

# Revolving





## Penjelasan Tema Theme Explanation



# Revolving

PT Pertamina (Persero) berkomitmen untuk menjalankan kegiatan usahanya dengan prinsip keberlanjutan dalam bingkai keselarasan yang digambarkan dengan sebuah *circle* sekaligus *central point* keberlanjutan. Terminologi keberlanjutan juga divisualisasikan dengan insan Pertamina yang memberikan bibit tanaman kepada seorang anak.

Pertumbuhan berkelanjutan ini tidak hanya sekadar dimanifestasikan dalam program-program dan langkah operasional yang dilakukan. Namun, dalam perkembangan dan perjalanan pengabdian insan-insan Pertamina yang terus berkembang, berkontribusi sesuai dengan peran dan kapasitasnya masing-masing, sehingga pada akhirnya memberikan nilai tambah Perusahaan secara berkelanjutan bagi seluruh pemangku kepentingan.

PT Pertamina (Persero) is committed to carrying out its business activities with the sustainability principle within an alignment frame described by a circle as well as the central point of sustainability. Sustainability terminology is also visualized with a picture of Pertamina personnel giving plant seeds to a child.

This sustainable growth is not only manifested in the programs and operational steps taken, but also in the development and journey of dedication of Pertamina personnel who continuously grow and contribute according to their respective roles and capacities, with a view to finally provide the Company's added value for all stakeholders in a sustainable manner.

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# Tentang Laporan [CDSB REQ-07, CDSB REQ-08]

## About this Report



Laporan Keberlanjutan PT Pertamina (Persero) tahun 2022 disusun dengan mengacu pada beberapa standar pelaporan yaitu:

- Peraturan Otoritas Jasa Keuangan (POJK) Nomor 51/POJK.03/2017 tentang Penerapan Keuangan Berkelanjutan Bagi Lembaga Jasa Keuangan, Emiten, dan Perusahaan Publik, beserta turunannya yaitu Salinan Surat Edaran Otoritas Jasa Keuangan Republik Indonesia Nomor 16/SEOJK.04/2021 tentang Bentuk dan Isi Laporan Tahunan Emiten atau Perusahaan Publik.
- Consolidated GRI Standards 2021 beserta GRI 11 Oil and Gas Sector 2021
- Task Force on Climate-related Financial Disclosure (TCFD)
- Sustainability Accounting Standards Board (SASB)
- Climate Disclosure Standards Board (CDSB)
- Standar yang dikeluarkan oleh International Petroleum Industry Environmental Conservation Association (IPIECA), SGXST Listing Rules, Practice Note 7.6 – Sustainability Reporting Guideline, American Petroleum Institute (API) and the International Association of Oil & Gas Producers (IOGP).

Informasi lain yang berkaitan dengan kebijakan keberlanjutan dapat diakses pada <https://www.pertamina.com> dan informasi lain terkait profil perusahaan dan tata kelola dapat diakses pada Laporan Tahunan Pertamina 2022.

PT Pertamina (Persero)'s 2022 Sustainability Report is prepared by referring to several reporting standards, namely:

- Regulation of Financial Services Authority No. 51/POJK.03/2017 on Application of Sustainable Finance to Financial Services Institution, Issuer and Publicly Listed Companies, and its derivatives, namely Copy of the Circular Letter of the Financial Services Authority of the Republic of Indonesia Number 16/SEOJK.04/2021 on the Form and Content of Annual Reports of Issuers or Public Companies.
- Consolidated GRI Standards 2021 and GRI 11 Oil and Gas Sector 2021
- Task Force on Climate-related Financial Disclosure (TCFD)
- Sustainability Accounting Standards Board (SASB)
- Climate Disclosure Standards Board (CDSB)
- Standards issued by the International Petroleum Industry Environmental Conservation Association (IPIECA), SGXST Listing Rules, Practice Note 7.6 – Sustainability Reporting Guideline, American Petroleum Institute (API) and the International Association of Oil & Gas Producers (IOGP).

Other information related to sustainability policies can be accessed at <https://www.pertamina.com> and other information related to company profile and governance can be accessed in Pertamina's 2022 Annual Report.

### ENTITAS YANG TERMASUK DALAM PELAPORAN KEBERLANJUTAN [GRI 2-2]

Entitas yang termasuk dalam Laporan Keberlanjutan ini meliputi 12 entitas anak, yang terintegrasi dari hulu hingga hilir. Entitas anak Perseroan dikelompokkan

### ENTITIES INCLUDED IN SUSTAINABILITY REPORTING [GRI 2-2]

The entities included in this Sustainability Report include 12 subsidiaries which are integrated from upstream to downstream. The Company's

ke dalam 6 (enam) *subholding*, dan 6 (enam) entitas anak jasa/portofolio. Tidak terdapat perbedaan daftar entitas yang termasuk dalam Laporan Keuangan dan Laporan Keberlanjutan. Daftar entitas anak telah disampaikan dalam Catatan Atas Laporan Keuangan Konsolidasian PT Pertamina (Persero) Tahun 2022. Namun demikian, pada beberapa topik materi tertentu lingkup pelaporan tidak meliputi seluruh entitas anak dan akan dinyatakan pada laporan topik materi yang terkait. Pendekatan yang digunakan yaitu dengan menjumlahkan data yang disampaikan oleh tiap-tiap entitas anak.

subsidiaries are grouped into 6 (six) subholdings, and 6 (six) service/portfolio subsidiaries. There is no difference in the list of entities included in the Financial Statements and the Sustainability Report. The list of subsidiaries has been presented in the Notes to the 2022 Consolidated Financial Statements of PT Pertamina (Persero). However, on certain material topics the scope of reporting does not cover all subsidiaries and will be stated in the report on related material topics. The approach used is by adding up the data submitted by each subsidiary.

### PERIODE PELAPORAN, FREKUENSI DAN KONTAK [GRI 2-3, CDSB REQ-09]

Pertamina telah melaporkan informasi sesuai dengan ("in accordance with") Standar GRI 2021. Periode Laporan Keberlanjutan ini adalah dari 1 Januari sampai dengan tanggal 31 Desember 2022 sesuai dengan periode Laporan Keuangan Konsolidasian. Perseroan menyusun Laporan Keberlanjutan sebanyak satu kali dalam satu tahun. Tanggal publikasi Laporan Keberlanjutan adalah tanggal 31 Mei 2023. Pertanyaan terkait laporan keberlanjutan dapat disampaikan melalui:

### REPORTING PERIOD, FREQUENCY, AND CONTACT POINT (GRI 2-3, CDSB REQ-09)

Pertamina has reported information in accordance with the 2021 GRI Standards. The period of this Sustainability Report is from 1 January to 31 December 2022 according to the period of the Consolidated Financial Statements. The Company publish a Sustainability Report annually. The publication date of this Sustainability Report is May 31, 2023. Inquiries regarding the sustainability report can be submitted to:

**Investor Relation  
PT Pertamina (Persero)**  
 Jl. Medan Merdeka Timur  
 No. 11-13. Jakarta Pusat 10110  
 PERTAMINA Contact Center 135  
 Tel: (021) 3815111, 3816111  
 E-mail: pcc135@pertamina.com  
 Website: www.pertamina.com



### INFORMASI RESTATEMENT [GRI 2-4, CDSB REQ-10]

Pada Laporan Keberlanjutan tahun 2022 ini terdapat informasi penyajian kembali pada realisasi belanja lingkungan, luasan wilayah konservasi di wilayah operasional Perseroan, konsumsi energi, konsumsi bahan bakar, intensitas energi, emisi GRK cakupan 1, dan cakupan 2, beban emisi non GRK, nilai ekonomi yang ditahan, serta penggunaan air. Informasi penyajian kembali bersifat memperbaiki informasi pada tahun sebelumnya. Setiap penyajian kembali, diberikan keterangan pada bawah tabel.

### RESTATEMENTS OF INFORMATION [GRI 2-4, CDSB REQ-10]

In this 2022 Sustainability Report, there are restatements of information on the realization of environmental spending, the size of conservation areas in the Company's operational areas, energy consumption, fuel consumption, energy intensity, GHG emissions scope 1 and scope 2, non-GHG emission load, retained economic value, and water use. Restatements of information are to correct information in the previous year. For each restatement, a description is given below the table.

### PERUBAHAN PERUSAHAAN YANG BERSIFAT SIGNIFIKAN PADA ORGANISASI [OJK C.6, GRI 2-6-D]

Selama periode pelaporan tahun 2022, tidak terdapat perubahan signifikan pada Perseroan.

### SIGNIFICANT CORPORATE CHANGES IN ORGANIZATION [OJK C.6, GRI 2-6-D]

During the 2022 reporting period, there were no significant changes in the Company.

# Sustainability Highlight



<p><b>Skor Sustainalytics</b> ESG Rating membaik menjadi ESG Rating score from Sustainalytics improved to</p> <p><b>22.1</b> (medium risk) as of October 2022</p>	<p><b>Skor CDP</b> <b>Climate Change</b> Climate Change score from CDP</p> <p><b>B</b></p>	<p>Direktur Utama Pertamina sebagai Pertamina CEO as the</p> <p><b>Chair Task Force ESC B20</b> Chair of B20 ESC Task Force</p>
<p><b>Reduksi emisi</b> Emission reduction</p> <p><b>7.9</b> Million Ton <b>CO2e</b></p> <p>Notes: Dari baseline emisi tahun 2010 berdasarkan skenario <i>business as usual</i>. From the 2010 emission baseline based on a business as usual scenario</p>	<p>Penambahan Kapasitas <b>Clean Energy</b> Increase in Clean Energy capacity by</p> <p><b>25.14</b> MW</p>	<p><b>Pengembangan Ekosistem EV</b> Development of EV Ecosystem</p> <p><b>21</b> Battery Swapping Station <b>6</b> Charging Station</p>
<p>Pengembangan Stasiun Energi Hijau Development of <b>Green Energy Station</b></p> <p><b>349</b> Units</p>	<p>Komersialisasi <b>Potensi Karbon Credit</b> Commercialization of Carbon Credit Potential</p>	<p><b>Launching produk Kilang Biofuel</b> Launch of the Biofuel Refinery product</p>
<p>Penambahan lembaga penyalur untuk daerah 3T (Terdepan, Terluar, Tertinggal) Addition of channeling agencies for 3T areas (Frontier, Outermost, Under Developed)</p> <p><b>96</b> Lokasi</p>	<p><b>Pembangunan 5 Desa Energi Berdikari</b> dengan total kapasitas energi listrik sebesar 18,4 kWp dan energi gas sebesar 190.320 m3 Ton/tahun Construction of 5 Desa Energi Berdikari with a total capacity of 18.4 kWp of electrical energy and 190,320 m3 of gas energy/year</p>	<p><b>Carbon Project</b></p> <p><b>100 Ha</b> Mangrove Plantation</p>



# Penghargaan Awards

## National

 <p>20 Proper Emas Penghargaan CEO Green Leadership Utama 20 Gold Proper CEO Green Leadership Award</p>	 <ul style="list-style-type: none"> <li>Penghargaan Kesehatan, dan Keselamatan Kerja</li> <li>Penghargaan Nasional atas Implementasi Undang-Undang Tentang Penyandang Disabilitas</li> <li>Health Award, and Work safety</li> <li>Top National Award Implementation of Laws About Persons with Disabilities</li> </ul>	 <p>Penghargaan Dharma Karya Energi 2022 Dharma karya energy award 2022</p>	 <p>Anugerah Penghargaan Kompetisi Pengelolaan Pengaduan Pelayanan Publik Public Service Complaint Management Competition Award from the Ministry of Administrative and Bureaucratic Reform</p>
 <p>Penghargaan Top Brand Top Brand Award</p>	 <p>Penghargaan Percepatan Penurunan Stunting Accelerated Drop Award stunt</p>	 <p>Rekor MURI untuk Komitmen Akselerasi Penerapan EBT, PHE ONWJ MURI record for Acceleration Commitment Application of EBT, PHE ONWJ</p>	 <p>Tiga Penghargaan Transparansi Emisi Korporasi 2022 Three Corporate Emissions Transparency Awards 2022</p>
 <p>Penghargaan untuk kategori Energy and Mining Industry Award for the Energy and Mining Industry category</p>	 <p>Penghargaan atas Transisi Energi Award for Energy Transition</p>	 <p>FEI SDG Awards 2022 pada Kategori Sustainable Oil and Gas FEI SDG Awards 2022 in Category Sustainable Oil and Gas</p>	 <p>Winner of Tren Asia's ESG Excellence 2022 for SOE Category for Action</p>
 <p>19 penghargaan untuk Program Tanggung Jawab Sosial Perusahaan dan Best Leadership pada Indonesia CSR Excellence 19 awards for the Corporate Social Responsibility Program and Best Leadership at the Indonesia CSR Excellence Award from Indonesia First</p>	 <p>Best Of The Best CSR Of The Year</p>	 <p>The Best CSR Community Development</p>	 <p>CSR dan Pembangunan Desa Berkelanjutan Awards 2022 CSR and Sustainable Village Development Awards 2022</p>
 <p>The Best SDG's Program Implementation - 2022 "Sustainable Cities &amp; Communities"</p>	 <p>67 Penghargaan Indonesia Green Awards 2022 67 Awards in Indonesia Green Awards 2022</p>	 <p>Tiga Peringkat Gold Safety Culture Award 2022 Three Gold Safety Culture Ratings Awards 2022</p>	 <p>3 Penghargaan dari Indonesia Safety Excellence Award 2022 3 Awards from Indonesia Safety Excellence Awards 2022</p>
 <p>10 Penghargaan dari Human Capital and Performance Award 2022 10 Awards from Human Capital and Performance Awards 2022</p>	 <p>Human Capital on Resilience Excellence Award 2022</p>	 <p>Direktur Utama Pertamina Masuk 20 Perempuan Paling Berpengaruh 2022 Main Director of Pertamina Enters 20 The Most Influential Woman of 2022</p>	 <p>Best CEO Awards 2022 dalam Kategori Employees Choice pada kategori Oil and Gas Best CEO Award 2022 in the Employees Choice Category in the Oil and Gas</p>
 <p>Tokoh Ketahanan Energi Nasional The National Energy Resilience</p>	 <p>Corporate Emission Award 2022 ESG Disclosure Award 2022 Best BUMN</p>	 <p>CSR Award 2022</p>	 <p>Penghargaan BUMN Berprestasi di Sektor Energi BUMN Achievement Award at Energy Sector</p>
 <p>Indonesian Green and Sustainable Companies Award</p>	 <p>Green Initiative Awards</p>	 <p>Best of The Best SME Enabler</p>	 <p>PMO of the Year dari PMO Indonesia Award</p>
 <p>12 Penghargaan IDEAS 2022 12 awards in the 2022 IDEAS Awards</p>	 <p>The Best Life Insurance Company 2022</p>		



International



Pertamina Raih Peringkat 2 Rating ESG Dunia pada sub industri minyak dan gas  
 Pertamina Wins 2nd Place in ESG Ratings The world in the oil and gas sub industry



PGE Ranking ke-2 dalam Penilaian ESG Sustainable Fitch  
 PGE Ranked 2nd in ESG Assessment Sustainable Fitch



Perolehan skor B untuk kategori Climate Change  
 Obtaining a B score for the Climate Change category



Fortune Global 500, Rank #287



Highly Commended from Sustainability Business Award 2022



Kategori Gold untuk Sustainability Report Award  
 Gold Category for Sustainability Award



Nicke Widyawati masuk dalam Daftar 100 Wanita Berpengaruh di Dunia  
 Nicke Widyawati is listed 100 Influential Women in the World



Nicke Widyawati Masuk 50 Perempuan Berpengaruh di Dunia  
 Nicke Widyawati Entered 50 Influential Women in the World



The Winner of Leadership Commitment Category



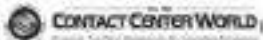
Social Empowerment Category



Champion pada kategori Community Commitment  
 Champion in the Community category Commitment



Energy Management Leadership Award 2022



10 Penghargaan dari Global Contact Center Award - Asia Pacific Region 2022  
 10 Awards from the Global Contact Center Award - Asia Pacific Region 2022



PGE Best CSR Initiative



## PENCAPAIAN SATGAS ENERGI, KEBERLANJUTAN DAN IKLIM (ESC) BISNIS 20 (B20)

Perseroan memiliki peran penting dalam kolaborasi B20 terkait *energy, sustainability and climate (ESC) issues*, dimana Direktur Utama menjabat sebagai Ketua Satuan Tugas Energi Keberlanjutan, dan Iklim (*Task Force Energy, Sustainability and Climate Business 20*) untuk memastikan bahwa seluruh kebijakan dan upaya transisi energi sejalan dengan tujuan G20 Indonesia. *Task Force Energy, Sustainability and Climate B20* didukung oleh 8 (delapan) Co Chairs dari pemimpin industri energi global dan 150 lebih eksekutif dari negara-negara G20. Satuan Tugas ini telah menghasilkan *legacy* atau *outcome* antara lain:

## ACHIEVEMENT OF BUSINESS 20 (B20) ENERGY, SUSTAINABILITY AND CLIMATE (ESC) TASK FORCE

The Company plays an important role in the B20 collaboration where its President Director serves as Chair of Business 20 (B20) Energy, Sustainability and Climate Task Force to ensure that all energy transition policies and efforts are in line with Indonesia's G20 goals. B20 Energy, Sustainability and Climate Task Force is supported by 8 (eight) Co Chairs from global energy industry leaders and 150 more executives from G20 countries. This Task Force has produced the following legacy or outcome:

### Policy recommendation

Terdiri dari kebijakan untuk mempercepat transisi penggunaan energi berkelanjutan dengan mengurangi intensitas karbon, memastikan transisi yang adil, teratur, dan terjangkau menuju penggunaan energi berkelanjutan, serta meningkatkan akses masyarakat untuk mengonsumsi energi bersih dan modern.

Which consist of policies to accelerate the transition to sustainable energy use by reducing carbon intensity, ensuring a fair, orderly, and affordable transition to the use of sustainable energy, as well as increasing people's access to clean and modern energy consumption.

### Business action in energy transition

Program yang berperan sebagai katalis untuk mempercepat kerja sama global dalam bidang low carbon dan transisi energi antara negara maju dan negara berkembang melalui transfer pengetahuan, teknologi, pengembangan SDM, serta pendanaan. Program ini telah menghasilkan 38 perjanjian kerja sama dengan 11 negara dan potensi nilai proyek hingga USD11,5 Miliar.

A program that acts as a catalyst to accelerate global cooperation in the field of low carbon and energy transition between developed and developing countries through the transfer of knowledge, technology, human resource development, and funding. This program has resulted in 38 cooperation agreements with 11 countries and a potential project value of up to USD 11.5 billion

### Carbon centre of excellence

Platform yang bertujuan untuk mengembangkan *digital center of excellence* yang dilengkapi dengan *carbon knowledge repository* dan kegiatan *sharing centre* yang dapat membantu perusahaan dan masyarakat untuk mendapatkan pengetahuan dan meningkatkan kegiatan-kegiatan *carbon trading*.

The platform aims to develop a digital center of excellence equipped with a carbon knowledge repository and an activity sharing center that can help the company and the public gain knowledge and improve carbon trading activities.



## Ikhtisar Kinerja Keberlanjutan

[OJK B.1, OJK B.2, OJK B.3, EM-EP-000.A, EM-RM-000.A, EM-SV-110a.1]

Sustainability Performance Highlights





Uraian Description	Satuan Unit	2022	2021	2020
<b>ASPEK EKONOMI/ECONOMIC ASPECT</b>				
Penjualan dan Pendapatan Usaha Lainnya Sales and Other Operating Revenues	Jutaan USD USD Million	<b>84,888</b>	57,509	41,649
EBITDA	Jutaan USD USD Million	<b>13,593</b>	9,256	7,608
Laba Bersih Tahun Berjalan (OJK B.1) Net Profit for the Year	Jutaan USD USD Million	<b>4,060</b>	2,239	821
Produksi Migas (OJK B.1, EM-EP-000.A) Oil & Gas Production	MBOEPD	<b>967</b>	897	863
Kapasitas pengolahan (EM-RM-000.A) Refining Capacity	Thousand Barrel Per Calendar Day (MBPD)	<b>917.98</b>	866.38	855.59
Pengolahan Minyak Mentah, Gas & Intermedia (EM-RM-000.A) Crude Oil, Gas & Intermedia Refinery	MMBBL	<b>333.06</b>	314.32	311.53
BBM PSO PSO Fuel Oil	Ribu KL	<b>17,957.26</b>	15,904.57	-
BBM Non PSO Non-FSO Fuel Oil	Ribu KL	<b>6,797.18</b>	29,664.31	-
Volume Penjualan Gas Gas Sales Volume	BBTU	<b>327,023</b>	317,975	303,078
Volume Transportasi Gas Gas Transportation Volume	MMSCF	<b>492,554</b>	493,326	459,512
Volume Produksi Listrik (Solar dan Biogas)# Electricity Production Volume (Diesel Fuel and Biogas)	GWh	<b>29.23</b>	25.65	18.65
Volume Produksi Uap dan Listrik dari Panas Bumi# Production Volume of Steam and Electricity from Geothermal	GWh	<b>4,629.59</b>	4,660.48	4,618.27
Jumlah Armada Kapal Total Fleet				
Tanker	Unit	<b>95</b>	95	13
Layanan Kelautan & Dukungan Lepas Pantai Marine Service & Offshore Support	Unit	<b>369</b>	344	125
Pelibatan Pemasok Lokal/Dalam Negeri (OJK B.1) Local/Domestic Supplier Engagement	Perusahaan/ Mitra Company/Partner	<b>13,419</b>	11,812*	10,927*
Realisasi Pendirian Lembaga Penyalur Wilayah 3T Realization of Establishment of Distributors for the Disadvantaged, Frontier and Outermost (3T) Areas	Jumlah Penyalur Number of Distributors	<b>96</b>	78	83
<b>ASPEK LINGKUNGAN/ENVIRONMENTAL ASPECT</b>				
Penggunaan Air Water use	Megaliters	<b>299,163.38</b>	263,663.25	291,432.90
Penggunaan Energi (OJK B.2) Energy Usage (OJK B.2)	TJ	<b>173,606.95</b>	128,939.08	119,971.88
Konsumsi Bahan Bakar dari Sumber Emisi yang Tidak Bergerak: (EM-SV-110a.1) Fuel Consumption from Immovable Emission Sources: (EM-SV-110a.1)				
Fuel Gas	mmscf	<b>317,297.81</b>	560,300.07	405,581.96
Fuel Oil	m3	<b>1,174,849.72</b>	1,138,680.31	1,220,263.28
Gasoline	m3	<b>60.60</b>	19.30	31.33
Diesel	m3	<b>88,931.66</b>	94,473.54	85,117.47
Konsumsi Bahan Bakar dari Sumber Emisi yang Bergerak: (EM-SV-110a.1) Fuel Consumption from Mobile Emission Sources: (EM-SV-110a.1)				
Diesel/Solar	m3	<b>702,076.52</b>	1,164,544.55	1,172,228.43
Gasoline	m3	<b>2,180.56</b>	20,701.67	48,399.81
Marine Fuel	m3	<b>849,282.33</b>	1,557,384.59	1,576,691.56
Realisasi Akumulasi Reduksi Emisi terhadap Baseline** (OJK B.2) Realized Accumulated Emission Reduction to Baseline** (OJK B.2)	Persentase Juta Ton CO2	<b>31.06</b> <b>7.9</b>	29.09 7.4	27 6.7
Pengurangan limbah Non B3 (OJK B.2) Non-B3 waste reduction (OJK B.2)	Ton	<b>189.70</b>	173.98	187.12
Pengurangan limbah B3 (OJK B.2) B3 waste reduction (OJK B.2)	Ton	<b>183.90</b>	222.32	402.86
Pencapaian Peringkat PROPER Emas Achievement Gold PROPER Rating	Penghargaan Award	<b>20</b>	23	16

Uraian Description	Satuan Unit	2022	2021	2020
Realisasi Belanja Lingkungan*** Realized Environmental Expenditures***	Dalam Miliar Rupiah in billion Rupiah	1,523.53	1,225.79*	1,535.49
Luasan Wilayah Konservasi di Wilayah Operasi Perseroan Conservation Area in the Company's Operational Area	Ha	30,810.81	30,426.29*	30,059.56*
<b>ASPEK SOSIAL/SOCIAL ASPECT</b>				
Total Recordable Incident Rate (TRIR)	Per 100,000,000 Work Hour	0.09	0.12	0.15
Lost Time Incident Rate (LTIR)	Per 1,000,000 Work Hour	0.02	0.01	0.02
Fatal Accident Rate (FAR)	Per 1,000,000 Work Hour	0.42	0.50	0.73
Employee Turnover	%	3	1.13	0.06
Employee Engagement	%	83.36	80.68	N/A
Indeks Kepuasan Pelanggan Customer Satisfaction Index	Skala Likert Likert Scale	4.29	4.28	4.10
Biaya TJSL yang disalurkan Disbursed TJSL costs	Dalam Miliar Rupiah in billion Rupiah	637.59	1,186.09	953.42
Realisasi TKDN Realized TKDN	%	60.59	60.00	55.60
<b>ASPEK TATA KELOLA/GOVERNANCE ASPECT</b>				
Hasil Penilaian Penerapan GCG GCG Implementation Assessment Results	%	95.06% Sangat Baik Very Good	96.94% Sangat Baik Very Good	92.85% Sangat Baik Very Good
Cyber Security Assessment	Skala Likert	4.27	-****	-****
<p>Keterangan: *Disajikan Kembali **mengacu pada <i>baseline</i> emisi tahun 2010 berdasarkan skenario BAU *** Biaya pada kegiatan pencegahan dan penanganan dampak lingkungan hidup, seperti efisiensi energi, penggunaan energi terbarukan, sertifikasi produk rendah karbon, kegiatan audit lingkungan hidup, pengelolaan limbah beracun (B3), daur ulang dan penggunaan kembali limbah, pengeluaran air (CAPEX) dan pengeluaran operasional (OPEX) **** Belum dilakukan <i>assessment</i> #Merupakan produk ramah lingkungan</p> <p>Catatan untuk pembaca laporan: Tabel dan grafik pada laporan ini memaparkan data numerik dengan standar Bahasa Inggris, sedangkan pemaparan numerik dalam teks menggunakan standar Bahasa Inggris dan Indonesia sesuai dengan konteksnya.</p>		<p>Remarks: *Restated ** Refers to the 2010 emissions baseline under the BAU scenario. *** Costs for prevention and handling of environmental impacts, such as energy efficiency, usage of renewable energy, certification of low carbon products, environmental audit activities, management of toxic waste (B3), recycling and reuse of waste, water disposal (CAPEX) and operating expenses (OPEX) **** Not yet done an assessment # It is an eco-friendly product</p> <p>Note to report readers: The tables and graphs in this report present numerical data in standard English, while the numerical presentation in the text uses standard English and Indonesian according to the context.</p>		





## Sertifikasi Manajemen Keberlanjutan [GOV-2.C3] Sustainability Management Certifications

ISO 37001:2016 Sistem Manajemen Anti Penyuapan	ISO 37001:2016 Anti-Bribery Management System
ISO 27001:2013 Sistem Manajemen Keamanan Informasi	ISO 27001:2013 Information Security Management System
ISO 27002:2013 Standar dan Prosedur yang Berkaitan dengan Keamanan dan Kontrol Informasi	ISO 27002-2013 Standards and Procedures Related To Information Security and Control
ISO 9001:2015 tentang <i>Quality Management</i>	ISO 9001:2015 on Quality Management
ISO 14001:2015 Sistem Manajemen Lingkungan	ISO 14001:2015 Environmental Management System
ISO 45001:2018 Sistem Manajemen Kesehatan dan Keselamatan Kerja	ISO 45001:2018: Occupational Health and Safety Management System
ISO 50001:2018 Sistem Manajemen Energi	ISO 50001:2018 Energy Management System
ISO 26000:2010 Pedoman Tanggung Jawab Sosial	ISO 26000:2010 Social Responsibility Guideline



## Komitmen Penanganan Dampak Negatif [OJK B.3] Commitment to Manage Negative Impacts

Komitmen Perseroan dalam menerapkan pembangunan berkelanjutan terlihat dari berbagai capaian kinerja baik dari aspek ekonomi, sosial, lingkungan dan tata kelola. Informasi tentang dampak negatif (insiden) dan upaya penanganannya disajikan pada bagian Kinerja Sosial dalam Laporan Keberlanjutan ini.

The Company's commitment in implementing sustainable development can be seen from various performance achievements in the economic, social, environmental, and governance aspects. Information on negative impacts (incidents) and the efforts to handle the impacts is presented in the Social Performance section of this Sustainability Report.





# Penjelasan Direksi

[OJK D.1, OJK E.5, GRI 2-22,  
CDSB REQ-03, CDSB REQ-06]

## Board of Directors' Report



**NICKE  
WIDYAWATI**

**Direktur Utama**  
President Director & CEO



### Para pemangku kepentingan yang kami hormati, Dear distinguished Stakeholders,

Telah kita lalui bersama, tahun 2022 yang penuh dengan tantangan akibat pandemi Covid-19 dan gejolak ekonomi yang mengikutinya, namun kami masih dapat senantiasa menjalankan komitmen penuh terhadap aspek ekonomi, lingkungan, sosial, dan tata kelola secara berkelanjutan di sepanjang tahun 2022. Hal ini tak terlepas dari dedikasi, loyalitas, dan kerja sama dari Perwira Pertamina untuk terus dapat memberikan nilai tambah secara berkelanjutan bagi seluruh pemangku kepentingan.

Dalam upaya mencapai pertumbuhan berkelanjutan, kami juga berkomitmen untuk menjalankan prinsip *circularity* melalui kegiatan operasional yang melibatkan seluruh insan Pertamina dan bertujuan untuk memberikan kembali nilai tambah bagi masyarakat. Semangat *revolving* yang kami usung menggambarkan upaya untuk terus bergerak membentuk masa depan melalui berbagai program keberlanjutan dan aktivitas operasional yang lebih ramah lingkungan. Untuk itu, Laporan Keberlanjutan ini kami sampaikan sebagai komitmen kami atas penerapan aspek keberlanjutan di tahun 2022.

Together we have gone through the year 2022 which was filled with challenges due to the Covid-19 pandemic and its economic turmoil. However, we were still able to continuously carry out our full commitment to the economic, environmental, social and governance aspects throughout 2022. This is owing to the dedication, loyalty and cooperation demonstrated by Pertamina Perwira to relentlessly provide added value in a sustainable manner for all stakeholders.

In the quest of achieving sustainable growth, we are also committed to carrying out the principle of circularity through operational activities that involve all Pertamina personnel and aim to provide added value to the community. The revolving spirit we are carrying illustrates our efforts to keep moving to shape the future through various sustainability programs and more eco-friendly operational activities. For this reason, we submit this Sustainability Report as our commitment to implementing sustainability aspects in 2022.



## TANTANGAN YANG DIHADAPI PERUSAHAAN



Tahun 2022 merupakan momentum untuk bangkit dan pulih dari krisis multidimensi global yang ditimbulkan atas dampak pandemi Covid-19. Berbagai tantangan telah kami hadapi seiring langkah untuk mencapai Tujuan Pembangunan Berkelanjutan (TPB) yang ditargetkan tercapai pada tahun 2030, termasuk isu perubahan iklim yang terus menjadi sorotan dunia. Saat ini, dunia melakukan percepatan transisi menuju penggunaan energi baru terbarukan guna mencapai target Perjanjian Paris (Paris Agreement) yang telah disepakati oleh 195 negara di dunia, termasuk Indonesia, untuk menahan laju peningkatan suhu bumi di bawah 2°C. Guna mencapai target tersebut, Pemerintah Indonesia telah menerjemahkannya ke dalam Kontribusi yang Ditentukan Secara Nasional (NDC) dengan target pengurangan emisi sebesar 31,89% dengan upaya sendiri dan sampai dengan 43,20% pada tahun 2030. Selain itu, negara-negara di dunia, tidak terkecuali Indonesia, juga telah mendeklarasikan *Net Zero Emissions* (NZE) untuk mempercepat tercapainya transisi energi. Maka atas kondisi tersebut, Pertamina dengan visi menjadi perusahaan energi nasional kelas dunia perlu merespons tantangan global tersebut secara serius.

Tak hanya tantangan untuk melakukan percepatan transisi energi, kami juga menghadapi berbagai tantangan lain pada tiga bidang utama, yakni lingkungan, sosial, dan tata kelola.

Pertama, tantangan di bidang lingkungan. Sebagai perusahaan energi nasional, kami menyadari bahwa porsi emisi pada sektor minyak dan gas masih besar. Pengendalian emisi merupakan fokus dan prioritas kami. Per tahun 2022, total emisi yang dihasilkan Pertamina (*scope 1*) adalah 27,38 juta ton CO<sub>2</sub>eq. Selain itu, untuk memitigasi dampak perubahan iklim, kami telah melakukan manajemen risiko *physical climate risk* melalui identifikasi secara komprehensif dan sistematis ke dalam *Risk Intelligence Map* dan Pedoman Manajemen Risiko untuk dilakukan pengelolaan secara tepat.

Selanjutnya, tantangan di bidang sosial. Kami percaya bahwa sumber daya manusia adalah aset penting bagi perusahaan, sehingga kami terus berkomitmen menyelesaikan berbagai tantangan kepegawaian. Tantangan tersebut terkait dengan perlunya peningkatan porsi perempuan dan generasi milenial dalam perusahaan dengan turut mempertimbangkan aspek keberagaman dan inklusivitas sebagai bentuk perlindungan dan penghormatan terhadap Hak Asasi Manusia, serta tantangan terkait aspek K3 yang mendorong kita agar terus berbenah untuk meningkatkan aspek *safety* dalam menjalankan kegiatan operasional agar tidak berdampak bagi pekerja dan masyarakat.

Terakhir, tantangan di bidang tata kelola terkait dengan manajemen risiko keberlanjutan. Kami menyadari bahwa risiko iklim (*climate risk*) merupakan suatu risiko serius yang berdampak jangka panjang bagi kehidupan manusia, sehingga penting bagi kami untuk terus mendorong

## CHALLENGES FACED BY THE COMPANY

2022 was a momentum to rise and recover from the global multidimensional crisis caused by the Covid-19 pandemic. We have faced various challenges in line with the steps towards achieving the Sustainable Development Goals (SDGs) which are targeted to be achieved by 2030, including the issue of climate change which continues to be in the world's spotlight. Currently, the world is accelerating the transition towards the use of new renewable energy in order to achieve the Paris Agreement target which has been agreed upon by 195 countries in the world, including Indonesia, to hold the increase rate of the earth's temperature below 2°C. In order to achieve this target, the Government of Indonesia has translated it into a Nationally Determined Contribution (NDC) with a target of emissions reduction by 31.89% on its own and up to 43.20% in 2030. In addition, countries in the world, including Indonesia, have also declared Net Zero Emissions (NZE) to accelerate the achievement of the energy transition. Therefore, under such conditions, Pertamina with a vision of becoming a world-class national energy company needs to respond to these global challenges seriously.

We not only have faced a challenge to accelerate the energy transition, but also various other challenges in three main areas, namely environment, social and governance.

First, challenges in the environmental area. Being a national energy company, we realize that the portion of emissions in the oil and gas sector is still large. Therefore, emission control is our focus and priority. As of 2022, total emissions produced by Pertamina are 27.38 million tons of CO<sub>2</sub>eq. In addition, to mitigate the impact of climate change, we have carried out physical climate risk management through comprehensive and systematic identification into the Risk Intelligence Map and Risk Management Guidelines for suitable management.

The next are challenges in the social area. We believe that human resources are an important asset for the Company, so we are committed to solving various employment challenges. These challenges are the challenge related to the need to increase the share of women and the millennial generation in the Company by taking into account the aspects of diversity and inclusivity as a form of protection and respect for human rights, as well as the challenge related to OHS aspects which encourage us to continuously improve and enhance safety aspect in carrying out operational activities so that there will be no impact on workers and the community.

Finally, challenges in the area of governance which are related to sustainability risk management. We realize that climate risk is a serious risk with long-term impacts on human life, so it is important for us to continue to promote comprehensive sustainability risk management. In addition,

pengelolaan risiko keberlanjutan secara komprehensif. Di samping itu, tantangan terkait kepatuhan terhadap hukum dan peraturan, penerapan etika perusahaan, dan anti-korupsi juga terus menjadi perhatian kami sebagai komitmen terhadap tata kelola perusahaan yang baik.

## STRATEGI DALAM MERESPONS TANTANGAN



Guna merespons tantangan yang dihadapi sepanjang tahun 2022, berbagai strategi kami terapkan sebagai bentuk keseriusan kami dalam menjawab tantangan tersebut.

Sebagai langkah fundamental untuk mengatasi tantangan transisi energi, kami memiliki fondasi yang kuat untuk beradaptasi dan mencapai ambisi kami melalui penetapan *Net Zero Emission Roadmap* di dalam perencanaan jangka panjang perusahaan. Kami telah merumuskan strategi sampai dengan tahun 2060 melalui *maintaining business legacy*, upaya dekarbonisasi, dan membangun *new green business* yang merupakan komitmen kami sebagai perusahaan energi yang memiliki tanggung jawab besar menjadi pilar pencapaian *net zero emission* di Indonesia.

Sejalan dengan hal tersebut, kami juga terus memperkuat implementasi ESG dengan menjalankan 10 (sepuluh) fokus keberlanjutan untuk menjawab berbagai tantangan di bidang lingkungan, sosial, dan tata kelola. Fokus Keberlanjutan tersebut meliputi penanganan perubahan iklim, mengurangi jejak lingkungan, melindungi keanekaragaman hayati, meningkatkan aspek K3, pencegahan insiden skala besar, pengembangan karyawan, inovasi dan penelitian berkelanjutan, pelibatan masyarakat secara aktif, peningkatan keamanan digital, serta penguatan etika perusahaan. Seluruh fokus keberlanjutan ini, sejalan dengan agenda prioritas pembangunan nasional yang mengadopsi Tujuan Pembangunan Berkelanjutan (TPB). Selain itu, kami juga memiliki *Sustainability Policy* untuk mengatur praktik-praktik berkelanjutan di dalam perusahaan dan *Sustainability Committee* yang bertanggung jawab untuk mengarahkan dan mengawasi pengelolaan LST di seluruh kegiatan operasi.

Untuk mencapai target dari Fokus Keberlanjutan yang telah ditetapkan, selama tahun 2022 kami menjalankan sejumlah strategi perbaikan LST untuk meminimalisir risiko-risiko yang mungkin terjadi. Upaya yang dilakukan adalah dengan mengedepankan prinsip-prinsip pengelolaan bisnis yang berkelanjutan guna turut serta mengatasi perubahan iklim, mengurangi jejak lingkungan, dan mendukung perlindungan keanekaragaman hayati. Lalu, kami juga berupaya untuk lebih meningkatkan pemberdayaan dan keikutsertaan masyarakat di lingkungan sekitar perusahaan. Selain itu, sebagai komitmen praktik bisnis yang bertanggung jawab, kami telah menerapkan Prinsip dari United Nation Global Compact (UNGC) ke dalam strategi dan operasionalnya, serta berkomitmen untuk menghormati HAM dan tenaga kerja, serta bekerja melawan korupsi.

challenges related to compliance with laws and regulations, implementation of corporate ethics, and anti-corruption are also a constant concern for us as a commitment to good corporate governance.

## STRATEGIES IN RESPONDING TO CHALLENGES

In order to respond to the challenges faced throughout 2022, we have implemented various strategies as a form of our seriousness in responding to these challenges.

As a fundamental step to overcome the challenges of energy transition, we have a strong foundation to adapt and achieve our ambitions through the establishment of a *Net Zero Emission Roadmap* in the Company's long-term planning. We have formulated a strategy up to 2060 by maintaining *business legacy*, conducting decarbonization efforts, and building a *new green business* which is our commitment as an energy company that has a big responsibility to be a pillar of achieving *net zero emissions* in Indonesia.

In line with the above matters, we also continue to strengthen ESG implementation by carrying out 10 (ten) sustainability focuses to address various challenges in the environmental, social and governance areas. The Sustainability focus includes addressing climate change, reducing environmental footprint, protecting biodiversity, enhancing health and safety, prevention of major accidents, respecting & empowering our people, reorienting innovation and research, expanding community engagement and impact, strengthening cyber security, and leveraging corporate ethics. All these sustainability focuses are in line with the national development priority agenda which adopts the Sustainable Development Goals (SDGs). In addition, we also have *Sustainability Policy* to regulate sustainable practices within the Company and *Sustainability Committee* which is responsible for directing and overseeing ESG management in all business operations.

To achieve the target of the Sustainability Focus that has been set, during 2022 we have implemented several ESG improvement strategies to minimize the risks that may occur. Efforts are being made by prioritizing the principles of sustainable business management in order to participate in overcoming climate change, reducing the environmental footprint, and supporting the protection of biodiversity. Then, we also strive to further enhance empowerment and participation of the Community in the vicinity of the Company's area. In addition, as a commitment to responsible business practices, we have implemented the Principles of the United Nations Global Compact (UNGC) into our strategy and operations, and are committed to respecting human rights and labor, also working against corruption.

## INISIATIF DAN PROGRAM UNTUK MENCAPAI TARGET

Penetapan fokus keberlanjutan perlu diiringi dengan pelaksanaan inisiatif-inisiatif untuk mencapai target tersebut. Kami bergerak melakukan berbagai inisiatif untuk mewujudkan keseimbangan dan kelestarian alam, perlindungan terhadap lingkungan hidup serta kontribusi terhadap terwujudnya kemandirian masyarakat.

Dalam bidang lingkungan, kami berhasil merealisasikan penurunan emisi gas rumah kaca (GRK) terhitung dari tahun 2010 - 2022 mencapai -7,9 MMtCO<sub>2</sub>e atau setara dengan 31,06% terhadap *baseline* emisi tahun 2010. Hal ini dapat tercapai melalui pengurangan suar bakar, efisiensi energi, penggunaan energi rendah karbon, dan substitusi bahan bakar. Selain itu, dalam menjalankan sejumlah inisiatif LST di *Sub Holding*, telah dilakukan upaya dekarbonisasi yang telah diselaraskan dengan *NZE Roadmap* serta akselerasi EBT.

Dalam bidang sosial, proyek binaan kami melalui program Desa Energi Berdikari berbasis energi baru terbarukan tercatat telah memberikan manfaat penyaluran energi bagi 2.750 kepala keluarga dan mampu berpartisipasi dalam mereduksi emisi karbon sebesar 565.855 Ton CO<sub>2</sub>eq/ tahun. Selain itu, guna meningkatkan Kesehatan dan Keselamatan Kerja (K3) pada perusahaan, kami memiliki inisiatif *Zero Accidents* dengan meningkatkan program K3, seperti penguatan budaya keselamatan pekerja dan kontraktor, penguatan kompetensi HSSE, peningkatan manajemen risiko HSSE, implementasi SUPREME, dan program kesehatan kerja sebagai mitigasi untuk mencegah fatalitas penyakit. Dalam upaya menciptakan iklim kerja yang positif, kami menjunjung tinggi penegakkan HAM dan mendukung aspek *diversity & inclusion* melalui implementasi *respectful workplace & human rights policy*, *gender inclusion program*, serta meningkatkan *employee engagement*, porsi perempuan, dan *millenial* di dalam *top talent*.

Dalam bidang tata kelola, kami juga menerapkan sertifikasi ISO 37001:2016 Sistem Manajemen Anti Penyuapan (SMAP), sebagai salah satu bukti Perseroan telah menerapkan sistem manajemen yang mendukung anti *fraud* dan anti korupsi di seluruh proses bisnis. Di samping itu, kami juga terus memperkuat infrastruktur teknologi informasi melalui pembentukan tim *Cyber Incident Response Team* sebagai komitmen kami untuk meningkatkan keamanan siber.

Dalam rangka mendorong percepatan tercapainya target tujuan keberlanjutan, kolaborasi yang kuat dengan berbagai pihak merupakan prioritas kami. Pada tahun 2022, saya diberikan kepercayaan oleh *stakeholders* untuk menjadi *Chair* dalam *Task Force Energy Sustainability and Climate* (ESC) B20. Melalui forum tersebut, kami berpartisipasi aktif untuk mendorong pembentukan rekomendasi kebijakan transisi energi, menjadi katalisator kerja sama melalui program Business Action, serta mendirikan *Carbon Centre of Excellence* sebagai platform *sharing knowledge* terkait perdagangan carbon.

## INITIATIVES AND PROGRAMS TO ACHIEVE TARGETS

Determination of sustainability focus needs to be accompanied by the implementation of initiatives to achieve this target. We are engaged in carrying out various initiatives to achieve balance and preservation of nature, protection of the environment, and contribution to the realization of community self-sufficiency.

In the environmental area, we have succeeded in realizing a reduction in greenhouse gas (GHG) emissions from 2010 - 2022 reaching -7.9 MMtCO<sub>2</sub>e or equivalent to 31.06% of the 2010 emission baseline. This can be achieved through reduced flaring, energy efficiency, the use of low-carbon energy, and fuel substitution. In addition, in carrying out some ESG initiatives at Sub Holding, we have conducted decarbonization efforts which have been aligned with the NZE Roadmap and new renewable energy acceleration.

In the social area, our fostered project through the Desa Energi Berdikari program based on new and renewable energy is recorded to have provided energy distribution benefits for 2,750 heads of households and be able to participate in reducing carbon emissions by 565,855 Tons of CO<sub>2</sub>eq/year. In addition, in order to improve Occupational Health and Safety (OHS) in the Company, we have a Zero Accidents initiative by improving the OHS program, such as strengthening the safety culture of workers and contractors, strengthening HSSE competencies, improving HSSE risk management, implementing SUPREME and Occupational health program as a mitigation to prevent disease fatalities. To create a positive work climate, we uphold human rights enforcement and support aspects of diversity & inclusion through the implementation of a respectful workplace & human rights policy, gender inclusion programs as well as increasing employee engagement, the share of women and millennials among top talents.

In the governance area, we also have implemented ISO 37001:2016 Anti-Bribery Management System (SMAP) certification, as one of the proofs that the Company has implemented a management system that supports anti-fraud and anti-corruption in all business processes. In addition, we also continue to strengthen our information technology infrastructure through the establishment of a Cyber Incident Response Team as part of our commitment to improving cyber security.

In order to accelerate the achievement of sustainability targets, strong collaboration with various parties is our priority. In 2022, I was entrusted by stakeholders to become the Chair in B20 Energy, Sustainability and Climate (ESC) Task Force. Through this forum, we actively participated to encourage the formation of energy transition policy recommendations, become a catalyst for cooperation through the Business Action program, and establish a Carbon Center of Excellence as a knowledge sharing platform related to carbon trading.

Sejalan dengan prinsip-prinsip keberlanjutan, kami terus berupaya tanpa henti untuk menjalankan amanat Pemerintah melalui peningkatan kinerja serta pelaksanaan komitmen untuk mencapai ketahanan energi nasional. Program unggulan kami seperti program BBM Satu Harga, *One Village One Outlet*, dan *Pertashop*, kami jalankan melalui pendekatan *Availability, Accessibility, Acceptability, dan Affordability*, serta *Sustainability* sehingga kami mampu menjamin ketersediaan dan akses masyarakat terhadap energi dengan harga yang terjangkau dalam jangka panjang dan tetap memperhatikan perlindungan lingkungan hidup.

In line with the principles of sustainability, we continue to make relentless efforts to carry out the Government's mandate by increasing performance and implementing commitments to achieving national energy security. We carry out our flagship programs, such as the One Price Fuel, One Village One Outlet, and *Pertashop* programs, with the *Availability, Accessibility, Acceptability, Affordability, and Sustainability* approaches, so that we are able to guarantee the availability and access of the public to energy at affordable prices in the long term and continue to pay attention to environmental protection.

Kinerja keberlanjutan kami telah membuahkan pencapaian positif. Kami meraih posisi nomor 2 secara global dalam sub-industri *Integrated Oil & Gas* oleh *Sustainalytics* dengan skor ESG sebesar 22,1 di Oktober 2022, yang mengalami perbaikan dari tahun sebelumnya dengan skor 28,1. Tidak hanya itu, kami juga berhasil mendapat capaian baru dalam penilaian kinerja lingkungan perusahaan terkait aspek perubahan iklim yang dilakukan oleh *CDP* dengan skor B, naik dari tahun sebelumnya dengan skor D.

Our sustainability performance has resulted in positive achievements. We achieved the 2nd place position globally in the *Integrated Oil & Gas* sub-industry by *Sustainalytics* with an ESG score of 22.1 in October 2022, an improvement compared to the previous year's score of 28.1. Furthermore, we also managed to get a new achievement in the assessment of corporate environmental performance related to the aspect of climate change. The assessment was carried out by *CDP* with a score of B, an improvement from the previous year with a score of D.

**RENCANA KE DEPAN**



**FUTURE PLAN**

Kami terus berkomitmen terhadap aspek keberlanjutan dalam pengelolaan operasional perusahaan dengan memprioritaskan fokus pada dekarbonisasi dalam kegiatan bisnis serta terus mengembangkan bisnis baru, guna memastikan kesiapan dalam menghadapi transisi energi.

We continue to be committed to the sustainability aspect in managing the Company's operations by prioritizing a focus on decarbonization in business activities and continuing to develop new businesses, with a view to ensure readiness in facing the energy transition.

Dengan semangat untuk terus bergerak maju, kami siap untuk senantiasa memberikan dampak positif kepada masyarakat guna mendorong penambahan nilai demi keberlanjutan jangka panjang. Berbekal pengalaman kami selama 65 tahun mengabdikan untuk negeri, kami yakin mampu membangun ketangguhan dan ketahanan dalam menghadapi berbagai tantangan di masa mendatang melalui program dekarbonisasi, seperti *CCUS/CCS* seperti pengembangan bisnis baru seperti *Green Hydrogen* dan *Electric Vehicle Ecosystem*.

With the spirit to keep moving forward, we are ready to always make a positive impact on the society in order to encourage added value for long-term sustainability. Equipped with our 65 years of experience serving the country, we are confident that we can build perseverance and resilience in facing various challenges in the future through decarbonization program such as *CCUS/CCS*, and new business development such as *Green Hydrogen* and *Electric Vehicle Ecosystem*.

Ke depannya, dengan dukungan dari seluruh pihak, kami yakin bahwa strategi keberlanjutan yang telah disusun akan membawa kami ke arah transformasi yang lebih kuat, dengan merangkul perubahan untuk masa depan yang lebih tangguh bersama-sama untuk Indonesia dan dunia.

Going forward with the support from all parties, we are confident that the sustainability strategy we have prepared will lead us to a stronger transformation, by embracing change for a more resilient future together for Indonesia and the world

Jakarta, 31 May 2023 | May 31, 2023

Atas Nama Direksi  
On behalf of the Board of Directors

**Nicke Widyawati**  
Direktur Utama  
President Director & CEO

# Tanggung Jawab Pelaporan Keberlanjutan [GRI 2-14]

## Responsibility for Sustainability Reporting

Kami yang bertandatangan di bawah ini telah meninjau serta menyetujui seluruh informasi yang tercakup dalam Laporan keberlanjutan PT Pertamina (Persero) Tahun 2022. Kami bertanggung jawab penuh atas kebenaran seluruh isi laporan sesuai dengan Peraturan OJK No. 51/POJK.03/2017 tentang Keuangan Berkelanjutan.

We, the undersigned, have reviewed and agreed to all information included in PT Pertamina (Persero) Sustainability Report 2022. We are fully responsible for the accuracy of all report contents in accordance with OJK Regulation No. 51/POJK.03/2017 concerning Sustainable Finance

Jakarta, 31 Mei 2023 | May 31, 2023  
**Dewan Komisaris PT Pertamina (Persero)**  
 Board of Commissioners of PT Pertamina (Persero)

<b>Basuki Tjahaja Purnama</b> Komisaris Utama/Komisaris Independen President Commissioner/Independent Commissioner			
<b>Pahala Nugraha Mansury</b> Wakil Komisaris Utama Vice President Commissioner	<b>Alexander Lay</b> Komisaris Independen Independent Commissioner	<b>Ahmad Fikri Assegaf</b> Komisaris Independen Independent Commissioner	
<b>Heru Pambudi</b> Komisaris Commissioner	<b>Iggi H. Achsien</b> Komisaris Independen Independent Commissioner	<b>Rida Mulyana</b> Komisaris Commissioner	<b>Ego Syahrial</b> Komisaris Commissioner (Periode 1 Januari - 19 September 2022) (Period of January 1 - September 19, 2022)

Jakarta, 31 Mei 2023 | May 31, 2023  
**Direksi PT Pertamina (Persero)**  
 Directors of PT Pertamina (Persero)

<b>Nicke Widyawati</b> Direktur Utama President Director			
<b>Dedi Sunardi</b> Direktur Penunjang Bisnis Director of Corporate Services	<b>Emma Sri Martini</b> Direktur Keuangan Director of Finance	<b>M. Erry Sugiharto</b> Direktur Sumber Daya Manusia Director of Human Capital	<b>Ery Widiastono</b> Direktur Logistik dan Infrastruktur Director of Integrated Logistics & Infrastructure
<b>A. Salyadi Saputra</b> Direktur Strategi, Portofolio, dan Pengembangan Usaha Director of Strategy, Portfolio, & New Ventures	<b>Mulyono</b> Direktur Logistik & Infrastruktur Director of Integrated Logistics & Infrastructure (Periode 1 Januari - 19 September 2022) (Period of January 1 - September 19, 2022)	<b>Iman Rachman</b> Direktur Strategi, Portofolio, dan Pengembangan Usaha Director of Strategy, Portfolio, & New Ventures (Periode 1 Januari - 29 Juni 2022) (Period of January 1 - June 29, 2022)	



# Profil Perusahaan [OJK C]

Company Profile





# Visi, Misi, dan Nilai Keberlanjutan [OJK C.1]

## Sustainability Vision, Mission, and Values

### ASPIRASI KEBERLANJUTAN | SUSTAINABILITY ASPIRATIONS

Ambisi Perseroan adalah **menjadi Perusahaan Energi Global terkemuka serta diakui sebagai:**  
 The Company's ambition is to become a leading Global Energy Company and to be recognized as:

**Environmentally Friendly Company**

**Socially Responsible Company**

**Good Governance Company**

### NILAI-NILAI KEBERLANJUTAN | SUSTAINABILITY VALUES

Nilai-nilai keberlanjutan tercermin dalam kebijakan keberlanjutan sebagai berikut: Sustainability values are reflected in the following sustainability policies:

Ensuring security of energy supply and access to energy.	Reducing emissions, releases, wastes, effluents, and addressing broader climate change issues.	Protecting and preserving the environment, water, natural resources, and energy.	Management and mitigation of the impact of projects and activities on biodiversity with the aim of 'Net Positive Impact'.
Rehabilitating land after closure of operations to restore ecosystems, minimize negative impacts.	Implementing the highest standards regarding Health, Safety and Environment, and preventing major accidents in all workplaces.	Working with partners and suppliers towards the procurement of goods and services that are environmentally friendly and sustainable.	
Becoming locomotive to encourage social and economic development.	Community development and engagement to improve their welfare.	Respecting the rights of indigenous peoples or communities around operational areas.	Supporting the provision of products and services according to the principles of sustainability to customers.
Promoting continuous employee development, fair treatment, and diversity in the workplace.	Increasing the use of local workers and contractors, and support for Micro, Small Enterprises.	Ensuring compliance with all legal requirements and upholding good corporate governance.	Upholding judgments regarding anti-corruption and anti-fraud practices.

# Identitas Perusahaan [OJK C.2]

## Corporate Identity



### Nama Perusahaan [GRI 2-1, 207-4]

Company Name  
PT Pertamina (Persero)



### Status Perusahaan [GRI 2-1]

Company Status  
Perseroan Terbatas (PT),  
Badan Usaha Milik Negara (BUMN)  
Limited Liability Company (PT),  
State Owned Enterprise (SOE)

### Bidang Usaha [GRI 2-6a, 207-4]

Line of Business  
Energi/Energy



### Kepemilikan [GRI 2-1, OJK C.3-c]

Ownership  
100% Pemerintah Republik Indonesia  
100% Government of Republic of Indonesia



### Total Aset [OJK C.3-a]

Total Assets  
USD 87.811.096.000  
USD 87,811,096,000

### Total Liabilitas [OJK C.3-a]

Total Liabilities  
USD 50.595.744.000  
USD 50,595,744,000



### Jumlah Pegawai [GRI 2-7, 207-4]

Number of Employees  
43.666 pegawai  
43,666 employees



### Alamat Kantor Pusat [GRI 2-1, OJK C.2]

Head Office Address  
Gedung Grha Pertamina  
Jl. Medan Merdeka Timur No.11-13  
Jakarta Pusat 10340 Indonesia



### Situs Web [OJK C.2]

Website  
<https://www.pertamina.com>



### Contact Address [OJK C.2]

Telp.: (62-21) 3815111, 3816111



@Pertamina







## Wilayah Operasional dan Pemasaran Luar Negeri [OJK C.3-D, OJK C.4, GRI 2-1]

### Operational Areas and Overseas Marketing

Wilayah operasional dan pemasaran luar negeri dapat dilihat pada bab Profil Perusahaan Laporan Tahunan 2022.

Operational areas and overseas marketing can be seen in the Company Profile Chapter of the 2022 Annual Report.

## Kantor Cabang dan Kantor Perwakilan [OJK C.2, GRI 2-6B]

### Branch Offices and Representative Offices

Sampai dengan 31 Desember 2022, Perseroan memiliki 12 entitas anak yang terintegrasi dari hulu hingga hilir. Entitas anak Perseroan dibagi ke dalam 6 (enam) *subholding* dan 6 (enam) entitas anak jasa/portfolio. Alamat kantor entitas anak dapat dilihat pada bab Profil Perusahaan Laporan Tahunan 2022.

As of December 31, 2022, the Company has 12 subsidiaries which are integrated from upstream to downstream. The Company's subsidiaries are divided into 6 (six) subholdings and 6 (six) service/portfolio subsidiaries. The office addresses of subsidiaries can be seen in the Company Profile chapter of the 2022 Annual Report.



## Produk, Layanan dan Kegiatan Usaha yang Dijalankan [OJK C.4, GRI 2-6B]

### Products, Services and Business Activities Carried Out

Sesuai Akta No. 29 tanggal 13 April 2018, Perseroan melalui entitas anaknya dapat melaksanakan kegiatan usaha utama dan kegiatan usaha dalam rangka optimalisasi pemanfaatan sumber daya yang dimiliki. Perseroan menerima mandat dari Pemerintah terkait penugasan kewajiban pelayanan publik (*Public Service Obligation*) untuk penyediaan BBM tertentu. Rincian produk, layanan dan kegiatan usaha yang dijalankan dapat dilihat pada bab Profil Perusahaan Laporan Tahunan 2022.

In accordance with the Deed No. 29 dated April 13, 2018, the Company through its subsidiaries can carry out main business activities and business activities in optimizing the use of owned resources. The Company has received a mandate from the Government related to the assignment of Public Service Obligation (PSO) for the supply of specific oil fuel. Details of products, services and business activities carried out can be seen in the Company Profile chapter of the 2022 Annual Report.

## Rantai Pasok dan Relasi Bisnis Lainnya [GRI 2-6-B, 2-6-C, CCE-6.a1] Supply Chain and Other Business Relationships

Sesuai dengan amanat undang-undang, Perseroan ditugaskan oleh Pemerintah Indonesia untuk memastikan ketahanan energi bagi seluruh masyarakat melalui pendekatan 4A & 1S, yaitu *Availability*, *Accessibility*, *Acceptability*, dan *Affordability* dan *Sustainability*. Dalam menjalankan amanat tersebut, diperlukan kehandalan rantai pasokan energi dilakukan secara terintegrasi dari hulu ke hilir untuk menjamin ketersediaan energi, akses masyarakat terhadap energi pada harga yang terjangkau dalam jangka panjang dengan tetap memperhatikan perlindungan terhadap lingkungan hidup. Dalam menjalankan kegiatan operasionalnya, Perseroan memiliki relasi bisnis dalam bentuk *joint venture* sebanyak 6, kerja sama pengelolaan hulu migas. Informasi lengkap terkait rantai pasok dan relasi bisnis dapat dilihat di AR tahun 2022.

In accordance with the mandate of the law, the Company has been assigned by the Government of Indonesia to ensure energy security for all people through the 4A & 1S approach, namely *Availability*, *Accessibility*, *Acceptability*, and *Affordability* and *Sustainability*. In carrying out this mandate, it is necessary to have reliable energy supply chain carried out in an integrated manner from upstream to downstream to ensure energy availability, public access to energy at affordable prices in the long term while still paying attention to environmental protection. In carrying out its operational activities, the Company has business relations in the form of joint ventures as many as 6, cooperation in upstream oil and gas management. Complete information regarding supply chain and business relationships can be seen in the 2022 Annual Report.





## Partisipasi pada Inisiatif LST

[OJK C.5, GRI 2-28, GOV-3.A2, GOV-5.a3]

### Participation to ESG Initiatives

WE SUPPORT



UN Global Compact

Di tahun 2022, Perseroan masih terus berkomitmen penuh pada inisiatif keberlanjutan UN Global Compact serta berkomitmen pada prinsip-prinsipnya di bidang hak asasi manusia, tenaga kerja, lingkungan dan anti-korupsi.

In 2022, the Company continued to be fully committed to the UN Global Compact's sustainability initiative and its principles in the fields of human rights, labor, environment and anti-corruption.



Kadin NET Zero hub



Extractive Industries Transparency Initiative



UN Women



Indonesia Business Coalition for Women Empowerment

## Keanggotaan Asosiasi

[OJK C.5, GRI 2-28, GOV-3.A2, GOV-5.a3]

### Association Membership



Green Building Council Indonesia



Asia Pacific Natural Gas Vehicles Association



International Gas Union



Masyarakat energi terbarukan Indonesia  
Indonesian Renewable Energy Society



ASEAN Council on Petroleum



Forum Human Capital Indonesia



The World LPG Association



# Strategi Keberlanjutan

Sustainability Strategy





# Penjelasan Strategi Keberlanjutan

[OJK A.1, TCFD STR a, TCFD STR-b, TCFD STR-c, CCE-1.C3, CCE-1.C4, CDSB REQ-02]

## Explanation of Sustainability Strategy

Perseroan berkomitmen untuk menerapkan strategi keberlanjutan yang didasarkan pada standar LST Global sejalan dengan semakin meningkatnya perhatian *stakeholder* terhadap aspek LST:

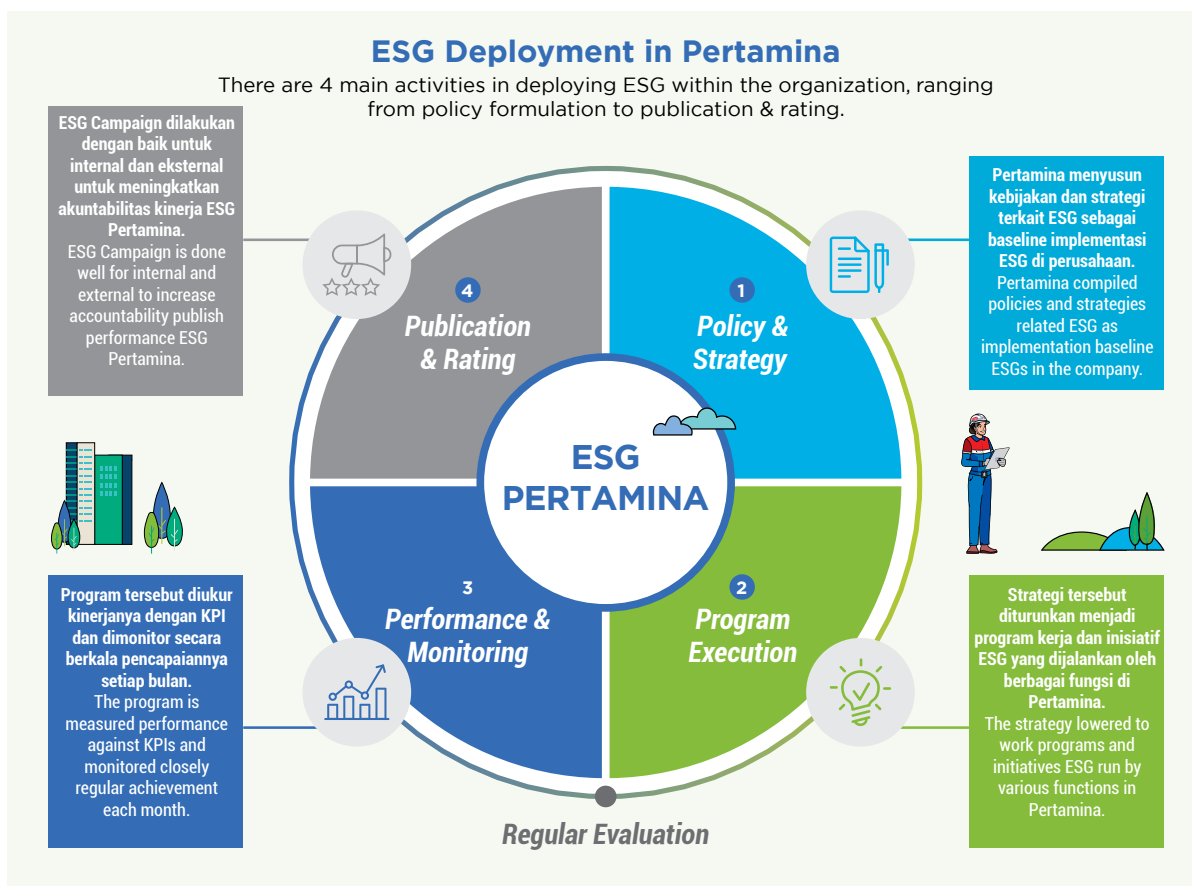
1. Sustainable Development Goals, Paris Agreement 2015, International Labor Organization (ILO), dan International Association of Oil and Gas Producers (IOGP)
2. UN Global Compact
3. Standar Pelaporan antara lain GRI, IPIECA, TCFD, dan SASB
4. Rating Sustainability, MSCI, ISS, CDP

Pengembangan strategi keberlanjutan bertujuan untuk menjaga keberlangsungan bisnis, menciptakan nilai tambah dan mendukung tercapai *enterprise value* melalui 3 (tiga) pilar utama yakni penyusunan *roadmap*, ambisi, inisiatif dan target, implementasi strategi komunikasi dan publikasi, serta penyusunan ESG *Financing Framework*. *Framework* ini dijalankan di tataran  *Holding* dan *Subholding* dengan menggunakan metode 4Ps yaitu penyusunan kebijakan, pelaksanaan program, pengukuran dan *monitoring* kinerja, publikasi kinerja dan *rating*.

The Company is committed to implementing a sustainability strategy that is based on Global ESG standards and aligned with the growing-of stakeholder interest in ESG aspects:

1. Sustainable Development Goals, Paris Agreement 2015, International Labor Organization (ILO), and International Association of Oil and Gas Producers (IOGP)
2. UN Global Compact
3. Reporting Standards, include GRI, IPIECA, TCFD, and SASB
4. Rating from Sustainability, MSCI, ISS, CDP

The sustainability strategy development aims to maintain business continuity, create added value, and support the achievement of enterprise value through 3 (three) main pillars, namely roadmap preparation, ambitions, initiatives and targets, implementation of communication and publication strategies, and ESG *Financing* preparation. This framework is implemented at the  *Holding* and *Subholding* level using the 4Ps method, namely policy formulation, program implementation, performance measurement and monitoring, performance publication and ratings.



Dalam mewujudkan ambisi keberlanjutan, Perseroan menetapkan 10 (sepuluh) Fokus Keberlanjutan beserta target jangka panjangnya yang mengacu pada standar LST global sebagai berikut:

In realizing its sustainability ambitions, the Company establishes 10 (ten) Sustainability Focuses along with their long-term targets that refer to global ESG standards, as follows:

**Tabel Fokus Keberlanjutan**

No.	Fokus Keberlanjutan Sustainability Focus	Inisiatif 2022 2022 Initiatives	TARGET YANG DIUKUR UNTUK 2025 QUANTIFIABLE TARGET FOR 2025
1.	<p><b>Menangani perubahan iklim</b> Addressing climate change</p> <p><b>Aspirasi/Aspiration:</b> Net zero di tahun 2060 Net Zero by 2060</p> <p><b>TPB/SDG:</b>  </p>	<ul style="list-style-type: none"> <li>• Peta Jalan Net Zero</li> <li>• Dekarbonisasi</li> <li>• Mewujudkan Kapasitas EBT</li> <li>• Zero Roadmap</li> <li>• Decarbonization</li> <li>• Deliver NRE Capacity</li> </ul>	<ul style="list-style-type: none"> <li>• Pengurangan emisi 23% dari Skenario BAU (- 9,1 juta ton CO2e) mengacu pada emisi <i>baseline</i> 2010 dan penghitungan emisi <i>rebaseline</i> 2021</li> <li>• 23% emission reduction from BAU Scenario (- 9.1 million ton CO2e) refer to 2010 baseline emission and 2021 rebaseline emission calculation</li> </ul>
2.	<p><b>Mengurangi jejak lingkungan</b> Reducing Environmental Footprint</p> <p><b>Aspirasi/Aspiration:</b> 1. Melampaui Kepatuhan Limbah dan Air 2. Manajemen Dampak Air Positif Bersih 1. Beyond Compliance Waste and Water 2. Management Net Positive Water Impact</p> <p><b>TPB/SDG:</b>  </p>	<p>Melampaui PROPER (Limbah dan Air) Beyond PROPER (Waste and Water)</p>	<ul style="list-style-type: none"> <li>• 98% lokasi yang beroperasi di area dengan dampak signifikan bersertifikat ISO 14001</li> <li>• Air: Mengurangi konsumsi air bersih sebesar 5% di area yang mengalami kerawanan air</li> <li>• 98% sites operated in significant impact area certified with ISO 14001</li> <li>• Water: Reduce fresh water consumption by 5% in water stressed area</li> </ul>
3.	<p><b>Melindungi keanekaragaman hayati</b> Protecting Biodiversity</p> <p><b>Aspirasi/Aspiration:</b> Dampak Positif Bersih (Net Positive Impact/NPI) pada Keanekaragaman hayati Net Positive Impact on Biodiversity</p> <p><b>TPB/SDG:</b>  </p>	<ul style="list-style-type: none"> <li>• Sistemisasi Program Keanekaragaman Hayati</li> <li>• Inisiatif Karbon Biru</li> <li>• Systemize Biodiversity Program</li> <li>• Blue Carbon Initiatives</li> </ul>	<p>50% NPI untuk fasilitas baru setelah 2022 50% NPI for new facility after 2022</p>
4.	<p><b>Meningkatkan Kesehatan dan keselamatan Kerja (K3)</b> Enhancing Occupational Health and Safety (OHS)</p> <p><b>Aspirasi/Aspiration:</b> Nihil Kecelakaan, Nihil Fatalitas Zero Accidents, Zero Fatalities</p> <p><b>TPB/SDG:</b>  </p>	<p>Peningkatan Aspek Kesehatan dan Keamanan Enhancement of Health and Safety Aspect</p>	<ul style="list-style-type: none"> <li>• 80% lokasi dengan operasi berisiko tinggi memiliki sertifikasi ISO 45001</li> <li>• <i>Zero Major Accident</i> (Fatalitas, Tumpahan Minyak, Kerusakan Properti)</li> <li>• 80% location with high risk operation certified ISO 45001</li> <li>• Zero Major Accident (Fatality, Oil Spill, Property Damage)</li> </ul>
5.	<p><b>Pencegahan insiden skala besar</b> Prevention of Large-Scale Incidents</p> <p><b>Aspirasi/Aspiration:</b> Nihil <i>loss of primary containment</i>/ tidak ada kebocoran di seluruh operasi, Tidak ada kecelakaan besar Nihil loss of primary containment Zero loss of primary containment/ no leaks across operations, No major accidents Zero loss of prim</p> <p><b>TPB/SDG:</b>  </p>	<p>Manajemen Keamanan Proses Process Safety Management</p>	<ul style="list-style-type: none"> <li>• 100% lokasi operasi berisiko tinggi di PERTAMINA Group telah melaksanakan proses <i>safety audit</i></li> <li>• 100% of high risk operation locations in PERTAMINA Group have carried out process safety audit</li> </ul>



Table of Sustainability Focus

TARGET YANG DIUKUR UNTUK 2030 QUANTIFIABLE TARGET FOR 2030	Realisasi 2022 2022 Realization
<ul style="list-style-type: none"> <li>• Pengurangan emisi 32% dari skenario BAU (-21,4 juta ton CO2e) mengacu pada emisi <i>baseline</i> 2010 dan perhitungan emisi <i>rebaseline</i> 2021</li> <li>• 32% emission reduction from BAU scenario (-21.4 million ton CO2e) refer to 2010 baseline emission and 2021 rebaseline emission calculation</li> </ul>	<ul style="list-style-type: none"> <li>• Penurunan Emisi Karbon Dioksida sebesar 7,9 juta ton CO2e mengacu <i>baseline</i> tahun 2010 berdasarkan skenario <i>business as usual</i></li> <li>• Implementasi inisiatif dekarbonisasi sebesar 524.232 ton CO2e</li> <li>• <i>Roadmap</i> NZE sebesar 100%</li> <li>• Instalasi <i>Green Energy Station</i> sebesar 349 unit</li> <li>• Penambahan Kapasitas Energi Baru Terbarukan 25,14 MW</li> <li>• Reduction of Carbon Dioxide Emissions by 7.9 million tons of CO2e referring to the 2010 baseline based on a business-as-usual scenario</li> <li>• Implementation of decarbonization initiatives of 524,232 tons of CO2e</li> <li>• <i>Roadmap</i> NZE sebesar 100%</li> <li>• The installation of 349 Green Energy Stations</li> <li>• New Renewable Energy Capacity Addition of 25.14 MW</li> </ul>
<ul style="list-style-type: none"> <li>• 100% lokasi yang beroperasi di area dengan dampak yang signifikan bersertifikat ISO 14001</li> <li>• Air: mengurangi konsumsi air bersih sebesar 10% di daerah yang kekurangan air</li> <li>• 100% sites operated in significant impact area certified with ISO 14001</li> <li>• Water: Reduce fresh water consumption by 10% in water stressed area</li> </ul>	<ul style="list-style-type: none"> <li>• Jumlah sertifikasi ISO 14001 di 192 lokasi (97%)</li> <li>• Penyelesaian <i>Roadmap</i> &amp; Pedoman Pengelolaan Efluen, Air, Limbah, &amp; Emisi</li> <li>• Telah tersedianya studi manajemen risiko terkait limbah dan air, serta aplikasi <i>water tool</i> untuk memantau kinerja penggunaan air</li> <li>• ISO 14001 certifications in 192 locations (97%)</li> <li>• Completion of <i>Roadmap</i> and Guidelines for Effluent, Water, Waste and Emissions Management</li> <li>• Availability of risk management studies that related to waste and water, as well as water tool applications to monitor water use performance</li> </ul>
<p>50% NPI untuk fasilitas baru setelah 2022 50% NPI for new facility after 2022</p>	<ul style="list-style-type: none"> <li>• <i>Systemize Biodiversity Program</i> sebesar 4 (empat) dokumen <i>biodiversity action plan</i></li> <li>• <i>Blue Carbon Initiative</i> sebesar 100 Ha <i>Mangrove</i></li> <li>• Systemize Biodiversity Program of 4 (four) documents biodiversity action plans</li> <li>• Blue Carbon Initiative of 100 Ha Mangroves</li> </ul>
<ul style="list-style-type: none"> <li>• 100% lokasi dengan operasi berisiko tinggi memiliki sertifikasi ISO 45001</li> <li>• <i>Zero Major Accident</i> (Fatalitas, Tumpahan Minyak, Kerusakan Properti)</li> <li>• 100% location with high risk operation certified ISO 45001</li> <li>• Zero Major Accident (Fatality, Oil Spill, Property Damage)</li> </ul>	<ul style="list-style-type: none"> <li>• Jumlah sertifikasi ISO 45001 di 44 lokasi (76%)</li> <li>• <i>HSSE Management System Excellence</i></li> <li>• Pelaksanaan <i>Health Risk Assessment</i>.</li> <li>• 75% of subsidiaries achieve "operate with manageable risk" SUPREME</li> <li>• LTIR 0,02, FAR 0,42, TRIR 0,09, <i>Zero Major Oil Spill</i></li> <li>• ISO 45001 certifications in 44 locations (76%)</li> <li>• <i>HSSE Management System Excellence</i></li> <li>• Implementation of Health Risk Assessment.</li> <li>• 75% of subsidiaries have achieved "operate with manageable risk" SUPREME</li> <li>• LTIR 0.02, FAR 0.42, TRIR 0.09, Zero Major Oil Spill</li> </ul>
<ul style="list-style-type: none"> <li>• 100% lokasi operasi berisiko tinggi di PERTAMINA Group telah melaksanakan Audit keselamatan proses</li> <li>• 100% of high risk operation locations in PERTAMINA Group have carried out process safety audit</li> </ul>	<p>Audit atau sertifikasi keselamatan pada tahun 2021 (sebagian besar berfokus pada keselamatan kerja):</p> <ul style="list-style-type: none"> <li>• SUPREME: 42% lokasi mendapatkan kategori "outcome yang cukup baik" (10 dari 24 lokasi yang diaudit)</li> <li>• ISO 45001: 44 sertifikat</li> </ul> <p>Safety audit or certification in 2021 (focused mostly on occupational safety):</p> <ul style="list-style-type: none"> <li>• SUPREME: 42% of locations earned the 'tolerable outcome' category (10 from 24 locations audited)</li> <li>• ISO 45001: 44 certificates</li> </ul>

Tabel Fokus Keberlanjutan

No.	Fokus Keberlanjutan Sustainability Focus	Inisiatif 2022 2022 Initiatives	TARGET YANG DIUKUR UNTUK 2025 QUANTIFIABLE TARGET FOR 2025
6.	<p><b>Menghormati dan memberdayakan Karyawan</b> Respecting and Empowering Employees</p> <p><b>Aspirasi/Aspiration:</b> Tingkat Turnover Rendah (&lt;3%), Nihil Pelecehan, Kesetaraan Gender Low Turnover Rate (&lt;3%), Zero Harassment, Gender Equality</p> <p><b>TPB/SDG:</b>  </p>	<ul style="list-style-type: none"> <li>Mempromosikan Hak Asasi Manusia</li> <li>Fungsi Operasional yang membidangi Lingkungan, Sosial, dan Tata Kelola (LST)</li> <li>Promoting Human Right</li> <li>ESG Operating Model</li> </ul>	<ul style="list-style-type: none"> <li>16,5% dari total karyawan <i>holding</i> dan <i>sub holding</i> dengan modul pelatihan HAM <i>online</i></li> <li>Minimal 17% keterwakilan perempuan pada posisi pimpinan di PERTAMINA Group (<i>holding, subholding</i>, dan anak perusahaan)</li> <li>16.5% of total employees at the holding and sub holding level with online human rights training module</li> <li>Minimum 17% of female representation in leader position at PERTAMINA Group (holding, sub holdings, and subsidiaries)</li> </ul>
7.	<p><b>Reorientasi Inovasi dan Penelitian</b> Innovation and Research Reorientation</p> <p><b>Aspirasi/Aspiration:</b> Teknologi dan Inovasi Rendah Karbon Low Carbon Technology and Innovation</p> <p><b>TPB/SDG:</b>  </p>	<p>Riset dan Inovasi yang Berfokus pada Keberlanjutan Sustainability Focused Research and Innovation</p>	<p>Minimal 30% dari realisasi investasi dan anggaran operasional untuk R&amp;D difokuskan pada dekarbonisasi Minimum 30% of realized investment and operational budget for R&amp;D focus on decarbonization</p>
8.	<p><b>Memperluas Keterlibatan dan dampak komunitas</b> Expanding Community Engagement and Impact</p> <p><b>Aspirasi/Aspiration:</b> Peningkatan kesejahteraan, kehidupan yang baik, dan akses energi secara nasional Improved welfare, wellbeing and access to energy nationwide</p> <p><b>TPB/SDG:</b>  </p>	<p>Meningkatkan Aksesibilitas ke Energi untuk Masyarakat Improve Accessibility to Energy for the Community</p>	<ul style="list-style-type: none"> <li>Total kapasitas energi dari Desa Energi Berdikari (DEB)</li> <li>Tenaga Matahari : 317.000 Watt Peak</li> <li>Biogas dan Biometana: 551.960 m3/tahun</li> <li>Mikrohidro Energi: 14.000 Watt</li> <li>Total energy capacity from Desa Energi Berdikari (DEB)</li> <li>Solar Energy: 317,000 Watt Peak</li> <li>Biogas and Biomethane: 551,960 m3/year</li> <li>Microhydro Energy: 14,000 Watt</li> </ul>
9.	<p><b>Memperkuat Keamanan Digital</b> Strengthening Digital Security</p> <p><b>Aspirasi/Aspiration:</b> Nihil Serangan Cyber Zero Cyber Attacks</p> <p><b>TPB/SDG:</b>  </p>	<p>Struktur dan Budaya Keamanan Cyber Cyber Security Structure and Culture</p>	<ul style="list-style-type: none"> <li>100% PERTAMINA Group (<i>Holding &amp; SH</i>) certified with ISO 27001</li> <li>Perolehan <i>cyber security maturity</i> BSSN Level 4 (Implementasi Terkelola) untuk <i>Holding</i> dan 2 SH, <i>Cyber Security Maturity</i> BSSN Level 3 (Implementasi Terdefinisi) untuk 4 SH.</li> <li><i>Phishing Prone</i> rate tetap terjaga di level kurang dari 10% sesuai standar IOC</li> <li>100% PERTAMINA Group (Holding &amp; SH) certified with ISO 27001</li> <li>Obtain <i>cyber security maturity</i> BSSN Level 4 (Managed Implementation) for Holding and 2 Sub Holdings, and <i>Cyber Security Maturity</i> BSSN Level 3 (Defined Implementation) for 4 Sub Holdings.</li> <li><i>Phishing Prone</i> rate is maintained at a level of less than 10% according to IOC standards</li> </ul>
10.	<p><b>Meningkatkan etika Perusahaan</b> Improving Corporate ethics</p> <p><b>Aspirasi/Aspiration:</b> Tidak ada toleransi terhadap fraud dan korupsi Zero tolerance on fraud and corruption</p> <p><b>TPB/SDG:</b>  </p>	<p>Meningkatkan Asesmen GCG Enhance GCG Assessment</p>	<ul style="list-style-type: none"> <li>80% entitas di bawah PERTAMINA Group (<i>holding, sub holding</i>, dan anak perusahaan) bersertifikat ISO 37001</li> <li>80% of entities under PERTAMINA Group (holding, sub holdings, and subsidiaries) are ISO 37001 certified</li> </ul>







Table of Sustainability Focus

TARGET YANG DIUKUR UNTUK 2030 QUANTIFIABLE TARGET FOR 2030	Realisasi 2022 2022 Realization
<ul style="list-style-type: none"> <li>• 33% dari total karyawan <i>holding</i> dan <i>sub holding</i> dengan modul pelatihan HAM online</li> <li>• Representasi perempuan minimal 20% pada posisi leader di PERTAMINA Group (<i>holding, subholding, dan anak perusahaan</i>)</li> <li>• 33% of total employees at the holding and sub holding level with online human rights training module</li> <li>• Minimum 20% female representation in leader position at PERTAMINA Group (holding, sub holdings, and subsidiaries)</li> </ul>	<ul style="list-style-type: none"> <li>• 8.491 pekerja mengikuti <i>respectful workplace training</i></li> <li>• Penerapan <i>sustainability organization</i> telah mencapai 100%.</li> <li>• Perempuan sebagai <i>Leader</i> di perusahaan sebesar 18.11%</li> <li>• Produktivitas Pekerja (<i>Revenue/FTE</i>) sebesar 2.073,34 USD Ribu/FTE</li> <li>• Keterlibatan Pekerja 83,36%</li> <li>• Milenial (Usia &lt;42 tahun) dalam <i>Nominated Talent</i> sebesar 45,42%</li> <li>• 8,491 employees participated in respectful workplace training</li> <li>• 100% of sustainability organization implementation</li> <li>• Woman as Leaders in the company 18.11%</li> <li>• Employee Productivity (Revenue/FTE) by 2,073.34 USD Thousand/FTE</li> <li>• Employee Involvement by 83.36%</li> <li>• 45.42% of millennials (Age &lt;42 years) in Nominated Talent</li> </ul>
<p>Minimal 44% dari realisasi investasi dan anggaran operasional untuk Riset dan Pengembangan difokuskan pada dekarbonisasi Minimum 44% of realized investment and operational budget for R&amp;D focus on decarbonization</p>	<ul style="list-style-type: none"> <li>• 7 Riset Keberlanjutan (CCUS, HVO, Bioethanol 2G, <i>Charging Station dan Swapping Station, Geothermal, Hydrogen dan Microalgae</i>)</li> <li>• 13% of the R&amp;D allocated budget for decarbonization in 2022</li> <li>• 7 Sustainability Research (CCUS, HVO, 2G Bioethanol, Charging Station and Swapping Station, Geothermal, Hydrogen and Microalgae)</li> <li>• 13% of the R&amp;D allocated budget for decarbonization in 2022</li> </ul>
<ul style="list-style-type: none"> <li>• Total kapasitas energi dari Desa Energi Berdikari (DEB)</li> <li>• Energi Matahari : 662.000 Watt Peak</li> <li>• Biogas dan Biometana: 663.560 m3/tahun</li> <li>• Mikrohidro Energi: 21.500 Watt</li> <li>• Total energy capacity from Desa Energi Berdikari (DEB)</li> <li>• Solar Energy: 662,000 Watt Peak</li> <li>• Biogas and Biomethane: 663,560 m3/year</li> <li>• Microhydro Energy: 21,500 Watt</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Improve accessibility energy to comm.</i> sebanyak 5 Desa Energi Berdikari, dengan total kapasitas energi listrik 18,4 kWp dan energi gas 190.320 m3 Ton/tahun</li> <li>• Implementasi Program <i>Creating Shared Value</i> dan Program TJSL BUMN Prioritas</li> <li>• Improve accessibility energy to community in 5 Energy Independent Villages, with a total capacity of 18.4 kWp of electrical energy and 190,320 m3 of gas energy/year</li> <li>• Implementation of the Creating Shared Value Program and Priority SOE's TJSL Program</li> </ul>
<ul style="list-style-type: none"> <li>• 100% PERTAMINA Group (<i>Holding, 6 SH &amp; 7 Subsidiaries certified with ISO 27001</i>)</li> <li>• Perolehan <i>Cyber Security Maturity BSSN Level 4</i> Implementasi Terkelola) untuk <i>Holding dan 6 Subholding</i></li> <li>• <i>Phishing Prone rate</i> tetap terjaga di level kurang dari 7%, atau angka acuan yang relevan untuk industri setara pada tahun tersebut</li> <li>• 100% PERTAMINA Group (Holding, 6 SH &amp; 7 Subsidiaries certified with ISO 27001)</li> <li>• Obtain Cyber Security Maturity BSSN Level 4 Managed Implementation) for Holding and 6 Sub Holdings</li> <li>• The Phishing Prone rate is maintained at less than 7%, or a relevant industry benchmark for the year</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Cyber Security Assessment</i> 4,27</li> <li>• <i>Phishing Prone Rate</i> 6,8%</li> <li>• 35.283 karyawan mengikuti <i>Training iSEC</i></li> <li>• <i>Digital Resilience Assessment (DRA) Index</i> 3,01</li> <li>• Cyber Security Assessment: 4.27</li> <li>• Phishing Prone Rate: 6.8%</li> <li>• 35,283 employees attended iSEC Training</li> <li>• Digital Resilience Assessment (DRA) Index: 3.01</li> </ul>
<ul style="list-style-type: none"> <li>• 95% entitas di bawah PERTAMINA Group (<i>holding, sub holding, dan anak perusahaan</i>) bersertifikat ISO 37001</li> <li>• 95% of entities under PERTAMINA Group (holding, sub holdings, and subsidiaries) are ISO 37001 certified</li> </ul>	<ul style="list-style-type: none"> <li>• 83% of entities, including subholding and subsidiaries under PERTAMINA Group are ISO 37001 certified in 2021</li> <li>• GCG Assessment Score sebesar 95,06%</li> <li>• Pengelolaan Pengaduan sebesar 85,85%</li> <li>• 83% of entities, including Sub Holdings and Subsidiaries under PERTAMINA Group are ISO 37001 certified in 2021</li> <li>• GCG Assessment Score of 95.06%</li> <li>• Whistleblowing System Management by 85.85%</li> </ul>

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# Proses Penentuan Topik Material

[GRI 3-1]

## Material Topics Determination Process



Dalam menyusun Laporan Keberlanjutan tahun 2022, Perseroan telah melakukan proses penentuan topik material dengan langkah-langkah sebagai berikut:

In compiling the 2022 Sustainability Report, the Company has conducted the process of defining material topics with the following steps:

### Step 1 Memahami Konteks Organisasi Understanding the Organizational Context

Pada tahap pertama, Perseroan melakukan identifikasi awal terkait aktivitas dan hubungan bisnisnya berbasis konteks keberlanjutan dan pemangku kepentingannya. Proses ini dilakukan dengan melibatkan pihak internal dan *stakeholders* eksternal Perseroan, melalui kegiatan *Focus Group Discussion* (FGD).

In the first phase, the Company conducted initial identification of its operations and commercial partnerships based on the sustainability context and its stakeholders. Through Focus Group Discussion (FGD), the Company's internal and external stakeholders were included in this process.

### Step 2 Mengidentifikasi Dampak Aktual dan Potensial Identify Actual and Potential Impacts

Pada tahap ini, Perseroan mengidentifikasi dampak aktual dan potensial pada aspek ekonomi, lingkungan dan sosial pada tiap-tiap aktivitas bisnis dan relasi bisnisnya dengan mempertimbangkan berbagai sumber informasi internal dan eksternal, serta dampak-dampak yang telah diidentifikasi dalam *GRI Sector Standards*, *IPIECA Sustainability Reporting Guidance*, *TCFD*, dan *SASB*. Identifikasi dampak tersebut, dilakukan melalui kegiatan FGD dan penyebaran kuesioner kepada *stakeholder* internal dan eksternal, yang menghasilkan identifikasi 27 topik material.

At this phase, the Company determines the actual and potential impacts on the economic, environmental, and social aspects of each business activity and business relations by considering various sources of internal and external information, as well as the impacts identified in the *GRI Sector Standards*, *IPIECA Sustainability Reporting Guidance*, *TCFD*, and *SASB*. Identification of these impacts was conducted through FGD activities and distributing questionnaires to internal and external stakeholders, which resulted in the identification of 27 material topics.

### Step 3 Asesmen Signifikansi Dampak Impact Significance Assessment

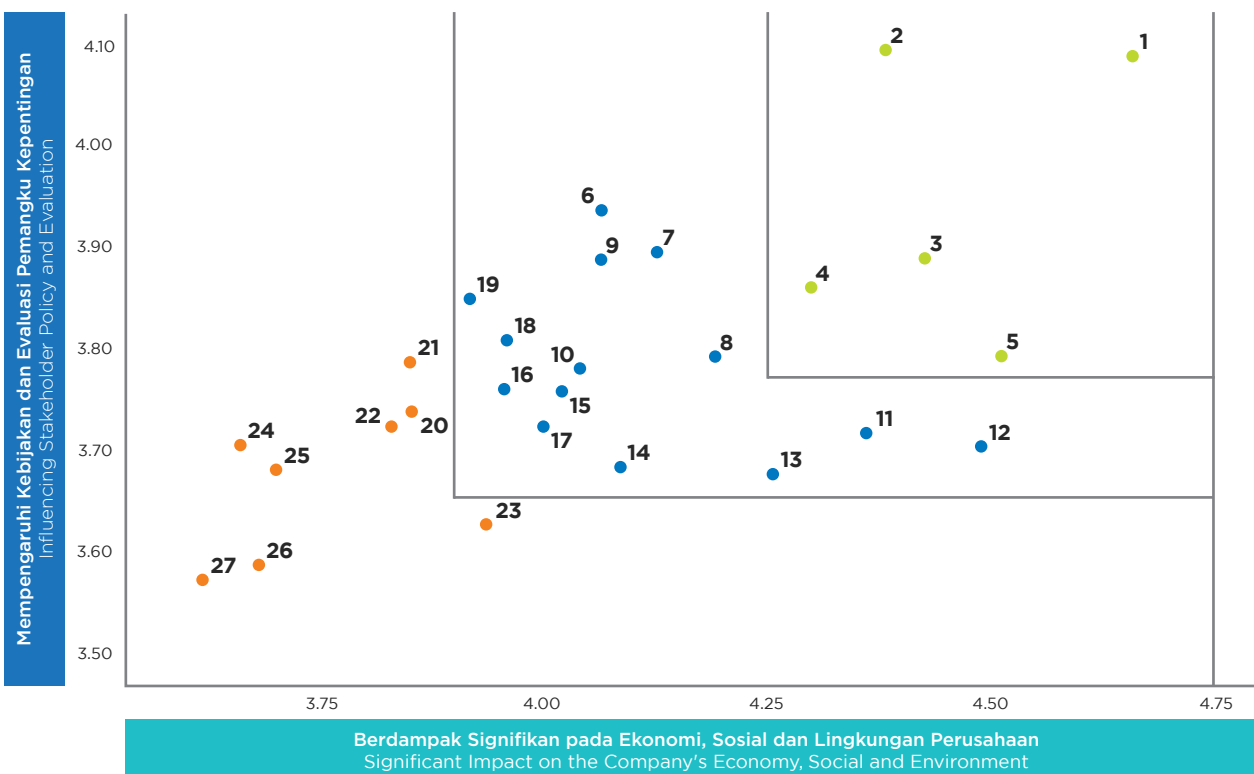
Pada tahap ini, Perseroan melakukan asesmen signifikansi dari dampak-dampak yang telah teridentifikasi pada tahap sebelumnya untuk menetapkan skala prioritas dengan menggunakan analisis kuantitatif dan kualitatif, serta melakukan konsultasi dengan berbagai pemangku kepentingan. Kegiatan prioritas memungkinkan Perseroan untuk mengambil tindakan untuk menangani dampak-dampak tersebut dan untuk menentukan topik-topik material yang akan dilaporkan dalam Laporan Keberlanjutan. Hasil asesmen signifikansi dampak disajikan pada grafik di bawah ini. [GRI 3-2]

At this phase, the Company assessed the significance of the impacts that were identified in the previous phase to determine priority scales through quantitative and qualitative analysis, as well as conducting stakeholder consultations. Setting priorities helps the Company identify the important topics to be reported in the Sustainability Report and take action to address these impacts. The results of the impact significance assessment are presented in the following graph: [GRI 3-2]

### Step 4 Prioritasi Dampak yang Paling Signifikan untuk Pelaporan Prioritize the Most Significant Impacts for Reporting

Berdasarkan signifikansinya, Perseroan menetapkan prioritas atas topik material yang telah disetujui oleh Direksi, yaitu Keselamatan dan Kesehatan Kerja, Anti Korupsi, Emisi, Kepegawaian, dan Energi. Topik tersebut mengalami perubahan dibandingkan dengan tahun 2021, dikarenakan perbedaan pertimbangan dalam signifikansi dampak isu-isu keberlanjutan. [GRI 3-2]

Based on its significance, the Company determines priority on material topics that have been approved by the Board of Directors, namely Occupational Safety and Health, Anti-Corruption, Emissions, Employment, and Energy. Due to various considerations regarding the significance of the effects of sustainability issues, the topics have changed from 2021. [GRI 3-2]



#### Highly Critical Material Issue

- |                                    |                                   |
|------------------------------------|-----------------------------------|
| 1. Keselamatan dan Kesehatan Kerja | 1. Occupational Safety and Health |
| 2. Anti Korupsi                    | 2. Anti-Corruption                |
| 3. Emisi                           | 3. Emissions                      |
| 4. Kepegawaian                     | 4. Employment                     |
| 5. Energi                          | 5. Energy                         |










#### Critical Material Issue

- |   |  |
|---|--|
| 6. Pajak                                  | 6. Taxes                               |
| 7. Praktik Keamanan dan Hak Asasi Manusia | 7. Security Practices and Human Rights |
| 8. Hubungan Tenaga Kerja/Manajemen        | 8. Labor/Management Relations          |
| 9. Respon terhadap Perubahan Iklim        | 9. Response to Climate Change          |
| 10. Keamanan Digital/Siber                | 10. Digital/Cyber Security             |
| 11. Kinerja Ekonomi                       | 11. Economic Performance               |
| 12. Limbah                                | 12. Waste                              |
| 13. Kesehatan dan Keselamatan Pelanggan   | 13. Customer Health and Safety         |
| 14. Air dan Efluen                        | 14. Water and Effluent                 |
| 15. Keanekaragaman Hayati                 | 15. Biodiversity                       |
| 16. Dampak Ekonomi Tidak Langsung         | 16. Indirect Economic Impact           |
| 17. Keberagaman dan Kesempatan Setara     | 17. Diversity and Equal Opportunity    |
| 18. Pelatihan dan Pendidikan              | 18. Training and Education             |
| 19. Masyarakat Lokal                      | 19. Local Communities                  |

#### Moderate Material Issue

- |   |  |
|---|--|
| 20. Praktik Pengadaan Barang dan Jasa             | 20. Goods and Services Procurement Practices         |
| 21. Non Diskriminasi                              | 21. Non-Discrimination                               |
| 22. Penutupan dan Rehabilitasi                    | 22. Closure and Rehabilitation                       |
| 23. Kebebasan Berserikat dan Perundingan Kolektif | 23. Freedom of Association and Collective Bargaining |
| 24. Hak-Hak Masyarakat Adat                       | 24. Rights of Indigenous Peoples                     |
| 25. Kebijakan Publik                              | 25. Public Policy                                    |
| 26. Perilaku Anti Persaingan                      | 26. Anti-competitive Behavior                        |
| 27. Keberadaan Pasar                              | 27. Market Presence                                  |

Topik material dan batasan topik yang disajikan dalam laporan ini adalah sebagai berikut.

Aspek Aspect	Topik Material Material Topics	Indeks Index	Pemangku Kepentingan yang Terdampak Affected Stakeholders	Risiko/Peluang Risk/Opportunity
Sosial Social	Keselamatan dan Kesehatan Kerja (K3) Occupational Safety and Health (OSH)  TCFD Pillars: 	GRI 403	<ul style="list-style-type: none"> <li>• Pelanggan</li> <li>• Pemegang Saham</li> <li>• Pekerja</li> <li>• Customers</li> <li>• Shareholders</li> <li>• Employees</li> </ul>	<ul style="list-style-type: none"> <li>• Terjadinya <i>Major Accident: Process Safety Event Tier 1 dan 2 dan Loss of Primary Containment (LOPC)</i></li> <li>• Kecelakaan Kerja dan <i>Fatality</i></li> <li>• Terjadinya Potensi Penyakit Akibat Kerja Penurunan kualitas layanan kesehatan</li> <li>• Occurrence of Major Accidents: Process Safety Event Tier 1 and 2 and Loss of Primary Containment (LOPC),</li> <li>• Occupational Accidents and Fatality</li> <li>• Occurrence of Potential Occupational Illness</li> <li>• Decreased quality of health services</li> </ul>
	Kepegawaian Employment  TCFD Pillars: 	GRI 401	<ul style="list-style-type: none"> <li>• Pelanggan</li> <li>• Pemegang Saham</li> <li>• Pekerja</li> <li>• Customers</li> <li>• Shareholders</li> <li>• Employees</li> </ul>	<ul style="list-style-type: none"> <li>• Komunikasi perusahaan dan pekerja tidak lancar</li> <li>• Hubungan antara perusahaan dan pekerja tidak baik</li> <li>• Communication between the Company and employees is not going well</li> <li>• The Company and employees have troubled relationship.</li> </ul>
Ekonomi Economy	Anti Korupsi Anti-Corruption  TCFD Pillars: 	GRI 205	<ul style="list-style-type: none"> <li>• Pemegang Saham</li> <li>• Pekerja</li> <li>• Shareholders</li> <li>• Employees</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Anti-Fraud Program</i> untuk meningkatkan <i>awareness</i> pekerja PERTAMINA terhadap <i>fraud</i> tidak tercapai sesuai target</li> <li>• Munculnya gugatan/ tuntutan hukum atas hasil audit investigasi</li> <li>• The Anti-Fraud Program was not achieved according to the target</li> <li>• The emergence of legal actions based on the findings of investigational audits</li> </ul>
Lingkungan Environment	Energi Energy  TCFD Pillars: 	GRI 302	<ul style="list-style-type: none"> <li>• Masyarakat</li> <li>• Pelanggan</li> <li>• Pekerja</li> <li>• Community</li> <li>• Customers</li> <li>• Employees</li> </ul>	Tidak terpenuhinya <i>Environmental Materiality</i> di ESG Environmental Materiality is not fulfilled in ESG
	Emisi Emissions  TCFD Pillars: 	GRI 305	<ul style="list-style-type: none"> <li>• Masyarakat</li> <li>• Pelanggan</li> <li>• Pemegang saham</li> <li>• Regulator</li> <li>• Investor</li> <li>• Pekerja</li> <li>• Community</li> <li>• Customers</li> <li>• Shareholders</li> <li>• Regulators</li> <li>• Investors</li> <li>• Employees</li> </ul>	<ul style="list-style-type: none"> <li>• Tidak terpenuhinya <i>Environmental Materiality</i></li> <li>• Pengembangan dan/atau perluasan produk/ jasa rendah emisi</li> <li>• Penggunaan teknologi baru</li> <li>• Penggunaan sumber energi rendah emisi</li> <li>• Environmental Materiality is not fulfilled</li> <li>• Development and/or expansion of low emission products/services</li> <li>• Use of new technology</li> <li>• Use of low emission energy sources</li> </ul>

The following list, outlines the material topics and topic boundaries presented in this report

Alasan Bersifat Material [GRI 3-3] Material Reasons	Respon Response
<p>Topik K3 menjadi isu prioritas yang dipilih oleh <i>stakeholder</i> internal dan eksternal, mengingat Perseroan merupakan perusahaan dengan risiko tinggi dalam kegiatan aktivitas bisnis.</p> <p>OSH topic is a priority issue that is chosen by internal and external stakeholders, considering that the Company is a company with high-risk business activities.</p>	<ul style="list-style-type: none"> <li>• Memastikan pengelolaan risiko di <i>Subholding</i>.</li> <li>• Melakukan dan <i>monitoring</i> terhadap <i>major accident</i></li> <li>• Memastikan efektivitas program kompetensi pekerja</li> <li>• Melakukan <i>Health &amp; Hazard Risk Assessment Control</i></li> <li>• Meningkatkan kesadaran Pekerja terkait pencegahan penyakit akibat kerja</li> <li>• Ensure risk management in each Sub Holding.</li> <li>• Manage and monitor major accidents</li> <li>• Ensuring the effectiveness of employee competency programs</li> <li>• Conduct Health &amp; Hazard Risk Assessment Control</li> <li>• Increase employees' awareness of occupational illness prevention</li> </ul>
<p>Topik kepegawaian merupakan fokus dari Perseroan yang meyakini bahwa pekerja merupakan aset terbesar dari perusahaan. Hal ini sejalan dengan topik prioritas dari <i>stakeholder</i> internal, pemegang saham, dan kontraktor.</p> <p>For the company, employment topic is important, which considers that employees are Company's greatest asset. This is in line with the priority topics of internal stakeholders, shareholders and contractors.</p>	<ul style="list-style-type: none"> <li>• <i>Monitoring</i> dan Penguatan HC <i>Contact Center</i> 135</li> <li>• Memaksimalkan pemanfaatan <i>Internal Social Media</i></li> <li>• Pelaksanaan LKS Bipartit Secara Rutin</li> <li>• Pengelolaan Komunitas pekerja</li> <li>• Monitoring and Strengthening of HC Contact Center 135</li> <li>• Maximize the utilization of Internal Social Media</li> <li>• Regularly conduct Bipartite Cooperation Institution</li> <li>• Community Management for employee</li> </ul>
<p>Anti korupsi menjadi topik prioritas dari <i>stakeholder</i> internal dan eksternal. Selaras dengan hal itu, Perseroan juga berkomitmen penuh untuk tidak mentolerir segala bentuk korupsi.</p> <p>Anti-corruption is a priority topic for internal and external stakeholders. The Company is also fully committed not to tolerate to any form of corruption.</p>	<ul style="list-style-type: none"> <li>• Melakukan <i>monitoring fraud awareness</i> program secara periodik dan melaporkan hasilnya kepada Manajemen</li> <li>• Peningkatan kompetensi auditor terkait audit investigasi</li> <li>• Pelaksanaan <i>review</i> berjenjang atas temuan dan bukti-bukti audit</li> <li>• Periodically monitor the fraud awareness program and report the results to the Management</li> <li>• Improve auditor competence on investigational audits</li> <li>• Carry out a tiered review of the audit findings and evidence</li> </ul>
<p>Topik Energi merupakan topik material utama dan topik material tertinggi yang menjadi prioritas bagi <i>stakeholder</i> eksternal maupun internal Perseroan.</p> <p>The Energy topic is the main and the highest material topic which is a priority for the Company's external and internal stakeholders.</p>	<ul style="list-style-type: none"> <li>• Melakukan program efisiensi energi dan sumber daya;</li> <li>• Mengembangkan energi berbasis sumber daya baru dan terbarukan</li> <li>• Conduct energy and resource efficiency programs.</li> <li>• Developing new resource energy based and renewable</li> </ul>
<p>Topik emisi termasuk ke dalam topik material tertinggi sesuai prioritas <i>stakeholder</i> internal, <i>expert</i>, perguruan tinggi, serta gabungan <i>stakeholder</i>. Selain itu, topik emisi telah menjadi topik material <i>Sustainability Report</i> Perseroan sejak tahun 2012.</p> <p>The emissions topic is considered as the highest material topics according to the priorities of internal stakeholders, experts, universities, and a combination of stakeholders. In addition, the emissions topic has been a material topic for the Company's Sustainability Report since 2012.</p>	<ul style="list-style-type: none"> <li>• Mengevaluasi <i>roadmap</i> dekarbonisasi;</li> <li>• Membuat Sistem Tata Kerja (STK)/PERTAMINA Standard/Protokol/Juknis Reduksi Emisi;</li> <li>• <i>Monitoring</i> dan konsolidasi strategi reduksi emisi</li> <li>• <i>Workshop</i> Dekarbonisasi dan Perubahan Iklim</li> <li>• Evaluate the decarbonization roadmap;</li> <li>• Create Work Procedure System/PERTAMINA Standard/Protocol/Technical Manual on Emission Reduction;</li> <li>• Monitor and consolidate emission reduction strategies</li> <li>• Decarbonization and Climate Change Workshop</li> </ul>

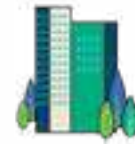
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Strategi Keberlanjutan  
Strategi Keberlanjutan

# Hubungan Dengan Pemangku Kepentingan

[OJK E.4, GRI 2-29, GOV-1.A2, SOC-6.C1, SOC-9.C2, SOC-12.A2]

## Relationship with Stakeholders



Asesmen untuk memetakan pemangku kepentingan dilakukan berdasarkan Standar AA1000 *Stakeholder Engagement Standard* (SES) 2015, sebagai berikut.

The assessment to do the stakeholders mapping is carried out based on the 2015 AA1000 *Stakeholder Engagement Standard* (SES), as follows.

Pelibatan Pemangku Kepentingan, Tujuan, Metode <i>Engagement</i> , Issue dan Concern			
Stakeholder Engagement, Purpose, Engagement Method, Issue and Concern			
Pemangku Kepentingan dan Signifikansinya Stakeholders and Their Significance	Tujuan Purpose	Metode Engagement Engagement Method	Isu dan Kepedulian Issue and Concern
<p><b>Pemegang Saham</b> Pemegang saham sebagai pemilik modal, sehingga diperlukan dialog komunikasi terkait strategi dan kinerja Perseroan untuk membangun kepercayaan.</p> <p><b>Shareholders</b> Shareholders are the owners of capital, a communication dialog about the Company's strategy and performance is required to build trust.</p>	<p>Mengomunikasikan kinerja pengelolaan perusahaan yang efisien serta berkelanjutan. To communicate the performance of the company's efficient and sustainable management.</p>	<p>Pelaporan kinerja rutin sesuai kebutuhan, termasuk penyelenggaraan Rapat Umum Pemegang Saham (RUPS) Tahunan, RUPS Sirkuler, dan RUPS Luar Biasa Routine performance reporting as needed, including by Holding the Annual General Meeting of Shareholders (GMS), Circular GMS, and Extraordinary GMS</p>	<p>Informasi tentang arahan strategis, kinerja keuangan dan operasional, serta aksi Perseroan Information on the Company's strategic direction, financial, operational performance, and actions</p>
<p><b>Pelanggan</b> Memberikan produk yang aman, setara kepada seluruh pelanggan Perseroan.</p> <p><b>Customers</b> Providing safe and equal products to all the Company's customers.</p>	<p>Memastikan ketersediaan produk dan jasa dengan memperhatikan aspek mutu, keselamatan dan kesehatan pelanggan, serta memberikan informasi transparan terkait produk dan jasa To ensure the availability of products and services by paying attention to quality, safety and health of customers, as well as to provide clear information about products and services</p>	<ul style="list-style-type: none"> <li>Layanan respon pengaduan terpusat 24/7 dan pelaksanaan survei kepuasan pelanggan</li> <li>Kegiatan dan program <i>engagement</i> khusus dengan pelanggan</li> <li>24/7 centralized complaint response service and customer satisfaction survey implementation</li> <li>Special engagement activities and programs with customers</li> </ul>	<ul style="list-style-type: none"> <li>Pelayanan pengaduan pelanggan</li> <li>Kepuasan pelanggan</li> <li>Praktik pemasaran yang etis</li> <li>Customer complaint service</li> <li>Customer satisfaction</li> <li>Ethical marketing practices</li> </ul>
<p><b>Pekerja</b> Pekerja merupakan suatu hal yang fundamental bagi Perseroan, sehingga diperlukan perbaikan aspek Kesehatan, dan Keselamatan Kerja (K3), kesejahteraan serta pengembangan kompetensi.</p> <p><b>Employees</b> Employees are a fundamental matter for the Company, so it is important to improve the aspects of Occupational Health and Safety (OHS), welfare and competence development.</p>	<ul style="list-style-type: none"> <li>Memenuhi hak-hak normatif pekerja, kebebasan berserikat, kesempatan yang setara, dan non diskriminasi.</li> <li>Menjamin upaya melindungi keselamatan dan kesehatan kerja (K3)</li> <li>Peningkatan kompetensi melalui pelatihan, pendidikan dan pengembangan pekerja</li> <li>To fulfill employees' normative rights, freedom of association, equal opportunity, and non-discrimination.</li> <li>To ensure efforts to protect occupational safety and health (OHS)</li> <li>To improve employee competence through training, education and development</li> </ul>	<ul style="list-style-type: none"> <li>Penyusunan Perjanjian Kerja Bersama (PKB) secara berkala</li> <li>Pelaksanaan Survei Indeks Keterikatan Karyawan</li> <li>Pembuatan kebijakan terkait sumber daya manusia serta penciptaan iklim kerja yang positif</li> <li>Penerapan pedoman pengelolaan dan protokol HSSE kepada seluruh pekerja</li> <li>Regularly comply the Collective Labor Agreements (CLA).</li> <li>Implement the Employee Engagement Index Survey</li> <li>Making policies related to human resources and creating a positive work climate</li> <li>Apply the management guidelines and HSSE protocols to all employees</li> </ul>	<ul style="list-style-type: none"> <li>Perlindungan hak pekerja</li> <li>Keselamatan dan Kesehatan Kerja</li> <li>Protection of employees' rights</li> <li>Occupational Health and Safety (OHS)</li> </ul>
<p><b>Investor</b> Investor sebagai entitas yang berperan dalam menunjang penyediaan permodalan untuk pertumbuhan Perseroan, sehingga diperlukan komunikasi dua arah untuk membangun kepercayaan.</p> <p><b>Investors</b> Investors are entities that play a role in supporting the provision of capital for the growth of the Company, so that two-way communication is required to build trust.</p>	<p>Mengomunikasikan kesinambungan usaha dan operasional, kinerja finansial, serta pengelolaan LST untuk potensi investasi di masa depan To communicate business and operational continuity, financial performance, and ESG management for potential future investments</p>	<ul style="list-style-type: none"> <li>Komunikasi dan korespondensi dilaksanakan secara berkala</li> <li>Menyampaikan dan menerbitkan laporan tahunan yang didalamnya termasuk Laporan Keuangan serta Laporan Keberlanjutan</li> <li>Communication and correspondence are conducted regularly</li> <li>Deliver and publish annual reports such as Financial and Sustainability Reports</li> </ul>	<ul style="list-style-type: none"> <li>Informasi terkait kinerja keuangan dan operasional</li> <li><i>Sustainability performance</i></li> <li>Information related to financial and operational performance</li> <li>Sustainability performance</li> </ul>

## Pelibatan Pemangku Kepentingan, Tujuan, Metode *Engagement*, Issue dan *Concern*

Stakeholder Engagement, Purpose, Engagement Method, Issue and Concern

Pemangku Kepentingan dan Signifikansinya Stakeholders and Their Significance	Tujuan Purpose	Metode <i>Engagement</i> Engagement Method	Isu dan Kepedulian Issue and Concern
<p><b>Regulator, Legislatif dan Lembaga Pengawas</b> Perseroan senantiasa bermitra dengan regulator dalam meningkatkan standar industri pada praktik keberlanjutan.</p> <p><b>Regulators, Legislatures, and Supervisory Agency</b> The Company always partners with regulators to improve industry standards on sustainability practices.</p>	<p>Mengomunikasikan kepatuhan seluruh regulasi, termasuk pelaksanaan tanggung jawab sosial dan lingkungan, penerapan Tata Kelola Perusahaan yang Baik.</p> <p>To communicate compliance with all regulations, including implementation of social and environmental responsibility, implementation of GCG.</p>	<ul style="list-style-type: none"> <li>Melakukan Rapat Dengar Pendapat, kunjungan kerja, FGD, audiensi, <i>courtesy call</i>.</li> <li>Pelaporan pelaksanaan kinerja dan GCG</li> <li>Conduct hearings, working visits, FGD, courtesy calls, and other forums</li> <li>Submit reporting on performance and GCG implementation</li> </ul>	<ul style="list-style-type: none"> <li>Kepatuhan hukum</li> <li>Program untuk menumbuhkan praktik tempat kerja yang bertanggung jawab</li> <li>Legal compliance</li> <li>Programs to foster responsible workplace practices</li> </ul>
<p><b>Masyarakat di Sekitar Wilayah Usaha Perseroan</b> Perseroan berkomitmen untuk mengembangkan dan bekerja sama dengan masyarakat sekitar wilayah operasional dalam mewujudkan Tujuan Pembangunan Berkelanjutan.</p> <p><b>Communities Around the Company's Business Area</b> The Company is committed to developing and collaborating with communities around its operational areas to achieve the Sustainable Development Goals.</p>	<p>Kepatuhan dalam pengelolaan dampak sosial terkait peningkatan kesejahteraan dan pemberdayaan masyarakat, melalui pelaksanaan TJSL.</p> <p>Compliance in managing social impacts related to increase welfare and community empowerment through the implementation of Social and Environmental Responsibility (TJSL)</p>	<ul style="list-style-type: none"> <li>Melaksanakan program TJSL di seluruh wilayah operasi Perseroan, dengan menyertakan konsultasi publik dan musyawarah perencanaan pembangunan (musrenbang) rutin.</li> <li>Implement TJSL program in all the Company's operational areas, including regular public consultations and development planning meetings.</li> </ul>	<p>Implementasi Program TJSL</p> <p>Implementation of TJSL Programs</p>
<p><b>Media Massa</b> Perseroan senantiasa melibatkan media massa secara rutin untuk mempublikasikan kinerja keberlanjutan Perseroan.</p> <p><b>Mass Media</b> The Company always involves the mass media regularly to publish the sustainability performance.</p>	<p>Menyediakan keterbukaan informasi kinerja dan aksi korporasi Perseroan</p> <p>To provide disclosure of information regarding the Company's performance and corporate actions</p>	<p>Melakukan komunikasi dengan media melalui <i>press release</i>, <i>press conference</i>, wawancara, serta lainnya.</p> <p>Communicate with the media through press releases, press conferences, interviews, and others</p>	<p>Pemberitaan terkait berbagai informasi yang dimiliki Perseroan</p> <p>News about the Company's various information</p>
<p><b>Kontraktor</b> Perseroan senantiasa bekerja sama dengan mitra guna memastikan bahwa kegiatan operasional Perseroan telah dilakukan selaras dengan K3, serta kepentingan terbaik kedua pihak</p> <p><b>Contractors</b> The Company always collaborates with partners to ensure that the Company's operational activities are carried out in accordance with OHS, as well as the best interests of both parties</p>	<p>Menjalin hubungan kerja sama yang saling menguntungkan dan berkelanjutan, serta memperhatikan aspek K3</p> <p>To establish mutually beneficial and sustainable cooperative relationships that prioritize OHS aspects</p>	<ul style="list-style-type: none"> <li>Penerapan <i>Contractor Safety Management System</i> (CSMS), disertai evaluasi secara berkala sesuai kebutuhan</li> <li>Implementation of the Contractor Safety Management System (CSMS), accompanied by periodic evaluations as needed.</li> </ul>	<ul style="list-style-type: none"> <li>Kesehatan dan Keselamatan Kerja</li> <li>Pengadaan barang dan jasa yang bertanggung jawab</li> <li>Occupational Health and Safety</li> <li>Responsible procurement of goods and services</li> </ul>
<p><b>Lembaga Swadaya Masyarakat</b> Perseroan bekerja sama dengan LSM dalam meninjau kinerja keberlanjutan yang telah dilakukan oleh Perseroan.</p> <p><b>Non-Governmental Organization</b> The Company cooperates with NGOs in reviewing the sustainability performance that has been carried out by the Company.</p>	<p>Menyediakan informasi terkait pengelolaan LST yang dilakukan Perseroan</p> <p>To provide information related to the management of ESG by the Company</p>	<ul style="list-style-type: none"> <li>Menyampaikan kinerja Perusahaan melalui media dan saluran informasi lainnya.</li> <li>Melakukan komunikasi, FGD dan kerja sama program.</li> <li>Communicate the Company's performance through media and other information channels.</li> <li>Conduct communication, FGD and program cooperation.</li> </ul>	<ul style="list-style-type: none"> <li>Informasi terkait kinerja keberlanjutan</li> <li>Pelaksanaan TJSL</li> <li>Information related to sustainability performance</li> <li>Implementation of TJSL</li> </ul>
<p><b>Lembaga Penelitian dan Perguruan Tinggi</b> Perseroan bekerja sama dengan Lembaga Penelitian dan Perguruan tinggi untuk melakukan eksplorasi dan inovasi terkait produk rendah karbon.</p> <p><b>Research Institutes and Universities</b> The Company cooperates with Research Institutes and Universities to explore and innovate low carbon products.</p>	<p>Riset dan pengembangan teknologi yang mendukung kegiatan usaha dan kelangsungan bisnis Perusahaan.</p> <p>Technology research and development that support the Company's business activities and continuity.</p>	<ul style="list-style-type: none"> <li>Kerja sama riset, kegiatan, dan publikasi ilmiah.</li> <li>Cooperation on research, activities, and scientific publications.</li> </ul>	<ul style="list-style-type: none"> <li>Penelitian dan pengembangan</li> <li><i>Sharing of industry best practices</i></li> <li>Research and development</li> <li>Sharing of industry best practices</li> </ul>

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Strategi Keberlanjutan





# Strategi Keberlanjutan Terkait Perubahan Iklim

## Sustainability Strategy Related to Climate Change

### KEBIJAKAN TRANSISI ENERGI

[TCFD RM-A, TCFD RM-B, TCFD RM-C, CCE-1. C3, GOV-2.C2, CCE-3.A2, EM-MD-160A.1]

### ENERGY TRANSITION POLICY

[TCFD RM-A, TCFD RM-B, TCFD RM-C, CCE-1. C3, GOV-2.C2, CCE-3.A2, EM-MD-160A.1]

Berdasarkan data dari International Energy Agency (IEA), Indonesia merupakan salah satu negara penyumbang emisi terbesar dunia yang menghasilkan 602,6 juta ton karbon di 2021. Presiden Republik Indonesia dalam Forum COP 26 menyatakan komitmennya untuk mencapai *Net Zero Target* pada tahun 2060 dan meningkatkan target penurunan emisi gas rumah kaca (GRK) menjadi 31,89 persen dengan upaya sendiri, dan 43,20 persen dengan bantuan internasional pada tahun 2030, yang tertuang dalam dokumen Nationally Determined Contribution (NDC).

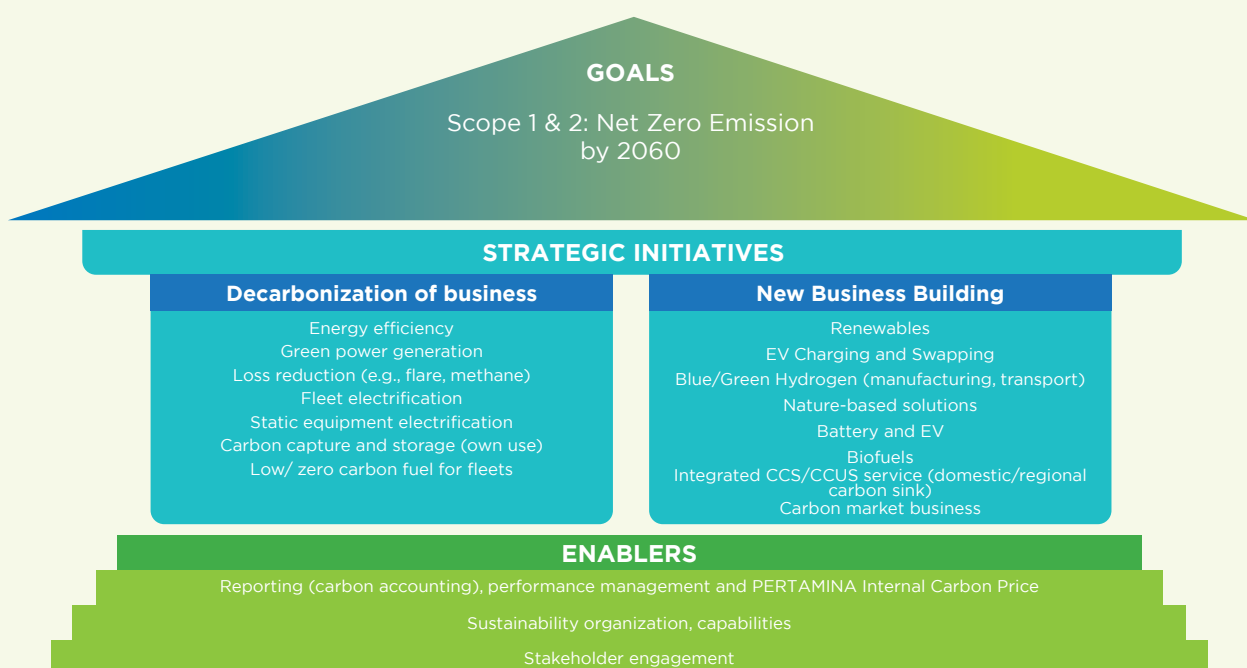
Perseroan berkomitmen untuk mendukung target pemerintah Indonesia dalam mencapai *Net Zero* pada tahun 2060 dengan meningkatkan porsi EBT dalam bauran energi Perseroan dari yang sebelumnya 1% di 2021 menjadi 17% di 2030, serta peningkatan porsi gas dari 3% menjadi 19%. Target ini didukung oleh strategi investasi jangka panjang Perseroan pada tahun 2030 yang terdiri dari 14% anggaran investasi untuk gas dan EBT.

Upaya di atas dilakukan untuk menghadapi transisi energi dan mengatasi risiko perubahan iklim yang dituangkan dalam PERTAMINA *Net Zero Emission Roadmap* sebagai berikut.

According to International Energy Agency (IEA) data, Indonesia is one of the world's largest emitting countries, which produced 602.6 million tons of carbon in 2021. The President of the Republic of Indonesia in the COP 26 Forum stated his commitment to achieving the *Net Zero Target* by 2060 and increasing the target of greenhouse gas (GHG) emissions reduction to 31.89 percent with its own effort, and 43.20 percent with international assistance by 2030, as stated in the Nationally Determined Contribution (NDC) document.

the Company is committed to supporting the Indonesian government's target of achieving *Net Zero* in 2060 by increasing the portion of NRE in the Company's energy mix from the previous 1% in 2021 to 17% in 2030, as well as increasing the portion of gas from 3% to 19%. This target is supported by the Company's long-term investment strategy, which includes 14% of the investment budget for gas and NRE in 2030.

The above efforts are made to deal with the energy transition and overcome the risks of climate change as outlined in the PERTAMINA *Net Zero Emission Roadmap* as follows.



Strategi inisiatif yang dimiliki Perseroan meliputi dekarbonisasi kegiatan bisnis dan pengembangan bisnis hijau baru. Kedua strategi inisiatif tersebut mencakup strategi jangka pendek, jangka menengah, dan jangka panjang sebagai berikut.

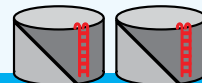
The Company's strategic initiatives include decarbonization of business activities and new green business development. The two initiative strategies include short-term, medium-term and long-term strategies as follows.



## Upstream

<b>Near Term</b>	<b>Kampanye PV surya di semua zona dan konversi diesel ke gas</b> Solar PV campaign in all zones and diesel fuel to gas conversion	<b>Pilot project CCS/ CCUS pada Gundih, Sukowati, dan Ramba</b> CCS/CCUS pilot projects for Gundih, Sukowati and Ramba
<b>Mid Term</b>	<b>Komersialkan CCUS di Gundih, Sukowati dan Ramba dan konversi diesel ke gas</b> Commercialize CCUS in Gundih, Sukowati and Ramba and convert diesel fuel to gas	<b>Penyiapan Infrastruktur CCS / CCUS</b> CCS / CCUS Infrastructure Setup
<b>Long Term</b>	<b>Elektrifikasi Peralatan</b> Equipment Electrification	<b>Pengembangan dan menskalakan CCS dan integrasi kluster untuk CCUS</b> Development and scaling of CCS and cluster integration for CCUS

## Refining and Petrochemical (R&P)



<b>Near Term</b>	<b>Kampanye solar PV dan penerapan energi efisiensi</b> Solar PV campaign and application of energy efficiency	<b>Pengembangan Green Refinery, Produksi HVO dan HEFA</b> Green Refinery Development, HVO and HEFA Production
<b>Mid Term</b>	<b>Efisiensi energi, flaring/venting</b> Energy efficiency, flaring/venting	<b>Peralihan ke energi listrik ramah lingkungan</b> Switch to environmentally friendly electricity
<b>Long Term</b>	<b>Penerapan teknologi CCUS</b> CCUS Technology application	<b>Peningkatan kapasitas HVO berbasis CPO dan pembangunan kapasitas HEFA</b> CPO-based HVO capacity building and HEFA capacity building

## Commercial and Trading (C&T)

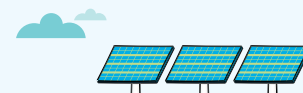


<b>Near Term</b>	<b>Inisiatif energi rendah karbon</b> Low carbon energy initiative	<b>Pembangunan stasiun pengisi daya dan unit pemasaran biofuel</b> Construction of charging stations and biofuel marketing units
<b>Mid Term</b>	<b>Instalasi stasiun pengisi daya</b> Charging station installation	<b>Instalasi stasiun pengisi daya</b> Charging station installation
<b>Long Term</b>	<b>Konversi ke baterai dan HDT rendah karbon</b> Convert to low carbon battery and HDT	<b>Memperluas cakupan stasiun pengisi daya, meningkatkan infrastruktur pencampuran biofuel, dan infrastruktur stasiun pengisi bahan bakar H2 Cair</b> Expanding the coverage of charging stations, upgrading the Biofuel blending Infrastructure, and the Liquid H2 fueling station Infrastructure

■ Dekarbonisasi Kegiatan Bisnis  
 Decarbonization of Business Activities

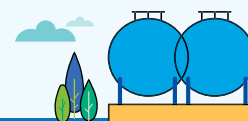
■ Pengembangan Bisnis Hijau Baru  
 New Green Business Development

## Power New and Renewable Energy (PNRE)



<b>Near Term</b>	<p><i>Low carbon power &amp; PLTBg Sei Mangkei</i> Low carbon power &amp; PLTBg Sei Mangkei</p>	<ul style="list-style-type: none"> <li>• Pilot large scale solar PV dan peningkatan kapasitas panas bumi</li> <li>• Memproduksi baterai</li> <li>• Pilot project untuk NH3 (Ammonia)</li> <li>• Pilot large scale solar PV and increasing geothermal capacity</li> <li>• Producing batteries</li> <li>• Pilot project for NH3 (Ammonia)</li> </ul>
<b>Mid Term</b>	<p>Efisiensi pada pembangkit <i>Combined Cycle Gas Turbine (CCGT)</i> Efficiency in Combined generation Gas Turbine Cycle (CCGT)</p>	<ul style="list-style-type: none"> <li>• Peningkatan kapasitas Solar PV dan Panas bumi</li> <li>• Peningkatan rantai produksi baterai dan pengembangan pada E2W</li> <li>• Pengembangan bisnis NBS</li> <li>• Increasing the capacity of Solar PV and Geothermal</li> <li>• Improvement of the battery production chain and development of the E2W market</li> <li>• - NBS business development</li> </ul>
<b>Long Term</b>	<p>CCUS untuk aset panas bumi dan CCGT CCUS for geothermal assets and CCGT</p>	<ul style="list-style-type: none"> <li>• Peningkatan kapasitas Solar PV dan Panas bumi</li> <li>• Melanjutkan pertumbuhan baterai dan E2W</li> <li>• Meningkatkan volume penjualan H2 dan NH3</li> <li>• Increase the capacity of Solar PV and Geothermal</li> <li>• Continuing battery and E2W growth</li> <li>• Increasing sales volume of H2 and NH3</li> </ul>

## Gas



<b>Near Term</b>	<p>Solar PV dan efisiensi energi di transmisi gas dan operasi pigging Solar PV and energy efficiency in gas transmission and pigging operations</p>	
<b>Mid Term</b>	<p>Peralihan ke listrik ramah lingkungan untuk aset transmisi Switch to green electricity for transmission assets</p>	<p><b>Infrastruktur untuk pengangkutan CO2</b> Infrastructure for CO2 transport</p>
<b>Long Term</b>	<p>CCS di jaringan pipa gas, elektrifikasi turbin gas dan konversi pembangkit listrik sendiri ke ramah lingkungan CCS in gas pipelines, electrification of gas turbines and conversion of own power plants to environmentally friendly</p>	<p><b>Meningkatkan Infrastruktur bagi lebih banyak kluster untuk pengangkutan CO2</b> Improve infrastructure for more clusters for CO2 transport</p>

## Integrated Marine Logistic (IML)



<b>Near Term</b>	<p>Optimasi kecepatan dan rute kapal &amp; peningkatan efisiensi Ship speed and route optimization &amp; efficiency improvements</p>	
<b>Mid Term</b>	<p>Kapal tanker untuk transportasi ammonia Tankers for the transportation of ammonia</p>	
<b>Long Term</b>	<p>Pembaruan 200 kapal dengan dual fuel Renew 200 ships with dual fuel</p>	<p><b>Kapal tanker untuk pengiriman Hydrogen dan armada untuk pengiriman CO2</b> Tankers for Hydrogen shipments and fleets for CO2 shipments</p>

**RISIKO DAN PELUANG TERKAIT PERUBAHAN IKLIM** [CCE-1.C4, TCFD RM-A, TCFD RM-B, TCFD RM-C, TCFD STR-A, TCFD STR-B, TCFD STR-C, CDSB REQ-03, CDSB REQ-06, CCE-1.A1, CCE-1.A2, CCE-1.A3, EM-EP-530 A.1, EM-SV-530A.1, EM-RM-530.A1]

**RISKS AND OPPORTUNITIES RELATED TO CLIMATE CHANGE** [CCE-1.C4, TCFD RM-A, TCFD RM-B, TCFD RM-C, TCFD STR-A, TCFD STR-B, TCFD STR-C, CDSB REQ-03, CDSB REQ-06, CCE-1.A1, CCE-1.A2, CCE-1.A3, EM-EP-530 A.1, EM-SV-530A.1, EM-RM-530.A1]

Pengelolaan risiko dan peluang terkait perubahan iklim merupakan satu kesatuan yang tidak terpisahkan dan berkelanjutan dari seluruh aktivitas perusahaan. Perseroan telah mengidentifikasi risiko dan peluang terkait perubahan iklim dalam rencana jangka pendek untuk 3 tahun, rencana jangka menengah untuk 10 tahun, serta rencana jangka panjang untuk 60 tahun yang dituangkan dalam bentuk *workplan* dan/atau *roadmap*.

Management of risks and opportunities related to climate change is an integral and continuous part of all activities at the Company. In the form of a work plan and/or roadmap, the Company has identified risks and opportunities related to climate change in a short-term plan for three years, a medium-term plan for ten years, and a long-term plan for sixty years.

Risiko dan peluang terkait perubahan iklim telah diidentifikasi dan dikategorikan sebagai salah satu risiko dalam berjalannya bisnis perusahaan yang tercantum dalam *Risk Intelligence Map* perusahaan dan Pedoman Manajemen Resiko. Pengelolaan risiko dan peluang terkait iklim dan isu-isu terkait LST telah terintegrasi dengan *framework* ISO 31000:2018 sebagai upaya mencapai Tujuan Pembangunan Berkelanjutan yang berkesinambungan dengan strategi dan rencana kerja perusahaan.

Risks and opportunities related to climate change have been identified and categorized as one of the risks in the running of the company's business listed in the Company's Risk Intelligence Map and Risk Management Guidelines. The management of risks and opportunities related to climate and issues related to ESG has been integrated with the ISO 31000:2018 framework as an effort to achieve Sustainable Development Goals that are aligned with the Company's strategy and work plans

Seluruh proses identifikasi hingga pengelolaan risiko dan peluang terkait perubahan iklim dilakukan secara berkala telah melalui persetujuan dan pengawasan oleh Direksi dan Dewan Komisaris yang berperan dalam menetapkan penanganannya melalui aspirasi *Net Zero Emission* di tahun 2060 dan penetapan target kuantitatif secara bertahap di setiap tahunnya, serta melakukan *monitoring* pengelolaan risiko di perusahaan.

The entire process of identifying and managing climate change-related risks and opportunities is carried out periodically through approval and supervision by the Board of Directors and Board of Commissioners whose role is to determine the handling through the aspirations of Net Zero Emissions by 2060, set quantitative targets in stages every year, and monitor risk management in the Company.


**Risiko Perubahan Iklim**

Risiko terkait perubahan iklim yang telah diidentifikasi oleh Perseroan meliputi hal-hal sebagai berikut.

**Climate Change Risks**


The risks related to climate change that have been identified by the Company include the following.

Risiko Risk	Dampak Risiko Risk Impact	Target & Realisasi 2022 2022 Target & Realization	Mitigasi Risiko Risk Mitigation
<b>LINGKUNGAN/ENVIRONMENT</b>			
<p><b>Physical Climate Risk</b> Geohazard dan Hydrologi Hazard incident (Longsor, Banjir dan TSUNAMI, BADAI/ ANGIN TOPAN)</p> <p><b>Physical Climate Risk</b> Geohazard and Hydrological Hazard incidents (Landslides, Floods and TSUNAMI, hurricanes/typhoons)</p>	<p><i>Fatality / Totally property damage</i></p>	<p><b>Target:</b> Penyelesaian <i>Net Zero Roadmap</i> 100% Completion of Net Zero Roadmap: 100%</p> <p><b>Realisasi/ Realization:</b> Penyelesaian <i>Net Zero Roadmap</i> 100% Completion of Net Zero Roadmap: 100%</p>	<ol style="list-style-type: none"> <li>1. Menyusun strategi Energi Transisi untuk menghadapi <i>physical climate risk</i> seperti penetapan <i>roadmap Net Zero Emission</i></li> <li>2. Melakukan analisa potensi <i>physical climate risk</i> melalui data historis pencatatan kejadian longsor, gempa, Tsunami dan bencana alam lainnya serta pelaksanaan study geohazards ;</li> <li>3. Pengelolaan Risiko Validasi HAZID, <i>Risk Assessment, Risk Register, HIRADC</i> dll;</li> <li>4. Mendesain <i>engineering physical barrier</i> (penahan longsor, penahan aliran air, tripod untuk penahan tsunami) serta mendesain alat deteksi &amp; <i>monitoring</i> potensi bahaya;</li> <li>5. Peningkatan dan memperluas jalinan Koordinasi, komunikasi dan kerja sama dengan Instansi/ Badan Pemerintah/pihak terkait lainnya untuk Aspek Penanggulangan, evakuasi, proses recovery, penyediaan peralatan / sarana</li> <li>6. Memastikan pedoman tanggap darurat dan menyelenggarakan periodic latihan tanggap darurat sesuai dengan level yang ditentukan.</li> </ol>

Risiko Risk	Dampak Risiko Risk Impact	Target & Realisasi 2022 2022 Target & Realization	Mitigasi Resiko Risk Mitigation
			<ol style="list-style-type: none"> <li>1. Develop a Transition Energy strategy to address physical climate risk, such as establishing a Net Zero Emissions roadmap</li> <li>2. Conduct an analysis of the potential for physical climate risk using historical data for recording landslides, earthquakes, tsunamis, and other natural disasters as well as implement geohazards studies;</li> <li>3. HAZID Validation Risk Management, Risk Assessment, Risk Register, HIRADC etc.;</li> <li>4. Design engineering physical barriers (avalanche barriers, water flow barriers, tripots for tsunami barriers) as well as design potential hazard detection &amp; monitoring tools;</li> <li>5. Improve and expand coordination, communication, and collaboration with government agencies/bodies/other related parties for the aspects of handling, evacuation, recovery process, provision of equipment/facilities</li> <li>6. Ensure emergency response guidelines and conduct periodic emergency response drills at the appropriate level.</li> </ol>
<p><b>GHG emission</b> Meningkatnya emisi dari operasional perusahaan sehingga tidak tercapainya target penurunan emisi</p> <p><b>GHG emissions</b> Increased emissions from the Company's operations, resulting in a failure to meet the emission reduction target.</p>	<p>Mempercepat Perubahan iklim Accelerate Climate Change</p>	<p><b>Target:</b> Peningkatan pencapaian reduksi emisi dari inisiatif dekarbonisasi sebesar 208.933 Ton CO2e Increased achievement of emission reduction from decarbonization initiatives by 208,933 Ton CO2e</p> <p><b>Realisasi/ Realization:</b> Pencapaian increment reduksi emisi dari inisiatif dekarbonisasi sebesar 524.232 Ton CO2e Achievement of emission reduction increment from decarbonization initiatives of 524,232 Ton CO2e.</p>	<ol style="list-style-type: none"> <li>1. Mengevaluasi <i>roadmap</i> dekarbonisasi</li> <li>2. Penetapan Pedoman Reduksi Emisi</li> <li>3. Implementasi upaya reduksi emisi</li> <li>4. <i>Monitoring</i> beban emisi dan program reduksi emisi</li> </ol> <ol style="list-style-type: none"> <li>1. Evaluate the decarbonization roadmap</li> <li>2. Determine Emission Reduction Guidelines</li> <li>3. Implement emission reduction efforts</li> <li>4. Monitor emission load and emission reduction program</li> </ol>
<p><b>SOSIAL/SOCIAL</b></p>			
<p><b>Pengelolaan Pengaduan Masyarakat terkait Physical Climate Risk</b> Lambatnya penyelesaian dampak operasi ke masyarakat terkait pengaduan jika terjadi <i>Catastrophic Incident</i></p> <p><b>Management of Public Complaints related to Physical Climate Risk</b> The delay in resolving the impact of operations on the community related to complaints in the event of a catastrophic incident</p>	<ol style="list-style-type: none"> <li>1. Gangguan operasional</li> <li>2. Demonstrasi Masyarakat</li> </ol> <ol style="list-style-type: none"> <li>1. Operational disruption</li> <li>2. Community demonstrations</li> </ol>	<p><b>Target:</b> Penanganan pengaduan keluhan masyarakat terkait aspek lingkungan: 100% Handling of public complaints related to environmental aspect: 100%</p> <p><b>Realisasi/ Realization:</b> Penanganan pengaduan keluhan masyarakat terkait aspek lingkungan: 100% Handling of public complaints related to environmental aspect: 100%</p>	<ol style="list-style-type: none"> <li>1. Pelibatan karyawan dan masyarakat secara proporsional dalam simulasi penanggulangan insiden yang dilaksanakan secara bertahap bertingkat dan berlanjut dan dievaluasi efektifitasnya</li> <li>2. Pemenuhan dan kesiapan peralatan penanganan insiden</li> <li>3. Manajemen komunikasi penanganan insiden yang <i>integrated</i>, informatif dan akuntabel</li> <li>4. Melaksanakan audit penanganan <i>claim and complain</i></li> <li>5. Sosialisasi dan komunikasi secara berlanjut dengan <i>stakeholders</i> hingga penuntasan penanganan insiden di lingkungan terdampak</li> </ol> <ol style="list-style-type: none"> <li>1. Proportionate employees and community participation in incident management simulation carried out in stages and continuously and evaluated for effectiveness</li> <li>2. Completion and readiness of incident handling equipment</li> <li>3. Integrated, informative, and accountable incident handling communication management</li> <li>4. Conduct an audit of claims and complaint handling</li> <li>5. Constant dissemination and communication with stakeholders until incident handling in the affected environment is completed</li> </ol>
<p><b>Safety Performance</b> Terjadinya Kecelakaan Kerja &amp; <i>Fatality</i></p> <p><b>Safety Performance</b> Occurrence of work accidents &amp; fatalities</p>	<p>Terjadinya Kasus <i>Fatality</i> (Tidak tercapainya HSSE Excellence - <i>Fatality</i>) &amp; <i>Recordable Incident</i> di lingkungan PERTAMINA Occurrence of <i>Fatality Case</i> (Not achieved HSSE Excellence - <i>Fatality</i>) &amp; <i>Recordable Incident</i> in PERTAMINA</p>	<p><b>Target:</b> <i>Total Recordable Incident Rate</i> (TRIR): 0.11</p> <p><b>Realisasi/ Realization:</b> <i>Total Recordable Incident Rate</i> (TRIR): 0.09</p>	<ol style="list-style-type: none"> <li>1. Melakukan evaluasi terkait implementasi Pedoman Pengelolaan <i>Human Factor, Behavior Based Safety</i>;</li> <li>2. <i>Major Accident drill &amp; exercise level corporate</i>;</li> <li>3. Pelaksanaan Audit HSSE secara berkala dan monitoring rekomendasi hasil audit</li> <li>4. <i>Monthly monitoring Risk Management</i></li> <li>5. Pengelolaan &amp; <i>Monitoring major accident barrier management/MERRAT</i> and ERCM and Business Continuity System</li> </ol> <ol style="list-style-type: none"> <li>1. Conduct an evaluation related to the implementation of Human Factor Management Guidelines, Behavior Based Safety;</li> <li>2. Major Accident drill &amp; exercise at corporate level;</li> <li>3. Implementation of periodic HSSE Audits and monitoring of audit recommendations</li> <li>4. Monthly monitoring Risk Management</li> <li>5. Management &amp; Monitoring of major accident barrier management/MERRAT and ERCM and Business Continuity System</li> </ol>

<b>Risiko Risk</b>	<b>Dampak Risiko Risk Impact</b>	<b>Target &amp; Realisasi 2022 Target &amp; Realization</b>	<b>Mitigasi Resiko Risk Mitigation</b>
<p><b>Energy Transition Strategy</b> Rencana strategi perusahaan terkait <i>climate change &amp; decarbonization</i> tidak sesuai dengan perubahan tren industri</p> <p><b>Energy Transition Strategy</b> The Company's strategic plan regarding climate change &amp; decarbonization is not in accordance with changing industry trends</p>	<ol style="list-style-type: none"> <li>1. Target pertumbuhan perusahaan menjadi tidak tercapai.</li> <li>2. Kemampuan perusahaan memenuhi kewajibannya menurun.</li> </ol> <ol style="list-style-type: none"> <li>1. The Company's growth target is not achieved.</li> <li>2. The Company's ability to meet its obligations decreases.</li> </ol>	<p><b>Target:</b> Penyelesaian <i>Green Energy Business Roadmap</i> 100% Completion of Green Energy Business Roadmap: 100</p> <p><b>Realisasi/ Realization:</b> Penyelesaian <i>Green Energy Business Roadmap</i> 100% Completion of Green Energy Business Roadmap: 100</p>	<ol style="list-style-type: none"> <li>1. Melakukan <i>review</i> terhadap RJPP setiap tahun dan melakukan revisi RJPP apabila terjadi deviasi &gt;20% dari asumsi dan parameter sebelumnya</li> <li>2. Melakukan riset untuk menyusun/<i>updating</i> asumsi, parameter, dan target finansial pada RJPP periode berjalan menyesuaikan dengan konsensus internasional dan tren industri terbaru</li> <li>3. Koordinasi dengan Direktorat/Unit Bisnis/<i>Subholding</i> terkait untuk memperoleh update strategi bisnis sebagai <i>corrective action</i> dalam penanggulangan perubahan kondisi yang terjadi</li> </ol> <ol style="list-style-type: none"> <li>1. Review the Company's Long-Term Plan (RJPP) every year and revise the RJPP if there is a &gt;20% deviation from the previous assumptions and parameters</li> <li>2. Conduct research to compile/update assumptions, parameters, and financial targets in the current period's RJPP according to international consensus and the latest industry trends</li> <li>3. Coordinate with related Directorates/Business Units/Subholdings to obtain business strategy updates as corrective actions in dealing with changes in conditions that have occurred</li> </ol>
<p><b>Sustainability Innovation</b> Potensi resiko kegagalan menyusun riset dan kajian terkait <i>low carbon</i></p> <p><b>Sustainability Innovation</b> Potential risk of failure to compile research and studies related to low carbon</p>	<p>Hasil riset dan kajian tidak akurat dan tidak <i>applicable</i></p> <p>The results of research and studies are inaccurate and not applicable</p>	<p><b>Target:</b> Penyelesaian riset <i>low carbon</i> sebanyak 7 kajian Completion of low carbon research of 7 studies</p> <p><b>Realisasi/ Realization:</b> Penyelesaian riset <i>low carbon</i> sebanyak 7 kajian Completion of low carbon research of 7 studies</p>	<ol style="list-style-type: none"> <li>1. Menyusun Kerangka Acuan Kerja secara detail dan tahapan pembuatan riset dan kajian</li> <li>2. Menyusun program kerja dan melakukan evaluasi kajian secara berkala</li> </ol> <ol style="list-style-type: none"> <li>1. Prepare the Terms of Reference in detail and the stages of making research and studies</li> <li>2. Develop a work program and conduct evaluation studies on a regular basis</li> </ol>
<p><b>Environmental Friendly Product</b> Terjadi potensi tidak akurat dan tidak <i>update</i> nya proses pemetaan produk dan jasa ramah lingkungan dan potensi risiko keterlambatan dalam melakukan kajian, analisa, inovasi desain pengembangan produk dan jasa ramah lingkungan</p> <p><b>Environmentally Friendly Products</b> There is a risk that the mapping process for environmentally friendly products and services is inaccurate and not updated and there is a potential risk of delays in conducting studies, analysis, design innovations for the development of environmentally friendly products and services</p>	<p>Pelaporan perubahan produk/jasa ramah lingkungan dibatalkan oleh Pemerintah dan proses pengembangan atau pelaporan perubahan produk/jasa ramah lingkungan dimulai dari awal</p> <p>Reporting of changes to environmentally friendly products/services is canceled by the Government and the process of developing or reporting changes to environmentally friendly products/services starts from the beginning</p>	<p><b>Target:</b> 0 Produk yang Ditarik Kembali 0 Recall of Products</p> <p><b>Realisasi/ Realization:</b> 0 Produk yang Ditarik Kembali 0 Recall of Products</p>	<ol style="list-style-type: none"> <li>1. Mempercepat proses pemetaan, penyusunan kajian, dan pengembangan inovasi produk ramah lingkungan</li> <li>2. Meningkatkan koordinasi dengan fungsi terkait dalam rangka pemenuhan dokumen atau menyampaikan tanggapan pelaporan produk/jasa baru atau pelaporan perubahan produk/jasa ramah lingkungan</li> </ol> <ol style="list-style-type: none"> <li>1. Accelerate the process of mapping, compiling studies, and developing innovations for environmentally friendly products</li> <li>2. Improving coordination with related functions in order to fulfill documents or submit responses for reporting new products/services or reporting changes to environmentally friendly products/services</li> </ol>
<p><b>Human Capital Readiness</b> Tidak tersedianya <i>talent muda</i> dan kemampuan untuk suksesor <i>Strategic Position</i> baik secara kualitatif sesuai kebutuhan bisnis Perusahaan maupun secara kuantitatif sesuai target RJPP</p>	<ol style="list-style-type: none"> <li>1. Target strategis perusahaan tidak tercapai</li> <li>2. Tertundanya pengambilan keputusan</li> <li>3. Terjadinya kesalahan prosedur dalam pekerjaan yang berdampak <i>accident</i> karena <i>human error</i></li> <li>4. Kegiatan operasional perusahaan terganggu</li> </ol>	<p><b>Target:</b> <i>Talent Muda</i>: 40% Perempuan sebagai <i>Leader</i> di perusahaan sebesar 15%</p> <p><b>Realisasi:</b> <i>Talent Muda</i>: 45,42% Perempuan sebagai <i>Leader</i> di perusahaan sebesar 18.11%</p>	<ol style="list-style-type: none"> <li>1. Pengembangan <i>mapping &amp; talent identification</i> yang setara bagi seluruh pekerja</li> <li>2. Peningkatan program <i>capability building</i> dan <i>talent management</i> di perusahaan</li> <li>3. Menyiapkan <i>Successor List</i> untuk tiap Delta Positions</li> </ol>



Risiko Risk	Dampak Risiko Risk Impact	Target & Realisasi 2022 2022 Target & Realization	Mitigasi Resiko Risk Mitigation
<b>Human Capital Readiness</b> The lack of young and female talents for Strategic Position successors both qualitatively, according to the Company's business needs and the RJPP target	<ol style="list-style-type: none"> <li>The Company's strategic targets are not achieved</li> <li>Delayed decision making</li> <li>Occurrence of procedural errors in the work resulting in an accident due to human error</li> <li>The Company's operational activities are disrupted</li> </ol>	<b>Target:</b> Young Talent: 40% Woman as Leaders in the company 15%  <b>Realization:</b> Young Talent: 45.42% Woman as Leaders in the company 18.11%	<ol style="list-style-type: none"> <li>Development of equal mapping &amp; talent identification for all employees</li> <li>Improvement of capability building and talent management programs at the Company</li> <li>Prepare a Successor List for each Delta Positions</li> </ol> 

## TATA KELOLA/GOVERNANCE

<b>Anti-Corruption</b> Munculnya gugatan/tuntutan hukum atas kasus korupsi yang dilakukan oleh pekerja <b>Risk Assessment Anti Corruption</b> The emergence of lawsuits / lawsuits over corruption cases committed by workers	<ol style="list-style-type: none"> <li>Menurunnya reputasi Perusahaan</li> <li>Menurunnya kepercayaan <i>Stakeholder</i> terhadap aspek <i>compliance</i> perusahaan</li> <li>Decreased Company reputation</li> <li>Decreasing Stakeholders' trust in the company's compliance aspects</li> </ol>	<b>Target:</b> <ol style="list-style-type: none"> <li>GCG <i>Implementation Compliance</i> 93%</li> <li>GCG <i>Assessment Score</i>: Sangat Baik</li> </ol> <b>Realisasi/ Realization:</b> <ol style="list-style-type: none"> <li>GCG <i>Implementation Compliance</i> 93%</li> <li>GCG <i>Assessment Score</i>: Very Good</li> </ol>	<ol style="list-style-type: none"> <li>Mengimplementasikan <i>anti-fraud awareness</i> program</li> <li>Melakukan pelatihan dan sosialisasi secara berkala terkait corporate ethic.</li> <li>Mewajibkan pekerja untuk mengimplementasikan GCG secara menyeluruh meliputi Col, CoC, LHKPN, Gratifikasi</li> </ol> <ol style="list-style-type: none"> <li>Implementing anti-fraud awareness program</li> <li>Conduct regular training and outreach regarding corporate ethics.</li> <li>Requiring employees to fully implement GCG including Col, CoC, LHKPN, Gratification</li> </ol>
<b>Anti Fraud</b> Anti <i>Fraud</i> Program untuk meningkatkan <i>awareness</i> pekerja PERTAMINA terhadap <i>fraud</i> yang tidak tercapai sesuai target <b>Anti-Fraud</b> Anti-Fraud Program to raise PERTAMINA employees' awareness of fraud that has not been achieved as planned	<ol style="list-style-type: none"> <li>Potensi peningkatan kasus <i>fraud</i> di lingkungan perusahaan;</li> <li>Menurunnya reputasi dan kepercayaan <i>Stakeholder</i> terhadap Internal Audit atas efektivitas <i>Anti Fraud</i> Program.</li> <li>Potential increase in fraud cases within the Company;</li> <li>A decrease in reputation and stakeholders' trust in Internal Audit for the effectiveness of the Anti-Fraud Program.</li> </ol>	<b>Target:</b> Anti-Fraud Program tercapai 100% Anti-Fraud Program is achieved 100%  <b>Realisasi/ Realization:</b> Anti-Fraud Program tercapai 110% Anti-Fraud Program is achieved 110%	<ol style="list-style-type: none"> <li>Melakukan <i>monitoring fraud awareness</i> program secara periodik dan melaporkan hasilnya kepada Chief Audit Executive.</li> <li>Melakukan sertifikasi ISO 37001:2016 <i>System</i></li> </ol> <ol style="list-style-type: none"> <li>Periodically monitor the fraud awareness program and report the results to the Chief Audit Executive.</li> <li>Perform ISO 37001:2016 System certification</li> </ol>
<b>Cybersecurity</b> Gangguan pada semua layanan IT yang terkena <i>impact</i> serangan <i>security</i> IT serta kelumpuhan Sistem Informasi akibat serangan siber & <i>phishing</i> <b>Cybersecurity</b> Disruption to all IT services affected by IT security attacks and paralysis of information systems due to cyber & phishing attacks	Terjadinya gangguan pada operasional bisnis PERTAMINA yang menggunakan layanan IT karena sistem informasi tidak bisa diakses PERTAMINA's business operations that rely on IT services are disrupted because the information system cannot be accessed	<b>Target:</b> Phishing Prone Rate: 11%  <b>Realisasi/ Realization:</b> Phishing Prone Rate: 7%	<ol style="list-style-type: none"> <li>Melakukan <i>Security Assessment</i> untuk pengujian terhadap kehandalan suatu sistem atau keamanan informasi dari sisi infrastruktur, aplikasi, atau jaringan</li> <li>Meningkatkan keterampilan dan keahlian dengan memberikan pelatihan / sertifikasi terkait <i>cyber security</i> kepada pekerja IT</li> <li><i>Monitoring</i> Implementasi / Operasional <i>Cyber Security Initiatives</i></li> <li>Meningkatkan <i>awareness</i> terkait <i>cyber security</i> kepada seluruh insan PERTAMINA / <i>human firewall</i></li> </ol> <ol style="list-style-type: none"> <li>Conduct Security Assessment to test the reliability of a system or information security in terms of infrastructure, application, or network</li> <li>Improve skills and expertise by providing training/certification related to cyber security to IT employees</li> <li>Monitor Implementation / Operations of Cyber Security Initiatives</li> <li>Raise the awareness of cyber security for all PERTAMINA personnel / human firewall</li> </ol>

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Strategi Keberlanjutan  
Strategi Keberlanjutan

Perseroan melakukan analisis skenario kuantitatif dan kualitatif sesuai dengan asumsi yang digunakan dalam merancang *business as usual* (BAU) dan pengurangan emisi (*unconditional/CM1* and *conditional/CM2 reduction*) pada kategori sektor energi yang telah dituangkan dalam *Nationally Determined Contribution* (NDC) Pemerintah Republik Indonesia.

NDC tersebut bertujuan untuk menekankan pada transisi rendah karbon dan ketahanan iklim pada masa yang akan datang sehingga memberikan kontribusi terhadap upaya bersama dalam mencegah peningkatan suhu rata-rata global sebesar 2°C serta mendorong upaya untuk membatasi peningkatan suhu sebesar 1,5°C. Skenario analisis yang digunakan:

1. *Business as Usual* (BAU) merupakan skenario emisi yang arah pengembangannya tidak mempertimbangkan kebijakan mitigasi
2. *Counter Measure 1 Scenario* (CM1) atau *unconditional scenario* merupakan skenario emisi dengan skenario mitigasi yang mempertimbangkan target pengembangan sektoral. Melalui skenario ini, target pengurangan emisi adalah 31,89% dari skenario *business as usual* pada tahun 2030
3. *Counter Measure 2 Scenario* (CM2) atau *conditional scenario* yang merupakan skenario emisi dengan skenario mitigasi yang lebih ambisius dengan mempertimbangkan target pengembangan sektoral jika terdapat dukungan internasional tersedia. Pada skenario ini, target penurunan emisi akan mencapai 43,20% dari skenario *business as usual* (BAU) pada tahun 2030.

Berdasarkan 3 (tiga) skenario tersebut, Perseroan mengelola risiko dan peluang perubahan iklim yang mengacu pada ISO 31000: 2018 tentang *Guideline Risk Management Framework* yang digunakan untuk mendefinisikan dampak finansial atau strategis substantif terhadap Bisnis PERTAMINA.

### Peluang Perubahan Iklim

Di samping potensi risiko yang dihadapi, Perseroan juga memanfaatkan peluang untuk bekerja sama dengan Japan Bank for International Corporation (JBIC) dalam pengadaan *green facility* untuk mendanai proyek yang berbasis *new renewable energy*. Dalam momentum Government 20 (G20), kerja sama tersebut diwujudkan dengan penandatanganan *Memorandum of Understanding* (MoU) antara Perseroan dengan JBIC. Kerja sama ini merupakan langkah nyata dalam kemitraan global dengan negara maju untuk mendukung Indonesia dalam mempercepat transisi energi atau implementasi energi terbarukan.

Di tataran *Sub Holding*, PPI, PGE, dan PGN telah menyusun *Green Financing Framework* dan *Transition Financing Framework* yang bertujuan untuk menyiapkan model pendanaan hijau bagi proyek-proyek hijau yang *eligible*, yang berkaitan dengan proyek rendah emisi dan mitigasi perubahan iklim.

The Company conducts quantitative and qualitative scenario analysis in accordance with the assumptions used in designing business as usual (BAU) and emission reductions (*unconditional/CM1* and *conditional/CM2 reduction*) in the energy sector category as outlined in the *Nationally Determined Contribution* (NDC) of the Government of the Republic of Indonesia .

The Government of Indonesia's NDC aims to emphasize low-carbon transition and climate-resilience in the future. The scenario analysis used by the Government of Indonesia contributes to concerted efforts to prevent a 2°C increase in global average temperatures and encourage efforts to limit temperature increases to 1.5°C above pre-industrial levels. The following is the analysis scenario:

1. Business as Usual (BAU) is an emission scenario in which no mitigation policies are considered in the development direction.
2. Counter Measure 1 (CM1) Scenario or unconditional scenario is an emission scenario with a mitigation scenario that considers sectoral development targets. Through this scenario, the emission reduction target is 31.89% from the business-as-usual scenario by 2030
3. Counter Measure 2 (CM2) Scenario or conditional scenario, is an emission scenario with a more ambitious mitigation scenario that takes sectoral development targets into account if international support is available. In this scenario, the emission reduction target will reach 43.20% of the business as usual (BAU) scenario by 2030.

Based on these 3 (three) scenarios, the Company manages climate change risks and opportunities referring to ISO 31000: 2018 concerning the *Guideline of Risk Management Framework* which is used to define substantive financial or strategic impacts on PERTAMINA's Business.

### Climate Change Opportunities

As a SOE with 100% ownership by the Government of the Republic of Indonesia, the Company's strategic plan must be able to support and align with the Government of Indonesia's policies. Thus, the Company conducts quantitative and qualitative scenario analysis in accordance with the assumptions used in designing business as usual (BAU) and emission reductions (*unconditional/CM1* and *conditional/CM2 reductions*) in the energy sector category as outlined in the *Nationally Determined Contribution* (NDC) of the Government of the Republic of Indonesia.

At the *Sub Holding* level, PPI, PGE and PGN have developed a *Green Financing Framework* and a *Transition Financing Framework* which aim to -prepare a green funding model for eligible green projects related to low emission projects and climate change mitigation.



## KEBIJAKAN KEBERLANJUTAN PERSEROAN [GRI 2-23, GRI 2-24, GOV-1.C4]

Sejalan dengan tata nilai dan prinsip etika Perseroan untuk menjaga keberlanjutan bisnis perusahaan, Perseroan memiliki kebijakan keberlanjutan untuk menciptakan nilai jangka panjang melalui pengembangan praktik keberlanjutan di seluruh bisnis *Holding* dan *Sub Holding*. Kebijakan ini bertujuan untuk mendorong keberlangsungan, keterbukaan, dan pengembangan pekerja dalam organisasi bisnis sebagai bagian dari *operational excellence* yang sejalan dengan Sustainable Development Goals (SDGs).






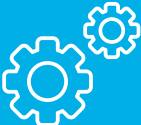


Berbagai kebijakan keberlanjutan telah disosialisasikan kepada seluruh pemangku kepentingan melalui *website* resmi Perseroan. Mekanisme untuk mengalokasikan tanggung jawab dalam implementasi kebijakan tersebut ditetapkan dalam Surat Keputusan Direksi serta dilaksanakan secara efektif melalui *monitoring* dan evaluasi secara berkala. Komitmen tersebut merupakan perwujudan prinsip kehati-hatian yang dimiliki Perseroan. Kebijakan keberlanjutan Perseroan meliputi:

## COMPANY'S SUSTAINABILITY POLICY [GRI 2-23, GRI 2-24, GOV-1.C4]

In order to maintain the company's business continuity, the Company has implemented a sustainability policy to create long-term value through the development of sustainability practices in all Holding and Sub Holding businesses. This policy aims to promote sustainability, openness, and employee development in business organizations as part of operational excellence in accordance with the Sustainable Development Goals (SDGs).

A range of sustainability policies have been disseminated to all stakeholders through the Company's official website. The mechanism for allocating responsibility for the implementation of the policy is stipulated in the Board of Directors Decision Letter and is implemented effectively through periodic monitoring and evaluation. This commitment is a manifestation of the Company's prudential principles. The Company's sustainability policies include:

<p><b>ESG</b></p>	<p><b>Kebijakan Keberlanjutan Pertamina</b> Pertamina's Sustainability Policy</p>	<p>Kebijakan ini merupakan kebijakan utama yang memayungi berbagai kebijakan keberlanjutan di <i>Holding</i> dan <i>Subholding</i>. Kebijakan ini mengintegrasikan strategi dan aktivitas Perusahaan dalam konteks ESG. This policy is the main policy that covers various sustainability policies in Holding and Subholding. This policy integrates the Company's strategy and activities in the context of ESG.</p>
<p><b>Lingkungan Environment</b></p>	<p><b>Net Zero Emission Commitment</b></p>	<p>Bentuk komitmen Perseroan untuk berkontribusi dalam target perubahan iklim, transisi energi dalam mencapai target <i>Net Zero Emission</i>. Kebijakan ini berlaku di <i>Holding</i> dan <i>Subholding</i> dengan implementasi dekarbonisasi, akselerasi <i>green business</i>, orientasi <i>green strategy</i> pengembangan kapabilitas SDM dan organisasi, optimalisasi <i>green financing</i>, implementasi <i>green operation</i>, akselerasi penggunaan teknologi hijau dan inovasi digital, pengembangan bisnis pasar karbon dan inovasi model bisnis.</p> <p>A type of the Company's commitment to contribute to the climate change target, the energy transition in achieving the Net Zero Emission target. This policy applies to Holding and Sub Holding with the implementation of decarbonization, green business acceleration, green strategy orientation for HR and organizational capability development, optimization of green financing, implementation of green operations, acceleration of the use of green technology and digital innovation, development of carbon market business and business model innovation.</p>
	<p><b>Kebijakan Green Procurement</b> Green Procurement Policy</p>	<p>Kebijakan yang berisi tentang komitmen Perseroan untuk menjadi perusahaan yang ramah lingkungan, bertanggung jawab sosial dan bertata kelola yang baik dalam pengadaan barang dan jasa.</p> <p>A policy that contains the Company's commitment to becoming an environmentally friendly, socially responsible, and good corporate governance company in the procurement of goods and services.</p>

 <p><b>Sosial</b> Social</p>	 <p><b>Kebijakan Human Rights</b> Human Rights Policy</p>	<p>Kebijakan yang terkait dengan komitmen Perseroan untuk mendukung perlindungan dan penghormatan terhadap Hak Asasi Manusia baik di lingkungan internal sesuai dengan Peraturan Ketenagakerjaan Internasional (<i>International Labour Organization</i>) yang relevan dan lingkungan eksternal Perseroan. [GRI 2-23, GRI 2-24]</p> <p>Policies related to the Company's commitment to supporting the protection and respecting Human Rights both in the internal environment in accordance with the relevant International Labor Organization (ILO) regulations and the Company's external environment. [GRI 2-23, GRI 2-24]</p>
	<p><b>Kebijakan Health, Safety, Security dan Environment (HSSE)</b> Health, Safety, Security and Environment (HSSE) Policy</p> 	<p>Kebijakan yang terkait dengan komitmen Perseroan untuk melaksanakan kegiatan operasi dengan memperhatikan Kesehatan dan keselamatan kerja, keamanan, perlindungan terhadap lingkungan dan masyarakat serta keselamatan proses dan <i>asset integrity</i> secara terus menerus.</p> <p>The policy addressed the Company's commitment to carrying out operational activities with due regard for occupational health and safety, security, protection of the environment and community as well as process safety and asset integrity on an ongoing basis.</p>
	<p><b>Kebijakan Sosial untuk Pemasok dan Kontraktor</b> Social Policy for Suppliers and Contractors</p> 	<p>Kebijakan yang diperuntukkan bagi seluruh pemasok dan kontraktor agar memastikan implementasi prinsip-prinsip HAM kepada karyawan di seluruh lingkungan kerjanya.</p> <p>The policy intended for all suppliers and contractors to ensure the implementation of human rights principles for employees in all work environments.</p>
	<p><b>Kebijakan Respectful Workplace</b> Respectful Workplace Policy</p> 	<p>Kebijakan Perseroan yang mencakup komitmen untuk menciptakan lingkungan kerja yang bebas diskriminasi, kekerasan dan pelecehan bagi seluruh karyawan dan mitra kerja.</p> <p>The Company's policy includes a commitment to creating a work environment that is free from discrimination, violence and harassment for all employees and work partners.</p>
 <p><b>Tata Kelola</b> Governance</p>	 <p><b>Pedoman Perilaku dan Etika Bisnis</b> Code of Conduct</p>	<p>Pedoman terkait dengan hubungan dengan karyawan, mitra kerja, pelanggan, pemegang saham, dan pemangku kepentingan, sesuai dengan etika bisnis yang berlaku.</p> <p>Guidelines related to relationships with employees, work partners, customers, shareholders and stakeholders, in accordance with applicable business ethics.</p>
	 <p><b>Pedoman terkait cyber security</b> Guidance related Cyber Security</p>	<p>Kebijakan untuk meningkatkan ketahanan perusahaan terhadap serangan <i>cyber</i> untuk memastikan kehandalan kegiatan operasional perusahaan.</p> <p>Policies to increase the company's resilience to cyber attacks to ensure the reliability of the company's operational activities.</p>

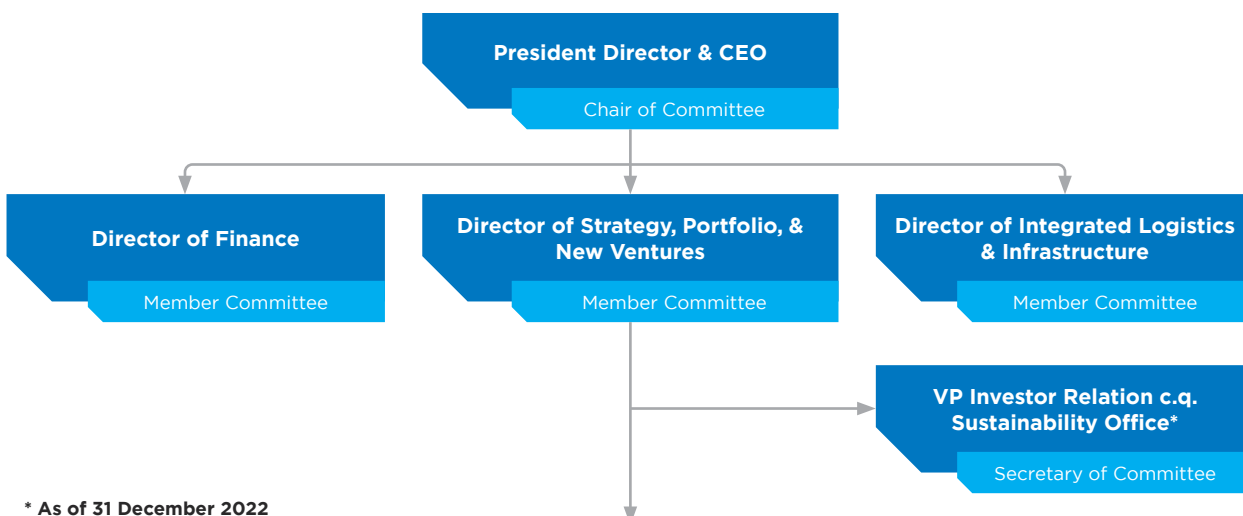


**PENANGGUNG JAWAB PENERAPAN PEMBANGUNAN BERKELANJUTAN [OJK E.1, GRI 2-9, 2-12, 2-13, GOV-1.C1, GOV-1.C3, GOV-1.C5, GOV-2.C1, GOV-2.A1, GOV-2.A5, TCFD GOV-A, CCE-1.C1, TCFD GOV-B, CDSB REQ-01, CDSB REQ-02]**

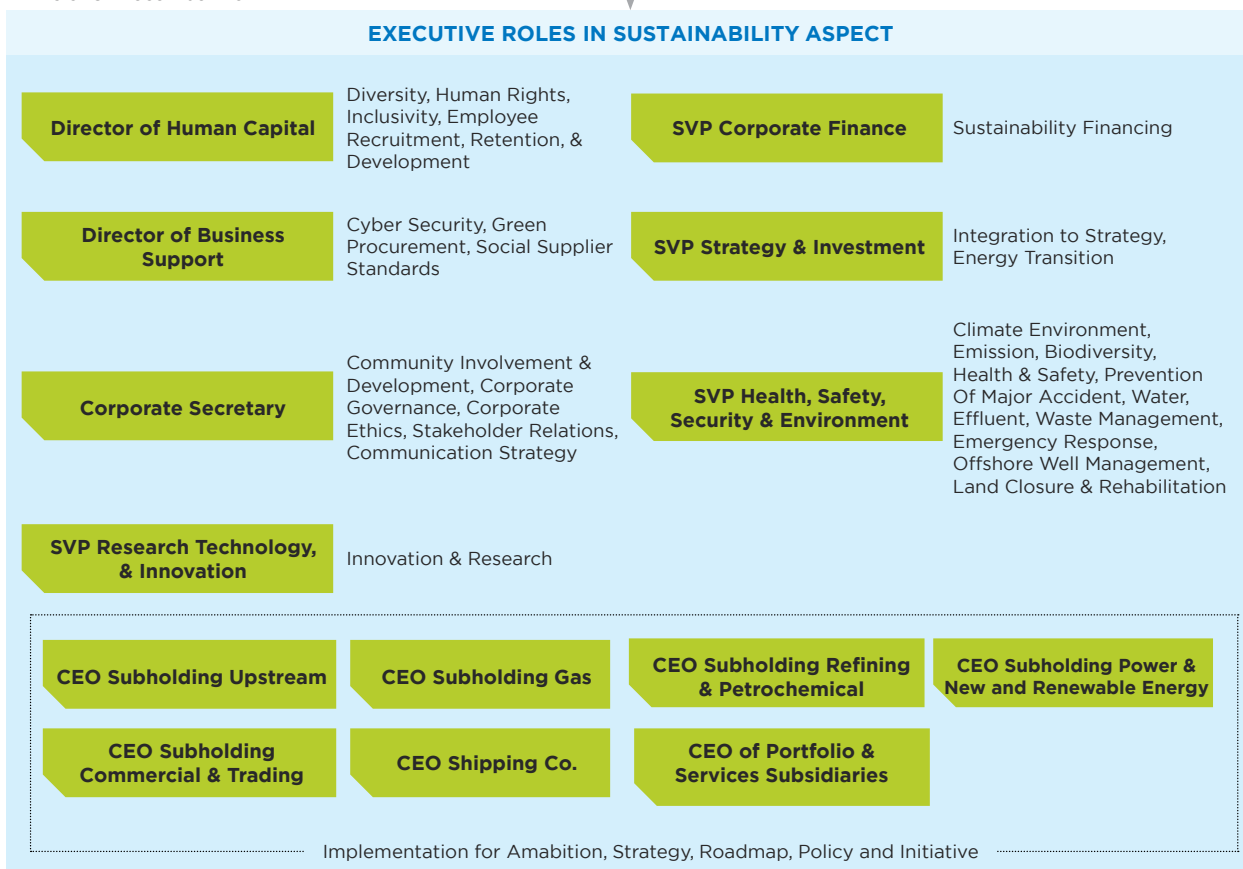
**PARTIES RESPONSIBLE FOR SUSTAINABLE DEVELOPMENT IMPLEMENTATION [OJK E.1, GRI 2-9, 2-12, 2-13, GOV-1.C1, GOV-1.C3, GOV-1.C5, GOV-2.C1, GOV-2.A1, GOV-2.A5, TCFD GOV-A, CCE-1.C1, TCFD GOV-B, CDSB REQ-01, CDSB REQ-02]**

Pengelolaan keberlanjutan yang dilakukan oleh Komite Keberlanjutan yang diketuai oleh Direktur Utama yang dapat mendelegasikan pengelolaan keberlanjutan kepada setiap fungsi berkepentingan di masing-masing *subholding*, maupun entitas anak. Adapun struktur organisasi komite keberlanjutan sebagai berikut.

Sustainability management is carried out by the Sustainability Committee chaired by the President Director who can delegate sustainability management to each function concerned in each sub holding, as well as to subsidiaries. The Sustainability Committee's organizational structure is as follows.



\* As of 31 December 2022



Komite tersebut memiliki tugas dan tanggung jawab secara umum maupun khusus terkait aspek keberlanjutan, yaitu: (1) Mengawasi, menetapkan dan memberi arahan terkait ambisi, strategi, *roadmap*, kebijakan, inisiatif dan ukuran kinerja; (2) Identifikasi dampak dan risiko operasional Perseroan terhadap ekonomi, sosial dan lingkungan, serta melakukan pengawasan terhadap upaya pencegahan risiko; (3) Memonitor pencapaian target dan *deliverables*; (4) Memonitor pencapaian kinerja perusahaan di bidang Keberlanjutan berdasarkan penilaian pihak ketiga; (5) Mengarahkan dan memonitor komunikasi eksternal terkait Aspek Keberlanjutan; (6) Memberi arahan terkait pelaksanaan pendanaan eksternal Perusahaan berbasis Keberlanjutan; (7) Melakukan koordinasi dengan Dewan Komisaris, Dewan Direksi, Direktorat atau *Subholding* dalam penerapan Aspek Keberlanjutan; dan (8) Melaksanakan fungsi Komite TJSL BUMN.

The Committee has general and specific duties and responsibilities related to sustainability aspects, including: (1) Overseeing, establishing and providing direction regarding ambitions, strategies, roadmaps, policies, initiatives and performance measures; (2) Identifying the impacts and risks of the Company's operations on the economy, social and environment, as well as monitoring efforts to prevent risks; (3) Monitoring the achievement of targets and deliverables; (4) Monitoring the achievement of the Company's performance in Sustainability based on a third party assessment; (5) Directing and monitoring external communications related to Sustainability Aspects; (6) Providing direction regarding the implementation of external Sustainability-based funding for the Company; (7) Coordinating with the Board of Commissioners, Board of Directors, Directorates or Sub holdings in implementing the Sustainability Aspect; and (8) Conducting the role of the SOE TJSL Committee.

**KEGIATAN MEMBANGUN BUDAYA KEBERLANJUTAN**

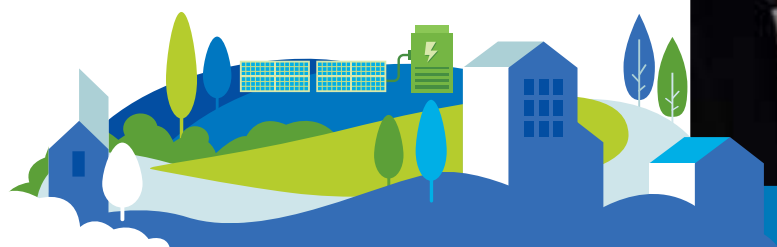
[OJK F.1, GOV-2.C4, GOV-2.A3]

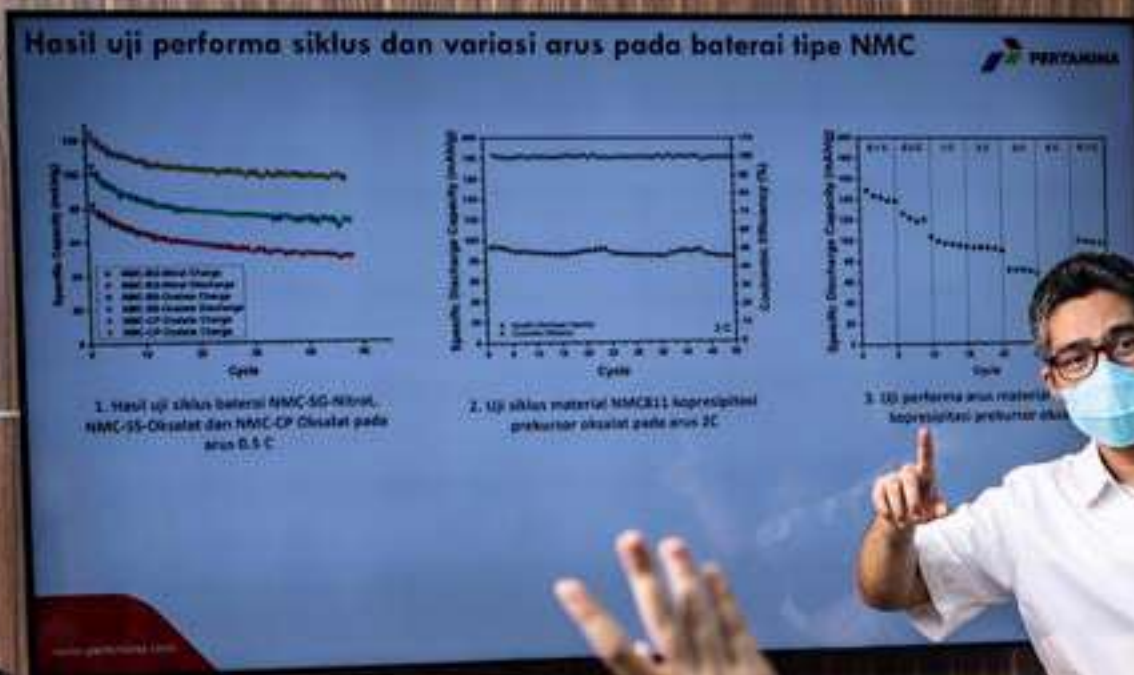
Perseroan berkomitmen untuk membangun budaya keberlanjutan dengan secara rutin mengadakan pelatihan terkait keberlanjutan. Pada tahun 2022, Perseroan telah mengadakan 481 pelatihan dan sertifikasi dengan total peserta 47.390. Beberapa jenis pelatihan terkait keberlanjutan antara lain *Fraud Awareness*, Pelatihan dan Sertifikasi terkait HSSE termasuk keanekaragaman hayati, auditor energi, *cyber security* dan sertifikasi *information system security, respectful workplace*, dan lainnya. Pelatihan dilaksanakan secara *online* (melalui *mobile learning apps*) maupun secara *offline*. Selain itu, Perseroan juga membangun budaya keberlanjutan dengan menginternalisasikan penerapan ESG Perseroan di kalangan pekerja. Hal ini dilakukan melalui penerbitan majalah *Energia*, *internal broadcast*, *news publication*, media briefing dengan Direktur Keuangan, *press release* dan *site visit media*.

**ACTIVITIES TO BUILD A CULTURE OF SUSTAINABILITY**

[OJK F.1, GOV-2.C4, GOV-2.A3]

The Company is committed to building a culture of sustainability by regularly holding sustainability-related training. In 2022, the Company held 481 trainings and certifications with a total of 47,390 participants. Several types of training related to sustainability include Fraud Awareness, Training and Certification related to HSSE including biodiversity, energy auditors, cyber security and information system security certification, respectful workplace, and others. Training is carried out online (via mobile learning apps) or offline. In addition, the Company also builds a culture of sustainability by internalizing the application of the Company's ESG among employees. This is done through the publication of *Energia* magazine, internal broadcasts, news publications, media briefings with the Director of Finance, press releases and media site visits.







# Kinerja Keberlanjutan [OJK F]

Sustainability Performance





# Kinerja Lingkungan Hidup

## Environmental Performance

HIGHLIGHTED ISSUES			
Topik Topic	Aktivitas Activities	Keluaran dan Nilai yang Diciptakan Output and Value Created	Berkontribusi pada TPB Contributing to SDG
Aspek Energi Energy Aspect	Upaya dan Pencapaian Efisiensi Energi dan Penggunaan Energi Terbarukan Energy Efficiency and Renewable Energy Efforts and Achievements	Efisiensi energi berhasil mencapai 5,65 Juta MWh. Energy efficiency succeeded to reach 5.65 Million MWh	
Aspek Emisi Emission Aspect	Upaya dan Pencapaian Pengurangan Emisi yang Dilakukan Emission Reduction Efforts and Achievements	Reduksi emisi sebesar 7,9 juta ton CO <sub>2</sub> e dari <i>baseline</i> emisi tahun 2010 berdasarkan skenario <i>business as usual</i> . Emissions reduction of 7.9 million tons CO <sub>2</sub> e from the 2010 emissions baseline under the business as usual scenario.	
Aspek Air Water Aspect	Upaya daur ulang air Water recycling efforts	Pengurangan konsumsi air sebesar 13,45 juta meter kubik Reduction in water consumption of 13.45 million cubic meters	
Aspek Limbah dan Efluen Waste and Effluent Aspect	<ul style="list-style-type: none"> <li>Pengelolaan Limbah dan Efluen yang efisien</li> <li>Pencegahan Insiden Tumpahan Minyak</li> <li>Efficient Waste and Effluent Management</li> <li>Prevention of Oil Spill Incidents</li> </ul>	<ul style="list-style-type: none"> <li>Penurunan limbah B3 yang dihasilkan sebesar 183,9 Ton dan penurunan sampah sebesar 189,7 Ton.</li> <li>Penurunan insiden tumpahan minyak tahun 2022 sebesar 44% dibanding tahun 2021</li> <li>Decrease in hazardous waste generated by 183.9 tons and decrease in waste by 189.7 tons</li> <li>Reduction in oil spill incidents in 2022 by 44% compared to 2021</li> </ul>	
Aspek Keane-karagaman Hayati Biodiversity Aspect	<ul style="list-style-type: none"> <li>Peningkatan wilayah konservasi keanekaragaman hayati</li> <li>Increase in biodiversity conservation areas</li> </ul>	<ul style="list-style-type: none"> <li>Luasan wilayah konservasi 30.810,81 Ha, meningkat di bandingkan dengan tahun 2021 sebesar 30.426,29 Ha.</li> <li>The area of the conservation area is 30,810.81 Ha, an increase compared to 2021 of 30,426.29 Ha.</li> </ul>	
Aspek Umum General Aspect	<ul style="list-style-type: none"> <li>Peningkatan realisasi belanja pengelolaan lingkungan</li> <li>An increase in the realization of environmental management spending</li> </ul>	<ul style="list-style-type: none"> <li>Peningkatan realisasi belanja pengelolaan lingkungan tahun 2022 sebesar 24% dibanding tahun 2021</li> <li>Increased realization of environmental management expenditure in 2022 by 24% compared to 2021</li> </ul>	
Aspek Material Material Aspect	<ul style="list-style-type: none"> <li>Penggunaan Material yang Ramah Lingkungan</li> <li>Use of Environmentally Friendly Materials</li> </ul>	<ul style="list-style-type: none"> <li>Pengembangan kemasan ramah lingkungan untuk produk lubricants.</li> <li>Development of environmentally friendly packaging for lubricants products.</li> </ul>	
Aspek Pen-gaduan Terkait Lingkungan Hidup Environmental Grievances Aspect	<ul style="list-style-type: none"> <li>Penyelesaian Pengaduan Lingkungan Hidup</li> <li>Settlement of Environmental Grievances</li> </ul>	<ul style="list-style-type: none"> <li>Penyelesaian 100% pengaduan lingkungan hidup dari masyarakat yang diterima melalui <i>call centre</i> 135</li> <li>Jumlah dan Materi Pengaduan Lingkungan Hidup yang Diterima dan Diselesaikan</li> <li>Completion of 100% environmental grievances from the public received through the call center 135</li> <li>Number and Material of Environmental Grievances Received and Resolved</li> </ul>	

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Kinerja Keberlanjutan  
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**ASPEK ENERGI [GRI 3-3, ENV-7.C1]**

PERTAMINA terus berupaya dalam melakukan efisiensi energi dengan berbagai kebijakan, inisiatif di antaranya mengacu pada ISO 50001:2018 Sistem Manajemen Energi. PERTAMINA juga terus melakukan inovasi melalui penggunaan produk berkelanjutan serta pemanfaatan energi baru dan terbarukan (EBT). Upaya tersebut dilakukan guna mengurangi emisi yang dihasilkan yang akan berdampak pada lingkungan sekitar. Pengukuran efisiensi energi mengacu kepada International Energy Agency (IEA) yang diaudit secara berkala.

Meskipun PERTAMINA belum memiliki target khusus terkait reduksi energi, namun PERTAMINA senantiasa melakukan serangkaian inisiatif efisiensi energi pada unit operasi di masing-masing *Subholding*. PERTAMINA juga melakukan serangkaian inisiatif efisiensi energi yang dilakukan oleh unit operasi di masing masing subholding dengan kumulatif reduksi energi sebesar 10.037.093,34 mWh atau sebesar 36.133,53 GJ. Di samping itu, sepanjang tahun 2022, PERTAMINA tidak terlibat dengan dampak negatif terkait dengan energi.

**Jumlah dan Intensitas Energi yang Digunakan [OJK F.6, GRI 302-1, 11.1.2, 302-2, 11.1.3, 302-3, 11.1.4, CCE-6.C1, CCE-6.A3, CDSB REQ-04, CDSB REQ-05]**

Pada tahun 2022, total konsumsi energi Perseroan mengalami peningkatan sebesar 35% dibanding tahun sebelumnya, sebagai berikut.

**ENERGY ASPECT [GRI 3-3, ENV-7.C1]**

PERTAMINA continues to strive for energy efficiency with various policies, one of which refers to the ISO 50001:2018 Energy Management System. Pertamina also continues to innovate through the use of sustainable products and the use of new and renewable energy (EBT). These efforts are made to reduce emissions that will have an impact on the surrounding environment. Energy efficiency measurement refers to the International Energy Agency (IEA) which is audited regularly.

Even though Pertamina does not yet have specific targets related to energy reduction, Pertamina continues to carry out a series of energy efficiency initiatives in the operating units in each Subholding. PERTAMINA also conducted a series of energy efficiency initiatives carried out by operating units in each subholding with a cumulative energy reduction of 10,037,093.34 mWh or 36,133.53 GJ. In addition, throughout 2022, Pertamina will not be involved in negative impacts related to energy.

**Amount and Intensity of Energy Used [OJK F.6, GRI 302-1, 11.1.2, 302-2, 11.1.3, 302-3, 11.1.4, CCE-6.C1, CCE-6.A3, CDSB REQ-04, CDSB REQ-05]**

In 2022, the Company's total energy consumption increased by 35% compared to the previous year with details as follows.

**Tabel Konsumsi Energi [GRI 302-1, 11.1.2, CCE-6.C1]**  
Table of Energy Consumption  
(Dalam Terajoules) (In Terajoules)

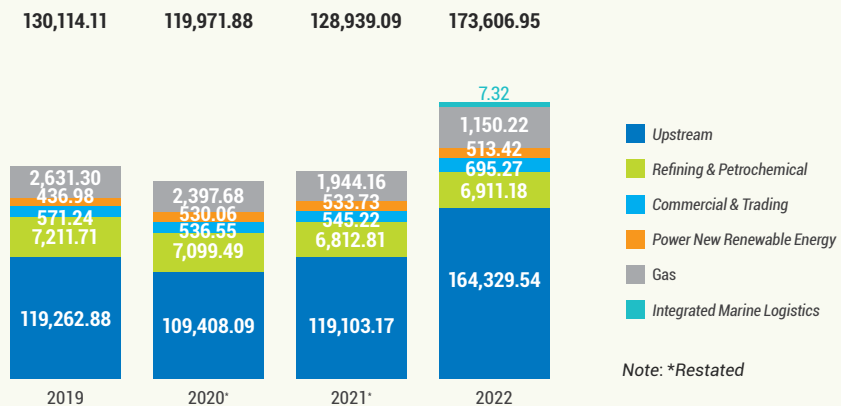
Konsumsi Energi Energy Consumption	2022	2021*	2020*	2019*
Energi yang dihasilkan sendiri/Self-generated energy	149,981.48	129,147.85	134,128.54	143,786.75
Listrik yang dibeli/Purchased electricity	10,278.86	6,068.65	2,777.35	1,733.18
Uap dan panas yang dibeli/Purchased steam and heat	30,372.48	10,930.43	-	-
Listrik yang dijual/Electricity for Sale	8,497.69	8,769.60	8,503.99	7,167.90
Uap dan panas yang dijual/Steam and Heat for sale	8,528.18	8,438.25	8,430.03	8,237.92
<b>Total konsumsi energi/Total Energy Consumption</b>	<b>173,606.95</b>	<b>128,939.09</b>	<b>119,971.88</b>	<b>130,114.11</b>

\*Restated

**Konsumsi Energi Berdasarkan Segmen Bisnis**

[GRI 302-1, 11.1.2, CCE-6.C1]  
**Energy Consumption by Business Segment**

(Dalam Terajoules)  
(In Terajoules)



Note: \*Restated



**Tabel Konsumsi Energi dari Sumber Terbarukan Berdasarkan Sumber [OJK F.7, GRI 302-1, 11.1.2]**

Table of Energy Consumption from Renewable Energy Resources by Source

(Dalam Terajoules) (In Terajoules)

Sumber Source	2022	2021	2020	2019
Pembangkit energi internal Internal energy generator	<b>5,222.77</b>	3,162.64	3,811.91	3,751.59
Listrik dibeli Purchased electricity	<b>22.74</b>	15.98	17.60	13.27
Listrik dialirkan ke grid Electricity exported to grid	<b>16,771.75</b>	16,870.04	16,661.73	15,123.30

**Tabel Konsumsi Bahan Bakar untuk Operasional Sumber Emisi Tidak Bergerak [GRI 302-1, 11.1.2]**

Fuel Consumption for Operational Stationary Emission Sources

Konsumsi Bahan Bakar Fuel Consumption	Satuan Unit	2022	2021*	2020	2019*
<i>Fuel Gas</i>	MMSCF	317,297.81	560,300.07	405,581.96	452,015.39
	TJ	9,977.69	17,623.35	12,761.45	14,212.51
<i>Fuel Oil</i>	m <sup>3</sup>	1,174,849.72	1,138,680.31	1,220,263.28	1,538,839.55
	TJ	44,744.58	43,348.46	46,516.79	58,664.15
<i>Gasoline</i>	m <sup>3</sup>	60.60	19.30	31.33	82.38
	TJ	2,020.98	642.63	1,043.01	2,742.47
<i>Diesel</i>	m <sup>3</sup>	88,931.66	94,473.54	85,117.47	101,214.24
	TJ	3,441.96	3,655.74	3,295.86	3,913.03

Keterangan: \*Disajikan Kembali. Mengacu pada referensi *heating value* dari American Petroleum Institute (API)  
 Note: \*Represented. Refers to the heating value reference from the American Petroleum Institute (API)

**Tabel Konsumsi Bahan Bakar untuk operasional sumber emisi bergerak [GRI 302-2, 11.1.3]**

Konsumsi Bahan Bakar Fuel Consumption	Satuan Unit	2022	2021	2020	2019
Diesel/Solar	m <sup>3</sup>	702,076.52	1,164,544.55	1,172,228.43	2,023,900.45
	TJ	27,156.32	45,044.58	45,341.80	78,284.47
<i>Gasoline</i>	m <sup>3</sup>	2,180.56	20,701.67	48,399.81	39,325.90
	TJ	75.58	717.52	1,677.54	1,363.04
<i>Marine Fuel</i>	m <sup>3</sup>	849,282.33	1,557,384.59	1,576,691.56	1,597,428.10
	TJ	35,440.55	64,989.66	65,795.34	66,660.67

Keterangan: \*Disajikan Kembali. Mengacu pada referensi heating value dari American Petroleum Institute (API)  
 Note: \*Represented. Refers to the heating value reference from the American Petroleum Institute (API)

**Intensitas Energi [GRI 302-3, 11.1.4, F.6]**

Energy Intensity

Konsumsi Energi Energy Consumption	Satuan Unit	2022	2021	2020	2019
<i>Upstream</i>	TJ/MBOE	<b>0.44</b>	0.36	0.35	0.36
<i>Refining and Petrochemical</i>	Solomon Energy Intensity Index	<b>108.35</b>	108.10	109.28	107.23

\*Restated

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Kinerja Keberlanjutan

**Upaya dan Pencapaian Efisiensi Energi dan Penggunaan Energi Terbarukan [OJK F.7, GRI 302-4, 302-5, CCE-6.C2]**

**Efforts and Achievement in Energy Efficiency and the Use of Renewable Energy [OJK F.7, GRI 302-4, 302-5, CCE-6.C2]**

Selama tahun 2022, Perseroan telah mengurangi konsumsi energi sebagai hasil inisiatif konservasi dan efisiensi. Efisiensi energi berasal dari efisiensi bahan bakar, listrik, pemanas, pendingin, dan uap yang harus memenuhi tiga kriteria, meliputi intervensi spesifik yang telah mengurangi konsumsi energi; pengurangan tersebut harus terukur dan berkelanjutan; serta pengurangan dilaporkan untuk periode 12 bulan sejak dimulainya intervensi atau tindakan. Reduksi energi sebagai berikut.

In 2022, the Company managed to reduce energy consumption as a result of conservation and efficiency initiatives. Energy efficiency comes from fuel, electricity, heating, cooling and steam efficiency, which must meet three criteria, including specific interventions that have reduced energy consumption; the reduction must be measurable and sustainable; and reductions must be reported for a period of 12 months from the start of the intervention or action. Energy reduction is as follows.


Reduksi Energi 2022 [GRI 302-4, GRI 302-5] Energy Reduction				
Segmen Segment	2022		2021	
	MWh	TJ*	MWh	TJ
Upstream	3,873,503.03	13,944.61	29,651.61	106.75
Refining and Petrochemical	6,123,730.47	22,045.43	1,713,907.69	6,170.07
Commercial and Trading	490.91	1.77	433.07	1.56
Power and New Renewable Energy	39,368.93	141.73	23,142.35	83.31
Gas	-	-	83,730.07	301.43
<b>Total</b>	<b>10,037,093.34</b>	<b>36,133.54</b>	<b>1,850,864.79</b>	<b>6,663.11</b>

Notes: \* 1 MWh=0.0036 TJ (convertunits.com)


**Beberapa program reduksi energi yang dilakukan termasuk NRE selama tahun 2022:**


Several significant energy reduction programs conducted during 2022:

**RU III Plaju**



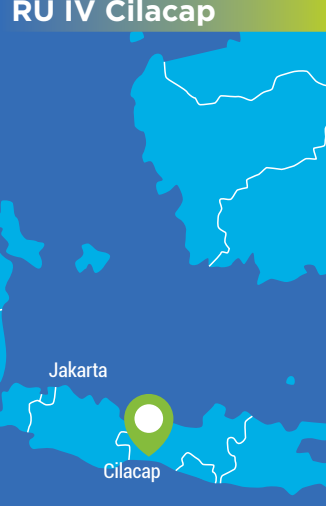
- Waste Heat Recovery Unit
- Revitalisasi FGC I & III
- Single Package Boiler
- EL-SCUAD (Eliminasi Steam Consumption di Area Dermaga Plaju)  
EL-SCUAD (Elimination of Steam Consumption in the Plaju Jetty Area)
- Minimized Letdown Steam
- SUPERMAN (Sustain Reduce Pressure Steam Manifold Utilities RU III)



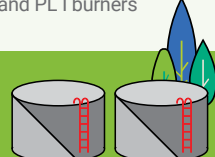
Berhasil mereduksi energi sebesar  
Managed to reduce energy by
1,598,244.15 MWh


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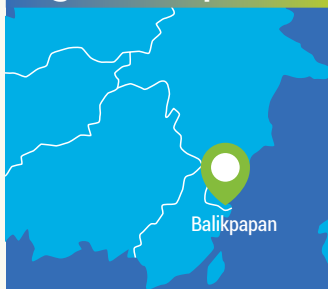
**RU IV Cilacap**



- Integrasi PLN Kilang
- Upgrade Sootblower CDU II
- Metoda Akreditasi Operator dan Energy Patrol untuk Optimasi operasi Furnace
- Implementasi Teknologi Low NOx pada Burner Unit NHT 82 dan Platforming 84 Kilang Paraxylene
- TERONG UDANG DAN TEMPE BAKAR (Teknologi Lorong Udara Tunggal pada Sistem Penyalur Udara Pembakaran Furnace 011 dan 012 FOC II)
- Time-based cleaning pre heater untuk mengoptimalkan inlet temperature 011F101A/B
- Penggunaan Air PDAM Sebagai Pengganti Air Pendingin
- Penggantian Burner CDU I dan PL I
- Integration of PLN Refinery
- Upgrade CDU II Sootblower
- Operator and Energy Patrol Accreditation Methods for Optimizing Furnace operations
- Implementation of Low NOx Technology in the Paraxylene Refinery NHT 82 Burner Unit and Platform 84
- TERONG UDANG DAN TEMPE BAKAR (Single Air Aisle Technology in Combustion Air Ventilation System Furnace 011 and 012 FOC II)
- Time-based cleaning pre heater to optimize inlet temperature 011F101A/B
- Use of PDAM Water as a Substitute for Cooling Water
- Replacement of CDU I and PL I burners

Berhasil mereduksi energi sebesar  
Managed to reduce energy by
3,105,052.26 MWh


### Regional 3 Upstream



- Penggunaan Jalur *Horizontal in Directional Drilling* (HDD) untuk Transportasi Crude Oil di Area Muara (PHSS)
- BSP Optimasi MP-LP *Compression* (PHM)
- Use of Horizontal Directional Drilling (HDD) Lines for Crude Oil Transportation in the Estuary Area (PHSS)
- MP-LP Compression (PHM) Optimization BSP

Berhasil mereduksi energi sebesar  
Managed to reduce energy by

**1,879,387.89 MWh**



**ASPEK EMISI [GRI 3-3, CCE-1.A4, CCE-2.C2, CCE-2.C3, CCE-5.C1, CCE-2.C3, CCE-2.C4, ENV-5.C2]**



**EMISSIONS ASPECT [GRI 3-3, CCE-1.A4, CCE-2.C2, CCE-2.C3, CCE-5.C1, CCE-2.C3, CCE-2.C4, ENV-5.C2]**

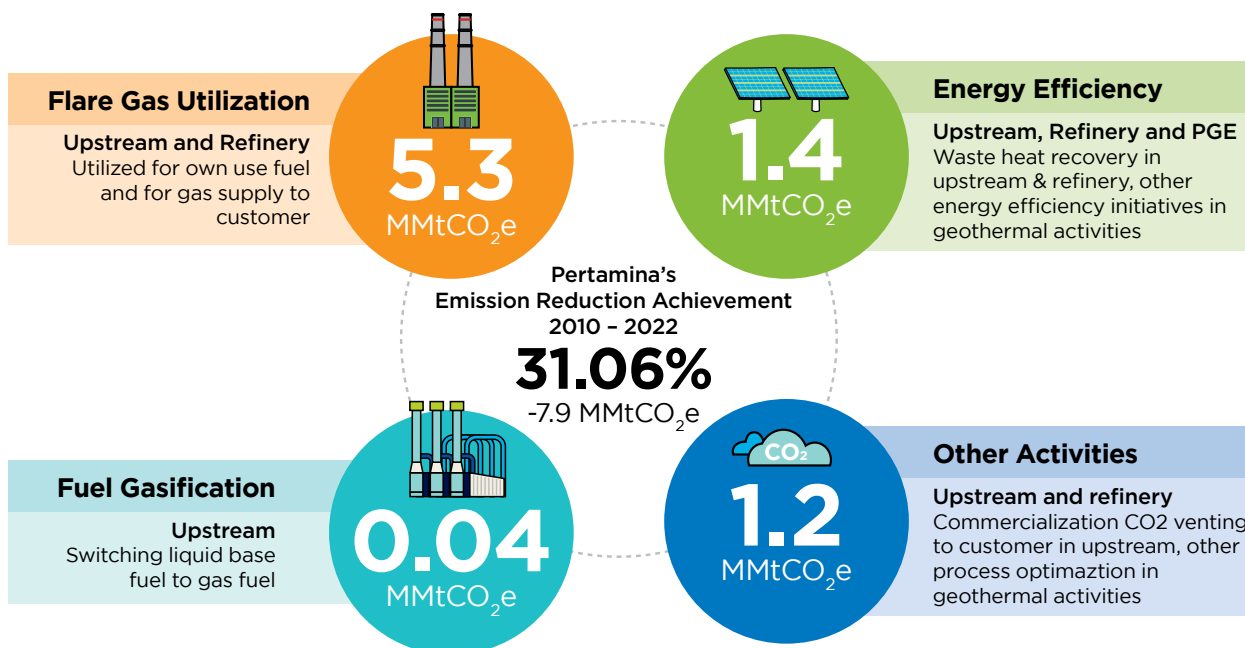
Komitmen Perseroan dalam menurunkan emisi karbon dan efek GRK dilakukan melalui inisiatif dekarbonisasi dalam kegiatan operasional perusahaan. Upaya tersebut dilakukan melalui *flare gas utilization*, efisiensi energi, gasifikasi bahan bakar dan aktivitas lainnya. Reduksi emisi GRK mengacu pada Peta Jalan Reduksi Emisi berdasarkan hasil *baseline* 2010 dengan target 32% hingga tahun 2030.

The Company's commitment to reducing carbon emissions and GHG effects is carried out through decarbonization initiatives in the Company's operations. These efforts include the use of flare gas utilization, energy efficiency, fuel gasification and other activities. GHG emission reduction refers to the Emission Reduction Roadmap, which is based on 2010 baseline results and has a target of 32% reduction by 2030.

Penggunaan dan upaya pencapaian reduksi emisi merupakan tanggung jawab dari seluruh unit bisnis perusahaan dan dievaluasi secara berkala oleh Direksi. Perseroan menargetkan penurunan emisi sebesar 32% berdasarkan *baseline* emisi tahun 2010 yang mengacu pada skenario *business as usual*. Dalam mencapai target tersebut, Perseroan telah menginisiasi inisiatif dalam mereduksi emisi GRK. Adapun ketercapaian reduksi emisi GRK di tahun 2022 yaitu sebesar 7,9 juta Ton CO<sub>2</sub>e atau setara dengan 31,06%.

The use and efforts to achieve emission reduction are the responsibility of all business units of the Company and are regularly evaluated by the Board of Directors. The Company targets a 32% reduction in emissions based on the 2010 emission baseline that refers to the business-as-usual scenario. The Company has initiated initiatives to reduce GHG emissions to achieve this target. The achievement of GHG emission reduction in 2022 is 7.9 million tons of CO<sub>2</sub>e, or equivalent to 31.06%.

### End-to-End GHG Emission Reduction Achieved 2010-2022



**Jumlah dan Intensitas Emisi yang dihasilkan Berdasarkan Jenisnya [OJK F.11]**

Perseroan telah melakukan perhitungan emisi GRK yang mengacu pada PERMENLH No. 12 Tahun 2012 tentang Pedoman Penghitungan Beban Emisi Kegiatan Industri Minyak dan Gas Bumi untuk Cakupan 1 (Penggunaan Sendiri) dan cakupan 2 (konsumsi energi yang berasal dari luar). Berdasarkan perhitungan yang dilakukan, total emisi Cakupan 1 dan Cakupan 2 tahun 2020 digunakan sebagai *baseline* baru yaitu sebesar 21,358 juta ton CO<sub>2</sub>eq. Pada tahun 2022, terdapat peningkatan intensitas emisi cakupan 1 sebesar 3,6% dibandingkan dengan tahun sebelumnya. [GRI 305-1, 11.1.5, 305-2, 11.1.6, 305-3, 11.1.7, 305-4, 11.1.8, CCE-4.C2, CCE-4.A3, CDSB REQ-04, CDSB REQ-05]

**Amount and Intensity of Emissions Produced by Type [OJK F.11]**

The Company calculated GHG emissions using PERMENLH No. 12 of 2012 Guidelines for Calculating Emission Loads for Oil and Gas Industry Activities for Scope 1 (Own Use) and Scope 2 (Other Use) (consumption of energy originating from outside). Based on the calculations, the total Scope 1 and 2 emissions for 2020, namely 21.358 million tons of CO<sub>2</sub>eq, are used as the new baseline. In 2022, there was a 3.6% increase in Scope 1 emissions intensity compared to the previous year. [GRI 305-1, 11.1.5, 305-2, 11.1.6, 305-3, 11.1.7, 305-4, 11.1.8, CCE-4.C2, CCE-4.A3, CDSB REQ-04, CDSB REQ-05]

**Tabel Emisi GRK Cakupan 1** [OJK F.11, GRI 305-1, 11.1.5, EM-EP-110a.1, EM-EP-110a.2, EM-RM-110a.1, EM-MD-110a.1, TCFD MT-b, CCE-4.C1, CCE-4.C3, CCE-4.A3, ENV-5.A1]  
Table of Scope 1 GHG Emissions

Cakupan 1 Scope 1	Satuan Unit	2022	2021*	2020*	2019*
<b>Emisi GRK Langsung Cakupan 1</b> Direct (Scope 1) GHG Emissions	<b>Juta Ton Co<sub>2</sub></b> Million Tons of Co <sub>2</sub>	<b>27.38</b>	<b>26.43</b>	<b>24.14</b>	<b>27.80</b>
Karbon Dioksida (CO <sub>2</sub> )/Carbon Dioxide (CO <sub>2</sub> )	Juta Ton/Million Tons	<b>20.58</b>	20.99	19.03	21.89
Metana (CH <sub>4</sub> )/Methane (CH <sub>4</sub> )	Juta Ton/Million Tons	<b>0.083</b>	0.90	0.078	0.106
Nitrogen oksida (N <sub>2</sub> O)/Nitrous oxide (N <sub>2</sub> O)	Juta Ton/Million Tons	<b>0.016</b>	0.011	0.011	0.011
Hydrofluorocarbons (HFCs)	Juta Ton/Million Tons	-	-	-	-
Sulphur hexafluoride (SF6)	Juta Ton/Million Tons	-	-	-	-
Perfluorocarbons (PFC)	Juta Ton/Million Tons	-	-	-	-
Nitrogen trifluoride (NF3)	Juta Ton/Million Tons	-	-	-	-
<b>Emisi Cakupan 1 berdasarkan segmen bisnis</b> Scope 1 Emissions by business segment					
Upstream	Juta Ton/Million Tons	<b>12.12</b>	11.46	10.15	11.23
Refining and Petrochemical	Juta Ton/Million Tons	<b>10.74</b>	11.81	10.96	12.12
Commercial and Trading	Juta Ton/Million Tons	<b>0.28</b>	0.14	0.19	0.27
Power New Renewable Energy	Juta Ton/Million Tons	<b>0.12</b>	0.11	0.11	0.03
Gas	Juta Ton/Million Tons	<b>0.63</b>	0.48	0.43	1.84
Integrated Marine Logistics	Juta Ton/Million Tons	<b>3.49</b>	2.43	2.31	2.30
<b>Emisi Cakupan 1 berdasarkan sumber</b> Scope 1 Emissions by source					
Pembakaran	Juta Ton/Million Tons	<b>15.43</b>	14.17	13.00	15.16
Routine Flaring	Juta Ton/Million Tons	<b>2.35</b>	2.25	2.01	1.34
Non Routine Flaring	Juta Ton/Million Tons	<b>0.22</b>	0.19	0.24	0.14
Safety Flaring	Juta Ton/Million Tons	<b>0.34</b>	0.34	-	-
Process Emission & Venting	Juta Ton/Million Tons	<b>8.44</b>	8.94	8.25	9.21
Fugitives	Juta Ton/Million Tons	<b>0.40</b>	0.45	0.40	1.95

\* Restated

Beban Emisi GRK Cakupan 2 [GRI F.11, GRI 305-2, 11.1.4, CCE-3.C1, CCE-4.C2, CCE-4.C4, CCE-4.A2]					
Scope 2 GHG Emissions					
Cakupan 2 Scope 2	Satuan Unit	2022	2021	2020	2019
Upstream*	Ribu Ton CO <sub>2</sub> eq Thousand tons CO <sub>2</sub> eq	<b>1,748.46</b>	902.15	171.22	28.01
Refining and Petrochemical	Ribu Ton CO <sub>2</sub> eq Thousand tons CO <sub>2</sub> eq	<b>135.51</b>	110.80	137.13	146.68
Commercial and Trading	Ribu Ton CO <sub>2</sub> eq Thousand tons CO <sub>2</sub> eq	<b>104.04</b>	90.45	110.65	126.38
Power New Renewable Energy	Ribu Ton CO <sub>2</sub> eq Thousand tons CO <sub>2</sub> eq	<b>2.78</b>	1.87	0.74	-
Gas	Ribu Ton CO <sub>2</sub> eq Thousand tons CO <sub>2</sub> eq	<b>15.71</b>	9.44	19.77	11.09
Integrated Marine Logistics	Ribu Ton CO <sub>2</sub> eq Thousand tons CO <sub>2</sub> eq	-	-	-	-
<b>Total</b>	<b>Ribu Ton CO<sub>2</sub>eq</b> Thousand tons CO <sub>2</sub> eq	<b>2,006.51</b>	<b>1,114.97</b>	<b>439.51</b>	<b>312.17</b>

\*Including Badak LNG

Emisi cakupan 3 merupakan emisi tidak langsung yang dihasilkan dari kegiatan operasional Perseroan. Pengukuran emisi GRK Cakupan 3 mengacu pada GHG Protocol/IPIECA Category 1 dan 11 Scope 3 – Used of Sold Products. Faktor emisi yang digunakan mengacu pada faktor emisi lokal produk BBM yang dijual di Indonesia serta pembelian minyak mentah dan produk BBM dari luar. Produk non-BBM yang digunakan oleh konsumen tidak termasuk dalam perhitungan emisi cakupan 3. [CCE-3.A4]

Scope 3 emissions are indirect emissions resulting from the Company's operational activities. Measurement of GHG emissions for Scope 3 refers to the GHG Protocol/IPIECA Category 1 and 11 Scope 3 – Used of Sold Products. The emission factors refer to local emission factors for fuel products sold in Indonesia and purchases of crude oil and fuel products from outside. Non-petroleum products used by consumers are not included in the calculation of coverage three emissions. [CCE-3.A4]

Beban Emisi GRK Cakupan 3 [GRI 305-3, 11.1.7, CCE-4.A7]					
Scope 3 GHG Emissions					
Cakupan 3 Scope 3	Satuan Unit	2022	2021	2020	2019
Pembelian minyak mentah dan produk BBM dari luar – kategori 1 Purchase of crude oil and fuel products from outside – category 1	Juta Ton CO <sub>2</sub> eq Million tons CO <sub>2</sub> eq	<b>2.30</b>	1.98	1.51	1.65
Penggunaan Produk yang Dijual – Kategori 11 Use of Sold Product – Category 11	Juta Ton CO <sub>2</sub> eq Million tons CO <sub>2</sub> eq	<b>167.33</b>	154.45	144.24	160.41

Intensitas Emisi Emission Intensity					
Segmen Segment	Satuan Unit	2022	2021	2020	2019
Upstream*	kg CO <sub>2</sub> eq/BOE	25.29	28.67	28.13	32.11
Refining and Petrochemical	kg CO <sub>2</sub> eq /bbl minyak mentah diolah* crude processed*	32.24	37.57	35.18	34.49

\*Not Including Badak LNG



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**Upaya dan Pencapaian Pengurangan Emisi yang Dilakukan** [OJK F.12, GRI 305-5, 11.2.3, TCFD MT-a, TCFD MT-c, EM-EP-110a.3, EM-RM-110a.2, EM-MD-110a.2, EM-SV-110a.2, CCE-3.A2, CCE-3.A3, CCE-3.A5, CCE-3.A6]

**Efforts and Achievements In Emission Reduction** [OJK F.12, GRI 305-5, 11.2.3, TCFD MT-a, TCFD MT-c, EM-EP-110a.3, EM-RM-110a.2, EM-MD-110a.2, EM-SV-110a.2, CCE-3.A2, CCE-3.A3, CCE-3.A5, CCE-3.A6]

Pengelolaan emisi GRK merupakan suatu komitmen Perseroan dalam menjaga lingkungan hidup. Perseroan terus berupaya dalam mengurangi emisi GRK yang dihasilkan dari kegiatan produksinya yang mencakup  *Holding*  dan  *Subholding* . Reduksi emisi yang dilakukan oleh Perseroan mengacu pada  *roadmap*  reduksi emisi berdasarkan hasil  *baseline*  tahun 2010 dan  *rebaseline*  tahun 2020 yang mengacu pada  *business as usual*  dengan target 32% hingga tahun 2030.

GHG emission management is a commitment of the Company to preserving the environment. The Company continues to strive to reduce GHG emissions resulting from its production activities, including  *Holding*  and  *Subholding* . The emission reduction carried out by the Company refers to the emission reduction roadmap based on the 2010 baseline results, and the 2020 rebaseline related to business-as-usual, with a target of 32% by 2030.

Salah satu upaya reduksi emisi adalah melalui inisiatif dekarbonisasi yang merupakan proses penggantian bahan bakar fosil dengan bahan bakar yang lebih ramah lingkungan. Pada tahun 2022, inisiatif dekarbonisasi yang dilakukan mampu menurunkan emisi tambahan sebesar sebesar 524.232 Ton CO<sub>2</sub>e, sehingga secara kumulatif PERTAMINA telah mereduksi emisi sebesar 7,9 Juta Ton CO<sub>2</sub>e, atau setara dengan 31,06%. Hal ini menunjukkan besarnya komitmen Perseroan dalam program dekarbonisasi perusahaan.

One effort to reduce emissions is through decarbonization initiatives, which are replacing fossil fuels with more environmentally friendly ones. In 2022, the decarbonization initiative reduced additional emissions by 524,232 tons of CO<sub>2</sub>e, so cumulatively, Pertamina has reduced emissions by 7.9 million tons of CO<sub>2</sub>e, or equivalent to 31.06%. This shows the company's strong commitment to the corporate decarbonization program.

**Upstream**

*Subholding*  dengan realisasi dekarbonisasi terbesar di Pertamina pada tahun 2022, dengan penyumbang realisasi penurunan emisi terbesar  *subholding upstream*  berasal dari proyek: Optimasi pengoperasian Gas Turbin untuk mengefisienkan gas fuel di OSES (108.227 Ton CO<sub>2</sub>e), dan Pengurangan Flaring dengan Teknologi  *Steam Atomizing*  pada JOB Tomori (75.939 Ton CO<sub>2</sub>e)

The largest realization of decarbonization in Pertamina in 2022, with the most significant contributor to the emission reductions in the upstream subholding coming from projects: Optimization of Gas Turbine operation to make gas fuel efficient in OSES (108,227 Tons of CO<sub>2</sub>e), and Reduction Flaring with Steam Atomizing Technology at JOB Tomori (75,939 Tons of CO<sub>2</sub>e)

Kontribusi Dekarbonisasi  
Decarbonization Contribution **384,793** Ton CO<sub>2</sub>e



**Refining & Petrochemical (R&P)**

Penyumbang realisasi terbesar dari SH R&P berasal dari Program minimize flare to Fuel Gas 100.508 Ton CO<sub>2</sub>e

The largest contribution to the realization in R&P SH was coming from the Minimize Flare to Fuel Gas Program of 100,508 Tons of CO<sub>2</sub>e

Kontribusi Dekarbonisasi  
Decarbonization Contribution **128,496** Ton CO<sub>2</sub>e

**Gas**

Penyumbang realisasi berasal dari 2 proyek yaitu optimalisasi suhu AC dan optimalisasi pola operasional fasilitas pengelolaan SH Gas

Contribution to the realization coming from 2 projects, namely optimizing AC temperature, and optimizing the operational pattern of SH Gas management facilities

Kontribusi Dekarbonisasi  
Decarbonization Contribution **208** Ton CO<sub>2</sub>e



**Integrated Marine Logistic (IML)**

Penyumbang realisasi dari SH IML berasal dari proyek Penyesuaian kecepatan operasi kapal: 5.858 Ton CO<sub>2</sub>e dan Inisiatif Hull Cleaning: 1.008 Ton CO<sub>2</sub>e

Contribution to the realization in IML SH was coming from the Speed Adjustment of ship operations: 5,858 Tons of CO<sub>2</sub>e and the Hull Cleaning Initiative: 1,008 Tons of CO<sub>2</sub>e

Kontribusi Dekarbonisasi  
Decarbonization Contribution **128,496** Ton CO<sub>2</sub>e



**Power & NRE (P&NRE)**

Penyumbang realisasi terbesar berasal dari proyek Penggunaan Listrik NRE PLTBg Sei Mangkei untuk operasional internal 741,3 Ton CO<sub>2</sub>e (efficiency energy intensity)

The largest contributor to the realization, which was coming from the Sei Mangkei PLTBg NRE Electricity Usage project for internal operations of 741.3 Ton CO<sub>2</sub>e (efficiency energy intensity)

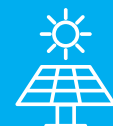
Kontribusi Dekarbonisasi  
Decarbonization Contribution **741.3** Ton CO<sub>2</sub>e



**Commercial & Trading (C&T)**

Penyumbang realisasi terbesar berasal dari inisiatif PLTS (solar PV) SPBU/GES sebesar 2.201 Ton CO<sub>2</sub>e dimana telah Terpasang pada atap kantor di 25 SPBU COCO – PTPR (252 KWp) dan Total GES Nasional sebanyak 300 Stasiun Pengisian Bahan Bakar Umum (SPBU).

The largest contributor to the realization, which was coming from the SPBU/GES PLTS (solar PV) initiative of 2,201 tons of CO<sub>2</sub>e, which has been installed on office roofs at 25 COCO gas stations - PTPR (252 KWp) and a total of 300 National GES Gas Stations (SPBU).



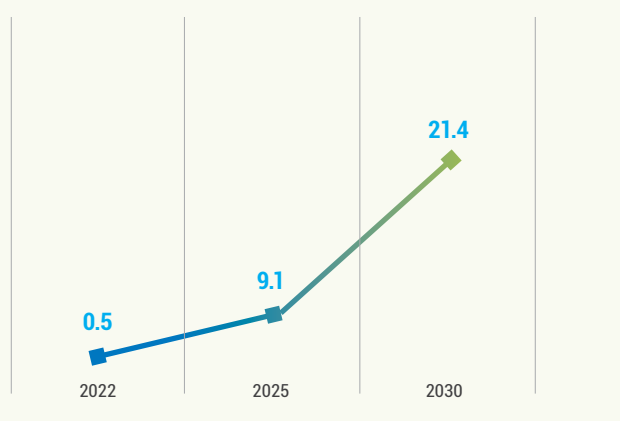
Kontribusi Dekarbonisasi  
Decarbonization Contribution **2,201** Ton CO<sub>2</sub>e

## Roadmap Reduksi Emisi

[GRI 302-1, 11.1.2, CCE-6.C1]

### Emission Reduction Roadmap

Juta Ton CO<sub>2</sub>e m<sup>3</sup>



### Pengendalian Emisi Penipis Lapisan Ozon [GRI 305-6]

Dalam kegiatan operasionalnya, Perseroan menggunakan refrigeran yang diproduksi sendiri yaitu Musicool. Musicool merupakan refrigeran alami yang terbuat dari hidrokarbon yang digunakan untuk bahan pendingin dalam berbagai mesin pendingin seperti AC *Split*, *Chiller*, *Refrigerator*, *Cold Storage* dan lain – lain. Produk tersebut memiliki berbagai varian produk, di antaranya Breezon MC-32 yang memiliki indeks Global Warming Potential (GWP) sangat rendah, yakni GWP = 2, dan nilai indeks Ozone Depletion Potential (ODP) = 0 (dalam metrik ton setara CFC-11). Musicool dan varian produknya menjadi produk yang dikomersialisasikan ke masyarakat, sehingga secara tidak langsung turut mengurangi emisi ODS. Pada tahun 2022, total penjualan musicool dan varian produknya 992 MT, mengalami peningkatan 102% dibandingkan tahun 2021 sebesar 490 MT.

Perseroan juga memiliki sertifikasi *green building* yang di keluarkan oleh Green Building Council Indonesia (GBCI) untuk fasilitas-fasilitas yang berada di unit operasionalnya.

### Beban Emisi Non GRK [GRI 305-7, 11.3.2, EM-EP-120a.1, EM-RM-120a.1, EM-MD-120a.1, CCE-7.C1, ENV-5.C1, CCE-7.C2, CCE-7.C3, CCE-7.C4, CCE-7.C5, ENV-5.A3]

Perseroan senantiasa memantau secara berkala terkait dengan beban emisi NO<sub>2</sub> (nitrogen dioksida), SO<sub>2</sub> (sulfur dioksida), partikulat, senyawa organik volatil (VOC), dan total senyawa organik (TOC). Pengukuran kualitas udara ambien dengan menggunakan metode aktif manual dan aktif kontinu dengan mengacu pada regulasi yang berlaku yaitu Peraturan Pemerintah Indonesia Nomor 22 Tahun 2021 tentang Penyelenggaraan dan Perlindungan Lingkungan Hidup serta ketentuan turunannya. Dari hasil pengukuran dan perhitungan selama periode pelaporan diketahui, kualitas udara ambien telah memenuhi baku mutu yang ditetapkan regulasi. Adapun rincian dari masing-masing jenis emisi non GRK, adalah sebagai berikut.

### Control of Ozone-Depleting Substances Emissions [GRI 305-6]

In its operational activities, the Company uses a self-produced refrigerant, namely Musicool. Musicool which is a natural refrigerant made from hydrocarbons, used as a cooling material in various refrigeration machines such as Split AC, Chiller, Refrigerators, Cold Storage, etc. This product has multiple product variants, including Breezon MC-32, which has a very low Global Warming Potential (GWP) index, namely GWP = 2, and an Ozone Depletion Potential (ODP) index value = 0 (in metric tons equivalent to CFC-11). Musicool and its product variants are the products commercialised to the public, thus indirectly helping to reduce ODS emissions. In 2022, the total sales of Musicool and its product variants amounted to 992 MT, an increase of 102% compared to 2021 of 490 MT.

The Company also has a green building certificate issued by the Green Building Council Indonesia (GBCI) for facilities located in the operational unit.

### Non GHG Emission Loads [GRI 305-7, 11.3.2, EM-EP-120a.1, EM-RM-120a.1, EM-MD-120a.1, CCE-7.C1, ENV-5.C1, CCE-7.C2, CCE-7.C3, CCE-7.C4, CCE-7.C5, ENV-5.A3]

The Company periodically monitors the emission load of NO<sub>2</sub> (nitrogen dioxide), SO<sub>2</sub> (sulfur dioxide), particulates, volatile organic compounds (VOC), and total organic compounds (TOC). It measures ambient air quality using active manual and continuous methods regarding applicable regulations, namely Indonesian Government Regulation Number 22 of 2021 concerning Environmental Management and Protection and its derivative provisions. The results of the measurements and calculations during the reporting period show that the ambient air quality has met the quality standards set by regulations. The details of each type of non-GHG emission are as follows.

**Tabel Beban Emisi Non-GHG**  
 Non-GHG Emission Table  
 (Dalam Ton) (in Ton)

Parameter	2022	2021*	2020	2019*
SOx	582,589.95	742,746.81	812,549.58	900,470.12
Nox	163,943.00	197,458.64	168,854.57	170,253.82
VOC	195,889.67	184,932.76	222,295.82	377,329.56
COx	2,715,028.91	2,428,507.41	2,297,958.59	2,295,211.25
PM	9,029.94	8,908.89	8,200.52	8,301.08
TOC	98,052.76	98,052.76	107,626.24	351,554.09

\* Restated

**ASPEK AIR**

**Penggunaan Air** [OJK F.8, GRI 303-1, 11.6.2, 303-2, 11.6.3, 303-3, 11.6.4, ENV-1.C3, ENV-1.C5, ENV-1.A10, ENV-2.A2, ENV- 1.C4, ENV-1.A2, CDSB REQ-04, CDSB REQ-05, ENV-1.A4, EM-RM-140a.2, EM-SV-140a.2]

Perseroan memastikan bahwa pemakaian air yang diambil dari berbagai sumber untuk kegiatan operasional dilakukan dengan bertanggung jawab. Hal tersebut dilakukan dengan mempertimbangkan konservasi sumber daya air agar tidak berdampak pada sumber air yang digunakan bersama masyarakat, melalui kegiatan pengelolaan di instalasi pengolahan air limbah (IPAL) yang sebagian olahan dari air yang sudah terpakai, akan dilepaskan kembali ke badan air.

Selama tahun 2022, Perseroan tidak dihadapkan pada sanksi karena pelanggaran regulasi terkait pemakaian air dan pelepasan olahan air limbah ke badan air. Pengukuran yang dilakukan oleh Perseroan menggunakan satuan meter kubik dengan rincian sebagai berikut.

**WATER ASPECT**

**Water Use** [OJK F.8, GRI 303-1, 11.6.2, 303-2, 11.6.3, 303-3, 11.6.4, ENV-1.C3, ENV-1.C5, ENV-1.A10, ENV-2.A2, ENV- 1.C4, ENV-1.A2, CDSB REQ-04, CDSB REQ-05, ENV-1.A4, EM-RM-140a.2, EM-SV-140a.2]

The Company ensures that water from various sources is used responsibly for operational activities. This is accomplished by considering the conservation of water resources so that it does not have an impact on water sources that are shared with the community through management activities at the Wastewater Treatment Plant (WWTP), where part of the processed water that has been used will be released back into the water bodies.

During 2022, the Company was not penalized for violating water-use regulations or releasing treated wastewater into water bodies. The Company's measurements are in cubic meters and include the following information.





### Tabel Pengambilan Air Berdasarkan Sumber

[GRI 303-3, 11.6.4, GRI 303-5, EM-EP-140a.1, EM-RM-140a.1, ENV-1.C1, ENV-1.A2]

Table of Water Withdrawal by Source

Air Water	Satuan Unit	2022	2021*	2020*	2019
<b>Total Air yang Diambil</b> Total Water Withdrawn	<b>Megaliters</b>	<b>799,365.02</b>	<b>554,317.53</b>	<b>577,557.66</b>	<b>564,548.29</b>
Air Permukaan Surface water	Megaliters	<b>359,292.35</b>	310,333.87	342,417.11	321,412.98
Air Tanah Ground water	Megaliters	<b>48,042.69</b>	15,606.51	17,627.20	19,011.22
Air Laut Sea water	Megaliters	<b>327,767.35</b>	224,916.08	213,371.77	223,406.71
Air yang Berasal dari Pihak Ketiga Water from third party	Megaliters	<b>64,262.63</b>	3,461.07	4,141.58	717.38
<b>Pengambilan air tawar berdasarkan segmen bisnis</b> Fresh water withdrawn by business segments					
<i>Upstream</i>	Megaliters	<b>28,800.59</b>	23,019.55	20,119.79	20,182.65
<i>Refining &amp; Petrochemical</i>	Megaliters	<b>393,529.85</b>	364,414.27	396,826.94	368,554.28
<i>Commercial &amp; Trading</i>	Megaliters	<b>392.25</b>	410.19	391.43	614.97
<i>Power New Renewable Energy</i>	Megaliters	<b>121.87</b>	54.12	274.71	488.86
<i>Gas</i>	Megaliters	<b>376,468.48</b>	166,419.36	159,944.80	174,707.53
<b>Pengambilan air berdasarkan kategori</b> Water withdrawal by category					
Air tawar ( $\leq 1.000$ mg/L Total Padatan Terlarut) Fresh water ( $\leq 1,000$ mg/L Total Dissolved Solids)	Megaliters	<b>471,597.67</b>	329,401.45	364,185.89	341,141.59
Air lainnya ( $> 1.000$ mg/L Total Padatan Terlarut) Other water ( $> 1,000$ mg/L Total Dissolved Solids)	Megaliters	<b>327,767.35</b>	224,916.08	213,371.77	223,406.71

\*Restated

### Tabel Pengurangan Penggunaan Air Tawar Berdasarkan Inisiatif yang Dilakukan di Subholding [ENV-1.C5]

Table of Freshwater Use Reduction Based on Initiatives Conducted in Subholdings

Segmen Segment	Megaliters/Tahun Megaliters/Year
<i>Upstream</i>	6,869,805.41
<i>Refining and Petrochemical</i>	9,557,040.73
<i>Commercial and Trading</i>	789.00
<i>Power and New Renewable Energy</i>	12,858.17
<b>Total</b>	<b>16,440,493.31</b>

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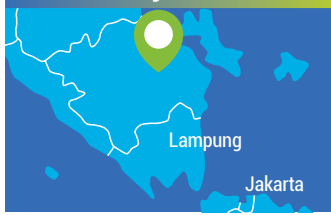
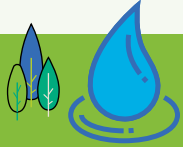




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Beberapa program penghematan penggunaan air yang dilakukan selama tahun 2022:

Several water saving programs conducted during 2022:

<p><b>RU III Plaju</b></p> 	<ul style="list-style-type: none"> <li>• Pengaturan Operasional Distribusi ke Perumahan</li> <li>• Re-Route Sistem Penyaluran <i>Cooling Water</i> dari Pola <i>Partially Circulated</i> menjadi <i>Fully Circulated</i> ke Unit FCCU</li> </ul>	<ul style="list-style-type: none"> <li>• Operational Arrangements for Distribution to Housing Area</li> <li>• Re-Route of Cooling Water Distribution System from Partially Circulated Pattern into Fully Circulated to FCCU Unit</li> </ul>
<p>Berhasil mencapai pengurangan air sebesar Successfully achieved water reduction of</p>		<p><b>267,739.20</b> M<sup>3</sup>/Year</p> 
<p><b>RU IV Cilacap</b></p> 	<ul style="list-style-type: none"> <li>• Pemanfaatan Kembali (<i>Recycle</i>) Air Condensate Outlet Area Proses sebagai Air Campuran <i>Treated Water</i> di Unit Utilities</li> <li>• Mengurangi <i>Evaporation Loss Cooling Water</i> UTL RFCC dengan Mengubah <i>Chemical Treatment</i></li> <li>• Mas Jack dan Ning Wati (Optimasi Sistem <i>Jacket Water</i> dan <i>Drinking Water Utilities</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• Reuse of condensate outlet water in the process area as mixed water of treated water in utilities unit</li> <li>• Reducing UTL RFCC Evaporation Loss Cooling Water by Changing Chemical Treatment</li> <li>• Mas Jack and Ning Wati (Optimization of Jacket Water Systems and Drinking Water Utilities)</li> </ul>
<p>Berhasil mencapai pengurangan air sebesar Successfully achieved water reduction of</p>		<p><b>5,235,248</b> M<sup>3</sup>/Year</p> 
<p><b>RU V</b></p> 	<ul style="list-style-type: none"> <li>• Pemanfaatan LLS Steam Ex-Kilang Balikpapan 2 sebagai Supply Heat di SWD 1 dan SWD 2</li> <li>• Meningkatkan Keandalan SWD 1 dengan Membuat Portable MOV di SWD Plant Utilities RU V Balikpapan</li> <li>• Implementasi Program <i>Change of Resin</i> di Demin Plant untuk Meningkatkan Efisiensi Produksi Demin Water</li> <li>• Implementasi <i>Chemical &amp; Mechanical Cleaning</i> di SWD 1 dan SWD 2 untuk Meningkatkan Efisiensi</li> <li>• Monit (Modifikasi Demineralization Unit)</li> <li>• Pemanfaatan Air Baku/ Air Permukaan Sungai Wain sebagai Air Baku Domestik Masyarakat di Sepanjang Line Waduk Sungai Wain - WTP Pancur</li> <li>• Pemanfaatan <i>Stripped Water Ex-New SWS Plant 17</i> dan <i>Plant 7</i> sebagai <i>Wash Water</i> di Kilang Balikpapan II</li> </ul>	<ul style="list-style-type: none"> <li>• Utilization of LLS Steam Ex-Balikpapan 2 Refinery as Heat Supply in SWD 1 and SWD 2</li> <li>• Improving the Reliability of SWD 1 by Making a Portable MOV at SWD Plant Utilities RU V Balikpapan</li> <li>• Implementation of the Change of Resin Program at the Demin Plant to Increase Demin Water Production Efficiency</li> <li>• Implementation of Chemical &amp; Mechanical Cleaning in SWD 1 and SWD 2 to Increase Efficiency</li> <li>• Monit (Modified Demineralization Unit)</li> <li>• Utilization of Wain River Raw Water/Surface Water as Community Domestic Raw Water Along the Sungai Wain Reservoir Line - WTP Pancur</li> <li>• Utilization of Stripped Water Ex-New SWS Plant 17 and Plant 7 as Wash Water at the Balikpapan II Refinery</li> </ul>
<p>Berhasil mencapai pengurangan air sebesar Successfully achieved water reduction of</p>		<p><b>1,361,821.59</b> M<sup>3</sup>/Year</p> 

**Operasional di Daerah yang Mengalami Kerawanan Air**

PERTAMINA telah melakukan identifikasi risiko pengelolaan air, khususnya di daerah yang mengalami kerawanan air. Sampai dengan akhir tahun 2022, PERTAMINA memiliki 7 lokasi yang beroperasi di wilayah kerawanan air. Identifikasi wilayah yang mengalami kerawanan air mengacu pada World Resources Institute’s Aqueduct Water Risk Atlas dan *risk assessment* lokal yang dilakukan.

**Operations in Areas Experiencing Water Stress**

Pertamina has identified water management risks, especially in areas experiencing water stress. Until the end of 2022, Pertamina has 7 locations operating in water stress areas. Identification of areas experiencing water stress refers to the World Resources Institute’s Aqueduct Water Risk Atlas and the local risk assessment conducted.

Unit operasi Operating unit	Area kerja Working area
Upstream regional 2	Jawa barat   West Java
Upstream regional 4	Jawa timur   East Java
Refinery Unit IV	Jawa tengah   Central Java
Refinery Unit VI	Jawa Barat   West Java
Marketing Operation Region III	Jawa Barat   West Java
Marketing Operation Region IV	Jawa tengah   Central Java
Marketing Operation Region V	Jawa timur   East Java



Konsumsi air di wilayah yang mengalami kerawanan air (GRI 303-5)					
Water Consumption in water-stressed areas					
	Satuan Unit	2022	2021	2020	2019
Konsumsi air di wilayah yang mengalami kerawanan air Water Consumption in water-stressed areas	Megaliters	230,751.64	182,353.56	218,530.97	185,919.78

### PEMAKAIAN AIR PADA MATURE FIELD

Dalam menjalankan kegiatan operasionalnya, Perseroan juga menggunakan air pada lapangan *mature (mature field)*. Sepanjang tahun 2022, penggunaan air mature field mengalami peningkatan sebesar 24,71% dibandingkan dengan tahun 2021, dengan rincian sebagai berikut.

### WATER USAGE IN MATURE FIELD

The Company also uses water in mature fields to carry out its operational activities. Throughout 2022, the use of mature field water increased by 24.71% compared to 2021, with the following details.

Lapangan Field	Sumber Air Terpakai Sources of Water Used	Volume air terpakai (megaliter) Volume of water used (megaliters)	
		2022	2021
Rantau	Produksi air struktur Rantau Water production of Rantau structure	1,100	1,360
Jirak	Produksi air struktur Jirak ditambah produksi Struktur Sopa dan Musi Water production of Jirak structure plus Sopa and Musi structure	910	960
Belimbing	Produksi air struktur Belimbing Water production of Belimbing structure	1,370	1,180
Ramba	Produksi air struktur Ramba Water production of Ramba Structure	1,370	480
North East Air Serdang	Produksi air struktur North East Air Serdang Water production of North East Air Serdang Structure	1,490	1,620
Meruap	Produksi air struktur Meruap Water production of Meruap Structure	420	460
Handil	Produksi air struktur Handil Water production of Handil Structure	3,980	1,980
Tanjung	Produksi air struktur Tanjung Water production of Tanjung Structure	2,330	2,360
<b>Total air terinjeksi</b> Total injected water		<b>12,970</b>	<b>10,400*</b>

\*Restated

### Konsumsi dan Intensitas Daur Ulang Air [GRI 303-4, 11.6.5, 303-5, 11.6.6, ENV-1.A1, ENV-1.C2]

Perseroan memiliki komitmen untuk melakukan penghematan air, dengan menggunakan kembali air yang terpakai. Seluruh subholding maupun entitas anak dan unit bisnisnya telah dilengkapi IPAL yang digunakan untuk mengolah air limbah agar dapat memenuhi baku mutu yang ditetapkan regulasi saat dilepaskan ke badan air. Pengukuran air limbah meliputi parameter *chemical oxygen demand (COD)*, sulfida, ammonia, fenol, total padatan tersuspensi (TSS) telah memenuhi baku mutu yang ditetapkan oleh regulasi di masing-masing wilayah operasi, dan telah dilaporkan kepada pihak-pihak yang berwenang. Komitmen Perseroan dalam penggunaan air bersih juga terlihat dari tidak terlibatnya Perseroan dengan dampak negatif atau terjadinya insiden terkait air sepanjang tahun 2022. Adapun metode pengelolaan air serta konsumsi dan daur ulang air sebagai berikut.

### Consumption and Intensity of Recycled Water [GRI 303-4, 11.6.5, 303-5, 11.6.6, ENV-1.A1, ENV-1.C2]

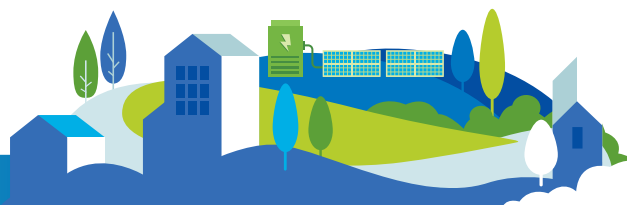
The Company commits to saving water by reusing used water. All Sub Holdings, subsidiaries, and business units have been equipped with a WWTP, which is used to treat wastewater to meet the quality standards set by regulations when it is discharged into water bodies. Wastewater measurements covering the parameters of chemical oxygen demand (COD), sulphide, ammonia, phenol, and total suspended solids (TSS), have met the quality standards set by regulations in each operational area, and have been reported to the competent authorities. The Company's commitment to use clean water can also be seen from the Company's zero negative impacts or incidents that related to water throughout 2022. The methods for managing water as well as consuming and recycling water are as follows.

**Tabel Pengelolaan Air**  
Water Management Table

Lokasi Kegiatan Activities Location	Tempat Pengolahan Treatment Site	Metode Pengolahan Processing Method	Bentuk Pemanfaatan Utilization Form
Kegiatan Lepas Pantai Offshore Activities	Instalasi Pengolahan Air Limbah (IPAL) Waste Water Treatment Plant (WWTP)	<ul style="list-style-type: none"> <li>• Biologis</li> <li>• Kimiawi</li> <li>• Pemantauan dan pengukuran sesuai Peraturan Menteri Lingkungan Hidup Nomor 19 Tahun 2010 Tentang Baku Mutu Air Limbah Bagi Usaha dan/atau Kegiatan Minyak dan Gas serta Panas Bumi</li> </ul>	<ul style="list-style-type: none"> <li>• Digunakan kembali</li> <li>• Dilepaskan ke badan air: laut, berdasar Izin Pembuangan Limbah Cair (IPLC) dari Kementerian LHK</li> <li>• Reused</li> <li>• Discharged into water bodies: sea, based on the Liquid Waste Disposal Permit (IPLC) from the Ministry of Environment and Forestry</li> </ul>
Kegiatan di Daratan Onshore activities		<ul style="list-style-type: none"> <li>• Biological</li> <li>• Chemistry</li> <li>• Monitoring and measurement in accordance with the Regulation of the Minister of the Environment Number 19 of 2010 concerning Wastewater Quality Standards for Oil and Gas and Geothermal Business and/or Activities</li> </ul>	<ul style="list-style-type: none"> <li>• Digunakan kembali</li> <li>• Dilepaskan ke badan air: saluran air, sungai, danau berdasar izin dari pemerintah daerah</li> <li>• Reused</li> <li>• Discharged into water bodies: water channels, rivers, lakes with permission from local government</li> </ul>

**Tabel Konsumsi Air dan Air Daur Ulang** [GRI 303-5, 11.6.6, EM-EP-140a.1, EM-SV-140a.1, ENV-1.C2, ENV-1.A1]  
Water and Recycled Water Consumption Table

	Satuan Unit	2022	2021	2020	2019
<b>Total Air Dikonsumsi</b> Total Water Consumed	<b>Megaliters</b>	<b>299,163.38</b>	<b>263,663.25</b>	<b>291,432.90</b>	<b>253,771.68</b>
<i>Upstream</i>	Megaliters	<b>12,877.71</b>	9,515.75	7,966.94	7,715.03
<i>Refining &amp; Petrochemical</i>	Megaliters	<b>281,557.76</b>	250,692.43	280,563.48	243,113.94
<i>Commercial &amp; Trading</i>	Megaliters	<b>92.91</b>	410.19	391.43	614.97
<i>Power &amp; New Renewable Energy</i>	Megaliters	<b>13.34</b>	54.12	4.97	7.90
Gas	Megaliters	<b>4,621.66</b>	2,990.76	2,506.08	2,319.85
<b>Total Air Didaur Ulang Berdasarkan Segmen Bisnis</b> Total Recycled Water by Business Segment	<b>Megaliters</b>	<b>13,448.94</b>	<b>15,512.20</b>	<b>14,268.10</b>	<b>14,177.78</b>
<i>Upstream</i>	Megaliters	<b>314.02</b>	231.20	229.02	160.49
<i>Refining &amp; Petrochemical</i>	Megaliters	<b>13,134.90</b>	13,006.79	13,019.90	12,047.14
<i>Power &amp; New Renewable Energy</i>	Megaliters	-	1.66	-	-
Gas	Megaliters	<b>0.02</b>	2,272.56	1,019.18	1,970.14



**Tabel Pembuangan Air [GRI 303-4, 11.6.5, EM-EP-140a.2]**

Table of Water Discharge

	Satuan Unit	2022	2021*	2020*	2019*
<b>Total Air dibuang berdasarkan segmen bisnis</b> Total water discharge by business segment	<b>Megaliters</b>	<b>500,048.84</b>	<b>290,654.24</b>	<b>285,855.03</b>	<b>310,295.65</b>
<i>Upstream</i>	Megaliters	<b>15,922.88</b>	13,503.80	12,152.85	12,467.63
<i>Refining &amp; Petrochemical</i>	Megaliters	<b>111,972.09</b>	113,721.84	116,263.46	125,440.34
<i>Commercial &amp; Trading</i>	Megaliters	<b>299.33</b>	-	-	-
<i>Power &amp; New Renewable Energy</i>	Megaliters	<b>7.72</b>	-	-	-
<i>Gas</i>	Megaliters	<b>371,846.82</b>	163,428.60	157,438.71	172,387.69

\*Restated

**Tabel Pembuangan Air berdasarkan Tujuan [GRI 303-4, 11.6.5, EM-EP-140a.2, ENV-2.A6]**

Table of Water Discharge by Destination

	Satuan Unit	2022	2021*	2020*	2019*
<b>Total Pembuangan Air Berdasarkan Tujuan</b> Table of Water Discharge by Destination	<b>Megaliters</b>	<b>500,048.84</b>	<b>290,654.24</b>	<b>285,855.03</b>	<b>310,295.65</b>
Air Permukaan/Surface Water	Megaliters	<b>126,692.55</b>	116,159.33	114,353.22	123,198.44
Air Tanah/Ground Water	Megaliters	<b>34,644.09</b>	1.37	1.59	0.73
Air Laut/Sea Water	Megaliters	<b>283,168.41</b>	173,552.83	170,579.38	186,205.38
Distribusi pihak ketiga Third-party distribution	Megaliters	<b>55,543.79</b>	940.70	920.83	891.11

**Tabel Pembuangan Air Berdasarkan Kategori**

Table of Water Discharge by Category

	Satuan Unit	2022	2021*	2020*	2019*
Air tawar ( $\leq 1.000$ mg/L Total Padatan Terlarut)/Fresh water ( $\leq 1,000$ mg/L Total Dissolved Solids)	Megaliters	216,880.43	117,101.40	115,275.64	124,090.28
Air lainnya ( $> 1.000$ mg/L Total Padatan Terlarut)/Other water ( $> 1,000$ mg/L Total Dissolved Solids)	Megaliters	283,168.41	173,552.83	170,579.38	186,205.38

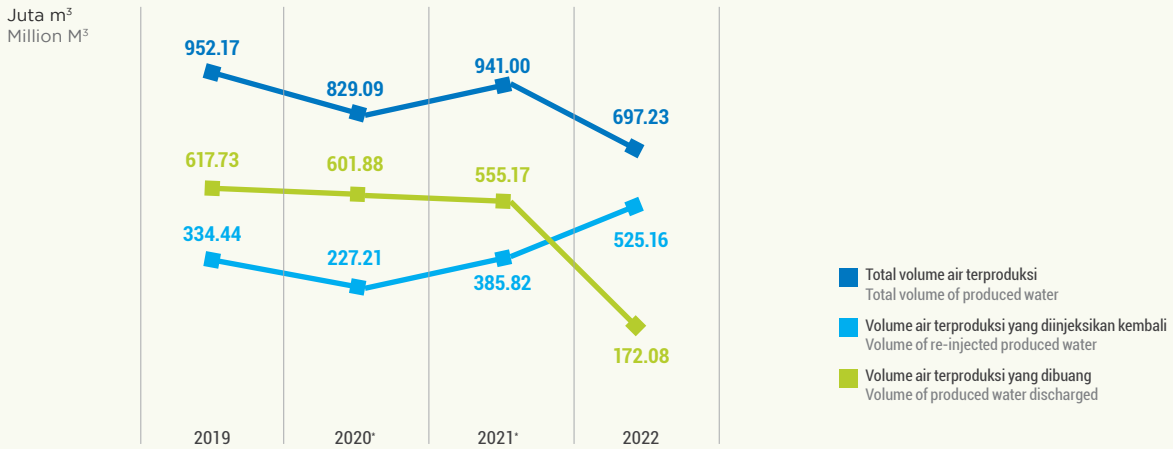
\*Restated

**Tabel Intensitas Konsumsi Air [GRI 303-4, 11.6.5, ENV-2.C1, ENV-2.C2, ENV-2.A6]**

Table of Water Consumption Intensity

Segmen Segment	Satuan Unit	2022	2021	2020	2019
<i>Upstream</i>	m <sup>3</sup> /MBOE	<b>35.96</b>	30.65	27.26	25.47
<i>Refining and Petrochemical</i>	m <sup>3</sup> /bareil minyak mentah diproses m <sup>3</sup> /bbl crude processed	<b>0.714</b>	0.607	0.731	0.556

**Pembuangan Air Terproduksi Berdasarkan Tujuan** [GRI 303-4, 11.6.5, EM-EP-140a.2, ENV-2.A5, ENV-1.A10]  
Produced Water Discharged by Destination



**Tabel Volume Hidrokarbon Dilepas ke Air Permukaan** [GRI 303-4, 11.6.5, EM-EP-160a.2]  
Table of Volume of Hydrocarbon Discharged into Surface Water

Segmen Segment	Satuan Unit	2022	2021	2020	2019
Upstream	m3	28.13	28.13	-	-
Refining & Petrochemical	m3	229.34	156.25	186.32	196.64
Commercial & Trading	m3	-	7.57	-	-
Gas	m3	-	55.67	34.61	16.00
<b>Total</b>	<b>m3</b>	<b>257.47</b>	<b>247.62</b>	<b>220.93</b>	<b>212.64</b>

**ASPEK LIMBAH DAN EFLUEN**

**Limbah dan Efluen yang Dihasilkan** [OJK F.13, EM-RM-150a.1, EM-RM-150a.2, EM-EP-140a.2, EM-EP-160a.2, CDSB REQ-04, CDSB REQ-05]

Perseroan senantiasa berkomitmen untuk melakukan pengelolaan limbah yang bertujuan untuk meminimalkan dampak negatif terhadap lingkungan. Pengelolaan limbah dilakukan dengan pendekatan kepatuhan pada regulasi yang berlaku, standar ISO 14001:2015 tentang Sistem Manajemen Lingkungan Limbah, dan SUPREME. Pengelolaan limbah merupakan tanggung jawab dari masing-masing unit bisnis, dimana fungsi HSSE di lokasi berperan sebagai *assurance body* untuk memastikan limbah telah dikelola dengan baik. Komitmen Perseroan dalam pengelolaan limbah tercermin dari tidak adanya insiden atau sanksi yang diterima oleh Perseroan terkait dengan limbah sepanjang tahun 2022. Terkait kenaikan limbah B3 dan Non B3 secara umum disebabkan akuisisi PERTAMINA Hulu Rokan yang pada tahun 2022 seluruh kinerjanya dikonsolidasi dalam laporan kinerja Perseroan. Data di bawah ini mencakup jumlah limbah yang dihasilkan serta upaya pengelolaan yang dilakukan oleh Perseroan.

**WASTE AND EFFLUENT ASPECT**

**Waste and Effluent Produced** [OJK F.13, EM-RM-150a.1, EM-RM-150a.2, EM-EP-140a.2, EM-EP-160a.2, CDSB REQ-04, CDSB REQ-05]

The Company is always committed to managing waste to minimize adverse environmental impacts. Waste management is carried out with an approach to compliance with applicable regulations, ISO 14001:2015 standard on Environmental Waste Management Systems, and SUPREME. Waste management is the responsibility of each business unit, where the HSSE function at the location acts as an assurance body to ensure that waste has been appropriately managed. The Company's commitment to waste management is reflected in the absence of incidents or sanctions received by The Company related to waste throughout 2022. Regarding the increase in B3 and Non-B3 waste, in general it was due to the acquisition of Pertamina Hulu Rokan, whose entire performance will be consolidated in the Company's performance report in 2022. The data below includes the amount of waste generated and the management efforts undertaken by the Company.



**Tabel Jumlah Limbah non B3 yang Dihasilkan dan Pengelolaannya**

[GRI 306-3, 11.5.4, 11.8.2, 306-4, 11.5.5, 306-5, 11.5.6, ENV-7.C3, ENV-7.A1]

Table of Amount of Waste Generated and Its Management

Jenis Limbah Type of Waste	Satuan Unit	2022	2021	2020	2019
Limbah dihasilkan Waste generated	Ton	<b>25,124.71</b>	21,521.29	17,814.15	16,869.77
Limbah digunakan kembali dan didaur ulang Waste reused & recycled	Ton	<b>2,545.84</b>	3,564.99	1,510.27	1,445.16
Limbah dikelola oleh pihak ketiga, di dalam dan di luar lokasi Waste managed by third party, in-site & off-site	Ton	<b>19,108.14</b>	19,872.72	15,911.45	14,849.58

**Tabel Jumlah Limbah B3** [GRI 306-3, 11.5.4, GRI 306-4, 11.5.5, ENV-7.C3, ENV-7.A1]

Table of Amount of Toxic and Hazardous Waste (B3)

Jenis Limbah Type of Waste	Satuan Unit	2022	2021*	2020*	2019*
Limbah dihasilkan Waste generated	Ton	<b>122,913.82</b>	81,351.53	77,593.73	76,595.55
Limbah digunakan kembali dan didaur ulang Waste reused & recycled	Ton	<b>5,079.19</b>	1,682.28	1,399.10	3,190.65
Limbah dikelola oleh pihak ketiga, di dalam dan di luar lokasi Waste managed by third party, in-site & off-site	Ton	<b>117,316.47</b>	76,769.56	76,933.19	73,184.26

\*Restated

**Tabel Pengurangan Limbah**

Table of Waste Reduced

Jenis Limbah Type of Waste	Satuan Unit	2022	2021*	2020*	2019*
B3	Ton	<b>189.70</b>	133.58	187.12	400.46
Non B3	Ton	<b>183.9</b>	222.32*	402.86*	351.27*

\*Restated

## Mekanisme Pengelolaan Limbah dan Efluen [OJK F.14]

Limbah yang dihasilkan oleh Perseroan dikelola melalui penerapan *reduce, reuse, recycle, replace, return on supplier, treatment* dan *disposal* (5RTD). Pengelolaan limbah dapat dilakukan sendiri oleh Perseroan, maupun melibatkan pihak ketiga, yang diseleksi sesuai dengan persyaratan yang ditentukan, antara lain telah memiliki izin dari Kementerian Lingkungan Hidup dan Kehutanan (KLHK) dan memiliki fasilitas pengangkutan dan penyimpanan yang aman. Perseroan terus berkomitmen untuk mengurangi volume timbulan limbah. Informasi pengelolaan limbah sebagai berikut.  
[GRI 306-1, 11.5.2, GRI 306-2, 11.5.3]

## Waste and Effluent Management Mechanism [OJK F.14]

The Company's waste is managed through the use of *reduce, reuse, recycle, replace, return on supplier, treatment, and disposal* (5RTD). Waste management can be handled by the Company on its own or by involving third parties who meet certain criteria, such as having a permit from the Ministry of Environment and Forestry (KLHK) and safe transportation and storage facilities. The Company remains committed to reducing the amount of waste generated. The following is some waste management information.  
[GRI 306-1, 11.5.2, GRI 306-2, 11.5.3]



**Jenis dan Bentuk Limbah Non-B3 serta Metode Pengelolaannya**

[GRI 306-1, 11.5.2, GRI 306-2, 11.5.3, 306-4, 11.5.5, 306-5, 11.5.6, ENV-7.C2, ENV-7.A4]

Types and Forms of Non-Toxic and Hazardous Waste and Its Management Method

Jenis Limbah Type of Waste	Bentuk Limbah Form of Waste	Metode Pengelolaan dan Pengolahan Management and Processing Methods	
Padatan Solid	Kertas bekas, sampah organik dan anorganik, karton bekas kemasan, kayu bekas, dan rumput/potongan tanaman Used paper, organic and inorganic waste, used cardboard packaging, used wood, and grass/plant clippings	1. Limbah disimpan di Tempat Penampungan Sementara	Dimanfaatkan kembali oleh perusahaan melalui program <i>reuse, recycle, dan recovery</i> Managed by the company through reuse, recycle, and recovery programs
		1. Waste is stored in Temporary Storage	Dimanfaatkan kembali oleh pihak ketiga, termasuk masyarakat melalui kegiatan pemberdayaan (CSR), di antaranya bank sampah, <i>composting</i> , dan lainnya Managed by third parties, including the community through empowerment activities (CSR), including waste banks, composting, and others
		2. Program pengurangan timbulan limbah 2. Waste generation reduction program	<i>Reduce, Reuse, Recycle, Replace, Return on Supplier, Treatment dan Disposal</i> (5RTD).

**Jenis dan Bentuk Limbah B3 serta Metode Pengelolaan dan Pengolahan**

[GRI 306-1, 11.5.2, 306-2, 11.5.3, 306-4, 11.5.5, 306-5, 11.5.6, ENV-7.C2]

Type and Form of Toxic and Hazardous Waste as Well as Management and Processing Method

Jenis Limbah Type of Waste	Bentuk Limbah Form of Waste	Metode Pengelolaan dan Pengolahan Management and Processing Methods	
Padatan Solid	Kemasan B3 bekas, obat kedaluwarsa, sarung tangan dan majun bekas, serbuk bor, filter bekas, lampu bekas, aki, baterai bekas, dan absorbent beka Used hazardous packaging, expired medicines, used gloves & rags, drill cuttings, used filters, used lamps, used dry batteries/batteries, and used absorbents	1. Limbah disimpan di Tempat Penampungan Sementara	Diangkut pihak ketiga berizin ke tempat pengolahan • Insinerasi • Penimbunan dengan metode khusus • Pemanfaatan Kembali untuk kegiatan lain
		1. Waste is stored in Temporary Storage	Transported by a licensed third party to the processing site • Incineration • Landfilling with specific methods • Reuse for other activities
Cairan Liquid	Katalis bekas, pelumas bekas, <i>sludge oil</i> , limbah analisis laboratorium Used catalysts, used lubricants, sludge oil, laboratory analysis waste	1. Tempat penampungan sementara	Diangkut pihak ketiga berizin ke tempat pengolahan dengan: • Insinerasi • Penimbunan dengan metode khusus • Pemanfaatan Kembali untuk kegiatan lain
		1. Temporary storage	Transported by a licensed third party to the processing site: • Incineration • Landfilling with specific methods • Reused for other activities
Air Terproduksi Produced water		2. Program pengurangan timbulan limbah 2. Waste reduction program	Dilakukan dengan: • Inovasi modifikasi WTIP untuk mengurangi timbulan <i>sludge oil</i> • Inovasi dalam pekerjaan <i>pressure vessel</i> maintenance untuk mengurangi timbulan limbah glycol
		1. <i>Metode enhanced oil recovery</i> (EOR) 1. enhanced oil recovery (EOR) method	Disuntikkan kembali sebagai air injeksi dalam kegiatan <i>enhanced oil recovery</i> (EOR) sumur minyak maupun sumur panas bumi. It is reinjected as injection water in enhanced oil recovery (EOR) activities for oil wells and geothermal wells.
		2. Diolah di instalasi pengolahan air limbah (IPAL) 2. Processed in a wastewater treatment plant (IPAL)	• Dialirkan ke badan air • Pemanfaatan Kembali untuk kegiatan lain • Discharged into water bodies • Reuse for other activities
		3. Program pengurangan timbulan limbah 3. Waste reduction program	<i>Reduce, Reuse, Recycle, Replace, Return on Supplier, Treatment dan Disposal</i> (5RTD). <i>Reduce, Reuse, Recycle, Replace, Return on Supplier, Treatment and Disposal</i> (5RTD).



### Tumpahan yang Terjadi [OJK F.15, EM-MD-160a.4, ENV-6.C2, ENV-6.C3, ENV-6.A2, ENV-6.A6, ENV-6.A7]

Perseroan senantiasa berkomitmen untuk mencegah dampak negatif terhadap lingkungan termasuk pencegahan terhadap tumpahan minyak dan tumpahan hidrokarbon. Namun demikian, pada tahun 2022 masih terdapat kasus tumpahan minyak sebesar 95,441 barrel, menurun 64% dibanding tahun 2021. Strategi dan upaya mitigasi yang dilakukan Perseroan untuk meminimalkan dampak negatif tersebut yaitu:

1. Melaksanakan *assurance* terhadap *well integrity*;
2. Melakukan inspeksi dan *maintenance* terhadap fasilitas produksi *offshore*;
3. Memastikan kesiapan penanggulangan keadaan darurat tumpahan minyak di perairan;
4. Menerapkan *process safety* dan *asset integrity management system*.

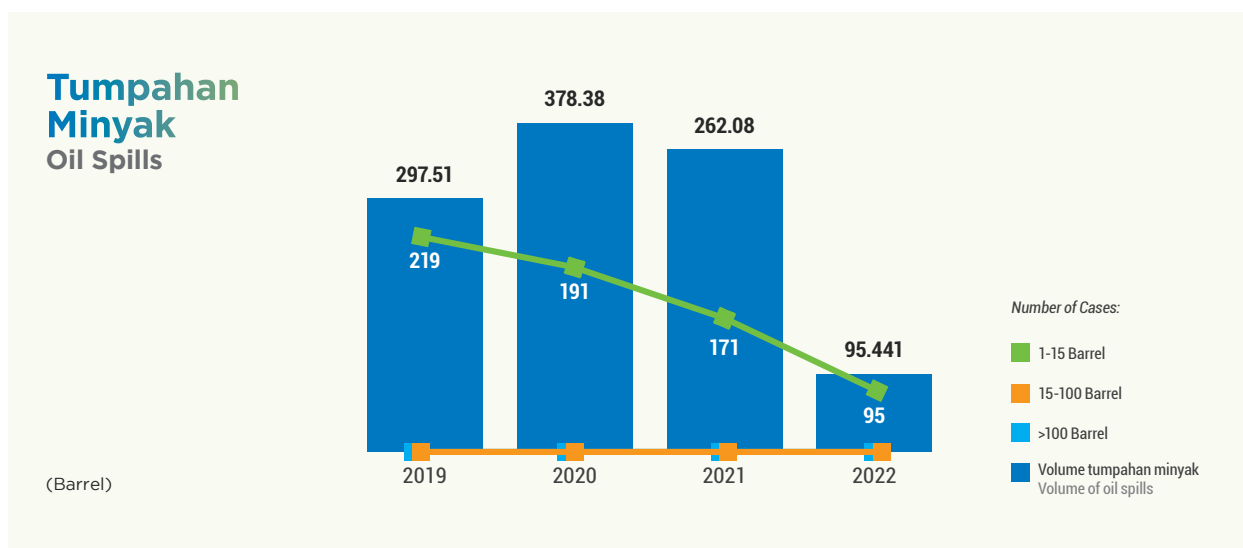
Adapun tumpahan yang terjadi dari tahun 2019 sampai dengan 2022, sebagai berikut:

### Spills Occurring [OJK F.15, EM-MD-160a.4, ENV-6.C2, ENV-6.C3, ENV-6.A2, ENV-6.A6, ENV-6.A7]

The Company is always committed to preventing negative impacts on the environment, including the prevention of oil spills and hydrocarbon spills. However, in 2022 there were still cases of oil spills amounting to 95,441 barrels, a decrease of 64% compared to 2021. The strategies and mitigation efforts undertaken by the company to minimize these negative impacts are:

1. Conduct assurance of well integrity;
2. Perform inspection and maintenance of offshore production facilities;
3. Ensure readiness for handling an emergency oil spills in waters;
4. Implement process safety and asset integrity management systems.

The spills occurring from 2019 to 2022 are as follows:



### ASPEK KEANEKARAGAMAN HAYATI

#### Dampak dari Wilayah Operasional yang Dekat atau Berada di Daerah Konservasi atau Memiliki Keanekaragaman Hayati [OJK F.9, GRI 304-1, 11.4.2, ENV-4.C1, CDSB REQ-04, CDSB REQ-05, EM-EP-160a.3, EM-MD-160a.2, EM-MD-160a.3]

Perseroan selalu berkomitmen untuk melestarikan aspek keanekaragaman hayati, mengingat beberapa area operasionalnya yang terdiri dari eksplorasi, produksi, pengolahan, distribusi, dan perkantoran di Indonesia berdekatan dengan kawasan yang dilindungi. Perseroan memastikan bahwa lokasi operasional yang bersinggungan dengan wilayah

### BIODIVERSITY ASPECT

#### Impacts of Operational Areas Near Conservation Area or Area with Biodiversity [OJK F.9, GRI 304-1, 11.4.2, ENV-4.C1, CDSB REQ-04, CDSB REQ-05, EM-EP-160a.3, EM-MD-160a.2, EM-MD-160a.3]

The Company is always committed to biodiversity preservation, keeping in mind that some of its operational areas include exploration, production, processing, and distribution, and that its offices in Indonesia are located near protected areas. The Company ensures that operational locations intersecting with conservation areas have been

konservasi telah dilengkapi dengan dokumen perizinan dari Kementerian Lingkungan Hidup dan Kehutanan (KLHK) dan menerapkan hirarki mitigasi: *avoid, minimize, remediate, offsite*. Berikut merupakan informasi luasan wilayah konservasi. [GRI 304-1, 11.4.2, EM-SV-160a.1, EM-SV-160a.2, ENV-4.A3]

completed with licensing documents from the Ministry of Environment and Forestry (KLHK) and employs a mitigation hierarchy of avoidance, minimization, remediation, and offsite. The following outlines the size of the conservation area. [GRI 304-1, 11.4.2, EM-SV-160a.1, EM-SV-160a.2, ENV-4.A3]

**Luasan Wilayah Konservasi di Wilayah Operasi Perseroan** [EM-EP-160a.3, EM-SV-160a.1, EM-MD-160a.2]

Size of Conservation Area (ha) in the Company's Operational Areas

(Dalam Ha)(in Ha)

Segmen Segment	2022	2021*	2020*	2019*
Upstream	13,511.37	13,511.37	12,988.23	6,067.23
Refining and Petrochemical	12,638.36	12,308.60	12,470.42	12,466.92
Commercial and Trading	4,580.74	4,580.74	4,580.74	4,580.74
Power New Renewable Energy	24.63	19.73	14.32	13.72
Gas	55.71	5.85	5.85	5.85
Integrated Marine Logistics	-	-	-	-
<b>Total</b>	<b>30,810.81</b>	<b>30,426.29</b>	<b>30,059.56</b>	<b>23,134.46</b>

\*Restated

**Tabel Aktivitas Operasi Perseroan yang dekat dengan Daerah Dilindungi/  
Tinggi Nilai Keaneekaragaman Hayati** [GRI 304-1, 11.4.2]

Table of the Company's Operational Activities Adjacent to Protected Areas / Areas of High Biodiversity Value

Keterangan Description	Bersilangan dengan area operasional Intersecting with operational areas	Dekat dengan area operasional Adjacent to operational areas (<1km)
UNESCO World Heritage Natural Sites	0	0
Natura 2000	0	0
Conservation area	9	3

**Tabel Wilayah Operasi Perseroan yang dekat dengan Daerah Dilindungi/  
Tinggi Nilai Keaneekaragaman Hayati** [GRI 304-1, 11.4.2, EM-EP-160a.3, EM-MD-160a.3]

Table of Company's Operational Areas adjacent to protected areas and areas of high biodiversity value

Segmen Segment	Lokasi Location	Description
Upstream	Blok ONWJ	Seluas 324 km2 dari WK di perairan Kabupaten Kepulauan Seribu berada di kawasan Taman Nasional Kepulauan Seribu An area of 324 km2 from the WK in the waters of the Thousand Islands Regency is in the Thousand Islands National Park area
	Jambi Merang	Wilayah Kerja PHE Jambi Merang berisikan dengan kawasan Taman Nasional Sembilang, namun hingga saat ini PHE Jambi Merang tidak melakukan aktifitas di dalam area Taman Nasional Sembilang The Jambi Merang PHE Working Area overlaps with the Sembilang National Park area, but until now PHE Jambi Merang has not carried out activities within the Sembilang National Park area
	Blok OSES	Wilayah kerja terluar PHE OSES di perairan Laut Jawa, berbatasan dengan Taman Nasional Kepulauan Seribu di Tenggara dan Taman Nasional Way Kambas di Barat The outer working area of PHE OSES is in the waters of the Java Sea, bordered by a Park Thousand Islands National Park in the Southeast and Way Kambas National Park in the West
	Donggi Matindok	Wilayah Kerja PEP Field Donggi Matindok berbatasan dengan Taman Keaneekaragaman Hayati Kokolomboi, Banggai Kepulauan, Sulawesi Tengah The Donggi Matindok PEP Field Working Area is adjacent to the Kokolomboi Biodiversity Park, Banggai Islands, and Central Sulawesi

**Tabel Wilayah Operasi Perseroan yang dekat dengan Daerah Dilindungi/  
Tinggi Nilai Keanekaragaman Hayati [GRI 304-1, 11.4.2, EM-EP-160a.3, EM-MD-160a.3]**

Table of Company's Operational Areas adjacent to protected areas and areas of high biodiversity value

Segmen Segment	Lokasi Location	Description
	Sanga-Sanga	Wilayah Kerja PEP Field Sangasanga area Samboja berbatasan dengan Taman Nasional Bukit Soeharto The working area of PEP Field Sangasanga, Samboja area, bordering with the Bukit Soeharto National Park
	Sangatta	Wilayah Kerja PEP Field Sangatta beririsan dengan kawasan Taman Nasional Kutai. The PEP Field Sangatta Working Area intersects with the Kutai National Park area.
	WK Rokan	Wilayah kerja PHR beririsan dengan Taman Hutan Raya Sultan Syarif Hasyim pada Wilayah Operasi Minas Siak dan beririsan dengan Suaka Margasatwa Balairaja pada wilayah operasi Bekasap Rokan The working area of PHR intersects with the Sultan Syarif Hasyim Grand Forest Park in the Minas Siak Operational Area. It intersects with the Balairaja Wildlife Sanctuary in the Bekasap Rokan operational area.
<b>Power &amp; New Renewable Energy</b>	Kamojang, Lumut Balai, Karaha, Hululais, Bukit Daun, Ulubelu	Wilayah kerja PGE area Kamojang, Lumut Balai, Karaha, Hululais, Bukit Daun, Ulubelu berada di kawasan hutan lindung The PGE working area in the Kamojang, Lumutbalai, Karaha, Hululais, Bukitdaun, Ulubelu areas is a protected forest area

Keterangan : lokasi yang berdekatan (3 lokasi) dan lokasi yang bersilangan (9 lokasi) dengan area dilindungi  
Notes : sites that are adjacent (3 sites) and sites that intersect (9 sites) with protected areas

**Usaha Konservasi Keanekaragaman Hayati [OJK F.10, GRI 304-2, 11.4.3, 304-3, 11.4.4, 304-4, 11.4.5, EM-EP-160a.1, ENV-3.C1, ENV-3.C2, ENV-3.C3, ENV-3.A4, ENV-3A.2, ENV-4.C1, ENV-4.C2, ENV-4.A2]**

Perseroan senantiasa berkomitmen dalam melindungi keanekaragaman hayati, dengan melakukan identifikasi keberadaan spesies endemik maupun spesies dilindungi sebelum kegiatan operasi dilaksanakan, serta melakukan pemindahan spesies ke kawasan konservasi yang sudah disiapkan, atau kawasan lain yang tidak terdampak kegiatan operasi. Seluruh tahapan kegiatan dijalankan dengan melibatkan pihak-pihak berwenang, termasuk Balai Konservasi dan Sumber Daya Alam (BKSDA) maupun Dinas Lingkungan Hidup setempat, dan disertai pelaporan berkala. [GRI 304-2, 11.4.3, ENV-4.C1, ENV-3.C1, ENV-3.C3, ENV-4.C2]

Adapun program konservasi keanekaragaman hayati yang dilakukan Perseroan yaitu pada spesies endemik dan dilindungi, berdasarkan Peraturan Menteri Lingkungan Hidup dan Kehutanan Nomor P.106/MENLHK/SETJEN/KUM.1/12/2018 tentang Jenis Tumbuhan dan Satwa Dilindungi, serta Daftar Merah IUCN. Adapun jumlah jenis flora dan fauna yang dikonservasi sebagai berikut.

**Efforts to Conserve Biodiversity [OJK F.10, GRI 304-2, 11.4.3, 304-3, 11.4.4, 304-4, 11.4.5, EM-EP-160a.1, ENV-3.C1, ENV-3.C2, ENV-3.C3, ENV-3.A4, ENV-3A.2, ENV-4.C1, ENV-4.C2, ENV-4.A2]**

The Company is always committed to protecting biodiversity by identifying the presence of endemic species and protecting species before conducting operations and transferring species to conservation areas that have been prepared or other areas that are not affected by operations. All stages of the activity are carried out by involving the authorities, including the Conservation and Natural Resources Agency (BKSDA) and the local Environment Service. These activities are reported periodically. [GRI 304-2, 11.4.3, ENV-4.C1, ENV-3.C1, ENV-3.C3, ENV-4.C2]

The Company's biodiversity conservation program is for endemic and protected species, based on the Regulation of the Minister of Environment and Forestry Number P.106/MENLHK/SETJEN/KUM.1/12/2018 concerning Protected Plant and Animal Species, as well as the IUCN Red List. The number of species of flora and fauna that are conserved is as follows.



1  
2  
3  
4  
5  
6  
7

Kinerja Keberlanjutan  
Kinerja Keberlanjutan

**Jumlah Spesies IUCN Red List yang Dikonservasi** [GRI 304-1, 11.4.2, 304-4, 11.4.5]  
 Number of Conservation IUCN Red List Species

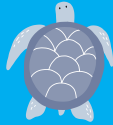
(Dalam Spesies)(In Species)

Status	Fauna		Flora	
	2022	2021	2022	2021
Kritis atau sangat terancam (Critically Endangered; CR)	6	8	8	2
Terancam (Endangered; EN)	17	10	5	0
Rentan (Vulnerable; VU)	20	8	27	8
Hampir Terancam (Near Threatened; NT)	9	3	12	2
Risiko Rendah (Least Concern; LC)	84	20	132	22

**Konservasi Keanekaragaman Hayati di Wilayah Operasi** [GRI 304-3, 11.4.4, ENV-3.C2, ENV-3.A4, ENV-4.C1] **Biodiversity Conservation in Operational Areas** [GRI 304-3, 11.4.4, ENV-3.C2, ENV-3.A4, ENV-4.C1]


**Pelepasliaran Satwa Dilindungi Tahun 2022**  
 Release of Protected Animals in 2022

**Konservasi di Patra Niaga**  
 Pelepasliaran satwa dilindungi yang dilaksanakan oleh Pertamina Patra Niaga di tahun 2022  
 The release of protected animals carried out by Pertamina Patra Niaga in 2022




**50 ekor Tukik**  
 di Pantai Kali Ratu on Kali Ratu Beach

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**813 ekor Penyu**  
 di Pantai Sodong, Kabupaten Cilacap 813 turtles on Sodong Beach, Cilacap Regency




**2,000 Bibit Ikan** fish seeds

---



**100 Pohon Bakau** mangrove trees



**20 Burung** Bird

di sekitar Pantai Labuhan Amuk dalam kegiatan pelestarian lingkungan  
 conducted environmental conservation activities

**Konservasi di PGE**  
 Pusat Konservasi Elang Kamojang atau PKEK (Pusat penyelamatan, pelepasliaran, rehabilitasi serta edukasi)  
 Center for Rescue, release, rehabilitation and education  
<https://www.pge.pertamina.com/CsrKonservasiElangKamojang/index.htm>



**Elang Jawa (Nisaetus Bartelsi)**  
 berstatus **Endangered**  
 data The IUCN Red List of Threatened Species  
 data The IUCN Red List of Threatened Species

Kolaborasi/Collaboration



**143 proses rehabilitasi** rehabilitation processes  
**25 dilepasliarkan** released


**Konservasi di PHE**  
 program perlindungan keanekaragaman hayati (kehati)  
 The program run is the biodiversity protection (kehati)

**Area Konservasi**  
 conservation area  
**430.45 Ha**  
 Daerah Operasi Bagian Utara (DOBU)  
 Northern operational area (DOBU)


**190.02 Ha**  
 Operasi Bagian Selatan (DOBS)  
 Southern Operation area (DOBU)



**500** anakan ikan Belida belida fish seedlings



**4,000** bibit pakan Bekantan proboscis monkey feed seeds,



**58** ekor Bekantan proboscis monkeys

**1.7 juta/million** Pohon Spesies Endemik endemic species trees  
 Ditanam Kembali Replanted

**7 ekor/tail Jawa** dilepasliarkan released

---

**6 ekor tail** **Penyu Lekang**

**6 ekor tail** **Bangau Tongtong**

**8 ekor tail** **Kukang Sumatera**

**proses rehabilitasi/Rehabilitation process**  
 melakukan perlindungan dan pemulihan habitat protecting and restoring habitat.

## PENUTUPAN DAN REHABILITASI

[11.7.4, 11.7.5, ENV-8.C1, ENV-8.C2]



Segmen *Upstream* mengelola fasilitas anjungan non-aktif melalui perawatan secara periodik untuk memastikan kepatuhan pada aspek keselamatan dan lingkungan. Perencanaan untuk Kegiatan Pasca Operasi (KPO) dilakukan bersama dengan regulator, baik SKK MIGAS, Ditjen Migas, dan para pemangku kepentingan yang mengatur perizinan, dengan tetap mengedepankan aspek LST [11.7.5, ENV-8.C2]

Selama periode pelaporan terdapat *feasibility study* KPO di beberapa Wilayah Kerja sebagai hasil kolaborasi dengan Pusat Riset Kelautan, Kementerian Kelautan dan Perikanan, serta lembaga akademisi di luar negeri dalam melakukan upaya kajian perencanaan *decommissioning* dan pemanfaatan kembali anjungan lepas pantai nonaktif. Saat ini masih berlangsung inisiasi kegiatan serupa dengan badan riset tersebut untuk Wilayah Kerja yang lain. [11.7.5]

## CLOSURE AND REHABILITATION

[11.7.4, 11.7.5, ENV-8.C1, ENV-8.C2]

The Upstream segment manages inactive rig facilities through routine maintenance in order to ensure compliance with safety and environmental protection aspects. Planning for Post Operational Activities (KPO) is done with collaboration with regulators, including SKK MIGAS, Directorate General of Oil and Gas, and stakeholders who regulate permits, while keeping the ESG aspects in mind. [11.7.5, ENV-8.C2]

Several KPO feasibility studies were conducted in several Work Areas during the reporting period as a result of the Company's collaboration with the Maritime Research Center, the Ministry of Maritime Affairs and Fisheries, and academic institutions abroad in carrying out efforts to study the decommissioning planning and reuse of decommissioned offshore platforms. Similar activities with this research agency are still being initiated for other Working Areas. [11.7.5]

## ASPEK UMUM

### Biaya Lingkungan Hidup [OJK F.4]

Biaya lingkungan hidup yang dikeluarkan Perseroan mencakup biaya pada kegiatan pencegahan dan penanganan dampak lingkungan hidup, seperti efisiensi energi, penggunaan energi terbarukan, sertifikasi produk rendah karbon, kegiatan audit lingkungan hidup, pengelolaan limbah beracun (B3), daur ulang dan penggunaan kembali limbah, pengelolaan air dan pengeluaran operasional lainnya. Biaya lingkungan hidup yang dikeluarkan adalah sebagai berikut.

## GENERAL ASPECT

### Environmental Costs [OJK F.4]

Environmental costs incurred by the Company include costs for prevention and handling of environmental impacts, such as energy efficiency, use of renewable energy, low-carbon product certification, environmental audit activities, management of toxic and hazardous waste (B3), recycling and reuse of waste, management water and other operating expenses. The environmental costs incurred are as follows.

**Tabel Biaya Lingkungan Hidup**

Table of Environmental Costs

(Dalam Jutaan Rupiah)(In Million Rupiah)

Segmen Segment	2022	2021	2020	2019
<i>Upstream</i>	<b>1,078,747</b>	888,288	1,193,851	1,013,886
<i>Refining and Petrochemical</i>	<b>259,525</b>	209,557	217,564	186,015
<i>Commercial and Trading</i>	<b>78,924</b>	71,756	75,255	73,336
<i>Power and New Renewable Energy</i>	<b>6,102</b>	5,760	4,239	4,284
Gas	<b>98,565</b>	50,242	44,581	44,939
<i>Integrated Marine Logistics</i>	<b>1,663</b>	188	-	-
<b> Holding </b>	<b>1,523,529</b>	<b>1,225,793</b>	<b>1,535,491</b>	<b>1,322,461</b>



**ASPEK MATERIAL**

**MATERIAL ASPECT**

**Penggunaan Material Yang Ramah Lingkungan [OJK F.5, CCE-6.A5]**

**Use of Environment Friendly Materials [OJK F.5, CCE-6.A5]**

Segmen Segment	Material Ramah Lingkungan Environmentally Friendly Materials	Keterangan Description
<b>Upstream</b>	<ul style="list-style-type: none"> <li>Pemanfaatan bahan bakar gas (<i>liquefied natural gas</i>/LNG) dalam konversi mesin diesel di kapal kru menjadi dual diesel fuel (DDF).</li> <li>Pemanfaatan limbah aluminium dan polyurethane hasil pengolahan perusahaan sebagai bahan baku pakai ulang untuk pembuatan ingot, baling-baling &amp; anoda, <i>cool box</i>, maupun kapal polyurethane</li> <li>Utilization of liquefied natural gas (LNG) in the conversion of diesel engines on crew ships to dual diesel fuel (DDF).</li> <li>Utilization of aluminium and polyurethane wastes from the company's processing as raw materials for reuse in the manufacture of ingots, propellers &amp; anodes, cool boxes, and polyurethane vessels</li> </ul>	<ul style="list-style-type: none"> <li>Pemanfaatan LNG maka akan mengurangi emisi karbon dari pemakaian bahan bakar fosil. Konversi ini juga berpotensi mengurangi ketergantungan bahan bakar diesel sebesar 6.020 kiloliter solar per tahun untuk 10 kapal kru, dengan potensi pengurangan biaya sebesar USD4,1 juta.</li> <li>Pemanfaatan berbagai limbah ini sebanyak 1.737,6 kg limbah non B3 aluminium dan 171 kg limbah non B3 polyurethane dapat dimanfaatkan kembali menjadi produk handal tepat guna, serta menciptakan pasar dan bisnis model baru. Selain itu pengolahan limbah tepat guna ini mereduksi 210 ton CO2eq/ tahun.</li> <li>Utilization of LNG to reduce carbon emissions from the use of fossil fuels. This conversion also has the potential to reduce dependence on diesel fuel by 6,020 kiloliters of diesel per year for ten crew ships, with a potential cost reduction of USD 4.1 million.</li> <li>Utilization of these wastes: as much as 1,737.6 kg of non-toxic and hazardous aluminium waste and 171 kg of non-toxic and hazardous polyurethane waste can be reused into reliable, efficient products, thus creating new markets and business models. Furthermore, this appropriate waste treatment reduces 210 tons of CO2eq/year</li> </ul>
<b>Commercial and Trading</b>	Pengembangan kemasan ramah lingkungan untuk produk lubricants. Development of environmentally friendly packaging for lubricants products.	Penggunaan material ramah lingkungan dalam produk lubricant akan mengurangi emisi karbon yang dikeluarkan oleh Perseroan. Use of environmentally friendly materials in lubricant products will reduce the carbon emissions released by the Company.

**ASPEK PENGADUAN TERKAIT LINGKUNGAN HIDUP**

**ENVIRONMENTAL GRIEVANCE ASPECT**

**Jumlah dan Materi Pengaduan Lingkungan Hidup yang Diterima dan Diselesaikan [OJK F.16]**

**Number and Materials of Environmental Grievances Received and Resolved [OJK F.16]**

Selama tahun 2022, PERTAMINA Contact Center 135 menerima 151 pengaduan atau 1,13% berkaitan dengan lingkungan. Seluruh pengaduan yang disampaikan telah ditindaklanjuti.

During 2022, PERTAMINA Contact Center 135 received 151 environmental grievances or 1.13%. All incoming grievances have been followed up.

Jenis Pengaduan Type of Grievance	Jumlah Keluhan yang Diterima Number of Grievances Received			Persentase Keluhan yang Telah Diselesaikan (%) Percentage of Grievances Resolved (%)		
	2022	2021	2020	2022	2021	2020
Kebocoran Pipa Instalasi Installation Pipe Leaks	133	-	-			
Dugaan Kebocoran Pada Jaringan Alleged Leaks on the Network	16	14	12	100	100	100
Keluhan Terkait Pipa BBM Grievances Regarding Fuel Pipes	2	-	-			





1

2

3

4

Kinerja Keberlanjutan  
Kinerja Keberlanjutan

6

7

# Kinerja Ekonomi

## Economic Performance

HIGHLIGHTED ISSUES			
Topik Topic	Aktivitas Activities	Output & Value Created	Dukungan pada TPB Support for SDGs
<p>Nilai Ekonomi Langsung yang Dihasilkan dan Didistribusikan Direct economic value generated and distributed</p>	<p>Nilai ekonomi yang dihasilkan dari penjualan barang dan jasa Economic value generated from the sales of goods and services</p>	<ul style="list-style-type: none"> <li>• Pendapatan USD85,91 Miliar. Pendapatan tersebut merupakan penjualan dan pendapatan usaha lainnya, pendapatan keuangan, dan bagian atas laba neto entitas asosiasi dan ventura bersama.</li> <li>• Investasi sosial USD43 Juta</li> <li>• Revenue USD85.91 Billion. The revenue consists of sales and other operating income, finance income, and share of net income of associates and joint ventures.</li> <li>• USD43 Million social investment</li> </ul>	 
<p>Perbandingan Target dan Kinerja Portofolio, Target Pembiayaan, atau Investasi pada Instrumen Keuangan atau Proyek yang Sejalan dengan Pembangunan Berkelanjutan Comparison of portfolio target and performance, target of financing or investments in financial instruments or projects that are aligned with Sustainable Development.</p>	<p>Upaya Perseroan dalam mengembangkan Energi Baru Terbarukan (EBT) antara lain panas bumi, hidrogen, serta penambahan kapasitas energi baru terbarukan lainnya sebagai bentuk realisasi investasi berkelanjutan The Company's efforts in developing New and Renewable Energy (NRE), including geothermal, hydrogen, as well as additional capacity of other new and renewable energy as a form of sustainable investment realization</p>	<p>Realisasi investasi berkelanjutan dalam pengembangan EBT sebesar USD63,187 ribu, meningkat 65% dibandingkan tahun 2021 Sustainable Investment realization in NRE development of USD63.187 thousand, increased by 65% compared to year 2021</p>	   
<p>Implikasi Finansial Serta Risiko dan Peluang Lain Akibat dari Perubahan Iklim Financial implications, other risks and opportunities due to climate change</p>	<p>Program Clean Development Mechanism (CDM)</p>	<p>Potensi <i>Emission Reduction</i> Verifikasi CDM Gold Standar Lumut Balai 1 dan 2 sebesar 581,784 Ton CO<sub>2</sub>eq Emission reduction potential Gold Standard Verification Manual for CDM in Lumut Balai 1 and 2 was 581.784 tons/CO<sub>2</sub>eq</p>	 
<p>Dampak Ekonomi Tidak Langsung Indirect economic impacts</p>	<p>Pembangunan proyek investasi infrastruktur yang memberikan manfaat berupa peningkatan lapangan kerja, tingkat perekonomian, dan taraf hidup masyarakat. Infrastructure Investment project development that delivers benefits in the form of increased employment, economic level, and people's standard of living.</p>	<ul style="list-style-type: none"> <li>• Proyek Strategis Nasional Jambaran Tiung Biru (JTB).</li> <li>• Jaringan Gas, IPP Jawa I 1.760 MW.</li> <li>• Terminal LPG Pressurised Wayame dan Jayapura.</li> <li>• Kapal Baru Very Large Crude Carrier (VLCC) "Pertamina Prime" dan VLCC "Pertamina Pride".</li> <li>• NGRR Tuban.</li> <li>• National strategic projects Jambaran Tiung Biru (JTB).</li> <li>• Gas Network, IPP Java of I 1,760 MW.</li> <li>• Pressurized LPG Terminals in Wayame and Jayapura.</li> <li>• New Very Large Crude Ship Carrier (VLCC) "Pertamina Prime" and VLCC "Pertamina pride".</li> <li>• NGRR Tuban.</li> </ul>	   
<p>Pajak Tax</p>	<p>Penyetoran pajak kepada negara dari hasil penjualan barang dan jasa Payment of taxes to the state from the sale of goods and services</p>	<p>Total pajak yang disetorkan kepada negara sebesar Rp219 Triliun The total tax paid to the state was Rp219 trillion</p>	 





## NILAI EKONOMI LANGSUNG YANG DIHASILKAN DAN DIDISTRIBUSIKAN

[GRI 201-1, 11.14.2, 11.21.2]

Nilai ekonomi yang didapat Perseroan selama periode pelaporan didistribusikan kepada pemangku kepentingan sesuai dengan kebutuhan. Pengungkapan informasi terkait nilai ekonomi dihasilkan dan didistribusikan tidak dilaporkan berdasarkan negara, regional, wilayah pemasaran, dan/atau kriteria lain. Pendapatan yang disajikan merupakan jumlah penjualan dan pendapatan usaha lainnya yang dirinci lebih lanjut dalam laporan keuangan Perseroan. Nilai ekonomi langsung yang dihasilkan dan didistribusikan Perseroan akan dirinci pada tabel berikut. [GRI 201-1-a, 201-1-b]

## DIRECT ECONOMIC VALUE GENERATED AND DISTRIBUTED [GRI 201-1, 11.14.2, 11.21.2]

The economic value obtained by the Company during reporting period distributed to stakeholders interests as needed. Disclosure information related to the economic value generated and distributed not reported by country, regional, marketing area, and/or other criteria. Income presented is the amount sales and other business income detailed further details in the Company's financial statements. Mark generated and distributed direct economy Companies will be detailed in the following table. [GRI 201-1-a, 201-1-b]

<b>Nilai Ekonomi Diperoleh dan Didistribusikan [GRI 201-1, 11.14.2]</b> Economic Value Generated and Distributed (Dalam USD Juta)/(In USD Million)				
Uraian Description	2022	2021	2020	2019
<b>Ekonomi yang Dihasilkan/Economic Value Generated</b>				
Pendapatan*/Revenues	85,905	58,287	41,921	56,014
Penggantian Subsidi dari Pemerintah Subsidy Reimbursement from the Government	6,297	5,117	3,429	4,875
<b>Nilai Ekonomi yang Didistribusikan/Economic Value Distributed</b>				
Biaya Operasi/Operating Costs	68,790	46,134	31,104	44,279
Biaya Pekerja/ Employee Wages	2,258	2,063	2,099	2,304
Pembayaran Bagi Pemodal/Payments to Investors	846	798	806	816
Pembayaran kepada Pemerintah** Payments to Government	3,529	5,250	6,655	7,702
Investasi Sosial (TJSL + PUMK) Social Investment (CSR + PUMK)	43	56	31	19
<b>Nilai Ekonomi yang Ditahan**/Retained Economic Value</b>	<b>10,439</b>	<b>3,986</b>	<b>1,226</b>	<b>894</b>

\*Pendapatan terdiri dari penjualan dan pendapatan usaha lainnya, pendapatan keuangan dan bagian atas laba neto entitas asosiasi dan ventura bersama.  
 \*Revenue consists of sales and other operating income, finance income and share in net income of associates and joint ventures.  
 \*\*Restated

Pendapatan mengalami peningkatan sebesar 47% dibandingkan tahun 2021, yang disebabkan oleh:

1. Kenaikan rata-rata realisasi Indonesia Crude Price (ICP) dan publikasi harga dari tahun 2021.
2. Peningkatan Penggantian biaya subsidi dari Pemerintah.
3. Peningkatan penjualan ekspor minyak mentah, gas bumi dan produk minyak.
4. Kenaikan pendapatan usaha dari aktivitas operasi dikarenakan pengakuan pendapatan Dana Kompensasi BBM, kenaikan jasa perkapalan, dan jasa teknik transportasi.

Revenue increased by 47% compared to 2021, due to:

1. Increase in the average realized Indonesian Crude Price (ICP) and published prices from 2021.
2. Increasing subsidy reimbursement from the Government.
3. Increase in export sales of crude oil, natural gas and oil products.
4. The increase in revenue from operating activities was due to the recognition of revenue from the BBM Compensation Fund, increase in shipping services and transportation engineering services.

**PERBANDINGAN TARGET DAN KINERJA PRODUKSI, PORTOFOLIO, TARGET PEMBIAYAAN, ATAU INVESTASI, PENDAPATAN DAN LABA RUGI [OJK F.2]**

**COMPARISON OF TARGET AND PERFORMANCE OF PRODUCTION, PORTFOLIO, FINANCING, OR INVESTMENT, REVENUE, AND PROFIT AND LOSS [OJK F.2]**

Sepanjang tahun 2022, Perseroan telah menetapkan target yang hendak dicapai dalam Rencana Kerja dan Anggaran Perusahaan (RKAP) tahun 2022. Target tersebut telah disesuaikan dengan kondisi industri dan ekonomi Perseroan. Proyeksi yang tercakup pada target tersebut yaitu selama 1 (satu) tahun ke depan. Adapun perbandingan pencapaian target yang ditetapkan adalah sebagai berikut.

Throughout 2022, the Company has set targets to be achieved in the 2022 Corporate Work Plan and Budget (RKAP). These targets have been adjusted to the Company's industrial and economic conditions. The projection included in this target is for the next 1 (one) year. The comparison of the achievement of the set targets is as follows.

(Dalam juta USD) (In Million USD)

Uraian Description	2022		2021		2020		2019	
	Target	Realisasi Realization	Target	Realisasi Realization	Target	Realisasi Realization	Target	Realisasi Realization
Penjualan dan Pendapatan Usaha Lainnya Sales and Other Operating Income	58,531	84,888	58,604	57,509	37,915	41,469	58,849	54,793
Laba Tahun Berjalan Profit for the year	1,373	4,060	1,519	2,239	413	821	1,612	2,618

**PERBANDINGAN TARGET DAN KINERJA PORTOFOLIO, TARGET PEMBIAYAAN, ATAU INVESTASI PADA INSTRUMEN KEUANGAN ATAU PROYEK YANG SEJALAN DENGAN PEMBANGUNAN BERKELANJUTAN [OJK F.3, EM-EP-420A.1, EM-EP-420A.3]**

**COMPARISON OF PORTFOLIO TARGET AND PERFORMANCE, FINANCING TARGETS, OR INVESTMENTS IN FINANCIAL INSTRUMENTS OR PROJECTS THAT ALIGN WITH SUSTAINABLE DEVELOPMENT [OJK F.3, EM-EP-420A.1, EM-EP-420A.3]**

Perseroan senantiasa berupaya dalam mengembangkan Energi Baru Terbarukan (EBT), antara lain panas bumi, hidrogen, baterai kendaraan listrik dan *Energy Storage System* (ESS), gasifikasi, bioenergi, *green refinery*, *circular carbon economy*, serta penambahan kapasitas energi baru terbarukan lainnya. Adapun realisasi investasi berkelanjutan pengembangan EBT disajikan pada table di bawah ini.

The Company always strives to develop New and Renewable Energy (NRE), which includes geothermal, hydrogen, electric vehicle batteries and Energy Storage Systems (ESS), gasification, bioenergy, green refinery, and circular carbon economy as well as additional capacity for other new renewable energy. The realization of sustainable investment in NRE development is presented in the table below.

**Tabel Investasi Berkelanjutan Pengembangan EBT**

Table of Sustainable Investment for NRE Development

In Percentage

Keterangan	2022 vs 2021	2021 vs 2020	2020 vs 2019
Increase (Decrease) in Percentage	65	(35)	(35)
Proyek Projects	NRE Installation & Hululais Project	Geothermal Project Lumut Balai & Hululais	Geothermal Project Lumut Balai & Hululais

**IMPLIKASI FINANSIAL SERTA RISIKO DAN PELUANG LAIN AKIBAT DARI PERUBAHAN IKLIM [GRI 201-2, 11.2.2, CCE-2.C1, CCE-2.A1, CCE-2.A2, TCFD RM-A, TCFD RM-B, TCFD RM-C, CDSB REQ-03, CDSB REQ-06]**

**FINANCIAL IMPLICATIONS, OTHER RISKS AND OPPORTUNITIES DUE TO CLIMATE CHANGE [GRI 201-2, 11.2.2, CCE-2.C1, CCE-2.A1, CCE-2.A2, TCFD RM-A, TCFD RM-B, TCFD RM-C, CDSB REQ-03, CDSB REQ-06]**

Sampai dengan akhir tahun 2022, tidak terjadi implikasi finansial yang dihadapi Perseroan. Hal ini karena kegiatan operasi dan produksi Perseroan secara signifikan tidak terdampak akibat perubahan

Until the end of 2022, there were no financial implications for the Company. Climate change only significantly affects the Company's operations and production activities. Furthermore, the Company can

iklim. Di samping itu, Perseroan dapat memanfaatkan peluang perubahan iklim melalui mekanisme kerja pembangunan bersih (*Clean Development Mechanism* atau (CDM)). Perhitungan potensi pengurangan emisi GRK ini menggunakan *standard methodology ACM 0002 grid connected electricity generation from renewable sources*. [201-2-a]

capitalize on climate change opportunities through the Clean Development Mechanism (CDM). This GHG emission reduction potential calculation uses the standard methodology ACM 0002 grid-connected electricity generation from renewable sources. [201-2-a]

Program Clean Development Mechanism per 31 Desember 2022			
Clean Development Mechanism Program (CDM) as of December 31, 2022			
Clean Development Mechanism Program as of December 31, 2022	Potential ER Verifikasi CDM (Ton CO <sub>2</sub> eq)	Realization of Emission Reduction (ER) (Ton CO <sub>2</sub> eq) Unverified-Own Operation	
CDM Gold Standard	Lumut Balai 1-2	581,784	415,702
	Lumut Balai 3-4	581,784	-
	Ulubelu 3-4	581,518	642,794
	Karaha 1	156,669	56,699
	Kamojang 5	156,669	219,109
CDM	Kamojang 4 (dengan PLN)	402,780	379,528
VCS	Lahendong 5-6	181,030	239,150

Pengurangan Emisi CDM (Ton CO <sub>2</sub> e)			
CDM Emission Reduction (Tons of CO <sub>2</sub> e)			
Keterangan Description	2022	2021	YOY
Pembangkit Listrik/Power Generation	4,629,594.51	4,660,478.00	(0.01)
Pengurangan Emisi CDM/CDM Emission Reduction	3,879,690.33	3,920,976.71	(0.01)
Pembangkitan Listrik PLTP/Geothermal Power Generation	2,330,344.26	2,366,214.00	(0.02)
Pengurangan Emisi CDM/CDM Emission Reduction	1,952,981.31	1,996,362.14	(0.02)

### BANTUAN FINANSIAL YANG DITERIMA DARI PEMERINTAH [GRI 201-4, 11.21.3]

Selama periode pelaporan, Perseroan memperoleh bantuan finansial dari Pemerintah berupa penggantian subsidi atas Jenis Bahan Bakar Tertentu (JBT minyak solar, JBT minyak tanah dan LPG tabung 3kg) dan penggantian Dana Kompensasi BBM atas JBT Solar dan JBKP Peralite dan kebijakan BBM Satu Harga. Hal tersebut sesuai Peraturan Presiden Nomor 117 Tahun 2021 tentang Perubahan ketiga atas Peraturan Presiden Nomor 191 Tahun 2014 tentang Penyediaan Pendistribusian dan Harga Jual Eceran. Laporan ini tidak menyertakan pengungkapan informasi terkait bantuan keuangan dari Pemerintah di wilayah operasi Perseroan di mancanegara. Bantuan finansial yang diterima dari Pemerintah pada tahun 2022 sebesar USD22.181 juta yang terdiri dari penggantian biaya subsidi dari Pemerintah sebesar USD6.297 juta dan pengakuan Dana Kompensasi sebesar USD15.884 juta.

### FINANCIAL ASSISTANCE RECEIVED FROM GOVERNMENT [GRI 201-4, 11.21.3]

During the reporting period, the Company received financial assistance from the Government in the form of subsidy replacement for certain types of fuel (JBT diesel oil, JBT kerosene and 3kg cylinder LPG) and reimbursement of the BBM Compensation Fund for JBT Solar and JBKP Peralite and the One Price Fuel policy. This is in accordance with Presidential Regulation Number 117 of 2021 concerning the third amendment to Presidential Regulation Number 191 of 2014 concerning Provision of Distribution and Retail Selling Prices. This report does not include disclosure of information related to financial assistance from the Government in the Company's overseas operations. Financial assistance received from the Government in 2022 amounted to USD 22,181 million consisting of subsidy reimbursement from the Government of USD6,297 million and recognition of a Compensation Fund of USD15,884 million.

### DAMPAK EKONOMI TIDAK LANGSUNG

#### Investasi Infrastruktur dan Dukungan Layanan [GRI 203-1, 11.14.4]

Perseroan melalui Direktorat Logistik dan Infrastruktur merencanakan masterplan dan untuk mencapai secara *On Time, On Budget, On Scope*, dan *On Regulation*

### INDIRECT ECONOMIC IMPACTS

#### Infrastructure Investments and Services Supported [GRI 203-1, 11.14.4]

The Company, through the Directorate of Logistics and Infrastructure develops a master plan to achieve *On Time, On Budget, On Scope* and *On Regulation*

(OTOBOSOR), seluruh proyek investasi infrastruktur di seluruh subholding untuk mendapatkan manfaat yang terbaik dengan biaya yang optimal seluruh pengembangan infrastruktur tersebut bersifat pro bono. Adapun rincian proyek yang dilaksanakan sebagai berikut:

(OTOBOSOR) basis, all infrastructure investment projects in all subholdings to get the best benefits at optimal costs. All infrastructure development is pro bono. The details of the projects implemented are as follows:

<b>Proyek Infrastruktur</b> Infrastructure Project	<b>Deskripsi Proyek</b> Project Description	<b>Dampak</b> Impact
<p><b>Proyek Strategis Nasional Jambaran Tiung Biru Jambaran Tiung Biru (JTB) National Strategic Project</b></p> 	<p>Memproduksi gas dan kondensat dari Lapangan Unitisasi JTB dengan produksi rata-rata <i>raw gas</i> sebesar 315 MMSCFD dengan <i>sales gas</i> sebesar 172 MMSCFD dengan <i>impurities</i> antara lain H<sub>2</sub>S CO<sub>2</sub> dan potensi penambahan <i>sales gas</i> sebesar 20 MMSCFD</p> <p>The JTB Unitization generates gas and condensate. Field with an average raw gas production of 315 MMSCFD, gas sales of 172 MMSCFD with impurities including H<sub>2</sub>S CO<sub>2</sub>, and potential for 20 MMSCFD additional gas sales</p>	<ul style="list-style-type: none"> <li>• Pasokan sales gas dari Proyek JTB sebesar 192 MMSCFD diharapkan dapat memenuhi kebutuhan listrik, industri terutama pupuk, serta industri lainnya seperti keramik dan petrokimia di beberapa wilayah yang ada di daerah Jawa Timur dan Jawa Tengah melalui transportasi pipa gas Gresik-Semarang.</li> <li>• Pasokan gas JTB akan digunakan untuk PLN sebesar 100 MMSCFD, untuk sektor industri melalui PGN sebesar 72 MMSCFD, dan mendukung JarGas Kabupaten Lamongan sebesar 0.2 MMSCFD.</li> <li>• Proyek JTB memberikan sumbangan bagi penerimaan negara hingga Rp19,8 triliun (selama proyek berjalan) dengan TKDN sebesar 40%.</li> <li>• Pada puncak pelaksanaannya, Proyek JTB mampu menyerap lebih dari 7.000 tenaga kerja, dengan 65% merupakan tenaga kerja lokal Bojonegoro.</li> <li>• Pada tahun 2022 Proyek JTB juga berkontribusi bagi masyarakat sekitar melalui pelaksanaan Program Tanggung Jawab Sosial dan Lingkungan senilai Rp12,7 miliar, meliputi bidang Kesehatan, Pendidikan, Ekonomi, Infrastruktur dan Lingkungan, dengan total jumlah penerima manfaat lebih dari 108 ribu orang.</li> <li>• Gas sales supply from the JTB Project is 192 MMSCFD expected to meet the electricity needs, especially industry fertilizers, as well as other industries such as ceramics and petrochemicals in several areas in East Java and Java Middle through the transportation of the Gresik-Semarang gas pipeline.</li> <li>• JTB gas supply will be used for PLN in the amount of 100 MMSCFD, for the industrial sector through PGN of 72 MMSCFD, and supports JarGas in Lamongan Regency by 0.2 MMSCFD.</li> <li>• The JTB project contributes to state revenues up to Rp19.8 trillion (while the project is running) with TKDN by 40%.</li> <li>• At the peak of its implementation, the JTB Project was able to absorb more of 7,000 workers, with 65% being local workers Bojonegoro.</li> <li>• In 2022 the JTB Project will also contribute to society around through the implementation of the Social Responsibility Program and Environment worth Rp12.7 billion, covering the Health, Education, Economy, Infrastructure and Environment, in total the number of beneficiaries is more than 108 thousand people</li> </ul>
<p><b>Jaringan Gas Gas Network Development</b></p> 	<p>Pembangunan jaringan gas kota sebagai sarana fasilitas pendukung penyaluran gas untuk masyarakat</p> <p>Construction of a city gas network to support facilities for gas distribution to the community.</p>	<ul style="list-style-type: none"> <li>• Memudahkan masyarakat dalam mendapatkan akses bahan bakar gas guna memenuhi kebutuhan gas untuk keperluan rumah tangga</li> <li>• Menyerap tenaga kerja lokal di daerah sekaligus menggerakkan ekonomi regional dan nasional</li> <li>• Facilitate the community in obtaining access to gas fuel in order to meet household gas needs.</li> <li>• Absorb local workers in the regions and drive regional and national economies.</li> </ul>
<p><b>IPP Jawa I 1.760 MW</b> <b>IPP Jawa I 1,760 MW</b></p>	<ul style="list-style-type: none"> <li>• Pembangunan Pembangkit Listrik Tenaga Gas dan Uap berkapasitas 1.760 MW serta Jaringan Transmisi 500 KV di Cilamaya dan Cibatu, Karawang, Jawa Barat</li> <li>• Pembangunan unit baru <i>Floating Storage Regasification Unit (FSRU)</i>, <i>Onshore Gas Pipeline</i>, <i>Onshore Receiving Facilities (ORF)</i>, <i>Offshore Gas Pipeline</i></li> </ul>	<ul style="list-style-type: none"> <li>• Mendukung ketersediaan energi listrik bagi masyarakat setempat</li> <li>• Mendukung putaran roda ekonomi regional dan nasional melalui penyerapan tenaga kerja lokal</li> <li>• Support the availability of electrical energy for local communities</li> <li>• Support regional and national economic states by hiring local workers</li> </ul>

Projek Infrastruktur Infrastructure Project	Deskripsi Projek Project Description	Dampak Impact
	<ul style="list-style-type: none"> <li>Construction of a Gas and Steam Power Plant with a capacity of 1,760 MW and a 500 KV Transmission Network in Cilamaya and Cibatu, Karawang, West Java</li> <li>Construction of new units of Floating Storage Regasification Unit (FSRU), Onshore Gas Pipeline, Onshore Receiving Facilities (ORF), Offshore Gas Pipeline</li> </ul>	
<b>Terminal LPG Pressurised Wayame</b> <b>Wayame Pressurized LPG Terminal</b>	Pembangunan Terminal LPG Pressurised sebagai tambahan fasilitas di Terminal BBM di Wayame Construction of a Pressurized LPG Terminal as an additional facility at the Fuel Terminal in Wayame	Meningkatkan ketahanan energi di wilayah Maluku dan sekitarnya khususnya produk LPG Increasing energy security in the Maluku region and its surroundings, especially for LPG products
<b>Terminal LPG Pressurised Jayapura</b> <b>Jayapura Pressurized LPG Terminal</b>	Pembangunan Terminal LPG Pressurised sebagai tambahan fasilitas di Terminal BBM di Jayapura Construction of a Pressurized LPG Terminal as an additional facility at the Fuel Terminal in Jayapura	Meningkatkan ketahanan energi di wilayah Papua dan sekitarnya khususnya produk LPG Increasing energy security in Papua region and its surroundings, especially for LPG products
<b>Kapal Baru Very Large Crude Carrier (VLCC) "Pertamina Prime"</b> <b>The New Very Large Crude Carrier (VLCC) "Pertamina Prime"</b>	Pembangunan VLCC untuk memperkuat bisnis perkapalan Perseroan Construction of VLCC to strengthen the Company's shipping business	<ul style="list-style-type: none"> <li>Menggantikan Kapal Existing (TC) tipe VLCC untuk kebutuhan Jasa Angkutan Rute Rastanura-Cilacap</li> <li>Mengembangkan Portofolio PT PIS melalui potensi memasuki <i>third party market</i></li> <li>Replacing the VLCC type Existing Vessel (TC) for the needs of Rastanura-Cilacap Route Transportation Services</li> <li>Develop PT PIS Portfolio through the potential to enter third-party markets</li> </ul>
<b>Kapal Baru VLCC "Pertamina Pride"</b> <b>The New VLCC Ship "Pertamina Pride"</b>	Pembangunan VLCC untuk memperkuat bisnis perkapalan Perseroan Construction of VLCC to strengthen the Company's shipping business	<ul style="list-style-type: none"> <li>Menggantikan Kapal Existing (TC) tipe VLCC untuk kebutuhan Jasa Angkutan Rute Rastanura-Cilacap,</li> <li>Mengembangkan Portofolio PT PIS melalui potensi memasuki <i>third party market</i></li> <li>Replace the VLCC-type Existing Vessel (TC) for the needs of Rastanura-Cilacap Route Transportation Services,</li> <li>Develop PT PIS Portfolio through the potential to enter third-party markets</li> </ul>
<b>NGRR Tuban</b> <b>The Tuban NGRR</b> 	Pembangunan kilang BBM dan Petrokimia di Tuban, Jawa Timur Construction of a Fuel and Petrochemical refinery in Tuban, East Java	<ul style="list-style-type: none"> <li>Pembangunan NGRR diproyeksikan menyerap tenaga kerja sebanyak 77.000 orang pada tahun 2024-2025. Sedangkan realisasi sampai dengan tahun 2022, jumlah tenaga kerja yang terserap mencapai lebih dari 570 orang, dengan 88% di antaranya adalah warga yang berasal dari Kabupaten Tuban serta kabupaten lain di sekitarnya.</li> <li>NGRR construction is expected to employ 77,000 workforces in 2024-2025. Meanwhile, up to 2022, the number of workers absorbed has reached more than 570 people, with 88% coming from Tuban Regency and other surrounding districts.</li> </ul>

### Dampak Ekonomi Tidak Langsung yang Signifikan [GRI 203-2, 11.14.5]

Dalam kegiatan operasional, Perseroan secara tidak langsung memberikan dampak ekonomi yang signifikan bagi masyarakat sekitar, dengan menciptakan lapangan pekerjaan dan menggerakkan roda perekonomian, melalui program-program unggulan yang mendukung pemerataan energi di Indonesia melalui sasaran GO Retail, dengan rincian masing-masing program terkait dampak dan signifikansi dampaknya sebagai berikut: [203-2-b] .

### Significant Indirect Economic Impacts [GRI 203-2, 11.14.5]

In its operational activities, the Company indirectly provides a significant economic impact on the surrounding community by creating jobs, driving the economy, through programs that support energy equity in Indonesia, such as GO Retail targets, the following sections provide the details about each program's impact and its impact significance: [203-2-b].

## PINKY MOVEMENT\*

### Pemerintah/Government

- Edukasi untuk memberikan subsidi energi tepat sasaran bagi masyarakat prasejahtera dan usaha mikro
- Menjamin pemenuhan hak-hak masyarakat prasejahtera untuk mendapatkan subsidi
- Mengurangi kerawanan sosial terkait kesenjangan subsidi di masyarakat.
- Pengalihan dana subsidi untuk infrastruktur, pendidikan, kesehatan, lingkungan dan sosial lainnya
- Education to provide targeted energy subsidies for the pre-prosperous society and micro-enterprises
- Ensure the fulfillment of the rights of the pre-prosperous society to receive subsidies
- Reducing social vulnerability related to the subsidy gap in society.
- Diversion of subsidy funds for infrastructure, education, health, environment and social.

### Pertamina

- Edukasi subsidi energi tepat sasaran bagi masyarakat prasejahtera dan usaha mikro
- Meningkatkan pemenuhan hak-hak masyarakat prasejahtera untuk mendapatkan subsidi
- Mengurangi kerawanan sosial terkait kesenjangan subsidi di masyarakat.
- Pengalihan dana subsidi untuk infrastruktur, pendidikan, kesehatan, lingkungan dan sosial lainnya
- Education on targeted energy subsidies for the pre-prosperous society and micro-enterprises
- Increasing the fulfillment of the rights of the pre-prosperous society to receive subsidies
- Reducing social vulnerability related to the subsidy gap in society.
- Diversion of subsidy funds for infrastructure, education, health, environment and social

### UMKM/MSMEs

- Penambahan outlet LPG NPSO
- Menambah volume penjualan, omset, dan margin bisnis
- Memperkuat/menambah jaringan usaha baru
- Membuka lapangan usaha baru dan peluang kerja bagi masyarakat sekitar
- Addition of LPG NPSO outlets
- Increase sales volume, turnover and business margins
- Strengthen/add new business networks
- Opening new business fields and job opportunities for the surrounding community

### Masyarakat/Communities

Kemudahan masyarakat dalam memperoleh dan mengakses energi  
Ease for community in obtaining and accessing energy

## PERTASHOP SME EMPOWERMENT

### Masyarakat/Communities

Untuk mendukung program pemberdayaan masyarakat di sejumlah daerah terpencil, Program Pendanaan Usaha Mikro Kecil bekerjasama dengan C&T untuk penyaluran kepada Pertashop. Perseroan juga memperkuat Pertashop, yang merupakan layanan baru penyaluran BBM kepada masyarakat di daerah yang belum tersedia SPBU

To support community empowerment programs in several remote areas, the Micro Small Business Funding Program has cooperated with C&T for the Pertashop distribution. The Company also strengthens Pertashop as a new service for distributing fuel to people in areas where gas stations are unavailable.

### Pertamina dan Pemerintah/Pertamina and Government

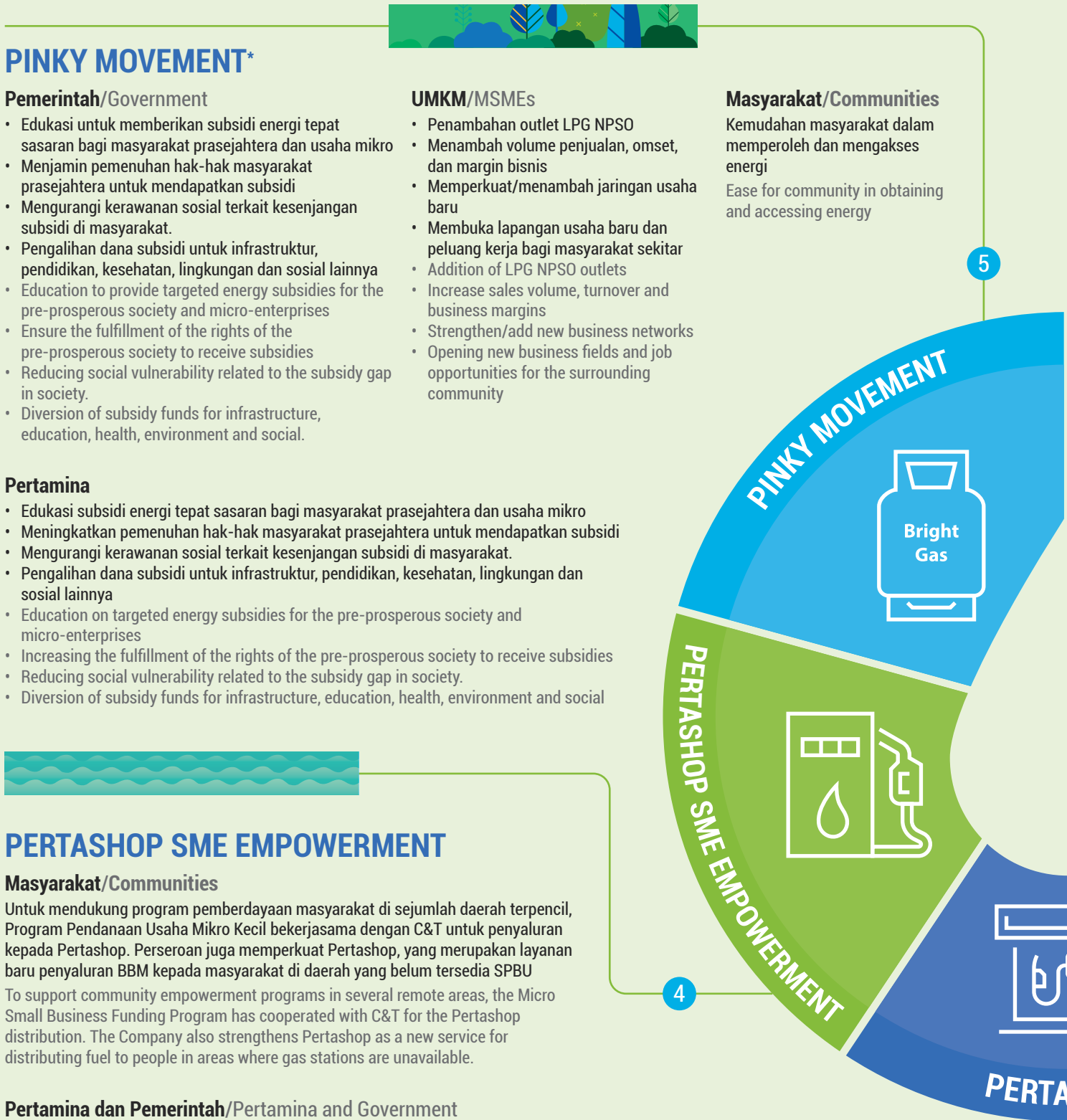
Tujuan didirikannya Pertashop utamanya yakni memenuhi kebutuhan energi masyarakat perdesaan dengan menyalurkan BBM dan LPG ke wilayah yang belum terjangkau oleh jaringan SPBU Pertamina sehingga menambah kekuatan *value chain* perusahaan, dalam hal ini dalam ketersediaan Bahan Bakar Khusus berkualitas maupun LPG non subsidi. Melalui kebijakan 'Go Collaborative', Perseroan berkolaborasi dengan Kementerian Dalam Negeri untuk mempermudah perizinan dan dengan Himpunan Bank Milik Negara (Himbara) untuk akses permodalan.

The primary purpose of establishing Pertashop is to meet rural communities energy needs by distributing fuel and LPG to areas that is not yet reached by the Pertamina gas station network, thereby strengthening the Company's value chain, in this case in terms of the availability of high-quality Special Fuel and non-subsidized LPG. Through the 'Go Collaborative' policy, the Company collaborates with the Ministry of Home Affairs to facilitate licensing and with the Association of State-Owned Banks (Himbara) for capital access.

### UMKM/MSMEs

Selain itu Pertashop menjadi peluang usaha bagi calon mitra Pertamina di pedesaan untuk peningkatan kegiatan ekonomi, sehingga pada akhirnya dapat memaksimalkan potensi desa, meningkatkan kemakmuran dan kesejahteraan masyarakat  
Furthermore, Pertashop provides an opportunity for potential Pertamina partners in rural areas to increase economic activity. Finally, it can maximize the village's potential, increasing the community's prosperity and welfare.

\*Pinky Movement yang dilakukan sebagai program CSV di Holding  
\*The Pinky Movement which is carried out as a CSV program in Holding





## BBM 1 HARGA/One Price Fuel

### Masyarakat

Pemerintah telah melaksanakan Program BBM Satu Harga di beberapa daerah pelosok Indonesia, di antaranya daerah 3T (Tertinggal, Terdepan, dan Terluar) yang dijalankan PT Pertamina (Persero) sejak 2017.

Program BBM Satu Harga adalah kebijakan menyeragamkan harga jual resmi BBM sebesar Rp6.450 per liter (Premium) dan Rp5.150 per liter (Solar).

### Communities

The government has implemented the One Price Fuel Program in several remote areas of Indonesia, including the 3T (Disadvantaged, Frontier and Outermost) areas, which are managed by PT Pertamina (Persero) since 2017. The One Price Fuel Program is a policy of that sets the official selling price of fuel at Rp6,450 per litre (Premium) and Rp5,150 per litre (Solar).

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## OVOO

### Masyarakat/Communities

Program OVOO memberikan manfaat kepada masyarakat pedesaan di seluruh Indonesia, karena dapat memperoleh elpiji subsidi dengan Harga Eceran Tertinggi (HET) yang telah ditetapkan untuk masing-masing daerah. Pada tahun 2022, Perseroan merealisasikan tambahan jumlah desa yang telah memiliki pangkalan LPG Subsidi sebanyak 2.414 desa. Sampai dengan akhir tahun 2022, pangkalan LPG Subsidi yang tersedia berada di 5.610 kecamatan, 411 kabupaten, dan 64.277 desa/kelurahan di seluruh Indonesia, atau 98% dari total desa dan kelurahan di Indonesia yang sudah terkonversi LPG.

The OVOO program benefits rural communities throughout Indonesia by allowing them to obtain subsidized LPG at the Maximum Retail Price (MRP) set for each region. In 2022, the Company realized an additional 2,414 villages that already have Subsidized LPG bases. Until the end of 2022, Subsidized LPG bases were available in 5,610 sub-districts, 411 districts, and 64,277 villages/sub-district throughout Indonesia, or 98% of the total villages and sub-districts in Indonesia that have been to converted to use LPG.



## PERTASHOP

### Masyarakat/Communities

Sampai dengan akhir tahun 2022, sudah terdapat 6.152 unit Pertashop di seluruh Indonesia, bertambah 2.087 Unit, atau 51% dari tahun 2021 yang sebanyak 4.065. Keberadaan Pertashop juga mendorong peningkatan jumlah kecamatan yang memiliki penyalur resmi BBM dari semula hanya 3.369 kecamatan, menjadi 3.446 kecamatan

Selain itu, Pertashop memberikan manfaat di antaranya:

- Keberadaan Pertashop mempermudah masyarakat memperoleh BBM
- Harga BBM yang dijual di Pertashop sama dengan harga BBM di SPBU PERTAMINA, sehingga mengurangi biaya yang harus dikeluarkan masyarakat
- Pendirian Pertashop dapat menyerap banyak tenaga kerja di daerah setempat

Until the end of 2022, there were 6,152 Pertashop units throughout Indonesia, an increase by 2,087 units, or 51%, from 4,065 Pertashop units in 2021. The presence of Pertashop has also encouraged an increase in the number of sub-districts with official fuel distributors, from only 3,369 sub-districts to 3,446 sub-districts.

In addition, Pertashop provides benefits including:

- The presence of Pertashop makes it easier for people to obtain fuel
- The price of fuel sold at Pertashop is the same as the price of fuel sold at PERTAMINA gas stations, lowering the costs borne by the community.
- The establishment of Pertashop can absorb many local workers

### Pemerintah/Government

Potensi peningkatan pendapatan daerah dari bagi hasil penjualan BBM, yang akan meningkatkan anggaran untuk pembangunan daerah

Profit sharing from fuel sales has the potential to increase regional income, which will increase the budget for regional development

### UMKM/MSMEs

Menggerakkan ekonomi masyarakat, melalui pelibatan badan usaha lokal untuk pembuatan unit Pertashop, serta penyediaan gerai khusus untuk usaha mikro kecil menengah (UMKM) setempat

Driving the community's economy by involving local business entities to create Pertashop units and providing outlets specifically for local micro, small and medium enterprises (MSMEs).

**PAJAK [GRI 207]**

Kementerian Keuangan Republik Indonesia telah menetapkan tonggak sejarah baru terkait dukungan pada perubahan iklim dunia, melalui Undang-Undang Harmonisasi Peraturan Perpajakan (UU HPP) dan menambah kebijakan fiskal yang digunakan sebagai instrumen pengendali perubahan iklim. Agenda reformasi dalam kebijakan fiskal untuk mempercepat investasi hijau telah dimulai secara intensif. Pemerintah telah memberikan insentif fiskal seperti *tax holiday*, *tax allowance*, dan fasilitas PPN untuk meningkatkan pengembangan energi terbarukan.

**Pendekatan Perpajakan [GRI 207-1, 11.21.4]**

Perusahaan memiliki strategi pajak (*tax strategy*) yang dikelola, dimonitor dan dievaluasi oleh Fungsi *Tax Strategy* di dalam Fungsi *Tax* Perseroan sebagai perencanaan pajak jangka pendek dan jangka panjang.

*Tax Strategy* mencakup kegiatan perencanaan pajak dan konsultasi pajak, yang dilakukan sesuai dengan ketentuan peraturan perundang-undangan perpajakan yang berlaku, baik formal maupun material.

Fungsi *Tax* menyusun perencanaan pajak berdasarkan inisiatif Fungsi *Tax* atau permintaan fungsi lain Perseroan. Khusus usulan dari subholding atau anak perusahaan, perencanaan tersebut dikonsultasikan terlebih dahulu dengan Fungsi *Tax Holding* sebelum diterapkan.

Perencanaan pajak memuat strategi pengelolaan pajak dengan memperhatikan strategi manajemen, mitigasi risiko pajak dan optimalisasi pembayaran pajak sesuai dengan ketentuan peraturan perundang-undangan yang berlaku di negara-negara tempat Perseroan menjalankan kegiatan operasionalnya.

Melalui keanggotaan Perseroan di EITI, Perseroan bersama dengan pihak Pemerintah, maupun non-Pemerintah, serta Lembaga Swadaya Manusia (LSM) mendukung transparansi pelaporan pajak dan aktivitas-aktivitas lainnya di bidang Energi.

Pertamina memberikan data sesuai dengan standar EITI di negara-negara *supporting countries* EITI tempat Pertamina melakukan kegiatan operasional Hulu yaitu yaitu Indonesia, Irak, Aljazair, Gabon, Tanzania, Kolombia, dan Angola.

**TAX [GRI 207]**

The Ministry of Finance of the Republic of Indonesia has established a new milestone related to support for world climate change, through the Law on Harmonization of Tax Regulations (UU HPP) and added fiscal policy that is used as an instrument to control climate change. The reform agenda in fiscal policy to accelerate green investment has been started intensively. The government has provided fiscal incentives such as tax holidays, tax allowances and VAT facilities to increase the development of renewable energy.

**Tax Approach [GRI 207-1, 11.21.4]**

The Company has a tax strategy that is managed, monitored, and evaluated by the Tax Strategy Function within the Company's Tax Function as short-term and long-term tax planning.

Tax Strategy includes tax planning and tax consulting activities, which are conducted in accordance with the provisions of the applicable tax laws and regulations, both formal and material.

The Tax Function prepares tax planning based on the initiative of the Tax Function or requests from other Company functions. Before implementing proposals from sub-holdings or subsidiaries, the plan is reviewed by the Tax Holding Function.

The tax plan includes a tax management strategy that focuses on the management strategy, mitigating tax risks and optimizing tax payments in accordance with the provisions of the laws and regulations in force in the countries where the Company operates.

Through the Company's membership in EITI, the Company collaborates with the Government, as well as non-Government and Non-Governmental Organizations (NGOs), to support the transparency of tax reporting and other activities in the Energy sector.

Pertamina provides data in accordance with EITI standards in EITI supporting countries where it conducts upstream operational activities, namely Indonesia, Iraq, Algeria, Gabon, Tanzania, Colombia, and Angola.









## Tata Kelola, Kontrol, dan Risiko Pengelolaan Pajak [GRI 207-2, 11.21.5]

## Tax Governance, Control and Risk Management [GRI 207-2, 11.21.5]

Pengelolaan perpajakan seluruh entitas di Pertamina Group yang efektif dan efisien dilakukan melalui penerapan prinsip-prinsip *fundamental tax management* sebagai berikut:

Effective and efficient tax management of all entities in the Pertamina Group is conducted through the application of the fundamental principles of tax management as follows:

<h3>Potensi Risiko Perpajakan</h3> <p>Tax Risk Awareness</p> 	<p>Meningkatkan kepedulian terhadap potensi risiko perpajakan (<i>Tax Risk Awareness</i>) dengan melakukan <i>tax risk assessment</i> yang dilakukan oleh fungsi <i>Tax</i> bersama fungsi <i>Enterprise Risk Management</i> (ERM) Perseroan, secara rutin setiap bulan atas risiko perpajakan pada proses bisnis perpajakan, proses bisnis perusahaan dan <i>corporate action</i> perusahaan disertai upaya mitigasi.</p>	<p>Increasing awareness of potential tax risks (<i>Tax Risk Awareness</i>) by conducting tax risk assessments conducted by the Tax function together with the Company's Enterprise Risk Management (ERM) function, regularly every month on tax risks in tax business processes, corporate business processes and the Company's corporation action accompanied by mitigation efforts.</p>
<p>Memastikan <i>internal control</i> proses perpajakan telah berjalan baik dengan melakukan <i>assessment</i> berkala <i>internal control</i> proses bisnis perpajakan yang dilakukan fungsi <i>Tax</i> bersama fungsi <i>Internal Control over Financial Report</i> (ICoFR) perusahaan untuk memastikan bahwa <i>internal control</i> proses perpajakan telah berjalan sebagaimana mestinya, serta tersedianya <i>early warning system</i> jika terjadi kesalahan penerapan <i>internal control</i>.</p>	<p>Ensuring the internal control of the taxation process is running well by conducting periodic assessments of internal control of the taxation business process conducted by the Tax function together with the Company's Internal Control over Financial Report (ICoFR) function. This is to ensure the internal control of the taxation process is running as it should, as well as the availability of an early warning system if there is an error in the implementation of internal control.</p>	<h3>Internal Control</h3> <p>Internal Control</p> 
<h3>Pengawasan Proses Bisnis Perpajakan</h3> <p>Supervision of Taxation Business Processes</p> 	<p>Pengawasan proses bisnis perpajakan secara menyeluruh dengan melakukan <i>monitoring</i> dan evaluasi implementasi perencanaan pajak, kepatuhan pemenuhan kewajiban perpajakan, <i>internal control</i> proses bisnis perpajakan, dan penanganan segala potensi risiko pajak. Selain itu juga melakukan <i>Tax Diagnostic Review</i> (TDR) untuk memastikan pengendalian risiko perpajakan dan kepatuhan pemenuhan kewajiban perpajakan telah berjalan baik yang dilakukan fungsi Internal Audit (IA) dibantu fungsi <i>Tax</i> perusahaan.</p>	<p>Supervising the tax business processes thoroughly by monitoring and evaluating the implementation of tax planning, compliance with tax obligations, internal control of tax business processes, and handling of all potential tax risks. In addition, it also conducts a Tax Diagnostic Review (TDR) to ensure the tax risk control and compliance with tax obligations are well conducted by the Internal Audit (IA) function assisted by the Company's Tax function.</p>
<p>Meningkatkan keterlibatan fungsi pajak dalam kegiatan bisnis perusahaan dengan melakukan <i>review</i> aspek perpajakan skema transaksi bisnis <i>existing</i>, bisnis baru dan <i>corporate action</i> baru yang akan diterapkan agar memberikan dampak pajak yang paling optimal dengan tetap memenuhi ketentuan peraturan perundang-undangan perpajakan yang berlaku.</p>	<p>Increasing the involvement of the tax function in the Company's business activities by reviewing the taxation aspects of existing business transaction schemes, new businesses and new corporate actions that will be implemented in order to provide the most optimal tax impact while still complying with the provisions of the applicable tax laws and regulations</p>	<h3>Meningkatkan Keterlibatan Fungsi Pajak</h3> <p>Increase the Involvement of The Tax Function</p>
<h3>Tersedianya Informasi yang Memadai</h3> <p>Availability of Adequate Information</p> 	<p>Memastikan tersedianya informasi yang memadai bagi manajemen atas seluruh isu-isu perpajakan dengan melakukan pelaporan rutin atau <i>meeting</i> berkala, terkait dengan isu dampak regulasi perpajakan terhadap bisnis perusahaan, kepatuhan pemenuhan kewajiban perpajakan, perencanaan pajak atas skema bisnis baru dan evaluasi implementasi pajak atas skema bisnis <i>existing</i>.</p>	<p>Ensuring the availability of adequate information for management on all tax issues by conducting routine reports or periodic meetings, related to issues of the impact of tax regulations on the Company's business, compliance with fulfilling tax obligations, tax planning for new business schemes and evaluation of tax implementation on existing business schemes.</p>

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Kinerja Keberlanjutan  
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**Keterlibatan Pemangku Kepentingan Dan Manajemen Masalah Yang Terkait Dengan Pajak [GRI 207-3, 11.21.6]**

Keterlibatan pemangku kepentingan terdiri dari keterlibatan Direktorat Jenderal Pajak, Direktorat Jenderal Bea dan Cukai, dan Badan Kebijakan Fiskal serta fungsi lainnya di internal perusahaan.

Pengelolaan manajemen pajak yang dilakukan Perseroan, antara lain:

1. Perseroan memiliki *Tax Risk Awareness*, sehingga melakukan *Tax Risk Assessment* pada proses bisnis perpajakan Perseroan dan *corporate action* secara periodik, serta melakukan mitigasi hasil atas proses *assessment* tersebut
2. Perseroan memiliki *internal control* untuk memastikan proses perpajakan telah berjalan sebagaimana mestinya dengan mengidentifikasi *control objective*, memastikan tidak terjadi kesalahan pemenuhan *control objective*, serta memastikan sistem peringatan dini atas kesalahan yang berpotensi tidak terpenuhinya *control objective*
3. Perseroan melakukan implementasi perencanaan pajak, kepatuhan pemenuhan kewajiban perpajakan, *internal control* proses bisnis perpajakan, dan penanganan segala potensi risiko pajak dilakukan secara berkala oleh Fungsi Internal Audit dibantu Fungsi *Tax*

**Pelaporan Pajak [GRI 207-4, 11.21.7]**

Perseroan telah melaporkan pajak sebesar Rp219.064.283 juta kepada negara-negara tempat Perseroan melakukan kegiatan produksi minyak dan gas. Berikut disampaikan penerimaan pajak yang diterima oleh negara-negara tersebut. Informasi mengenai pembayaran pajak kepada negara-negara tempat Perseroan melakukan kegiatan produksi minyak dan gas juga telah disampaikan dalam *website* Perseroan.

Selain itu, Perseroan dalam operasionalnya terdapat berbagai jenis pajak yang bertanggung. Adapun rinciannya disajikan pada tabel berikut.

**Stakeholder Engagement and Management of Tax-Related Problems [GRI 207-3, 11.21.6]**

Stakeholder involvement consists of the participation of the Directorate General of Taxes, Directorate General of Customs and Excise, and the Fiscal Policy Agency as well as other functions within the company.

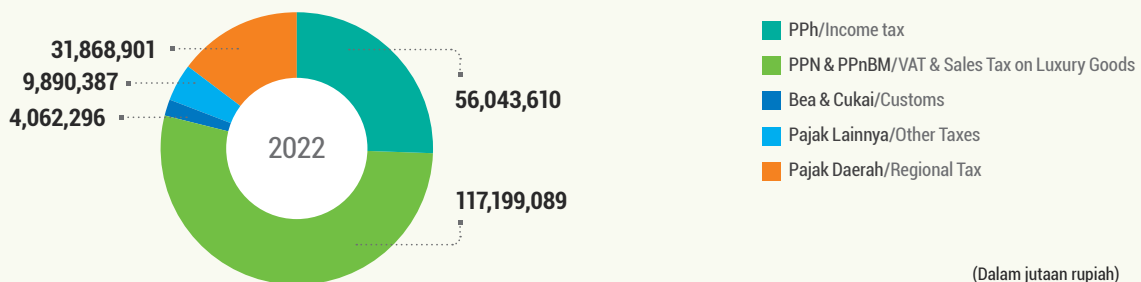
Management of tax carried out by the Company includes:

1. The Company has *Tax Risk Awareness*, therefore the Company conducts *Tax Risk Assessment* on the Company's tax business processes and corporate actions periodically, as well as mitigates the results of the assessment process.
2. The Company has *internal control* to ensure the taxation process is running as it should by identifying control objectives, ensuring that there are no errors in fulfilling control objectives, and ensuring an early warning system for errors that have the potential to not fulfill control objectives
3. The Company implements tax planning, compliance with tax obligations, internal control of tax business processes, and handling of all potential tax risks is carried out regularly by the Internal Audit Function assisted by the *Tax* Function

**Reporting by Country [GRI 207-4, 11.21.7]**

The company has reported taxes of Rp219,064,283 million to countries where the company carries out oil and gas production activities. Below is presented the tax receipts received by these countries. Information regarding tax payments to countries where the Company carries out oil and gas production activities has also been submitted on the Company's website.

In addition, the Company in its operations there are various types of taxes insured. The details are presented in the following table.



(Dalam jutaan rupiah)  
(In million rupiah)



Pelaporan pajak Perseroan dilakukan oleh masing-masing entitas kepada otoritas pajak sesuai negara tempat kedudukan entitas tersebut. Khusus untuk perusahaan yang terdaftar sebagai Wajib Pajak dan memiliki Nomor Pokok Wajib Pajak (NPWP) di Indonesia, pelaporan pajak pusat dilakukan melalui Surat Pemberitahuan (SPT) jenis pajak PPh Badan, PPh Pemotongan/Pemungutan dan PPN, dan pelaporan pajak daerah dilakukan melalui SPT Pajak Daerah kepada masing-masing Pemerintah Daerah sesuai lokasi usaha perusahaan.

Khusus untuk keperluan penghitungan PPh Badan, Perseroan melakukan rekonsiliasi fiskal atas laba rugi komersial, sehingga didapatkan besaran PPh Badan terutang. Untuk transaksi intra-group, Perseroan melaporkan kewajiban pajak atas transaksi tersebut dalam bentuk dokumen penentuan harga transfer setiap tahun pajak.

The Company tax reporting is conducted by each entity to the tax authorities according to the country where the entity is domiciled. Specifically for companies that are registered as taxpayers and have a Taxpayer Identification Number (NPWP) in Indonesia, central tax reporting is done through Notification Letters (SPT) for types of corporate income tax, withholding/collecting income tax and VAT, and regional tax reporting which is done through tax returns Region to each Regional Government according to the Company's business location.



To calculate corporate income tax, the Company performs a fiscal reconciliation of commercial profit and loss to determine the amount of corporate income tax payable. For intra-group transactions, the Company reports tax obligations through transfer pricing documents every tax year.



# Kinerja Sosial

## Social Performance



Highlighted Issue			
Topik Topic	Aktivitas Activity	Output & Value Created	Dukungan pada TPB Support for SDG
<p><b>Aspek Ketenagakerjaan</b> Employment Aspect</p> 	<ul style="list-style-type: none"> <li>Meningkatkan <i>Employee Engagement</i> melalui <i>Human Capital Counseling Assistance for Employee</i></li> <li>Mendukung <i>Diversity &amp; Inclusive Culture</i> dalam pengembangan kompetensi dan karir bagi karyawan</li> <li>Menyediakan program <i>talent management</i>, termasuk <i>Female Leadership and Talent Pipeline</i> untuk mendorong kepemimpinan perempuan Perseroan</li> <li>Mengimplementasikan HSSE <i>Management Excellence Program</i></li> <li>Enhancing Employee Engagement through Human Capital Counseling Assistance for Employees</li> <li>Supporting Diversity &amp; Inclusive Culture in competency and career development for employees</li> <li>Providing talent management programs, including the Female Leadership and Talent Pipeline to encourage the Company's women's leadership</li> <li>Implementing the HSSE Management Excellence Program</li> </ul>	<ul style="list-style-type: none"> <li>Terbentuknya <i>High Performing Culture</i> dengan skor <i>employee engagement</i> 83,23%</li> <li>Tersedianya kebijakan Hak Asasi Manusia dan <i>Respectful Workplace</i> yang diterapkan ke seluruh pekerja</li> <li>Presentase perempuan dalam porsi kepemimpinan sebesar 18,11%</li> <li>Level <i>Total Recordable Incident Rate</i> yang berada di angka 0,09</li> <li>Establishment of a High Performing Culture with an employee engagement score of 83.23%</li> <li>Availability of Human Rights and Respectful Workplace policy that applies to all workers</li> <li>The percentage of women in the leadership portion is 18.11%</li> <li>The level of Total Recordable Incident Rate was 0.09</li> </ul>	   
<p><b>Aspek Masyarakat</b> Community Aspect</p> 	<ul style="list-style-type: none"> <li>Pelaksanaan program TJSL, salah satunya melalui program Desa Berdikari untuk menyediakan energi bersih melalui penyediaan Pembangkit Listrik Tenaga Surya, Angin, dan Microhydro</li> <li>Menciptakan inovasi produk ramah lingkungan untuk mendukung pembangunan berkelanjutan</li> <li>Implementing TJSL programs, one of which is through the Desa Berdikari (Independent Village) program to provide clean energy through the provision of Solar, Wind and Microhydro Power Plants</li> <li>Creating environmentally friendly product innovations to support sustainable development</li> </ul>	<ul style="list-style-type: none"> <li>Terdapat 2.750 Kepala Keluarga penerima manfaat yang berhasil menghemat biaya listrik Rp4,4 Juta/tahun, dengan penyerapan 565.855 ton CO2eq/tahun dan reduksi emisi karbon sebesar 2,86 Kg/tahun</li> <li>Menghasilkan berbagai macam produk ramah lingkungan seperti Musicool, Sustainable Aviation Fuel, Geothermal steam, Solar PV, B35, dan lain sebagainya</li> <li>There were 2,750 beneficiary household heads who managed to save Rp 4.4 million/year on electricity costs, by absorbing 565,855 tons of CO2eq/year and reducing carbon emissions by 2.86 Kg/year</li> <li>Producing various kinds of environmentally friendly products such as Musicool, Sustainable Aviation Fuel, Geothermal steam, Solar PV, B35, etc.</li> </ul>	  

## ASPEK KETENAGAKERJAAN [GRI 3-3]

Sumber daya manusia memiliki peran strategis sebagai aset terpenting bagi pertumbuhan dan kesuksesan bisnis perusahaan dalam jangka panjang. Oleh karena itu, Perseroan berkomitmen penuh untuk mendukung dan menjamin pengembangan serta peningkatan sumber daya manusia secara berkelanjutan. Perseroan percaya mampu untuk mencetak sumber daya manusia yang mumpuni dan berkualitas demi mencapai visi sebagai perusahaan energi nasional kelas dunia melalui penciptaan lingkungan kerja yang positif dan aman.

Di bidang ketenagakerjaan, Perseroan telah mengeluarkan berbagai macam kebijakan seperti *Respectful Workplace Policy* dan *Human Right Policy* yang diterjemahkan melalui berbagai macam program untuk mendorong pemenuhan Hak Asasi Manusia, menciptakan kesetaraan kesempatan pekerja melalui *diversity & inclusion*, meningkatkan *employee engagement rate*, mengembangkan kompetensi dan karir melalui *talent management*, termasuk meningkatkan porsi perempuan dan milenial dalam porsi kepemimpinan perusahaan. Selain itu, Perseroan juga mengupayakan tersedianya fasilitas Kesehatan dan keselamatan kerja bagi seluruh karyawan dan mitra kerja untuk meningkatkan produktivitas.

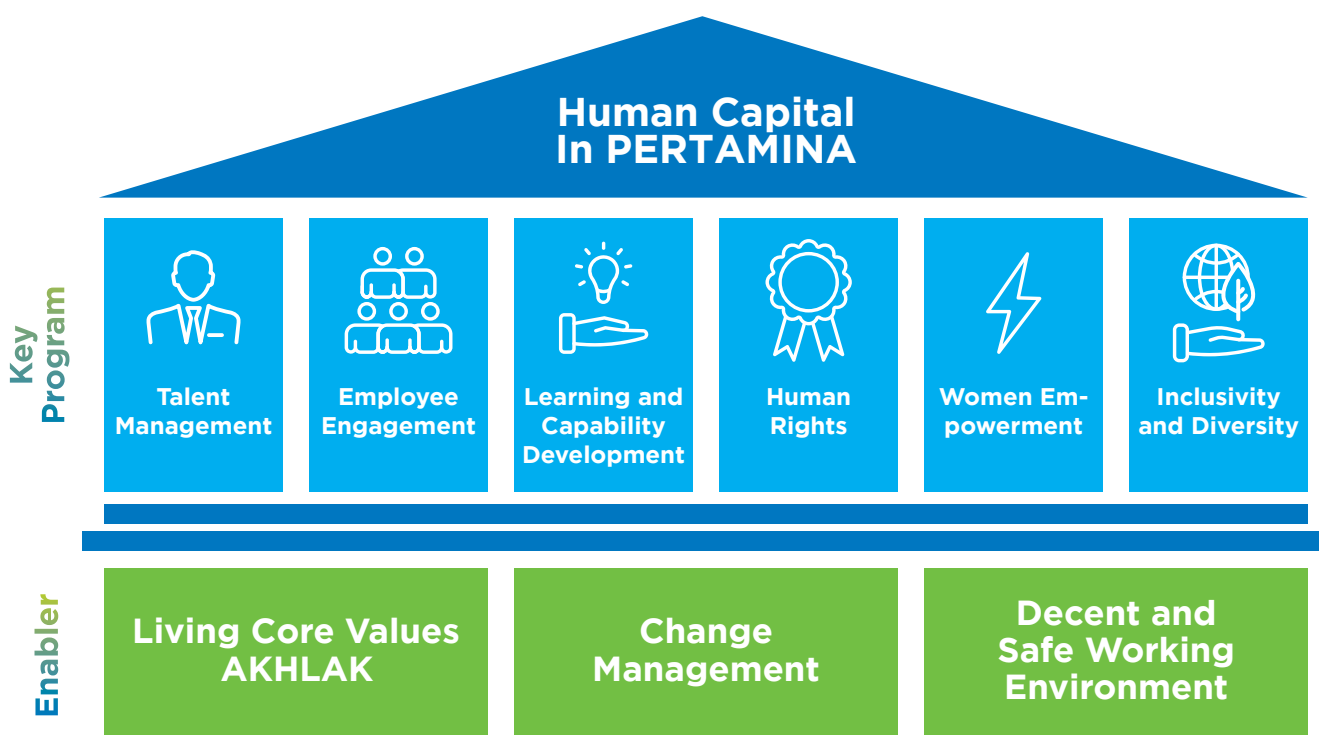
Komitmen Perseroan dalam aspek ketenagakerjaan dapat digambarkan melalui kerangka *Human Capital in PERTAMINA* sebagai berikut.

## EMPLOYMENT ASPECT [GRI 3-3]

Human resources have a strategic role as the most important asset for the Company's long-term business growth and success. Therefore, the Company is fully committed to supporting and ensuring the development and improvement of human resources in a sustainable manner. The Company believes in its ability to produce equipped and qualified human resources to achieve its vision as a world-class national energy company by creating a positive and safe working environment.

On employment aspect, the Company has issued various policies such as the *Respectful Workplace Policy* and the *Human Rights Policy* which are translated through various programs to encourage the fulfillment of Human Rights, create equal opportunity for employees through diversity & inclusion, increase employee engagement rates, develop competencies and careers through talent management, including increasing the share of women and millennials in the Company's leadership portion. In addition, the Company also seeks to provide occupational health and safety facilities for all employees and work partners to increase productivity.

The Company's commitment to the employment aspect can be described through the *Human Capital in Pertamina* framework as follows.



**Informasi Mengenai Karyawan [OJK C.3-b, GRI 2-7, SOC-5.C2]**

Pekerja Perseroan terdiri dari Pekerja Waktu Tidak Tertentu (PWTT) dan Pekerja Waktu Tertentu (PWT). Pada tahun 2022, Pekerja Perseroan mengalami penurunan sebesar 3,6% dibandingkan dengan tahun 2021, dikarenakan sebagian Pekerja telah purna tugas. Sehubungan dengan pembentukan  *Holding*  dan  *Subholding*  yang diresmikan pada tahun 2021, informasi pekerja yang disajikan pada laporan keberlanjutan ini mencakup data tahun 2021 dan 2022, termasuk entitas yang tidak dikonsolidasikan dan proyek. [GRI 2-7-a, GRI 2-7-c]

**Information About Employees [OJK C.3-b, GRI 2-7, SOC-5.C2]**

The Company's employees consist of Unspecified Time Employees or Permanent Employees (PWTT) and Specified Time Employees or Non-Permanent Employees (PWT). In 2022, the Company's employees decreased by 3.6% compared to 2021, because some employees had retired. With respect to formation  *Holding*  and  *Subholding*  which was inaugurated in 2021, employee information presented on the report This sustainability includes 2021 and 2021 data 2022, including unconsolidated entities and projects. [GRI 2-7-a, GRI 2-7-c]

**Komposisi Pekerja Berdasarkan Status Kepegawaian dan Gender**

**Employee Composition by Employment Status and Gender**

**Tabel Komposisi Pekerja Berdasarkan Status Kepegawaian dan Gender [GRI 2-7]**  
Table of Employee Composition by Employment Status and Gender  
(dalam satuan orang) (in person)

Status Kepegawaian Employment Status	2022			2021		
	Holding	Sub-Holding	Total	Holding	Sub-Holding	Total
Pekerja Waktu Tidak Tertentu (PWTT) Permanent (PWTT)	12,885	22,915	35,800	13,048	21,093	34,141
• Laki-Laki/Man	11,363	18,043	29,406	11,525	16,389	27,914
• Perempuan/Woman	1,522	4,872	6,394	1,523	4,704	6,227
Pekerja Waktu Tertentu (PWT) Non-Permanent (PWT)	36	7,830	7,866	33	11,138	11,171
• Laki-Laki/Man	20	6,458	6,478	19	9,348	9,367
• Perempuan/Woman	16	1,372	1,388	14	1,790	1,804
<b>Total Pekerja</b>	<b>12,921</b>	<b>30,745</b>	<b>43,666</b>	<b>13,081</b>	<b>32,231</b>	<b>45,312</b>
• Laki-Laki/Man	11,383	24,501	35,884	11,544	25,737	37,281
• Perempuan/Woman	1,538	6,244	7,782	1,537	6,494	8,031

**Komposisi Pekerja PWTT Berdasarkan Usia [GRI 2-7]**

**Composition of Permanent Employees by Age [GRI 2-7]**

(dalam satuan orang) (in person)

Berdasarkan Usia By Age	2022			2021		
	Holding	Sub-Holding	Total	Holding	Sub-Holding	Total
< 26 Tahun/Years Old	748	525	1,273	1,307	429	1,736
• Laki-Laki/Man	735	422	1,157	1,271	360	1,631
• Perempuan/Woman	13	103	116	36	69	105
26-35 Tahun/Years Old	5,583	5,985	11,568	5,869	5,752	11,621
• Laki-Laki/Man	4,937	4,455	9,392	5,136	4,161	9,297
• Perempuan/Woman	646	1,530	2,176	733	1,591	2,324
36-45 Tahun/Years Old	4,448	9,459	13,907	3,686	8,939	12,625
• Laki-Laki/Man	3,744	7,440	11,184	3,088	6,978	10,066
• Perempuan/Woman	704	2,019	2,723	598	1,961	2,559
46-55 Tahun/Years Old	2,078	6,426	8,504	2,172	5,728	7,900
• Laki-Laki/Man	1,920	5,272	7,192	2,016	4,673	6,689
• Perempuan/Woman	158	1,154	1,312	156	1,055	1,211
> 55 Tahun/Years Old	28	520	548	14	245	259
• Laki-Laki/Man	27	454	481	14	217	231
• Perempuan/Woman	1	66	67	-	28	28
<b>Total</b>	<b>12,885</b>	<b>22,915</b>	<b>35,800</b>	<b>13,048</b>	<b>21,093</b>	<b>34,141</b>



### Komposisi Pekerja Non Pegawai [GRI 2-8]

Pada tahun 2022, Perseroan juga membuka kesempatan magang bagi mahasiswa tingkat akhir yang masih menempuh studi di perguruan tinggi dengan rincian sebagai berikut.

### Composition of Non-Employee Workers (GRI 2-8)

In 2022, the Company also opened internship opportunities for final year students who were still studying at universities with the following details.

**Tabel Komposisi Pekerja Magang Perseroan Berdasarkan Penempatan dan Gender**

Table of Apprentice Composition Based on Placement and Gender

(dalam satuan orang) (in person)

Penempatan Placement	Jenis Kelamin Gender	2022	2021
Holding	Laki-Laki/Man	226	184
	Perempuan/Woman	331	294
	<b>Total</b>	<b>557</b>	<b>478</b>
Subholding	Laki-Laki/Man	279	104
	Perempuan/Woman	104	155
	<b>Total</b>	<b>672</b>	<b>259</b>

**Tabel Komposisi Pekerja Tenaga Kerja Jasa Penunjang Perseroan**

Table of Composition of the Company's Supporting Service Workers

(dalam satuan orang) (in person)

	2022	2021
Holding	1,373	1,362
Upstream	11,418	10,615
Refining & Petrochemical	4,180	4,429
Commercial & Trading	8,404	8,793
Power and New Renewable Energy	1,077	69
Integrated Marine Logistic	3,283	248
Gas	5,779	3,243

### Perekrutan Karyawan Baru dan Perputaran Karyawan [GRI 401-1, 11.10.2, SOC-15.C1, SOC-6.A1]

Perseroan telah memiliki program perekrutan pekerja yang tersentral melalui *website* recruitment.pertamina.com yang mencakup informasi pengumuman rekrutmen, registrasi, tahapan seleksi, pengumuman kelulusan dan *job description*. Terkait dengan alih kepegawaian Blokrokan merupakan proses alih status pekerja dari sebelumnya PT Chevron menjadi PT Pertamina Hulu Rokan di tahun 2021, sedangkan di tahun 2022 tidak ada proses alih kelola baru.

### New Employee Recruitment and Employee Turnover [GRI 401-1, 11.10.2, SOC-15.C1, SOC-6.A1]

The Company has a centralized employee recruitment program through the *website* recruitment.pertamina.com which includes information on recruitment announcements, registration, selection stages, graduation announcements and job descriptions. Associated with the transfer of Blokrokan staffing is the process of transferring worker status from previously PT Chevron to PT Pertamina Hulu Rokan in 2021, while in 2022 there will be no new management transfer process.

**Rekrutmen Pekerja Baru Perseroan Tahun 2022**
**Wilayah Operasional Indonesia Berdasarkan Sumber Rekrutmen dan Wilayah [GRI 401-1, 11.10.2]**

Recruitment of the Company's New Employees in 2022 in Indonesian Operational Areas by Recruitment Sources

Program	2022			2021 *		
	Laki-Laki Man	Perempuan Woman	Total	Laki-Laki Man	Perempuan Woman	Total
<b>Rekrutmen Reguler Regular Recruitment</b>	<b>6,225</b>	<b>1,018</b>	<b>7,243</b>	<b>6,568</b>	<b>937</b>	<b>7,505</b>
	<b>86%</b>	<b>14%</b>	<b>100%</b>	<b>88%</b>	<b>12%</b>	<b>100%</b>
<i> Holding</i>	15	3	18	1,042	33	1,075
	83%	17%	100%	97%	3%	100%
<i> Upstream</i>	392	101	493	1,727	259	1,986
	80%	20%	100%	87%	13%	100%
<i> Refining &amp; Petrochemical</i>	291	47	338	130	9	139
	86%	14%	100%	94%	6%	100%
<i> Commercial &amp; Trading</i>	606	110	716	508	107	615
	85%	15%	100%	83%	17%	100%
<i> Power and Renewable Energy</i>	35	9	44	22	5	27
	80%	20%	100%	82%	18%	100%
<i> Gas</i>	64	8	72	25	7	32
	89%	11%	100%	78%	22%	100%
<i> Integrated Marine Logistic</i>	2,729	65	2,794	1,732	41	1,773
	98%	2%	100%	98%	2%	100%
<i> AP Services &amp; Portfolio</i>	2,093	675	2,768	1,382	476	1,858
	76%	24%	100%	74%	26%	100%
<b>Pengalihan Blok Rokan Transfer of Rokan Block</b>	-	-	-	<b>2,348</b>	<b>341</b>	<b>2,689</b>
	-	-	-	<b>87%</b>	<b>13%</b>	<b>100%</b>
<b>Total</b>	<b>6,225</b>	<b>1,018</b>	<b>7,243</b>	<b>8,916</b>	<b>1,278</b>	<b>10,194</b>

\*Restated

**Rekrutmen Pekerja Baru Perseroan Tahun 2022 Berdasarkan Kelompok Usia [GRI 401-1, 11.10.2]**

Recruitment of New Employees by Regular Channel in 2022 Based on Age Group

Kelompok Usia Age Group	2022			2021*		
	Laki-Laki Man	Perempuan Woman	Total	Laki-Laki Man	Perempuan Woman	Total
<b>Berdasarkan Kelompok Usia/Based on Age Group</b>						
<20 Tahun/Years Old	<b>71</b>	<b>16</b>	<b>87</b>	40	21	61
20-29 Tahun/Years Old	<b>1,840</b>	<b>599</b>	<b>2,439</b>	1,476	366	1,842
30-39 Tahun/Years Old	<b>2,004</b>	<b>237</b>	<b>2,241</b>	3,014	480	3,494
40-49 Tahun/Years Old	<b>1,496</b>	<b>108</b>	<b>1,604</b>	2,549	248	2,797
50-59 Tahun/Years Old	<b>814</b>	<b>58</b>	<b>872</b>	1,837	163	2,000
<b>Total</b>	<b>6,225</b>	<b>1,018</b>	<b>7,243</b>	<b>8,916</b>	<b>1,278</b>	<b>10,194</b>

\*Restated





### Turnover Pekerja Perseroan Tahun 2022 Berdasarkan Kelompok Usia [GRI 401-1, 11.10.2]

The Company's Employee Turnover in 2022 by Age Group

Kelompok Usia Age Group	2022			2021*		
	Laki-Laki Man	Perempuan Woman	Total	Laki-Laki Man	Perempuan Woman	Total
<b>Berdasarkan Kelompok Usia/Based on Age Group</b>						
20-29 Tahun/Years Old	174	79	253	435	46	481
30-39 Tahun/Years Old	234	71	305	971	101	1,072
40-49 Tahun/Years Old	216	44	260	785	29	814
50-59 Tahun/Years Old	384	60	444	665	41	706
<b>Total</b>	<b>1,008</b>	<b>254</b>	<b>1,262</b>	<b>2,856</b>	<b>217</b>	<b>3,073</b>
<b>Berdasarkan Wilayah Kerja Berdasarkan Kelompok Usia/Based on Work Area</b>						
Holding	297	52	349	2,534	72	2,606
Subholding	711	202	913	322	145	467
<b>Total</b>	<b>1,008</b>	<b>254</b>	<b>1,262</b>	<b>2,856</b>	<b>217</b>	<b>3,073</b>

\*Restated

Berdasarkan data tabel di atas, data tahun 2022 menunjukkan bahwa *recruitment rate* PERTAMINA sebesar 17% dan *turnover rate* sebesar 3%.

Based on the data table above, data for 2022 shows that Pertamina's recruitment rate is 17% and the turnover rate is 3%.

### Retensi dan Keterikatan Pegawai [SOC-6.C1]

### Employee Retention And Engagement [SOC-6.C1]

Perseroan melakukan pengukuran *employee engagement* untuk melihat sejauh mana keterikatan karyawan dengan Perseroan dan antusiasme terhadap pekerjaan. Pengukuran *Employee Engagement* dikelompokkan ke dalam 6 (enam) dimensi, yaitu Reputasi Organisasi, Kepemimpinan, Karir dan Pengembangan Diri, Pekerjaan, Kebutuhan dasar, dan Hubungan Sosial.

The Company measures employee engagement to see the extent of employee engagement with the Company and enthusiasm for work. Employee Engagement measurement is grouped into 6 (six) dimensions, namely Organizational Reputation, Leadership, Career and Personal Development, Employment, Basic Needs, and Social Relations.

Hasil survei menunjukkan bahwa terdapat peningkatan *employee engagement* sebesar 3.16% pada tahun 2022 dengan total responden 31.381 pegawai Perseroan. Pengukuran *Employee Engagement* tahun 2022 menunjukkan indeks pada kategori tinggi dan masuk pada aspek *Stay Growing*. Berikut hasil survei *employee engagement* yang mencakup tingkat kepuasan pekerja.

The survey results show that is an increase *employee engagement* of 3,16% in 2022 with a total of 31,381 employees as respondents Company. Employee Engagement Measurement 2022 shows the index in the high category and enter the *Stay Growing* aspect. Here are the results *employee engagement* survey that includes levels worker satisfaction.

### Tabel Employee Engagement

Employee Engagement table

(Dalam Persentase) (In Percentage)

Tahun/Year	2022	2021
Skor/Score	83.23	80.68

Untuk meningkatkan *Employee Engagement*, Perseroan memiliki program *Human Capital Counseling Assistance for Employees* (HC CARE) yang merupakan layanan konseling dari Konselor HC untuk pekerja *Holding* Perseroan yang bertujuan untuk meningkatkan derajat kesehatan mental pekerja dalam rangka mendukung terciptanya *High Performing Culture*, yang diwujudkan melalui:

To increase *Employee Engagement*, the Company has *Human Capital Counseling Assistance for Employees* (HC CARE) program which is a counseling service from HC Counselors for *Holding* employees which aims to improve the mental health status of employees with a view to support the creation of *High Performing Culture*, which is manifested through:

1. Program untuk meningkatkan kesehatan mental bagi pekerja Holding.
2. Program konseling untuk meningkatkan *wellbeing* pekerja Holding.
3. Peningkatan peran *Human Capital* sebagai *Employee's Partner*.
4. Mendukung terciptanya *Happy Working Culture* untuk meningkatkan produktivitas pekerja.

Selama tahun 2021-2022 telah dilaksanakan 71 sesi *one-on-one counselling* untuk pekerja Holding Perseroan melalui program HC CARE.

**Kesetaraan Kesempatan Bekerja [OJKF.18, GRI 405-1, 11.11.5, SOC-5.C1, SOC-5.C3, SOC-5.A1, SOC-5.A2, SOC-5.A4]**

Perseroan berupaya mewujudkan lingkungan kerja yang bebas diskriminasi sesuai dengan ILO Convention No. 111 tentang *Discrimination in Employment and Occupation*. Hal ini dilakukan dengan tidak melakukan perlakuan berbeda, pengecualian, atau preferensi yang berdasarkan etnis, ras, kebangsaan, warna kulit, agama, jenis kelamin, usia, dan disabilitas dalam seluruh aktivitas operasional Perseroan. Selain itu, Perseroan juga berkomitmen untuk menciptakan lingkungan kerja yang bebas kekerasan dan pelecehan sesuai dengan ILO Convention No. 190 tentang *Violence and Harassment in The World of Work*.

Untuk memastikan lingkungan bekerja yang bebas diskriminasi dan pelecehan, Perseroan memiliki kebijakan *Respectful Workplace* dan HAM yang wajib ditaati oleh seluruh pekerja. Direktur Utama Perseroan bertanggung jawab untuk menjamin implementasi kebijakan ini dan melakukan upaya perbaikan secara berkelanjutan. Seluruh pekerja Perseroan berkewajiban melaporkan tindakan diskriminasi, kekerasan, dan pelecehan yang terjadi di lingkungan kerja melalui media pelaporan yang telah disediakan yaitu [respect@pertamina.com](mailto:respect@pertamina.com). Segala tindakan diskriminasi, kekerasan, dan pelecehan akan ditindaklanjuti dan diberikan sanksi sesuai dengan ketentuan Perusahaan yang berlaku dengan sanksi maksimum berupa PHK.

**Kesetaraan Kesempatan Kerja Bagi Masyarakat**

Perseroan membuka kesempatan bagi penyandang disabilitas untuk bekerja di Perseroan melalui program afirmasi rekrutmen penyandang disabilitas. Hal ini bertujuan untuk meningkatkan populasi penyandang disabilitas hingga 2% dari total demografi Perseroan pada tahun 2024. Adapun komposisi penyandang disabilitas di Perseroan adalah sebagai berikut.

1. Programs to improve mental health of Holding employees.
2. Counseling program to improve the wellbeing of Holding employees.
3. Enhancing the role of Human Capital as Employee's Partner.
4. Supporting the creation of a Happy Working Culture to increase employee productivity.

During 2021-2022, 71 one-on-one counseling sessions have been held for the Company's Holding employees through the HC CARE program.

**Equal Work Opportunities [OJKF.18, GRI 405-1, 11.11.5, SOC-5.C1, SOC-5.C3, SOC-5.A1, SOC-5.A2, SOC-5.A4]**

The Company strives to create a work environment that is free of discrimination in accordance with ILO Convention No. 111 concerning *Discrimination in Employment and Occupation*. This is done by not applying different treatment, exclusion or preference based on ethnicity, race, nationality, skin color, religion, gender, age and disability in all of the Company's operational activities. In addition, the Company is also committed to creating a work environment free of violence and harassment in accordance with ILO Convention no. 190 concerning *Violence and Harassment in the World of Work*.

To ensure a work environment that is free of discrimination and harassment, the Company has *Respectful Workplace* and *Human Rights* policies that must be obeyed by all employees. The President Director of the Company is responsible for ensuring the implementation of these policies and making continuous improvement efforts. All employees of the Company are obliged to report acts of discrimination, violence and harassment that occur in the work environment through the reporting media that has been provided, namely [respect@pertamina.com](mailto:respect@pertamina.com). All acts of discrimination, violence and harassment will be followed up and sanctioned in accordance with applicable Company provisions with the maximum sanction of being layoffs.

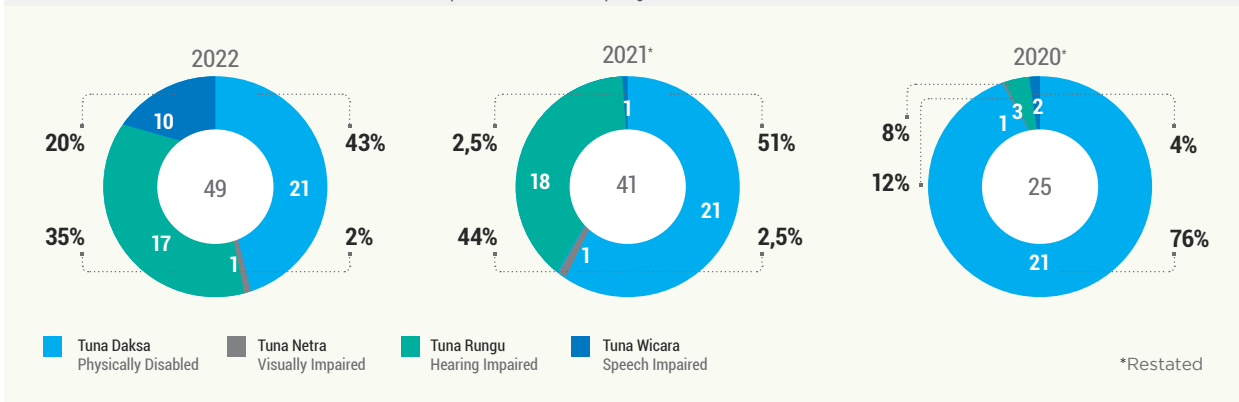
**Equal Work Opportunities For Communities**

The Company opens opportunities for persons with disabilities to work in the Company through an affirmation program for the recruitment of persons with disabilities. This aims to increase the population of persons with disabilities to 2% of the Company's total demographics in 2024. The composition of persons with disabilities in the Company is as follows:



### Komposisi Pegawai Penyandang Disabilitas [GRI 405-1, 11.11.5]

Composition of Employees with Disabilities



### Komposisi Pegawai Penyandang Disabilitas Berdasarkan Gender dan Usia [GRI 405-1, 11.11.5]

Composition of Employees with Disabilities by Gender and Age

Usia Age	Jenis Kelamin Gender	2022	%	2021*)	%	2020*)	%
<30 Tahun/Years Old	Laki-Laki/Man	12	24%	6	15%	5	20%
	Perempuan/Woman	16	33%	14	34%	8	32%
30-50 Tahun Years Old	Laki-Laki/Man	13	27%	13	32%	9	36%
	Perempuan/Woman	8	16%	8	20%	3	12%
>50 Tahun Years Old	Laki-Laki/Man	0	0	0	0	0	0
	Perempuan/Woman	0	0	0	0	0	0
<b>Total</b>		<b>49</b>	<b>100%</b>	<b>41</b>	<b>100%</b>	<b>25</b>	<b>100%</b>
<b>Total</b>	<b>Laki-laki/Man</b>	<b>25</b>	<b>51%</b>	<b>19</b>	<b>46%</b>	<b>14</b>	<b>56%</b>
	<b>Perempuan/Woman</b>	<b>24</b>	<b>49%</b>	<b>22</b>	<b>54%</b>	<b>11</b>	<b>44%</b>

\*Restated

Selain rekrutmen terhadap penyandang disabilitas, Perseroan memiliki kebijakan penyediaan kesempatan setara bagi masyarakat lokal dan masyarakat adat setempat. Komitmen ini selaras dengan komitmen Kementerian BUMN untuk menyediakan kesempatan setara.

In addition to recruiting people with disabilities, the Company has a policy of providing equal opportunities for local and indigenous communities. This commitment is in line with the commitment of the Ministry of State-Owned Enterprises to provide equal opportunities.

### Akumulasi Jumlah Perwira Putra Daerah Papua Berdasarkan Gender [GRI 405-1, 11.11.5]

Accumulated Number of Papuan Regional Male Officers Based on Gender

Jenis Kelamin Gender	2022	%	2021	%	2020	%
Laki-Laki/Man	18	64	17	59	17	59
Perempuan/Woman	10	36	12	41	12	41
<b>Total</b>	<b>28</b>	<b>100</b>	<b>29</b>	<b>100</b>	<b>29</b>	<b>100</b>

### Kesetaraan Gender

Perseroan berkomitmen tinggi untuk menerapkan kesetaraan *gender* dalam pengelolaan sumber daya manusia. Komitmen tersebut diiringi dengan penerapan *Women Empowerment Principles* (WEP) yang diusung oleh UNGC. Perseroan juga berkolaborasi dengan para pemangku kepentingan untuk mendorong praktik bisnis yang memberdayakan perempuan. Kesetaraan gender diwujudkan dalam berbagai program sebagai berikut: [SOC-5.C1]

### Gender Equality

The Company is highly committed to implementing gender equality in human resource management. This commitment is accompanied by the implementation of the Women Empowerment Principles (WEP) promoted by the UNGC. The Company also collaborates with stakeholders to encourage business practices that empower women. Gender equality is manifested in various programs as follows: [SOC-5.C1]



**FEMALE LEADERSHIP AND TALENT PIPELINE**

Perseroan memahami akan pentingnya keberagaman dan berkomitmen untuk terus mendorong kepemimpinan perempuan di Perseroan. Hal ini diwujudkan dalam pengukuran target KPI persentase *Woman as a Leader* sebagai bagian dari tindakan afirmasi dalam rangka meningkatkan peluang pekerja perempuan sebagai pemimpin di Perseroan. Pada tahun 2022, persentase *Woman as a Leader* adalah 18,11% atau meningkat 28,5% dibandingkan dengan tahun 2021. Selain itu, Perseroan juga melaksanakan program *coaching* untuk pekerja perempuan dalam rangka meningkatkan kesiapan kepemimpinan pekerja perempuan yang diikuti oleh 153 *coachee* dan 51 *coach*.

**FEMALE LEADERSHIP AND TALENT PIPELINE**

The Company acknowledges the importance of diversity and is committed to continuing to encourage women’s leadership in the Company. This is manifested in the measurement of the KPI target percentage of *Woman as a Leader* as part of affirmative action to increase opportunities for women workers to become leaders in the Company. In 2022, the percentage of *Woman as a Leader* is 18.11%, an increase of 28.5% compared to 2021. In addition, the Company also implemented a coaching program for female employees in order to improve the leadership readiness of female workers, which was attended by 153 *coachees* and 51 *coaches*.

**Tabel Komposisi Pekerja PWTT Berdasarkan Level Jabatan dan Gender**  
[GRI 2-7, 405-1, 11.11.5, SOC-5.C3]

Table of Permanent Employee Composition by Gender and Position Level

(dalam satuan orang) (in person)

Level Jabatan Position level	2022				2021			
	Holding	Sub-Holding	Total	%	Holding	Sub-Holding	Total	%
<b>L1 (SVP Setara) L1 (SVP Equivalent)</b>	<b>14</b>	<b>10</b>	<b>24</b>	<b>1.59%</b>	<b>17</b>	<b>5</b>	<b>22</b>	<b>1.18%</b>
Laki-Laki/Man	13	8	21	1.39%	17	5	22	1.18%
Perempuan/Woman	1	2	3	0.20%	0	0	0	0%
<b>L2 (VP Setara) L2 (VP Equivalent)</b>	<b>163</b>	<b>88</b>	<b>251</b>	<b>16.59%</b>	<b>187</b>	<b>81</b>	<b>268</b>	<b>14.35%</b>
Laki-Laki/Man	136	66	202	13.35%	162	60	222	11.89%
Perempuan/Woman	27	22	49	3.24%	25	21	46	2.46%
<b>L3 (Manajer Setara) L3 (Manager Equivalent)</b>	<b>626</b>	<b>612</b>	<b>1,238</b>	<b>81.82%</b>	<b>965</b>	<b>612</b>	<b>1,577</b>	<b>84.47%</b>
Laki-Laki/Man	505	511	1,016	67.15%	820	541	1,361	72.90%
Perempuan/Woman	121	101	222	14.67%	145	71	216	11.57%
<b>Total L1-L3</b>			<b>1,513</b>	<b>100%</b>			<b>1,867</b>	<b>100%</b>
% Woman Leader				18.11%				14%
<b>L4 dan lainnya L4 and others</b>	<b>12,082</b>	<b>22,205</b>	<b>34,287</b>		<b>11,879</b>	<b>20,395</b>	<b>32,274</b>	
Laki-Laki/Man	10,709	17,458	28,167		10,526	15,783	26,309	
Perempuan/Woman	1,373	4,747	6,120		1,353	4,612	5,965	
<b>Total L1-L4</b>	<b>12,885</b>	<b>22,915</b>	<b>35,800</b>		<b>13,048</b>	<b>21,093</b>	<b>34,141</b>	

**EQUAL PAY AND GENDER PAY PARITY**

Salah satu faktor yang mempengaruhi tingkat retensi adalah tingkat remunerasi pekerja yang mengacu pada kemampuan perusahaan dan *competitiveness* posisi upah sesuai pasar atau *market*. Selain hal tersebut, sesuai Peraturan Pemerintah, remunerasi diberikan berbeda atas pekerja tetap (Pekerja Waktu Tidak Tertentu/PWTT), dan pekerja tidak tetap (Pekerja Waktu Tertentu/PWT). Beberapa komponen dalam imbal jasa pekerjaan yang tidak diberikan kepada pekerja tidak tetap adalah komponen terkait Penghargaan Atas

**EQUAL PAY AND GENDER PAY PARITY**

One of the factors that affect the level of retention is the level of employee remuneration, which refers to the ability of the Company and the competitiveness of the wage position according to the market. In addition to this, according to the Government Regulation, remuneration is given differently for permanent employees (unspecified time employees/PWTT) and non-permanent employees (specified time employees/PWT). Several components in compensation for employment services that are not given to non-permanent employees are components related

Pengabdian (PAP) yang meliputi pesangon, Uang Penghargaan Masa Kerja (UPMK), Uang Penggantian Hak (UPH), serta komponen penggantian biaya lainnya terkait PAP. [\[GRI 401-2, 11.10.3\]](#)

to Service Rewards (PAP), which include severance pay, Long Service Payments (UPMK), Compensation of Rights (UPH), as well as other compensation components related to PAP. [\[GRI 401-2, 11.10.3\]](#)

Perseroan memastikan besaran imbal jasa pekerjaan terendah untuk pekerja Perseroan lebih besar daripada upah minimum yang ditetapkan pemerintah daerah di setiap wilayah operasi. [\[OJK F.20, GRI 405-2, 11.11.6\]](#)

The Company ensures that the minimum wage for its workers is higher than the minimum wage set by the local government in each operating region. [\[OJK F.20, GRI 405-2, 11.11.6\]](#)

Unit Usaha Business Unit	Provinsi/ Daerah Province/ Area	Upah Minimum Provinsi (Rp) Provincial Minimum Wage (Rp)	Imbal Jasa Karyawan Tingkat Terendah (Rp) Employee Remuneration at the Lowest Level (Rp)	Persentase Percentage (%)
Kantor Pusat Head Office	Jakarta	4,641,854	8,371,928	180%

Perusahaan selalu berupaya untuk menjaga kesetaraan rasio upah dan remunerasi yang sehat tanpa membedakan jenis kelamin pekerja. Pada tahun 2022, Perseroan mengkalkulasi besaran remunerasi pekerja berdasarkan jenis kelamin yang menunjukkan adanya perbedaan remunerasi yang diterima pekerja karena perbedaan masa kerja, kinerja, dan lokasi kerja. [\[GRI 405-2, 11.11.6, SOC-5.A2\]](#)

The Company always strives to maintain a healthy wage and remuneration ratio without discriminating against workers based on gender. In 2022, the Company calculated worker remuneration based on gender, showing differences in income received by workers due to differences in length of service, performance, and work location. [\[GRI 405-2, 11.11.6, SOC-5.A2\]](#)

**Tabel Rasio Gaji Pokok dan Remunerasi Perempuan dibandingkan Laki-Laki**

Table of the Ratio of Male's Wages to Female's Wages

Level Jabatan Position Level	2022			2021			2020		
	Perempuan Woman	Laki- Laki Man	Rasio Ratio	Perempuan Woman	Laki- Laki Man	Rasio Ratio	Perempuan Woman	Laki- Laki Man	Rasio Ratio
L1 (SVP Setara) L1 (SVP Equivalent)	1	1.27	0.79	1	1.06	0.94	-	1	-
L2 (VP Setara) L2 (VP Equivalent)	1	1.03	0.97	1	0.99	1.01	1	0.99	1.00
L3 (Manajer Setara) L3 (Manager Equivalent)	1	0.99	1.01	1	0.98	1.02	1	1.02	0.98
L4 dan lainnya L4 and others	1	1.01	0.99	1	1.01	0.99	1	0.99	1.00

**Tabel Rasio Gaji Pokok dan Remunerasi Perempuan dibandingkan Laki-Laki berdasarkan Lini Bisnis Signifikan Tahun 2022**

Table of Basic Salary and Remuneration Ratio of Female compared to Male based on Significant Business Lines in 2022

Level Jabatan Position Level	Upstream			Refining & Petrochemical			Commercial & Trading		
	Perempuan Woman	Laki- Laki Man	Rasio Ratio	Perempuan Woman	Laki- Laki Man	Rasio Ratio	Perempuan Woman	Laki- Laki Man	Rasio Ratio
L2 (VP Setara) L2 (VP Equivalent)	1	1.08	0.92	1	1.49	0.66	1	0.85	1.17
L3 (Manajer Setara) L3 (Manager Equivalent)	1	0.99	1.00	1	1.17	0.84	1	1.08	0.922
L4 dan lainnya L4 and others	1	0.89	1.12	1	0.84	1.18	1	0.83	1.21






Keterangan: Terkait dengan informasi L1 (SVP Setara) atau setara dengan Direksi pada *Subholding* tidak dapat disajikan dalam tabel ini dikarenakan memiliki ketentuan yang berbeda.  
Description: Information related to L1 (SVP Equivalent) or equivalent to the Board of Directors in *Subholding* cannot be presented in this table because have different conditions.

**SEXUAL HARASSMENT POLICIES**

Perseroan berkomitmen untuk menciptakan lingkungan kerja yang bebas diskriminasi, kekerasan, dan pelecehan, dalam rangka menciptakan lingkungan yang lebih inklusif dan produktif bagi para pekerja untuk mendorong keberlanjutan perusahaan. Hal ini diwujudkan melalui *Respectful Workplace Policy*. Implementasi kebijakan tersebut dilaksanakan dalam beberapa kegiatan sebagai berikut:

**SEXUAL HARASSMENT POLICIES**

The Company is committed to creating a work environment that is free of discrimination, violence, and harassment, with a view to create a more inclusive and productive environment for employees to promote corporate sustainability. This is realized through the *Respectful Workplace Policy*. Implementation of the policy is carried out in several activities as follows:

<p style="font-size: 2em; font-weight: bold; margin: 0;">1</p> 	<p>Penyusunan <i>Handbook for A Respectful Workplace</i> yang menjadi panduan teknis bagi pekerja untuk menjalankan perannya dalam ikut serta menciptakan lingkungan kerja yang bebas diskriminasi, kekerasan, dan pelecehan. Compilation of Handbook for a Respectful Workplace which serves as a technical guide for employees to carry out their role in participating in creating a work environment free of discrimination, violence, and harassment.</p>	<p style="font-size: 2em; font-weight: bold; margin: 0;">2</p> 	<p><i>Respectful Workplace Mandatory Training</i> yang wajib diikuti oleh seluruh pekerja melalui <i>platform</i> pembelajaran <i>online</i> dan menjadi bagian dalam kurikulum <i>Induction Training</i> pekerja baru. Respectful Workplace Mandatory Training that all employees must participate in through an online learning platform and is part of the Induction Training curriculum for new employees.</p>
<p style="font-size: 2em; font-weight: bold; margin: 0;">3</p> 	<p>Penyediaan saluran pelaporan tindakan diskriminasi, kekerasan, dan pelecehan melalui <a href="mailto:respect@pertamina.com">respect@pertamina.com</a> serta <i>Whistle Blower System (WBS)</i>. Providing channels for reporting acts of discrimination, violence, and harassment through <a href="mailto:respect@pertamina.com">respect@pertamina.com</a> and the Whistle Blower System (WBS).</p>	<p style="font-size: 2em; font-weight: bold; margin: 0;">4</p> 	<p>Program pendampingan psikologis dan <i>mental health</i> pekerja termasuk bagi korban diskriminasi, kekerasan, dan pelecehan melalui program <i>HC CARE</i>. Psychological and mental health assistance program for employees, including for victims of discrimination, violence and harassment through the <i>HC CARE</i> program.</p>
<p style="font-size: 2em; font-weight: bold; margin: 0;">5</p> 	<p>Audit kebijakan dan program terkait dengan <i>respectful workplace</i> yang dilakukan secara internal maupun eksternal seperti Pertamina Industrial Peace Level (PIPL) Audit, <i>Gender Equality Assessment Report and Strategy (GEARS)</i>, serta Penilaian Risiko Bisnis dan HAM (PRISMA).</p>	<p>Policy and program audits related to respectful workplace are conducted internally and externally such as the Pertamina Industrial Peace Level (PIPL) Audit, Gender Equality Assessment Report and Strategy (GEARS), and Business and Human Rights Risk Assessment (PRISMA).</p>	

Di luar program-program tersebut, manajemen Perseroan juga selalu mengiterasi komitmennya terkait penerapan *Respectful Workplace Policy* pada berbagai kegiatan kampanye melalui *Live Event*, *Webinar*, maupun diskusi tatap muka. Hingga tahun 2022, terdapat 9 (sembilan) kali sosialisasi yang meliputi  *Holding*, *Subholding*, dan Entitas Anak serta telah dilakukan pelatihan *mandatory respectful workplace policy* yang diikuti oleh 14.000 pekerja.

Apart from these programs, the Company's management always iterates on its commitment regarding the implementation of the *Respectful Workplace Policy* in various campaign activities through *Live Events*, *Webinars*, and discussions. Until 2022, there have been 9 (nine) socialization sessions covering  *Holding*, *Subholding*, and *Subsidiaries*, and *mandatory respectful workplace policy* training which has been attended by 14,000 workers.

Untuk memastikan pengelolaan *respectful workplace* secara efektif, Perseroan melakukan audit dengan pihak eksternal yaitu audit PIPL dan audit Prisma bekerja sama dengan Kementerian Hukum dan HAM Republik Indonesia. Hasil audit dari dua lembaga tersebut menunjukkan bahwa implementasi *respectful workplace policy* di Perseroan telah berjalan dengan baik, dan akan digunakan sebagai dasar *improvement* program untuk memperkuat implementasi *respectful workplace policy* di Perseroan.

To ensure effective management of *respectful workplace*, the Company conducts audits with external parties, namely the PIPL audit and Prisma audit in collaboration with the Ministry of Law and Human Rights of the Republic of Indonesia. The audit results from the two institutions shows that the implementation of a *respectful workplace policy* in the Company has gone well and will be used as the basis for an *improvement* program to strengthen the implementation of *respectful workplace policy* in the Company.

### INCLUSIVE CULTURE

Untuk mendorong inklusi gender, Perseroan mendirikan komunitas PERTIWI (Perempuan PERTAMINA Tangguh Inspiratif Wibawa dan Integritas) yaitu sebuah komunitas pekerja yang mendukung kesetaraan dan inklusi di Perseroan melalui pelaksanaan berbagai inisiatif di bidang *Development, Sustainability, Wellbeing, and Partnership & Communication*. Dalam menjalankan programnya, komunitas ini bekerja sama dengan UNGC, UN Woman, IBCWE, USAID, dan weempowerasia. Beberapa program unggulannya diantaranya adalah:

1. *Gender Equality Accelerator Program*. Perseroan bekerja sama dengan beberapa organisasi multilateral dan internasional seperti *United States Agency for International Development (USAID)* dan *United States Energy Association (USEA)* untuk mengembangkan *gender change agent* di dalam Perseroan.
2. *Respectful Workplace Initiative*. PERTIWI turut serta dalam penyusunan kebijakan dan panduan *respectful workplace* di Perseroan termasuk juga melakukan berbagai kegiatan sosialisasi dan kampanye kebijakan untuk mendukung terciptanya lingkungan kerja yang bebas diskriminasi, kekerasan, dan pelecehan.

Tahun 2022, Perseroan meraih penghargaan tingkat Asia-Pacific dari UN Women melalui *Women Empowerment Principles (WEPs) Award 2022* untuk kategori *Leadership Commitment* yang diberikan kepada Perseroan atas komitmen kuat perusahaan dalam meningkatkan kesetaraan dan inklusi gender.

### PRO-WOMEN BRAND

Perseroan menunjukkan kesetaraan *gender* dalam meningkatkan *brand* perusahaan pada masyarakat. Hal ini ditunjukkan dengan adanya karyawan Perempuan dalam berbagai kegiatan pemasaran dan hubungan dengan masyarakat.

### Praktik Keamanan dan Hak Asasi Manusia [GRI 410-1, 11.18.2, EM-EP-210a.1, EM-EP-210a.2, EM-EP-210a.3, SHS-7.C1, SHS-7.C2, SHS-7.A3, SOC-3.C1, SOC-3.C2, SOC-1.C1, SOC-1.C3, SOC-3.C3, SOC-1.C4, SOC-1.C5, SOC-1.A1]

Perseroan berkomitmen untuk mendukung perlindungan Hak Asasi Manusia (HAM) dalam aktivitas bisnisnya di Perseroan. Kebijakan terkait HAM di Perseroan dituangkan dalam *Human Rights Policy*. Kebijakan tersebut diimplementasikan melalui program penerapan inisiatif HAM bagi pekerja dan mitra kerja yaitu *zero harassment campaign, counselling assistance for employee, live event* yang bertemakan *PERTAMINA Zero Harassment Commitment, Harassment Prevention & Gender Bias in Interview Training* dan *human rights due diligence* (uji tuntas HAM) melalui instrumen Penilaian Risiko

### INCLUSIVE CULTURE

To encourage gender inclusion, the Company has established the PERTIWI community (Perempuan Pertamina Tangguh Inspiratif Wibawa dan Integritas or Pertamina Women Who Are Tough, Inspiring, Commanding and Have Integrity), an employee community that supports equality and inclusion in the Company through the implementation of various initiatives in the fields of *Development, Sustainability, Wellbeing, and Partnership & Communication*. In carrying out its program, this community collaborates with UNGC, UN Woman, IBCWE, USAID, and weempowerasia. Some of its flagship programs include:

1. *Gender Equality Accelerator Program*. The Company cooperates with several multilateral and international organizations such as the *United States Agency for International Development (USAID)* and the *United States Energy Association (USEA)* to develop a *gender change agent* within the Company.
2. *Respectful Workplace Initiative*. PERTIWI participates in the development of *respectful workplace* policy and guidelines in the Company, including conducting various dissemination activities and policy campaigns to support the creation of a work environment free of discrimination, violence, and harassment.

In 2022, the Company won an Asia-Pacific award from UN Women through the 2022 *Women Empowerment Principles (WEPs) Award* for the *Leadership Commitment* category which was given to the Company for the Company's strong commitment to enhancing gender equality and inclusion.

### PRO-WOMEN BRAND

The Company shows gender equality in enhancing the company's brand in the community. This is demonstrated by the presence of female employees in various marketing and community relations activities.

### Security And Human Rights Practices [GRI 410-1, 11.18.2, EM-EP-210a.1, EM-EP-210a.2, EM-EP-210a.3, SHS-7.C1, SHS-7.C2, SHS-7.A3, SOC-3.C1, SOC-3.C2, SOC-1.C1, SOC-1.C3, SOC-3.C3, SOC-1.C4, SOC-1.C5, SOC-1.A1]

The Company is committed to supporting the protection of Human Rights (HAM) in its business activities at the Company. Policies related to human rights in the Company are outlined in the *Human Rights Policy*. This policy is implemented through a program of implementing human rights initiatives for workers and work partners, namely a *zero harassment campaign, counseling assistance for employees, live events* with the theme *Pertamina Zero Harassment Commitment, Harassment Prevention & Gender Bias in Interview Training* and *human rights due diligence* (HR due diligence). through the *Business and Human Rights Risk Assessment (PRISMA)* instrument



Bisnis dan HAM (PRISMA) yang dikembangkan oleh Kementerian Hukum dan HAM RI. Perseroan juga turut serta dalam mengikutsertakan seluruh (100%) *security personel* yang menerima *formal training* terkait HAM serta mengikuti *Mandatory Training Respectful Workplace Policy*.

Dalam melakukan praktik kegiatan pengamanan, PERTAMINA menerapkan prinsip-prinsip hak asasi manusia sesuai yang tertuang dalam Voluntary Principle on Security and Human Rights (VPSHR). Departemen Security PERTAMINA (*Company Security*) bekerja sama dengan Badan Usaha Jasa Pengamanan (BUJP) dan Aparat Keamanan (*Public Security*). Kontrak kerja sama jasa pengamanan yang dibuat dengan pihak-pihak tersebut telah memasukkan klausul mengenai aspek hak asasi manusia sesuai dengan VPSHR sebagai panduan bagi penyedia jasa pengamanan untuk menerapkan prinsip hak asasi manusia dalam kegiatan pengamanan. PERTAMINA bekerja sama dengan Penyedia Jasa Pengamanan memberikan pelatihan VPSHR terhadap petugas keamanannya di beberapa lokasi kerja, dan akan diperluas cakupannya untuk seluruh PERTAMINA Group di tahun 2023 secara lebih sistematis dan terukur.

**Kebebasan Berserikat [GRI 2-30, GRI 407-1, 11.13.2, GRI 402-1, 11.7.2, 11.10.5, SOC-6.C2]**

Sepanjang tahun 2022, tidak ada hal-hal yang dapat dikategorikan sebagai bentuk-bentuk penghalangan kebebasan berserikat bagi pekerja Perseroan. Saat ini, terdapat tiga federasi serikat pekerja di PERTAMINA Group yaitu Federasi Serikat Pekerja PERTAMINA Bersatu (FSPPB), Federasi Serikat Pekerja Pertamina Hulu (FSPPH), dan Federasi Serikat Pekerja Pertamina Hilir Indonesia (FSPPHI). Jumlah anggota seluruh serikat pekerja mencapai 20.861 orang, atau 58% dari total pekerja Perseroan.

Perseroan berkomitmen untuk memastikan agar seluruh pekerja memiliki hak untuk menyuarakan dan melakukan perundingan bersama dengan manajemen dengan tujuan untuk menyepakati Perjanjian Kerja Bersama (PKB) yang di dalamnya mengatur remunerasi, jaminan kesejahteraan bagi pekerja, dan hal lainnya yang berkaitan dengan kepegawaian, termasuk jangka waktu notifikasi ketika terdapat mutasi pekerja. Saat ini PKB yang berlaku di PERTAMINA Group mencakup seluruh pekerja (100%) baik yang merupakan anggota serikat pekerja maupun yang bukan anggota serikat pekerja. Pembaharuan PKB dilakukan setiap 2 (dua) tahun sesuai dengan ketentuan perundang-undangan yang berlaku. PKB tersebut disosialisasikan kepada pekerja melalui berbagai metode, di antaranya didistribusikan secara digital melalui intranet serta dilakukan sosialisasi tatap muka di berbagai wilayah kerja. Terkait dengan periode pemberitahuan tentang pembaharuan PKB disampaikan sekurang-kurangnya 30 hari kalender sebelum SKPD Tidak Kembali dibuat sesuai dengan Pasal 75 Ayat 2 PKB Periode 2022-2024.

developed by the Ministry of Law and Human Rights of the Republic of Indonesia. The Company also participates in enrolling all (100%) security personnel who receive formal human rights-related training and participate in the Mandatory Training Respectful Workplace Policy.

In practicing security activities, Pertamina applies the principles of human rights according to the Voluntary Principles on Security and Human Rights (VPSHR). The Pertamina Security Department (*Company Security*) cooperates with the Security Service Business Entity (BUJP) and the Security Apparatus (*Public Security*). Security service cooperation contracts made with these parties have included clauses regarding human rights aspects in accordance with the VPSHR as a guide for security service providers to apply human rights principles in security activities. Pertamina is working with Security Service Providers to provide VPSHR training for its security officers at several work locations, and the scope will be expanded to the entire Pertamina Group in 2023 in a more systematic and measurable manner.

**Freedom of Association [GRI 2-30, GRI 407-1, 11.13.2, GRI 402-1, 11.7.2, 11.10.5, SOC-6.C2]**

Throughout 2022, nothing can categorized as forms of obstruction freedom of association for the Company's employees. Currently, there are three federations of trade unions in Pertamina The Group is the Federation of PERTAMINA Trade Unions (FSPPB), Pertamina Workers Union Federation Upstream (FSPPH), and Pertamina Workers Union Federation Downstream Indonesia (FSPPHI). The total number of members unions reached 20,861 people, or 58% of total employees of the Company

The Company is committed to ensuring that all workers have the right to voice and negotiate collectively with management with the aim of agreeing on a Collective Labor Agreement (CLA) that regulates remuneration, welfare guarantees for workers, and other matters related to employment, including the notification period when there is a transfer of workers. The current CLA in the Pertamina Group covers all workers (100%), both members and non-members of trade unions. The CLA is renewed every 2 (two) years in accordance with applicable laws and regulations. The CLA is disseminated to workers through various methods, distributed digitally through the intranet and face-to-face socialization across multiple work areas. Regarding the notification period for CLA renewal, it is conveyed at least 30 calendar days before the Non-Return SKPD is made in accordance with Article 75 Paragraph 2 of the 2022-2024 CLA Period.







### Tenaga Kerja Anak dan Tenaga Kerja Paksa [OJK F.19, GRI 408-1, 12.16.2, 11.12.2]

Perseroan berkomitmen untuk tidak mempekerjakan pekerja anak dan pekerja paksa di seluruh kegiatan operasi Perseroan, yang dituangkan dalam *Human Right Policy* dengan merujuk pada konvensi ILO nomor C-29, C-105, C-138, dan C-182. Di samping itu, Perseroan juga merujuk pada Undang-Undang Ketenagakerjaan Pasal 68 tahun 2003 bahwa tidak memperkerjakan anak di bawah usia 18 tahun.

### Child Labor and Forced Labor [OJK F.19, GRI 408-1, 12.16.2, 11.12.2]

The Company is committed not to employing child labor and forced labor in the Company's activities, as outlined in the Human Rights Policy by referring to ILO conventions number C-29, C-105, C-138, and C-182. In addition, the Company also refers to the Labor Law Article 68 of 2003 that it does not employ children under the age of 18.

### Pengembangan Kompetensi dan Karir [OJK F.22, GRI 404-1, 11.11.4, 404-2, 11.7.3, SOC-7.C1, SOC-7.C2]

Perseroan terus meningkatkan kompetensi pekerja melalui pembelajaran dan pelatihan yang dilakukan secara rutin. Selama tahun 2022, Perseroan melanjutkan kegiatan pendidikan dan pelatihan, yang mengedepankan metode pembelajaran dengan memanfaatkan teknologi, di antaranya *mobile learning* dan *e-learning* yang dilakukan melalui kolaborasi dengan institusi global. Setiap pekerja memiliki kesempatan setara untuk mengikuti kegiatan pelatihan dan Pendidikan, bagi pekerja yang akan memasuki purnatugas. [GRI 404-2, 11.7.3, 11.10.7, SOC-7.C2]

### Competency and Career Development [OJK F.22, GRI 404-1, 11.11.4, 404-2, 11.7.3, SOC-7.C1, SOC-7.C2]

The Company continues to improve employee competence through regular learning and training. During 2022, the Company continued education and training activities, which prioritized learning methods by utilizing technology, including mobile learning and e-learning carried out in collaboration with global institutions. Every employee has an equal opportunity to take part in training and education activities for employees who are about to enter retirement. [GRI 404-2, 11.7.3, 11.10.7, SOC-7.C2]

Peningkatan kompetensi pekerja menjadi tanggung jawab Fungsi HC, dan didukung Pertamina *Corporate University* (PCU) serta PT Pertamina *Training & Consulting* (PTC) yang diukur melalui target KPI. Berdasarkan hasil evaluasi diketahui kegiatan pengembangan pekerja telah berjalan dengan baik, meski dihadapkan pada pandemi Covid-19 dengan rincian sebagai berikut. [GRI 3-3, 11.10.1, 11.11.7]

Employee competence enhancement is the responsibility of the HC Function with the support of Pertamina Corporate University (PCU) and PT Pertamina Training & Consulting (PTC) which is measured through KPI targets. Based on the results of the evaluation, it is known that employee development activities have been going well, despite the Covid-19 pandemic, with the following details. [GRI 3-3, 11.10.1, 11.11.7]

**Tabel Realisasi Program Pelatihan dan Pendidikan**  
Table of Realization of Training and Education Programs

Jenis Pelatihan dan Pendidikan Type of Training and Education	2022		2021		2020	
	Jumlah Program Number of Programs	Jumlah Peserta Number of Participants	Jumlah Program Number of Programs	Jumlah Peserta Number of Participants	Jumlah Program Number of Programs	Jumlah Peserta Number of Participants
<i>Pre-Employee Program</i>	4	560	2	167	5	363
Program Pendidikan Lanjutan (Tugas Belajar) Advanced Education Program (Study Assignment)	2	5	2	23	5	111
Program Pelatihan Jangka Panjang dan Pendek Long-Term and Short-Term Training Program	266	11,240	305	15,135	258	43,497
Program <i>E-Learning/Mobile Learning</i> E-Learning/Mobile Learning Program	192	62,349	43	26,875	78	56,597

Sebagai bagian dalam *capability development*, Perseroan juga memberdayakan para pimpinan untuk memiliki tanggung jawab dalam melakukan transfer pengetahuan melalui kegiatan *coaching* dan *mentoring*. Program tersebut di antaranya *Functional Program*, *Managerial/Leadership Program*, *Corporate Values Program*, *HSSE Program*, *Strong National Commitment Program* (SNCP), dan *Series of Formal Education*.

As part of *capability development*, the Company also empowers leaders to take responsibility for transferring knowledge through coaching and mentoring activities. These programs include *Functional Programs*, *Managerial/Leadership Programs*, *Corporate Values Programs*, *HSSE Programs*, *Strong National Commitment Programs* (SNCP), and *Series of Formal Education*.

Untuk mempersiapkan *talent-talent* terbaik, Perseroan memiliki program untuk mengakselerasi karyawan yang dikemas dalam bentuk *Leadership Development Program* yang bertujuan untuk mengembangkan *Human Capital Readiness*; mengembangkan dan meningkatkan kompetensi para *talent*, serta untuk menjamin terlaksananya pengembangan kompetensi kepemimpinan yang sistematis, konsisten, dan berkesinambungan. Program ini terdiri dari:

To prepare the best talents, the Company has a program to accelerate employees which is packaged in the form of a Leadership Development Program which aims to develop Human Capital Readiness; develop and improve the competence of talents, as well as to ensure the implementation of systematic, consistent, and continuous development of leadership competencies. This program consists of:

**Program Wajib/Mandatory Program**



*Mandatory program*: merupakan program yang ditujukan untuk memenuhi *Generic Skills/Perilaku Leadership* yang dibutuhkan di setiap jenjang untuk menjalankan tugas dan tanggung jawabnya, antara lain *Effective Working Attitude (EWA)*, *Junior Management Development Program (JMMDP)*, dan *Senior Management Development Program (SMMDP)*. Selain itu, terdapat juga program *Directorship (PRIME)* yang ditujukan untuk memenuhi kebutuhan kapabilitas spesifik Direksi dan suksesor Direksi anak usaha di Pertamina Group di mana pada tahun 2022 telah dilaksanakan 1 *batch* program PRIME yang diikuti oleh 56 Peserta dari berbagai entitas di Pertamina Group.

*Mandatory program*: a program aimed at fulfilling the *Generic Skills/Leadership Behavior* required at every level to carry out their duties and responsibilities, including *Effective Working Attitude (EWA)*, *Junior Management Development Program (JMMDP)*, and *Senior Management Development Program (SMMDP)*. In addition, there is also the *Directorship program (PRIME)* which is aimed at meeting the specific capability needs of Directors and successor Directors of subsidiaries in Pertamina Group where in 2022, there was 1 batch of PRIME program implemented and attended by 56 Participants from various entities in Pertamina Group.

**Program Pengayaan/Enrichment Program**



*Program pengayaan*: merupakan program yang ditujukan melengkapi *skills* tertentu pada Pekerja untuk mengoptimalkan kinerja. Program ini difokuskan pada *skillset* unik/baru/yang dibutuhkan bisnis di masa yang akan datang.

*Enrichment program*: a program aimed at completing certain skills in employees to optimize performance. This program is focused on unique/new/skillset needed by businesses in the future.

**Program Akselerasi/Acceleration Program**



*Program akselerasi*: merupakan program yang ditujukan untuk memfasilitasi pengembangan akselerasi Pekerja agar siap untuk menjadi suksesor posisi kunci di berbagai level jabatan. Beberapa program akselerasi yang dijalankan di tahun 2022 di antaranya adalah *Trailblazer* yang diikuti 152 Pekerja dalam 10 batch, program *Catalyser* yang diikuti oleh 140 Pekerja.

*Acceleration program*: a program aimed at facilitating accelerated development of employees so that they are ready to become successors to key positions at various levels of positions. Several acceleration programs implemented in 2022 included the *Trailblazer* attended by 152 workers in 10 batches, the *Catalyser* program attended by 140 workers.

**Program Global Talent/Global Talent Program**



*Program Global Talent*: program penugasan pekerja ke luar negeri dengan tujuan untuk mendapatkan *exposure* dalam lingkungan multikultural dengan tujuan meningkatkan kapabilitas dan mempersiapkan pekerja yang siap *go global*.

*Global Talent Program*: a program for assigning employees abroad with the aim of gaining exposure in a multicultural environment with the aim of increasing capabilities and preparing employees who are ready to go global.

Perseroan memberikan kesempatan yang sama kepada setiap pekerja untuk mengembangkan karir, tanpa diskriminasi. Promosi jabatan didasarkan pada hasil penilaian kinerja, dengan mempertimbangkan kebutuhan organisasi. Tahun 2022 penilaian dilakukan terhadap seluruh (100%) pekerja. Dari penilaian yang dilaksanakan tahun 2022, terdapat peningkatan promosi jabatan sebesar 21% dibandingkan dengan tahun 2021.

The Company provides equal opportunities for every employee to develop a career, without discrimination. Promotions are based on the results of performance appraisals, taking into account the needs of the organization. In 2022 the assessment was carried out for all (100%) employees. From the assessment carried out in 2022, there was an increase in promotion by 21% compared to 2021. The opportunity to become



Kesempatan untuk menjadi pemimpin di Perseroan juga difasilitasi melalui mekanisme lelang jabatan. Kebijakan ini mendorong keberagaman komposisi pejabat perusahaan, di antaranya berdasarkan *gender*, dan kelompok usia. [\[GRI 404-3, 11.10.7\]](#)

a leader in the Company is also facilitated through a position auction mechanism. This policy encourages diversity in the composition of company officials, including based on gender and age group. [\[GRI 404-3, 11.10.7\]](#)

### Jumlah Pekerja Mendapat Promosi Jabatan Berdasarkan Gender [\[GRI 404-3, 11.10.7\]](#)

Number of Promoted Employees by Gender

Gender	2022		2021		2020		2019	
	Jumlah Total	%	Jumlah Total	%	Jumlah Total	%	Jumlah Total	%
Laki-Laki/Man	6,927	86	5,716	84	3,789	87	5,381	88
Perempuan/Woman	1,091	14	864	16	723	13	718	12
<b>Total</b>	<b>8,018</b>	<b>100</b>	<b>6,625</b>	<b>100</b>	<b>4,512</b>	<b>100</b>	<b>6,098</b>	<b>100</b>

### Lingkungan Bekerja yang Layak dan Aman [\[OJK F.21\]](#)

Perseroan senantiasa berupaya untuk menciptakan lingkungan kerja yang layak dan aman melalui penjaminan manfaat kepada pekerja, serta peningkatan aspek Kesehatan dan keamanan kerja. Penjabaran mengenai lingkungan bekerja yang layak dan aman, dijelaskan sebagai berikut.

#### Employee Benefit

Upaya yang dilakukan dalam meningkatkan *employee wellbeing* untuk seluruh pekerja dengan memberikan *employee benefit* mencakup pemberian *maternity leave* bagi pekerja perempuan dan *parental leave* bagi pekerja laki-laki yang istrinya melahirkan, pengadaan program pensiun, serta pemberian layanan kesehatan bagi seluruh pekerja. Dalam menjalankan kegiatan operasional, Perseroan menjamin seluruh pekerja mendapatkan keamanan kerja serta memperoleh kecukupan fasilitas kerja meliputi toilet, ruang makan, ketersediaan ruang laktasi/menyusui, penitipan anak, alat deteksi asap, fasilitas pemadam kebakaran, tempat ibadah, serta tempat parkir.

#### Maternity Leave Dan Parental Leave [\[GRI 401-3, 11.10.4\]](#)

Perseroan memberikan cuti selama 3 (tiga) bulan kepada pekerja perempuan yang melahirkan disertai jaminan dari perusahaan untuk bekerja kembali sesuai jabatan semula, serta cuti tiga hari kerja bagi pekerja laki-laki yang istrinya melahirkan. Peraturan pemberian cuti telah diatur dalam Perjanjian Kerja Bersama (PKB) periode 2022-2024. Seluruh pekerja (100%) baik yang mendapat cuti melahirkan dan bekerja setelah parental leave masih bekerja selama 12 bulan. Data pemanfaatan *maternity leave* dan *parental leave* sebagai berikut. [\[GRI 401-3, 11.10.4\]](#)

### Decent and Safe Work Environment [\[OJK F.21\]](#)

The Company always strives to create a decent and safe work environment by guaranteeing benefits to employees and improving occupational health and safety aspects. The description regarding a decent and safe working environment is explained as follows.

#### Employee Benefits

Efforts made to improve employee well-being for all employees by providing employee benefits include providing maternity leave for female workers and parental leave for male workers whose wives give birth, establishing a pension program, and providing health services for all employees. In carrying out operational activities, the Company guarantees that all workers have job security and have adequate work facilities including toilets, dining rooms, availability of lactation/breastfeeding rooms, childcare, smoke detection equipment, fire extinguishing facilities, prayer room, and parking lots.

#### Maternity Leave and Parental Leave [\[GRI 401-3, 11.10.4\]](#)

The Company provides 3 (three) months leave for female workers who give birth accompanied by a guarantee from the Company to return to work according to their original position, as well as three days leave for male workers whose wives give birth. Regulations for granting leave have been regulated in the Collective Labor Agreement (CLA) for the 2022-2024 period. Data on the use of maternity leave and parental leave are as follows. [\[GRI 401-3, 11.10.4\]](#)

Uraian Description	2022	2021
Jumlah Pekerja Perempuan Cuti Melahirkan Number of Female Employees Taking Maternity Leave	172	174
Jumlah Pekerja Perempuan Kembali Bekerja Setelah Cuti Melahirkan Number of Female Employees returning to work after taking Maternity Leave	172	172



Uraian Description	2022	2021
Jumlah Pekerja Laki-Laki <i>Parental Leave</i> Number of Male Employees Taking Parental Leave	915	647
Jumlah Pekerja Laki-Laki Kembali Bekerja Setelah <i>Parental leave</i> Number of Male Employees Returning to Work After Taking Parental Leave	915	647

**Kewajiban Program Pensiun Manfaat Pasti dan Program Pensiun Lainnya [GRI 201-3]**

Sebagian nilai ekonomi yang didistribusikan ditujukan kepada Pekerja dalam bentuk pembayaran imbal jasa pekerjaan. Sesuai regulasi yang berlaku, Perseroan menyertakan pekerja dalam program pensiun, yakni Program Pensiun Manfaat Pasti (PPMP). Perseroan berkontribusi dengan membayarkan iuran sebesar 15,7% x Penghasilan Dasar Pensiun (PhDP) atau 4,082% x Upah Tetap Pensiun (UTP), sementara Pekerja membayarkan iuran sebesar 7,5% x PhDP atau 1,95% x UTP. Pengelolaan iuran dana pensiun dilaksanakan Dana Pensiun PERTAMINA, selaku penyelenggara PPMP untuk pekerja Perseroan dengan kinerja sebagai berikut.

**Defined Benefit Plan Obligations and Other Retirement Plans [GRI 201-3]**

Part of the distributed economic value is intended to Workers in the form of compensation payments work. In accordance with applicable regulations, the Company include workers in pension plans, ie Defined Benefit Pension Plan (PPMP). Company contribute by paying dues 15.7% x Basic Retirement Income (PhDP) or 4.082% x Pension Fixed Wages (UTP), temporarily Employees pay contributions of 7.5% x PhDP or 1.95% x UTP. Management of pension fund contributions implemented PERTAMINA Pension Fund, as PPMP organizers for the Company's employees with the following performance.

	Satuan/Unit	2022	2021
Aset Neto Dana Pensiun Net Assets of Pension Fund	Rp Triliun Rp Trillion	9,55	9,67
Jumlah Kewajiban Pembayaran Pensiun Total Pension Payment Liabilities	Rp Triliun Rp Trillion	0,99	1
Rasio Kecukupan Dana (RKD) Fund Sufficiency Ratio	%	96,47	95,9

Selain PPMP, PERTAMINA juga mengikutsertakan Pekerja dalam Program Pensiun Iuran Pasti (PPIP) yang bekerja sama dengan beberapa Dana Pensiun Lembaga Keuangan yang ditunjuk dengan besaran iuran 4,5% menjadi beban Perseroan dan 2% menjadi beban Pekerja dan BPJS Tenaga Kerja terkait Jaminan Hari Tua (JHT) dan Jaminan Pensiun (JP) sesuai ketentuan normatif. Informasi lebih lengkap mengenai pengelolaan dana pensiun dapat diakses di <https://dp-pertamina.com/>. [GRI 201-3]

In addition to PPMP, PERTAMINA also enrolls workers in the Defined Contribution Pension Program (PPIP) in collaboration with several designated Pension Funds of Financial Institutions with a contribution rate of 4.5% being borne by the Company and 2% being borne by Workers and BPJS Labor related to Old Age Benefits ( JHT) and Pension Guarantee (JP) in accordance with normative provisions. More complete information regarding pension fund management can be accessed at <https://dp-pertamina.com/>. [GRI 201-3]

**Kesehatan dan Keselamatan Kerja**

Perseroan telah memiliki kebijakan *Health, Safety, Security, and Environment* (HSSE) yang merupakan berkomitmen untuk melaksanakan kegiatan operasi dengan memperhatikan kesehatan dan keselamatan kerja, keamanan, perlindungan terhadap lingkungan dan masyarakat serta keselamatan proses dan *asset integrity* secara terus menerus sebagai prioritas utama Perseroan.

**Occupational Health and Safety**

The Company already has Health, Safety, Security, and Environment (HSSE) policy which is the commitment to carrying out operational activities with due regard to occupational health and safety, security, protection of the environment and society as well as process safety and asset integrity on an ongoing basis as the Company's top priority.

Komitmen HSSE Perseroan tertuang dalam Kebijakan *Health, Safety, Security, and Environment* (HSSE) dengan memperhatikan kesehatan dan keselamatan kerja, keamanan, perlindungan terhadap lingkungan dan masyarakat. Perseroan menerapkan sistem manajemen K3 untuk seluruh karyawan, pekerja kontraktor/pemasok/pihak ketiga dengan nama SUPREME (*Sustainability PERTAMINA Expectations*

The Company's HSSE commitment is included in the Health, Safety, Security, and Environment (HSSE) Policy with attention to occupational health and safety, security, and protection of the environment and society. The Company implements an OHS management system for all employees, contractors/ suppliers/third parties under the name SUPREME (*Sustainability PERTAMINA Expectations* for HSSE

for HSSE Management Excellence), and HSSE Golden Rules sebagai acuan untuk penerapan *Safe Behavior* bagi seluruh pekerja dan mitra kerja. [GRI 3-3, SHS-6.A5]

Management Excellence), and HSSE Golden Rules as a reference for implementing *Safe Behavior* for all employees and work partners. [GRI 3-3, SHS-6.A5]

**Kebijakan dan Implementasi di Bidang Kesehatan** [GRI 403-3, 11.9.4, 403-6, 11.9.7, SHS-2.C1, SHS-2.C2, SHS-2.C3, SHS-2.A3, SHS-4.C3, SHS-3.C3]

**Policy And Implementation In The Health Sector** [GRI 403-3, 11.9.4, 403-6, 11.9.7, SHS-2.C1, SHS-2.C2, SHS-2.C3, SHS-2.A3, SHS-4.C3, SHS-3.C3]

Untuk mewujudkan Pekerja PERTAMINA yang sehat dan produktif maka Perusahaan menyelenggarakan Program Jaminan Pemeliharaan Kesehatan kepada pekerja dan keluarga pekerja yang diakui mendapat jaminan Kesehatan, meliputi peningkatan derajat kesehatan (promotif), pencegahan penyakit (preventif), pengobatan penyakit (kuratif), dan pemulihan kesehatan (rehabilitatif). Perseroan melakukan upaya dalam mengurangi risiko kesakitan, kematian dan kecacatan, serta pencegahan Penyakit Akibat Kerja (PAK), sesuai dengan Peraturan Presiden No. 7 tahun 2019 tentang Penyakit Akibat yang Timbul karena Hubungan Kerja, antara lain: [GRI 403-3, 11.9.4, SHS-2.A3]

In order to support Pertamina's employees who are healthy and productive, the Company organizes a Health Care Insurance Program for employees and their families who are recognized as having health insurance, which includes increasing health status (promotive), disease prevention (preventive), disease treatment (curative), and health recovery (rehabilitative). The Company makes efforts to reduce the risk of morbidity, death and disability, as well as prevention of Occupational Diseases (PAK), in accordance with Presidential Regulation no. 7 of 2019 concerning Diseases Due to Occupational Relations, including: [GRI 403-3, 11.9.4, SHS-2.A3]

<p><b>Identifikasi bahaya kesehatan melalui penilaian risiko</b></p> <p>Identification of health hazards through a risk assessment (health risk assessment)</p> 	<p><b>Persiapan prosedur kerja aman dan sehat, termasuk penyediaan APD yang memadai</b></p> <p>Preparation of safe and healthy work procedures, including provision of adequate PPE</p> 	<p><b>Edukasi kepada pekerja dan mitra kerja tentang kondisi bahaya</b></p> <p>Education for employees and work partners about hazardous conditions</p> 
<p><b>Pengawasan dan mitigasi risiko bahaya kesehatan hingga pada level yang dapat diterima sesuai standar Perseroan dan peraturan di Indonesia</b></p> <p>Monitoring and mitigating the risk of health hazards to an acceptable level according to the Company's standards and regulations in Indonesia</p> 	<p><b>Pemeriksaan kesehatan berkala</b></p> <p>Periodic medical check-up or MCU</p> 	<p><b>Penguatan sistem tanggap darurat medis</b></p> <p>Strengthening the medical emergency response system</p> 
<p><b>Pemeriksaan kesehatan khusus untuk pekerja dengan paparan bahaya tertentu</b></p> <p>Special health checks for employees with exposure to certain hazards (biological monitoring)</p> 		

Perseroan juga melakukan berbagai program dalam rangka meningkatkan derajat kesehatan dan produktivitas pekerja, di antaranya: [GRI 403-6, 11.9.7, SHS-2.C3, SHS-2.A3, SHS-4.C3, SHS-3.C3]

The Company also carries out various programs to improve the health status and productivity of employees, including: [GRI 403-6, 11.9.7, SHS-2.C3, SHS-2.A3, SHS-4.C3, SHS-3.C3 ]

1. Kegiatan *Wellness* Program melalui *wellness challenge*
2. Penyuluhan/*webinar* terkait kesehatan
3. Program Konseling (*Employee Assistance Program*), juga memanfaatkan psikolog internal Perusahaan
4. Penguatan Program Pencegahan dan Pengendalian HIV di tempat kerja, melalui implementasi Skrining HIV Mandiri pada 4.000 pekerja dan mitra kerja, bekerja sama dengan ILO (International Labour Organization), Kementerian Kesehatan dan Kementerian Ketenagakerjaan Republik Indonesia. Untuk program ini, Perseroan mendapatkan

1. Wellness Program activities through wellness challenges
2. Webinar related to health
3. Counseling Program (Employee Assistance Program), also utilizing the Company's internal psychologist
4. Strengthening the HIV Prevention and Control Program in the workplace, through the implementation of HIV Self Screening for 4,000 workers and work partners, in collaboration with the ILO (International Labor Organization), the Ministry of Health and the Ministry of Manpower of the Republic of Indonesia. For this program, the

apresiasi dari ILO dan Kategori Platinum Program P2HIV dari Kementerian Ketenagakerjaan Republik Indonesia, antara lain PGN, PHE ONWJ, PHKT, RU V dan RU VI

#### **Kinerja Bidang Kesehatan [GRI 403-10, 11.9.11, SHS-3.A1]**

Sebagai bagian dari implementasi *Corporate Life Saving Rule* (CSLR) aspek *Fit to Work*, dan dalam rangka *monitoring* dampak risiko pekerjaan terhadap pekerja dilakukan pemeriksaan kesehatan secara berkala sebagai langkah mitigasi maksimal dengan mempertimbangkan risiko paparan, fasilitas kesehatan berada serta kondisi medis masing-masing pekerja.

Sampai dengan akhir tahun 2022, berdasarkan hasil pemeriksaan kesehatan dan MCU rutin di lingkungan Kantor Pusat, belum ditemukan PAK (Penyakit Akibat Kerja) yang terjadi terhadap pekerja dan mitra kerja. Pengungkapan informasi tentang PAK dominan pada *Subholding* maupun entitas anak dan unit operasi/unit bisnis, serta AP jasa dan *portfolio* disampaikan pada Laporan Keberlanjutan masing-masing. [GRI 403-10, 11.9.11, SHS-3.A1]

#### **Kebijakan dan Implementasi Keselamatan Kerja [GRI 403-1, 11.9.2 403-2, 11.9.3, 403-7, 11.9.8, 403-8, 11.9.9, EM-EP-320a.2, EM-SV-320a.2, EM-EP-540a.2, EM-MD-540a.4, EM-SV-540a.1, EM-RM-320a.2, ENV-6.C4, SHS-4.C1, SHS-6.C3, SHS-2.C1, SHS-2.C2,]**

Komitmen HSSE Perseroan tertuang dalam Kebijakan *Health, Safety, Security, and Environment* (HSSE) dengan memperhatikan kesehatan dan keselamatan kerja, keamanan, perlindungan terhadap lingkungan dan masyarakat. Evaluasi kinerja penerapan K3 dilaksanakan berdasarkan pencapaian target Indikator Kinerja Kunci (KPI) termasuk bagi Direksi, serta pelaksanaan audit penerapan SUPREME. Selain itu, Perseroan juga menerbitkan Pedoman Pengelolaan Keadaan Darurat, Krisis, dan Keberlangsungan Bisnis, sebagai respon atas insiden berskala besar. [GRI 3-3, 11.8.1, 11.9.1, 403-1, 11.9.2, 403-2, 11.9.3, 403-8, 11.9.9, EM-RM-320a.2, SHS-1.C2, SHS-4.C1, SHS-2.C1, SHS-2.C2, SHS-6.C3]

Perseroan memiliki kebijakan bahwa potensi kejadian besar yang terkait dengan kegiatan operasional harus diidentifikasi dan dikaji secara komprehensif dan menyeluruh. Melalui penerapan keselamatan proses yang terukur dan sesuai regulasi yang berlaku, Perseroan berupaya mencegah terjadinya insiden berskala besar. [GRI 403-7, 11.9.8, EM-EP-540a.2, EM-MD-540a.4, EM-SV-540a.1]

Sebagai salah satu upaya untuk mencegah terjadinya insiden, PERTAMINA berupaya untuk menurunkan risiko kegiatan operasi hingga level yang dapat diterima melalui proses pengelolaan risiko yang dilakukan oleh personil yang kompeten dengan mengikuti *framework* berikut ini.

Company received appreciation from the ILO and the P2HIV Program Platinum Category from the Ministry of Manpower of the Republic of Indonesia, including PGN, PHE ONWJ, PHKT, RU V and RU VI

#### **Health Sector Performance [GRI 403-10, 11.9.11, SHS-3.A1]**

As part of the implementation of the *Corporate Life Saving Rule* (CSLR) aspect of *Fit to Work*, and in the context of *monitoring* the impact of occupational risks on employees, periodic health checks are carried out as a maximum mitigation measure taking into account the risk of exposure, health facilities located and the medical condition of each employee.

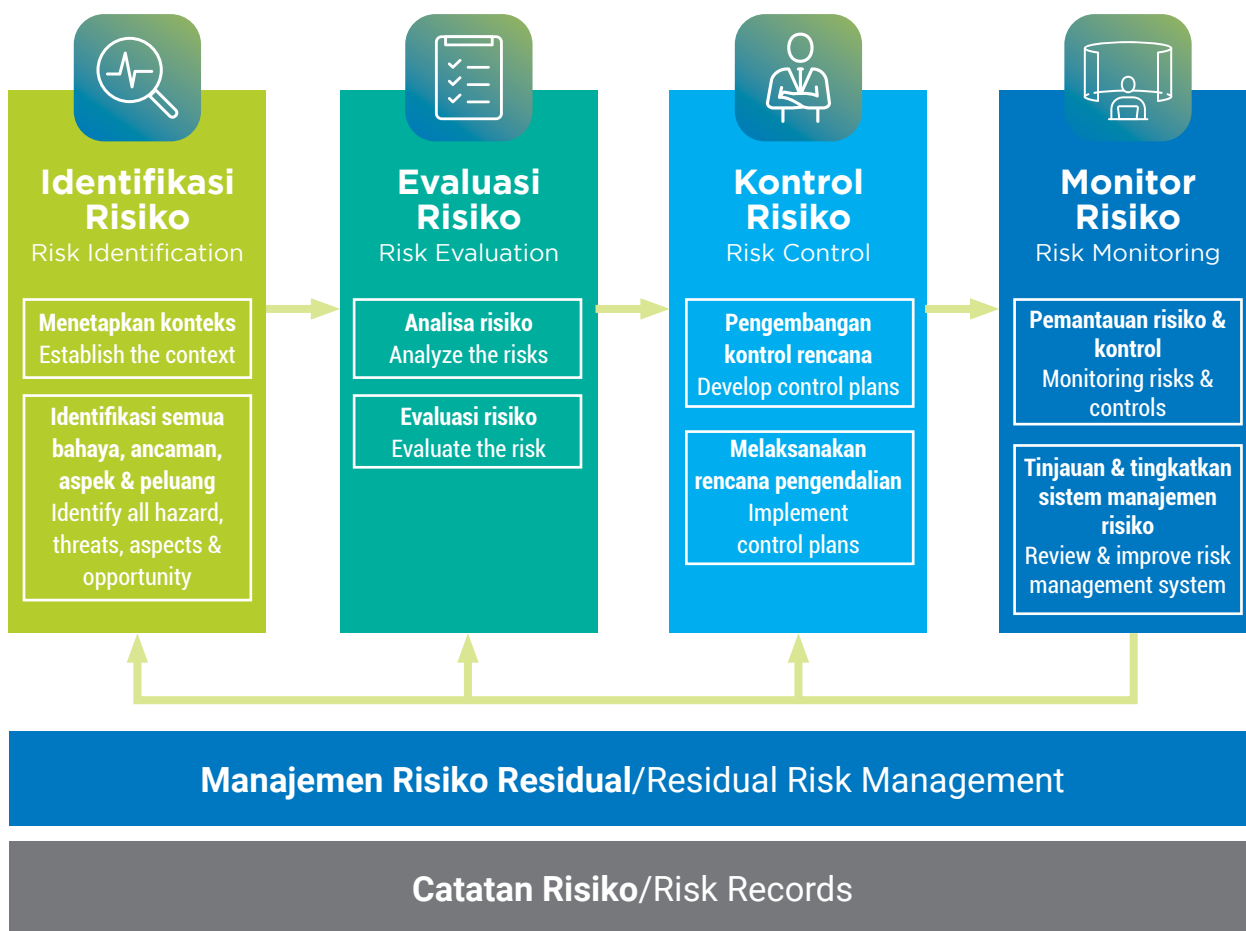
Until the end of 2022, based on the results of routine medical examinations and MCU at the Head Office, no Occupational Diseases have been found occurring in employees and work partners. Disclosure of information about the dominant Occupational Diseases in *Subholdings* and subsidiaries and operating units/business units, as well as services and portfolio subsidiaries are submitted in their Sustainability Reports. [GRI 403-10, 11.9.11, SHS-3.A1]

#### **Work Safety Policy and Implementation [GRI 403-1, 11.9.2 403-2, 11.9.3, 403-7, 11.9.8, 403-8, 11.9.9, EM-EP-320a.2, EM-SV-320a.2, EM-EP-540a.2, EM-MD-540a.4, EM-SV-540a.1, EM-RM-320a.2, ENV-6.C4, SHS-4.C1, SHS-6.C3, SHS-2.C1, SHS-2.C2,]**

The Company's HSSE commitment is included in the *Health, Safety, Security, and Environment* (HSSE) Policy with attention to occupational health and safety, security, protection of the environment and society. OHS implementation performance evaluation is carried out based on the achievement of Key Performance Indicator (KPI) targets including for the Board of Directors, as well as an audit of SUPREME implementation. In addition, the Company has also issued Guidelines for Management of Emergency Situations, Crisis, and Business Continuity, as a response to large-scale incidents. [GRI 3-3, 11.8.1, 11.9.1, 403-1, 11.9.2, 403-2, 11.9.3, 403-8, 11.9.9, EM-RM-320a.2, SHS-1.C2, SHS-4.C1, SHS-2.C1, SHS-2.C2, SHS-6.C3]

The Company has a policy that the potential for major events related to operational activities must be identified and studied comprehensively and thoroughly. Through the implementation of measurable process safety and in accordance with applicable regulations, the Company seeks to prevent large-scale incidents. [GRI 403-7, 11.9.8, EM-EP-540a.2, EM-MD-540a.4, EM-SV-540a.1]

As one of the efforts to prevent incidents from happening, PERTAMINA seeks to reduce the risk of operating activities to an acceptable level through a risk management process carried out by competent personnel by following the following framework



Dalam prosesnya, identifikasi risiko dilakukan untuk kegiatan operasional rutin dan non-rutin, untuk kemudian ditetapkan tingkat risikonya. Untuk menurunkan risiko ke tingkat yang dapat diterima, pengendalian risiko ditetapkan sesuai dengan hirarki sebagai berikut:

1. Eliminasi
2. Substitusi
3. *Engineering control*
4. Pengendalian administratif
5. Alat Pelindung Diri.

**Safety Performance** [GRI 403-9, 11.9.10, EM-EP-320a.1, EM-RM-320a.1, EM-SV-320a.1, EM-SV-000.D, SHS-3.C1, SHS-3.C2, SHS-3.A1, SHS-4.C2]

Kinerja HSSE merupakan salah satu Indikator Kinerja Kunci (KPI) Direksi atau KPI Manajemen tahun 2022, termasuk TRIR, pencegahan insiden skala besar, serta *zero major accident*. Untuk tahun 2022, target KPI TRIR tidak boleh melebihi 0,11. Perhitungan mengacu kepada International Association of Oil & Gas Procedures, yakni per 1.000.000 jam kerja untuk LTIR dan TRIR, sedangkan untuk FAR per 100.000.000 jam kerja. [GRI 403-9, 11.9.10]

In the process, risk identification is carried out for routine and non-routine operational activities, to then determine the risk level. In order to reduce risk to an acceptable level, risk control is determined according to the following hierarchy:

1. Elimination
2. Substitution
3. Engineering control
4. Administrative control
5. Personal Protective Equipment.

**Safety Performance** [GRI 403-9, 11.9.10, EM-EP-320a.1, EM-RM-320a.1, EM-SV-320a.1, EM-SV-000.D, SHS-3.C1, SHS-3.C2, SHS-3.A1, SHS-4.C2]

HSSE Performance is one of the Board of Directors' Key Performance Indicators (KPI) or Management KPIs for 2022, including TRIR, prevention of large-scale incidents, and zero major accidents. For 2022, the TRIR KPI target should not exceed 0.11. The calculation refers to the International Association of Oil & Gas Procedures, specifically per 1,000,000 working hours for LTIR and TRIR, and per 100,000,000 working hours for FAR. [GRI 403-9, 11.9.10]

**Tingkat Kecelakaan pada Pegawai Tetap dan Kontraktor**

[GRI 403-9, 11.9.10, EM-EP-320a.1, EM-RM-320a.1, EM-SV-320a.1, EM-SV-000.D, SHS-3.C1, SHS-3.A1, SHS-4.C2]

Accident Rates for Permanent Employees and Contractors

Kategori Category	Realisasi Realization			
	2022	2021	2020	2019
Jumlah Jam Kerja (Juta jam kerja) Number of Hours Worked (Million hours worked)	710	595	543	555
Fatal Accident Rate (FAR) - Per 100,000,000 Work Hour	0.42	0.50	0.73	0.54
Lost Time Incident Rate (LTIR) - Per 1,000,000 Work Hour	0.02	0.01	0.02	0.03
<b>Total Recordable Incident Rate (TRIR) - Per 1,000,000 Work Hour</b>	<b>0.09</b>	<b>0.12</b>	<b>0.15</b>	<b>0.19</b>

**Tingkat Kecelakaan pada Subholding Per Segmen 2022** [GRI 403-9, 11.9.10]

Accident Rate in Subholdings Per Segment 2022

	Consolidated	Upstream	R&P	C&T	PNRE	Gas	IML	AP Service
TRIR	0.09	0.10	0.12	0.02	0.32	0.09	0.15	0.06
LTIR	0.02	0.01	0.06	0.00	0.16	0.05	0.03	0.00
FAR	0.42	0.00	1.10	0.00	0.00	4.61	0.00	0.00

**Jumlah Insiden pada Pegawai Tetap dan Kontraktor** [GRI 403-9, 11.9.10]

Number of Incidents to Permanent Employees and Contractors

Tahun Year	Kategori Category	Fatalitas Fatality	Lost Time	Restricted Work Days	Perawatan medis Medical Treatment	Jumlah Kasus Total Cases
2022	Pegawai/Employees	0	2	1	2	5
	Kontraktor/Contractor	3	6	11	37	57
2021	Pegawai/Employees	0	0	0	0	0
	Kontraktor/Contractor	3	4	12	53	72
2020	Pegawai/Employees	0	0	0	0	0
	Kontraktor/Contractor	4	7	19	49	79

Pada tahun 2022, masih terjadi kecelakaan fatal yang menimpa pekerja kontraktor. Dari hasil evaluasi untuk mencegah terjadinya kecelakaan fatal di masa yang akan datang, PERTAMINA telah membuat 12 inisiatif peningkatan kinerja HSSE, sebagai berikut:

1. Komitmen & Visibilitas Kepemimpinan terhadap *Zero Accident*
2. Budaya HSSE (*Occupational Safety & Process Safety*)
3. Kompetensi dan kapabilitas HSSE & Operasional
4. Penguatan implementasi *Corporate Life Saving Rules* (CLSR)
5. Penguatan Implementasi HSSE MS (SUPREME)
6. Penguatan Pengelolaan *Emergency & Crisis Management System*
7. Sistem Belajar dari kejadian secara *full cycle*
8. Penguatan Implementasi *Process Safety & Asset Integrity Management System* (PSAIMS)
9. Pelaksanaan Operasi (*Conduct of operation*)
10. *Major Accident Risk Containment*
11. *Community Emergency Response*

In 2022, there will still be fatal accidents involving contractor workers. From the evaluation results to prevent fatal accidents in the future, Pertamina has made 12 HSSE performance improvement initiatives, as follows:

1. Leadership Commitment & Visibility towards Zero Accident
2. HSSE (Occupational Safety & Process Safety) Culture
3. HSSE & Operational competence and capability
4. Strengthening the implementation of Corporate Life Saving Rules (CLSR)
5. Strengthening MS HSSE Implementation (SUPREME)
6. Strengthening Emergency Management & Crisis Management System
7. Learning system from events in full cycle
8. Strengthening Process Safety & Asset Integrity Management System (PSAIMS) Implementation
9. Implementation of Operations (Conduct of operation)
10. Major Accident Risk Containment
11. Community Emergency Response





Selanjutnya, PERTAMINA juga memiliki inisiatif untuk melakukan pemantauan terhadap *Process Safety Event* (PSE). PSE merupakan terlepasnya material secara tidak terkendali, baik material berbahaya maupun material tidak beracun dan material tidak mudah terbakar dari sebuah fasilitas produksi, distribusi, penyimpanan, dan utilitas. Sesuai standar API RP 754 dan IOGP Report 456 terdapat 4 (empat) kategori PSE yaitu:

1. *Process safety event* Tier 1: *Process safety event* yang memiliki dampak negatif paling besar
2. *Process safety event* Tier 2: *Process safety event* yang memiliki dampak lebih rendah
3. *Process safety event* Tier 3: Permasalahan pada sistem instrumentasi keselamatan proses, namun tidak sampai menimbulkan *process safety event* Tier 1 dan 2
4. *Process safety event* Tier 4: Kinerja sistem manajemen untuk mencegah insiden keselamatan proses

Furthermore, Pertamina also has an initiative to monitor *Process Safety Event*(PSE). PSE is the uncontrolled release of materials, both hazardous materials and non-toxic materials and non-flammable materials from production, distribution, storage, and utility facility. According to API RP 754 and IOGP Report 456 standards, there are 4 (four) PSE categories:

1. *Process safety event* Tier 1: *Process safety event* that has the greatest negative impact
2. Tier 2 *process safety events*: *Process safety events* that have a lower impact
3. *Process safety event* Tier 3: Problems with *process safety instrumentation systems*, but not causing *process safety events* Tier 1 and 2
4. *Process safety event* Tier 4: *management system performance* to prevent *process safety incidents*



### Jumlah PSE yang Dipantau dan Dilaporkan

[SHS-6.C1, SHS-6.A1, SHS-6.A3, EM-EP-540a.1, EM-RM-540a.1, EM-RM-540a.2]

Total PSE Monitored and Reported

(Dalam Kasus)(in Cases)

Keterangan/Description	2022	2021
TIER 1	3	7
TIER 2	17	31

### Insiden dan Pemulihan Dampaknya [GRI 2-25, GRI 403-9, 11.9.10, 11.8.3, SHS-6.C2, SHS-6-A1, SHS-3.C4, SHS-3.A2, SHS-3.A3, SHS-3.A4, SHS-6.A2, SHS-7.A1]

Perseroan berkomitmen memastikan kegiatan operasionalnya memenuhi aspek K3, perlindungan terhadap lingkungan & masyarakat serta keselamatan proses dan *asset integrity* secara terus menerus. Namun dalam menjalankan kegiatan operasionalnya, terdapat insiden yang tidak dapat dihindari. Pada tahun 2022 terjadi kecelakaan truk PERTAMINA di area Cibubur yang mengakibatkan 10 pengemudi lain meninggal dunia dan 5 luka-luka. Berdasarkan hasil investigasi dan analisis, disimpulkan bahwa penyebab terjadinya kecelakaan ini adalah truk tangki mengalami kegagalan pengereman.

Perseroan bertanggung jawab penuh atas peristiwa kecelakaan tersebut, dengan memberikan pembiayaan perawatan korban luka-luka, dan pemakaman korban yang meninggal dunia. Atas kejadian tersebut, Perseroan memitigasi dengan menyusun standar silabus training bagi Awak Mobil Tangki (AMT), perbaikan mekanisme rekrutmen AMT, dan pemeliharaan mobil tanki. Perseroan juga terus berupaya mencegah terjadinya insiden serupa dengan mengevaluasi armada truknya guna pendistribusian bahan bakar dapat berjalan dengan aman.

### Incident and Impact Remedy [GRI 2-25, GRI 403-9, 11.9.10, 11.8.3, SHS-6.C2, SHS-6-A1, SHS-3.C4, SHS-3.A2, SHS-3.A3, SHS-3.A4, SHS-6.A2, SHS-7.A1]

The Company is committed to ensuring that its operations meet the aspects of K3, protection of the environment & community, and continuous process safety and asset integrity. However, some incidents cannot be avoided in carrying out its operations. In 2022, a Pertamina truck accident in the Cibubur area resulted in several 10 other riders killed and 5 injured. Based on the investigation and analysis results, it was concluded that the cause of the accident was a failure of the tank truck's brakes.

The Company was fully responsible for the accident, by providing funding for the treatment of the injured victims and the funeral of the victims who passed away. Due to this incident, the Company took mitigation steps by preparing a training syllabus standard for Tank Car Crew (AMT), improving the AMT recruitment mechanism, and improving the tank car maintenance mechanism. The Company also continues to strive preventing similar incidents from occurring by conducting a thorough evaluation of its truck fleet to ensure that fuel distribution runs safely.

**Pelibatan Komunikasi K3 Bagi Pekerja dan Eksternal**  
 [GRI 403-4, 11.9.5, 403-5, 11.9.6, 2-24, SHS-1.C1, SHS-2.A4, SHS-1. C2, SHS-1.C3, SHS-1.A2]

Para pekerja dilibatkan dalam penerapan maupun pengelolaan K3 melalui perwakilan pekerja di Panitia Pembina Kesehatan dan Keselamatan Kerja (P2K3). Melalui perwakilan di serikat pekerja, para pekerja dapat menyampaikan aspirasi terkait K3 sesuai Perjanjian Kerja Bersama (PKB). Mekanisme lainnya adalah yakni *safety induction*, *safety talk*, rapat P2K3, kegiatan *Management Walk Through*, *safety campaign*, serta *vendor day*. [GRI 403-4, SHS-1.C1]

**OHS Communication Engagement for Employees and External**  
 [GRI 403-4, 11.9.5, 403-5, 11.9.6, 2-24, SHS-1.C1, SHS-2.A4, SHS-1. C2, SHS-1.C3, SHS-1.A2]

Employees are involved in implementing and managing OHS through employee representatives in the Occupational Health and Safety Advisory Committee (P2K3). Through representatives in trade unions, employees can convey their aspirations related to OHS according to the Collective Labor Agreement (CLA). Other mechanisms that can serve as channels for communication, consultation and dissemination regarding OHS, include safety induction, safety talk, P2K3 meetings, and Management Walk Through activities, safety campaigns, and vendor days. [GRI 403-4, SHS-1.C1]

Perseroan memiliki sistem komunikasi eksternal terhadap pemangku kepentingan lain seperti kontraktor, pemasok, pengunjung, tamu dan masyarakat melalui berbagai media dan teknologi secara efektif. Selain itu, dalam setiap pertemuan baik tatap muka maupun daring, *safety induction*/informasi terkait K3 wajib disampaikan kepada pihak internal maupun eksternal.

The Company has an external communication system to other stakeholders such as contractors, suppliers, visitors, guests and the public through various media and technology effectively. Furthermore, in every offline or online meeting, safety induction/information related to OHS must be conveyed to internal and external parties.

<b>Protokol Komunikasi Sistem Manajemen K3</b> OHS Management System Communication Protocol		
Internal	Eksternal	
<ul style="list-style-type: none"> <li>• Komitmen dan program Perseroan terhadap penerapan K3 di tempat kerja</li> <li>• Identifikasi bahaya, penilaian dan pengendalian resiko K3 di tempat kerja</li> <li>• Prosedur kerja, instruksi kerja, diagram alur proses kerja serta material/mesin yang digunakan dalam proses kerja</li> <li>• Tujuan K3 dan aktivitas peningkatan berkelanjutan lainnya</li> <li>• Hasil investigasi kecelakaan kerja</li> <li>• Perkembangan aktivitas pengendalian bahaya di tempat kerja</li> <li>• Perubahan manajemen terkait penerapan K3 di tempat kerja</li> <li>• The Company's commitment and program for OHS implementation in the workplace</li> <li>• Identification of hazards, assessment and control of OHS risks in the workplace</li> <li>• Work procedures, work instructions, work process flow diagrams and materials/machines used in the work process</li> <li>• OHS objectives and other continuous improvement activities</li> <li>• Results of work accident investigations</li> <li>• Development of workplace hazard control activities</li> <li>• Changes in management related to OHS implementation in the workplace</li> </ul>	<b>Kontraktor, Pemasok, Mitra Kerja</b> Contractors, Suppliers, Partners	<b>Tamu dan Pengunjung</b> Guests and Visitors
	<ul style="list-style-type: none"> <li>• Sistem Manajemen K3 kontraktor individual</li> <li>• Peraturan dan persyaratan komunikasi kontraktor</li> <li>• Kinerja K3 kontraktor</li> <li>• Daftar kontraktor lain di tempat kerja</li> <li>• Hasil pemeriksaan dan pemantauan K3</li> <li>• Tanggap Darurat</li> <li>• Hasil investigasi kecelakaan, ketidaksesuaian dan tindakan perbaikan dan tindakan pencegahan</li> <li>• Occupational Health and Safety Management System for individual contractors</li> <li>• Contractor communication rules and requirements</li> <li>• OHS performance of contractors</li> <li>• List of other contractors at work</li> <li>• Results of OHS inspection and monitoring</li> <li>• Emergency response</li> <li>• Results of investigations of accidents, non-conformances and corrective actions, and preventive actions</li> </ul>	<ul style="list-style-type: none"> <li>• Persyaratan-persyaratan K3 untuk tamu</li> <li>• Prosedur evakuasi darurat;</li> <li>• Aturan lalu lintas di tempat kerja</li> <li>• Aturan akses tempat kerja dan pengawalan</li> <li>• APD (Alat Pelindung Diri) yang digunakan di tempat kerja</li> <li>• OHS requirements for guests</li> <li>• Emergency evacuation procedures</li> <li>• Traffic rules at work</li> <li>• Workplace access rules and escorts</li> <li>• PPE (Personal Protective Equipment) used in the workplace</li> </ul>

**Media Komunikasi K3/OHS Communication Media**  
 Papan informasi | Surat dan korespondensi | Email dan internet | Pengeras suara | Rambu-rambu dan tanda bahaya K3 | Bel, alarm, lampu bahaya | *Knowledge Sharing*, Media Cetak | *Call Center* 135  
 Information board | Letters and correspondence | E-mail and internet | Loudspeaker | OHS warning signs | Bells, alarms, hazard lights | *Knowledge Sharing*, Print Media | *Call Center* 135

Selama tahun 2022, Perseroan telah melaksanakan pelatihan rutin untuk meningkatkan penerapan K3, di antaranya terkait penerapan SUPREME. Pada tahun 2022, ada 4.033 karyawan, dan pekerja kontraktor/pemasok/mitra kerja yang telah mengikuti pelatihan penerapan SUPREME. [GRI 403-5, 11.9.6, SHS-1.C3]

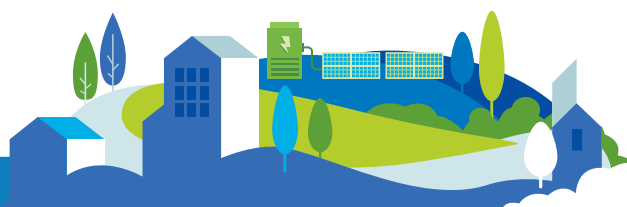
During 2022, the Company conducted a routine training to improve the implementation of OHS, including the implementation of SUPREME. In 2022, there were 4,033 employees, and contractor/supplier/work partner employees who attended SUPREME implementation training. [GRI 403-5, 11.9.6, SHS-1.C3]

Pelatihan bagi Pegawai dan Kontraktor terkait SUPREME Training for Employees and Contractors related to SUPREME			
Uraian Description	2022	2021	2020
Training SUPREME (Peserta yang diaudit) SUPREME Training (Audited Participants)	4,033	756	1,570
Training SUPREME (Auditor)	-	158	265
Training HSE Demo Room	-	70	494
Pelatihan Daring (Webinar)/Online Training (Webinar)	-	54	952
Training (Webinar) Process Safety and Asset Integrity Management (PSAIM) Process Safety and Asset Integrity Management (PSAIM) Training (Webinar)	111	659	1,972
Training Pertolongan Pertama First Aid Training	523	1,209	748
<b>Total</b>	<b>4,667</b>	<b>2,906</b>	<b>6,001</b>

Selain itu pada tahun 2022 dilakukan pelatihan terkait aspek safety sebagai berikut:

In addition, in 2022 training related to safety aspects will be carried out as follows:

Pelatihan Training	Jumlah Peserta Number of participants
Basic HSSE Mandatory Training	325
Fire Fighting Training/ Certification	831
Incident Command System	231
Incident Investigation Training	243
Gas Tester	854
HAZOPS	189
CSMS	89
Confined Space entry	100
Process safety Management	111
Working at Height	125
Pelatihan dan Sertifikasi Pengawas Utama K3 Migas Oil and Gas K3 Main Superintendent Training and Certification	44





## ASPEK MASYARAKAT

**Dampak Operasi Terhadap Masyarakat Sekitar** [OJK F.23, GRI 413-1, 413-2, 11.15.3, SOC-1.C2, SOC-9.C1, SOC-9.C2, SOC-9.C3, SOC-9.A2, EM-EP-210b.1, EM-EP-210b.2, CDSB REQ-04, CDSB REQ-05]

Pelibatan masyarakat lokal dilaksanakan melalui mekanisme asesmen dampak sosial pada setiap proyek maupun kegiatan operasi yang dijalankan. Perseroan melengkapi seluruh (100%) proyek maupun kegiatan operasi yang dijalankan dengan dokumen Analisis Mengenai Dampak Lingkungan (AMDAL), yang menyertakan analisis dampak sosial.

**Kegiatan Tanggung Jawab Sosial Lingkungan (TJSL)** [OJK F.25, SOC-13.A1, SOC-13.C1, SOC-13.C2]

### Program TJSL

Program tanggung jawab sosial dan lingkungan (TJSL) dilaksanakan dengan mengacu pada Peraturan Menteri BUMN No. PER-6/MBU/09/2022 tentang Perubahan atas Peraturan Menteri BUMN No. PER-5/MBU/04/2021 tentang Program Tanggung Jawab Sosial dan Lingkungan BUMN yang meliputi pembiayaan dan pembinaan Usaha Mikro dan Usaha Kecil, dan/atau bantuan dan/atau kegiatan lainnya. Kegiatan TJSL didasarkan pada kebijakan keberlanjutan Perseroan yang terdiri dari 4 (empat) pilar yang mendukung pencapaian *sustainable development goals* (SDGs) yaitu pilar pembangunan lingkungan, pilar pembangunan sosial, pilar pembangunan ekonomi, serta pilar pembangunan hukum dan tata kelola. Fokus utama TJSL meliputi program pendidikan, program lingkungan dan program ekonomi yang keseluruhannya bertujuan untuk meningkatkan kemandirian masyarakat dan bisnis berkelanjutan (*Creating Shared Value/CSV*).

## COMMUNITY ASPECT

**Impact of Operations on Surrounding Communities** [OJK F.23, GRI 413-1, 413-2, 11.15.3, SOC-1.C2, SOC-9.C1, SOC-9.C2, SOC-9.C3, SOC-9.A2, EM-EP-210b.1, EM-EP-210b.2, CDSB REQ-04, CDSB REQ-05]

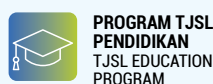
Local community involvement is carried out through a social impact assessment mechanism in each project or operational activity carried out. The Company completes all (100%) projects and operational activities carried out with an Environmental Impact Analysis (AMDAL) document, which includes a social impact analysis.

**Environmental Social Responsibility Activities (TJSL)** [OJK F.25, SOC-13.A1, SOC-13.C1, SOC-13.C2]

### TJSL Program

The social and environmental responsibility program (TJSL) is implemented with reference to the SOE Minister Regulation No. PER6/MBU/09/2022 concerning Amendments to the SOE Minister Regulation No. PER05/MBU/04/2021 concerning Social and Environmental Responsibility Programs in SOEs which include financing and fostering Micro and Small Enterprises, and/or assistance and/or other activities. TJSL activities are based on the Company's sustainability policy which consists of 4 (four) pillars that support the achievement of sustainable development goals (SDGs), namely environmental development pillars, social development pillars, economic development pillars, as well as law and governance development pillars. The main focus of TJSL includes educational programs, environmental programs, and economic programs which aims to increase community independence and sustainable business (*Creating Shared Value/CSV*).

## Fokus Utama TJSL/Main Focus of TJSL



**PROGRAM TJSL PENDIDIKAN**  
TJSL EDUCATION PROGRAM

- Sahabat Disabilitas Pertamina
- Program Pelatihan
- Friends with Disabilities PERTAMINA
- Training Programs



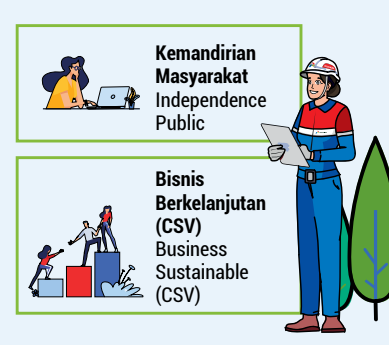
**PROGRAM TJSL LINGKUNGAN**  
ENVIRONMENTAL TJSL PROGRAM

- Desa Energi Berdikari
- Keanekaragaman Hayati
  - a. Flora
  - b. Fauna
- Waste Management
- Independent Energy Village
- Diversity Biological
  - a. Flora
  - b. Fauna
- Waste Management



**PROGRAM TJSL EKONOMI**  
ECONOMIC TJSL PROGRAM

- Desa Wisata
- Kopi Nusantara Pertamina
- Enduro Entrepreneurship Program
- Tourism Village
- Archipelago Coffee Pertamina
- Enduro Entrepreneurship Program







**Program TJSL unggulan yang dilaksanakan di tahun 2022, antara lain:**  
**The flagship TJSL program implemented in year 2022, among others:**

No	Jenis Kegiatan TJSL Type of TJSL Activity	Capaian Achievement	Manfaat Benefit
1	<b>Desa Energi Berdikari</b> <b>Energy Independent Village</b> TPB 3, 4, 6, 7, 8, 12, 13	<ul style="list-style-type: none"> <li>Terdapat 2.750 kepala keluarga menerima manfaat penyaluran energi.</li> <li>Reduksi emisi karbon sebesar 565.855 Ton CO2eq/tahun</li> <li>Total <i>multiplier effect</i> Rp1,8 Miliar/Tahun</li> <li>Total energi yang dihasilkan dari Pembangkit Listrik tenaga surya sebesar 110.000 Wp</li> <li>Total energi yang dihasilkan dari Pembangkit Listrik Tenaga Hybrid sebesar 16.000 Wp</li> <li>Total energi yang dihasilkan dari gas metana dan biogas sebesar 605.000 m3/tahun</li> <li>Total energi yang dihasilkan dari <i>microhydro</i> sebesar 8.000 watt/tahun</li> <li>There are 2,750 heads of families receiving energy distribution benefits.</li> <li>Reduction of carbon emissions by 565,855 tons of CO2eq/ year</li> <li>Total multiplier effect of Rp 1.8 billion/year</li> <li>The total energy generated from the solar power plant is 110,000 Wp</li> <li>The total energy generated from the Hybrid Power Plant is 16,000 Wp</li> <li>Total energy produced from methane gas and biogas is 605,000 m3/year</li> <li>The total energy generated from microhydro is 8,000 watts/year</li> </ul>	<ul style="list-style-type: none"> <li>Terbentuknya Desa Energi Berdikari adanya pembangkit Listrik Tenaga Surya, Angin, Microhydro, Gas metana</li> <li>Membangun kelistrikan untuk menunjang aktivitas ekonomi di desa seperti pertanian, peternakan pada Desa Energi Berdikari</li> <li>Menurunkan CO2 sebesar 2,86 Kg/Tahun</li> <li>Menghemat biaya listrik Rp4,4 Juta/tahun</li> <li>Formation of an Energy Independent Village with a Solar/Wind/Microhydro Power plant</li> <li>Build electricity to support economic activities in villages such as agriculture, animal husbandry in Berdikari Energy Village</li> <li>Reducing CO2 by 2.86 Kg/year</li> <li>Save electricity costs IDR 4.4 million/year</li> </ul>
2	<b>Rumah BUMN</b> <b>PERTAMINA</b> <b>PERTAMINA</b> <b>BUMN</b> <b>House</b> TPB 8	<p>Rumah BUMN (RB) sebagai wadah untuk berkumpul, mengajar dan membina para pelaku UMKM untuk menjadi UMKM Indonesia yang berkualitas, naik kelas dan berdaya saing tinggi dimana telah terdapat 30 lokasi RB PERTAMINA di seluruh Indonesia, dengan capaian antara lain: 3.993 UMKM telah listing di <i>marketplace</i>, 436 UMKM telah melakukan pemasaran produk hingga ke luar negeri, 9.120 UMKM ikut serta dalam dalam klinik bisnis, 3.264 UMKM telah mendapatkan perizinan dan sertifikasi, dan 370 kali pameran dengan angka penjualan mencapai lebih dari 27,6 Milyar.</p> <p>Rumah BUMN (RB) as a forum for gathering, teaching and fostering MSME actors to become quality, upgraded and highly competitive Indonesian MSMEs where there have been 30 PERTAMINA RB locations throughout Indonesia, with achievements including: 3,993 MSMEs have been listed on marketplace, 436 MSMEs have marketed their products abroad, 9,120 MSMEs have participated in business clinics, 3,264 MSMEs have obtained licensing and certification, and 370 exhibitions with sales figures reaching more than 27.6 billion.</p>	<ul style="list-style-type: none"> <li>Meningkatkan aspek sosial kemasyarakatan melalui pemberdayaan SDM dan penyaluran bantuan</li> <li>Peningkatan kualitas pendidikan dan pengembangan UMKM</li> <li>Menaikkan kelas UMKM dan kemandirian keuangan Rumah BUMN</li> <li>Improving social aspects through empowering human resources and distributing aid</li> <li>Improving the quality of education and development of MSMEs</li> <li>Increasing the UMKM class and the financial independence of BUMN Houses</li> </ul>
3	<b>Sampah Kita</b> <b>Our Garbage</b> TPB 6	<ul style="list-style-type: none"> <li>Terdapat 521.000 Ton/Tahun sampah dapat dimanfaatkan oleh masyarakat</li> <li>Lebih dari 1.000 Kepala Keluarga menerima manfaat</li> <li>Reduksi emisi karbon sebesar 101.499 Ton CO2eq/Tahun</li> <li>There are 521,000 tons/year of waste that can be utilized by the community</li> <li>More than 1,000 heads of households receive benefits</li> <li>Reduction of carbon emissions by 101,499 tons of CO2eq/year</li> </ul>	<p>Pengolahan sampah yang lebih baik disertai dengan pengurangan jejak karbon</p> <p>Better waste management accompanied by a reduction in carbon footprint.</p>
4	<b>Hutan PERTAMINA</b> <b>PERTAMINA</b> <b>Forest</b> TPB 8, 13, 14, 15	<ul style="list-style-type: none"> <li>Implementasi 267 Flora Biodiversity Programs</li> <li>Serapan emisi karbon 120.005,88 ton CO2eq/year</li> <li>Penanaman 1.000.000 Mangrove di wilayah pesisir</li> <li>Implementation of 267 Flora Biodiversity Programs</li> <li>Carbon emission absorption of 120,005.88 ton CO2eq/year</li> <li>Planting 1,000,000 mangroves in coastal areas</li> </ul>	<ul style="list-style-type: none"> <li>Memulihkan dan melindungi kawasan pantai dari abrasi dan intrusi air laut</li> <li>Total multiplier effect Rp1,8 Miliar/Tahun</li> <li>Pemanfaatan Lahan kritis menjadi lahan produktif</li> <li>Pencegahan Kebakaran Hutan dan Lahan</li> <li>Restore and protect coastal areas from abrasion and seawater intrusion</li> <li>Total multiplier effect of Rp 1.8 billion/year</li> <li>Utilization of critical land into productive land</li> <li>Forest and Land Fire Prevention</li> </ul>
5	<b>Konservasi Fauna</b> <b>Fauna Conservation</b> TPB 14, 15	<ul style="list-style-type: none"> <li>Implementasi 50 Fauna Biodiversity Programs</li> <li>261 Jenis Konservasi Fauna</li> <li>Lebih dari 700.000 Ekor Fauna yang di konservasi</li> <li>Implementation of 50 Fauna Biodiversity Programs</li> <li>261 types of fauna conservation</li> <li>More than 700,000 animals in conservation</li> </ul>	<ul style="list-style-type: none"> <li>Program konservasi yang melindungi Flora Fauna</li> <li>Pelestarian dan pengembangbiakan tanaman langka , tanaman endemic</li> <li>Conservation program that protects Flora Fauna</li> <li>Preservation and breeding of rare plants, endemic plants</li> </ul>
6	<b>Beasiswa Sobat Bumi</b> <b>Sobat Bumi Scholarship</b> TPB 4	<ul style="list-style-type: none"> <li>230 mahasiswa mendapat beasiswa afirmasi daerah operasi</li> <li>474 mahasiswa mendapat beasiswa S1 Regular</li> <li>97 mahasiswa mendapat beasiswa vokasi</li> <li>230 students received affirmation scholarships for operating areas</li> <li>474 students received Regular Undergraduate scholarships</li> <li>97 students received vocational scholarships</li> </ul>	<p>Beasiswa yang membantu para siswa mendapat Pendidikan yang layak dan lebih berprestasi</p> <p>Scholarships that help students get proper education and achieve more</p>





No	Jenis Kegiatan TJSL Type of TJSL Activity	Capaian Achievement	Manfaat Benefit
7	<b>Program Created Share Value</b> Created Share Value Program TPB 1, 2, 8 	<ul style="list-style-type: none"> <li>Pinky Movement meningkatkan kompetensi UMKM Binaan untuk meningkatkan bisnis serta membantu program konversi LPG dari subsidi ke non subsidi</li> <li>Lubricants GoPreneur/Enduro Entrepreneurship memberikan kesempatan bagi UMKM Binaan di bidang bengkel ataupun oli untuk mengembangkan usahanya serta membantu meningkatkan penjualan produk Perseroan.</li> <li>Pertashop Empowerment SME membantu percepatan program pemerataan akses energi, khususnya terkait BBM.</li> <li>Pinky Movement aims to improve the competence of its assisted MSMEs to increase their business and support the conversion program of subsidized LPG to non-subsidized LPG.</li> <li>Lubricants GoPreneur/Enduro Entrepreneurship provides opportunities for assisted MSMEs in the workshop and oil sectors to develop their business and increase the sales of the company's products.</li> <li>Pertashop Empowerment SME supports the acceleration of the energy access equalization program, particularly in relation to fuel.</li> </ul>	<ul style="list-style-type: none"> <li>Peningkatan kompetensi UMKM Binaan</li> <li>Dukungan bagi bisnis Perseroan di sektor BBM, LPG dan Lubricant</li> <li>Improvement of the competence of Fostered SMEs</li> <li>Support for the Company's business in the fuel, LPG and lubricant sectors</li> </ul>
8	<b>Sahabat Disabilitas PERTAMINA Disabled Friends</b> TPB 1, 10 	<ul style="list-style-type: none"> <li>320 difabel menerima pendidikan/pelatihan keterampilan</li> <li>62 difabel mendapatkan pekerjaan</li> <li>320 people with disabilities received education/training on skills</li> <li>62 people with disabilities gained employment</li> </ul>	<ul style="list-style-type: none"> <li>Pelatihan bagi anak-anak difabel</li> <li>Bantuan sarana prasana pendidikan yang meningkatkan kualitas belajar</li> <li>Training for children with disabilities</li> <li>Educational Infrastructure assistance that improves the quality of learning</li> </ul>
9	<b>Pemberdayaan Ekonomi Masyarakat dan UMKM Community Economic Empowerment and MSMEs</b> TPB 5, 8 	<ul style="list-style-type: none"> <li>Penyelenggaraan Pertamina SMEXPO sebagai ajang <i>hybrid exhibition</i> untuk UMKM binaan terbesar, yang mencakup penyelenggaraan pelatihan, workshop, <i>business matching</i> dengan <i>potential buyer</i> dari berbagai negara, diikuti total 590 UMKM dan dihadiri oleh 14,000 pengunjung dan memperoleh penghargaan MURI</li> <li>Penyelenggaraan UMK Academy melalui pemberian pelatihan dan <i>coaching</i> untuk 717 UMKM yang menghasilkan 511 UMKM naik kelas, 74 sertifikasi halal, dan hibah teknologi tepat guna bagi champion UMKM</li> <li>Pelaksanaan Pertapreneur Agregator sebagai kompetisi dan coaching bisnis untuk 100 UMKM yang menghasilkan 10 aggregator dari UMKM dengan inovasi bisnis di bidang sinergi kemitraan, lingkungan keberlanjutan, pemberdayaan perempuan terbaik, pemberdayaan digital dan teknologi, serta pemberdayaan pemuda terbaik</li> <li>182 UMKM Binaan telah diikuti dalam pameran dengan menghasilkan pendapatan UMKM yang dicatatkan sebesar Rp 49,958,195,870</li> <li>Pelaksanaan Program Pemberdayaan Perempuan Pesisir melalui pemberian pelatihan wirausaha dan bantuan modal kepada perempuan pelaku usaha</li> <li>Organizing Pertamina SMEXPO as a hybrid exhibition event for the largest fostered MSMEs, which includes training, workshops, business matching with potential buyers from various countries, attended by a total of 590 MSMEs and attended by 14,000 visitors and received the MURI award</li> <li>Organizing the UMK Academy through the provision of training and coaching for 717 MSMEs which resulted in 511 MSMEs being upgraded, 74 halal certifications, and appropriate technology grants for MSME champions</li> <li>Implementation of the Pertapreneur Agregator as a competition and business coaching for 100 MSMEs which resulted in 10 aggregators from MSMEs with business innovations in the areas of partnership synergy, environmental sustainability, empowering the best women, empowering digital and technology, and empowering the best youth</li> <li>182 Fostered MSMEs have been included in the exhibition by generating MSME income which was recorded at IDR 49,958,195,870</li> <li>Implementation of the Coastal Women's Empowerment Program through the provision of entrepreneurial training and capital assistance to women entrepreneurs</li> </ul>	<ul style="list-style-type: none"> <li>Perluasan pasar UMKM Binaan dan Pembinaan UMKM</li> <li>Menjadikan UMKM naik kelas dengan capaian indikator perluasan pasar, peningkatan nilai pinjaman, peningkatan kapasitas produksi, peningkatan omzet, pelibatan masyarakat sekitar dalam berproduksi, dan perolehan sertifikat nasional/internasional</li> <li>Meningkatkan kolaborasi UMKM dalam pengembangan usaha yang saling menguntungkan.</li> <li>Meningkatkan kesejahteraan dan kemandirian usaha perempuan berbasis potensi lokal</li> <li>Expansion of the MSME Fostered Market and MSME Development</li> <li>Making MSMEs class up with achievement indicators of market expansion, increasing loan value, increasing production capacity, increasing turnover, involving local communities in production, and obtaining national/international certificates</li> <li>Increase MSME collaboration in mutually beneficial business development.</li> <li>Improving the welfare and independence of women's businesses based on local potential</li> </ul>
10	<b>Program Unggulan PROPER PROPER Flagship Program</b> TPB 1, 6, 7, 8, 13 	<ul style="list-style-type: none"> <li>Kamojang Green Living Ecosystem mereduksi sampah anorganik 11,4 ton/tahun, menghemat listrik 41%, dan menanam 62.000 pohon.</li> <li>Klayas Semarak berhasil mengaliri air kepada 389 jiwa, meningkatkan pendapatan hingga Rp 250.000/bulan</li> <li>Kilau Permata Hijau di Pesisir Gambut menyerap 21.127,81 Ton CO2 dan memberikan pendapatan usaha tani hortikultura sebesar Rp 226.150.000</li> <li>PERTAMINA Sahabat Nelayan mengurangi emisi sebesar 2,815 ton CO2eq dari konversi BBM ke LPG dan pemasangan panel surya di perahu nelayan.</li> <li>Program Green Beach Kelan telah mendatangkan 11.163 wisatawan/tahun serta berhasil mengelola sampah laut hingga 4,5 ton/tahun.</li> <li>Kamojang Green Living Ecosystem reduced inorganic waste by 11.4 tons per year, saved 41% of electricity, and planted 62,000 trees.</li> <li>Klayas Semarak successfully provided water to 389 people, increasing their monthly income by up to Rp 250,000.</li> <li>Kilau Permata Hijau in Gambut Coastal absorbed 21,127,81 tons of CO2 and provided horticulture farming business income amounting to Rp 226,150,000.</li> <li>PERTAMINA Sahabat Nelayan reduced emissions by 2,815 tons of CO2eq through converting fuel to LPG and installing solar panels on fishing boats.</li> <li>The Green Beach Kelan program attracted 11,163 tourists per year and successfully managed marine waste of up to 4.5 tons per year.</li> </ul>	<ul style="list-style-type: none"> <li>Mengurangi emisi karbon serta meningkatkan kesadaran masyarakat akan lingkungan dan pengelolaan sampah dan limbah.</li> <li>Meningkatkan penghematan energi masyarakat dan membuka akses energi bersih bagi masyarakat</li> <li>Meningkatkan pemberdayaan masyarakat, pendapatan, kesejahteraan, dan tingkat pendidikan masyarakat, termasuk di area pesisir.</li> <li>Reducing carbon emissions and raising public awareness of environmental issues and waste management.</li> <li>Increasing energy savings for the community and providing access to clean energy.</li> <li>Enhancing community empowerment, income, welfare, and education levels in coastal areas.</li> </ul>

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CAPAIAN PROGRAM TANGGUNG JAWAB SOSIAL LINGKUNGAN



### Program sehat anak tercinta dan ibu & Akses Sanitasi Layak

Health Program for Children and Mothers and Access to a Proper Sanitation

17,416




Penerima Manfaat

Benefit Recipients

Mendapatkan akses posyandu dan edukasi PHBS serta Kesehatan gizi ibu & anak  
Get posyandu access and PHBS education as well Maternal & child nutritional health

63




Balita

Toddlers

Mendapatkan perawatan gizi  
Get nutritional care


2,196



Kepala Keluarga

Heads of Household

Menjadi penerima manfaat untuk akses sanitasi layak dan air bersih  
Be a recipient access benefits proper sanitation and water clean




### Program Desa Energi Berdikari

Energy Village Independent Program

15

Program Programs



16,000

watt peak


1 program Hybrid (pembangki listrik tenaga surya & angin)  
1 Hybrid Program (electric generator solar & wind)

601,450

m<sup>3</sup>/tahun  
m<sup>3</sup>/year





2 program Biogas & Biometana

2 Biogas & Biomethane program



### Program Keanekaragaman Hayati

Biodiversity Program

Flora	Fauna
<p style="font-size: 24px; font-weight: bold;">104</p> <p>Program Programs</p>  <p style="font-size: 10px;">Kehati Flora Kehati Flora</p> <p style="font-size: 24px; font-weight: bold;">2,507</p> <p>Orang People</p> <p style="font-size: 10px;">Penerima Manfaat Benefit Recipients</p>	<p style="font-size: 24px; font-weight: bold;">50</p> <p>Program Programs</p>  <p style="font-size: 10px;">Konservasi Fauna Animal Conservation</p>
<p style="font-size: 24px; font-weight: bold;">1,765,450</p> <p>Bibit Tumbuhan Plant Seeds</p>  <ul style="list-style-type: none"> <li>• 1 Miliar/tahun total pendapatan kelompok</li> <li>• 12.005,88 ton CO<sub>2</sub>eq/tahun serapan emisi karbon</li> <li>• 1 Billion/year total group income</li> <li>• 12.005.88 tons of CO<sub>2</sub>eq/year absorption of carbon emissions</li> </ul>	 <p style="font-size: 24px; font-weight: bold;">28,138</p> <p>Ekor/Animals</p> <p style="font-size: 10px;">Fauna Terkonservasi Conservation Fauna</p>



### Program CSV

Corporate Shared Value Program



18,549

Botol  
Bottles

Penjualan Pelumas Enduro

Sales of Lubricants Enduro



1.4

Billion/Year

Omset Penjualan Pelumas Enduro, Jasa Service dan Sparepart  
Sales Turnover Enduro Lubricants, Services Service and Spare Parts



### Program Pengentasan Kemiskinan - Sembako

Alleviation Program Poverty - Groceries

12,000

Penerima Manfaat  
Benefit Recipients



Lokasi : Jakarta, Kota Palopo, Cirebon, Balikpapan  
Location : Jakarta, Kota Palopo, Cirebon, Balikpapan



## ENVIRONMENTAL SOCIAL RESPONSIBILITY PROGRAM ACHIEVEMENTS

- 38,810 Kepala Keluarga penerima manfaat/Heads of households as benefit recipients
- 1.1 Billion/year total multiplier effect
- 396,796 tonCO<sub>2</sub>eq/year reduksi emisi karbon/carbon emissions reduction

**1,500**  
watt



1 Program Micro Hydro  
1 Micro-Hydro Program

**67,800**  
watt peak



11 program PLTS  
11 PLTS programs



### Program Pendidikan Education Program

**474**

Mahasiswa  
Students

Beasiswa S1  
Regular  
S1 Regular  
scholarship

**230**

Mahasiswa  
Students

Beasiswa Afirmasi  
Daerah Operasi  
Affirmation  
Scholarship  
Operation Area

**97**



Mahasiswa  
Students

Beasiswa Vokasi  
Mahasiswa  
Student  
Vocational  
Scholarship

**320**



Difabel  
Dissabilities

Menerima  
Pendidikan/pelatihan  
keterampilan  
Accept Education/  
training Skills



**320**

Difabel Memiliki pekerjaan  
Dissabilities Have a job

**326**

Orang/People



Penerima Manfaat Program  
Benefit Recipients Program

**24**

Bengkel/Workshops

Enduro Entrepreneurship  
Program  
Enduro Entrepreneurship  
Program

## Hutan Pertamina Pertamina Forest

Program Konservasi dan reforestasi hutan dengan penanaman pohon mangrove dan daratan  
Forest Conservation and Reforestation Program with planting mangrove trees and land

**104**

Program  
Programs

Keanekaragaman hayati flora  
Biodiversity of flora



**4,783**



Penerima Manfaat  
Benefit Recipients

**>4,170,276**

Tumbuhan  
Plants

Di antaranya mangrove, anggrek, dan pohon daratan lainnya.  
Among them are mangroves, orchids, and trees other lands.



**120,005.88**

ton CO<sub>2</sub>eq/tahun  
ton CO<sub>2</sub>eq/year

Reduksi emisi karbon  
Carbon Emission Reduction



Total Penerima Manfaat  
Total Beneficiaries

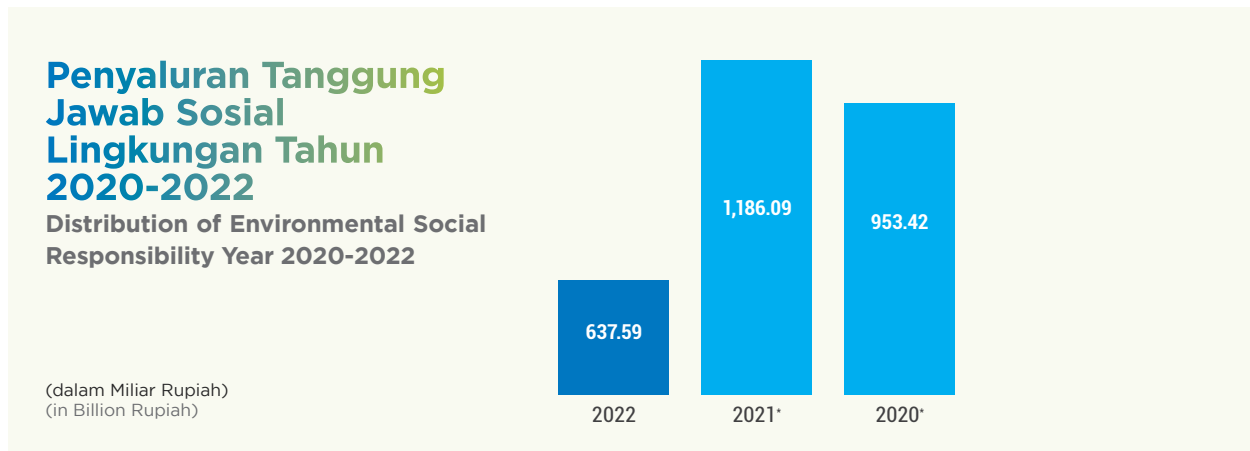
**45,000**

Orang/People



**Realisasi dana Tanggung Jawab Sosial Lingkungan (TJSL) yang telah disalurkan**

**Realization of Environmental Social Responsibility funds that have been distributed**



\*)Restated

	Tujuan Pembangunan Berkelanjutan Sustainable development goals	TJSL Bantuan 2022 TJSL Assistance 2022
<b>A</b>	<b>PILAR SOSIAL/SOCIAL PILLAR</b>	<b>192,083,733,321</b>
1	TPB 1 : Kemiskinan/SDG 1: No Poverty	87,287,054,287
2	TPB 2 : Tanpa Kelaparan/SDG 2: Zero Hunger	2,954,427,200
3	TPB 3 : Kesehatan/SDG 3: Health	24,779,834,905
4	TPB 4 : Pendidikan/SDG 4: Education	75,039,855,534
5	TPB 5 : Kesetaraan Gender/SDG 5: Gender Equality	2,022,561,396
<b>B</b>	<b>PILAR EKONOMI/ECONOMIC PILLAR</b>	<b>322,109,691,405</b>
1	TPB 7 : Energi Bersih/SDG 7: Clean Energy	6,035,925,381
2	TPB 8 : Pekerjaan Layak & Pertumbuhan Ekonomi SDG 8: Decent Work & Economic Growth	315,758,766,024
3	TPB 9 : Industri, Inovasi, Infrastruktur SDG 9: Industry, Innovation, Infrastructure	100,000,000
4	TPB 10 : Berkurangnya kesenjangan/SDG 10: Reduced Inequalities	215,000,000
<b>C</b>	<b>PILAR LINGKUNGAN/ENVIRONMENTAL PILLAR</b>	<b>121,223,091,798</b>
1	TPB 6 : Air Bersih dan Sanitasi Layak SDG 6: Clean Water and Sanitation	2,066,108,640
2	TPB 11: Kota dan Pemukiman Yang Berkelanjutan SDG 11: Sustainable Cities and Communities	55,859,333,076
3	TPB 12 : Konsumsi & Produksi Bertanggung Jawab SDG 12: Responsible Consumption & Production	5,234,112,320
4	TPB 13 : Perubahan Iklim/SDG 13: Climate Change	6,963,619,074
5	TPB 14 : Ekosistem Lautan/SDG 14: Life Below Water	22,974,283,658
6	TPB 15 : Ekosistem Daratan/SDG 15: Life on Land	28,125,635,030
<b>D</b>	<b>TATA KELOLA/GOVERNANCE PILLAR</b>	
	TPB 16: Perdamaian, Keadilan dan Kelembagaan yang Tangguh SDG 16: Peace, Justice and Strong Institutions	2,169,650,728
<b>TOTAL</b>		<b>637,586,167,252</b>



## Keberpihakan Pada Penduduk Asli/Masyarakat Adat [GRI 411-1, 11.17.2, 11.16.2, 11.17.3, SOC-10.C1, SOC-10.A1]

Perseroan selalu memiliki keberpihakan pada penduduk asli atau masyarakat adat dalam menjalankan kegiatan operasionalnya. Masyarakat adat memiliki hak atas sumber daya alam yang berada di wilayahnya, dan Perseroan memahami bahwa keberlanjutan operasionalnya tergantung pada hubungan yang baik dengan masyarakat adat.

Perseroan berusaha melibatkan masyarakat adat mulai dari perencanaan hingga pelaksanaan dan *monitoring*. Perseroan juga selalu memperhatikan kesejahteraan masyarakat adat dan memberikan dukungan dalam bentuk program-program sosial, seperti program kesehatan, pendidikan, dan pembangunan infrastruktur.

Selain itu, Perseroan juga memastikan bahwa tidak ada insiden yang melibatkan penduduk asli atau masyarakat adat dalam kegiatan operasionalnya. Secara teratur, Perseroan melakukan evaluasi dan monitoring terhadap kegiatan operasionalnya untuk memastikan bahwa tidak ada dampak negatif yang dirasakan oleh masyarakat adat. Selama tahun 2022, tidak terdapat insiden pelanggaran yang melibatkan hak-hak masyarakat adat. Sesuai Peraturan Menteri ESDM Nomor 37 Tahun 2016, Perseroan juga telah memberikan 10% *participating interest* kepada pemerintah daerah melalui Badan Usaha Milik Daerah (BUMD). [GRI 411-1]

### Suku Sakai

Pasca alih-kelola Blok Rokan, Perseroan melanjutkan kebijakan pelibatan pekerja lokal yang berasal dari Masyarakat Adat Tempatan di Provinsi Riau. Beberapa dari mereka telah menduduki jabatan strategis di PT Pertamina Hulu Rokan. WK Rokan mendukung Suku Sakai yang ada di Kabupaten Bengkalis dan Kabupaten Siak dalam bentuk pemberian beasiswa dan program inkubator karir bagi mahasiswa Suku Sakai, program Pertanian Terpadu di Desa Tenganau, program Pencegahan *Stunting*, pembinaan dan pemasaran produk kerajinan pandan, dan program Bank Sampah. [11.17.3]

### Suku Anak Dalam

Pemberdayaan Suku Anak Dalam (SAD) dilakukan melalui berbagai upaya, antara lain memberikan pendidikan anak bagi warga SAD secara berkelanjutan serta beasiswa, meningkatkan ekonomi masyarakat lokal melalui kegiatan produksi pemanfaatan SDA serta peningkatan kualitas SDM, dan meningkatkan kesehatan masyarakat SAD melalui perbaikan gizi. [11.17.3]

## Support For The Indigenous Peoples [GRI 411-1, 11.17.2, 11.16.2, 11.17.3, SOC-10.C1, SOC-10.A1]

The Company always gives support for the indigenous peoples in carrying out its operational activities. Indigenous peoples have rights over the natural resources in their territories, and the Company believes that the sustainability of its operations depends on good relations with indigenous peoples.

The Company eager to involve indigenous peoples from planning to implementation and monitoring. The Company always prioritize the welfare of indigenous peoples and provides support in the form of social programs, such as health, education, and infrastructure development programs.

Furthermore, the Company also ensures that there are no incidents involving indigenous peoples in its operational activities. On a regular basis, the Company evaluates and monitors its operational activities to ensure that there are no negative impacts felt by indigenous peoples. During 2022, there were no incidents of violations involving the rights of indigenous peoples. In accordance with Regulation of the Minister of Energy and Mineral Resources Number 37 of 2016, the Company has also provided a 10% participating interest to the local government through regionally owned enterprises (BUMD). [GRI 411-1]

### Sakai Tribe

After the acquisition of Rokan Block, PERTAMINA maintained the policy of involving local workers originating from the local indigenous peoples in Riau Province. Some of them have held strategic positions at PT Pertamina Hulu Rokan. WK Rokan supports the Sakai Tribe in Bengkalis Regency and Siak Regency in the form of providing scholarships and career incubator programs for Sakai University students, the Integrated Agriculture program in Tenganau Village, the Stunting Prevention program, fostering and marketing of pandan handicraft products, and the Garbage Bank program. [11.17.3]

### Anak Dalam Tribe

Empowerment of Anak Dalam Tribe is conducted through various efforts, including providing children's education for Anak Dalam Tribe residents in a sustainable manner and scholarships, improving the local community's economy through production activities utilizing natural resources and improving the quality of human resources, and improving the health of Anak Dalam Tribe communities through nutrition improvement. [11.17.3]

# Tanggung Jawab Pengembangan Produk dan/atau Jasa Keberlanjutan



## Responsibility for Sustainable Product and/or Service Development

### KOMITMEN UNTUK MEMBERIKAN LAYANAN ATAS PRODUK DAN/ATAU JASA YANG SETARA KEPADA KONSUMEN [OJK F.17]

Perseroan sebagai penyedia produk dan jasa di bidang energi berkomitmen untuk melaksanakan operasional harian dalam melayani *end customer* dilakukan secara konsisten dan terukur. Hal ini dilakukan agar tingkat kepuasan dan loyalitas konsumen tetap terjaga serta mampu menjaga atau mengangkat *brand image* Perseroan. SPBU sebagai *touch point* utama menjalankan standarisasi operasional dan pengelolaan melalui program “Pertamina Way” yang memiliki 5 elemen utama yaitu Staf, *Quality & Quantity*, Keterawatan Peralatan & Fasilitas, Format Fisik, dan Penawaran Produk Non Fuel Retail dan Layanan Tambahan. Pada tahun 2022, terdapat 3.119 SPBU yang lulus audit Pertamina Way di seluruh Indonesia. Di samping itu, Perseroan berkomitmen memberikan layanan atas produk dan jasa yang setara kepada konsumen dengan mendukung kebijakan Pemerintah melalui program BBM Satu Harga.

### COMMITMENT TO PROVIDING EQUAL PRODUCTS AND/OR SERVICES TO CONSUMERS [OJK F.17]

The Company as a provider of products and services in the energy sector is committed to conduct daily operations in serving end customers in a consistent and measurable manner. This effort is to maintain the level of customer satisfaction and loyalty with a view to maintain or enhance the Company’s brand image. Gas stations as the main touch point, conduct a standardization of operations and management through the “Pertamina Way” program which has 5 main elements namely Staff, Quality & Quantity, Equipment & Facilities Maintenance, Physical Format, and Retail Non-Fuel Product Offerings and Additional Services. In 2022, there were 3,119 gas stations that had passed the Pertamina Way audit throughout Indonesia. Furthermore, the Company is committed to providing equal products and services to consumers by supporting Government policies through the One Price Fuel program.

### INOVASI DAN PENGEMBANGAN PRODUK/JASA PEMBANGUNAN BERKELANJUTAN [OJK F.26, EM-RM-410A.1, EM-RM-410A.2, CCE-3.C2, CCE-3.A1, CCE-3.A8]

Perseroan senantiasa melakukan pengembangan dan penelitian untuk menciptakan produk ramah lingkungan, penciptaan akses kepada sumber daya baru dan pengurangan emisi produk minyak dan gas untuk mencapai target *net zero emission*.

### INNOVATION AND DEVELOPMENT OF SUSTAINABLE DEVELOPMENT PRODUCTS/SERVICES [OJK F.26, EM-RM-410A.1, EM-RM-410A.2, CCE-3.C2, CCE-3.A1, CCE-3.A8]

The Company continues to conduct development and research to create environmentally friendly products, access to new resources and reduce emissions of oil and gas products to achieve net zero emission target.

Di bidang hulu, riset-riset pengembangan Geothermal terus digalakkan sebagai upaya mendapatkan alternatif energi bersih di samping riset-riset pengembangan Migas Non Konvensional (MNK) untuk menunjang keberlanjutan bisnis hulu PERTAMINA dengan target produksi 1 juta BOPD di tahun 2030.

In the upstream sector, geothermal development research continues to be encouraged as an effort to obtain clean energy alternatives in addition to non-conventional oil and gas (MNK) development research to support the sustainability of Pertamina’s upstream business with a production target of 1 million BOPD by 2030.

Di bidang hilir, Perseroan mengembangkan *Hydrotreated Vegetable Oil* (HVO) sebagai komponen campuran 40% bahan bakar nabati, *Methanol* dan *Ethanol* sebagai Komponen Produk *Gasoline Methanol Ethanol* (GME), serta formulasi katalis untuk memproduksi bio fuel dimaksud. Untuk mengurangi emisi gas buang kendaraan dari produk BBM Eksisting, Perseroan menggantinya dengan bahan bakar dengan RON yang lebih tinggi.

In the downstream sector, the Company develops Hydrotreated Vegetable Oil (HVO) as a component of a 40% mixture of vegetable fuels, Methanol and Ethanol as Components for Gasoline Methanol Ethanol (GME) Products, as well as catalyst formulation to produce the intended bio fuel. To reduce vehicle exhaust emissions from existing fuel oil products, the Company replaces them with a higher RON fuel oil.

<b>Nilai RON dan CN BBM PERTAMINA</b> PERTAMINA Fuel Oil's RON and CN values					
Tidak Ramah Lingkungan Non-Eco-Friendly	Lebih Ramah Lingkungan Eco-Friendly				
Premium	Pertalite	Pertamax	Pertamax Turbo	Dexlite	Pertadex
RON 80	RON 90	RON 92	RON 98	CN 51	CN 55

Berikut adalah kontribusi dari kegiatan pengembangan riset dan inovasi teknologi

The following is a contribution from research and technology innovation development activities in low carbon.

<b>Tabel Kontribusi dari Kegiatan Pengembangan Riset dan Inovasi Teknologi</b> Contribution from Research Development Activities and Technological Innovation			
	2022	2021	2020
Kontribusi (Juta USD) Contribution (USD Million)	14.11	13.66	23.10

Di samping itu, inovasi produk dan jasa yang dilakukan Perseroan baik yang masih dalam tahapan riset, maupun yang telah beroperasi secara komersial, sebagai berikut:

Furthermore, the product and service innovations conducted by the Company, both those that are still in the research stage and those that are already operating commercially, are as follows:

No	Jenis Inovasi/Produk dan jasa Type of Innovation/Products and Services	Keterangan Description
1.	Pertasurf 31	Produk yang diformulasikan secara khusus agar dapat memenuhi kebutuhan sebagai AFF, OSD, dan Degreaser sekaligus dalam 1 produk. Products that are specially formulated to meet the needs of AFF, OSD and Degreaser all in 1 product.
2.	Musicool MC-22	Musicool MC-22 adalah Refrigeran Hidrokarbon produksi PERTAMINA yang dapat digunakan untuk menggantikan Refrigeran Sintetik jenis R-22, untuk dipakai sebagai bahan pendingin pada AC Split, Chiller, Refrigerator, Cold Storage dan lain-lain. Musicool MC-22 is a Hydrocarbon Refrigerant produced by PERTAMINA which can be used to replace Synthetic Refrigerant type R-22, for a cooling agent in Split ACs, Chillers, Refrigerators, Cold Storage, and others.
3.	Breezon	Merupakan next generation refrigerant produk kilang PERTAMINA nonCFC berbahan dasar propylene yang aman, ramah lingkungan, dan hemat energi. Sebagai <i>refrigerant</i> alami, Breezon memiliki nilai <i>Global Warming Potential (GWP)</i> paling rendah dibandingkan R32, R410a dan R22. The next generation refrigerant made from PERTAMINA's non-CFC refinery safe, environmentally friendly and energy efficient propylene base. As a refrigerant in nature, Breezon has the lowest Global Warming Potential (GWP) value compared to R32, R410a and R22.
4.	PERTAMINA HAP	Hydrocarbon Aerosol <i>Propellant</i> adalah <i>propellant</i> ramah lingkungan, sebagai pendorong produk aerosol dari dalam kemasan sehingga produk dapat keluar dalam bentuk gas. Hydrocarbon Aerosol Propellant is an environmentally friendly propellant for aerosol products from inside the packaging so that the product can come out in gaseous form.
5.	Solphy-2	Solphy-2 adalah Solvent/pelarut Hydrocarbon yang ramah lingkungan dengan memenuhi regulasi konvensi Vienna dan Protokol Montreal terkait pengurangan dampak buruk terhadap Ozon ( <i>Ozone Depleting Substance</i> ) dan memenuhi spesifikasi ASTM D235. Solphy-2 is an environmentally friendly Hydrocarbon Solvent by meeting the regulations of the Vienna convention and the Montreal Protocol regarding the reduction of adverse effects on Ozone (Ozone Depleting Substance) and meets ASTM D235 specifications.
6.	Dearomatized White Spirit Solvent	Fraksi kerosene dengan boiling range 190-250 °C. Jernih, tidak berbau, dan ramah lingkungan. Biasanya digunakan untuk cat, vernish, ink, dan <i>dry cleaning</i> . Kerosene fraction with a boiling range of 190-250 °C. Clear, odorless and environmentally friendly. Usually used for paint, varnish, ink, and dry cleaning.

No	Jenis Inovasi/Produk dan jasa Type of Innovation/Products and Services	Keterangan Description
7.	Dearomatized SBP Solvent	Fraksi naphtha 40-65 oC (SBP 40/65) dan 80-110 oC (SBP 80/100). Jernih, tidak berbau, dan ramah lingkungan. Naphtha fraction 40-65 oC (SBP 40/65) and 80-110 oC (SBP 80/100). Clear, odorless and environmentally friendly.
8.	Smooth Fluid SF-04 dan SF-05	Cairan fluida yang digunakan dalam kegiatan pengeboran yang ramah lingkungan. Environmentally friendly fluids used in drilling activities.
9.	Fastron Eco Green	Produk pelumas sintesis khusus diformulasikan untuk kendaraan <i>Low Cost Green Car</i> (LCGC), untuk perlindungan maksimal terhadap keausan mesin dan konsumsi BBM. Synthetic lubricant products specifically formulated for Low-Cost Green Car (LCGC) vehicles, for maximum protection against engine wear and fuel consumption.
10.	Exdo-4	<i>Rubber processing oil</i> (RPO) yang bersifat non-karsinogenik dan ramah lingkungan. Rubber processing oil (RPO) which is non-carcinogenic and environmentally friendly.
11.	PERTAMINA Green Coke	Green Coke merupakan produk dengan kandungan sulfur rendah sebagai bahan baku Calcined Coke yang digunakan sebagai pengurai pabrik aluminium, dan lain-lain. Green Coke is a product with a low sulfur content as a raw material for Calcined Coke which is used as a decomposer for aluminum factories, etc.
12.	Biodiesel B30	Biosolar dengan campuran 30 persen <i>fatty acid methyl ester</i> (FAME) dan 70% campuran solar. Biodiesel with a mixture of 30 percent fatty acid methyl ester (FAME) and 70% mixture of diesel.
13.	Biodiesel B40	Biosolar dengan campuran 40 persen <i>fatty acid methyl ester</i> (FAME) dan 60% campuran solar. Namun produk ini masih dalam kajian uji jalan. Biodiesel with a mixture of 40 percent fatty acid methyl ester (FAME) and 60% mixture of diesel. However, this product is still in the road test study.
14.	PERTAMINA Dex sulfur 50 PPM	Bahan bakar diesel hasil produksi kilang dalam negeri, dengan cetane number 53 dan kandungan sulfur 50 PPM, sesuai standar Euro 4. Dengan kandungan sulfur yang sangat rendah, kinerja mesin menjadi lebih lama, lebih tangguh, dan lebih aman. Diesel fuel produced by domestic refineries, with cetane number 53 and a sulfur content of 50 PPM, according to Euro 4 standards. With a very low sulfur content, engine performance that lasts longer, and more robust and safer.
15.	Green Diesel (D100)/ Renewable Diesel	Produk yang 100% berbahan nabati yakni Kelapa Sawit. Produk ini menggunakan material RBDPO ( <i>Refined, Bleached and Deodorized Palm Oil</i> ), digunakan sebagai bahan bakar hijau untuk <i>Generator Set</i> (Genset), bagi kendaraan listrik atau <i>Electric Vehicle</i> (EV). Product that uses 100% vegetable ingredient, namely Palm Oil. This product uses RBDPO (Refined, Bleached and Deodorized Palm Oil) material, which is used as a green fuel for Generator Sets (Gensets), for electric vehicles or Electric Vehicles (EV).
16.	Green Gasoline	Bahan bakar bensin ramah lingkungan yang berasal dari CPO ( <i>Crude Palm Oil</i> ) atau minyak sawit mentah yang diproses dengan teknologi <i>co-processing</i> . Environmentally friendly gasoline fuel derived from CPO (Crude Palm Oil) which is processed with co-processing technology.
17.	Bioavtur J2.4/ Sustainable Aviation Fuel	Biofuel untuk transportasi udara yang mengandung 2,4% biofuel yang terbuat dari olahan minyak sawit. Biofuel for air transportation containing 2.4% biofuel made from processed palm oil.
18.	Green LPG	Bahan bakar gas ramah lingkungan yang berasal dari CPO ( <i>Crude Palm Oil</i> ) atau minyak sawit mentah yang diproses dengan teknologi <i>co-processing</i> . Environmentally friendly gas fuel derived from CPO (Crude Palm Oil) processed with co-processing technology.
19.	Green Energy Station (GES)	SPBU yang menggunakan panel surya dan/atau menyediakan SPKLU dan/atau menyediakan SPBKLU Gas stations that use solar panels and/or provide SPKLU and/or provide SPBKLU
20.	Solar PV	Pembangkit listrik bertenaga surya sebagai salah satu sumber energi ramah lingkungan yang mengubah energi matahari menjadi listrik dengan menggunakan modul fotovoltaik. Solar-powered power plants as a source of environmentally friendly energy that converts solar energy into electricity using photovoltaic modules.
21.	Biomass/Biogas power plant	Pembangkit listrik yang dioperasikan PERTAMINA Power Indonesia dengan menggunakan limbah kelapa sawit <i>Palm Oil Mill Effluent</i> (POME) sebagai bahan bakar. The power plant that is operated by PERTAMINA Power Indonesia using Palm Oil Mill Effluent (POME) as fuel.

No	Jenis Inovasi/Produk dan jasa Type of Innovation/Products and Services	Keterangan Description
22.	Geothermal power plant	Penggunaan panas bumi untuk menghasilkan listrik sehingga dapat mengurangi emisi dan mengoptimalkan sumber daya energi natural domestik. The use of geothermal energy to generate electricity, thereby reducing emissions and optimizing domestic natural energy resources.
23.	Geothermal steam field	Penggunaan lapangan panas bumi dimana uap yang dihasilkan dipakai untuk membangkitkan listrik PLTP yang dimiliki pelanggan sehingga dapat mengurangi emisi dan mengoptimalkan sumber daya energi natural domestik. Use of geothermal fields where the steam produced is used to generate electricity for PLTP (Geothermal Power Plants) owned by customers to reduce emissions and optimize domestic natural energy resources.
24.	Biomethane	Biomethane dari POME untuk dibawa ke pelanggan melalui moda pipa atau CNG. Biomethane from POME to be brought to customers via pipeline or CNG mode.
25.	Carbon Capture Utilization and Storage (CCUS)	<i>Teknologi Carbon Capture Utilization and Storage (CCUS)</i> untuk menekan emisi karbon dan sebagai bagian dari upaya <i>Enhance Oil and Gas Recovery</i> di sumur-sumur PERTAMINA untuk meningkatkan produksi migas negara. Carbon Capture Utilization and Storage (CCUS) technology to reduce carbon emissions and as part of the Enhance Oil and Gas Recovery efforts at PERTAMINA's wells to increase the country's oil and gas production.

#### PENGEMBANGAN BIO DIESEL B35 DAN B40

Untuk meningkatkan kualitas bahan bakar diesel, Perseroan telah meningkatkan persentase pencampuran Bahan Bakar Nabati jenis Biodiesel (FAME) ke dalam BBM jenis Solar dari 30% (B30) menjadi 35% (B35) sesuai dengan Permen ESDM No. 208.K/EK.05/DJE/2022. Perseroan juga melakukan Roadtest B35 dan B40 dengan hasil menunjukkan perbaikan karakteristik angka setana, lubrisitas, dan kandungan sulfur dibandingkan minyak solar B0.

Untuk mempersiapkan implementasi yang lebih luas, Perseroan melakukan Persiapan Sarfas B35 di seluruh *supply point*, serta melakukan sosialisasi ke konsumen terkait implementasi B35, khususnya customer industri dan retail.

#### DEVELOPMENT OF B35 AND B40 BIO DIESEL

To improve the quality of diesel fuel, the Company has increased the percentage of mixing of Biodiesel type of vegetable fuel (FAME) into Diesel fuel from 30% (B30) to 35% (B35) in accordance with Energy and Mineral Resources Minister Regulation No. 208.K/EK.05/DJE/2022. The Company has also conducted Roadtest B35 and B40 with results that showing improved number of cetane, lubricity and sulfur content characteristics compared to B0 diesel oil.

To prepare for wider implementation, the Company has been preparing B35 Sarfas at all supply points, as well as conducting dissemination to consumers regarding the implementation of B35, especially industrial and retail customers.

#### PRODUK/JASA YANG SUDAH DIEVALUASI KEAMANANNYA BAGI PELANGGAN

[OJK F.27, GRI 416-1, 11.3.3, GRI 416-2, SHS-5.C1, SHS-5.C2, SHS-5.C3, GRI 417-1, 417-2, 417-3]

Produk-produk yang diproduksi telah dilengkapi informasi label kemasan yang patut diketahui pelanggan. Pencantuman informasi sesuai Peraturan Menteri Perdagangan Republik Indonesia No.73/MDAG/PER/9/2015 tentang Kewajiban Pencantuman Label dalam Bahasa Indonesia pada Barang. Selama tahun 2022, Perseroan tidak pernah mendapatkan pengaduan maupun sanksi hukum terkait informasi dalam label produk yang dicantumkan, maupun sanksi hukum terkait dugaan pelanggaran komunikasi pemasaran. Seluruh produk (100%) sudah dilakukan evaluasi keamanannya bagi pelanggan.

#### PRODUCTS/SERVICES THAT HAVE BEEN EVALUATED FOR THE SAFETY OF CUSTOMERS [OJK F.27, GRI 416-1, 11.3.3, GRI 416-2, SHS-5.C1, SHS-5.C2, SHS-5.C3, GRI 417-1, 417-2, 417-3]

The products produced have been equipped with packaging label information that customers should know. The inclusion of information is in accordance with the Regulation of the Minister of Trade of the Republic of Indonesia No.73/MDAG/PER/9/2015 concerning the Obligation to Include Labels in Indonesian on Goods. During 2022, the Company never received complaints or legal sanctions related to the information on the product labels listed, nor legal sanctions related to allegations of violations of marketing communication. All products (100%) have undergone safety evaluations for customers.



**DAMPAK PRODUK/JASA [OJK F.28]**

Dalam menjalankan kegiatan operasionalnya, Perseroan senantiasa memberikan dampak positif atas produk yang dihasilkannya yaitu mampu menggerakkan roda perekonomian masyarakat Indonesia. Di samping itu, Perseroan juga memiliki dampak negatif berupa adanya emisi yang dihasilkan dari kegiatan operasional Perseroan. Namun demikian, Perseroan memiliki upaya mitigasi dari dampak negatif yang dihasilkan berupa pengembangan dan penggunaan produk yang ramah lingkungan.

**IMPACT OF PRODUCTS/SERVICES [OJK F.28]**

In conducting its operational activities, the Company always gives positive impact on producing its products, in order to move the economy of the Indonesian people. Furthermore, the Company also has a negative impact in the form of emissions resulting from the Company's operational activities. However, the Company has made efforts to mitigate the negative impacts in the form of developing and using environmentally friendly products.

**JUMLAH PRODUK YANG DITARIK KEMBALI [OJK F.29]**

Sepanjang tahun 2022, tidak terdapat produk yang ditarik kembali.

**TOTAL RECALLED PRODUCTS [OJK F.29]**

Throughout 2022, there were no product recalls.

**SURVEI KEPUASAN PELANGGAN TERHADAP PRODUK DAN/ATAU JASA [OJK F.30]**

Pelanggan merupakan salah satu aspek penting dalam menunjang keberlanjutan bisnis Perseroan. Oleh karena itu, Perseroan senantiasa melakukan survei kepuasan pelanggan pada setiap tahunnya. Survei ini dilakukan sebagai evaluasi terhadap kinerja Perseroan dalam memberikan pelayanan dan mengukur tingkat kesetiaan pelanggan terhadap penggunaan produk dan/atau jasa yang diberikan oleh Perseroan. Adapun hasil survei kepuasan pelanggan yang dilaksanakan Perseroan sejak tahun 2019 sampai 2022, sebagai berikut.

**CUSTOMER SATISFACTION SURVEY ON PRODUCTS AND/OR SERVICES [OJK F.30]**

Customers are an important aspect in supporting the Company's business sustainability. Therefore, the Company conducts a customer satisfaction survey every year. This survey is conducted as an evaluation of the Company's performance in providing services and measuring the level of customer loyalty towards the use of products and/or services provided by the Company. The results of the customer satisfaction survey conducted by the Company from 2019 to 2022 are as follows.

**Tabel Survei Kepuasan Pelanggan**  
Table of Customer Satisfaction Survey

Keterangan Description	Kepuasan Pelanggan (Skala Likert) Customer Satisfaction (Likert Scale)			
	2022	2021	2020	2019
Indeks Kepuasan Pelanggan Customer Satisfaction Index	4.29	4.28	4.1	3.8
Indeks Kesetiaan Pelanggan Customer Loyalty Index	4.18	4.32	4.1	3.9







1

2

3

4

Kinerja Keberlanjutan  
Kinerja Keberlanjutan

6

7



# Tata Kelola

Governance





# Struktur dan Komposisi Governance

[GRI 2-9, GRI 2-11, GOV-1.C1, GOV-1.C3]

## Governance Structure and Composition

Sesuai dengan Undang-Undang No. 40 tahun 2007 tentang Perseroan Terbatas, Organ Perseroan terdiri dari: **[2-9-a]**

- Rapat Umum Pemegang Saham (RUPS), sebagai organ tata kelola tertinggi
- Dewan Komisaris, bertanggung jawab mengawasi Direksi dalam mengelola Perseroan. Dewan Komisaris dipimpin Komisaris Utama, serta dibantu Komite Audit, Komite Nominasi dan Remunerasi serta Komite Investasi
- Direksi, bertanggung jawab mengelola Perseroan. Direksi dipimpin Direktur Utama sebagai Chief Executive Officer (CEO), memberikan arahan dan mengendalikan kebijakan visi, misi, dan strategi Perseroan. Direksi dibantu Sekretaris Perusahaan; Fungsi Legal Counsel and Compliance; Satuan Pengawasan Internal; dan Fungsi Health, Safety, Security, and Environmental (HSSE). **[2-11-a, 2-11-b]**

PERTAMINA's governance structure according to the Law Number 40 of 2007 concerning Limited Liability Companies consists of: **[2-9-a]**

- General Meeting of Shareholders (GMS), as the highest governance organ;
- The Board of Commissioners, has the responsibility to supervise the Board of Directors in managing the Company. The Board of Commissioners is led by the President Commissioner and is assisted by the Audit Committee, the Nomination and Remuneration Committee, and the Investment Committee;
- The Board of Directors, has the responsibility to manage the Company. The Board of Directors is led by President Director as Chief Executive Officer (CEO) and provides direction and controls the Company's vision, mission, and strategy policies. The Board of Directors is assisted by the Corporate Secretary; Legal Counsel and Compliance Function; Internal Audit Unit; and Health, Safety, Security, and Environmental (HSSE) Function. **[2-11-a, 2-11-b]**

Struktur tata kelola Perseroan telah disajikan pada Laporan Tahunan 2022 bagian Kerangka Tata Kelola.

The corporate governance structure has been presented in the 2022 Annual Report in the Governance Framework section.

Selama tahun 2022, komposisi Dewan Komisaris sebanyak 7 (tujuh) orang yang terdiri dari 1 (satu) orang Komisaris Utama/Komisaris Independen, 1 (satu) orang Wakil Komisaris Utama, 2 (dua) orang Komisaris, dan 3 (tiga) orang Komisaris Independen. Sementara itu, komposisi Direksi sebanyak 6 (enam) orang yang terdiri dari 1 (satu) orang Direktur Utama dan 5 (lima) orang Direksi. Rincian komposisi Dewan Komisaris dan Direksi dapat dilihat pada Laporan Tahunan 2022 pada bagian profil Dewan Komisaris dan Direksi **[2-9-c]**.

During 2022, the composition of the Board of Commissioners consisted of 7 (seven) people, consisting of 1 (one) President Commissioner/Independent Commissioner, 1 (one) Deputy President Commissioner, 2 (two) Commissioners, and 3 (three) Independent Commissioners. Meanwhile, the composition of the Board of Directors consisted of 6 (six) people composed of 1 (one) Managing Director and 5 (five) Directors. Details of the composition of the Board of Commissioners and Board of Directors can be found in the 2022 Annual Report in the profiles of the Board of Commissioners and Board of Directors section **[2-9-c]**.

### NOMINASI DAN SELEKSI DEWAN KOMISARIS DAN DIREKSI [GRI 2-10, GOV-1.A1]



### NOMINATION AND SELECTION OF THE BOARD OF COMMISSIONERS AND THE BOARD OF DIRECTORS [GRI 2-10, GOV-1.A1]

Proses nominasi dan seleksi anggota Dewan Komisaris dan Direksi mengacu pada Peraturan Menteri Badan Usaha Milik Negara Nomor PER-10/MBU/10/2020 Tentang Perubahan Atas Peraturan Menteri Badan Usaha Milik Negara Nomor PER-02/MBU/02/2015 Tentang Persyaratan dan Tata Cara Pengangkatan dan Pemberhentian Anggota Dewan Komisaris dan Dewan Pengawas Badan Usaha Milik Negara. Sedangkan prosedur pengangkatan Direksi mengacu pada Peraturan Menteri Badan Usaha Milik Negara Nomor

The nomination and selection process of the Board of Commissioners and the Board of Directors members refers to the Regulation of the Minister of State-Owned Enterprises Number PER-10/MBU/10/2020 concerning Amendments to the Regulation of the Minister of State-Owned Enterprises Number PER-02/MBU/02/2015 concerning Requirements and Procedures for Appointment and Dismissal of Members of the Board of Commissioners and Supervisory Board of State-Owned Enterprises. Meanwhile, the procedure for appointing

PER - 11/MBU/07/2021 Tentang Persyaratan, Tata Cara Pengangkatan, dan Pemberhentian Anggota Direksi Badan Usaha Milik Negara. Seluruh calon anggota Dewan Komisaris dan/atau Direksi PERTAMINA harus memenuhi persyaratan formil dan materil sesuai yang tertera pada ketentuan tersebut. Kriteria dan syarat terkait nominasi Direksi dan Komisaris diungkapkan lebih lengkap pada laporan tahunan Perseroan 2022 pada Bab Nominasi Anggota Dewan Komisaris dan Direksi.



**PENILAIAN KINERJA DEWAN KOMISARIS DAN DIREKSI [GRI 2-18]**

Kinerja Dewan Komisaris dan Direksi dievaluasi melalui pencapaian target dalam *Key Performance Indicator* (KPI) yang ditetapkan oleh pemegang saham. Proses evaluasi dilaksanakan secara berkala dan independent dengan penetapan akhir melalui mekanisme Rapat Umum Pemegang Saham (RUPS) Tahunan, untuk memastikan Perseroan memberikan manfaat terhadap aspek ekonomi, lingkungan, dan sosial. Oleh karenanya terdapat sejumlah KPI yang berkaitan dengan ketiga aspek antara lain target laba bersih dari sisi ekonomi, target pengurangan emisi untuk aspek lingkungan, serta target K3 dan CSR untuk aspek sosial.

**KEBIJAKAN REMUNERASI DEWAN KOMISARIS DAN DIREKSI [GRI 2-19, 2-20, 2-21, GOV-1.A5]**

Besaran remunerasi bagi anggota Dewan Komisaris dan Direksi Perseroan ditetapkan oleh RUPS/Menteri, dan berlaku setiap tahun selama 1 (satu) tahun dihitung sejak bulan Januari tahun berjalan. Penetapan mengacu pada pedoman sebagaimana tercantum dalam Peraturan Menteri Badan Usaha Milik Negara Nomor PER-13/MBU/09/2021 tanggal 24 September 2021 tentang Perubahan Keenam atas Peraturan Menteri Badan Usaha Milik Negara Nomor PER-04/MBU/2014 tentang Pedoman Penetapan Penghasilan Direksi, Dewan Komisaris, dan Dewan Pengawas BUMN. Rincian mengenai kebijakan dan besaran remunerasi Dewan Komisaris dan Direksi telah sajikan dalam Laporan Tahunan 2022 pada bagian Bab Kebijakan Remunerasi Dewan Komisaris dan Direksi.

Selain besaran remunerasi Dewan Komisaris dan Direksi, PERTAMINA melaporkan rasio total gaji pekerja dengan level tertinggi terhadap total gaji tahunan rata-rata untuk semua karyawan. Selain itu, PERTAMINA juga melaporkan rasio persentase kenaikan total gaji tahunan untuk pekerja dengan

the Board of Directors refers to the Regulation of the Minister of State-Owned Enterprises Number PER - 11/MBU/07/2021 Concerning Requirements, Procedures for Appointment and Dismissal of Members of the Board of Directors of State-Owned Enterprises. All prospective members of the Board of Commissioners and/or the Board of Directors of PERTAMINA are obliged to meet formal and material requirements stated in the said regulations. The criteria and requirements regarding the nomination of the Board of Directors and the Board of Commissioners are disclosed in more detail in the Company's 2022 Annual Report's Board of Commissioners and Board of Directors Nomination Chapter.

**PERFORMANCE ASSESSMENT OF THE BOARD OF COMMISSIONERS AND THE BOARD OF DIRECTORS [GRI 2-18]**

Performance of the Board of Commissioners and the Board of Directors performance is evaluated based on the achievement of targets set by the shareholders in the Key Performance Indicator (KPI). The evaluation process is carried out periodically and independently with a final determination through the Annual General Meeting of Shareholders (GMS) mechanism, to ensure that the Company provides benefits from the economic, environmental, and social aspects. Therefore, there are several KPIs related to these three aspects, including net profit target from an economic perspective, emission reduction target for environmental aspect, and OHS and CSR target for social aspect.

**BOARD OF COMMISSIONERS AND BOARD OF DIRECTORS REMUNERATION POLICY [GRI 2-19, 2-20, 2-21, GOV-1.A5]**

The amount of remuneration for members of the Company's Board of Commissioners and Board of Directors is determined by the GMS/Minister, and is valid annually for 1 (one) year starting from January of the current year. The determination refers to the guidelines as stated in the Regulation of the Minister of State-Owned Enterprises Number PER-13/MBU/09/2021 dated 24 September 2021 concerning the Sixth Amendment to the Regulation of the Minister of State-Owned Enterprises Number PER-04/MBU/2014 concerning Guidelines for Determining Directors' Income , the Board of Commissioners and the Supervisory Board of SOEs. Details regarding the policies and amounts of remuneration for the Board of Commissioners and Directors have been presented in the 2022 Annual Report in the Chapter on Remuneration Policy for the Board of Commissioners and Directors.

In addition to the amount of remuneration for the Board of Commissioners and Board of Directors, the company reports the ratio of the total salary of the employee with the highest level to the average total annual salary for all employees. In addition, PERTAMINA also reports the ratio of the percentage increase in annual total salary

level tertinggi terhadap rasio peningkatan persentase median total gaji untuk semua karyawan. Adapun rincian disajikan sebagai berikut.

for employees with the highest level to the ratio of the median percentage increase in total salary for all employees. The details are presented as follows.

	Nilai
Rasio total gaji pekerja dengan level tertinggi terhadap total gaji tahunan rata-rata untuk semua karyawan The ratio of the total salary of the highest-level worker to the average annual total salary for all employees	4.7
Rasio persentase kenaikan total gaji tahunan untuk pekerja dengan level tertinggi terhadap rasio peningkatan persentase median total gaji untuk semua karyawan The ratio of the percentage increase in total annual salary for the highest level worker to median percentage increase ratio of total salary for all employees	1.0



## Etika Perusahaan [GOV-1.C2, GOV-1.A7] Code of Conduct

Perseroan telah menyusun Pedoman Perilaku atau yang disebut juga *Code of Conduct* (CoC) sebagai bentuk komitmen dari etika bisnis serta sebagai landasan perilaku usaha. Seluruh Insan Perseroan harus menjadikan kode etik menjadi dasar sikap, perilaku dan tindakan dalam melakukan interaksi hubungan bisnis maupun hubungan kerja, dengan menerapkan prinsip-prinsip dasar yang ada pada visi, misi, dan nilai-nilai utama Perseroan serta memperhatikan kepatuhan pada peraturan internal dan eksternal yang berlaku. Dokumen Pedoman Perilaku dapat diakses pada *website* Perseroan. Selama tahun 2022, Perseroan telah melakukan sosialisasi kepada 1.584 pekerja Perseroan terkait kode etik Perusahaan. Selain itu, setiap tahunnya Insan PERTAMINA wajib menandatangani surat pernyataan telah membaca, memahami, dan mematuhi Pedoman Perilaku.

The Company has developed Code of Conduct (CoC) as a form of commitment to business ethics and as a basis for business behavior. All Company personnel must implement the code of conduct as the basis for attitudes, behavior and actions in conducting business and work relations interactions, by applying the basic principles contained in the vision, mission and main values of the Company and paying attention to compliance with internal and external regulations applicable. The Code of Conduct document can be accessed on the Company's website. Throughout 2022, the Company conducted dissemination on the Company's Code of Conduct to 1,584 employees. Furthermore, every year, Pertamina's personnel are required to sign a statement letter that they have read, understood and complied with the Code of Conduct.

Pedoman Perilaku menjadi panduan bagi:

1. Insan Perseroan, yaitu Direksi, Dewan Komisaris, pekerja waktu tertentu, pekerja waktu tidak tertentu, dan tenaga kerja jasa penunjang yang bekerja di lingkungan Perseroan
2. Pihak eksternal yang bertindak untuk dan atas nama Perseroan
3. Anak Perusahaan dan struktur perusahaan di bawahnya, yaitu badan hukum/usaha lain yang dikendalikan oleh Perseroan, baik secara langsung maupun tidak langsung
4. Mitra Kerja yang bekerja sama dengan Perseroan

The Code of Conduct is a guide for:

1. The Company's personnel, namely the Board of Directors, the Board of Commissioners, permanent employees, non-permanent employees, and supporting service workers working in the Company.
2. External parties acting for and on behalf of the Company
3. Subsidiaries and corporate structures under them, namely legal entities/other businesses controlled by the Company, either directly or indirectly
4. Partners who work with the Company

Pedoman Perilaku dikembangkan berdasarkan nilai-nilai Perseroan yaitu Amanah, Kompeten, Harmonis, Loyal, Adaptif, dan Kolaboratif (AKHLAK). Rincian nilai-nilai Perseroan disajikan pada Laporan Tahunan 2022 Bagian Tata Kelola Perusahaan.

The Code of Conduct has been developed based on the Company's values, namely Amanah (Trustworthy), Kompeten (Competent), Harmonis (Harmonious), Loyal (Loyal), Adaptif (Adaptive), and Kolaboratif (Collaborative) or AKHLAK. Details of the Company's values are presented in the 2022 Annual Report of the Corporate Governance Section.

**CONFLICT OF INTEREST**


[GRI 2-15, GOV-5.C1, GOV-5.C2]

Perseroan berkomitmen untuk mewujudkan PERTAMINA yang bersih dengan menjalankan kegiatan usaha secara berintegritas dan profesional, menghindari benturan kepentingan, tidak mentoleransi suap, menjunjung tinggi kepercayaan, dan berpedoman pada asas-asas tata kelola korporasi yang baik dengan mengacu pada Sistem Manajemen Anti Penyuapan (SMAP) dan ISO 37001:2016. Untuk mencapai komitmen tersebut, upaya yang dilakukan oleh Insan PERTAMINA di antaranya:


**1** **Wajib mematuhi hukum, peraturan, dan undang-undang yang berlaku pada wilayah penugasannya, baik tingkat nasional maupun internasional, termasuk peraturan internal Perseroan**  
 Complying with laws and regulations applicable in their areas of assignment, both national and international levels, including the Company's internal regulations.



**3** **Menghindari segala bentuk benturan kepentingan, baik secara langsung maupun tidak langsung**  
 Avoiding all forms of conflict of interest, either directly or indirectly



**5** **Dilarang menawarkan, memberi, dan/atau menerima sesuatu yang tidak sesuai dengan Ketentuan Gratifikasi untuk tujuan memperoleh manfaat/imbalan/kontraprestasi dan perlakuan istimewa dari pihak-pihak tertentu.**  
 Prohibited from offering, giving, and/or receiving anything that is not in accordance with the Gratification Terms for the purpose of obtaining benefits/rewards/contra achievements and special treatment from certain parties.



Pejabat di level Direksi, Komisaris, Senior Vice President hingga manajerial di Perseroan dipilih berdasarkan kompetensi, profesionalitas dan integritas guna menghindari terjadinya benturan kepentingan (*conflict of interest*). Perseroan senantiasa memastikan bahwa anggota Direksi tidak memiliki afiliasi dengan sesama anggota Direksi, Komisaris maupun pemegang saham pengendali.

Sampai dengan akhir tahun 2022, tidak terdapat hubungan afiliasi berupa hubungan keuangan, keluarga, dan kepengurusan antara Dewan Komisaris dengan anggota Dewan Komisaris lainnya dan Direksi, maupun Direksi dengan Direksi lainnya dan Dewan Komisaris.

Dari total Dewan Komisaris di Perseroan, terdapat 2 (dua) Komisaris yang memiliki hubungan kepengurusan dengan perusahaan lain, yaitu Iggi H. Achsien yaitu sebagai Pemegang Saham PT Zen Armada dan PT Digi Laras Prosperindo, serta Basuki Tjahaja Purnama sebagai pemegang saham Bank Neo Commerce Tbk.


Setiap tahun, Insan PERTAMINA menandatangani surat pernyataan bebas benturan kepentingan.

**CONFLICT OF INTEREST**

[GRI 2-15, GOV-5.C1, GOV-5.C2]

The Company is committed to embodying a clean PERTAMINA by carrying out business activities with integrity and professionalism, avoiding conflicts of interest, not tolerating bribery, upholding trust, and adhering to the good corporate governance principles by referring to the Anti-Bribery Management System (SMAP) and ISO 37001:2016. To achieve the aforementioned commitment, some efforts are made by PERTAMINA personnel, including:

**2** **Bertanggung jawab untuk memastikan bahwa kepentingan pribadi di luar pekerjaan tidak mengganggu pelaksanaan tugas dan tanggung jawabnya terhadap Perseroan**  
 Being responsible for ensuring that personal interests outside of work do not interfere with the implementation of their duties and responsibilities to the Company



**4** **Dilarang terlibat dalam segala bentuk tindakan korupsi, kolusi, dan nepotisme**  
 Prohibited from being involved in all forms of corruption, collusion, and nepotism acts.



Officials at Board of Directors, Board of Commissioners, Senior Vice President, and managerial levels in the Company are selected based on competence, professionalism, and integrity in order to avoid conflicts of interest. The Company always ensures that the Board of Directors members have no affiliation with fellow members of the Board of Directors, the Board of Commissioners, or controlling shareholders.

Until the end of 2022, there was no affiliation in the form of financial, family and management relationships between the Board of Commissioners with fellow members of the Board of Commissioners and the Board of Directors, and the Board of Directors with fellow members of the Board of Directors and the Board of Commissioners.

There are 2 (two) Commissioners in the Company's Board of Commissioners composition who have management relationships with other companies, namely Iggi H. Achsien as Shareholder of PT Zen Armada and PT Digi Laras Prosperindo, and Basuki Tjahaja Purnama as Shareholder of PT Bank Neo Commerce Tbk.

Every year, PERTAMINA personnel sign a conflicts of interest statement.

## AKTIVITAS ADVOKASI PUBLIK DAN LOBI

[GRI 415-1, 11.22.2, GOV-5.C1, GOC-5.C2]

Perseroan senantiasa menghindari berbagai bentuk keterlibatan dan kontribusi politik dalam bentuk apapun. Berdasarkan Surat Edaran Menteri BUMN SE-12/MBU/10/2020, Perseroan memiliki kebijakan formal yang melarang untuk tidak melakukan kegiatan politik di lingkungan Perseroan dan memberikan sumbangan serta bantuan lain dalam bentuk apa pun yang mengatasnamakan Perseroan, termasuk penggunaan sarana, fasilitas, dan dana Perseroan untuk kepentingan Partai Politik. Perseroan mewajibkan bagi karyawan yang mencalonkan diri dalam jabatan politik untuk mengundurkan diri sebagai karyawan Perseroan. Secara korporasi, Perseroan tidak terlibat dalam pemberian dana politik atau dukungan pada kelompok politik tertentu. Dengan kondisi di atas, tidak terdapat informasi terkait nilai moneter atas kontribusi politik yang ada di Perseroan baik secara finansial maupun dalam bentuk benda atau barang yang diberikan secara langsung dan tidak langsung [GRI 415-1, 11.22.2, GOV-5.C2].

Namun mengingat Perseroan memiliki kepentingan terhadap kebijakan Pemerintah terutama di sektor energi, Perseroan menggunakan berbagai saluran untuk memberikan penjelasan, pendapat maupun pandangan agar kebijakan di sektor energi tetap mendukung kepentingan publik, serta memberikan jaminan keberlanjutan kegiatan operasi dan bisnis Perseroan di masa depan.

Perseroan senantiasa menyertakan advokasi publik dalam kegiatan pengembangan usaha, terutama kepada publik yang terdampak. Advokasi publik ditujukan guna memastikan publik yang terdampak tetap terjamin hak dan kewajibannya sesuai hukum yang berlaku. Perseroan melaksanakan Rapat Dengar Pendapat (RDP) dengan Dewan Perwakilan Rakyat (DPR) sebanyak 20 kali sepanjang tahun 2022, dengan materi strategis yang dibahas antara lain penyediaan energi nasional, aksi korporasi yang berdampak pada publik, aspirasi dalam regulasi pengelolaan Migas Nasional, dan pengelolaan lingkungan dalam operasional PERTAMINA.

Melalui *Subholding*, entitas anak sebagai kontraktor Kontrak Kerja Sama (KKKS) di sektor hulu maupun unit operasi/unit bisnis di sektor hilir, secara berkala melakukan pertemuan dengan Satuan Kerja Khusus Minyak dan Gas Bumi (SKK Migas), Badan Pengatur Hilir Minyak dan Gas Bumi (BPH Migas), dan Kementerian Energi dan Sumber Daya Mineral (ESDM).



## PUBLIC ADVOCACY, LOBBYING AND PUBLIC POLICY

[GRI 415-1, 11.22.2, GOV-5.C1, GOC-5.C2]

The Company always avoids any form of political involvement and contribution in any form. Based on the Minister of SOE Circular Letter SE-12/MBU/10/2020, the Company has in place a formal policy that prohibits any political activity within the Company and provision of donations and other assistance in any form on behalf of the Company, including the use of the Company's facilities and funds for the benefit of political parties. The Company obliges employees who run for political office to resign as employees of the Company. As a corporation, the Company is not involved in providing political funds or support to certain political groups. Given such conditions, there is no information related to the monetary value of political contributions in the Company, both financially and in the form of goods given directly or indirectly [GRI 415-1, 11.22.2, GOC-5.C2].

However, considering that the Company has an interest in Government policies, especially in the energy sector, the Company uses various channels to provide explanation, opinion, and views so that policies in the energy sector continue to support the public interest, and provide guarantees for the sustainability of the Company's operations and business activities in the future.

The Company always includes public advocacy in its business development activities, especially for the affected public. Public advocacy is aimed at ensuring that the affected public remain having a guarantee for their rights and obligations according to applicable law. The Company held 20 Hearing Meetings with the House of Representatives (DPR) throughout 2022, with strategic materials discussed comprising national energy supply, corporate actions with impact on the public, aspirations in regulations related to National Oil and Gas management, and environmental management in PERTAMINA's operations.

Through *Subholding*, subsidiaries as Cooperation Contract contractors (KKKS) in the upstream sector and operating units/business units in the downstream sector regularly hold meetings with the Oil and Gas Special Task Force (SKK Migas), Downstream Oil and Gas Regulatory Agency (BPH Migas), and the Ministry of Energy and Mineral Resources (ESDM).

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# Anti Korupsi

[GRI 3-3, GOV-3.C1, EM-EP-510a.2, GOV-3.A3]

## Anti Corruption



Anti korupsi diwujudkan melalui pencegahan tindakan perilaku ataupun perbuatan-perbuatan yang dapat menimbulkan konflik kepentingan, korupsi, kolusi maupun nepotisme. Perseroan telah memperoleh sertifikasi ISO 37000:2016 tentang Sistem Manajemen Anti Penyuapan (SMAP), sehingga seluruh jajaran manajemen dan karyawan telah memiliki komitmen untuk menerapkan kebijakan anti korupsi. Perseroan berkomitmen untuk melakukan pengawasan terhadap kebijakan tersebut dan sosialisasi mengenai hal ini telah dilaksanakan dalam berbagai program untuk menumbuhkan budaya anti Gratifikasi dan Suap di lingkungan perusahaan dan entitas anak. Perseroan memberikan konsekuensi tidak dipatuhinya kebijakan ini dapat mengakibatkan tindakan serius berupa sanksi disiplin, pemutusan hubungan kerja, pelanggaran perdata dan/atau pidana.

Selain itu, Perseroan juga memiliki Pedoman Gratifikasi yang memuat ketentuan mengenai gratifikasi yang dikecualikan dan mekanisme pelaporannya No. A09-001/N00000/2021-S0. Perseroan telah membentuk Unit Pengendalian Gratifikasi (UPG) Perseroan, yang dibentuk berdasarkan Pedoman Unit Pengendalian Gratifikasi No. A09-001/N00200/2022-S0. UPG menyampaikan laporan secara berkala dan berkoordinasi dengan KPK untuk laporan gratifikasi yang masuk dalam ranah Komisi Pemberantasan Korupsi (KPK). Setiap tahun, Insan PERTAMINA menandatangani surat pernyataan untuk memahami, mematuhi, dan menjalankan Pedoman Perilaku yang salah satunya mengatur anti korupsi. [GRI 3-3, 11.20.1, EM-EP-510a.2, EM-SV-510a.2]

Perseroan telah melakukan penilaian atas kegiatan operasi yang memiliki risiko korupsi dan memandang bahwa seluruh (100%) operasi memiliki risiko korupsi dengan kategori risiko tinggi, risiko sedang/menengah, dan risiko rendah. [GRI 205-1, 11.20.2, GOV-3.A4].

### KOMUNIKASI DAN PELATIHAN TENTANG KEBIJAKAN DAN PROSEDUR ANTI-KORUPSI [GRI 205-2, 11.20.3, GOV-3.C2, GOV-3.C3]

Pada periode pelaporan, Perseroan menyelenggarakan beberapa upaya komunikasi di antaranya melalui sosialisasi *broadcast* dan pelatihan antikorupsi, di antaranya: [GRI 205-2, 2-24]

1. Pada tahun 2022, sebanyak 8 orang Dewan Komisaris dan 8 orang Direksi atau 100% telah mengikuti pelatihan anti korupsi

Anti-corruption is embodied by preventing behavior or actions that can lead to conflicts of interest, corruption, collusion or nepotism. The Company has obtained ISO 37000:2016 certification regarding the Anti-Bribery Management System (SMAP), so that all levels of management and employees are committed to implementing anti-corruption policies. The Company is committed to overseeing this policy and has conducted dissemination regarding the policy in various programs to foster an anti-Gratification and anti-Bribery culture within the Company and its subsidiaries. The Company sets the consequence for not complying with this policy, which can result in serious action in the form of disciplinary sanctions, termination of employment, civil and/or criminal violations.

In addition, the Company also has Gratification Guideline which contains provisions regarding exempted gratification and its reporting mechanism No. A09-001/N00000/2021-S0. The Company has formed Gratification Control Unit (UPG) based on the Gratification Control Unit Guidelines No. A09-001/N00200/2022-S0. UPG submits regular reports and coordinates with the Corruption Eradication Commission (KPK) for gratuity reports that is under authority of KPK. Every year, PERTAMINA's personnel sign a statement on the understanding, compliance, and implementation of Code of Conduct, which also regulates anti-corruption. [GRI 3-3, 11.20.1, EM-EP-510a.2, EM-SV-510a.2]

The Company has conducted an assessment of the activities operations that have risks of corruption and views that all (100%) operations are at risk of corruption with high risk category, medium/medium risk, and low risk. [GRI 205-1, 11.20.2, GOV-3.A4].

### COMMUNICATION AND TRAINING ON ANTI-CORRUPTION POLICIES AND PROCEDURES

[GRI 205-2, 11.20.3, GOV-3.C2, GOV-3.C3]

During the reporting period, the Company conducted several communication efforts, including through broadcast dissemination and anti-corruption training, as follows: [GRI 205-2, 2-24]

1. In 2022, 8 members of the Board of Commissioners and 8 members of the Board of Directors or 100%, participated in anti-corruption training.



2. Pada tahun 2022, Perseroan menyelenggarakan Talkshow Hari Anti Korupsi Sedunia (Hakordia) dengan Bapak Basuki Tjahaja Poernama selaku Komisaris Utama PT Pertamina Holding sebagai keynote speech. Talkshow tersebut memiliki tema Upaya Penanganan Korupsi di Lingkungan BUMN yang ditujukan bagi para Dewan Komisaris dan Direksi Perseroan. Acara tersebut telah diikuti oleh seluruh (100%) oleh para Dewan Komisaris dan Direksi Perseroan
3. Pada tahun 2022, seluruh (100%) karyawan telah mendapatkan sosialisasi kebijakan *anti fraud* yang disebarakan melalui *broadcast email*
4. Selama tahun 2022, sebanyak 9.305 karyawan mengikuti Sosialisasi ISO 37001:2016, LHKPN, dan Gratifikasi.
5. Pada tahun 2022, sebanyak 356 karyawan yang terdiri dari *Holding* dan *Subholding* mengikuti *Talkshow* Hari Anti Korupsi. Materi yang diberikan antara lain terkait langkah preventif yang harus dilakukan untuk menghindari adanya korupsi di perusahaan
6. Pada tahun 2022, sebanyak 2.304 karyawan telah mengikuti pelatihan antikorupsi untuk mengawal pencegahan korupsi di Perseroan. Peserta menerima pengetahuan mengenai tindak pidana korupsi, konflik kepentingan, gratifikasi, serta panduan cegah korupsi
7. Pada tahun 2022, Perseroan mengadakan Vendor Day yang dibantu oleh Fungsi Compliance dan sebanyak ± 4.500 pemasok, kontraktor, mitra bisnis hadir pada acara tersebut. Vendor Day bertujuan pemberian apresiasi kepada para pemasok, kontraktor dan mitra bisnis yang berkinerja baik, sekaligus digunakan sebagai forum sosialisasi kebijakan dan aturan terkini mengenai proses pengadaan barang jasa dalam mendukung implementasi Kebijakan Keberlanjutan Perseroan dalam aspek ESG dan penerapan *Green Procurement*.

### Sosialisasi Kebijakan Anti Fraud untuk Karyawan

Socialization of Anti-Fraud Policy for Employees



**Whistleblowing System**

8 April 2022  
April 8, 2022



**Fighting Fraud Together with CEO**

6 Juni 2022  
June 6, 2022

**INSIDEN KORUPSI YANG TERBUKTI DAN TINDAKAN YANG DIAMBIL [GRI 205-3, 11.20.4, EM-EP-510A.1, EM-SV-510A.1]**

Selama tahun 2022 telah dilakukan pemeriksaan terkait dengan adanya fraud dan irregularities dengan jumlah laporan yang telah dikeluarkan oleh Fungsi *Investigation Audit*, WBS dan *Fraud Prevention* sebanyak 14 laporan penelaahan dan audit investigasi. Dari 14 laporan tersebut, 9 (sembilan) laporan merupakan laporan yang terkait dengan insiden korupsi di lingkungan Perseroan Group baik *Holding* maupun *Subholding* dan anak perusahaan *services*. [205-3-a]

Laporan-laporan Insiden korupsi tersebut dilakukan tindak lanjut berupa pemberian sanksi kepada karyawan yang terbukti terlibat, melalui prosedur *Industrial Relation* sesuai dengan Perjanjian Kerja Bersama (PKB) perusahaan dengan pekerja. Fungsi *Industrial Relation* akan melakukan evaluasi dan proses pemberian sanksi kepada karyawan yang terbukti bersalah. Sanksi tersebut terbagi beberapa jenis sesuai dengan tindakan yang dilakukan oleh karyawan tersebut. Adapun jenis sanksi yang diberikan antara lain sanksi teguran, surat peringatan, penurunan jabatan PERTAMINA Reference Level (PRL) sampai dengan Pemutusan Hubungan Kerja (PHK) baik secara hormat ataupun tidak hormat.

Selama tahun 2022, terdapat 9 (sembilan) kasus korupsi, dengan 39 pekerja yang terlibat dan sebanyak 32 pekerja mendapatkan sanksi mulai dari teguran, surat peringatan, Demosi maupun PHK. [205-3-b]

Selama tahun 2022, tidak terdapat insiden yang terbukti sehingga mengakibatkan kontrak dengan mitra bisnis diakhiri atau tidak dilanjutkan karena pelanggaran terkait korupsi. [205-3-c]

Selama tahun 2022, terdapat 6 (enam) kasus hukum terkait korupsi yang diajukan oleh publik terhadap Perseroan. Namun demikian, kasus tersebut masih dalam proses penyelidikan yang dilakukan oleh pihak ketiga. [205-3-d]

**PROVEN INCIDENTS OF CORRUPTION AND ACTIONS TAKEN [GRI 205-3, 11.20.4, EM-EP-510A.1, EM-SV-510A.1]**

Throughout 2022, the Investigation Audit, WBS dan Fraud Prevention Function conducted an audit related to the occurrence of fraud and irregularities and issued 14 reports of review and investigative audit. Of the 14 reports, 9 (nine) reports were related to incidents of corruption within the Company Group, both Holding and Sub holding and services subsidiaries. [205-3-a]

Follow-up on reports of corruption incidents is carried out in the form of imposing sanctions on employees that are proven to be involved, through Industrial Relations procedures in accordance with the Collective Labor Agreement (CLB) between the Company and the employees. The Industrial Relations function will evaluate and impose sanctions for employees who are proven guilty. There are several types of sanctions categorized by the actions taken by employees. The types of sanctions imposed include reprimands, warning letters, PERTAMINA Reference Level (PRL) demotion up to Termination of Employment (PHK) either honorably or dishonorably.

Throughout 2022, there were 9 (nine) fraud cases, with 39 employees involved and 32 employees receiving sanctions ranging from reprimands, warning letters, demotions, and layoffs. [205-3-b]

During 2022, there were no proven incidents resulting in termination or discontinuation of contracts with business partners due to violations related to corruption. [205-3-c]

Throughout 2022, there were 6 (six) legal cases related to corruption filed by the public against the Company. However, the cases are still under investigation by a third party. [205-3-d]





# Whistleblowing System

[OJK F.24, GRI 2-16, 11.15.2, GOV-3.C4, SOC-8.A1, SOC-8.A2, SOC-12.A1]

## Whistleblowing System

Perseroan telah memiliki Sistem Pelaporan Pelanggaran atau *Whistleblowing System* (WBS) dalam rangka memberikan kesempatan kepada segenap Insan Perseroan, konsumen, *supplier*, dan pihak eksternal lainnya untuk dapat menyampaikan laporan mengenai dugaan pelanggaran terhadap prinsip-prinsip GCG serta nilai-nilai etika yang berlaku. Hal ini dilakukan sebagai wujud komitmen Perseroan untuk menyediakan sistem bagi penegakan prinsip-prinsip tata kelola perusahaan yang baik sehingga menciptakan situasi kerja yang bersih dan bertanggung jawab.

Penyampaian pelaporan dugaan pelanggaran terhadap prinsip-prinsip GCG serta nilai-nilai etika yang berlaku (*fraud and irregularities*) disampaikan melalui saluran pelaporan yang tersedia 24 jam dan dikelola oleh Fungsi Investigation Audit, WBS dan Fraud Prevention (IWF), bekerja sama dengan konsultan independen (Deloitte). Pada tahun 2022, terdapat 156 pengaduan dan bentuk pelanggaran yang dilaporkan melalui WBS. Terdapat kenaikan pengaduan pada pelanggaran etik menjadi 26 pengaduan di tahun 2022 yang sebelumnya 9 pengaduan di tahun 2021. Hal ini antara lain disebabkan Perseroan aktif melakukan sosialisasi bahwa WBS adalah saluran pengaduan dugaan fraud maupun dugaan pelanggaran lainnya (termasuk permasalahan etik). Selain itu, Perseroan telah menerbitkan kebijakan perlindungan dan menjaga kerahasiaan pelapor. Sampai dengan akhir tahun 2022, jumlah pengaduan yang telah selesai ditindaklanjuti sebesar 85,85%. Efektivitas pelaksanaan WBS dilaporkan secara berkala kepada Direksi dan Dewan Komisaris. Penerapan WBS dan jumlah laporan pengaduan serta tindak lanjutnya disajikan dalam Laporan Tahunan 2022 Bab Tata Kelola Perusahaan halaman 322.

The Company has in place Whistleblowing System (WBS) to provide opportunities for all Company personnel, consumers, suppliers and other external parties to submit reports regarding alleged violations of GCG principles and applicable ethical values. This is done as a form of the Company's commitment to providing a system for upholding the principles of good corporate governance with a view to create a clean and responsible work situation.

Submission of reports of alleged violations of GCG principles and applicable ethical values (*fraud and irregularities*) is submitted through a reporting channel that is available 24 hours and is managed by the Investigation Audit Function, WBS and Fraud Prevention (IWF), in collaboration with an independent consultant (Deloitte). In 2022, there were 156 complaints and forms of violations reported through the WBS. There was an increase in complaints of violations of ethics to 26 complaints in 2022 from previously 9 complaints in 2021. This is partly due to the Company actively socializing that the WBS is a channel for complaints of alleged fraud or other alleged violations (including ethical issues). In addition, the Company has issued a policy to protect and maintain the confidentiality of the reporter. Until the end of 2022, the number of complaints that have been completely followed up is 85.85%. The effectiveness of WBS implementation is reported periodically to the Board of Directors and Board of Commissioners. The implementation of the WBS and the number of complaint reports and their follow-ups are presented in the 2022 Annual Report Chapter of Corporate Governance page 322.

### MEKANISME PENGADUAN MASYARAKAT

[GRI 2-25, GRI 413-1, SOC-12.C1, SOC-12.C2]

Sebagai dukungan pada layanan masyarakat, Perseroan menyediakan akses kepada pelanggan maupun pemangku kepentingan untuk menyampaikan pengaduan atau keluhan. Pengaduan maupun keluhan dapat disampaikan melalui layanan PERTAMINA *Call Center* 135 (PCC 135). Dalam kondisi tertentu, masyarakat juga dapat menyampaikan pengaduan secara langsung kepada unit operasi terkait sesuai lokasi. Selama tahun 2022, PCC 135 menerima pengaduan yang ditujukan untuk Perseroan sebanyak 13.411. Seluruh pengaduan yang disampaikan telah ditindaklanjuti.

### PUBLIC GRIEVANCE MECHANISM

[GRI 2-25, GRI 413-1, SOC-12.C1, SOC-12.C2]

As support for community service, The company provides access to customers and stakeholders to deliver complaints or grievances. Complaints or complaints can be submitted through the PERTAMINA Call service Center 135 (PCC 135). Under certain conditions, society can also submit complaints directly related operating units according to location. During the year 2022, PCC 135 received the complaint addressed for the Company as much as 13,411. All complaints submitted has been followed up.

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Secara berkala, Perseroan melibatkan para pemangku kepentingan dalam merancang, meninjau, mengoperasikan, serta memantau mekanisme penanganan keluhan yang diterapkan. Perseroan melakukan evaluasi efektivitas mekanisme pengaduan dan proses remediasi lainnya secara reguler melalui survei kepuasan pelanggan terhadap PCC 135. Pada tahun 2022, hasil survei kepuasan pelanggan terhadap PCC 135 sebesar 4,29, mengalami peningkatan dibandingkan tahun 2021 sebesar 4,28. Selain itu, Perseroan juga melibatkan pemangku kepentingan dalam remediasi dampak negatif antara lain Pemerintah Pusat dan Daerah, Organisasi Kemasyarakatan, Media Massa, Lembaga Pendidikan, Mitra Bisnis, dan lainnya.

Mekanisme kebijakan, pendekatan untuk menerima, menanggapi, dan menyelesaikan keluhan masyarakat disampaikan pada Laporan Tahunan 2022 Bab Perlindungan Konsumen.

Periodically, the Company engages stakeholders in designing, reviewing, operating, and monitoring the implemented complaint handling mechanism. The Company regularly evaluates the effectiveness of the complaint mechanism and other remediation processes through a customer satisfaction survey on PCC 135. In 2022, the results of a customer satisfaction survey on PCC 135 were 4.29, an increase compared to 2021 of 4.28. In addition, the Company also involves stakeholders in remediation of negative impacts including Central and Regional Governments, Community Organizations, Mass Media, Educational Institutions, Business Partners, and others.

Policy mechanism, approaches to receive, respond to, and resolve public grievances are presented in the 2022 Annual Report's Consumer Protection Chapter.

## Kepatuhan Terhadap Hukum dan Peraturan [GRI 2-27, SHS-7.A2, EM-MD-520a.1]

### Compliance with Laws and Regulations



Selama tahun 2022, tidak terdapat sanksi dan denda yang disebabkan oleh ketidakpatuhan Perseroan terhadap undang-undang dan peraturan yang berlaku.

Meskipun Perseroan mendapatkan penugasan dari Pemerintah untuk penyaluran beberapa jenis BBM, Perseroan tetap mendukung persaingan usaha yang sehat yang memacu peningkatan kinerja dan kreativitas bisnis untuk memberikan yang terbaik bagi pelanggan dan para pemangku kepentingan. Sampai dengan akhir tahun 2022, Perseroan tidak pernah menerima sanksi terkait perkara pelanggaran persaingan usaha sehat, dan pelaksanaan sanksi tertunda terkait perkara pelanggaran persaingan usaha sehat. [\[2-27\]](#)

Di sisi lain, berdasarkan hasil evaluasi tahun 2022, pengelolaan limbah dan pengelolaan air telah berjalan dengan baik, sehingga tidak ada sanksi dari pihak berwenang. Dengan demikian sampai dengan akhir periode pelaporan, Perseroan tidak pernah dihadapkan pada sanksi denda maupun sanksi hukum lain karena sangkaan pencemaran air. Pengungkapan informasi hasil pengukuran untuk setiap parameter oleh *Subholding* maupun entitas anak dan unit operasional/unit bisnis masing-masing disampaikan dalam Laporan Keberlanjutan terkait. [\[2-27\]](#)

In 2022, there was no sanction and penalty imposed due to the Company's non-compliance with applicable laws and regulations.

Even though the Company has received an assignment from the Government to distribute several types of fuel, the Company continues to support fair business competition which encourages increased performance and business creativity to provide the best for customers and stakeholders. Until the end of 2022, the Company has never received any sanction related to fair business competition violation cases and delayed sanction implementation related to fair business competition violation cases. [\[2-27\]](#)

On the flip side, based on the 2022 evaluation result, waste management and water management have been done properly so that there has been no sanction from the authorities. Thus, until the end of the reporting period, the Company has never received penalty or other legal sanctions due to the allegation of water pollution. Disclosure of information on measurement results for each parameter by Sub holdings and subsidiaries and respective operational units/business units is submitted in the related Sustainability Report. [\[2-27\]](#)



# Dukungan pada Inisiatif Transparansi Industri Ekstraktif

[GOV-4.C1, GOV-4.C2, GOV-4.C3, GOV-4.C4, GOV-4.A2, GOV-4.A3]

## Support for Extractive Industry Transparency Initiatives

EITI (Extractive Industries Transparency Initiative) adalah standar global untuk tata kelola sumber daya minyak, gas, dan mineral yang baik yang berusaha mengatasi isu-isu tata kelola utama di sektor ekstraktif. Sejak Oktober 2022, Perseroan menjadi Perusahaan Pendukung EITI Bersama dengan 21 perusahaan migas global serta 43 perusahaan global dari industri lainnya. Keterlibatan ini menandai tonggak sejarah Perseroan sebagai perusahaan migas pertama di Asia Tenggara yang mendukung EITI.

Perseroan berkomitmen untuk memastikan kepatuhan terhadap semua persyaratan hukum yang ditetapkan, dan menjunjung tinggi standar praktik Tata Kelola Perusahaan yang Baik, termasuk akuntabilitas dan transparansi di seluruh area operasi perusahaan.

Perseroan berkomitmen untuk mengungkapkan informasi dengan menerapkan standar internasional, termasuk Standar EITI di negara pelaksana EITI tempat mereka beroperasi. Di Indonesia, laporan disampaikan melalui anak perusahaan PT Pertamina Hulu Energi (PHE) sebagaimana diminta dan dikoordinasikan oleh Kementerian Energi dan Sumber Daya Mineral (ESDM). Di Irak, laporan tersebut disampaikan oleh PT Pertamina Internasional Eksplorasi dan Produksi (PIEP) sebagai salah satu kontraktor hulu migas. Di beberapa negara, seperti Gabon dan Tanzania, Perusahaan Maurel & Prom di bawah PT PIEP mengungkapkan pembayaran kepada pemerintah dalam laporan tahunannya.

PERTAMINA sebagai perusahaan energi yang terintegrasi penuh dari hulu ke hilir yang hanya dimiliki oleh Pemerintah Indonesia, mendukung penuh transparansi *Beneficial Ownership* untuk mendorong akuntabilitas dan transparansi sebagai dukungan terhadap EITI. Selain itu, Perseroan juga mendukung pentingnya transparansi terkait upaya pemerintah untuk membuka ketentuan dalam kontrak dan izin yang mengatur eksplorasi dan eksploitasi minyak, gas, dan mineral secara publik sesuai dengan Standar EITI.

Perseroan memiliki beberapa kontrak yang tersedia di domain publik, khususnya di *website* Kementerian ESDM. PERTAMINA bekerja sama dengan otoritas terkait sejauh yang memungkinkan terkait mekanisme pengungkapan kontrak.

EITI (Extractive Industries Transparency Initiative) is a global standard for governance of oil, gas and mineral resources that to address key governance issues in the extractive sector. Since October 2022, the Company has become EITI Supporting Company together with 21 global oil and gas companies and 43 global companies from other industries. This involvement marked a milestone for the Company as the first oil and gas company in Southeast Asia to support EITI.

The Company commit to ensure compliance of all stipulated legal requirements and upholds the highest standards of Good Corporate Governance practices, including accountability and transparency throughout the company's areas of operations.

The Company committed to disclose information by implementing international standards, including the EITI Standard applicable in the EITI implementing countries where they operate. In Indonesia, reports are submitted through the subsidiaries PT Pertamina Hulu Energi (PHE) as requested and coordinated by the Ministry of Energy and Mineral Resources (ESDM). In Iraq, the reports is are submitted by PT Pertamina International Exploration and Production (PIEP) as one of the upstream oil and gas contractors. In some countries, such as Gabon and Tanzania, Maurel & Prom under PT PIEP discloses payments to the government in their annual reports.

PERTAMINA as, a fully integrated energy company from upstream to downstream, solely owned by the Government of Indonesia, fully supports the transparency of beneficial ownership to encourage accountability and transparency as support for EITI. In addition, the Company also supports the importance of transparency regarding the government's efforts to publicly disclose provisions in contracts and licenses that govern the exploration and exploitation of oil, gas and minerals in line with the EITI Standard.

The Company has several contracts available in the public domain, particularly on the Ministry of Energy and Mineral Resources website. PERTAMINA is working hand in hand with relevant authorities to the extent possible regarding on the mechanics of the contract disclosure.

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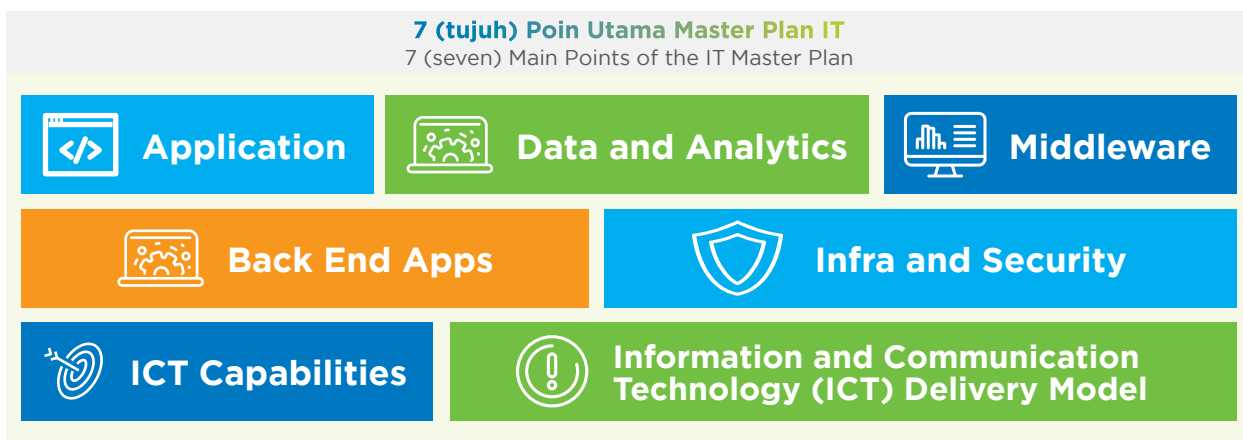
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# Keamanan Siber [SHS-7.C3]

## Cyber Security

Salah satu aspek penting dalam penerapan tata kelola keberlanjutan di Perseroan adalah dukungan pemanfaatan dan pengembangan teknologi informasi melalui transformasi digital. Perseroan telah memulai transformasi digital sejak tahun 2017 dan untuk tahun 2020-2024, telah disusun *Information Technology (IT) Master Plan* yang terdiri dari 7 (tujuh) poin utama. [SHS-7.C3]

One of the important aspects in the sustainable governance implementation in the Company is the support for the use and development of information technology through digital transformation. The Company has started digital transformation since 2017 and for 2020-2024, an Information Technology (IT) Master Plan has been prepared which consists of 7 (seven) main points. [SHS-7.C3]



Perseroan menggunakan *framework Control Objectives for Information and Related Technology (COBIT)* sebagai *best practice* dalam melaksanakan tata kelola Teknologi Informasi (TI). Berdasarkan pengukuran atas tata kelola TI yang dilakukan oleh pihak eksternal independen pada akhir 2021, skor kematangan mencapai 4,03 dari 5 level kematangan

The Company uses the Control framework Objectives for Information and Related Technology (COBIT) as best practice in implementing Information Technology (IT) governance. Based on measurement of IT governance conducted by independent external parties by the end of 2021, score maturity reached 4.03 of 5 levels of maturity

Untuk menjaga kepatuhan sistem IT terhadap peraturan, ketentuan keamanan siber Perseroan mengacu pada regulasi yang ditetapkan Pemerintah Republik Indonesia dan ISO 27001:2013 serta ISO 27002:2013

To maintain IT system compliance with regulations, the Company's cyber security provisions refer to regulations stipulated by the Government of the Republic of Indonesia and ISO 27001:2013 and ISO 27002:2013

Sejak tahun 2022, seluruh pekerja dan mitra kerja diwajibkan untuk menyelesaikan program *e-learning (mandatory) information Security Easy Course (iSEC)* tingkat dasar. Adapun banyaknya peserta yang mengikuti program iSEC sepanjang 2022 yaitu sebanyak 35.283 peserta.

Since 2022, all employees and work partners are required to complete the e-learning program (mandatory) information Security Easy Course (iSEC) at the basic level 2022. The number of participants participated in the iSEC program throughout 2022 was 35,283 participants.

Perseroan juga melakukan *Phishing Campaign* yang merupakan latihan *anti phishing* bagi seluruh pekerja di Perseroan. Phish prone menunjukkan dengan mengukur respon berupa *unsafe-action* terhadap simulasi *phishing*. Phish-Prone (%) menunjukkan ukuran jumlah user yang meng-klik link atau membuka *attachment* pada simulasi *phishing email* yang dikirimkan oleh tim keamanan siber.

The Company also conducts Phish-Prone which is an anti-phishing exercise for all employees in the Company. Phish prone shows a response in the form of an unsafe-action to a phishing simulation. Phish-Prone (%) shows a measure of the number of users who click on links or open attachments in email phishing simulation as follows.

Selama tahun 2022, realisasi *Phishing Campaign* program telah melampaui target yang ditetapkan dan berada di bawah angka rata-rata perusahaan sejenis. Hal ini menyatakan bahwa Pekerja Perseroan sudah memiliki *awareness* terkait *phishing*. Selain itu, di tahun 2022, Perseroan juga telah melakukan pembentukan tim Cyber Incident Response Team (CIRT) yang bertujuan untuk meningkatkan keamanan siber di Perseroan.

During 2022, the realization of the Phishing Campaign program has exceeded the set target and is below the average number of similar companies. This states that the Company's employees already have awareness regarding phishing. In addition, in 2022, the Company has also formed a Cyber Incident Response Team (CIRT) which aims to improve cyber security in the Company.

Berdasarkan Cyber Security Maturity BSSN Tahun 2022, Perseroan berhasil memperoleh nilai indeks 4,27 yang artinya pengelolaan *cyber* di PERTAMINA sudah dilakukan secara terorganisir, direviu secara berkala dan dilakukan perbaikan secara berkelanjutan untuk aspek tata kelola, identifikasi, proteksi, deteksi dan respon atas keamanan siber.

Based on the 2022 BSSN Cyber Security Maturity, the Company managed to obtain an index value of 4.27, which means that cyber management at PERTAMINA has been carried out in an organized manner, reviewed periodically and made continuous improvements to aspects of governance, identification, protection, detection and response to cyber security.



## Pengadaan Barang dan Jasa Procurement of Goods and Services

Perseroan menjamin proses pengadaan barang/jasa dengan memberikan perlakuan sama bagi seluruh calon penyedia barang/jasa tanpa ada perlakuan khusus bagi salah satunya. Perseroan berkomitmen melaksanakan kegiatan Pengadaan Barang dan Jasa dengan mematuhi kaidah yang dituangkan di dalam *ESG Management* serta selalu fokus menjadi Perusahaan yang berintegritas melalui upaya peningkatan secara berkelanjutan.

The Company guarantees the goods/services procurement process by providing equal treatment to all prospective goods/services suppliers without any special treatment for one of them. The Company is committed to carrying out goods and services procurement activities by complying with the rules set out in the ESG Management and always focusing on becoming a Company with integrity through continuous improvement efforts.

### GREEN PROCUREMENT [GRI 308-1, 308-2]

### GREEN PROCUREMENT [GRI 308-1, 308-2]

Perseroan berkomitmen untuk menjadi perusahaan yang ramah lingkungan, bertanggung jawab secara sosial dan bertata kelola yang baik, sebagaimana telah ditetapkan dalam Kebijakan Keberlanjutan Perseroan. Dalam menjalankan komitmennya, Perseroan melibatkan pekerja, masyarakat sekitar, pemasok, kontraktor, mitra bisnis, pelanggan dan kelompok kepentingan lainnya. Selain itu Perseroan juga berkomitmen untuk mengurangi dampak lingkungan sebagai konsekuensi dari kegiatan usahanya.

The Company is committed to becoming an environmentally friendly and socially responsible Company with good governance implementation, as stipulated in the Company's Sustainability Policy. In carrying out its commitment, the Company involves employees, local communities, suppliers, contractors, business partners, customers, and other stakeholders. In addition, the Company is also committed to reducing environmental impacts as a consequence of its business activities.

Perseroan mengharapkan pemasok, kontraktor dan mitra bisnis untuk:

1. Menghormati prinsip keberlanjutan dan lingkungan, membangun sarana untuk menghindari kebocoran dan emisi, menggunakan sumber daya alam secara bertanggung jawab dan ekonomis, mengurangi konsumsi energi dan emisi gas rumah kaca
2. Kemampuan menjamin lingkungan kerja yang aman, melindungi hak asasi tenaga kerja, tidak melakukan praktik diskriminatif, kerja paksa atau mempekerjakan anak, serta berupaya memenuhi segala ketentuan sesuai peraturan perundang-undangan
3. Berkomitmen pada kesepakatan yang ditetapkan dalam kontrak
4. Memenuhi standar kualitas tinggi di semua barang dan jasa yang disediakan

The Company expects suppliers, contractors, and business partners to:

1. Respect the sustainability principle and the environment, build facilities to avoid leakage and emissions, use natural resources responsibly and economically, reduce energy consumption and greenhouse gas emissions
2. Be able to guarantee a safe work environment, protect labor rights, not engage in discriminatory practices, forced labor or child labor, and strive to comply with all provisions in accordance with laws and regulations
3. Commit to the agreements stipulated in the contracts
4. Meet high quality standards in all goods and services that are provided.

**SOSIALISASI KEBIJAKAN PENGADAAN**

Manajemen Perseroan beserta seluruh Sub-Holding dan Anak Perusahaan bertanggung jawab dan menjamin bahwa kebijakan pengadaan dikomunikasikan, dilaksanakan, dan wajib dipatuhi oleh seluruh Pekerja, Pemasok, Kontraktor, dan Mitra Bisnis dengan tanpa kecuali. Pada tanggal 22 Juni 2022 telah dilaksanakan *Vendor Day* yang merupakan agenda rutin tahunan yang berisi selain pemberian apresiasi kepada para pemasok, kontraktor dan mitra bisnis yang berkinerja baik, sekaligus digunakan sebagai forum sosialisasi kebijakan dan aturan terkini mengenai proses pengadaan barang jasa dalam mendukung implementasi Kebijakan Keberlanjutan Perseroan dalam aspek ESG serta penerapan *Green Procurement* Sebanyak ± 4.500 pemasok/kontraktor/mitra bisnis hadir pada *Vendor Day* yang merupakan penyedia barang dan jasa berasal dari lingkungan PERTAMINA Group (*Holding* dan *Subholding*).

**PROCUREMENT POLICY DISSEMINATION**

The management of the Company and all Sub-Holding and Subsidiaries are responsible for and guarantee that procurement policies are communicated, implemented and must be complied with by all Workers, Suppliers, Contractors and Business Partners without exception. On June 22, 2022 Vendor Day was held which is an annual routine agenda which contains in addition to giving appreciation to suppliers, contractors and business partners who are performing well, as well as being used as a forum for socializing the latest policies and regulations regarding the process of procuring goods and services in supporting the implementation of the Sustainability Policy The Company in the aspect of ESG and the implementation of Green Procurement As many as ± 4,500 suppliers/contractors/business partners were present on Vendor Day who were providers of goods and services from the PERTAMINA Group (Holding and Subholding) environment.

Perseroan juga menyediakan *coaching* dan klinik terkait CSMS sebagai salah satu upaya untuk meningkatkan kapabilitas, terutama bagi kontraktor/pemasok/pihak ketiga lokal, sehingga mereka memiliki kemampuan aspek HSSE yang memadai untuk berpartisipasi dalam kegiatan *supply chain* Perseroan yang mayoritas bersifat *high risk*

The Company also provides coaching and clinics related to CSMS as an effort to increase capability, especially for local contractors/suppliers/third parties, so that they can have sufficient capability in HSSE aspect to participate in the Company’s supply chain activities that mostly are high risk activities.

**PENILAIAN SOSIAL DALAM PEMILIHAN PEMASOK [GRI 414-1, 11.10.8, 11.12.3, GRI 414-2, 11.10.9, SOC-2.C1, SOC-2.C2, SOC-2.A1]**

Dalam rangka melakukan implementasi kebijakan Hak Asasi Manusia (HAM), Perseroan memiliki kebijakan sosial pemasok dan kontraktor untuk memastikan implementasi prinsip-prinsip HAM kepada karyawan di seluruh lingkungan kerjanya. Berikut prinsip-prinsip HAM di antaranya namun tidak terbatas pada:

**SUPPLIER SOCIAL ASSESSMENT [GRI 414-1, 11.10.8, 11.12.3, GRI 414-2, 11.10.9, SOC-2.C1, SOC-2.C2, SOC-2.A1]**

In order to implement Human Rights (HAM) policies, the Company has social policies for vendors and contractors to ensure the implementation of human rights principles for employees in their work places. The following are human rights principles include but are not limited to:



- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1. Memastikan pemenuhan hak-hak terkait aspek kesehatan, kesejahteraan dan keamanan kerja.</li> <li>2. Memastikan pemenuhan upah minimum karyawan, kebijakan jam kerja maksimum, kondisi lingkungan tempat kerja maupun tempat tinggal pribadi yang sesuai dengan ketentuan perundang-undangan terkait ketenagakerjaan di Indonesia maupun standar yang berlaku secara internasional.</li> <li>3. Memfasilitasi kemerdekaan berserikat dan perundingan bersama para karyawan.</li> <li>4. Melarang praktik kerja paksa, dan penggunaan tenaga kerja anak dan memberikan perlindungan kepada pekerja wanita hamil.</li> <li>5. Memastikan lingkungan kerja yang tidak mentoleransi segala jenis perilaku dan praktik kekerasan, pelecehan maupun diskriminasi berbasis suku, agama, ras dan lain-lain.</li> <li>6. Menerapkan hukuman, sanksi dan disiplin untuk memastikan implementasi prinsip-prinsip di atas.</li> </ol> | <ol style="list-style-type: none"> <li>1. Ensuring the fulfilment of rights related to health, well-being and work safety aspects.</li> <li>2. Ensuring the fulfilment of the employees' minimum wage, maximum working hours policy, workplace conditions and private residence in accordance with the provisions of laws and regulations related to manpower in Indonesia as well as standards that apply internationally.</li> <li>3. Facilitating freedom of association and collective bargaining of employees.</li> <li>4. Prohibiting the practice of forced labor, and child labor, and providing protection for pregnant women employees.</li> <li>5. Ensuring a work place that does not tolerate all types of behavior and practices of violence, harassment or discrimination based on ethnicity, religion, race and others.</li> <li>6. Implementing penalties, sanctions and discipline to safeguard the implementation of the above principles.</li> </ol> |
|--|--|

Salah satu kriteria sosial yang digunakan Perseroan dalam pengadaan barang dan jasa adalah implementasi Contractor Safety Management System (CSMS). Dalam CSMS, pihak-pihak yang bekerja di wilayah operasi Perseroan, terutama kontraktor, harus memenuhi persyaratan minimum aspek HSSE berdasarkan risiko pekerjaan sebagai persyaratan mengikuti proses lelang pekerjaan. Kontraktor harus melewati tahapan prakualifikasi dan kualifikasi tiga tingkatan klasifikasi kontraktor, yaitu kontraktor yang mampu mengelola pekerjaan berisiko tinggi, kontraktor yang mengelola pekerjaan risiko menengah, dan kontraktor yang mengelola pekerjaan risiko rendah. Hanya mereka yang telah memenuhi persyaratan CSMS yang dapat bekerja di lokasi Perseroan.

One of the social criteria used by the Company in procuring goods and services is the implementation of the Contractor Safety Management System (CSMS). In the CSMS, parties who work in the Company's operational areas, especially contractors, must adhere to the minimum requirements for HSSE aspects based on work risk as a requirement to participate in the job auction process. Contractors must pass the pre-qualification and qualification stages of three levels of contractor classification, namely contractors capable of managing high-risk work, contractors managing medium-risk work, and contractors managing low-risk work. Only those who have fulfilled CSMS requirements can work at the Company's locations.

Untuk mendapatkan sertifikat CSMS, salah satu syarat yang harus dimiliki oleh kontraktor/pemasok/pihak ketiga adalah memiliki sertifikasi Sistem Manajemen HSSE dari Lembaga Sertifikasi Eksternal, seperti ISO 45001 serta ISO 14001.

To be able to obtain a CSMS certificate, a contractor/supplier/third party must have an HSSE Management System certification from an external certification body, such as ISO 45001 and ISO 14001.

<b>Hasil Penerapan Tahapan CSMS terhadap Pemasok/Kontraktor/Pihak Ketiga</b> Results of the Implementation of CSMS Stages for Suppliers/Contractors/Third Parties				
Uraian Tingkat Kemampuan Pemasok/ Kontraktor/Pihak Ketiga Description of Ability Level of Suppliers/ Contractors/ Third Parties	2022	2021	2020	2019
Berkemampuan mengelola pekerjaan risiko tinggi Able to manage high-risk work	<b>3,870</b>	4,150	3,496	3,403
Berkemampuan mengelola pekerjaan risiko sedang Able to manage moderate-risk work	<b>900</b>	911	778	759
Berkemampuan mengelola pekerjaan risiko rendah Able to manage low-risk work	<b>765</b>	700	589	592
<b>Jumlah</b> Total	<b>5,535</b>	<b>5,716</b>	<b>4,863</b>	<b>6,001</b>

Jika terbukti menyalahi ketentuan dalam persyaratan rencana kerja, Perseroan secara tegas akan menjatuhkan sanksi kepada vendor sesuai ketentuan berupa *blacklist*/sanksi kategori hitam. Sanksi ini merupakan kategori sanksi terberat yang berujung pada tidak diperkenalkannya vendor untuk mengikuti proses pengadaan barang dan jasa di PERTAMINA.

If it is proven that a vendor violates the provisions in the work plan requirements, the Company will strictly impose sanctions on the vendor according to the provisions in the form of a blacklist/black category sanction. Such a sanction is the heaviest category in which the vendor is not allowed to participate in the goods and services procurement process at PERTAMINA.

Jumlah Vendor yang Dikenakan Sanksi Number of Vendors Penalized				
Kategori Category	2022	2021	2020	2019
Blok Blocked	10,756	11,099	11,043	10,091
Hitam Black	203	171	164	154
Merah Red	52	44	45	43
Kuning Yellow	50	50	45	52
Hijau Green	5,580	5,576	4,832	4,567

**Keterangan:**

- Blok** : Vendor selama lebih dari 2 tahun tidak mendapat PO/kontrak/ pekerjaan, ada data/dokumen persyaratan SKT yang sudah *expired* dan belum di update dan lainnya
- Hitam** : Kelompok Penyedia Barang/Jasa ini tidak diperbolehkan mengikuti kegiatan Pengadaan Barang/Jasa selanjutnya
- Merah** : Kelompok Penyedia Barang/Jasa ini tidak diperbolehkan mengikuti kegiatan Pengadaan Barang/Jasa selanjutnya selama 1 (satu) tahun sejak Sanksi dimasukkan ke dalam sistem (berlaku untuk Penyedia Barang/Jasa).
- Kuning** : Dapat mengikuti pemilihan Penyedia di lingkungan PERTAMINA Grup (selain *cost recovery*) selama 2 (tahun) tahun dan dilanjutkan dengan masa percobaan selama 1 (satu) tahun kepada Penyedia Barang/ Jasa tersebut beserta pemilik dan/atau pengurusnya.
- Hijau** : Dapat mengikuti pemilihan Penyedia di lingkungan PERTAMINA Grup (selain *cost recovery*)

**Information:**

- Block** : vendors for more than 2 years have not received POs/ contracts/work, there are data/documents of SKT requirements that have expired and have not been updated and so on
- Black** : This group of suppliers of goods/services is not allowed to participate in procurement activities for 2 (two) years, followed by a probationary period of 1 (one) year for the supplier of goods/services and its owner and/or managers.
- Red** : This group of suppliers of goods/services is not allowed to participate in procurement activities for 1 (one) year since the sanction is entered into the system (applies to suppliers of goods/services).
- Yellow** : Can participate in supplier selection within PERTAMINA Group (except for cost recovery)
- Green** : Can participate in supplier selection within PERTAMINA Group (except for cost recovery)

**PROPORSI PENGELUARAN  
UNTUK PEMASOK LOKAL [GRI 204-  
1, 11.14.6, SOC-14.C1, SOC-13.A1]**

Perseroan melalui direktorat logistik yaitu Fungsi *Local Content Utilization Management* mendorong peningkatan penggunaan komponen dalam negeri di berbagai proyek dan operasional perusahaan. Inovasi dan penelitian yang dilakukan juga bertujuan meningkatkan penggunaan produk dalam negeri, termasuk *specialty chemicals* dan katalis.

Komitmen pada Peningkatan Penggunaan Produk Dalam Negeri dijalankan Perseroan melalui keterlibatan badan usaha dalam negeri sebagai pemasok barang dan jasa. Komitmen capaian penggunaan produk dalam negeri Perseroan periode 2020 - 2024 melalui rencana investasi senilai USD92 miliar di seluruh lini bisnis, diproyeksikan mencapai 40% pada tahun 2024.

**PROPORTION OF SPENDING  
ON LOCAL SUPPLIERS [GRI 204-  
1, 11.14.6, SOC-14.C1, SOC-13.A1]**

The Company with the logistics directorate, namely the Local Content Utilization Management Function, encourages increased use of domestic components in various projects and operations of the Company. The innovations and research carried out are also aimed at increasing the use of domestic products, including specialty chemicals and catalysts.

Commitment to Increasing the Use of Domestic Products is carried out by the Company through the involvement of domestic business entities as suppliers of goods and services. The Company's commitment to achieving the use of domestic products for the 2020-2024 period is implemented through an investment plan worth USD92 billion in all business lines, and is projected to reach 40% by 2024.

Proyeksi TKDN Perseroan 2020-2023				
The Company's Local Content Projection 2020 - 2023 (%)				
Uraian Description	2020	2021	2022	2023
Target TKDN Local Content Target	25	30	<b>40.0</b>	
Realisasi TKDN Local Content Realization	55.60	60	<b>60.59</b>	45

Selain itu peningkatan TKDN juga didukung dengan telah dibentuknya Fungsi Peningkatan Penggunaan Produk Dalam Negeri (P3DN) di masing-masing Subholding. Fungsi P3DN memiliki tugas dan tanggung jawab yang sama yaitu melakukan monitoring dan evaluasi penerapan TKDN serta melakukan fasilitasi terhadap perbedaan penafsiran TKDN, sehingga maka penerapan implementasi P2DN di PERTAMINA Group menjadi lebih terintegrasi dan optimal.

In addition, the increase in local content is also supported by the establishment of the Function for Increasing the Use of Domestic Products (P3DN) in each Subholding. The P3DN function has the same duties and responsibilities in monitoring and evaluating the implementation of local content and facilitating differences in the interpretation of local content for more integrated and optimized implementation of P2DN in PERTAMINA.

Selain dengan menerapkan TKDN pada pengadaan, pada tahun 2021 PERTAMINA melakukan sertifikasi TKDN terhadap 22 varian produk PERTAMINA Group untuk dapat menaikkan daya saing penjualan produk tersebut.

Aside from implementing local content in the procurement process, in 2021, PERTAMINA conducted local content certification for 22 variants of PERTAMINA Group's products to increase the competitiveness these products sales.

Proporsi Pengadaan Barang dan Jasa [204-1]									
Proportion of Goods & Services Procurement									
Uraian Description	Satuan Unit	2022	%	2021	%	2020	%	2019	%
<b>Jumlah Pemasok</b> Number of Suppliers									
Nasional National	Pemasok Supplier	<b>13,419</b>	95.50	11,632	95.04	10,972	94.95	11,097	94.61
Internasional International	Pemasok Supplier	<b>632</b>	4.50	607	4.96	584	5.05	632	5.39
<b>Jumlah Total</b>	<b>Pemasok Supplier</b>	<b>14,051</b>	<b>100</b>	<b>12,239</b>	<b>100</b>	<b>11,556</b>	<b>100</b>	<b>11,729</b>	<b>100</b>
<b>Nilai Kontrak</b> Contract value									
Nasional National	USD	<b>186.2</b>	96.72	147.9	96.85	135.45	95.89	133.68	95.48
Internasional International	USD	<b>6.31</b>	3.28	4.81	3.15	5.80	4.11	6.33	4.52
<b>Jumlah Total</b>	<b>USD</b>	<b>192.51</b>	<b>100</b>	<b>152.71</b>	<b>100</b>	<b>141.25</b>	<b>100</b>	<b>140.01</b>	<b>100</b>



# Tata Kelola Keberlanjutan

[OJK E.2, GRI 2-17, GOV-1.A6, CDSB REQ-01, CDSB REQ-02]

## Sustainability Governance



Komite keberlanjutan yang dibentuk diketuai oleh Direktur Utama sebagai ketua komite dengan beranggotakan Direktur Keuangan, Direktur Strategi, Portofolio, dan Pengembangan Usaha, Direktur Logistik dan Infrastruktur, Sekretaris Komite, serta Penanggung jawab Bidang. Ketua komite dan anggota komite bereperan dalam melakukan pengawasan, menetapkan dan memberi arahan terkait ambisi, strategi, *roadmap*, kebijakan, inisiatif dan ukuran kinerja terkait aspek keberlanjutan. Informasi mengenai komite keberlanjutan telah disampaikan dalam laporan ini pada Bab Strategi Keberlanjutan.

The Sustainability Committee is chaired by the President Director as chairman of the committee with members consisting of the Director of Finance, the Director of Strategy, Portfolio and Business Development, the Director of Logistics and Infrastructure, Secretary of Committee, and the person in charge of the field. The Committee's chair and members play a role in supervising, establishing, and providing direction regarding ambitions, strategies, roadmaps, policies, initiatives, and performance measures related to sustainability aspects. Information regarding the sustainability committee has been presented in this report in the Sustainability Strategy Chapter.

### PENGEMBANGAN KOMPETENSI TERKAIT PEMBANGUNAN BERKELANJUTAN

[OJK E.2, GRI 2-17, GOV-1.A6]

### COMPETENCE DEVELOPMENT RELATED TO SUSTAINABLE DEVELOPMENT

[OJK E.2, GRI 2-17, GOV-1.A6]

Sepanjang tahun 2022, Perseroan menyertakan Komisaris dalam kegiatan untuk meningkatkan pengetahuan, kompetensi, dan pengalaman kolektif terkait pembangunan berkelanjutan. Jenis pelatihan, materi dan penyelenggara pelatihan dapat dilihat pada tabel di bawah ini. [2-17-a]

Throughout 2022, the Company assigned the Board of Commissioners in activities to increase collective knowledge, competence and experience related to sustainable development. Types of training, materials and training organizers can be seen in the table below. [2-17-a]

#### Pengembangan Kompetensi Pembangunan Berkelanjutan bagi Dewan Komisaris

Competence Development in Sustainable Development for the Board of Commissioners

Jenis Pelatihan Type of Training	Materi Pengembangan Kompetensi/Pelatihan Competency Development/ Training Materials	Waktu dan Tempat Pelaksanaan Time and Venue of Implementation	Penyelenggara Organizer
Workshop	<i>Building Acquisition Management Capability To Improve Strategic Integration And Acquisition Performance</i>	11 Januari 2022 Jakarta - Online	Universitas Indonesia - Bapak Oki Ramadhana, S.Hub.Int, MBA, Ph.D
Workshop	<i>Risk, Uncertainty, Forecastability of Oil Price and How to Make Decisions Over the Situation</i> (Context: Russia and Ukraine Conflict)	09 Maret 2022 Jakarta - Online	Boston Consulting Group
Workshop	Pengaruh Konflik Ukraina & Rusia terhadap Bisnis PERTAMINA	07 April 2022 Jakarta - Online	PERTAMINA Energy Institute
Workshop	<i>Russia's Invasion of Ukraine and its impact to the Energy Markets</i>	21 April 2022 Jakarta - Online	Jarand Rystad - CEO of Rystad Energy
Workshop	<i>FG Energy Oil and Gas Market Snapshots due to Current Geopolitics Situation</i>	21 April 2022 Jakarta - Online	Fereidun Fesharaki - Chairman of FGE (Facts Global Energy)
Workshop	<i>Fraud dan Integritas Laporan Keuangan (Forensic Accounting)</i>	16 Juni 2022 Jakarta - Online	Deni R. Tama - Managing Director Kroll Indonesia
Workshop	<i>Sharing Session terkait Carbon Capture, Utilisation, Storage, and Carbon Credit</i>	01 September 2022 Jakarta - Online	Nick Dingemans - Lawyer/Partner of Penningtons Manches Cooper LLP

Di samping itu, Direksi sebagai penanggung jawab penerapan keberlanjutan, mengikuti pengembangan kompetensi pembangunan untuk meningkatkan pengetahuan kolektif, keterampilan, dalam penerapan tata kelola perusahaan untuk pembangunan berkelanjutan. Adapun beberapa pengembangan kompetensi pembangunan berkelanjutan yang telah diikuti Direksi sebagai berikut.

In addition, the Board of Directors is in charge implementation of sustainability, following the development competence development to improve collective knowledge, skills, in application corporate governance for development sustainable. As for some development sustainable development competencies that have followed by the Board of Directors as follows.

<b>Pengembangan Kompetensi Pembangunan Berkelanjutan bagi Direksi [GRI 2-24]</b> Competence Development in Sustainable Development for the Board of Directors		
<b>Nama Pelatihan/Workshop/Konferensi/Seminar</b> Name of Training/Workshop/Conference/Seminar	<b>Lembaga Penyelenggara</b> Organizer	<b>Waktu dan Tempat</b> Time and Place
<b>Nicke Widyawati - Direktur Utama/President Director</b>		
<i>G20 Presidency Conference - Sustainable Finance for Climate Transition Roundtable</i>	G20 Committee	July 14, 2022 Bali, Indonesia
<i>COP-27 Conference</i>	G20 Committee	November 6, 2022 Mesir - Egypt
<i>Global Energy Solutions Leadership Dialogue</i>	B20 Indonesia Summit 2022 & IEF	November 15, 2022 Bali, Indonesia
<b>Salyadi Saputra - Direktur Strategi, Portofolio dan Pengembangan Usaha</b> <b>Salyadi Saputra - Director of Strategy, Portfolio and New Ventures</b>		
<i>SOE International Conference - Driving 'Sustainable &amp; Inclusive Growth'</i>	Kementerian BUMN Ministry of SOE	October 17, 2022 Bali, Indonesia
<i>Onboarding Directorship Program Angkatan 6 Tahun 2022</i> Onboarding Directorship Program Batch 6 of 2022	Kementerian BUMN Ministry of SOE	Nov 2 - December 21, 2022 Online
<i>UK-Indonesia Business Leaders Forum</i>	B20 Committee	November 14, 2022 Bali, Indonesia
<b>Emma Sri Martini - Direktur Keuangan/Director of Finance</b>		
<i>Fitch on Indonesia 2022: Exit Strategy after the Pandemic - Corporates and Infrastructure and Project Finance</i>	Fitch Ratings	March 23, 2022 Online
<i>Risk Management Workshop</i>	Kementerian BUMN Ministry of SOE	October 26, 2022 Jakarta, Indonesia
<i>Workshop Pengendalian Risiko Melalui Penerapan Captive Insurance Untuk BUMN Konglomerasi</i> Workshop on Risk Control Through the Implementation of Captive Insurance for Conglomerate SOEs	Kementerian BUMN Ministry of SOE	November 29, 2022 Jakarta, Indonesia
<b>M. Erry Sugiharto - Direktur Sumber Daya Manusia/Director of Human Capital</b>		
<i>Indonesia HR Summit 12<sup>th</sup></i>	SKK Migas dan PERTAMINA Hulu Energi	June 28-29, 2022 Bali - Indonesia
<i>Dynamic Leadership for Young Leaders</i>	Kementerian BUMN Ministry of SOE	September 13, 2022 Jakarta, Indonesia
<i>Implementasi Industrial Peace Audit, Human Rights Due Diligence and Respectful Workplace for Sustainability</i> Implementation of Industrial Peace Audit, Human Rights Due Diligence and Respectful Workplace for Sustainability	Forum Human Capital Indonesia	Desember 7, 2022 Online
<b>Mulyono - Direktur Logistik dan Infrastruktur/Director of Integrated Logistics &amp; Infrastructure</b>		
<i>Pelatihan Talenta BUMN</i> SOE Talent Training	Kementerian BUMN Ministry of SOE	February 15, 2022 Online
<b>Dedi Sunardi - Direktur Penunjang Bisnis/Director of Corporate Services</b>		
<i>Assessment Kompetensi BUMN</i> SOE Competency Assessment	SHL	February 25, 2022 Online
<i>Professional Qualification Assessment</i>	SHL	March 1, 2022 Jakarta, Indonesia

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Tata Kelola dan Tata Kelola Keberlanjutan

Selain yang disampaikan pada tabel di atas, Direksi juga mengikuti beberapa jenis pelatihan/konferensi/seminar sebagai upaya penguatan untuk mengembangkan kompetensi berkelanjutan. Mengikuti langkah yang telah dilakukan Perseroan, pengembangan kompetensi juga dilaksanakan bagi Direksi Sub Holding dan Anak Perusahaan. Perseroan mengadakan PRIME (*Directorship Program*) yang merupakan salah satu program dalam piramida PERTAMINA Leadership Model, yang diperuntukkan bagi Direksi *Subholding*/Anak Perusahaan untuk mencapai *World Class Energy Company*. Kegiatan PRIME *Directorship* dilaksanakan pada 8 November 2022 dan diikuti oleh 33 Direksi *Sub Holding* dan Anak Perusahaan.

In addition to the information presented in the table above, the Board of Directors also participated in various training/conferences /seminars as part of ongoing efforts to strengthen and develop their competencies. Following the steps taken by the Company, competency development was also carried out for the Directors of Subholding and Subsidiaries. The Company held PRIME (Directorship Program), one of the programs in the PERTAMINA Leadership Model pyramid, intended for the Directors of Subholding/Subsidiaries to achieve a World Class Energy Company. The PRIME Directorship program was held on November 8, 2022, and was attended by 33 Directors of Subholding and Subsidiaries.

**PENILAIAN RISIKO ATAS PENERAPAN PEMBANGUNAN BERKELANJUTAN**

[OJK E.3, GOV-1.C3, GOV-1.A3, CCE-1.C2, TCFD GOV-A, TCFD GOV-B, GOV-2.A4]

**RISK ASSESSMENT OF SUSTAINABLE DEVELOPMENT IMPLEMENTATION**

[OJK E.3, GOV-1.C3, GOV-1.A3, CCE-1.C2, TCFD GOV-A, TCFD GOV-B, GOV-2.A4]

Dalam mengidentifikasi, mengukur, memantau, dan mengendalikan risiko aspek ekonomi, lingkungan, dan sosial, Perseroan telah memiliki Pedoman Manajemen Risiko yang mengacu pada ISO 31000:2018.

In identifying, measuring, monitoring, and controlling economic, environmental, and social risks, the Company has Risk Management Guidelines that refer to ISO 31000:2018.

Proses Manajemen Risiko Perseroan secara umum meliputi:

In general, the Company’s Risk Management process covers:





Perseroan menggunakan sejumlah alat dan metode di antaranya *risk intelligence map*, *risk register*, *disruptive risk assessment*, dan lainnya untuk mengidentifikasi risiko, mengukur potensi dampak, dan menetapkan langkah-langkah mitigasi yang diperlukan. Selain itu, Perseroan telah mengimplementasikan *Business Continuity Management System (BCMS)* yang mengacu pada ISO 22301:2019 sebagai panduan merencanakan dan menyiapkan perusahaan untuk menghadapi situasi abnormal.

The Company uses a number of tools and methods including risk intelligence maps, risk registers, disruptive risk assessments, and others to identify risks, measure potential impacts, and determine the necessary mitigation steps. In addition, the Company has implemented Business Continuity Management System (BCMS) which refers to ISO 22301:2019 as a guide for planning and preparing the Company to deal with abnormal situations.

Dari sisi pengawasan, Dewan Komisaris Perseroan telah membentuk Komite Pemantauan Investasi dan Manajemen Risiko (KPIMR). Salah satu tugas dan tanggung jawab yang dimiliki oleh KPIMR yaitu melakukan evaluasi dan pemantauan terutama Manajemen Risiko Korporasi, utamanya melakukan pemantauan atas kebijakan dan penerapan manajemen risiko yang dilakukan oleh fungsi *Enterprise Risk Management (2nd line of defense)* di  *Holding*. Hal ini tertuang dalam Surat Keputusan Dewan Komisaris Nomor 008/KPTS/K/DK/2021 tanggal 19 Juli 2021 **[TFCD GOV-a, TCFD GOV-b]**.

In terms of supervision, the Company's Board of Commissioners has formed an Investment and Risk Management Oversight Committee (KPIMR). One of the duties and responsibilities of KPIMR is to evaluate and monitor Enterprise Risk Management, in particular to monitor the policies and implementation of risk management carried out by the Enterprise Risk Management function (2nd line of defense) in Holding. This is as stated in the Board of Commissioners Decision Letter Number 008/KPTS/K/DK/2021 dated July 19, 2021 **[TFCD GOV-a, TCFD GOV-b]**.

# Verifikasi Tertulis dari Pihak Independen

[OJK G.1, GRI 2-5, GOV-1.A4, GOV-2.A2, CDSB REQ-12]

## Written Verification from Independent Party

Laporan ini telah melalui proses assurance oleh pihak eksternal independen dengan mengacu pada standar AA1000AS. Proses pemilihan penjamin dilaksanakan secara independen dan dipastikan tidak ada benturan kepentingan dengan pihak manapun yang berada dalam Perseroan. Laporan dilengkapi indeks dan referensi silang standar pelaporan.



## ASSURANCE STATEMENT

### SGS INDONESIA'S REPORT ON SUSTAINABILITY ACTIVITIES IN THE PT. PERTAMINA (PERSERO) SUSTAINABILITY REPORT 2022

#### NATURE OF THE ASSURANCE/VERIFICATION

PT. SGS Indonesia was commissioned by PT. Pertamina (Persero) to conduct an independent assurance of the Sustainability Report 2022. The scope of the assurance, based on the SGS Sustainability Report Assurance methodology, included the text, and data in accompanying tables, contained in this report.

#### INTENDED USERS OF THIS ASSURANCE STATEMENT

This Assurance Statement is provided with the intention of informing all PT.Pertamina (Persero)'s Stakeholders.

#### RESPONSIBILITIES

The information in the Report and its presentation are the responsibility of the directors or governing body and the management of PT. Pertamina (Persero). SGS has not been involved in the preparation of any of the material included in the Report.

Our responsibility is to express an opinion on the text, data, graphs and statements within the scope of verification with the intention to inform all PT. Pertamina (Persero)'s stakeholders.

#### ASSURANCE STANDARDS, TYPE AND LEVEL OF ASSURANCE

The SGS ESG & Sustainability Report Assurance protocols used to conduct assurance are based upon internationally recognised assurance guidance and standards including the principles of reporting process contained within the Global Reporting Initiative Sustainability Reporting Standards (GRI Standards) GRI 1: Foundation 2021 for report quality, GRI 2 General Disclosure 2021 for organisation's reporting practices and other organizational detail, GRI 3 2021 for organisation's process of determining material topics, its list of material topics and how to manages each topic, and the guidance on levels of assurance contained within the AA1000 series of standards.

The assurance of this report has been conducted according to the following Assurance Standards:

- SGS ESG & SRA Assurance Protocols (based on GRI Principles and guidance in AA1000)
- AA1000ASv3 Type 2 (AA1000AP Evaluation) with level of assurance is High.

Assurance has been conducted at a High level of scrutiny

#### SCOPE OF ASSURANCE AND REPORTING CRITERIA

The scope of the assurance included evaluation of quality, accuracy and reliability of specified performance information as detailed below and evaluation of adherence to the following reporting criteria:

- GRI (In Accordance with)
- AA1000 Accountability Principles (2018)
- SASB
- TCFD



This report has gone through an assurance process by an independent external party with reference to the AA1000AS standards. The assurer selection process is carried out independently and it is ensured that there is no conflict of interest with any party within the Company. Reports include reporting standards indexes and cross-references.

#### **ASSURANCE METHODOLOGY**

The assurance comprised a combination of pre-assurance research and interviews with relevant accountable managers and employees at the Head Office of PT. Pertamina (Persero) at Jakarta, Subholding Upstream office and Subholding Refining and Petrochemical office. PT. Pertamina's (Persero) Sustainability Report 2022 covers PT. Pertamina (Persero) Holding and Subholdings, documentation and record review.

#### **LIMITATIONS AND MITIGATION**

Financial data drawn directly from independently audited financial accounts and Task Force on Climate related Financial Disclosures (TCFD) has not been checked back to source as part of this assurance process

#### **STATEMENT OF INDEPENDENCE AND COMPETENCE**

The SGS Group of companies is the world leader in inspection, testing and verification, operating in more than 140 countries and providing services including management systems and service certification; quality, environmental, social and ethical auditing and training; environmental, social and sustainability report assurance. SGS affirm our independence from PT. Pertamina (Persero), being free from bias and conflicts of interest with the organization, its subsidiaries and stakeholders.

The assurance team was assembled based on their knowledge, experience and qualifications for this assignment, and comprised auditors registered with International Register of Certificated Auditors (IRCA), Environmental Management System (EMS) Lead Auditor, Quality Management System (QMS) Lead Auditor, Occupational Health and Safety Management System Lead Auditor, the IRCA Corporate Responsibility

#### **FINDINGS AND CONCLUSIONS**

##### **ASSURANCE/VERIFICATION OPINION**

On the basis of the methodology described and the verification work performed, we are satisfied that the specified performance information included in the scope of assurance is accurate, reliable, has been fairly stated and has been prepared, in all material respects, in accordance with the reporting criteria.

We believe that the organisation has chosen an appropriate level of assurance for this stage in their reporting.

##### **ADHERENCE TO AA1000 ACCOUNTABILITY PRINCIPLES STANDARD (2018)**

###### **Inclusivity**

PT. Pertamina (Persero) has made a commitment to be accountable to those on whom it has an impact or who have an impact on it as stated in some Policies such as Environmental Policies, Safety and Health Policy, and Code of Conduct. Inclusivity is the participation of stakeholders in developing and achieving an accountable and strategic response to sustainability. Process of engagement and participation that provides comprehensive and balanced involvement and results in strategies, plan, action, and outcomes that address and respond to issues and impacts in an accountable way. The company has a process of stakeholder participation (all stakeholders) through a periodic meeting.

###### **Materiality**

PT. Pertamina (Persero) has identified stakeholders and those issues that are material to each group of stakeholders and the report addresses these at an appropriate level to reflect their importance and priority to these stakeholders. In order to establish Key Material issues PT. Pertamina (Persero) conducted Focus Group Discussion, and the material topic was evaluated through in-depth study of material topics with management and the entire sustainability report drafting team. Materiality which to be high priority issues are Occupational Safety and Health, Anti-Corruption, Emissions, Employment and Energy.

###### **Responsiveness**

PT. Pertamina (Persero) has responded to stakeholders' issues that affect to its sustainability performance and is released through decisions, actions and performance, as well as communication with stakeholders.

**Impact**

PT Pertamina (Persero) has identified and fairly represented impacts that were monitored and measured. PT Pertamina (Persero) has established processes to monitor, measure and evaluate impacts that lead to effective decision making management within organization.

**ADHERENCE TO GLOBAL REPORTING INITIATIVE SUSTAINABILITY REPORTING STANDARDS (2021)**

In our opinion, the PT Pertamina (Persero) Sustainability Report 2022 is presented in accordance with the Global Reporting Initiative Sustainability Reporting Standards 2021 and GRI 11 Oil and Gas Sector 2021, for the period from 01 January 2022 to 31 December 2022.

**Foundation**

In our opinion, the content and quality of the report adheres to the GRI Reporting Principles of Accuracy, Balance, Clarity, Comparability, Completeness, Sustainability context, Timeliness and Verifiability.

**General Disclosures**

All the General disclosures required for reporting in accordance with the Global Reporting Initiative Sustainability Reporting Standards 2021.

**Material Topics**

PT Pertamina (Persero) disclose material topics that represent an organization's most significant impacts on the economy, environment, and people, in accordance with Global Reporting Initiative Sustainability Reporting Standards 2021 and GRI 11 Oil and Gas Sector 2021.

**ADHERENCE TO SASB AND TASK FORCE ON CLIMATE related FINANCIAL DISCLOSURE (TCFD)**

PT Pertamina (Persero) adopted SASB's standard EXTRACTIVES & MINERALS PROCESSING SECTOR - OIL & GAS – EXPLORATION & PRODUCTION INDUSTRY STANDARD VERSION 2018-10, OIL & GAS – MIDSTREAM INDUSTRY STANDARD VERSION 2018-10, OIL & GAS – REFINING & MARKETING INDUSTRY STANDARD VERSION 2018-10 AND OIL & GAS – SERVICES INDUSTRY STANDARD VERSION 2018-10 to communicate their sustainability accounting performance to their investor. PT Pertamina (Persero) has determined which disclosure topics and associated metrics and financially material to its business. PT Pertamina (Persero) also adopted Task Force on Climate related Financial Disclosures (TCFD) in Pertamina (Persero) Sustainability Report 2022 and disclose Governance, Strategy, Risk Management, Metrics and Target. By using GRI, SASB and TCFD standards together, the efficiency of communication and the identification of material issues are substantially increased. Besides, it is best practice to implement benchmark within or across sectors in the next reporting

Signed:

For and on behalf of SGS Indonesia



**Waras Putri Andrianti**  
 Business Manager  
 Jakarta, Indonesia  
 29 May 2023

[WWW.SGS.COM](http://WWW.SGS.COM)



**AA1000**  
 Licensed Report  
 000-8/V3-N3105



# Lembar Umpan Balik

[OJK G.2 GRI 2-26, SOC-8.C1]

## Feedback Sheet

Setelah membaca Laporan Keberlanjutan PT Pertamina (Persero), kami mohon kesediaan para pemangku kepentingan untuk memberikan umpan balik dengan mengirim email atau mengirim formulir ini melalui fax/pos.

Upon reading this PT Pertamina (Persero) Sustainability Report, we would like the stakeholders to provide feedback by sending an email or sending this form by fax/post.

Pertanyaan Question	Setuju Agree	Tidak Setuju Don't agree
Laporan ini telah memberikan informasi yang bermanfaat mengenai kinerja ekonomi, sosial, dan lingkungan Perusahaan. This report has provided useful information regarding the Company's economic, social, and environmental performance.		
Data dan informasi yang diungkapkan mudah dipahami, lengkap, transparan, dan berimbang. The data and information disclosed is easy to understand, complete, transparent and balanced.		
Data dan informasi yang disajikan berguna dalam pengambilan keputusan. The data and information presented is useful for making decisions.		
Laporan ini menarik dan mudah dibaca. This report is interesting and easy to read.		

Mohon berikan nilai mengenai aspek yang terdapat dalam laporan ini (nilai 1 = paling penting, 2 = penting, 3 = tidak penting, 4 = sangat tidak penting).

Please give a score regarding the aspects contained in this report. (1 = most important, 2 = important, 3 = not important, 4 = very unimportant).

(.....) Emisi/Emissions

(.....) Energi/Energy

(.....) Kependagangan/Employment

(.....) Kesehatan dan Keselamatan Kerja/Occupational Health and Safety

(.....) Anti Korupsi/Anti-Corruption

**Mohon berikan komentar/saran/usulan bagi laporan ini.**  
Please give your comment/suggestion for this report.

Nama/Name : .....

Pekerjaan/Position : .....

Institusi/Perusahaan/Institution/Company : .....

Kontak (telepon, email)/Contact (Phone, email) : .....

**Kategori Pemangku Kepentingan**  
Stakeholders Category

- Pemegang Saham/Shareholders
- Pelanggan/Customers
- Pekerja/Employees
- Investor/Investors
- Regulator, Legislatif, dan Lembaga Pengawas  
Regulator, Legislative, and Supervisory Bodies
- Masyarakat di Sekitar Wilayah Usaha Perusahaan  
Communities around the Company's Business Area
- Kontraktor/Contractor
- Lembaga Swadaya Masyarakat (LSM)  
Non-Governmental Organization (NGO)
- Lembaga Penelitian dan Perguruan Tinggi  
Research Institutes and Universities

Saran dan tanggapan yang Anda berikan atas informasi yang disajikan dalam laporan ini mohon dikirimkan kepada:  
Please send your suggestion and response on the information presented in the report to:

**Investor Relations**  
**PT Pertamina (Persero)**  
Jl. Medan Merdeka Timur No. 11-13.  
Jakarta Pusat 10110  
PERTAMINA Contact Center 135  
Telp: (021) 3815111, 3816111  
Fax: +6221 381 5912  
E-mail: pcc135@pertamina.com  
Website: www.pertamina.com

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# Lampiran

## Appendix



### Komposisi Pekerja Berdasarkan Gender

### Employee Composition by Gender

**Tabel Komposisi Pekerja Berdasarkan Gender [GRI 2-7]**

Table of Employee Composition by Employment Status and Gender

(dalam satuan orang) (in person)

Jenis Kelamin Gender	2022	2021
Laki-Laki/Man	<b>35,884</b>	37,281
Perempuan/Woman	<b>7,782</b>	8,031
<b>Total</b>	<b>43,666</b>	<b>45,312</b>

### Komposisi Pekerja PWTT Berdasarkan Tingkat Pendidikan dan Gender

### Composition of Permanent Employees by Educational Level and Gender

**Tabel Komposisi Pekerja PWTT Berdasarkan Tingkat Pendidikan dan Gender [GRI 2-7]**

Table of PWTT Worker Composition by Education Level and Gender

(dalam satuan orang) (in person)

Tingkat Pendidikan Educational Level	2022			2021		
	Holding	Sub-Holding	Total	Holding	Sub-Holding	Total
<b>Berdasarkan Tingkat Pendidikan By Educational Level</b>						
Pasca Sarjana Post Graduate	<b>1,198</b>	<b>3,139</b>	<b>4,337</b>	1,260	2,862	4,122
• Laki-Laki/Man	<b>936</b>	<b>2,510</b>	<b>3,446</b>	1,005	2,289	3,294
• Perempuan/Woman	<b>262</b>	<b>629</b>	<b>891</b>	255	573	828
Sarjana/Graduate	<b>5,385</b>	<b>10,806</b>	<b>16,191</b>	5,274	10,045	15,319
• Laki-Laki/Man	<b>4,345</b>	<b>8,372</b>	<b>12,717</b>	4,228	7,766	11,994
• Perempuan/Woman	<b>1,040</b>	<b>2,434</b>	<b>3,474</b>	1,046	2,279	3,325

Diploma/Diploma	<b>3,770</b>	<b>4,562</b>	<b>8,332</b>	3,992	4,263	8,255
• Laki-Laki/Man	<b>3,572</b>	<b>3,162</b>	<b>6,734</b>	3,790	2,814	6,604
• Perempuan/Woman	<b>198</b>	<b>1,400</b>	<b>1,598</b>	202	1,449	1,651
SMA/Senior High School	<b>2,532</b>	<b>4,363</b>	<b>6,895</b>	2,522	3,859	6,381
• Laki-Laki/Man	<b>2,510</b>	<b>3,958</b>	<b>6,468</b>	2,502	3,520	6,022
• Perempuan/Woman	<b>22</b>	<b>405</b>	<b>427</b>	20	403	423
SMP/Junior High School	<b>0</b>	<b>45</b>	<b>45</b>	-	38	38
• Laki-Laki/Man	<b>0</b>	<b>41</b>	<b>41</b>	-	34	34
• Perempuan/Woman	<b>0</b>	<b>4</b>	<b>4</b>	-	4	4
SD/Elementary School	<b>0</b>	<b>0</b>	<b>0</b>	-	26	26
• Laki-Laki/Man	<b>0</b>	<b>0</b>	<b>0</b>	-	22	22
• Perempuan/Woman	<b>0</b>	<b>0</b>	<b>0</b>	-	4	4
<b>Total</b>	<b>12,885</b>	<b>22,915</b>	<b>35,800</b>	<b>13,048</b>	<b>21,093</b>	<b>34,141</b>

### Komposisi Pekerja Berdasarkan Wilayah Kerja, Status Kepegawaian dan Gender Employee Composition by Work Area, Employment Status, and Gender

**Tabel Komposisi Pekerja Berdasarkan Wilayah Kerja, Status Kepegawaian dan Gender [GRI 2-7]**

Table of Employee Composition by Work Area and Employment Status

(dalam satuan orang) (in person)

Penempatan Placement	Jenis Kelamin Gender	2022			2021		
		PWTT Perma- nent	PWT Non- Per- manent	Total	PWTT Perma- nent	PWT Non- Per- manent	Total
<i> Holding </i>	Laki-Laki/Man	<b>948</b>	<b>20</b>	<b>968</b>	977	19	996
	Perempuan/Woman	<b>529</b>	<b>16</b>	<b>545</b>	522	14	536
	<b>Total</b>	<b>1,477</b>	<b>36</b>	<b>1,513</b>	1,499	33	1,532
<i> Upstream </i>	Laki-Laki/Man	<b>11,874</b>	<b>1,089</b>	<b>12,963</b>	11,068	1,424	12,492
	Perempuan/Woman	<b>1,786</b>	<b>191</b>	<b>1,977</b>	1,666	233	1,899
	<b>Total</b>	<b>13,660</b>	<b>1,280</b>	<b>14,940</b>	12,734	1,657	14,391
<i> Refining and Petrochemical (R&amp;P) </i>	Laki-Laki/Man	<b>6,527</b>	<b>250</b>	<b>6,777</b>	5,709	125	5,834
	Perempuan/Woman	<b>434</b>	<b>38</b>	<b>472</b>	330	9	339
	<b>Total</b>	<b>6,961</b>	<b>288</b>	<b>7,249</b>	6,039	134	6,173
<i> Commercial and Trading (C&amp;T) </i>	Laki-Laki/Man	<b>4,150</b>	<b>814</b>	<b>4,964</b>	4,190	758	4,948
	Perempuan/Woman	<b>732</b>	<b>121</b>	<b>853</b>	727	128	855
	<b>Total</b>	<b>4,882</b>	<b>935</b>	<b>5,817</b>	4,917	886	5,803
<i> Power and New Renewable Energy (PNRE) </i>	Laki-Laki/Man	<b>564</b>	<b>57</b>	<b>621</b>	544	70	614
	Perempuan/Woman	<b>83</b>	<b>12</b>	<b>95</b>	81	13	94
	<b>Total</b>	<b>647</b>	<b>69</b>	<b>716</b>	625	83	708
<i> Gas </i>	Laki-Laki/Man	<b>2,255</b>	<b>163</b>	<b>2,418</b>	2,196	141	2,337
	Perempuan/Woman	<b>680</b>	<b>31</b>	<b>711</b>	693	31	724
	<b>Total</b>	<b>2,935</b>	<b>194</b>	<b>3,129</b>	2,889	172	3,061
<i> Integrated Marine and Logistic (IML) </i>	Laki-Laki/Man	<b>1,235</b>	<b>2,356</b>	<b>3,591</b>	1,257	2,531	3,788
	Perempuan/Woman	<b>184</b>	<b>79</b>	<b>263</b>	184	78	262
	<b>Total</b>	<b>1,419</b>	<b>2,435</b>	<b>3,854</b>	1,441	2,609	4,050

**Tabel Komposisi Pekerja Berdasarkan Wilayah Kerja, Status Kepegawaian dan Gender [GRI 2-7]**

Table of Employee Composition by Work Area and Employment Status

(dalam satuan orang) (in person)

Penempatan Placement	Jenis Kelamin Gender	2022			2021		
		PWTT Perma- nent	PWT Non- Per- manent	Total	PWTT Perma- nent	PWT Non- Per- manent	Total
Total	Laki-Laki/Man	27,553	4,749	32,302	25,941	9,367	35,308
	Perempuan/Woman	4,428	488	4,916	4,203	1,804	6,007
	Total	31,981	5,237	37,218	30,144	11,171	41,315

**TANGGAPAN TERHADAP UMPAN  
BALIK LAPORAN KEBERLANJUTAN**

Sepanjang tahun 2022, PT Pertamina (Persero) tidak mendapat tanggapan dari para pemangku kepentingan setelah diterbitkannya Laporan Keberlanjutan tahun 2021. Oleh karena itu, dalam laporan ini tidak terdapat informasi secara spesifik terkait tindak lanjut yang dilakukan oleh PERTAMINA atas tanggapan dari pemangku kepentingan. Namun demikian, Pertamina terus berkomitmen untuk menyempurnakan kualitas pelaporan, sehingga memenuhi standar best practice. [OJK G.3]

**RESPONSES TO SUSTAINABILITY  
REPORT FEEDBACK**

Throughout 2022, PT Pertamina (Persero) did not receive any response from stakeholders following the issuance of the 2021 Sustainability Report. Therefore, this report does not contain specific information regarding follow-up actions taken by the PERTAMINA on responses from stakeholders. However, Pertamina continues to be committed to improving reporting quality, so that it meets best practice standards [OJK G.3]



# Daftar Pengungkapan Sesuai Peraturan Otoritas Jasa Keuangan Nomor 51/POJK.03/2017, GRI, IPIECA, SASB, TCFD [OJK G.4, CDSB REQ-11]

## List of Disclosures According to Authority Regulations Financial Services Number 51/POJK.03/2017, GRI, IPIECA, SASB, TCFD

	Pengungkapan Disclosure	Referensi Pengungkapan Disclosure Reference			Halaman Page
		GRI	POJK	IPIECA	
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GRI 411: Hak Masyarakat Adat 2016	Insiden Pelanggaran yang Melibatkan Hak-Hak Masyarakat Adat Incidents of violations involving rights of indigenous peoples	GRI 411-1, OG 11.17.2, OG 11.16.2, OG 11.17.3		SOC-10.C1, SOC-10.A1	123
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GRI 413: Masyarakat Lokal 2016	Operasi dengan Keterlibatan Masyarakat Lokal, Berdampak Penilaian, dan Program Pengembangan Operations with local community engagement, impact assessments, and development programs	GRI 413-1, OG 11.15.2	OJK F.23	SOC-1.C2, SOC-9.C1, SOC-9.C2, SOC-9.C3, SOC-9.A2, SOC-12.C1, SOC-12.C2	117,139
GRI 413: Local Communities 2016	Operasi dengan Dampak Aktual dan Potensial Negatif yang Signifikan Pada Komunitas Lokal Operations with significant actual and potential negative impacts on local communities	413-2, OG 11.15.3			117
GRI 414: Penilaian Sosial Pemasok 2016	Persentase Pemasok Baru yang Diseleksi dengan Menggunakan Kriteria Sosial New suppliers that were screened using social criteria	GRI 414-1, OG 11.10.8, OG 11.12.3		SOC-2.C1, SOC-2.C2, SOC-2.A1	114
GRI 414: Supplier Social Assessment 2016	Dampak Sosial Negatif dalam Rantai Pasokan dan Tindakan yang Diambil Negative social impacts in the supply chain and actions taken	GRI 414-2, 11.10.9			114
GRI 415: Kebijakan Publik 2016	Kontribusi Politik Political contributions	GRI 415-1, OG 11.22.2		GOV-5.C1, GOV-5.C2	135

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	Pengungkapan Disclosure	Referensi Pengungkapan Disclosure Reference			Halaman Page
		GRI	POJK	IPECA	
GRI 416: Kesehatan dan Keselamatan Pelanggan 2016 GRI 416: Customer Health and Safety 2016	Penilaian dampak kesehatan dan keselamatan produk dan jasa Assessment of the health and safety impacts of product and service categories	GRI 416-1, OG 11.3.3	OJK F.27	SHS-5.C1, SHS-5.C2, SHS-5.C3	127
	Insiden ketidakpatuhan tentang dampak kesehatan dan keselamatan produk dan layanan Incidents of non-compliance concerning the health and safety impacts of products and services	GRI 416-2			
GRI 417: Pemasaran dan Pelabelan GRI 417: Marketing and Labeling 2016	Persyaratan untuk informasi dan pelabelan produk dan layanan Requirements for product and service information and labeling	GRI 417-1			127
	Insiden ketidakpatuhan terkait produk dan layanan informasi dan pelabelan Incidents of non-compliance concerning product and service information and labeling	GRI 417-2			127
	Insiden ketidakpatuhan terkait produk dan layanan informasi dan pelabelan Incidents of non-compliance concerning marketing communications	GRI 417-3			127

**Satuan Tugas dalam Pengungkapan Keuangan Terkait Iklim (TCFD) 2021**      **Task Force in Climate-Related Financial Disclosures (TCFD) 2021**

TCFD Core Statement		Rekomendasi Pengungkapan Disclosure Recommendations	Halaman Page
Pemerintahan Governance	TCFD GOV-a	Jelaskan pengawasan dewan terhadap risiko dan peluang terkait iklim Describe the board's oversight of climate-related risks and opportunities.	51, 151
	TCFD GOV-b	Jelaskan peran manajemen dalam menilai dan mengelola risiko dan peluang terkait iklim. Describe management's role in assessing and managing climate-related risks and opportunities.	51, 151
Strategi Strategy	TCFD STR-a	Jelaskan risiko dan peluang terkait iklim yang telah diidentifikasi oleh organisasi dalam jangka pendek, menengah, dan panjang Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	29, 44
	TCFD STR-b	Jelaskan dampak risiko dan peluang terkait iklim pada bisnis, strategi, dan perencanaan keuangan organisasi. Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	29, 44
	TCFD STR-c	Jelaskan ketahanan strategi organisasi, dengan mempertimbangkan skenario terkait iklim yang berbeda, termasuk skenario 2°C atau lebih rendah. Describe the resilience of the organization's strategy, taking into consideration different climate related scenarios, including a 2°C or lower scenario.	29, 44
Manajemen risiko Risk Management	TCFD RM-a	Jelaskan proses organisasi untuk mengidentifikasi dan menilai terkait iklim risiko. Describe the organization's processes for identifying and assessing climate related risks.	41, 44, 83
	TCFD RM-b	Jelaskan proses organisasi untuk mengelola risiko terkait iklim. Describe the organization's processes for managing climate related risks.	41, 44, 83
	TCFD RM-c	Jelaskan bagaimana proses untuk mengidentifikasi, menilai, dan mengelola iklim terkait risiko diintegrasikan ke dalam manajemen risiko organisasi secara keseluruhan. Describe how processes for identifying, assessing, and managing climate related risks are integrated into the organization's overall risk management.	41, 44, 83

TCFD Core Statement		Rekomendasi Pengungkapan Disclosure Recommendations	Halaman Page
Metrik dan Target Metrics and Targets	TCFD MT-a	Mengungkapkan metrik yang digunakan oleh organisasi untuk menilai risiko terkait iklim dan peluang sejalan dengan strategi dan proses manajemen risikonya. Disclose the metrics used by the organization to assess climate related risks and opportunities in line with its strategy and risk management process.	62
	TCFD MT-b	Ungkap Cakupan 1, Cakupan 2, dan, jika sesuai, Cakupan 3 gas rumah kaca (GRK) emisi, dan risiko terkait Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	60
	TCFD MT-c	Jelaskan target yang digunakan oleh organisasi untuk mengelola risiko terkait iklim dan peluang dan kinerja terhadap target. Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	62

### Kerangka Kerja Dewan Standar Pengungkapan Iklim (CDSB) untuk Pelaporan Informasi Lingkungan dan Sosial

### Climate Disclosure Standards Board (CDSB) Framework for Reporting Environmental and Social Information

Persyaratan Requirement	Elaborasi Elaboration	Halaman Page
CDSB REQ-01	Pemerintahan/Governance	51, 148
CDSB REQ-02	Kebijakan, strategi, dan target lingkungan manajemen Management's environmental policies, strategy and targets	29, 51, 148
CDSB REQ-03	Risiko dan peluang bisnis/Business risks and opportunities	16, 44, 83
CDSB REQ-04	Sumber dampak lingkungan dan sosial Sources of environmental and social impacts	56, 64, 70, 73
CDSB REQ-05	Kinerja dan analisis komparatif/Performance and comparative analysis	56, 64, 70, 73
CDSB REQ-06	Pandangan/Outlook	16, 44, 83
CDSB REQ-07	Batas organisasi/Organisational boundary	6
CDSB REQ-08	Kebijakan pelaporan/Reporting policies	6
CDSB REQ-09	Periode pelaporan/Reporting period	7
CDSB REQ-10	Pernyataan ulang/Restatements	7
CDSB REQ-11	Kesesuaian/Conformance	159
CDSB REQ-12	Jaminan/Assurance	152

### Dewan Standar Akuntansi Keberlanjutan (SASB)

### Sustainability Accounting Standards Board (SASB)

Kode Pengungkapan Disclosure Code	Metrik Akuntansi Accounting Metric	Halaman Page
<b>SASB: Emisi Gas Rumah Kaca/Greenhouse Gas Emissions</b>		
EM-EP-110a.1, EM-MD-110a.1, EM-RM-110a.1	Emisi Cakupan 1 global bruto, persentase metana, persentase yang tercakup dalam peraturan pembatasan emisi Gross global Scope 1 emissions, percentage methane, percentage covered under emissions-limiting regulations	60
EM-EP-110a.2	Jumlah emisi Cakupan 1 global bruto dari: (1) hidrokarbon suar, (2) pembakaran lainnya, (3) emisi proses, (4) emisi berventilasi lainnya, dan (5) emisi buangan Amount of gross global Scope 1 emissions from: (1) flared hydrocarbons, (2) other combustion, (3) process emissions, (4) other vented emissions, and (5) fugitive emissions	63
EM-EP-110a.3, EM-MD-110a.2, EM-RM-110a.2	Pembahasan strategi atau rencana jangka panjang dan jangka pendek untuk mengelola Scope 1 emisi, target penurunan emisi, dan analisis kinerja terhadap target tersebut Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	63

Kode Pengungkapan Disclosure Code	Metrik Akuntansi Accounting Metric	Halaman Page
<b>SASB: Layanan Pengurangan Emisi dan Manajemen Bahan Bakar/Emissions Reduction Services and Fuels Management</b>		
EM-SV-110a.1	Total bahan bakar yang dikonsumsi, persentase terbarukan, persentase yang digunakan di: (1) on-road peralatan dan kendaraan dan (2) peralatan off-road Total fuel consumed, percentage renewable, percentage used in: (1) on-road equipment and vehicles and (2) off-road equipment	13
EM-SV-110a.2	Pembahasan strategi atau rencana untuk mengatasi risiko terkait emisi udara, Discussion of strategy or plans to address air emissions-related risks, opportunities, and impacts	63
<b>SASB: Kualitas Udara/Air Quality</b>		
EM-EP-120a.1, EM-MD-120a.1	Emisi udara dari polutan berikut: (1) NOx (tidak termasuk N2O), (2) SOx, (3) senyawa organik yang mudah menguap (VOC), dan (4) partikel (PM10) Air emissions of the following pollutants: (1) NOx (excluding N2O), (2) SOx, (3) volatile organic compounds (VOCs), and (4) particulate matter (PM10)	63
EM-RM-120a.1	Emisi udara dari polutan berikut: (1) NOx (tidak termasuk N2O), (2) SOx, (3) partikel (PM10), (4) H2S, dan (5) senyawa organik yang mudah menguap Air emissions of the following pollutants: (1) NOx (excluding N2O), (2) SOx, (3) particulate matter (PM10), (4) H2S, and (5) volatile organic compounds (VOCs)	63
<b>SASB: Manajemen Air/Water Management</b>		
EM-EP-140a.1, EM-RM-140a.1	(1) Jumlah air bersih yang diambil, (2) jumlah air bersih yang dikonsumsi, persentase masing-masing di daerah dengan Stres Air Dasar Tinggi atau Sangat Tinggi (1) Total fresh water withdrawn, (2) total fresh water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	65, 68
EM-SV-140a.1	(1) Total volume air bersih yang ditangani dalam operasi, (2) persentase yang didaur ulang (1) Total volume of fresh water handled in operations, (2) percentage recycled	68
EM-EP-140a.2	Volume air terproduksi dan aliran balik yang dibangkitkan; persentase (1) habis, (2) disuntikkan, (3) didaur ulang; kandungan hidrokarbon dalam pembuangan air Volume of produced water and flowback generated; percentage (1) discharged, (2) injected, (3) recycled; hydrocarbon content in discharged water	68, 69, 70
EM-RM-140a.2	Jumlah insiden ketidakpatuhan yang terkait dengan izin, standar, dan peraturan kualitas air Number of incidents of non-compliance associated with water quality permits, standards, and regulations	64
EM-SV-140a.2	Pembahasan strategi atau rencana untuk menangani konsumsi dan pembuangan air terkait risiko, peluang, dan dampak Discussion of strategy or plans to address water consumption and disposal-related risks, opportunities, and impacts	64, 68
<b>SASB: Manajemen Bahan Berbahaya/Hazardous Materials Management</b>		
EM-RM-150a.1	Jumlah limbah berbahaya yang dihasilkan, persentase yang didaur ulang Amount of hazardous waste generated, percentage recycled	70
EM-RM-150a.2	(1) Jumlah tangki penyimpanan bawah tanah (UST), (2) jumlah pelepasan UST membutuhkan pembersihan, dan (3) persentase di negara bagian dengan jaminan keuangan UST dana (1) Number of underground storage tanks (USTs), (2) number of UST releases requiring cleanup, and (3) percentage in states with UST financial assurance funds	70
<b>SASB: Dampak Keaneekaragaman Hayati/Biodiversity Impacts</b>		
EM-EP-160a.1	Deskripsi kebijakan dan praktik manajemen lingkungan untuk aktif situs Description of environmental management policies and practices for active sites	75
EM-EP-160a.2	Jumlah dan volume agregat tumpahan hidrokarbon, volume di Kutub Utara, volume berdampak pada garis pantai dengan peringkat ESI 8-10, dan volume pulih Number and aggregate volume of hydrocarbon spills, volume in Arctic, volume impacting shorelines with ESI rankings 8-10, and volume recovered	70
EM-EP-160a.3	Persentase dari (1) cadangan terbukti dan (2) terduga di dalam atau dekat lokasi dengan status konservasi yang dilindungi atau habitat spesies yang terancam punah Percentage of (1) proved and (2) probable reserves in or near sites with protected conservation status or endangered species habitat	73, 74, 75



Kode Pengungkapan Disclosure Code	Metrik Akuntansi Accounting Metric	Halaman Page
<b>SASB: Dampak Ekologis/Ecological Impacts</b>		
EM-MD-160a.1	Deskripsi kebijakan dan praktik manajemen lingkungan untuk aktif operasi Description of environmental management policies and practices for active operations	41
EM-SV-160a.1	Rata-rata areal terganggu per (1) lokasi sumur minyak dan (2) sumur gas Average disturbed acreage per (1) oil and (2) gas well site	74
EM-MD-160a.2	Persentase tanah yang dimiliki, disewa, dan/atau dioperasikan di dalam kawasan lindung status konservasi atau habitat spesies yang terancam punah Percentage of land owned, leased, and/or operated within areas of protected conservation status or endangered species habitat	73, 74
EM-SV-160a.2	Pembahasan strategi atau rencana untuk mengatasi risiko dan peluang terkait dampak ekologis dari kegiatan inti Discussion of strategy or plan to address risks and opportunities related to ecological impacts from core activities	74
EM-MD-160a.3	Areal terestrial terganggu, persentase area yang terkena dampak dipulihkan Terrestrial acreage disturbed, percentage of impacted area restored	73,75
EM-MD-160a.4	Jumlah dan volume agregat tumpahan hidrokarbon, volume di Kutub Utara, volume di Area Sensitif Luar Biasa (AS), dan volume pulih Number and aggregate volume of hydrocarbon spills, volume in Arctic, volume in Unusually Sensitive Areas (USAs), and volume recovered	73
<b>SASB: Keamanan, Hak Asasi Manusia dan Hak Masyarakat Adat/Security, Human Rights and Rights of Indigenous Peoples</b>		
EM-EP-210a.1	Persentase dari (1) cadangan terbukti dan (2) cadangan di atau dekat wilayah konflik Percentage of (1) proved and (2) probable reserves in or near areas of conflict	103
EM-EP-210a.2	Persentase dari (1) cadangan terbukti dan (2) terduga di dalam atau dekat tanah adat Percentage of (1) proved and (2) probable reserves in or near indigenous land	103
EM-EP-210a.3	Pembahasan proses keterlibatan dan praktik uji tuntas dengan penghormatan terhadap hak asasi manusia, hak masyarakat adat, dan operasi di wilayah konflik Discussion of engagement processes and due diligence practices with respect to human rights, indigenous rights, and operation in areas of conflict	103
<b>SASB: Hubungan Masyarakat/Community Relations</b>		
EM-EP-210b.1	Diskusi proses untuk mengelola risiko dan peluang yang terkait dengan hak dan kepentingan masyarakat Discussion of process to manage risks and opportunities associated with community rights and interests	117
EM-EP-210b.2	Jumlah dan durasi penundaan non-teknis Number and duration of non-technical delays	117
<b>SASB: Kesehatan dan Keselamatan Tenaga Kerja/Workforce Health and Safety</b>		
EM-EP-320a.1, EM-RM-320a.1	(1) Total tingkat insiden yang dapat direkam (TRIR), (2) tingkat kematian, (3) nyaris celaka tingkat frekuensi (NMFR), dan (4) rata-rata jam kesehatan, keselamatan, dan pelatihan tanggap darurat untuk (a) karyawan tetap, (b) kontrak karyawan, dan (c) karyawan jangka pendek (1) Total recordable incident rate (TRIR), (2) fatality rate, (3) near miss frequency rate (NMFR), and (4) average hours of health, safety, and emergency response training for (a) full-time employees, (b) contract employees, and (c) short-service employees	111, 112
EM-SV-320a.1	(1) Total tingkat insiden yang dapat direkam (TRIR), (2) tingkat kematian, (3) nyaris celaka tingkat frekuensi (NMFR), (4) total tingkat insiden kendaraan (TVIR), dan (5) rata-rata jam pelatihan kesehatan, keselamatan, dan tanggap darurat untuk (a) penuh waktu karyawan, (b) karyawan kontrak, dan (c) karyawan kontrak (1) Total recordable incident rate (TRIR), (2) fatality rate, (3) near miss frequency rate (NMFR), (4) total vehicle incident rate (TVIR), and (5) average hours of health, safety, and emergency response training for (a) full-time employees, (b) contract employees, and (c) short-service employees	111, 112
EM-EP-320a.2, EM-RM-320a.2, EM-SV-320a.2	Pembahasan tentang sistem manajemen yang digunakan untuk mengintegrasikan budaya keselamatan sepanjang siklus hidup eksplorasi dan produksi Discussion of management systems used to integrate a culture of safety throughout the exploration and production lifecycle	110

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Lampiran  
Lampiran

Kode Pengungkapan Disclosure Code	Metrik Akuntansi Accounting Metric	Halaman Page
<b>SASB: Penilaian Cadangan dan Belanja Modal/Reserves Valuation and Capital Expenditures</b>		
EM-RM-410a.1	Persentase Renewable Volume Obligation (RVO) dipenuhi melalui: (1) produksi bahan bakar terbarukan, (2) pembelian terbarukan “terpisah”. nomor identifikasi (RIN) Percentage of Renewable Volume Obligation (RVO) met through: (1) production of renewable fuels, (2) purchase of “separated” renewable identification numbers (RIN)	124
EM-RM-410a.2	Total pasar yang dapat dialamatkan dan pangsa pasar untuk biofuel canggih dan infrastruktur terkait Total addressable market and share of market for advanced biofuels and associated infrastructure	124
<b>SASB: Spesifikasi Produk dan Campuran Bahan Bakar Bersih/Product Specifications and Clean Fuel Blends</b>		
EM-EP-420a.1	Sensitivitas tingkat cadangan hidrokarbon terhadap skenario proyeksi harga di masa mendatang yang memperhitungkan harga emisi karbon Sensitivity of hydrocarbon reserve levels to future price projection scenarios that account for a price on carbon emissions	82
EM-EP-420a.3	Jumlah yang diinvestasikan dalam energi terbarukan, pendapatan yang dihasilkan oleh energi terbarukan penjualan energi Amount invested in renewable energy, revenue generated by renewable energy sales	82
<b>SASB: Etika Bisnis dan Transparansi Pembayaran/Business Ethics and Payment Transparency</b>		
EM-EP-510a.1	Persentase (1) cadangan terbukti dan (2) terduga di negara-negara yang memiliki 20 peringkat terendah dalam Indeks Persepsi Korupsi Transparency International Percentage of (1) proved and (2) probable reserves in countries that have the 20 lowest rankings in Transparency International’s Corruption Perception Index	138
EM-SV-510a.1	Jumlah pendapatan bersih di negara-negara yang memiliki 20 peringkat terendah di Indeks Persepsi Korupsi Transparency International Amount of net revenue in countries that have the 20 lowest rankings in Transparency International’s Corruption Perception Index	138
EM-EP-510a.2	Uraian tentang sistem manajemen pencegahan korupsi dan penyuapan di seluruh rantai nilai Description of the management system for prevention of corruption and bribery throughout the value chain	136
EM-SV-510a.2	Uraian tentang sistem manajemen pencegahan korupsi dan penyuapan di seluruh rantai nilai Description of the management system for prevention of corruption and bribery throughout the value chain	136
<b>SASB: Perilaku Kompetitif/Competitive Behavior</b>		
EM-MD-520a.1	Jumlah total kerugian moneter sebagai akibat dari proses hukum yang terkait dengan pipa federal dan peraturan penyimpanan Total amount of monetary losses as a result of legal proceedings associated with federal pipeline and storage regulations	140
<b>SASB: Integritas dan Transparansi Harga/Pricing Integrity and Transparency</b>		
<b>SASB: Manajemen Lingkungan Hukum dan Peraturan/Management of the Legal and Regulatory Environment</b>		
EM-EP-530a.1, EM-RM-530a.1, EM-SV-530a.1	Pembahasan posisi perusahaan terkait peraturan pemerintah dan/atau proposal kebijakan yang membahas faktor-faktor lingkungan dan sosial yang mempengaruhi industri Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	44

Kode Pengungkapan Disclosure Code	Metrik Akuntansi Accounting Metric	Halaman Page
<b>SASB: Manajemen Risiko Insiden Kritis/Critical Incident Risk Management</b>		
EM-EP-540a.1	Tingkat Kejadian Keselamatan Proses (PSE) untuk Loss of Primary Containment (LOPC) dari konsekuensi yang lebih besar (Tingkat 1) Process Safety Event (PSE) rates for Loss of Primary Containment (LOPC) of greater consequence (Tier 1)	113
EM-RM-540a.1	Tingkat Kejadian Keselamatan Proses (PSE) untuk Loss of Primary Containment (LOPC) dari konsekuensi lebih besar (Tingkat 1) dan konsekuensi lebih kecil (Tingkat 2) Process Safety Event (PSE) rates for Loss of Primary Containment (LOPC) of greater consequence (Tier 1) and lesser consequence (Tier 2)	113
EM-RM-540a.2	Tingkat indikator Tantangan terhadap Sistem Keselamatan (Tier 3) Challenges to Safety Systems indicator rate (Tier 3)	113
EM-EP-540a.2, EM-SV-540a.1	Deskripsi sistem manajemen yang digunakan untuk mengidentifikasi dan memitigasi risiko katastrofik dan risiko akhir Description of management systems used to identify and mitigate catastrophic and tail-end risks	110
<b>SASB: Keselamatan Operasional, Kesiapsiagaan dan Tanggap Darurat/Operational Safety, Emergency Preparedness and Response</b>		
EM-MD-540a.4	Pembahasan tentang sistem manajemen yang digunakan untuk mengintegrasikan budaya keselamatan dan kesiapsiagaan darurat di seluruh rantai nilai dan di seluruh proyek siklus hidup Discussion of management systems used to integrate a culture of safety and emergency preparedness throughout the value chain and throughout project lifecycles	110
<b>Kode Pengungkapan Disclosure Code</b>		
<b>Metrik Aktivitas Activity Metric</b>		
<b>Halaman Page</b>		
EM-EP-000.A	Produksi: (1) minyak, (2) gas alam, (3) minyak sintetis, dan (4) gas sintetis Production of: (1) oil, (2) natural gas, (3) synthetic oil, and (4) synthetic gas	13
EM-RM-000.A	Penyulingan throughput minyak mentah dan bahan baku lainnya Refining throughput of crude oil and other feedstocks	13
EM-SV-000.D	jumlah jam kerja oleh semua karyawan Total number of hours worked by all employees	111, 112

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**Topik dalam Standar Sektor GRI yang berlaku ditetapkan sebagai tidak material**

**Topics in the applicable GRI Sector Standards determined as not material**

Indeks index	Topik Topic	Keterangan Information
GRI 201	Kinerja Ekonomi Economic Performance	<p>Tidak termasuk ke dalam matriks prioritas dari sisi dampak dan signifikansinya Not included in the matrix priority in terms of impact and its significance</p>
GRI 202	Keberadaan Pasar Market Presence	
GRI 203	Dampak Ekonomi Tidak Langsung Indirect Economic Impacts	
GRI 204	Praktik Pengadaan Barang dan Jasa Procurement Practices	
GRI 206	Perilaku Anti Persaingan Anti-competitive Behavior	
GRI 207	Pajak Tax	
GRI 303	Air dan Efluen Water and Effluents	
GRI 304	Keanekaragaman Hayati Biodiversity	
GRI 306	Limbah Waste	
GRI 402	Hubungan Tenaga Kerja/Manajemen Labor/Management Relations	
GRI 404	Pelatihan dan Pendidikan Training and Education	
GRI 405	Keberagaman dan Kesempatan Setara Diversity and Equal Opportunity	
GRI 406	Non Diskriminasi Non-discrimination	
GRI 407	Kebebasan Berserikat dan Perundingan Kolektif Freedom of Association and Collective Bargaining	
GRI 408	Pekerja Anak Child Labor	
GRI 409	Kerja Paksa atau Kerja Wajib Forced or Compulsory Labor	
GRI 410	Praktik Keamanan dan Hak Asasi Manusia Security Practices	
GRI 411	Hak-hak Masyarakat Adat Rights of Indigenous Peoples	
GRI 413	Masyarakat Lokal Local Communities	
GRI 414	Penilaian Sosial Pemasok Supplier Social Assessment	
GRI 415	Kontribusi Politik Public Policy	
GRI 416	Kesehatan dan Keselamatan Pelanggan Customer Health and Safety	
CCE-1	Respon terhadap Perubahan Iklim Response to Climate Change	
SHS-7	Keamanan Digital/Siber Cyber Security	
ENV-8	Penutupan dan Rehabilitasi Closure and Rehabilitation	

## TAUTAN STANDAR GRI DENGAN TPB

## GRI STANDARD LINK WITH SDG

Dukungan atas pembangunan berkelanjutan yang dilakukan oleh PERTAMINA tercermin pada tautan tautan antara program/kegiatan yang dilakukan dengan GRI Standard dan SDGs, sesuai panduan *SDG Compass* yang diterbitkan oleh GRI, United Nations Global Compact, dan World Business Council for Sustainable Development (WBCSD), sebagai berikut:

Support for sustainable development carried out by PERTAMINA is reflected in the link link between programs/activities carried out with the GRI Standard and SDGs, according to the *SDG Compass* published by GRI, United Nations Global Compact, and the World Business Council for Sustainable Development (WBCSD), as follows:

Logo	Tujuan	Relevansi GRI Standard	Disclosure	Judul Indikator
	Mengakhiri kemiskinan dalam segala bentuk di mana pun. End poverty in all its forms everywhere	GRI 207: Pajak 2019 GRI 207: Tax 2019	207-1	Pendekatan Perpajakan Approach to tax
		207-2	Tata Kelola, Kontrol, dan Risiko Pengelolaan Pajak Tax governance, control, and risk management	
		207-3	Keterlibatan Pemangku Kepentingan dan Manajemen Masalah yang Terkait Dengan Pajak Stakeholder engagement and management of concerns related to tax	
		207-4	Laporan Per Negara Country-by-country reporting	
		GRI 203: Dampak Ekonomi Tidak Langsung GRI 203: Indirect Economic Impacts 2016	203-2	Dampak Ekonomi Tidak Langsung yang Signifikan Significant indirect economic impacts
	Mengakhiri kelaparan, mencapai ketahanan pangan, memperbaiki nutrisi dan mempromosikan pertanian yang berkelanjutan. End hunger, achieve food security and improved nutrition and promote sustainable agriculture	GRI 413: Masyarakat Lokal 2016 GRI 413: Local Communities 2016	413-2	Operasi dengan Dampak Aktual dan Potensial Negatif yang Signifikan Pada Komunitas Lokal Operations with significant actual and potential negative impact on local communities
		OG 11.16: Land and resource rights OG 11.16: Land and resource rights	OG 11.16.2	Daftar lokasi operasi yang menyebabkan atau berkontribusi pada ketidaksengajaan pemukiman kembali atau di mana pemukiman kembali tersebut sedang berlangsung. Untuk setiap lokasi, menjelaskan bagaimana kehidupan masyarakat dan hak asasi manusia terpengaruh dan pulih. List the locations of operations that caused or contributed to involuntary resettlement or where such resettlement is ongoing. For each location, describe how peoples' livelihoods and human rights were affected and restored
	Menjamin kehidupan yang sehat dan mendorong kesejahteraan bagi semua orang di segala usia. Ensure healthy lives and promote well-being for all, at all ages	GRI 411: Hak Masyarakat Adat 2016 GRI 411: Rights of Indigenous Peoples 2016	411-1	Insiden Pelanggaran yang Melibatkan Hak-Hak Masyarakat Adat Incidents of violations involving rights of indigenous peoples
		GRI 413: Masyarakat Lokal 2016 GRI 413: Local Communities 2016	413-2	Operasi dengan Dampak Aktual dan Potensial Negatif yang Signifikan Pada Komunitas Lokal Operations with significant actual and potential negative impacts on local communities
	Menjamin kehidupan yang sehat dan mendorong kesejahteraan bagi semua orang di segala usia. Ensure healthy lives and promote well-being for all, at all ages	GRI 401: Kepegawaian 2016 GRI 401: Employment 2016	401-1	Perekrutan Karyawan Baru dan Perputaran Karyawan New employee hires and employee turnover
		GRI 403: Kesehatan dan Keselamatan Kerja 2018 GRI 403: Occupational Health and Safety 2018	403-6	Peningkatan kualitas kesehatan pekerja Promotion of worker health
		403-9	Kecelakaan kerja/Work-related injuries	
		403-10	Penyakit akibat kerja/Work-related ill health	
		GRI 203: Dampak Ekonomi Tidak Langsung GRI 203: Indirect Economic Impacts 2016	203-2	Dampak Ekonomi Tidak Langsung yang Signifikan Significant indirect economic impacts

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Lampiran  
Lampiran

	GRI 305: Emisi 2016 GRI 305: Emissions 2016	305-1	Emisi GRK Langsung (Cakupan 1) Direct (Scope 1) GHG emissions	
		305-2	Energy Indirect (Scope 2) GHG Emissions Energy indirect (Scope 2) GHG emission	
		305-6	Pengendalian Emisi Penipis Lapisan Ozon Emissions of ozone-depleting substances (ODS)	
		305-7	Nitrogen Oksida (NOx), Sulfur Oksida (SOx), dan Emisi Udara Signifikan Lainnya Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	
	GRI 306: Limbah 2020 GRI 306: Waste 2020	306-1	Timbulan Sampah dan Dampak Signifikan Terkait Sampah Waste generation and significant waste-related impacts	
		306-2	Pengelolaan Dampak Signifikan Terkait Limbah Management of significant waste-related impacts	
		306-3	Limbah yang Dihasilkan/Waste generated	
		306-4,	Limbah Dialihkan dari Pembuangan Waste diverted from disposal	
		306-5,	Limbah Diarahkan Ke Pembuangan Waste directed to disposal	
	GRI 403: Kesehatan dan Keselamatan Kerja 2018 GRI 403: Occupational Health and Safety 2018	403-9	Kecelakaan kerja/Work-related injuries	
		403-10	Penyakit akibat kerja/Work-related ill health	
	Menjamin kualitas pendidikan yang inklusif dan merata serta meningkatkan kesempatan belajar sepanjang hayat untuk semua pada tahun 2030. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all by 2030	GRI 404: Pelatihan dan Pendidikan 2016 GRI 404: Training and Education 2016	404-1 OG 11.11.4	Rata-Rata Jam Pelatihan Per Tahun Per Karyawan Average hours of training per year per employee
		GRI 401: Kepegawaian 2016 GRI 401: Employment 2016	401-3 OG 11.10.4	<i>Parental Leave</i>
	Mencapai kesetaraan gender dan memberdayakan semua perempuan dan anak perempuan. Achieve gender equality and empower all women and girls.	GRI 405: Keberagaman dan Kesempatan Setara 2016 GRI 405: Diversity and Equal Opportunity 2016	405-1,	Keanekaragaman badan tata kelola dan karyawan Diversity of governance bodies and employees
		GRI 401: Kepegawaian 2016 GRI 401: Employment 2016	405-2	Rasio gaji pokok dan remunerasi perempuan terhadap laki-laki Ratio of basic salary and remuneration of women to men
			401-1	Perekrutan Karyawan Baru dan Perputaran Karyawan New employee hires and employee turnover
		GRI 404: Pelatihan dan Pendidikan 2016 GRI 404: Training and Education 2016	GRI 401-3	<i>Parental Leave</i>
			404-1	Rata-Rata Jam Pelatihan Per Tahun Per Karyawan Average hours of training per year per employee
		GRI 414: Penilaian Sosial Pemasok GRI 414: Supplier Social Assessment 2016	404-3	Persentase karyawan yang menerima kinerja reguler dan Tinjauan pengembangan karir Percentage of employees receiving regular performance and career development reviews
			414-1	Persentase Pemasok Baru yang Diseleksi dengan Menggunakan Kriteria Sosial New suppliers that were screened using social criteria
		GRI 401: Kepegawaian 2016 GRI 401: Employment 2016	414-2	Dampak Sosial Negatif dalam Rantai Pasokan dan Tindakan yang Diambil Negative social impacts in the supply chain and actions taken
			401-2	Manfaat yang Diberikan Kepada Karyawan Penuh Waktu yang Tidak Diberikan Kepada Karyawan Sementara atau Paruh Waktu Benefits provided to full-time employees that are not provided to temporary or part-time employees
		GRI 203: Dampak Ekonomi Tidak Langsung GRI 203: Indirect Economic Impacts 2016	203-1	Investasi Infrastruktur Dan Dukungan Layanan Infrastructure investments and services supported
GRI 2: Pengungkapan Umum 2021 GRI 2: General Disclosures 2021	2-9	Struktur dan Komposisi Governance Governance structure and composition		
	2-10	Nominasi dan Seleksi Dewan Komisaris dan Direksi Nomination and selection of the highest governance body		

 <p>Memastikan masyarakat mencapai akses universal air bersih dan sanitasi. Ensure availability and sustainable management of water and sanitation for all.</p>	<p>GRI 303: Air dan Efluen 2018 GRI 303: Water and Effluents 2018</p>	303-1	Interaksi dengan air sebagai sumber daya bersama Interactions with water as a shared resource
		303-2	Pengelolaan dampak terkait pelepasan air Management of water discharge-related impacts
		303-3	Penarikan air/Water withdrawal
		303-4	Debit Air/Water discharge
		303-5	Konsumsi Air/Water consumption
	<p>GRI 306: Limbah 2020 GRI 306: Waste 2020</p>	306-1	Timbulan Sampah dan Dampak Signifikan Terkait Sampah Waste generation and significant waste-related impacts
		306-2	Pengelolaan Dampak Signifikan Terkait Limbah Management of significant waste-related impacts
		306-3	Limbah yang Dihasilkan/Waste generated
		306-5	Limbah Diarahkan Ke Pembuangan Waste directed to disposal
	<p>GRI 304: Keanekaragaman Hayati 2016 GRI 304: Biodiversity 2016</p>	304-1	Lokasi Operasional yang Dimiliki, Disewa, Dikelola, atau Berdekatan Dengan, Kawasan Lindung Dan Kawasan Dengan Nilai Keanekaragaman Hayati Tinggi Di Luar Kawasan Lindung Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas
		304-2	Dampak signifikan dari aktivitas, produk dan layanan pada keanekaragaman hayati Significant impacts of activities, products and services on biodiversity
		304-3	Habitat dilindungi atau dipulihkan Habitats protected or restored
		304-4	Spesies Daftar Merah IUCN dan Spesies Daftar Konservasi Nasional Dengan Habitat Di Daerah yang Terkena Dampak Operasi IUCN Red List species and national conservation list species with habitats in areas affected by operations
	<p>OG 11.8: Asset integrity and critical incident management OG 11.8: Asset integrity and critical incident management</p>	OG 11.8.4	<p>Pengungkapan sektor tambahan berikut adalah untuk organisasi dengan operasi penambangan pasir minyak.</p> <ol style="list-style-type: none"> <li>Buat daftar fasilitas tailing organisasi</li> <li>Untuk setiap fasilitas tailing <ul style="list-style-type: none"> <li>menggambarkan fasilitas tailing;</li> <li>melaporkan apakah fasilitas tersebut aktif, tidak aktif, atau ditutup;</li> <li>laporkan tanggal dan temuan utama dari penilaian risiko terbaru.</li> </ul> </li> <li>Jelaskan tindakan yang dilakukan untuk: <ul style="list-style-type: none"> <li>mengelola dampak dari fasilitas tailing, termasuk selama penutupan dan pasca-penutupan;</li> <li>mencegah bencana kegagalan fasilitas tailing</li> </ul> </li> </ol> <p>The following additional sector disclosures are for organizations with oil sands mining operations.</p> <ol style="list-style-type: none"> <li>List the organization's tailings facilities</li> <li>For each tailings facility: <ul style="list-style-type: none"> <li>describe the tailings facility;</li> <li>report whether the facility is active, inactive, or closed;</li> <li>report the date and main findings of the most recent risk assessment.</li> </ul> </li> <li>Describe actions taken to: <ul style="list-style-type: none"> <li>manage impacts from tailings facilities, including during closure and post-closure;</li> <li>prevent catastrophic failures of tailings facilities</li> </ul> </li> </ol>
	 <p>Menjamin akses energi yang terjangkau, andal, berkelanjutan, dan modern untuk semua lapisan masyarakat. Ensure access to affordable, reliable, sustainable and modern energy for all</p>	<p>GRI 302: Energy 2016 GRI 302: Energy 2016</p>	302-1
302-2			Konsumsi energi di luar organisasi Energy consumption outside of the organization
302-3			Intensitas energi/Energy intensity
302-4			Pengurangan konsumsi energi Reduction of energy consumption
302-5			Pengurangan kebutuhan energi produk dan jasa Reductions in energy requirements of products and services

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	OG 11.7: Closure and rehabilitation OG 11.7: Closure and rehabilitation	OG 11.7.5	Buat daftar struktur yang dinonaktifkan yang dibiarkan di tempatnya dan jelaskan alasan untuk membiarkannya tetap di tempatnya. List the decommissioned structures left in place and describe the rationale for leaving them in place
 <p>Berusaha meningkatkan pertumbuhan ekonomi yang inklusif dan berkelanjutan, kesempatan kerja yang produktif dan menyeluruh serta pekerjaan yang layak untuk semua. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</p>	GRI 201: Kinerja Ekonomi 2016 GRI 201: Economic Performance 2016	201-1	Nilai ekonomi langsung yang dihasilkan dan didistribusikan Direct economic value generated and distributed
	GRI 203: Dampak Ekonomi Tidak Langsung 2016 GRI 203: Indirect Economic Impacts 2016	203-2	Dampak ekonomi tidak langsung yang signifikan Significant indirect economic impacts
	GRI 204: Praktik Pengadaan 2016 GRI 204: Procurement Practices 2016	204-1	Proporsi pengeluaran untuk pemasok lokal Proportion of spending on local suppliers
	GRI 302: Energi 2016 GRI 302: Energy 2016	302-1	Konsumsi energi di dalam organisasi Energy consumption within the organization
		302-2	Konsumsi energi di luar organisasi Energy consumption outside of the organization
		302-3	Intensitas energi Energy intensity
		302-4	Reduksi konsumsi energi Reduction of energy consumption
		302-5	Pengurangan kebutuhan energi dari produk dan jasa Reductions in energy requirements of products and services
	GRI 306: Limbah 2020 GRI 306: Waste 2020	306-2	Pengelolaan Dampak Signifikan Terkait Limbah Management of significant waste-related impacts
	GRI 2: Pengungkapan Umum 2021 GRI 2: General Disclosures 2021	2-7	Informasi Mengenai Karyawan Information Regarding Employees
		2-8	Pekerja Non Pegawai Workers who are not employees
	GRI 203: Dampak Ekonomi Tidak Langsung GRI 203: Indirect Economic Impacts 2016	203-2	Dampak Ekonomi Tidak Langsung yang Signifikan Significant indirect economic impacts
	GRI 401: Kepegawaian 2016 GRI 401: Employment 2016	401-1	Perekrutan Karyawan Baru dan Perputaran Karyawan New employee hires and employee turnover
		401-2	Manfaat yang Diberikan Kepada Karyawan Penuh Waktu yang Tidak Diberikan Kepada Karyawan Sementara atau Paruh Waktu Benefits provided to full-time employees that are not provided to temporary or parttime employees
		GRI 401-3	<i>Parental Leave</i>
GRI 404: Pelatihan dan Pendidikan 2016 GRI 404: Training and Education 2016	GRI 404-1	Rata-Rata Jam Pelatihan Per Tahun Per Karyawan Average hours of training per year per employee	
	404-2	Program untuk meningkatkan keterampilan karyawan dan program bantuan peralihan Programs for upgrading employee skills and transition assistance programs	
	404-3	Persentase karyawan yang menerima tinjauan rutin terhadap kinerja dan pengembangan karir Percentage of employees receiving regular performance and career development reviews	
GRI 405: Keberagaman dan Kesempatan Setara 2016 GRI 405: Diversity and Equal Opportunity 2016	405-1	Keanekaragaman badan tata kelola dan karyawan Diversity of governance bodies and employees	
	405-2	Rasio gaji pokok dan remunerasi perempuan terhadap laki-laki Ratio of basic salary and remuneration of women to men	
GRI 2: Pengungkapan Umum 2021 GRI 2: General Disclosures 2021	2-30	Kebebasan Berserikat Collective bargaining agreements	
GRI 402: Hubungan Tenaga Kerja/ Manajemen 2016 GRI 402: Labor/ Management Relations 2016	402-1	Periode Pemberitahuan Minimum Mengenai Perubahan Operasional Minimum notice periods regarding operational changes	



	GRI 403: Kesehatan dan Keselamatan Kerja 2018 GRI 403: Occupational Health and Safety 2018	403-1	Sistem manajemen keselamatan dan kesehatan kerja Occupational health and safety management system	
		403-2	Pengidentifikasi Bahaya, Penilaian Risiko, dan Investigasi Insiden Hazard identification, risk assessment, and incident investigation	
		403-3	Layanan Kesehatan Occupational health services	
		403-4	Partisipasi, konsultasi, dan komunikasi pekerja pada kesehatan dan keselamatan Kerja Worker participation, consultation, and communication on occupational health and safety	
		403-5	Pelatihan pekerja tentang kesehatan dan keselamatan kerja Worker training on occupational health and safety	
		403-7	Pencegahan dan mitigasi dampak-dampak keselamatan dan kesehatan kerja yang secara langsung terkait hubungan bisnis Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	
		403-8	Pekerja yang tercakup dalam sistem manajemen keselamatan dan kesehatan kerja Workers covered by an occupational health and safety management system	
		403-9	Kecelakaan kerja Work-related injuries	
		403-10	Penyakit akibat kerja Work-related ill health	
			GRI 407: Freedom of Association and Collective Bargaining 2016	
	GRI 414: Penilaian Sosial Pemasok GRI 414: Supplier Social Assessment 2016	414-1	Persentase Pemasok Baru yang Diseleksi dengan Menggunakan Kriteria Sosial New suppliers that were screened using social criteria	
		414-2	Dampak Sosial Negatif dalam Rantai Pasokan dan Tindakan yang Diambil Negative social impacts in the supply chain and actions taken	
	Membangun infrastruktur yang tangguh, meningkatkan industri inklusif dan berkelanjutan, serta mendorong inovasi. Build resilient infrastructure, promote sustainable industrialization and foster innovation	GRI 201: Kinerja Ekonomi 2016 GRI 201: Economic Performance 2016	201-1	Nilai ekonomi langsung yang dihasilkan dan didistribusikan Direct economic value generated and distributed
		GRI 203: Dampak Ekonomi Tidak Langsung GRI 203: Indirect Economic Impacts 2016	203-1	Investasi Infrastruktur Dan Dukungan Layanan Infrastructure investments and services supported
		OG 11.7: Closure and rehabilitation OG 11.7: Closure and rehabilitation	OG 11.7.5	Buat daftar struktur yang dinonaktifkan yang dibiarkan di tempatnya dan jelaskan alasan untuk membiarkannya tetap di tempatnya. List the decommissioned structures left in place and describe the rationale for leaving them in place
	Mengurangi Kesenjangan Intra dan Antar Negara Reduce inequality within and among countries	GRI 2: Pengungkapan Umum 2021 GRI 2: General Disclosures 2021	2-7	Informasi Mengenai Karyawan Information Regarding Employees
		GRI 401: Kepegawaian 2016 GRI 401: Employment 2016	401-1	Perekrutan Karyawan Baru dan Perputaran Karyawan New employee hires and employee turnover
		GRI 404: Pelatihan dan Pendidikan 2016 GRI 404: Training and Education 2016	404-1	Rata-Rata Jam Pelatihan Per Tahun Per Karyawan Average hours of training per year per employee
			404-3	Persentase karyawan yang menerima kinerja reguler dan Tinjauan pengembangan karir Percentage of employees receiving regular performance and career development reviews
		GRI 405: Keberagaman dan Kesempatan Setara 2016 GRI 405: Diversity and Equal Opportunity 2016	405-2	Rasio gaji pokok dan remunerasi perempuan terhadap laki-laki Ratio of basic salary and remuneration of women to men

	GRI 207: Pajak 2019 GRI 207: Tax 2019	207-1	Pendekatan Perpajakan Approach to tax
		207-2	Tata Kelola, Kontrol, dan Risiko Pengelolaan Pajak Tax governance, control, and risk management
		207-3	Keterlibatan Pemangku Kepentingan dan Manajemen Masalah yang Terkait Dengan Pajak Stakeholder engagement and management of concerns related to tax
 <p>Menjadikan kota dan pemukiman inklusif, aman, tangguh dan berkelanjutan Make cities and human settlements inclusive, safe, resilient and sustainable</p>	GRI 203: Dampak Ekonomi Tidak Langsung GRI 203: Indirect Economic Impacts 2016	203-1	Investasi Infrastruktur Dan Dukungan Layanan Infrastructure investments and services supported
	GRI 306: Limbah 2020 GRI 306: Waste 2020	306-1	Timbulan Sampah dan Dampak Signifikan Terkait Sampah Waste generation and significant waste-related impacts
		306-2	Pengelolaan Dampak Signifikan Terkait Limbah Management of significant waste-related impacts
		306-3	Limbah yang Dihasilkan Waste generated
		306-4	Limbah Dialihkan dari Pembuangan Waste diverted from disposal
		306-5	Limbah Diarahkan Ke Pembuangan Waste directed to disposal
	OG 11.8: Asset integrity and critical incident management OG 11.8: Asset integrity and critical incident management	OG 11.8.3	Laporkan jumlah total kejadian keselamatan proses Tier 1 dan Tier 2, dan a perincian total ini menurut aktivitas bisnis (mis., eksplorasi, pengembangan, produksi, penutupan dan rehabilitasi, pemurnian, pemrosesan, transportasi, penyimpanan). Report the total number of Tier 1 and Tier 2 process safety events, and a breakdown of this total by business activity (e.g., exploration, development, production, closure and rehabilitation, refining, processing, transportation, storage)
 <p>Menjamin pola produksi dan konsumsi yang bertanggungjawab Ensure sustainable consumption and production patterns</p>	GRI 302: Energy 2016 GRI 302: Energy 2016	302-1	Konsumsi energi dalam organisasi Energy consumption within the organization
		302-2	Konsumsi energi di luar organisasi Energy consumption outside of the organization
		302-3	Intensitas energi Energy intensity
		302-4	Pengurangan konsumsi energi Reduction of energy consumption
		302-5	Pengurangan kebutuhan energi produk dan jasa Reductions in energy requirements of products and services
	GRI 303: Air dan Efluen 2018 GRI 303: Water and Effluents 2018	303-1	Interaksi dengan air sebagai sumber daya bersama Interactions with water as a shared resource
	GRI 305: Emisi 2016 GRI 305: Emissions 2016	305-1	Emisi GRK Langsung (Cakupan 1) Direct (Scope 1) GHG emissions
		305-2	Emisi GRK Tidak Langsung (Cakupan 2) Energy Indirect (Scope 2) GHG Emission Energy indirect (Scope 2) GHG emission
		305-3	Emisi GRK (Cakupan 3) tidak langsung lainnya Other indirect (Scope 3) GHG emissions
		305-6	Pengendalian Emisi Penipis Lapisan Ozon Emissions of ozone-depleting substances (ODS)
		305-7	Emisi Nitrogen Oksida (NOx), Sulfur Oksida (SOx), dan Emisi Udara Signifikan Lainnya Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions
	GRI 306: Limbah 2020 GRI 306: Waste 2020	306-1	Timbulan Sampah dan Dampak Signifikan Terkait Sampah Waste generation and significant waste-related impacts
		306-2	Pengelolaan Dampak Signifikan Terkait Limbah Management of significant waste-related impacts
		306-3	Limbah yang Dihasilkan Waste generated
		306-4,	Limbah Dialihkan dari Pembuangan Waste diverted from disposal
		306-5	Limbah Diarahkan Ke Pembuangan Waste directed to disposal

GRI 417: Pemasaran dan Pelabelan 2016 GRI 417: Marketing and Labeling 2016	417-1	Persyaratan untuk informasi dan pelabelan produk dan layanan Requirements for product and service information and labeling	
OG 11.8: Asset integrity and critical incident management OG 11.8: Asset integrity and critical incident management	OG 11.8.3	Laporkan jumlah total kejadian keselamatan proses Tier 1 dan Tier 2, dan a perincian total ini menurut aktivitas bisnis (mis., eksplorasi, pengembangan, produksi, penutupan dan rehabilitasi, pemurnian, pemrosesan, transportasi, penyimpanan). Report the total number of Tier 1 and Tier 2 process safety events, and a breakdown of this total by business activity (e.g., exploration, development, production, closure and rehabilitation, refining, processing, transportation, storage)	
	OG 11.8.4	Pengungkapan sektor tambahan berikut adalah untuk organisasi dengan operasi penambangan pasir minyak. <ul style="list-style-type: none"> <li>Buat daftar fasilitas tailing organisasi</li> <li>Untuk setiap fasilitas tailing <ul style="list-style-type: none"> <li>menggambarkan fasilitas tailing;</li> <li>melaporkan apakah fasilitas tersebut aktif, tidak aktif, atau ditutup;</li> <li>laporkan tanggal dan temuan utama dari penilaian risiko terbaru.</li> </ul> </li> <li>Jelaskan tindakan yang dilakukan untuk: <ul style="list-style-type: none"> <li>mengelola dampak dari fasilitas tailing, termasuk selama penutupan dan pasca-penutupan;</li> <li>mencegah bencana kegagalan fasilitas tailing</li> </ul> </li> </ul> <p>The following additional sector disclosures are for organizations with oil sands mining operations.</p> <ul style="list-style-type: none"> <li>List the organization's tailings facilities</li> <li>For each tailings facility: <ul style="list-style-type: none"> <li>describe the tailings facility;</li> <li>report whether the facility is active, inactive, or closed;</li> <li>report the date and main findings of the most recent risk assessment.</li> </ul> </li> <li>Describe actions taken to: <ul style="list-style-type: none"> <li>manage impacts from tailings facilities, including during closure and post-closure;</li> <li>prevent catastrophic failures of tailings facilities</li> </ul> </li> </ul>	
OG 11.16: Land and resource rights OG 11.16: Land and resource rights	OG 11.16.2	Daftar lokasi operasi yang menyebabkan atau berkontribusi pada ketidaksengajaan pemukiman kembali atau di mana pemukiman kembali tersebut sedang berlangsung. Untuk setiap lokasi, menjelaskan bagaimana kehidupan masyarakat dan hak asasi manusia terpengaruh dan pulih. List the locations of operations that caused or contributed to involuntary resettlement or where such resettlement is ongoing. For each location, describe how peoples' livelihoods and human rights were affected and restored	
OG 11.17: Rights of indigenous peoples OG 11.17: Rights of indigenous peoples	OG 11.17.3	Cantumkan lokasi operasi di mana masyarakat adat berada atau terpengaruh oleh kegiatan-kegiatan tersebut organisasi. List the locations of operations where indigenous peoples are present or affected by activities of the organization	
<p>Mengambil aksi segera untuk memerangi perubahan iklim dan dampaknya karena perubahan iklim adalah tantangan global yang memengaruhi setiap orang. Take urgent action to combat climate change and its impacts</p>	GRI 201: Kinerja Ekonomi 2016 GRI 201: Economic Performance 2016	201-2	Implikasi Finansial serta Risiko dan Peluang Lain Akibat dari Perubahan Iklim Financial implications and other risks and opportunities due to climate change
	GRI 302: Energy 2016 GRI 302: Energy 2016	302-1	Konsumsi energi dalam organisasi Energy consumption within the organization
		302-2	Konsumsi energi di luar organisasi Energy consumption outside of the organization
		302-3	Intensitas energi/Energy intensity
		302-4	Pengurangan konsumsi energi Reduction of energy consumption
	302-5	Pengurangan kebutuhan energi produk dan jasa Reductions in energy requirements of products and services	

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Melestarikan dan memanfaatkan secara berkelanjutan sumber daya kelautan dan samudera untuk pembangunan berkelanjutan  
 Conserve and sustainably use the oceans, seas and marine resources for sustainable development

GRI 305: Emisi 2016 GRI 305: Emissions 2016	305-1	Emisi GRK Langsung (Cakupan 1) Direct (Scope 1) GHG emissions
	305-2	Energy Indirect (Scope 2) GHG Emissions Energy Indirect (Scope 2) GHG Emissions
	305-3	Emisi GRK (Cakupan 3) tidak langsung lainnya Other indirect (Scope 3) GHG emissions
	305-4	Intensitas Emisi GRK/GHG emissions intensity
	305-5	Pengurangan Emisi GRK/Reduction of GHG emissions

GRI 304: Keanekaragaman Hayati 2016 GRI 304: Biodiversity 2016	304-1	Lokasi Operasional yang Dimiliki, Disewa, Dikelola, atau Berdekatan Dengan, Kawasan Lindung Dan Kawasan Dengan Nilai Keanekaragaman Hayati Tinggi Di Luar Kawasan Lindung Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas
	304-2	Dampak signifikan dari aktivitas, produk dan layanan pada keanekaragaman hayati Significant impacts of activities, products and services on biodiversity
	304-3	Habitat dilindungi atau dipulihkan Habitats protected or restored
	304-4	Spesies Daftar Merah IUCN dan Spesies Daftar Konservasi Nasional Dengan Habitat Di Daerah yang Terkena Dampak Operasi IUCN Red List species and national conservation list species with habitats in areas affected by operations

GRI 305: Emisi 2016 GRI 305: Emissions 2016	305-1	Emisi GRK Langsung (Cakupan 1) Direct (Scope 1) GHG emissions
	305-2	Energy Indirect (Scope 2) GHG Emissions Energy Indirect (Scope 2) GHG Emissions
	305-3	Emisi GRK (Cakupan 3) tidak langsung lainnya Other indirect (Scope 3) GHG emissions
	305-4	Intensitas Emisi GRK GHG emissions intensity
	305-5	Pengurangan Emisi GRK Reduction of GHG emissions
	305-7	Nitrogen Oksida (NOx), Sulfur Oksida (SOx), dan Emisi Udara Signifikan Lainnya Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions



Melindungi, Merestorasi dan Meningkatkan Pemanfaatan Berkelanjutan Ekosistem Daratan, Mengelola Hutan Secara Lestari, Menghentikan Penggurunan, Memulihkan Degradasi lahan, serta Menghentikan Kehilangan Keanekaragaman Hayati  
 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss


GRI 304: Keanekaragaman Hayati 2016 GRI 304: Biodiversity 2016	304-1	Lokasi Operasional yang Dimiliki, Disewa, Dikelola, atau Berdekatan Dengan, Kawasan Lindung Dan Kawasan Dengan Nilai Keanekaragaman Hayati Tinggi Di Luar Kawasan Lindung Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas
	304-2	Dampak signifikan dari aktivitas, produk dan layanan pada keanekaragaman hayati Significant impacts of activities, products and services on biodiversity
	304-3	Habitat dilindungi atau dipulihkan Habitats protected or restored
	304-4	Spesies Daftar Merah IUCN dan Spesies Daftar Konservasi Nasional Dengan Habitat Di Daerah yang Terkena Dampak Operasi IUCN Red List species and national conservation list species with habitats in areas affected by operations

GRI 306: Limbah 2020 GRI 306: Waste 2020	306-3	Limbah yang Dihasilkan/Waste generated
	306-5,	Limbah Diarahkan Ke Pembuangan Waste directed to disposal



Menguatkan Masyarakat yang Inklusif dan Damai untuk Pembangunan Berkelanjutan, Menyediakan Akses Keadilan untuk Semua, dan Membangun Kelembagaan yang Efektif, Akuntabel, dan Inklusif di Semua Tingkatan  
Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

GRI 305: Emisi 2016 GRI 305: Emissions 2016	305-1	Emisi GRK Langsung (Cakupan 1) Direct (Scope 1) GHG emissions	
	305-2	Energy Indirect (Scope 2) GHG Emissions Energy Indirect (Scope 2) GHG Emissions	
	305-3	Emisi GRK (Cakupan 3) tidak langsung lainnya Other indirect (Scope 3) GHG emissions	
	305-4	Intensitas Emisi GRK/GHG emissions intensity	
	305-5	Pengurangan Emisi GRK/Reduction of GHG emissions	
	305-7	Nitrogen Oksida (NOx), Sulfur Oksida (SOx), dan Emisi Udara Signifikan Lainnya Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	
	OG 11.7: Closure and rehabilitation OG 11.7: Closure and rehabilitation	OG 11.7.4	Cantumkan lokasi operasional yang: <ul style="list-style-type: none"> <li>• Memiliki rencana penutupan dan rehabilitasi;</li> <li>• telah ditutup;</li> <li>• sedang dalam proses ditutup.</li> </ul> List the operational sites that: <ul style="list-style-type: none"> <li>• have closure and rehabilitation plans in place;</li> <li>• have been closed;</li> <li>• are in the process of being closed</li> </ul>
OG 11.7.6		Laporkan nilai moneter total ketentuan keuangan untuk penutupan dan rehabilitasi yang dilakukan oleh organisasi, termasuk pemantauan pasca penutupan dan after-care untuk situs operasional. Report the total monetary value of financial provisions for closure and rehabilitation made by the organization, including post-closure monitoring and aftercare for operational sites	
GRI 403: Kesehatan dan Keselamatan Kerja 2018 GRI 403: Occupational Health and Safety 2018	403-9	Kecelakaan kerja Work-related injuries	
	403-10,	Penyakit akibat kerja Work-related ill health	
	GRI 410: Praktik Keamanan 2016 GRI 410: Security Practices 2016	GRI 410-1	Petugas keamanan yang dilatih terkait kebijakan atau prosedur hak asasi manusia Security personnel trained in human rights policies or procedures
		GRI 414: Penilaian Sosial Pemasok GRI 414: Supplier Social Assessment 2016	414-1
	GRI 2: Pengungkapan Umum 2021 GRI 2: General Disclosures 2021	414-2	Dampak Sosial Negatif dalam Rantai Pasokan dan Tindakan yang Diambil Negative social impacts in the supply chain and actions taken
		2-9	Struktur dan Komposisi Governance Governance structure and composition
		2-10	Nominasi dan Seleksi Dewan Komisaris dan Direksi Nomination and selection of the highest governance body
		2-11	Ketua badan tata kelola tertinggi Chair of the highest governance body
		2-12	Peran badan tata kelola tertinggi dalam mengawasi pengelolaan dampak Role of the highest governance body in overseeing the management of impacts
	GRI 416: Kesehatan dan Keselamatan Pelanggan 2016 GRI 416: Customer Health and Safety 2016	2-23	Komitmen Kebijakan Policy Commitment
2-26		Lembar Umpan Balik Feedback Sheet	
GRI 417: Pemasaran dan Pelabelan GRI 417: Marketing and Labeling 2016		416-2	Insiden ketidakpatuhan tentang dampak kesehatan dan keselamatan produk dan layanan Incidents of non-compliance concerning the health and safety impacts of products and services
	417-2	Insiden ketidakpatuhan terkait produk dan layanan informasi dan pelabelan Incidents of non-compliance concerning product and service information and labeling	
	417-3	Insiden ketidakpatuhan terkait produk dan layanan informasi dan pelabelan Incidents of non-compliance concerning marketing communications	

	GRI 205: Anti Korupsi 2016 GRI 205: Anti-corruption 2016	205-1	Operasi-operasi yang Dinilai Memiliki Risiko Terkait Korupsi Operations assessed for risks related to corruption
		GRI 205-2	Komunikasi dan Pelatihan Tentang Kebijakan dan Prosedur Anti-Korupsi Communication and training about anti-corruption policies and procedures
		GRI 205-3	Insiden Korupsi yang Terbukti dan Tindakan yang Diambil Proven Incidents of Corruption and Actions Taken
	GRI 415: Kebijakan Publik GRI 415: Public Policy 2016	GRI 415-1	Kontribusi Politik Political contributions
	GRI 403: Kesehatan dan Keselamatan Kerja 2018 GRI 403: Occupational Health and Safety 2018	403-4	Partisipasi, konsultasi, dan komunikasi pekerja pada kesehatan dan keselamatan Kerja Worker participation, consultation, and communication on occupational health and safety
	OG 11.16: Land and resource rights	OG 11.16.2	Daftar lokasi operasi yang menyebabkan atau berkontribusi pada ketidaksengajaan pemukiman kembali atau di mana pemukiman kembali tersebut sedang berlangsung. Untuk setiap lokasi, menjelaskan bagaimana kehidupan masyarakat dan hak asasi manusia terpengaruh dan pulih. List the locations of operations that caused or contributed to involuntary resettlement or where such resettlement is ongoing. For each location, describe how peoples' livelihoods and human rights were affected and restored.
 <p>Menguatkan Sarana Pelaksanaan dan Merivitalisasi Kemitraan Global untuk Pembangunan Berkelanjutan Strengthen the means of implementation and revitalize the global partnership for sustainable development</p>	GRI 207: Pajak 2019 GRI 207: Tax 2019	207-1 OG 11.21.4	Pendekatan Perpajakan Approach to tax
		207-2 OG 11.21.5	Tata Kelola, Kontrol, dan Risiko Pengelolaan Pajak Tax governance, control, and risk management
		207-3 OG 11.21.6	Keterlibatan Pemangku Kepentingan dan Manajemen Masalah yang Terkait Dengan Pajak Stakeholder engagement and management of concerns related to tax
		207-4 OG 11.21.7	Laporan Per Negara Country-by-country reporting



2022

Sustainability Report  
Laporan Keberlanjutan

# Revolving



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