MINISTRY OF ENERGY AND MINERAL RESOURCES
DIRECTORATE GENERAL OF NEW RENEWABLE ENERGY AND ENERGY CONSERVATION

Country Report

Energy Report in Indonesia

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JICA Knowledge Co-Creation Program
Energy Policy

22 June – 19 July 2025

Indonesia : General Information

Indonesia marked a significant milestone in COP 26, 2021 by revealing decarbonization agenda by increasing the renewable energy capacity and initiating coal power plant phase down. Recently in May 2025, Indonesia established new long term planning in accelerating the renewable energy development.

285 mio
population

77.3 mio
household

$1.396 T
GDP

73 GW
Power plant capacity

ORGANIZATIONAL STRUCTURE RELATED TO ENERGY

Ministry of Energy and Mineral Resources

The Ministry of Energy and Mineral Resources has the task of organizing government affairs in the field of energy and mineral resources.

the Ministry of Energy and Mineral Resources carries out the following functions: formulation, stipulation and implementation of policies in the field of guidance, control, and supervision of oil and gas, electricity, minerals and coal, new energy, renewable energy, energy conservation, and geology

National Research and Innovation Agency

organizing government duties in the field of research, development, assessment, and application as well as invention and innovation, the implementation of nuclear power, and the implementation of space nationally integrated.

The agency functions to implement the research, development, assessment, and application as well as invention and innovation which cover also the development of energy sector

State-Owned Enterprise in Energy Sector

- PLN — Power Generation and Electricity Utility
- PERTAMINA — Oil and Natural Gas Utility
- MIND ID (Mining Industry Indonesia) — Mineral Resources Mining

PAST ENERGY DEMAND AND SUPPLY (1/3)

Primary energy supply by source

Unit: ktoe

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Production	394.964	428.869	440.719	432.059	432.231	460.533	489.855	450.555	480.879	455.535	503.784
Import	44.164	48.713	51.180	49.261	47.479	48.888	41.489	40.283	48.530	51.692	56.101
Export	(232.033)	(245.139)	(274.253)	(264.231)	(243.569)	(246.002)	(291.386)	(260.497)	(279.689)	(245.932)	(272.437)
Stock Change	4.955	(9.125)	26.795	(14.892)	(22.802)	(48.686)	(13.062)	(21.247)	(33.342)	(4.869)	(25.658)
Total	**212.049**	**223.318**	**244.441**	**202.197**	**213.440**	**214.733**	**226.896**	**209.095**	**216.378**	**256.427**	**261.790**

Primary energy supply by energy source

Unit: ktoe

Year	Coal	Crude Oil & Product	Natural Gas & Product	Hydro Power	Geothermal	Solar PP & Solar PV	Wind	Bioenergy PP (inc. MSW)	Solar Powered Public Street Lighting & Energy Saving Lamp	Solar Water Heater	Direct Use of Geothermal	Biofuel	BioGas	Traditional Biomass	Industrial Biomass	Total
2013	42.377	82.271	37.819	5.389	2.134	-	-	-	-	-	-	952	-	7.137	-	184.295
2014	44.794	80.876	37.993	5.314	2.267	-	-	-	-	-	-	1.675	-	6.676	-	185.921
2015	51.047	71.328	39.149	4.845	2.287	-	-	-	-	-	-	1.173	17	5.614	0	181.752
2016	53.243	74.499	40.397	6.643	2.455	-	-	-	-	-	-	2.888	20	5.052	26	191.379
2017	57.054	77.437	39.985	6.664	2.836	-	-	-	-	-	-	2.933	2	4.107	3	197.270
2018	67.667	79.407	40.364	5.629	3.646	50	65	4.269	1	-	-	3.964	23	3.920	48	215.096
2019	81.390	76.301	40.402	5.506	3.667	65	166	4.187	2	-	-	6.430	23	3.420	78	227.637
2020	77.549	65.940	35.160	6.329	4.047	10	163	4.254	2	-	-	7.772	25	3.079	89	211.812
2021	78.229	69.080	33.890	6.433	4.135	110	150	5.239	2	-	-	9.179	25	2.947	183	217.034
2022	104.401	77.346	34.302	7.109	4.337	239	122	7.292	7	131	1	10.412	29	2.611	633	256.427
2023	102.976	77.614	44.386	6.394	4.404	424	165	8.083	7	268	1	11.773	98	2.331	2.863	261.787

Source: MEMR, HEESI 2023

PAST ENERGY DEMAND AND SUPPLY (2/3)

Final energy consumption by sector

Unit: ktoe

Sector	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Industrial	39.699	40.771	40.428	37.252	38.371	46.163	54.402	47.840	44.712	74.865	77.929
Households	20.890	21.365	20.874	20.917	20.739	21.271	21.505	22.146	22.634	22.608	23.262
Commercial	5.493	5.635	5.500	5.792	5.933	6.104	6.376	5.909	6.153	6.951	7.766
Transportation	47.797	47.989	48.374	47.774	50.929	55.953	57.850	50.983	54.379	60.005	62.794
Other	4.355	4.017	3.039	2.781	2.380	1.901	1.556	1.434	1.510	1.549	1.486
Final Energy Consumption	118.234	119.777	118.214	114.516	118.351	131.392	141.689	128.312	129.388	165.978	173.239
Non Energy Utilization	3.972	3.986	4.190	3.522	3.520	3.579	3.577	3.446	4.213	4.423	4.419

Final energy consumption by energy source

Unit: ktoe

Year	Traditional Biomass	Industrial Biomass	Solar Water Heater	Direct Use of Geothermal	Coal	Natural Gas	Oil Fuel	BioGasoil			BioGas	Briquette	LPG	Electricity	Total
								Gasoil	Biodiesel	Blending Product					
2013	7.124	-	-	-	5.982	13.636	52.927	8.432	952	9.384	-	18	6.692	16.095	111.858
2014	6.658	-	-	-	7.709	13.314	50.920	8.526	1.675	10.202	-	8	7.272	17.044	113.127
2015	5.573	17	-	-	9.832	13.441	45.266	12.025	831	12.857	17	7	7.611	17.408	112.030
2016	5.001	26	-	-	8.891	13.046	46.073	8.294	2.732	11.026	20	15	7.928	18.538	110.565
2017	4.106	26	-	-	82	15.187	46.404	10.808	2.335	13.143	22	15	8.582	19.149	114.867
2018	3.919	48	-	-	14.071	16.620	44.902	14.833	3.406	18.239	23	5	9.026	21.567	128.421
2019	3.419	78	-	-	23.438	15.975	36.676	21.055	5.809	26.864	23	4	9.283	22.487	138.248
2020	3.078	89	-	-	15.878	14.975	31.127	17.473	7.629	25.102	25	26	96	22.362	122.240
2021	2.947	183	-	-	1.229	15.530	33.032	18.727	8.441	27.168	25	0	9.975	23.793	124.949
2022	2.611	633	131	1	41.887	15.024	36.818	20.879	9.490	30.369	29	0	10.218	25.678	163.399
2023	2.330	2.863	268	1	44.346	16.939	36.916	20.824	11.161	31.986	98	0	10.396	27.095	173.240

Source: MEMR, HEESI 2023

PAST ENERGY DEMAND AND SUPPLY (3/3)

Electricity Generation by energy source

Unit: GWh

Past electricity demand by energy source					
	Energy Source	**2021**	**2022**	**2023**	**2024**
A	**Renewable Energy**	**36.875**	**40.479**	**38.979**	**41.240**
	Hydropower	19.765	22.355	19.932	21.505
	Geothermal Power	15.898	16.677	16.936	16.763
	Other NRE	1.212	1.447	2.111	2.971
B	**Non-Renewable Energy**	**252.596**	**267.523**	**284.342**	**302.652**
	Steam Power	189.684	205.309	216.777	228,433
	Diesel Power	9.094	8.309	8.576	10,054
	Steam Gas Power 55.979		51.604	51.426	60,686
	Biofuel	2.214	2.479	3.010	3,478
	Total Electricity Production	**289.471**	**308.002**	**323.321**	**343.891**

CO_2 emissions by sector

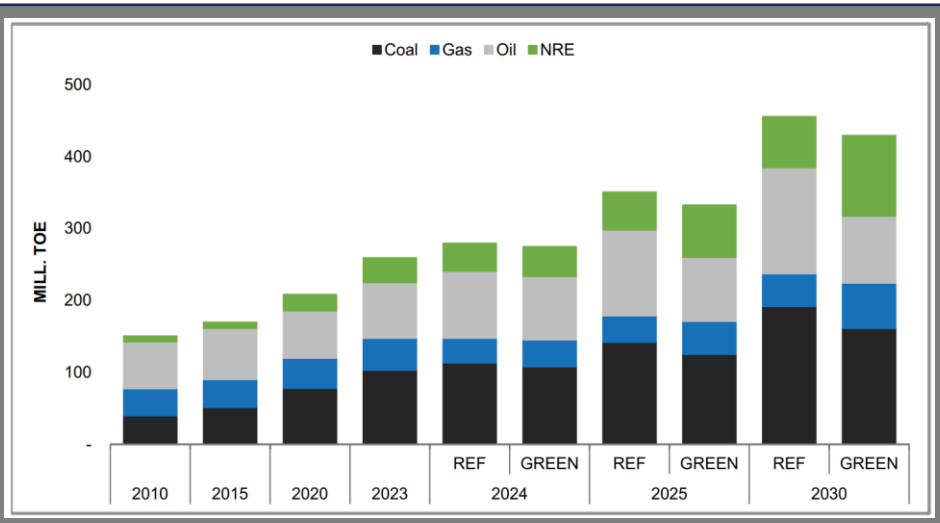
Unit: MTon CO_2

Sector	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Energy	510,328	538,349	567,910	623,175	683,819	750,364	823,385	903,512	965,253	1,031,213	1,101,680
IPPU	42,270	52,817	59,530	62,466	62,447	64,734	66,380	69,570	69,847	70,030	70,220
Waste	100,731	103,161	106,463	112,747	120,551	127,388	134,810	145,705	152,040	161,783	172,504
Agriculture	112,446	113,149	113,881	114,650	114,924	115,234	115,578	115,961	115,686	115,882	116,237
Forestry	771,029	769,069	767,052	764,974	767,338	766,299	765,203	764,048	727,292	725,554	724,109
Total	1,536,805	1,576,545	1,614,836	1,678,013	1,749,078	1,824,019	1,905,357	1,998,797	2,030,118	2,104,462	2,184,750

Source: MEMR, HEESI 2023

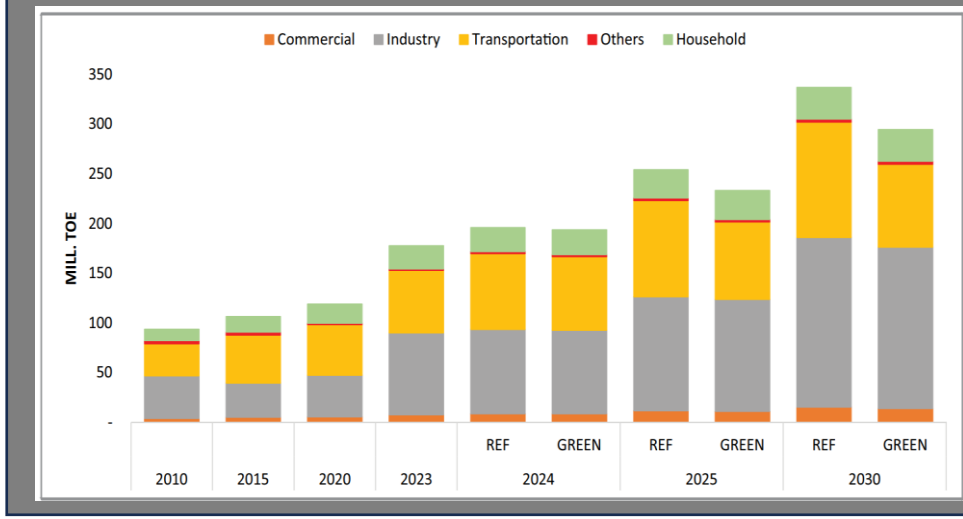
Outlook of Energy Demand & Supply (1)

Primary Energy Supply projection By Energy Type



The total primary energy supply in 2034 will increase to around 456 million TOE in the REF scenario and to 429 million TOE in the GREEN scenario. The supply of primary energy from NRE will grow the highest by around 6.8% (REF) and 11.3% (GREEN).

Final energy consumption by sector

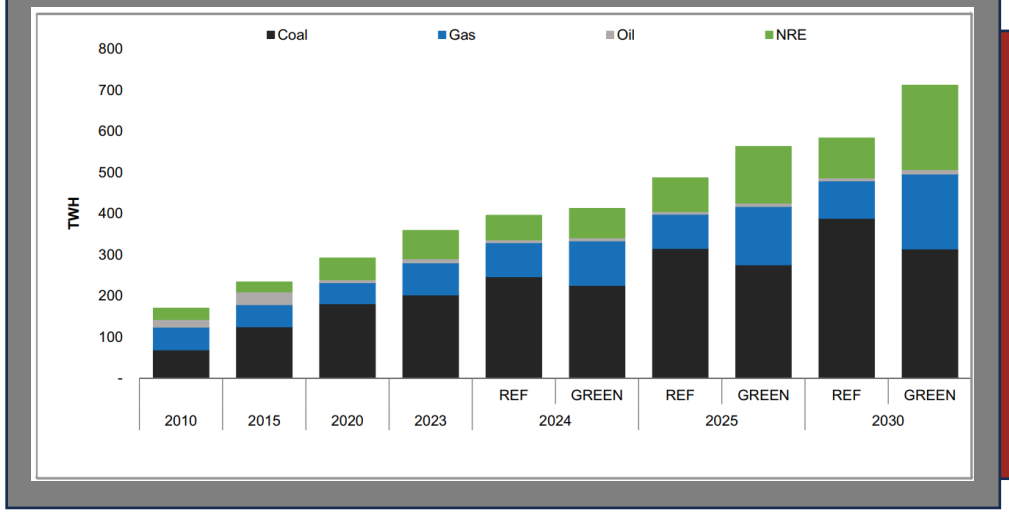


In the REF scenario, final energy demand is projected to increase from 178 million TOE in 2023 to 337 million TOE by the end of the projection year 2034. While, in GREEN scenario, total final energy consumption increases to 295 million TOE in 2034.

Source : DEN-Indonesia Energy Outlook

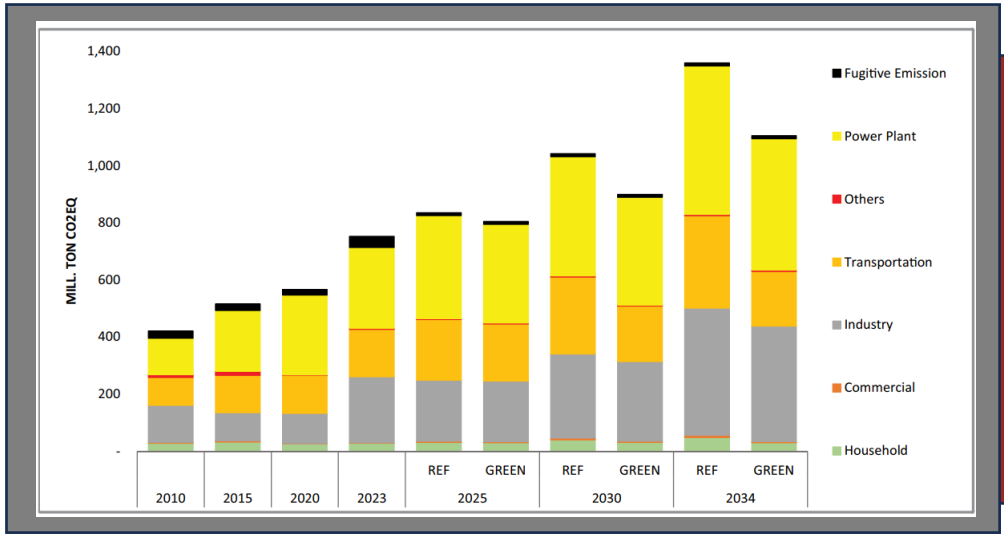
Outlook of Energy Demand & Supply (2)

Electricity Production by type



Total electricity production in 2030 is projected to increase to around 584 TWh (REF) and 712 TWh (GREEN) with the main contribution from fossil energy plants, especially coal.

GHG Emission by Sector



In 2034, power plants will still be the largest contributor to emissions due to the dominant use of fossil fuels in power plants, especially coal, at around 38% (REF) and 42% (GREEN). Meanwhile, the industrial sector contributes 33% (REF) and 37% (GREEN).

Source : DEN-Indonesia Energy Outlook

CURRENT ENERGY POLICY AND MEASURES

•National Energy Policy and Bioenergy Mandates

Under the National Energy Policy (KEN) and RUEN, Indonesia targets 23% renewable energy by 2025 and 31% by 2050. Bioenergy is positioned as a strategic contributor, including mandatory blending programs (B35 for biodiesel and plans for bioethanol pilot in gasoline).

•Acceleration of Renewable Energy Development

The Government of Indonesia has committed to increase the share of renewables in the national energy mix to 23% by 2025 and 31% by 2050 (as per RUEN). Presidential Regulation No. 112/2022 aims to accelerate renewable energy procurement, with priority on solar, hydro, and geothermal.

•Sustainable Bioenergy and Waste-to-Energy Initiatives

The government supports bioenergy development through waste-to-energy (WtE) projects, industrial biomass, and biogas programs. Recent policies include incentives for co-firing biomass in coal plants and POME (palm oil mill effluent) biogas for rural electricity.

MAJOR DIFFICULTIES AND BOTTLENECKS CURRENTLY FACED IN FORMULATING ENERGY POLICIES

•Regulatory and Institutional Fragmentation

Overlapping authorities between central and local governments, frequent policy changes, and uncertainty in procurement regulations (especially for renewables) hinder investor confidence and project execution. Regulatory overlap between MEMR, MOA, KLHK, and regional governments affects bioenergy licensing, land permits, and waste utilization. Better cross-sectoral coordination is needed for streamlined project development.

•Grid Infrastructure and Renewable Integration Issues

Many renewable resources are located far from demand centers. The current transmission system, especially outside Java-Bali, lacks the capacity and flexibility to integrate intermittent renewable energy like solar and wind. For Bioenergy, ensuring consistent, traceable, and sustainable biomass feedstock—especially outside Java—is a major challenge. Seasonality, land use competition, and fragmented supply chains hamper scalability.

•Subsidy Structure and Fossil Fuel Dependence

Persistent subsidies for fossil fuels (e.g., LPG and diesel) create a disincentive for shifting to clean energy and distort the energy market. This limits the competitiveness of renewable energy and energy efficiency investments.

TRAINING EXPECTATION

Course of Interest:

1. Bioenergy Policy Integration in Energy Transition Frameworks

- How bioenergy is planned and integrated in national decarbonization strategies (e.g., Japan's biomass roadmap or EU's RED II policies).

2. Waste-to-Energy and Circular Economy Practices

- Lessons on feedstock aggregation, technology selection, and community-based WtE models from countries with mature WtE ecosystems.

3. Mechanisms for Enhancing Private Sector and Regional Participation

- Including financing schemes, incentives, and decentralized energy business models that can accelerate rural bioenergy deployment.

Expectation of My Superior:

- *"We expect that your participation will help enhance Indonesia's bioenergy roadmap and implementation. The knowledge gained—particularly around international best practices, financing models, and institutional design—will be valuable to accelerate bioenergy initiatives and improve coordination within the Directorate of Bioenergy and across government stakeholders."*

THANK YOU

Energy Prices (1/2)

Year	Gasoline[2] (Ron 90)		Gasoline (Ron 92)		Avtur		Kerosene			Gasoil CN 48		Gasoil CN 51		LPG (3 Kg)		LPG (12 Kg)		LPG (50 Kg)	
	Thousand Rp/BOE	US$/ BOE	Thousand Rp/BOE	US$/ BOE	Thousand Rp/BOE	US$/ BOE	Thousand Rp/BOE	US$/ BOE		Thousand Rp/BOE	US$/ BOE	Thousand Rp/BOE	US$/ BOE	Thousand Rp/BOE	US$/ BOE	Thousand Rp/BOE	US$/ BOE	Thousand Rp/BOE	US$/ BOE
2013	954	78	1,678	185	1,694	139	422	35		775	64	1,721	190	499	41	747	61	1,569	129
2014	1,157	93	1,859	205	1,524	123	422	34		885	71	1,920	212	499	40	1,211	97	1,548	124
2015	1,238	90	1,517	167	1,562	113	422	31		1,052	76	1,673	184	499	36	1,440	104	1,428	104
2016	1,129	84	1,305	144	1,227	91	422	31		815	61	1,290	142	499	37	1,361	101	1,247	93
2017	1,110	82	1,463	161	1,418	105	422	31		794	59	1,318	145	499	37	1,410	104	1,461	108
2018	1,110	79	1,785	197	1,713	122	422	30		794	57	1,673	184	499	36	1,457	104	1,612	115
2019	1,110	80	1,690	186	1,664	120	422	30		794	57	1,804	199	499	36	1,457	105	1,330	96
2020	1,110	79	1,544	170	1,553	110	422	30		794	56	1,572	173	499	35	1,457	103	1,333	95
2021	1,110	78	1,544	170	2,136	150	422	30		794	56	1,719	190	499	35	1,867	131	2,238	157
2022	1,716	122	2,385	263	3,212	204	422	27		794	50	2,898	320	499	32	2,361	150	2,289	145
2023	1,716	120	2,291	253	2,856	185	422	27		794	51	2,497	275	499	32	2,361	153	2,261	147

Note : 1) At the official selling point
2) Gasoline RON 88 price before 2022

Energy Prices (2/2)

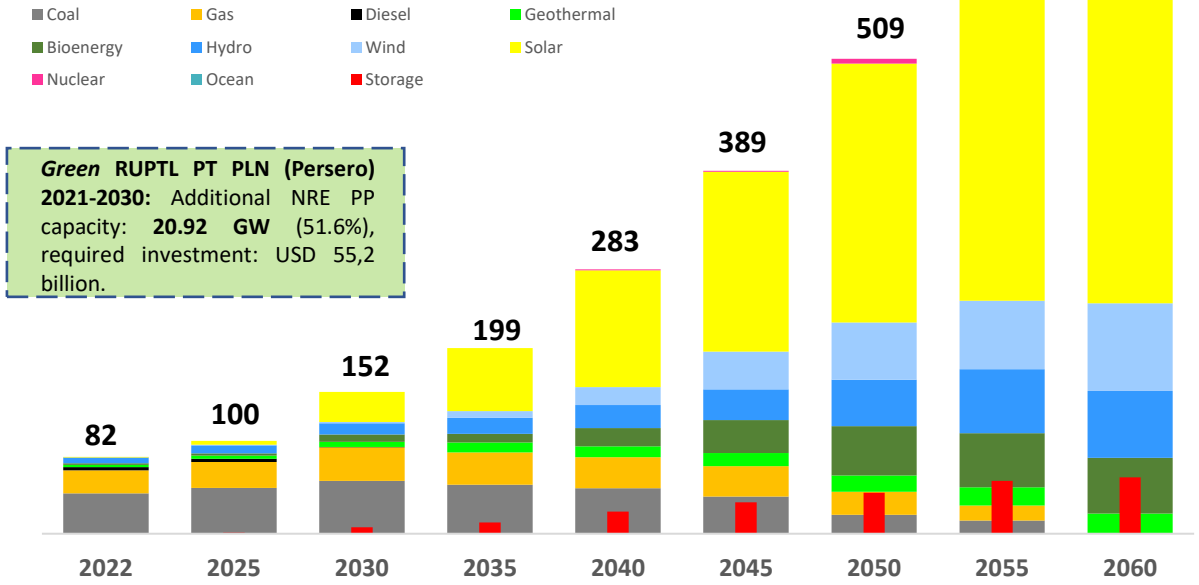
Year	Coal		Electricity (Average)			Electricity (Average)			
			Household			Industry		Commercial	
	Thousand Rp/ BOE	US$/BOE	Thousand Rp/ BOE	US$/BOE		Thousand Rp/ BOE	US$/BOE	Thousand Rp/ BOE	US$/BOE
2013	219	18	1,129	93		1,299	107	1,822	149
2014	235	19	1,237	99		1,595	128	2,065	166
2015	155	11	1,365	99		1,864	135	2,095	152
2016	143	11	1,376	102		1,716	128	1,959	146
2017	183	14	1,723	127		1,776	131	2,032	150
2018	179	13	1,798	128		1,770	126	2,029	145
2019	179	13	1,793	129		1,796	129	2,053	148
2020	214	15	1,618	115		1,780	126	2,022	143
2021	192	13	1,670	117		1,772	124	2,014	141
2022	213	14	1,841	117		1,763	112	2,048	130
2023	238	15	1,886	122		1,762	114	2,057	133

Note : 1) At the official selling point

NZE 2060 IN ACCORDANCE WITH ENERGY SECTOR DEVELOPMENT

NZE Power Plant Development Roadmap

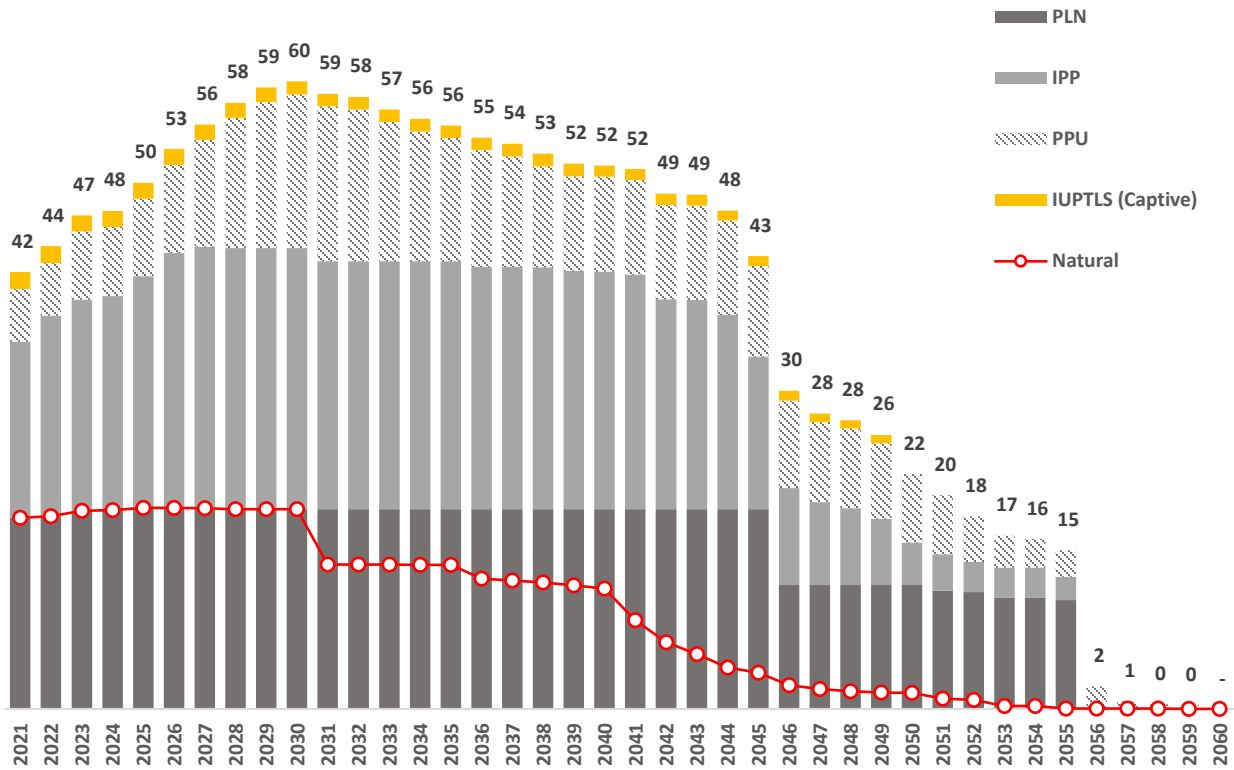
NRE PP Installed Capacity in 2060: 708 GW
Solar 421 GW, Wind 94 GW, Hydro 72 GW, Bioenergy 60 GW, Nuclear 31 GW, Geothermal 22 GW, Ocean Energy 8 GW.
60,2 GW Storage: *Pumped Storage* 4.2 GW, BESS 56 GW.



***Green* RUPTL PT PLN (Persero) 2021-2030:** Additional NRE PP capacity: **20.92 GW** (51.6%), required investment: USD 55,2 billion.

- The projected **electricity demand reach 1,942 TWh and electricity consumption per capita equal to 5,862 kWh/capita.**
- National power generation will be mainly sourced by VRE while optimizing other RE resources to help maintaining system stability.
- Pump storage enters the system in 2025, Battery Energy Storage System (BESS) to be massively utilized in 2031.
- Nuclear PP will enter the system in 2039 to maintain system reliability. By 2060, up to 31 GW nuclear PP will be deployed.

CFPP Retirement Program



1. By retiring the coal, it is expected that power generation sector will have zero emission in 2060, while the remaining energy sector emission (129 Mio tons CO_2) will be emitted in the industry and transportation sectors.
2. Coal PP capacity includes **existing and on-going Coal PPs for all business areas**, both PLN and non-PLN.
3. Coal PP capacity increase in accordance with the project in the RUPTL.
4. The lifetime of PLN's Coal PP is **in accordance with asset revaluation and maximum 30 years of PPU and 25-30 years of IPP** (according to PPA).

ENERGY TRANSITION ROADMAP TOWARD CARBON NEUTRAL

1) Timeline of strategic achievements to achieve net zero emission in the energy sector
2) This Roadmap will be a form of joint commitment between the government and stakeholders to achieve NZE 2060

2021 – 2025

2025: Emission Reduction 198 Mill ton CO_2

Supply:
- Implementation of 3.6 GW solar roof top
- Construction of NRE Plant capacity 10.6 GW
- Gasification gas generator 1.7 GW
- Take out 8.8 GW PLTU at RUPTL
- Convert Gasoil Plant to NRE
- Gas and Steam Power Plant 0.8 GW as a replacement for Steam Power Plant

Demand:
- Decreasing LPG imports by using Induction stove for 8.2 mill HH.
- Electric vehicles 400K cars and 1.7Mill motorcycles
- Gas network for 5.2 million homes.
- CNG Car 100k
- Application of Energy Management and MEPS

2026 – 2030

NDC TARGET ACHIEVED

Supply:
Construction of NRE Plant capacity 10.3 GW to replace coal power plant

Demand:
- Decreasing LPG imports by using Induction stove for 18.2 mill HH.
- Electric vehicles 2Mill cars and 13Mill motorcycles
- Gas network for 10million homes.
- CNG Car 300k
- DME usage to subtitute LPG for 20,4Mill HH
- Application of Energy Management and MEPS

2030: Emission Reduction 314 Mill ton CO_2

2031– 2035

2035: Emission Reduction 475 Mill ton CO_2

Supply:
- No additional Fosil Power Plant
- No Gasoil Power Plant
- Retirement Coal Power Plant 6 GW*)
- NRE Plant: Solar PV 99 GW, Hydro 3,1 GW, Bioenergy 3,1 GW dan Geothermal 5,6 GW
- **Hydrogen 328 MW**
- Battery use 7 GW

Demand:
- Induction Stove for 28,2 Mill HH.
- EV 5,7Mill Car and 46,3Mill motorcycles
- Gas network untuk 15,3Mill homes.
- CNG Car 800K

2036 – 2040

Supply:
- Retirement Coal power plant 3 GW*)
- NRE Construction: solar PV 68,5 GW, Wind power plant 9,4 GW, Hydro 3,7 GW, Bioenergy 7,8 GW, and geothermal 1 GW
- **Hydrogen use 332 MW**
- Battery use 46 GW

Demand:
- Induction Stove for 38,2 Mill HH.
- EV 12,3 Mill Car and 105Mill motorcycles
- Gas network untuk 20,3Mill homes.
- CNG Car 2Mill

2040: Emission Reduction 796 Mill ton CO_2

2041– 2050

2050: Emission Reduction 956 Mill ton CO_2

Supply:
- Retirement Coal Power Plant 31 GW*)
- NRE Plant : Solar PV 180,2 GW, Wind power plant 17,5 GW, Hydro 13,7 GW, Bioenergy 23 GW, Geothermal 3 GW, **Ocean Current 1,3 GW and Nuclear 5 GW**
- **Hydrogen 9 GW**
- Battery use 151 GW

Demand:
- Induction Stove for 48,2 Mill HH.
- EV 38,2 Mill Car and 205Mill motorcycles
- Gas network untuk 23,4Mill homes.
- CNG Car 2,8Mill

2051 – 2060

Supply:
- Retirement Coal power plant 8 GW*)
- Retirement Gas and Steam Power Plant 8 GW
- NRE Construction : Solar PV 8,2 GW, Wind power plant 11,6 GW, Hydro 37,9 GW, Bioenergy 2,1 GW, geothermal 3 GW, **Ocean Current 12,1 GW and Nuclear 30 GW**
- **Hydrogen use 52 GW**
- Battery use 140 GW

Demand:
- Induction stove for 58Mill HH.
- EV 69,6Mill Car and 229Mill motorcycles
- Gas Network 23,9Mill HH.

2060: Emission Reduction 1.526 Mill ton CO_2

Innovative low emission technology such as CCS/CCUS technology in some extent could be implemented in existing fossil power generation to accelerate the emission reduction while transitioning to a cleaner and greener energy

*) Coal Power Plant & Power Private Utility (PPU) maximum 30 years and IPP 25-30 years (as in PPA)

Outlook of Energy Demand & Supply (2)-RUPTL Version

Electricity Generation Projection up to 2034 (GWh) according to Long Term Planning 2025-2034.

	Energy Sources	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
1	Renewables	49,244	55,075	61,333	72,893	80,364	90,435	117,182	138,820	159,170	172,219
	Hydro	24,742	27,339	30,154	35,833	38,822	42,826	56,772	70,897	80,670	84,447
	Geothermal	17,122	18,154	19,473	21,941	23,791	26,635	36,768	42,717	51,475	57,470
	Biomass	3,871	5,001	5,622	5,927	6,915	7,151	7,979	8,153	8,083	8,103
	Waste	98	119	183	712	1,495	2,216	2,385	2,391	2,485	2,485
	Solar	2,357	2,843	3,937	6,363	7,000	9,027	10,144	11,010	12,374	14,394
	Wind	477	1,057	1,582	1,864	2,191	2,428	2,970	3,493	3,931	5,200
	Others	578	561	382	254	150	154	164	159	153	119
2	Gas	56,912	67,008	80,044	86,513	97,606	106,620	108,351	113,056	116,112	132,318
3	Fuel Oil	14,035	10,319	4,113	2,231	1,692	1,368	1,404	1,376	1,333	1,337
4	Coal	241,418	247,629	257,342	262,556	264,648	268,983	267,428	274,877	279,861	273,773
5	Import	1,306	1,333	1,375	1,408	1,427	843	868	921	980	1,040
	Total	362,916	381,363	404,207	425,602	445,737	468,249	495,233	529,049	557,456	580,687

GHG Emission by Energy Sources under Accelerated Renewable Energy Development (ARED) Scenario according to Long Term Planning 2025-2034

No.	Energy Sources	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
1	Gas	27.8	32.4	37.9	39.3	41.3	50.2	50.3	55.3	53.8	57.2
2	Fuel Oil	9.6	7.1	3.3	1.7	1.1	1.0	1.0	1.0	1.0	0.9
3	Coal	262	269	280	288	293	297	295	304	308	303
Total		299	308	321	329	335	348	346	360	363	362

Energy-Related Investment in PLN

PLN energy transition-related financing 2022-2024:

1. PLN signed **JPY13.629.000.000 Sub-Loan Agreement** with Gov of Indonesia (JICA as *original lender*) for **88 MW Peusangan HEPP Project.**

2. PLN secured loan with amount **USD 610 million** from World Bank and AIIB for **1040 MW *hydropower pumped storage project*** (2022).

3. PLN secured **EUR 58 million for Sawangan Hydropower plant project 2 x 8,3 MW** from KfW (Dec 2022)

4. PLN signed **USD581,5 million loan** from World Bank, CTF, dan CCECF for P-for-R Program-Indonesia Sustainable Least-cost Electrification-1 (ISLE-1) . (May 2024)

88 MW Peusangan HEPP

Hydropower pumped storage