



DEPARTMENT
OF ENERGY

Energy Outlook and ILP

Power-Up Live

18 November 2022

The Department of Energy



MANDATE

Prepare, integrate, coordinate, supervise and control all plans, programs, projects and activities of the Government relative to energy exploration, development, utilization, distribution and conservation



VISION

A globally-competitive DOE powering up Filipino communities through clean, efficient, robust and sustainable energy systems that will create wealth, propel industries and transform the lives of men and women and the generations to come.



MISSION

We at the DOE, in partnership with our stakeholders, shall improve the quality of life of the Filipino by formulating and implementing policies & programs to ensure sustainable, stable, secure, sufficient, accessible & reasonably-priced energy.

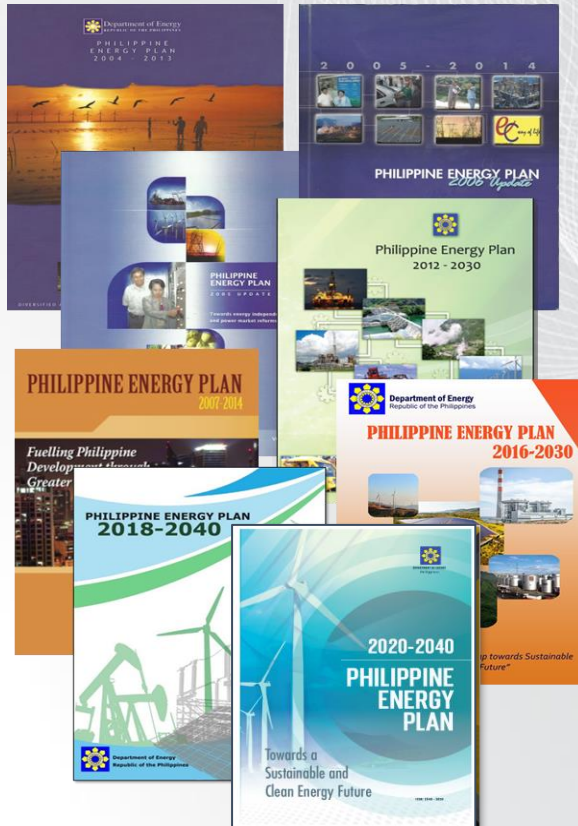
In pursuit of this mission, we commit to render efficient service with utmost integrity & professionalism.

Philippine Energy Plan (PEP)

Legal Basis: R.A. No. 7638 (DOE Act of 1992)

Section 5.b: “Develop and update the existing Philippine energy program which shall provide for an integrated and comprehensive exploration, development, utilization, distribution and conservation of energy resources, with preferential bias for environment-friendly, indigenous, and low-cost sources of energy....”

- ❑ The PEP is a rolling 20-year roadmap of programs and projects of the energy sector to ensure **sustainable, stable, secure, sufficient, accessible** and **reasonably-priced energy**.
- ❑ Embodies the country's major plans and programs in consideration of energy trends and development, as well as the action agenda to respond to emerging energy challenges and issues.
- ❑ Pursuant to the President's instructions, DOE will update the 2020-2040 PEP to align with the Medium-Term Philippine Development Plan

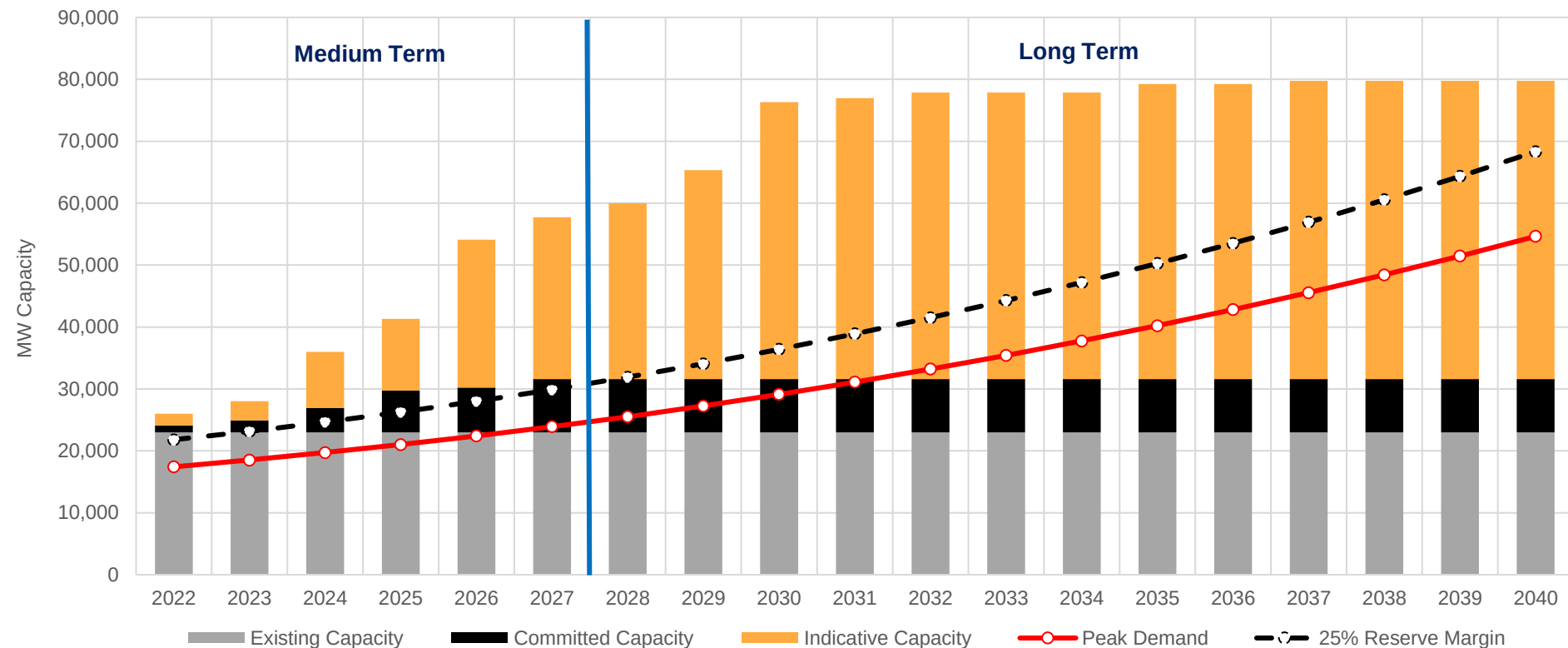




POWER OUTLOOK

Medium (2022 – 2028) to Long-Term (2029 – 2040)

Philippines : Committed and Indicative Projects vs Medium & Long-Term Power Supply-Demand Outlook



Note:

1. Demand Forecast (High GDP) based on the Power Development Plan (PDP) 2020-2040
2. Updated Existing Power Plants as of August 2022 and Committed Power Projects as of September 2022 (Including Projects with Firm Timeline)

Supply Policy and Market Development Mechanisms

01

Prosumer

- Own use
- Net metering

02

Customer Contracting Options

- **Interruptible Load Program (ILP)**
- Green Energy Option Program (GEOP)
- Retail Competition and Open Access (RCOA)
- Directly-Connected Customers (DCC)

03

Grid & Generation Maintenance

- Grid Operation and Maintenance Program (GOMP)

04

DU Contracting

- Embedded Generation (RE 10-5-5 CSP Exempt)
- DU Contracting (in accordance with the CSP)

05

System Operator Contracting

- Ancillary Services

06

DOE Support for RE Development

- Green Energy Auction Program (GEAP)

- ❖ Timely development of transmission and distribution wires and facilities
- ❖ Invest and utilize smart home and smart grid technologies





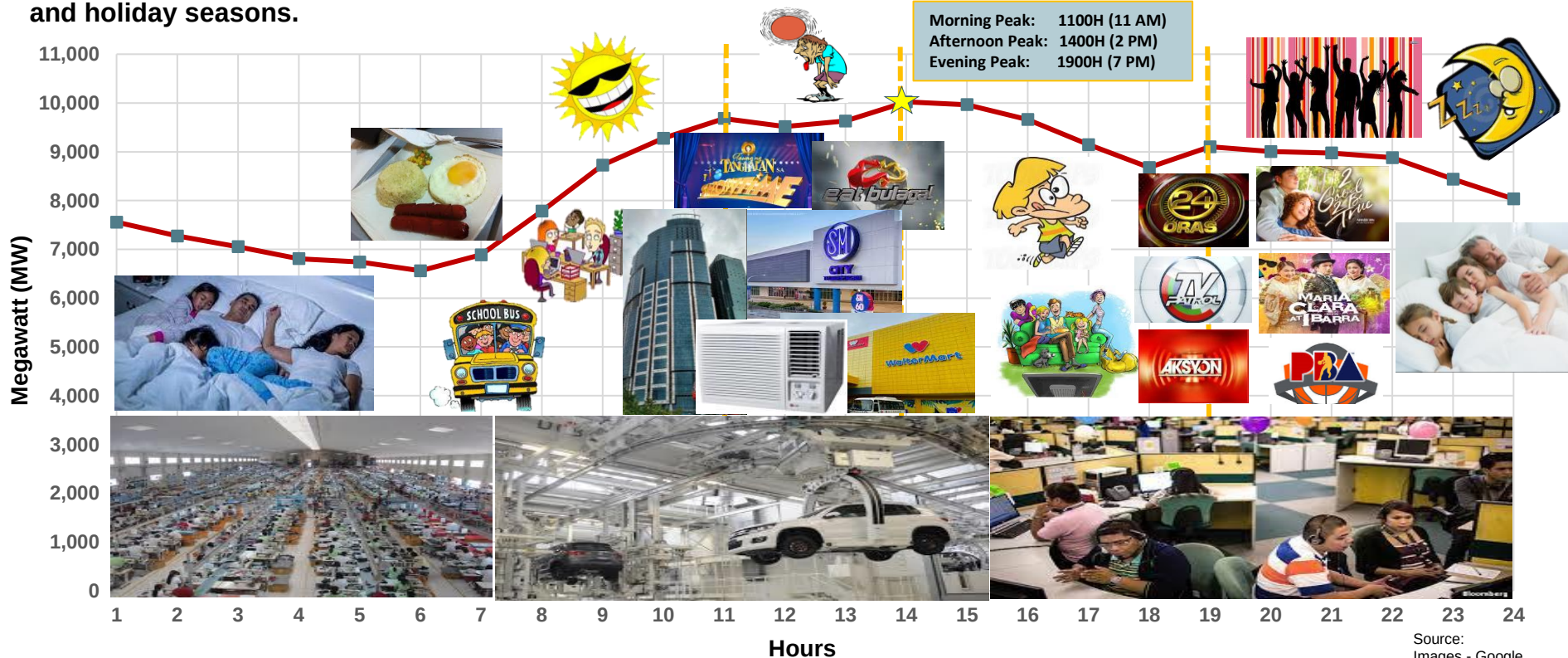
POWER SITUATION

Focus on Luzon

- ❖ Typical 24-Hour Load Profile
- ❖ Sectoral Electricity Consumption
- ❖ Capacity Mix and Generation Mix

Typical 24-hour Load Profile

24 – HOUR LOAD PROFILE, a load profile is a graph of the variation in the electrical load versus time. A load profile will vary according to customer type (typical examples include residential, commercial and industrial), temperature and holiday seasons.



Source:
 Images - Google
 Load profile - NGCP

Sectoral Electricity Consumption

TOTAL LUZON SECTORAL ELECTRICITY CONSUMPTION - 65,628 GWh
MERALCO - 44,902 GWh (68%)

LUZON SECTORAL
ELECTRICITY
CONSUMPTION



RESIDENTIAL

25,359 GWh

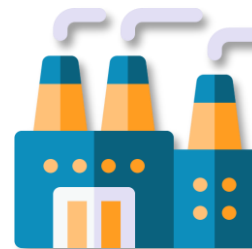
16,906 GWh (67%)



COMMERCIAL

18,164 GWh

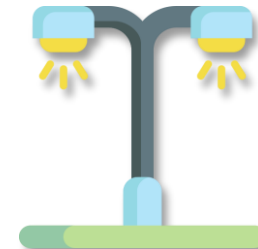
14,950 GWh (82%)



INDUSTRIAL

19,002 GWh

12,903 GWh (68%)



OTHERS

3,103 GWh

142 GWh (46%)

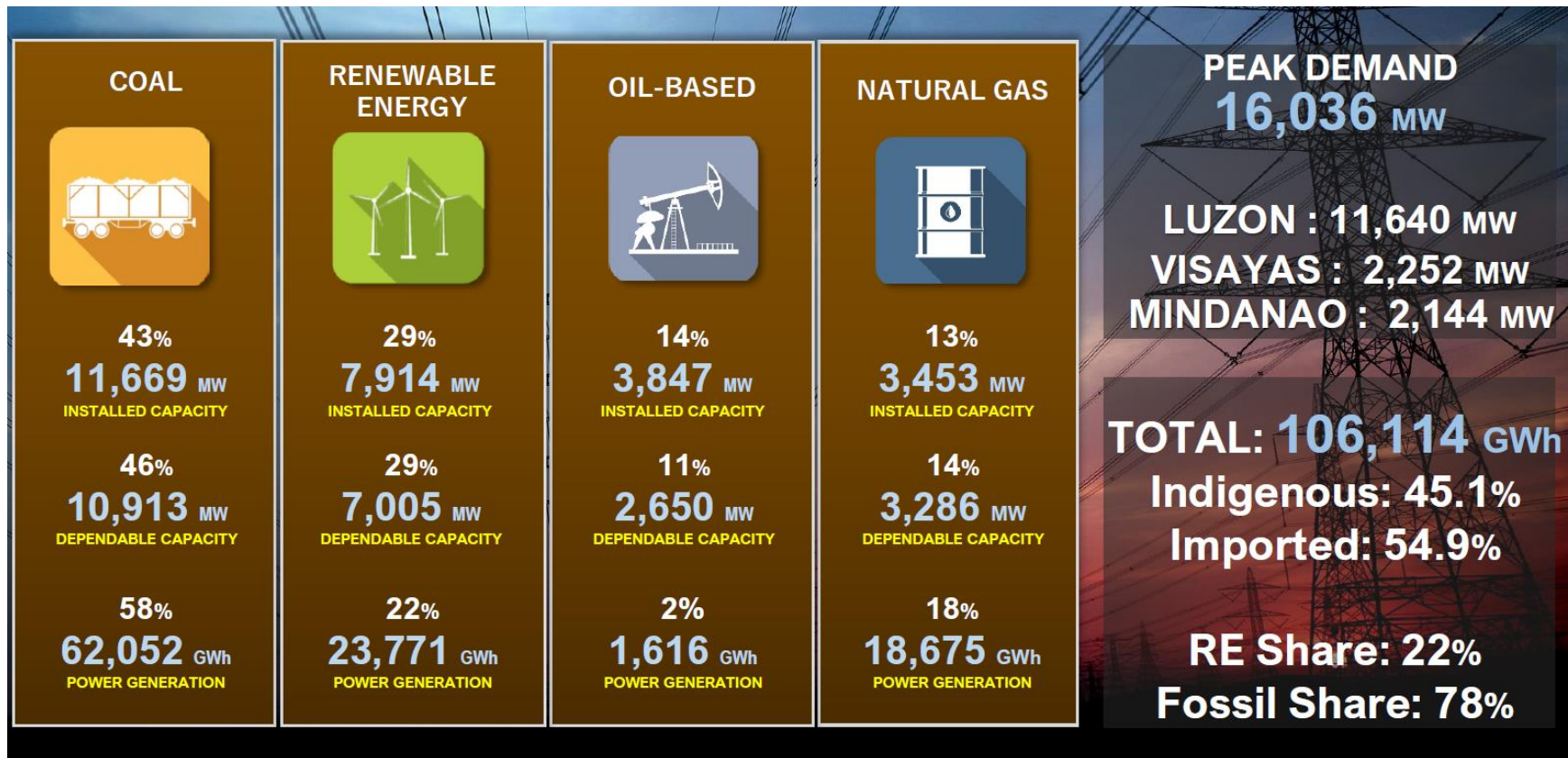
MERALCO Share

Notes:

1. Total Luzon Electricity Consumption excludes Own-Use and System Losses
2. Sources of Data: 2021 Luzon Power Statistics; MERALCO Monthly Operations Report

Icons used from www.flaticon.com

Philippine Capacity and Generation Mix, 2021



Note: On-grid capacity and generation as of 2021
Source: DOE

Capacity Terms

Installed Capacity

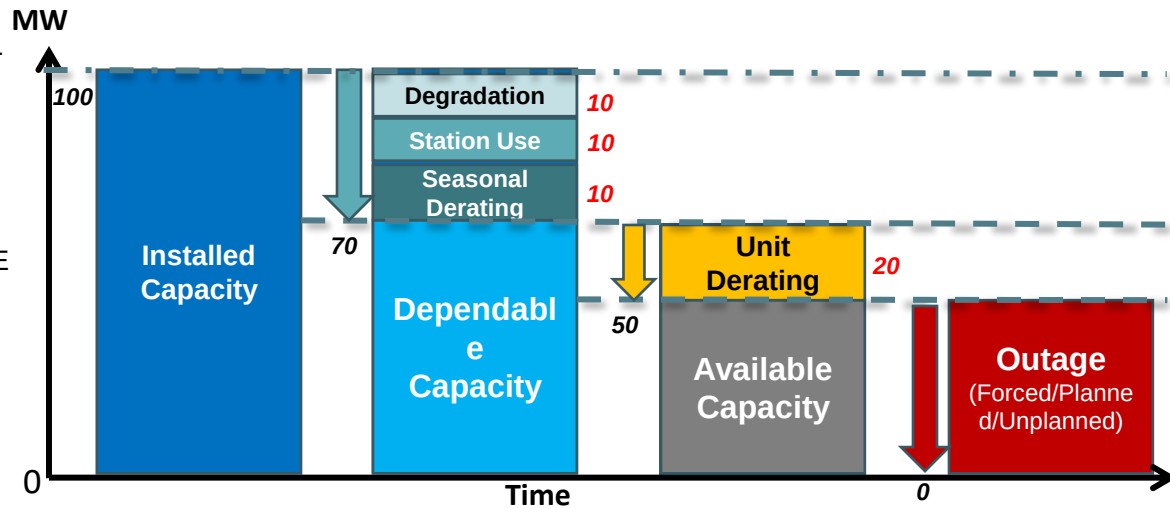
- Maximum amount of electricity that the power plant can produce
- The **total manufacturer-rated capacity of equipment** (as indicated in the nameplate)

Dependable Capacity

- The load carrying ability of an electric power plant or a generating unit
- The **capacity that can be relied upon (monthly or annually)**
- **Registered Maximum Power (Pmax)** in WESM
- For **Medium Term (MT) and Long Term (LT) Planning** such the Power Development Plan of DOE

Available Capacity

- The **current available capacity of an electric power plant at a certain period** (hour or day)
- The ability of a power plant or a generating unit to produce electricity in a certain time period (hourly or daily)
- For **Short Term (ST) planning** such as Daily Operation Highlights (Day-ahead forecasting) of NGCP





POWER OUTLOOK

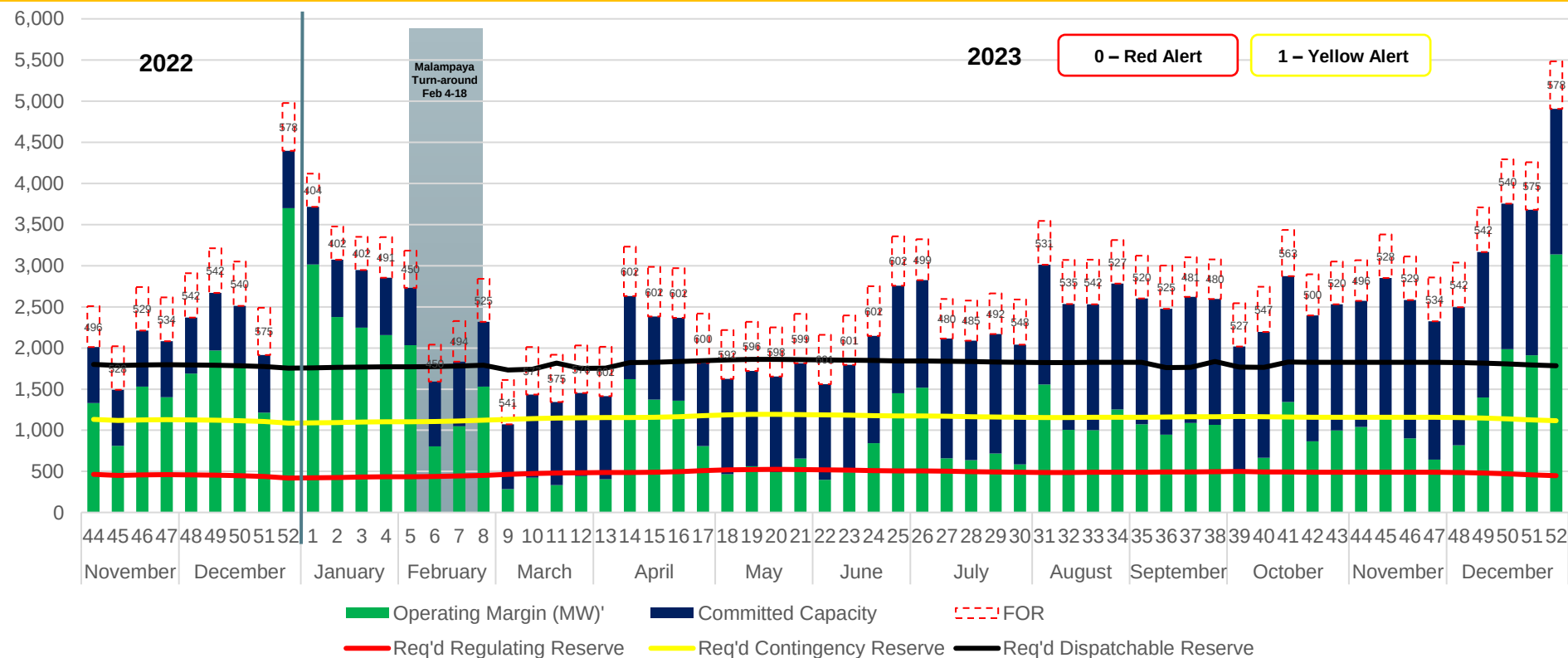
Short-Term (Nov 2022 - Dec 2023): Focus on Luzon

- ❖ Demand to increase from 12,113 MW (YTD) in 2022 to 13,125 MW in 2023
- ❖ Supply
 - Operation of Ilijan Plant at 1,200 MW
 - Possibility of delay in completing transmission project by December 2022 resulting in stranded power capacity (Hermosa-San Jose, Bataan)
 - Maintenance Shutdown of Malampaya Platform from 4-18 February 2023

Luzon Weekly Supply and Demand Outlook

November 2022-December 2023

Without 1,200 MW Ilijan and With Committed Capacity



Note:

1. Projected Operating Margin from November - December 2022 is based on GOMP 2022-2024 rev3
2. Projected Operating Margin from January - December 2023 is based in GOMP 2023-2025 rev 0
3. Committed Power Projects update as of September 2022

4. Includes Forced Outage Rate based on the average for 2018-2021 of the same week
5. Proposed Revised PMS of FGEN at January 2023

Luzon Committed Power Projects

2022 - 699.1 MW

TYPE OF TECHNOLOGY	MW CAPACITY
COAL	668.0
OIL-BASED	-
NATURAL GAS	-
RENEWABLE ENERGY	31.1
GEOTHERMAL	-
HYDROPOWER	23.2
BIOMASS	7.4
SOLAR	0.5
WIND	-
TOTAL	699.1
BESS	-

**STRANDED CAPACITY DUE TO
TRANSMISSION LINE PROJECTS**

668.0

2023 - 1,069.5 MW

TYPE OF TECHNOLOGY	MW CAPACITY
COAL	450.0
OIL-BASED	11.0
NATURAL GAS	-
RENEWABLE ENERGY	608.41
GEOTHERMAL	29.0
HYDROPOWER	14.2
BIOMASS	1.2
SOLAR	404.1
WIND	160.0
TOTAL	1,069.5
BESS	760.0

**STRANDED CAPACITY DUE TO
TRANSMISSION LINE PROJECTS**

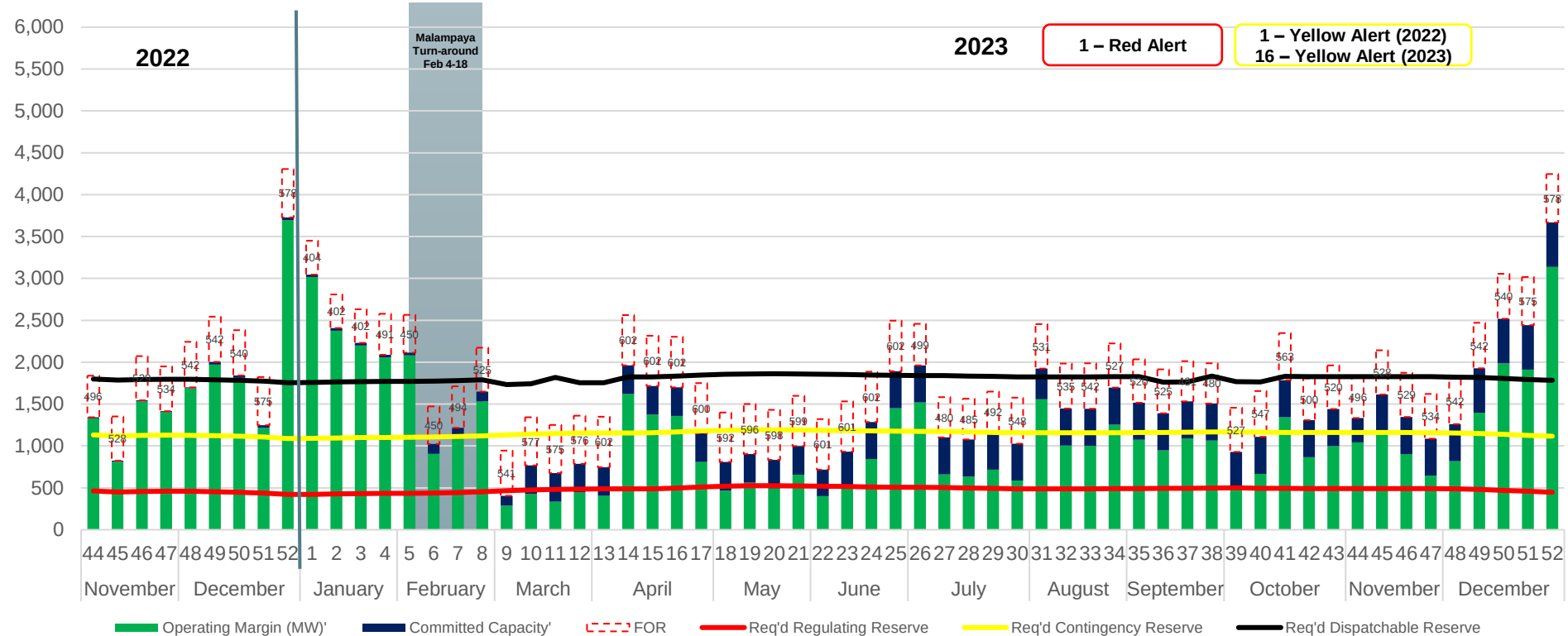
547.2

Source: DOE List of Private Sector-Initiated Power Projects as of September 2022

Luzon Weekly Supply and Demand Outlook

November 2022-December 2023

Without 1,200 MW Ilijan and Without Transmission-Constrained Committed Capacity



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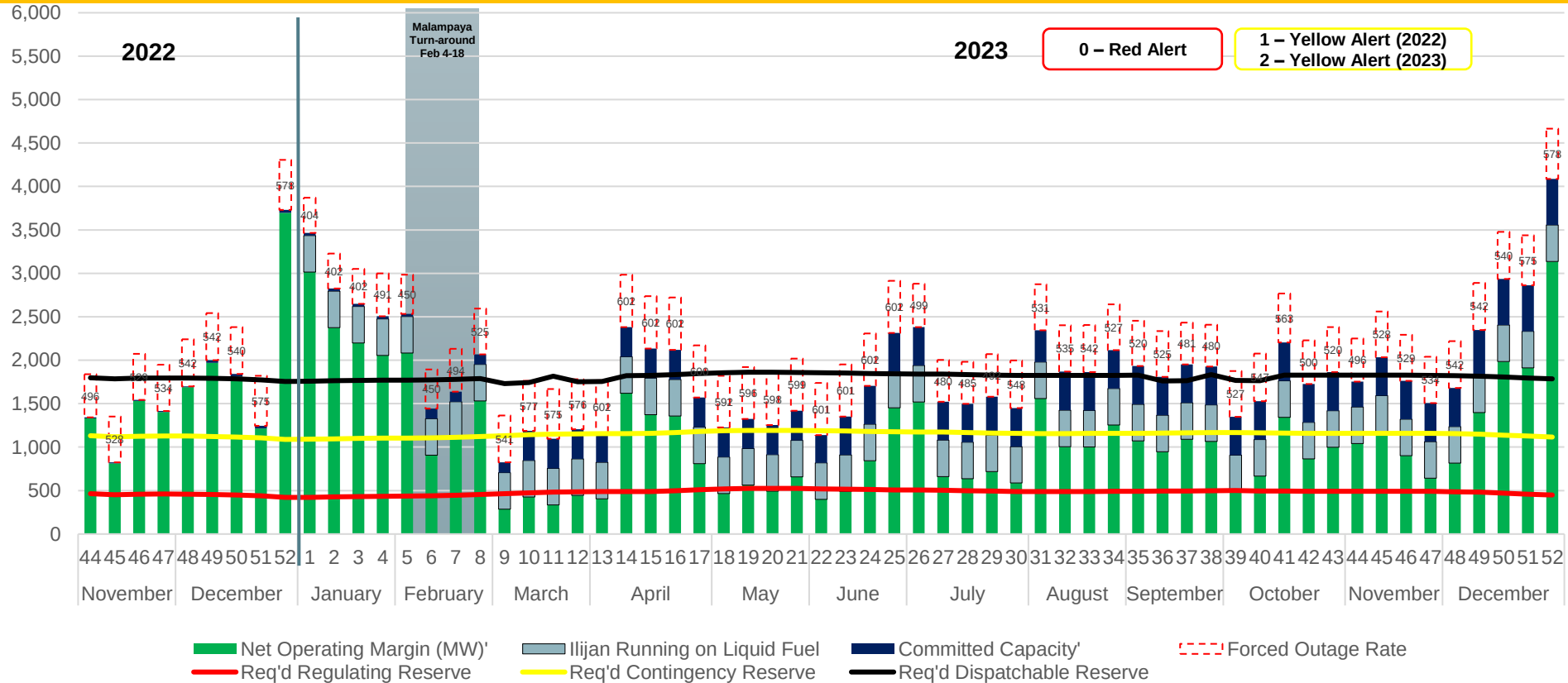
Supply and Demand Side Contingency Plans for 2023

- **Run Ilijan Power Plant using diesel fuel at 420 MW**
- **Interruptible Load Program (ILP)**
 - Activate existing ILP (Distribution Utilities)
 - ✓ Potential reduction in demand (284 MW – 50% of capacity of existing registered ILP participants)
 - NGCP to firm up the Day Ahead Declaration of Red Alert Notice to give participants lead time to deload capacity
 - **Potential/additional ILP participants**
 - Directly-connected customers to join ILP
- **Accelerate implementation of the Energy Efficiency and Conservation measures**
 - Issue Administrative Order directing the accelerated implementation of the Government Energy Management Program (GEMP)
- **Communicate and enforce the power security plans and policies**

Luzon Weekly Supply and Demand Outlook

November 2022-December 2023

With 420 MW Ilijan running on Diesel Fuel and Without Transmission-Constrained Committed Capacity



Note:

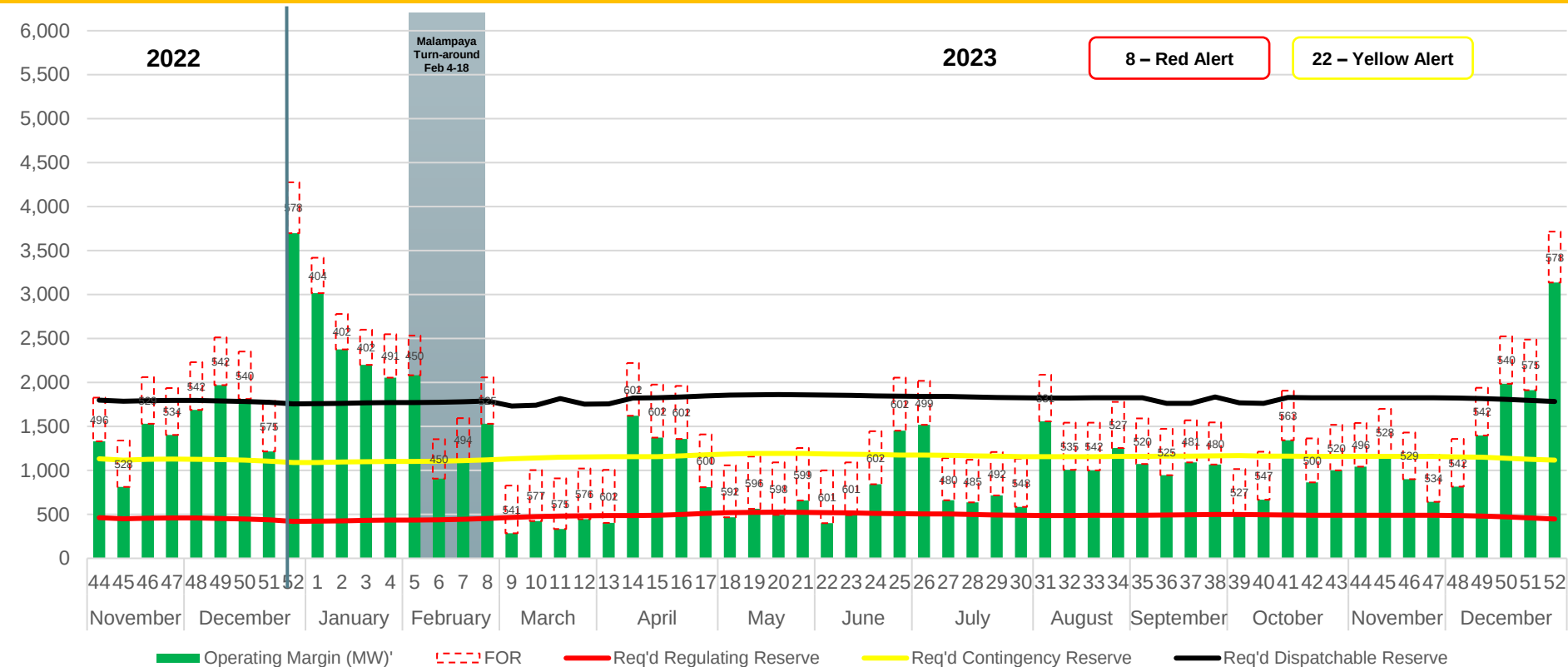
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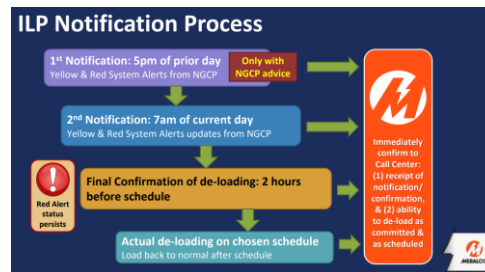
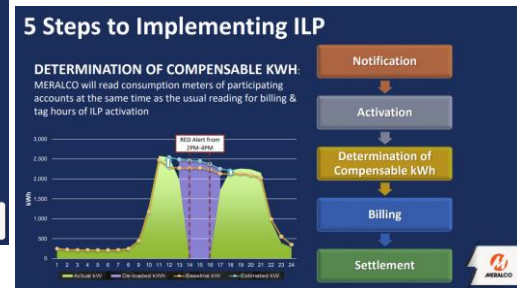
Demand-Side Management Programs/Initiatives

PEAK/OFF-PEAK (POP) PROGRAM



- Peak/Off-Peak (POP) rates program is an alternative energy pricing scheme that is based on the time-of-day electricity is generated and on the cost of supplying electricity during that time
- When enrolled, electricity generation charges are cheaper during hours of the week.

INTERRUPTIBLE LOAD PROGRAM (ILP)



- ILP is a voluntary, demand-side management program that allows customers to operate their generating sets & collectively reduce electricity drawn from the grid when power interruptions are imminent to ration limited power supply.
- As of October 2022, MERALCO has 569.59 MW Committed De-loading capacity from 119 companies representing 268 Participating Customers/accounts.

Source: MERALCO





Thank you!

Energy Outlook and ILP

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DEPARTMENT
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