

Updates on Luzon Power Situation Outlook for 2022



Overview

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Background on
Luzon Power
Supply

02

DOE's Luzon
Power Situation
Outlook for 2022

03

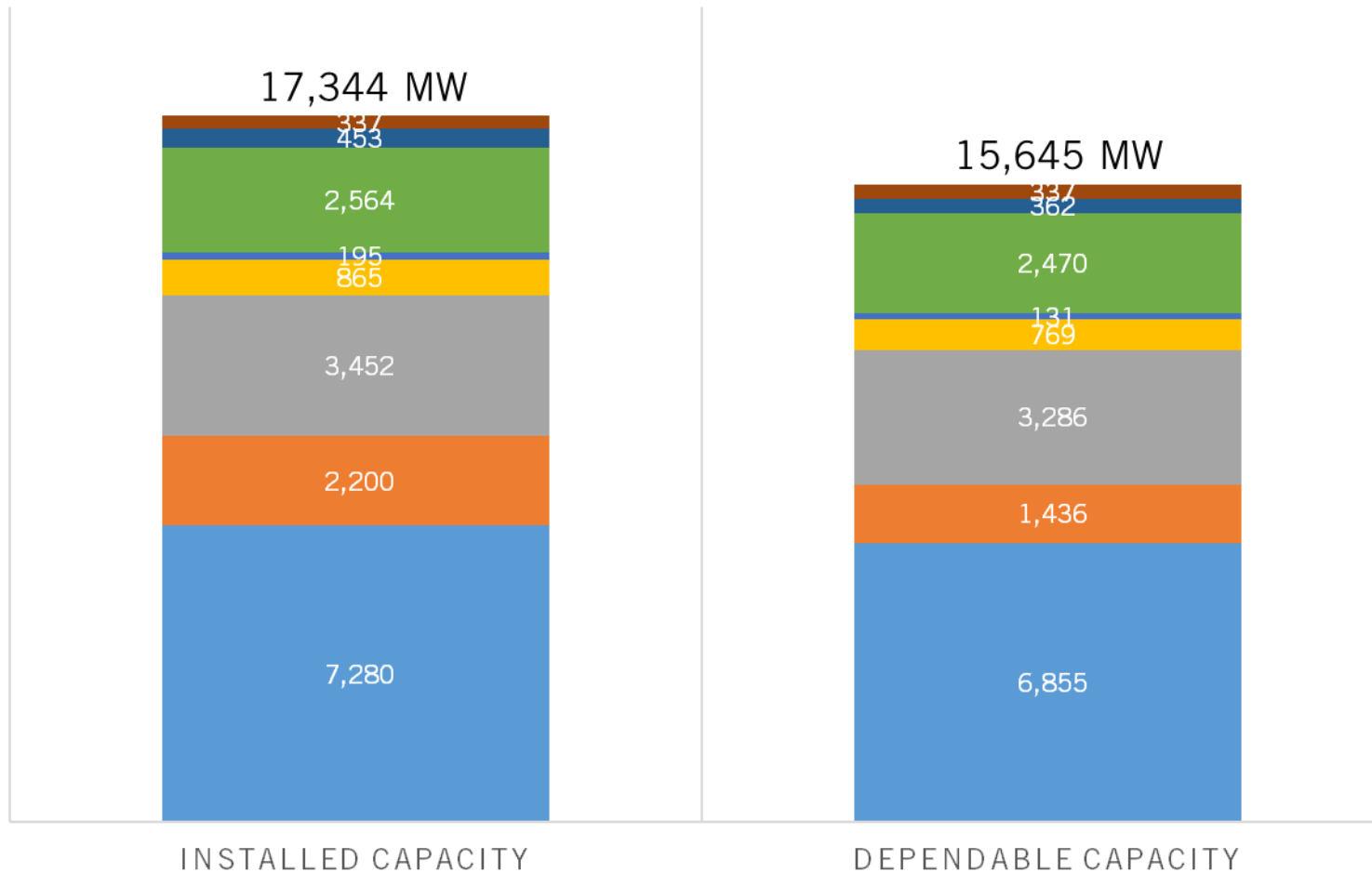
About the
Interruptible Load
Program

A faint, light blue circuit diagram is visible in the background of the slide. It features a grid of horizontal and vertical lines. Various electronic symbols are placed at the intersections and along the lines, including capacitors (two parallel lines), inductors (coiled lines), resistors (zigzag lines), and circular symbols containing a tilde (~) or the letter 'M'. There are also several small teal-colored dots scattered across the grid.

01. Background on Luzon Power Supply

LUZON GENERATION CAPACITY, 2020

■ Coal ■ Oil ■ Natural Gas ■ Geothermal ■ Biomass ■ Hydro ■ Solar ■ Wind

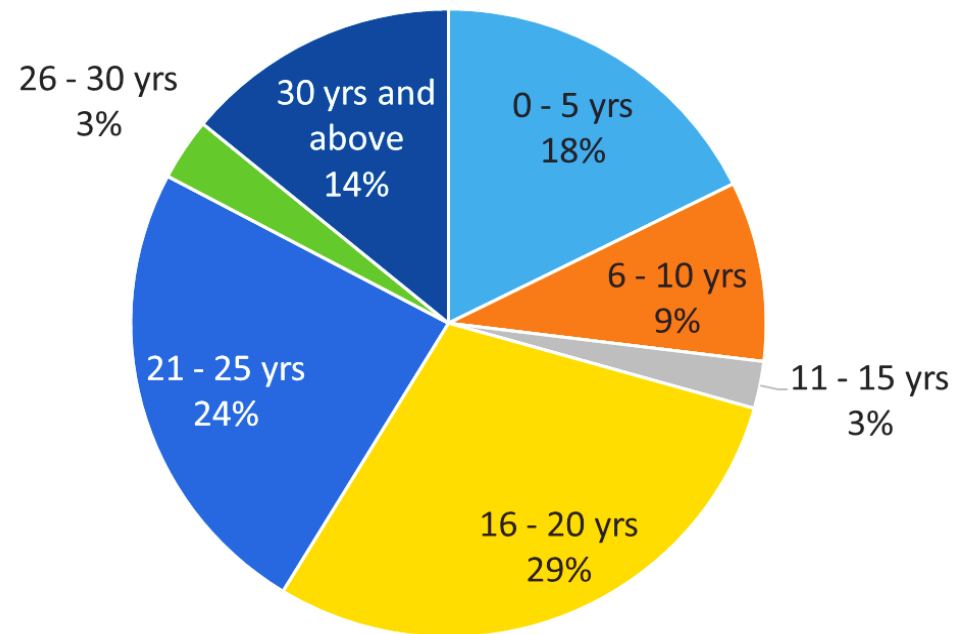


- Installed generating capacity in the Luzon grid reached 17,344 MW in 2020 with the addition of 474 MW.
- On 27 December 2021, GNPowder Dinginin (GNPD) Unit 1 with 668 MW was allowed to start commercial operations with the ERC's issuance of Certificate of Compliance.

Source: DOE List of Existing Plants as of 31Dec2020

Power plant availability is affected by age and fuel source availability. About 70% of capacity in Luzon is 16 years and older, requiring more frequent maintenance and repair. Around 20% is dependent on the availability of natural resources, further reducing sources that can provide stable and reliable supply.

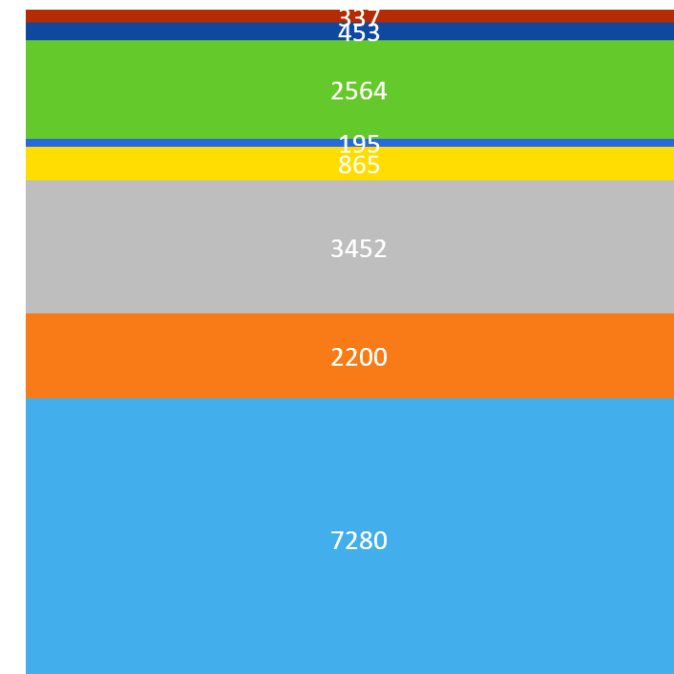
Luzon Installed Capacity (MW) by Age



Source: 11Jun2021 ERC Presentation to the Senate Committee on Energy

LUZON INSTALLED CAPACITY (MW) BY FUEL TYPE

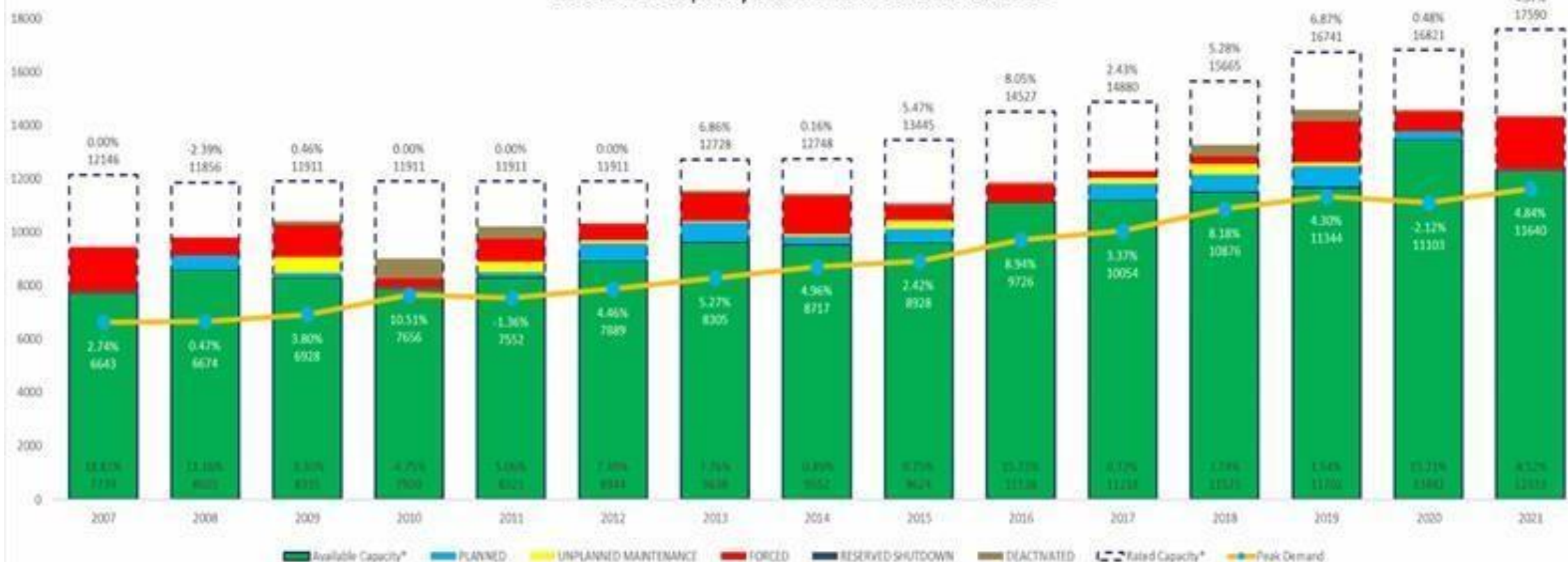
Coal Oil Natural Gas Geothermal Biomass Hydro Solar Wind



Source: DOE List of Existing Plants as of 31Dec2020

System Capacity and Demand Profile

Luzon Grid Capacity and Demand for 2007 to 2021



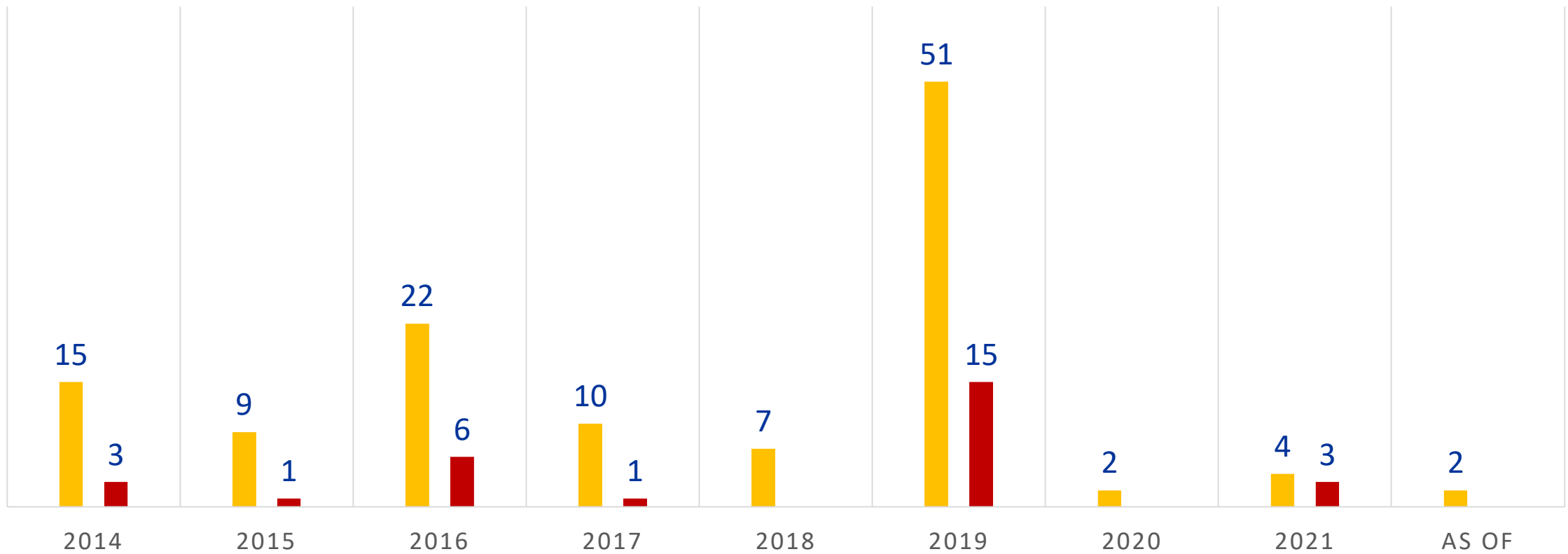
*Rated and Available Capacity Coincident with the date occurrence of the System Peak Demand
Peak Demand based on System Peak Aggregate Annual Submission to DOE

Growth Rate in %

The Luzon grid has been experiencing periodic supply tightness for years.

DAYS AFFECTED BY YELLOW AND RED ALERTS IN LUZON

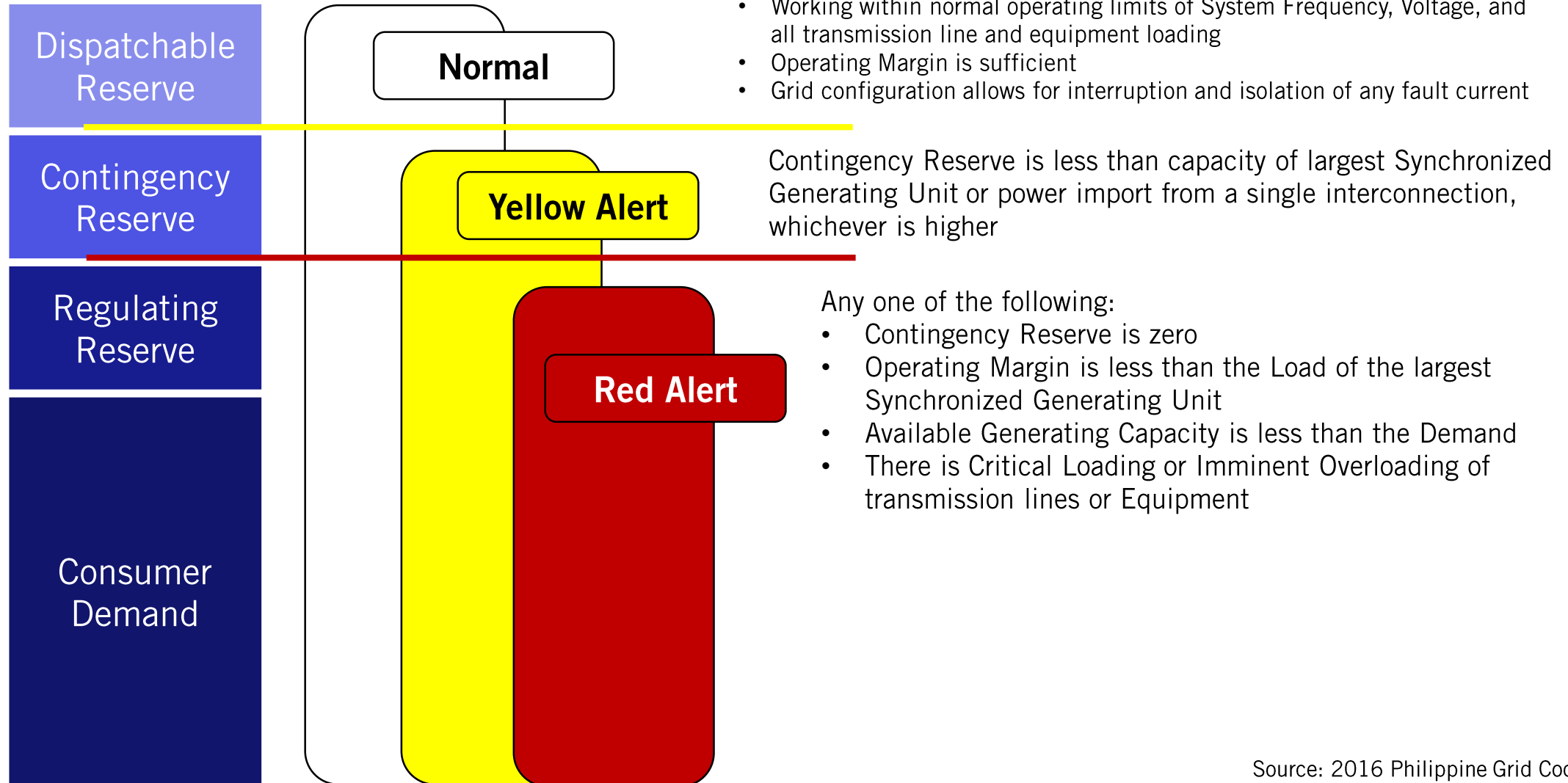
Yellow Red



Source: Daily Power Situation Updates from NGCP

AS OF
31JAN2022

Grid Alerts and System Conditions



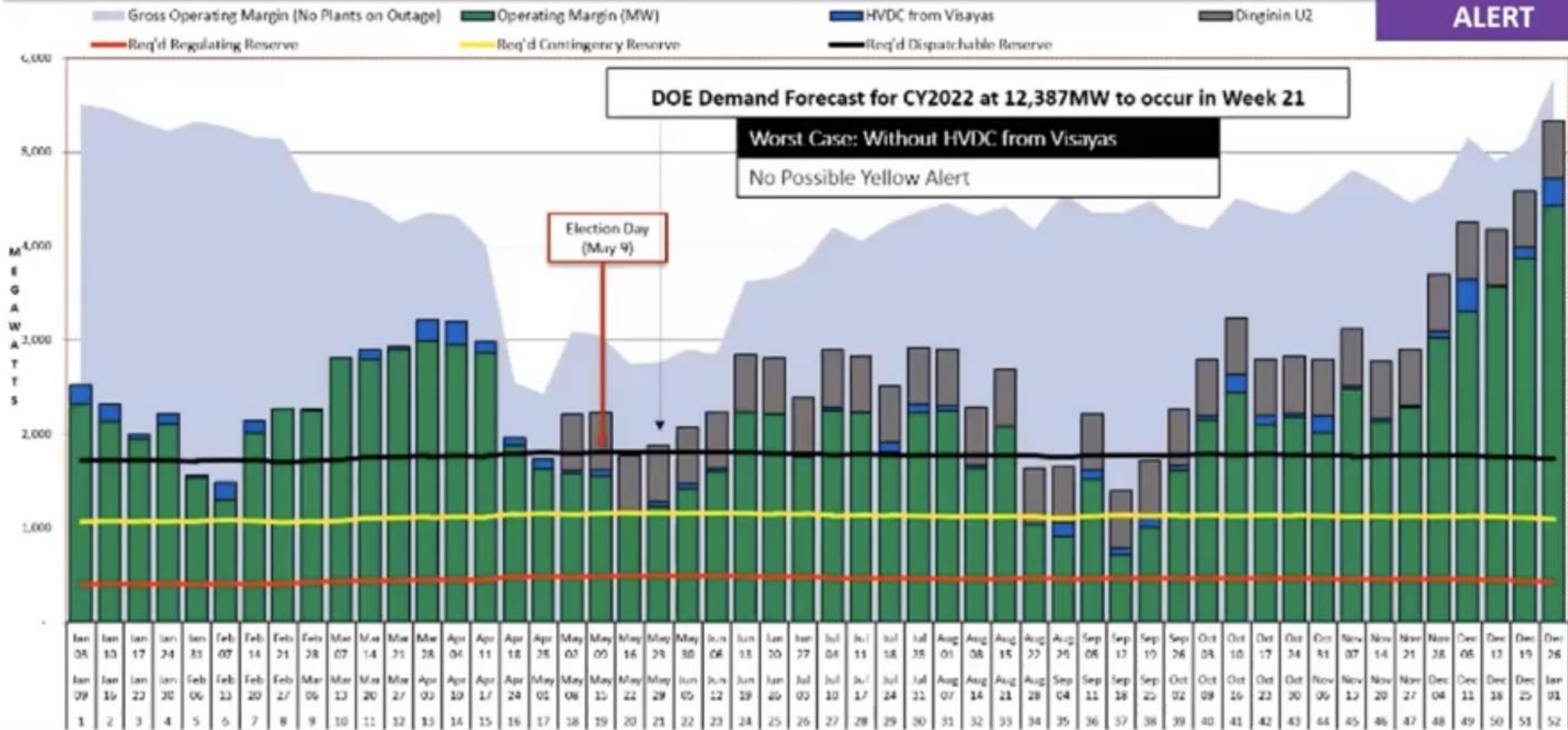
Source: 2016 Philippine Grid Code

A faint, light blue background graphic of a complex electrical circuit diagram. It features a grid of horizontal and vertical lines with various electronic symbols including resistors, capacitors, inductors, diodes, and a motor symbol (a circle with an 'M'). Several teal-colored dots are placed at various nodes and intersections within the circuit.

02. DOE's Luzon Power Situation Outlook for 2022

Power Supply Assessment – Power Outlook for CY 2022

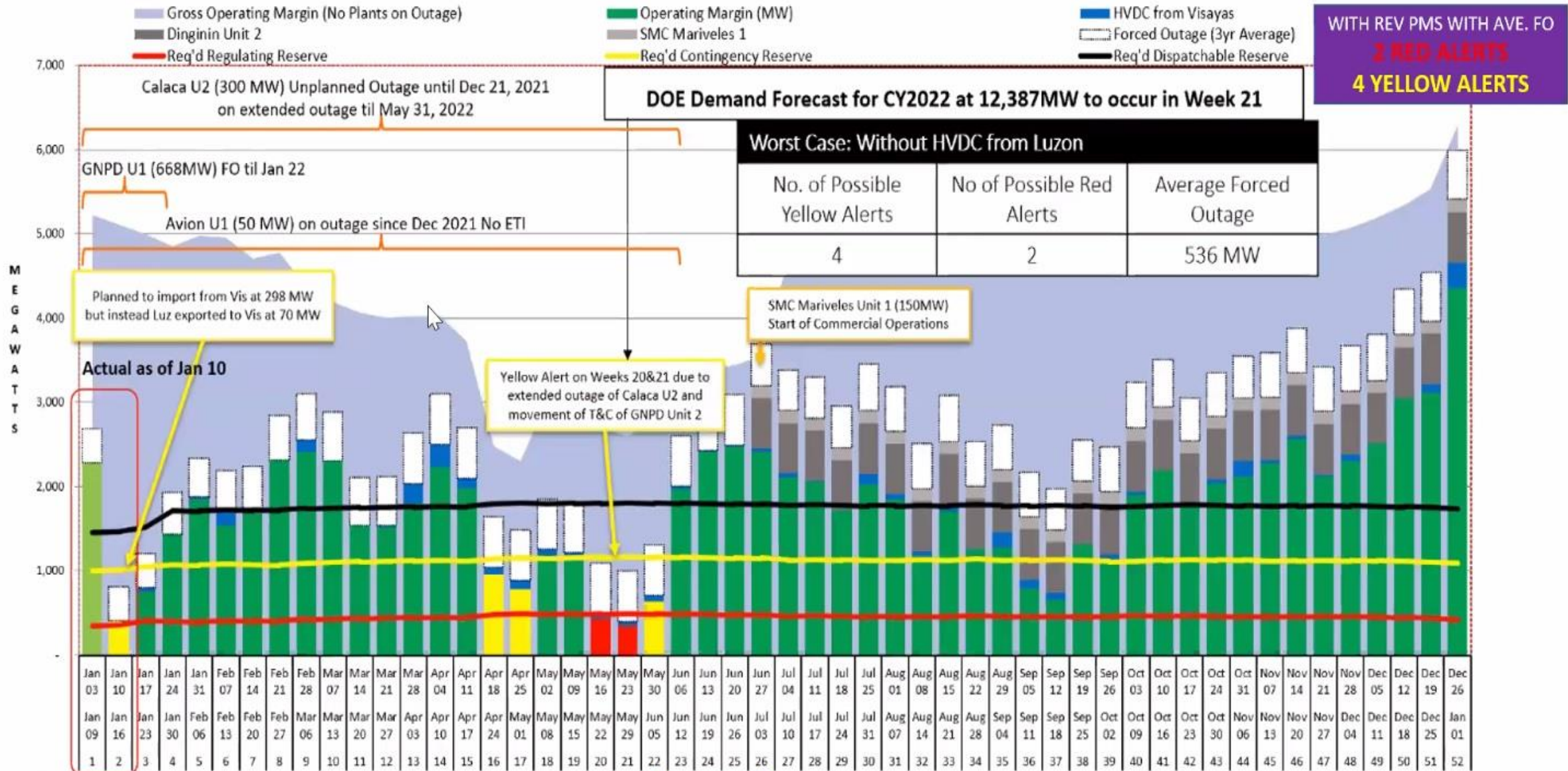
**BASECASE
NO YELLOW
ALERT**



Source: DOE Media Briefing on 25 Jan 2022

NGCP

With Revised Maintenance Schedules– Power Outlook for CY 2022 (w/ Forced Outage)



Source: DOE Media Briefing on 25 Jan 2022

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Summary of DOE's Luzon Power Situation Outlook for 2022

(as of 25 January 2022)

Base Case

- Luzon demand is expected to reach to 12,387 MW (↑ 6.4%) during Week 21 (May 23-29)
- Takes into account NGCP's 2022 Grid Operating and Maintenance Program (GOMP) approved by the DOE but does not consider extended maintenance shutdowns and forced outages
- Assumes GNPD Unit 2 (668 MW) will start commercial operations in May
- **No Yellow or Red Alerts**

"Worst" Case

- Luzon demand is expected to reach to 12,387 MW (↑ 6.4%) during Week 21 (May 23-29)
- Takes into account NGCP's 2022 GOMP approved by the DOE and considers 536 MW of forced outage
- Assumes GNPD Unit 2 (668 MW) will start commercial operations in July
- **Yellow Alert** during Week 16 (April 18-24), Week 17 (April 25-May 1) and Week 22 (May 30-June 5)
- **Red Alert** on Week 20 (May 16-22) and Week 21 (May 23-29)

The background of the slide features a faint, light blue circuit board pattern. It includes various electronic symbols such as resistors, capacitors, inductors, and integrated circuits, all arranged in a grid-like fashion. Several teal-colored dots are scattered across the circuit lines, possibly representing connection points or vias.

03.

About the Interruptible Load Program



About the Interruptible Load Program (ILP)

- ILP was promulgated under ERC Resolution No. 8 Series of 2010 and amended by Resolution No. 8 Series of 2013, No. 5 Series of 2015, and No. 3 Series of 2019
- ILP was first implemented in Visayas and Mindanao to ration limited power supply and avert prolonged power outages. In anticipation of a potential power supply shortage in Luzon, DOE initiated ILP implementation in MERALCO in March 2014.
- ILP is a **voluntary**, demand-side management program that allows customers to operate their generating sets and **collectively reduce** electricity drawn from the grid when power interruptions are imminent to ration limited power supply
 - Open to non-contestable customers, contestable customers, locators in economic and freeport zones, and directly-connected customers
 - Prioritizes customers with large loads and requests them to ‘de-load’ when NGCP issues a **Red Alert** notice
 - Can be implemented by (i) DUs in their respective franchise, or (ii) NGCP for directly-connected customers, PEZA, ecozone utility enterprise and other DUs



About the Interruptible Load Program (ILP)

- Customers interested to participate in ILP are required to: (i) provide committed de-loading capacity and preferred de-loading window, (ii) identify contact person/s for notification, and (iii) finalize baseline consumption profile for computation of de-loaded kWh
- These information are part of the ILP Agreement, a template of which is part of ERC Resolution No. 5 Series of 2015
 - For non-contestable customers, the ILP Agreement is between the customer and the DU
 - For contestable customers, the ILP Agreement is a tripartite agreement among the DU, a Retail Electricity Supplier (RES) or Local RES, and its contestable customer
- The ILP Agreement automatically terminates if: (i) a captive customer switches to the contestable market, and (i) a contestable customer switches from one RES to another



About the Interruptible Load Program (ILP)

- As of 31 December 2021, the total capacity available for de-loading in MERALCO's area is 563.09 MW from 124 companies
- During implementation in 2021, ILP has spared at least 700,000 households from rotating power interruptions



THANK YOU!