



IEMOP

INDEPENDENT ELECTRICITY MARKET OPERATOR
PHILIPPINES



ANNUAL MARKET OUTCOMES 2024

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SYSTEM

PEAK DEMAND

19,246 MW

13 May 2024 14:30

COINCIDENTAL SUPPLY: 20,631 MW



19,409 MW

AVERAGE SUPPLY



13,783 MW

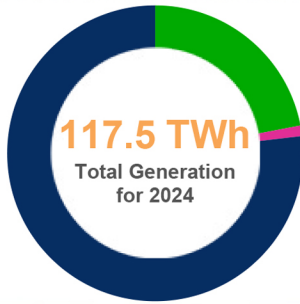
AVERAGE DEMAND



5,626 MW

AVERAGE MARGIN

GENERATION MIX



22.0%
RENEWABLE ENERGY

1.1%
ENERGY STORAGE SYSTEM

76.9%
NON-RENEWABLE ENERGY

117.5 TWh
Total Generation for 2024

HVDC LINK

LUZON TO VISAYAS

135MW 27.91%
of the time

VISAYAS TO LUZON

226MW 67.81%
of the time

MINDANAO TO VISAYAS

307MW 97.97%
of the time

VISAYAS TO MINDANAO

47MW 1.90%
of the time



MARKET TRANSACTIONS

24.93 TWh = 22.1%

energy purchased from the WESM in 2024

of the customer's total consumption for the year 2024

LOAD WEIGHTED AVERAGE PRICE



PhP 5.28
per KWh
YEAR 2024

PhP 6.07
per KWh
YEAR 2023

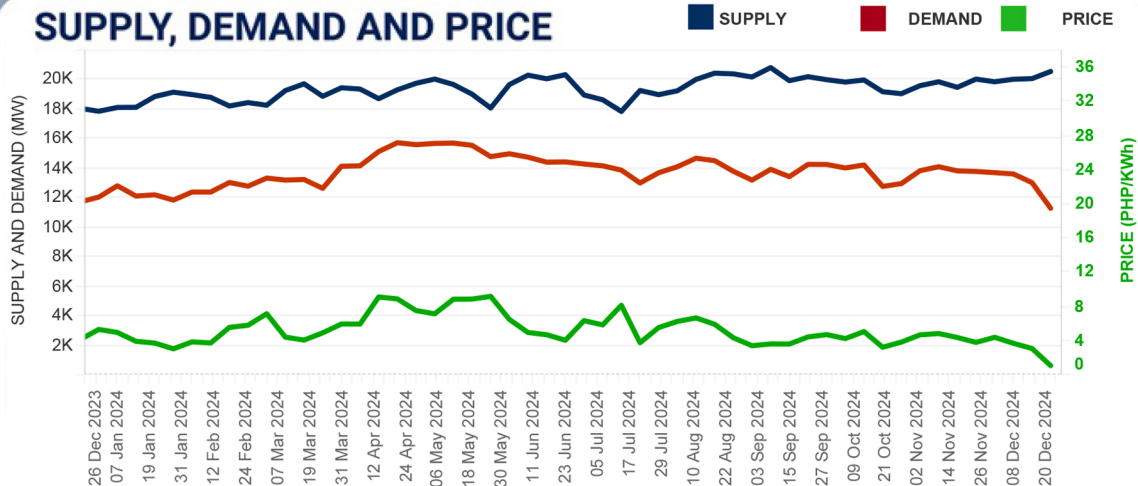
EFFECTIVE SPOT SETTLEMENT PRICE



PhP 5.58
per KWh
YEAR 2024

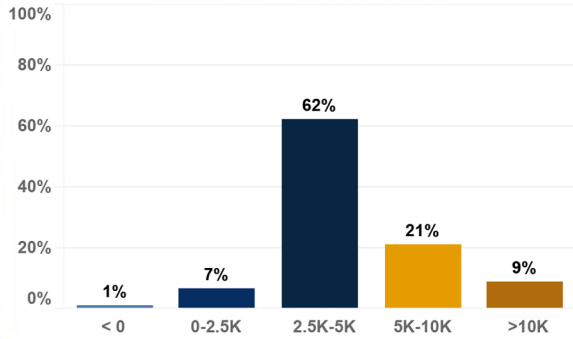
PhP 6.44
per KWh
YEAR 2023

SUPPLY, DEMAND AND PRICE



* in weekly average values

LWAP DISTRIBUTION

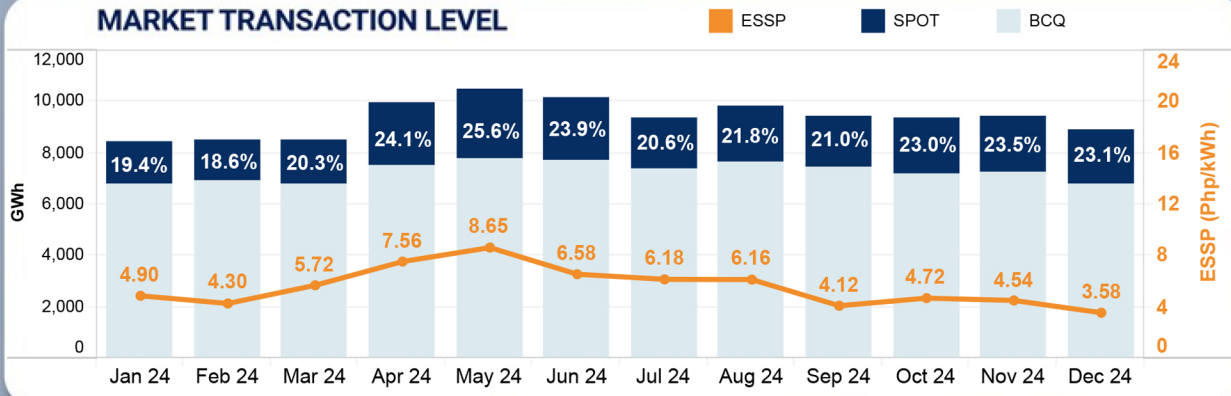


PRICING CONDITIONS

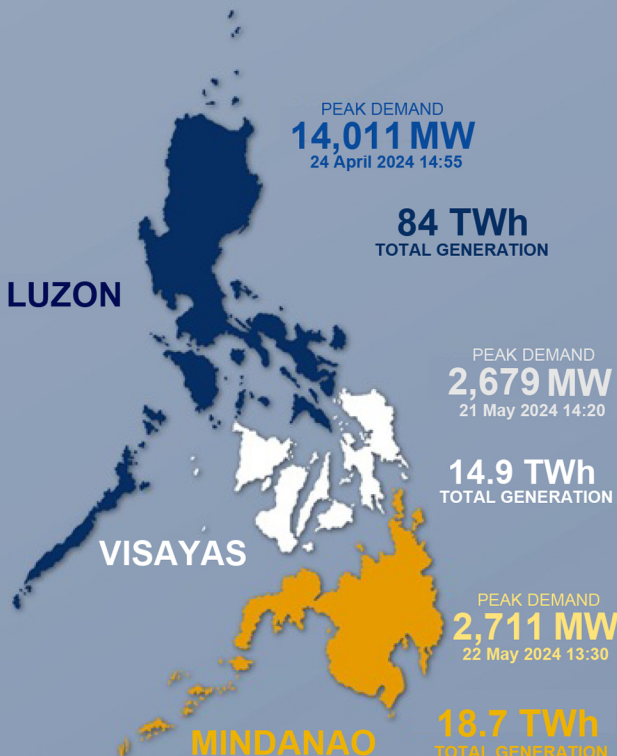
	LUZON	VISAYAS	MINDANAO
AP	2,069	1,707	41
SEC	4,758	5,459	5,512
PSM	3,266	2,992	3,027
PEN	3,823	4,122	4,162
OK	91,492	91,128	92,666
TOTAL	105,408	105,408	105,408

*number of trading intervals per Pricing Conditions

MARKET TRANSACTION LEVEL



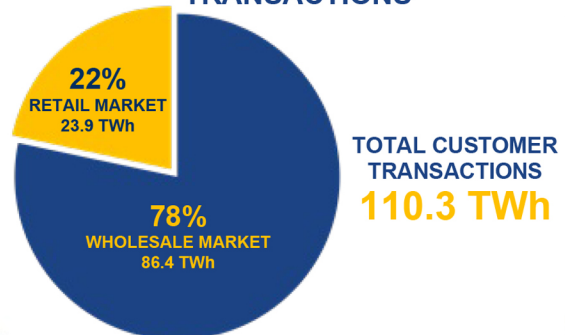
REGIONAL ENERGY GENERATION AND PEAK DEMAND



AVERAGE SUPPLY, DEMAND & LWAP

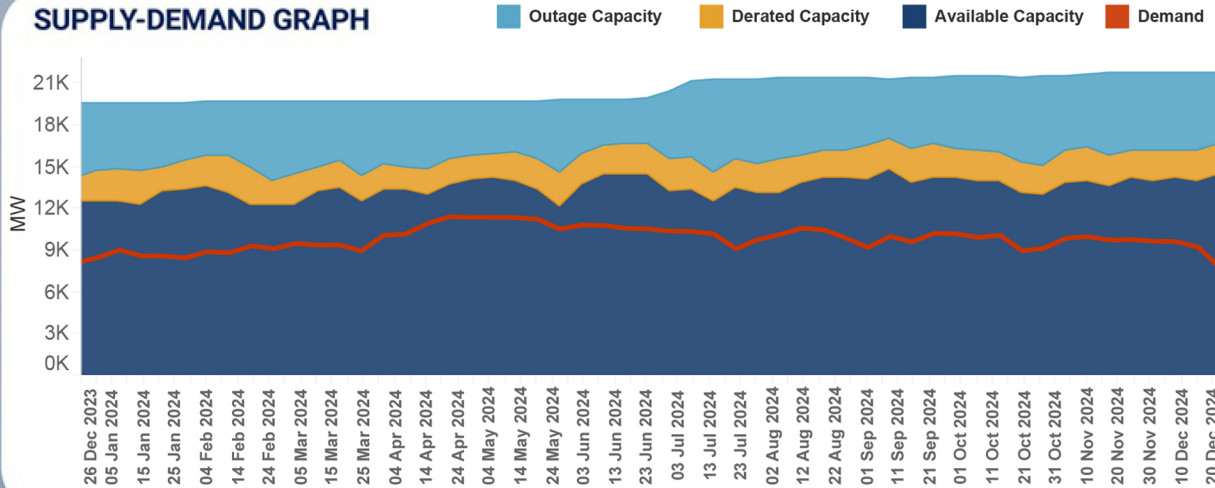
	LUZON	VISAYAS	MINDANAO
Demand (MW)	9,847	1,944	1,992
Supply (MW)	13,567	2,341	3,501
Margin (MW)	3,720	397	1,509
LWAP (Php/MWh)	5,172	6,400	4,665

RETAIL & WHOLESALE MARKET TRANSACTIONS

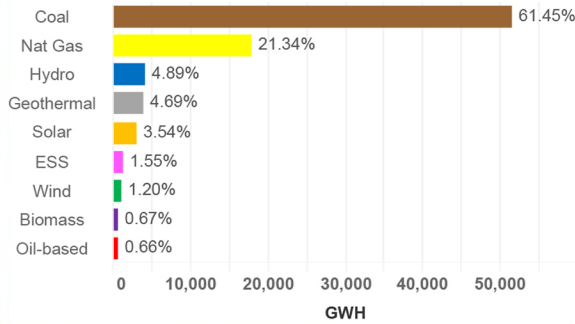


LUZON

SUPPLY-DEMAND GRAPH



GENERATION MIX



FREQUENT CONSTRAINED EQUIPMENT

EQUIPMENT	NO. OF INTERVALS	PERCENT OF TIME
Mexico - Hermosa Lines 1 & 2	1,899	1.80%
Buang - BPPC Line 1	1,869	1.78%

RESERVE MARKET

COMMODITY TYPE	AVERAGE RESERVE REQUIREMENT (MW)	AVERAGE RESERVE SCHEDULE (MW)	AVERAGE RESERVE MARKET PRICE* (PHP/KWH)
Contingency	612	498	5.66
Dispatchable	590	424	1.90
Regulation Down	197	186	7.11
Regulation Up	197	185	7.67

* Feb 2024 to Mar 2024 and Aug 2024 to Dec 2024 Billing

SO GENERATOR REDISPATCH

CATEGORY	TOTAL NUMBER OF EVENTS
MOT Raise	36,984
MRU - Real Power Balancing	7,194
MRU - System Voltage	23
MRU - Thermal Limits	12

NEW REGISTERED GENERATORS AND CONNECTED TRANSMISSION LINE

SOLAR 689 MW

Laoag Solar Power Plant (130.2 MW)
 RASLAG IV Solar Power Project (26.4 MW)
 Calabanga Solar Power Project (50 MW)
 San Miguel Solar Power Project (55 MW)
 Palauig Solar Power Project (49.5 MW)
 Tanauan Solar Power Plant (48.1 MW)
 Maragondon Solar Power Plant (48.1 MW)
 Bongabon Solar Power Plant (30.9 MW)
 Sto. Domingo Solar Power Plant (46.2 MW)
 Gamu Solar Power Project (46.2 MW)
 Armenia Solar Power Project (37.8 MW)
 Bongabon Solar Power Project (37.6 MW)
 Naic Solar Rooftop Power Plant (5 MW)
 San Jose Solar Power Plant (15.3 MW)

COAL 300 MW

Mariveles Coal-fired Thermal Power Plant Unit 3 & 4 (2 x 150 MW)

NATURAL GAS 1320 MW

Batangas Combined Cycle Power Plant Units 1, 2, & 3 (3 x 440 MW)

ENERGY STORAGE SYSTEM 114 MW

Magat Battery Energy Storage System (24 MW)
 Gamu Battery Energy Storage System (40 MW)
 Lumban Battery Energy Storage System (50 MW)

BIOMASS 1.7 MW

Biogas Power Plant (Phase 1) (1.7 MW)

OIL-BASED 45.4 MW

Calibu Bunker-C Fired Diesel Power Plant (27.5 MW)
 Bunker C-Fired Diesel Power Plant (17.9 MW)

WIND 50 MW

Caparispisan II Wind Power Project (50 MW)

GEOTHERMAL 16.7 MW

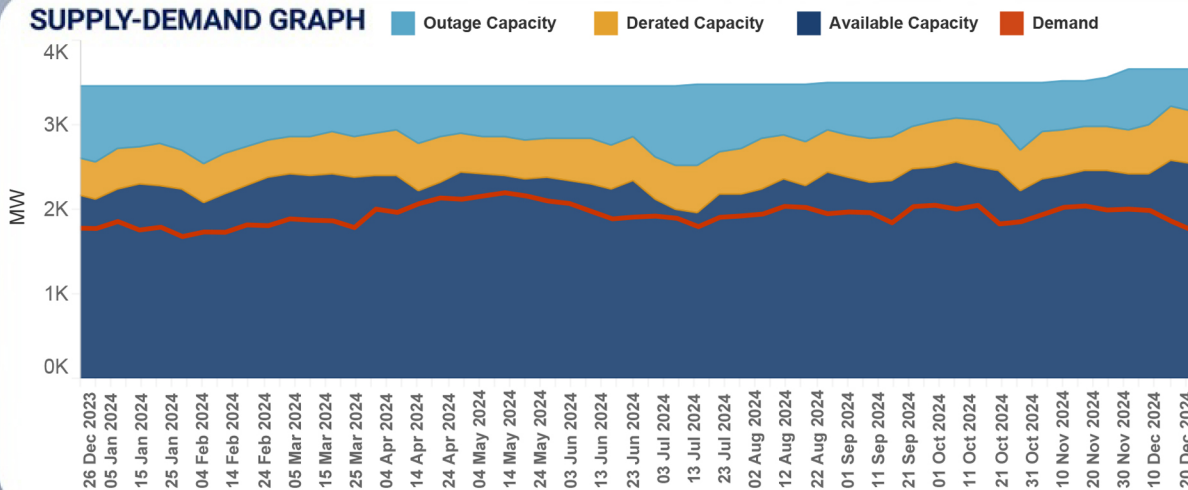
Tiwi Geothermal Binary Power Plant (16.7 MW)

TRANSMISSION LINES

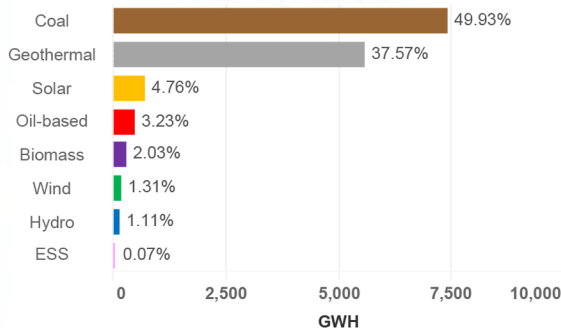
(2,850 MVA) Balsik - Tayabas 500 kV Line 1
 (4,780 MVA) Marilao - Balsik 500 kV Line 1
 (2,850 MVA) Marilao - Tayabas 500 kV Line
 (3,110 MVA) Ilijan - EERI 500 kV Line 1

based on WESM Registered Capacity List as of Dec 2023 until Dec 2024*

SUPPLY-DEMAND GRAPH



GENERATION MIX



FREQUENT CONSTRAINED EQUIPMENT

EQUIPMENT	NO. OF INTERVALS	PERCENT OF TIME
Maasin - Ubay Line 1	13,164	12.52%
Samboan - Amlan Lines 1 & 2	7,226	6.86%
Barotac - Dingle Lines 1 & 2	5,982	5.68%

RESERVE MARKET

COMMODITY TYPE	AVERAGE RESERVE REQUIREMENT (MW)	AVERAGE RESERVE SCHEDULE (MW)	AVERAGE RESERVE MARKET PRICE* (PHP/KWH)
Contingency	163	122	10.62
Dispatchable	153	129	3.55
Regulation Down	40	37	23.89
Regulation Up	40	37	17.73

* Feb 2024 to Mar 2024 and Aug 2024 to Dec 2024 Billing

SO GENERATOR REDISPATCH

CATEGORY	TOTAL NUMBER OF EVENTS
MRU - Thermal Limits	31,596
MOT Raise	21,959
MRU - System Voltage	8,691
MRU - Real Power Balancing	4,202
MRU	81

NEW REGISTERED GENERATORS AND CONNECTED TRANSMISSION LINE

GEOTHERMAL 5.7 MW

Bago Binary Geothermal Power Plant (4.7 MW)
(Phase 1) Biliran Geothermal Power Plant Project (1 MW)

BIOMASS 7 MW

Biomass Co-Generation Power Plant Unit 2 (7 MW)

SOLAR 157.6 MW

Dagohoy Solar Power Project (20.2 MW)
Calatrava Solar Power Project (SPP) (137.4 MW)

WIND 13.2 MW

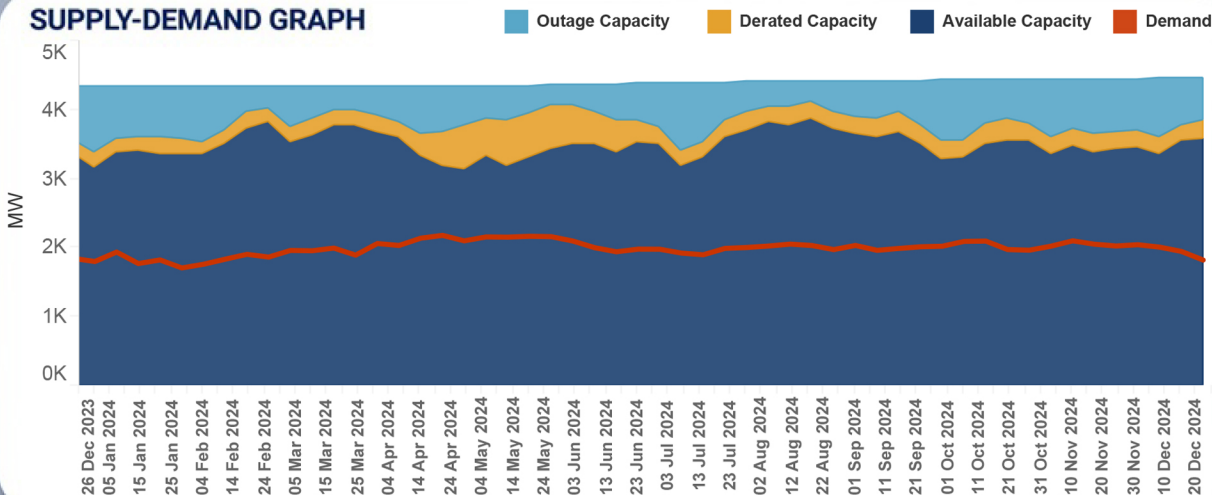
Nabas Wind Power Plant Phase 2 (Nabas-2) (13.2 MW)

TRANSMISSION LINES

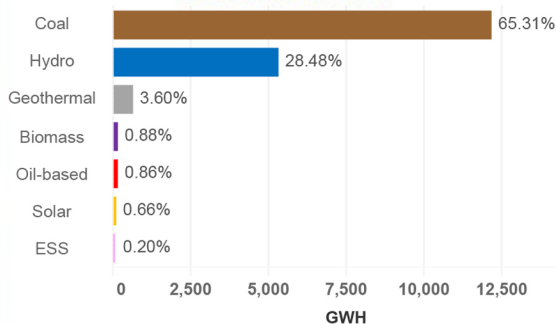
(196 MVA) Bacolod - Northern Negros Geothermal Power Plant 138 kV Line 1
(2 x 666 MVA) Argao - Maribojoc 230 kV Lines 1 & 2
(2 x 1,276 MVA) Cabu - Magdugo 230 kV Lines 1 & 2
(2 x 1,276 MVA) Dumanjug - Argao 230 kV Lines 1 & 2
(1,276 MVA) Magdugo - Dumanjug 230 kV Line 1
(2 x 1276 MVA) Cadiz - Gahit 230 kV Lines 1 & 2
(2 x 1,276 MVA) Cadiz - Calatrava 230 kV Lines 1 & 2
(2 x 444 MVA) Gahit - Barotac 230 kV Lines 1 & 2
(2 x 638 MVA) Gahit - Bacolod 230 kV Lines 1 & 2
(2 x 638 MVA) Gahit CTS - Gahit 230 kV Lines 1 & 2
(2 x 1,276 MVA) Corella - Maribojoc 230 kV Lines 1 & 2

based on WESM Registered Capacity List as of Dec 2023 until Dec 2024*

SUPPLY-DEMAND GRAPH



GENERATION MIX



FREQUENT CONSTRAINED EQUIPMENT

EQUIPMENT	NO. OF INTERVALS	PERCENT OF TIME
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EQUIPMENT	NO. OF INTERVALS	PERCENT OF TIME

RESERVE MARKET

COMMODITY TYPE	AVERAGE RESERVE REQUIREMENT (MW)	AVERAGE RESERVE SCHEDULE (MW)	AVERAGE RESERVE MARKET PRICE* (PHP/KWH)
Contingency	107	92	2.26
Dispatchable	105	101	0.31
Regulation Down	39	36	5.87
Regulation Up	39	36	6.32

* Feb 2024 to Mar 2024 and Aug 2024 to Dec 2024 Billing

SO GENERATOR REDISPATCH

CATEGORY	TOTAL NUMBER OF EVENTS
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CATEGORY	TOTAL NUMBER OF EVENTS
MOT Raise	84,514
MRU - System Voltage	26,659
MRU - Thermal Limits	831

NEW REGISTERED GENERATORS AND CONNECTED TRANSMISSION LINE

OIL-BASED 24.2 MW

PBI Bunker C-Fired Diesel Power Plant Unit 1 (5.2 MW)
 PBI Bunker C-Fired Diesel Power Plant Unit 2 (5.2 MW)
 SEDI Bunker C-Fired Diesel Power Plant Unit 1 (4.6 MW)
 SEDI Bunker C-Fired Diesel Power Plant Unit 2 (4.6 MW)
 SEDI Bunker C-Fired Diesel Power Plant Unit 3 (4.6 MW)

BIOMASS 15.4 MW

Cotabato Cogeneration Power Plant (3.4 MW)
 Biomass Cogeneration Plant (12 MW)

TRANSMISSION LINES

(637.4 MVA) Balo-i - Laguindingan 230 kV Line 2
 (637.4 MVA) Laguindingan - Villanueva 230 kV Line 2
 (191.2 MVA) Matanao - Toril 230 kV Line 1
 (191.2 MVA) Matanao - Toril 230 kV Line 2

based on WESM Registered Capacity List as of Dec 2023 until Dec 2024*