Philippine Electricity Market Corporation

# WEEKLY MARKET WATCH

07 - 13 Apr 2025

## MARKET ASSESSMENT HIGHLIGHTS

### Demand, Supply, and Price

- The average weekly GWAP increased by 13.72% and 11.75% in the Luzon and Visayas regions, while it decreased by 2.53% in the Mindanao regions.
- The average weekly demand increased across all regions.
- The average weekly capacity on outage decreased in the Luzon and Mindanao regions, while it increased in the Visayas region.
- Exports from Luzon to Visayas occurred 23.21% of the time, while the flow from Mindanao to Visayas was observed 97.42% of the time. The Luzon-Visayas HVDC was on unplanned outage starting 0420h of 12 April.
- Pivotal suppliers were present 82.29% of the time.

### Energy Offer Pattern Analysis

Luzon

- Battery Storage Systems showed dips in offered capacities on 10 April due to an outage.
- Biofuel plants recorded dips in nominated capacities on 09, 11, and 13 April due to outages.
- Geothermal plants experienced dips in nominated capacities on 08 and 10 April due to a decrease in nominated capacity and an outage, respectively.
- Natural Gas plants experienced decreases in offered capacities from 08 to 09 April due to outages and from 10 to 11 April due to resource constraint and outages.
- Wind plants showed a decreasing trend in nominated capacities throughout the week.

Visayas

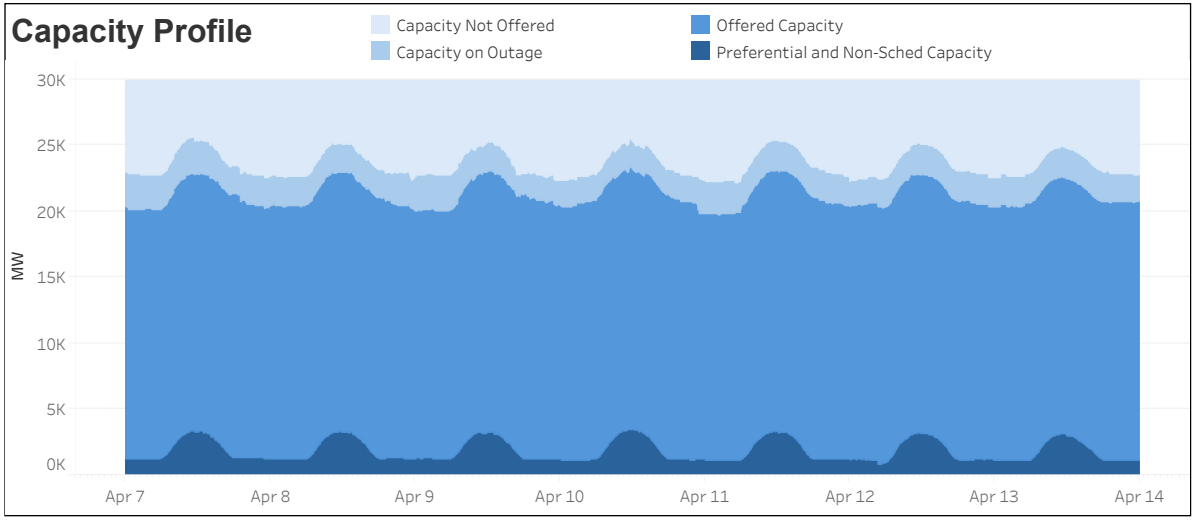
- Battery Storage Systems recorded a dip in offered capacities on 11 April due to an outage.
- Biofuel plants recorded dips in nominated capacities on 07 and 10 to 13 April due to outages.
- Coal plants showed a decrese in offered capacities from 07 to 09 April and from 12 to 13 april due to outages.
- Geothermal plants recorded dips in nominated capacities on 12 April due to the activation of the over-frequency relay triggered by the HVDC line tripping.
- Hydro and Oil plants showed variations in nominated and offered capacities, respectively, due to outages throughout the week.
- Solar plants' lowest daily peak nominations were observed on 12 April.
- Wind plants showed more frequent fluctuations and increasing volatility throughout the week.

Mindanao

- Biofuel plants previously on outage, returned to operation on 07 April, with variations in nominated capacites observed from 08 to 11 April. A decrease in nominated capacities was recorded on 12 and 13 April due to outages.
- Coal plants recorded decreases in offered capacities on 07 April and from 12 April onward due to outages.
- Hydro plants recorded an increasing trend from 07 to 09 April as they returned to operation following outages and resource constraints.
- Oil plants recorded dips in offered capacities on 08 April, with further dip on 11 April due to an outage.
- Solar plants' lowest daily peak nominations were observed on 13 April.

### Market Systems Advisory

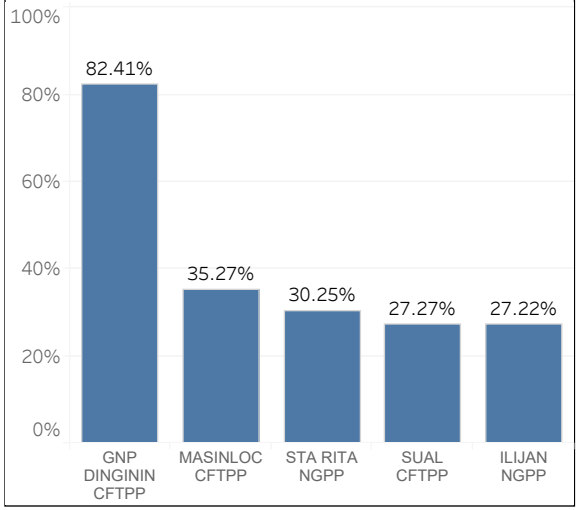
- MO Initiated Market Intervention is declared in all regions due to failure to generate RTD schedule caused by network connection problem on intervals 1155h to 1230h of 10 April.



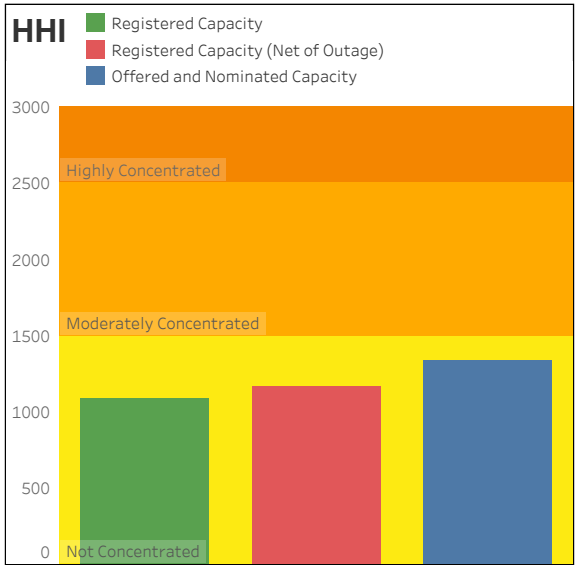

## SUMMARY OF AVERAGE VALUES

| Particulars | 07 - 13 Apr 2025 | 31 Mar - 06 Apr 2025 | % Change |
|---|---|---|---|
| **GENERATOR WEIGHTED AVERAGE PRICE (Php/MWh)** | | | |
| System | 4,547.1 | 4,086.5 | 11.27% |
| Luzon | 4,655.4 | 4,093.8 | 13.72% |
| Visayas | 4,698.5 | 4,204.4 | 11.75% |
| Mindanao | 3,872.3 | 3,972.8 | -2.53% |
| **EFFECTIVE SUPPLY (MW)** | | | |
| Luzon | 13,423 | 12,678 | 5.87% |
| Visayas | 2,429 | 2,456 | -1.09% |
| Mindanao | 3,410 | 3,294 | 3.51% |
| **DEMAND (MW)** | | | |
| Luzon | 10,438 | 11,102 | 6.37% |
| Visayas | 1,984 | 2,051 | 3.37% |
| Mindanao | 2,097 | 2,156 | 2.82% |
| **OUTAGE (MW)** | | | |
| Luzon | 1,620 | 2,660 | -39.11% |
| Visayas | 424 | 420 | 0.91% |
| Mindanao | 208 | 422 | -50.73% |
| **REGULATING UP PRICE (Php/MWh)** | | | |
| Luzon | 14,059 | 9,758 | 44.08% |
| Visayas | 24,786 | 24,503 | 1.15% |
| Mindanao | 24,553 | 24,702 | -0.61% |
| **REGULATING DOWN PRICE (Php/MWh)** | | | |
| Luzon | 12,188 | 9,486 | 28.48% |
| Visayas | 48,673 | 47,716 | 2.01% |
| Mindanao | 24,554 | 24,702 | -0.60% |
| **CONTINGENCY RESERVE PRICE (Php/MWh)** | | | |
| Luzon | 1,875 | 2,397 | -21.81% |
| Visayas | 7,372 | 4,158 | 77.30% |
| Mindanao | 1,712 | 1,840 | -6.98% |
| **DISPATCHABLE RESERVE PRICE (Php/MWh)** | | | |
| Luzon | 904 | 792 | 14.24% |
| Visayas | 5,391 | 5,475 | -1.54% |
| Mindanao | 0 | 0 | |

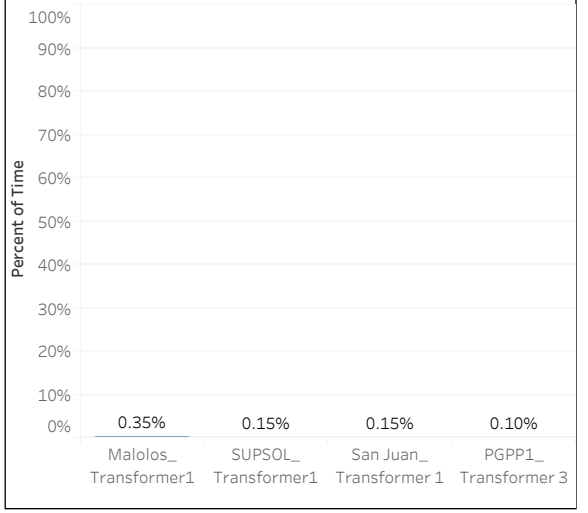
## Top 5 Pivotal Plants



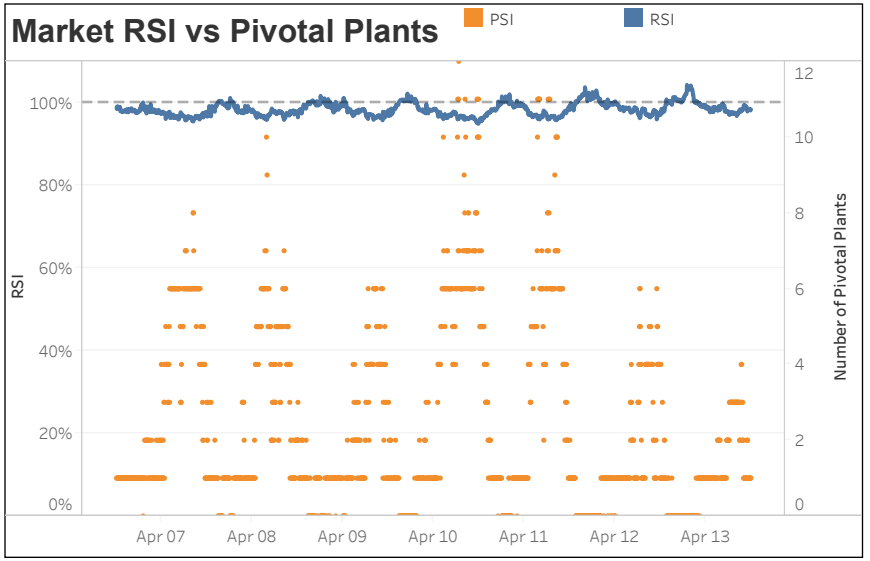

## HHI



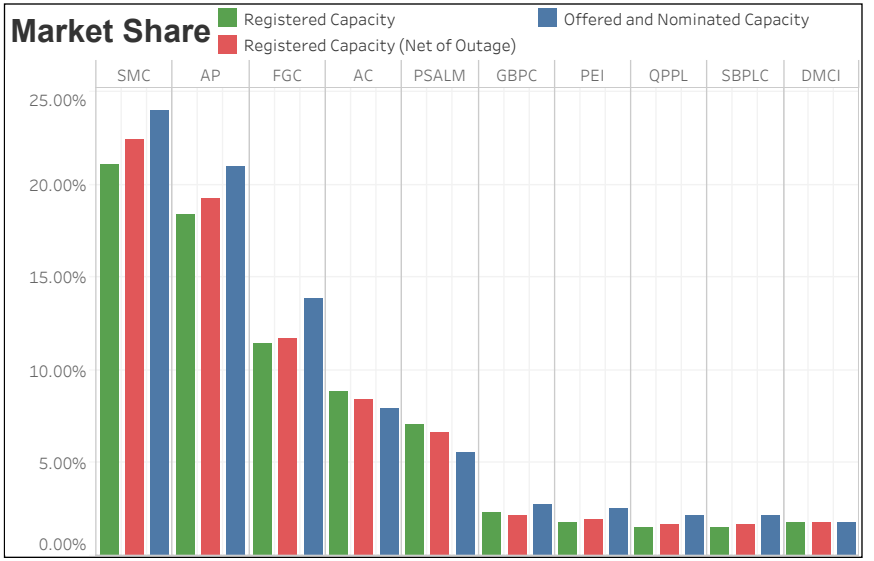

## RTD Congestion



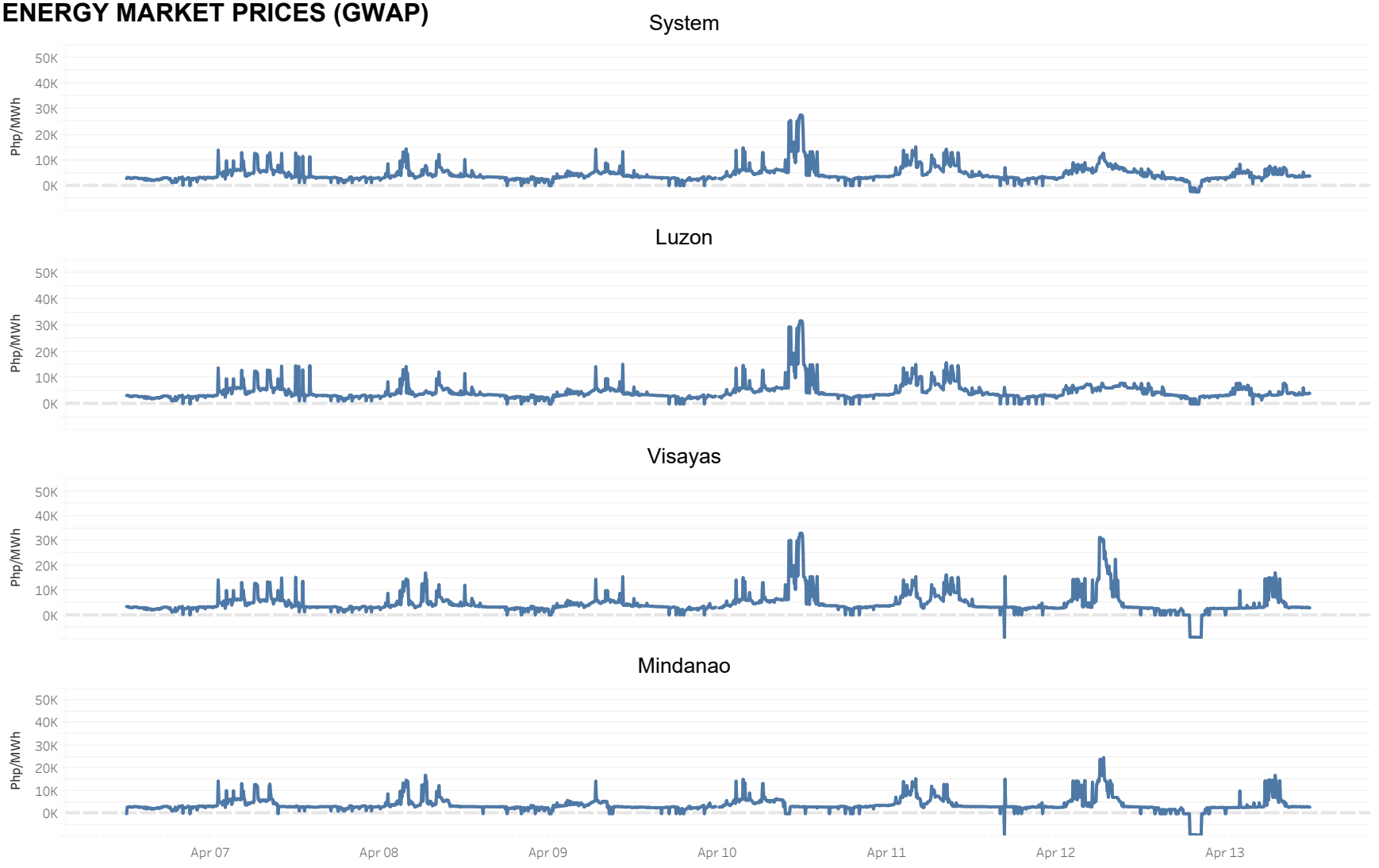

## Market RSI vs Pivotal Plants




## Market Share



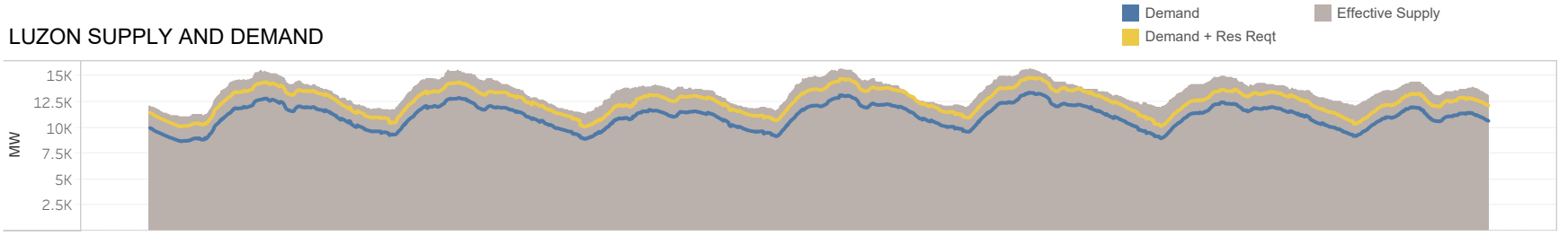
## ENERGY MARKET PRICES (GWAP)



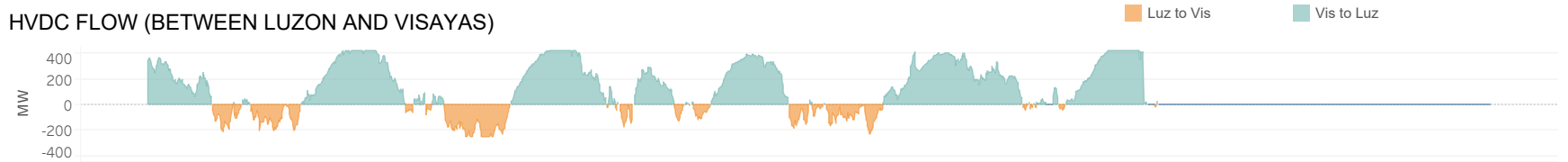

*The charts show the market prices by region based on generator weighted average price (GWAP). Prices are subject to the finalization of settlement data. The excluded trading intervals were due to a PEN.*

GWAP  GWAP (before post market run calculation)

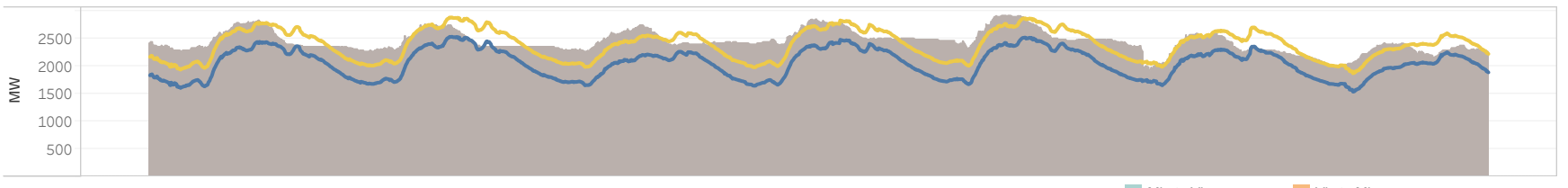
## LUZON SUPPLY AND DEMAND




## HVDC FLOW (BETWEEN LUZON AND VISAYAS)

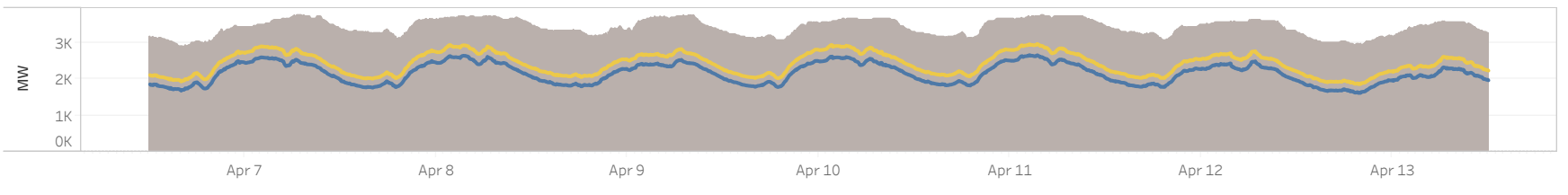



## VISAYAS SUPPLY AND DEMAND




## HVDC FLOW (BETWEEN VISAYAS AND MINDANAO)

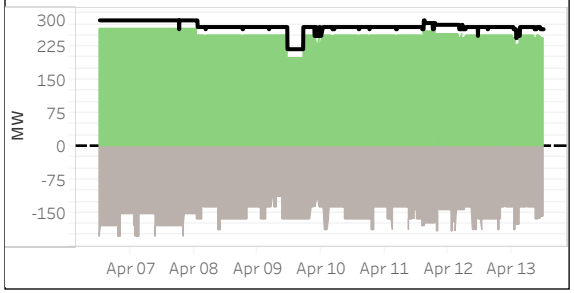

## MINDANAO SUPPLY AND DEMAND



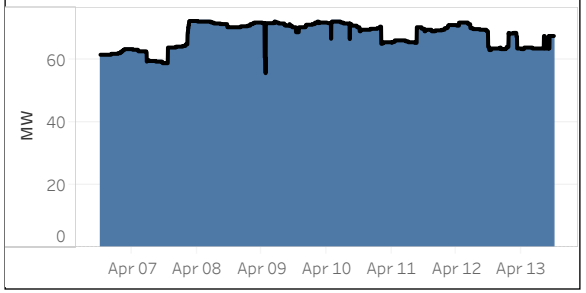

*The charts shows the aggregated supply and demand in each region and the scheduled power flow from/to a particular region via HVDC links.*

# ENERGY OFFER PATTERN - LUZON

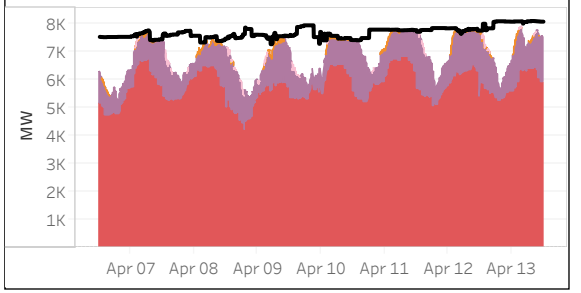
BATTERY



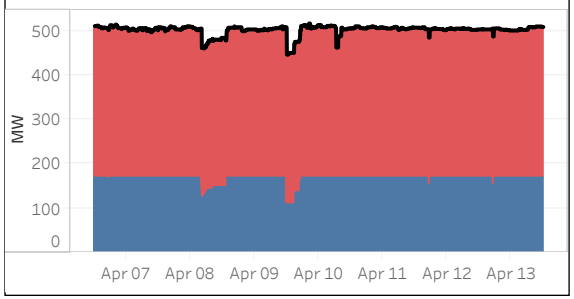

BIOFUEL



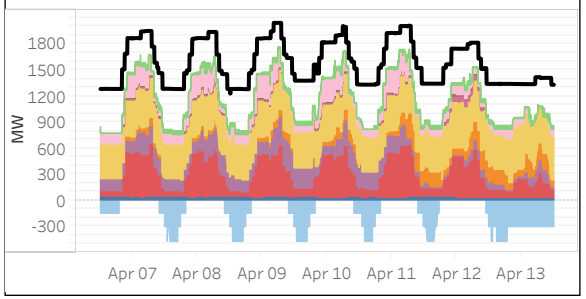

COAL



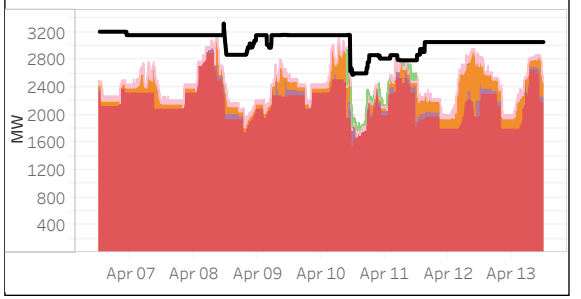

GEOTHERMAL



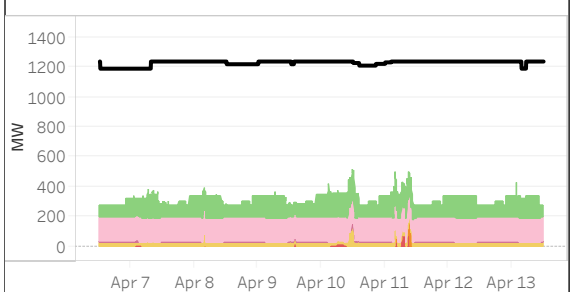

HYDRO



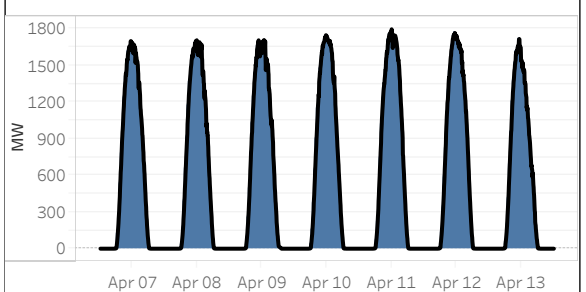

NATURAL GAS



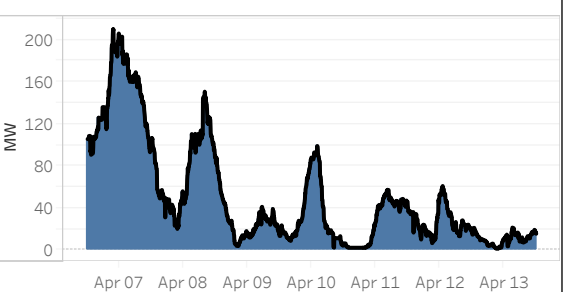

OIL




SOLAR




WIND




**Offer Price Range**

- Preferential Nomination
- Pumping Nomination
- PHP (0,5000]
- PHP (10000,15000]
- PHP (20000,25000]
- PHP (30000,32000]
- Battery Charging Offer
- PHP 0 and below
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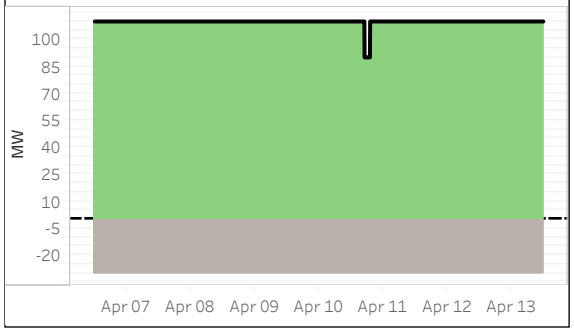
- Offered and Nominated Capacity

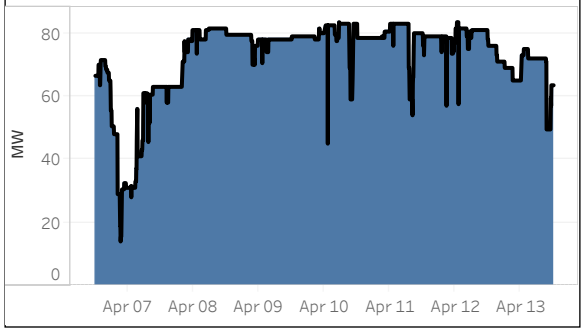
*NOTES:*
*1. In Php (X, Y], it includes offer price greater than Php X but less than or equal to Php Y. 2. Reflected capacity are effective supply, adjusted for the submitted ramp rate and excluding any overriding constraint.*

# ENERGY OFFER PATTERN - VISAYAS

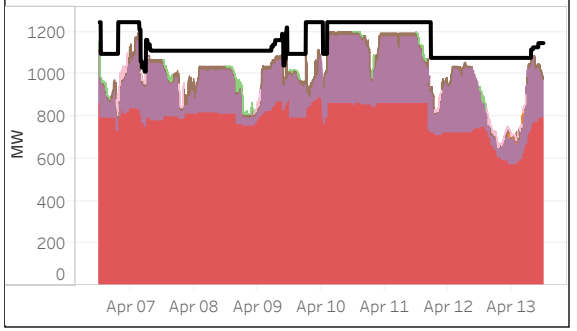
BATTERY



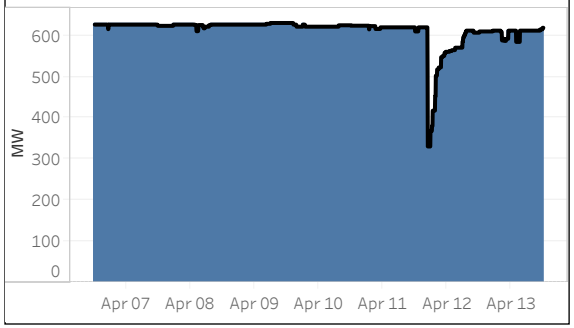

BIOFUEL



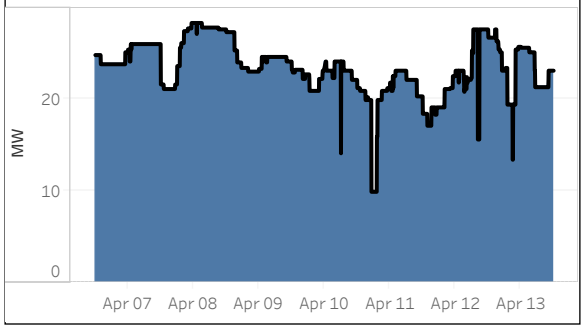

COAL



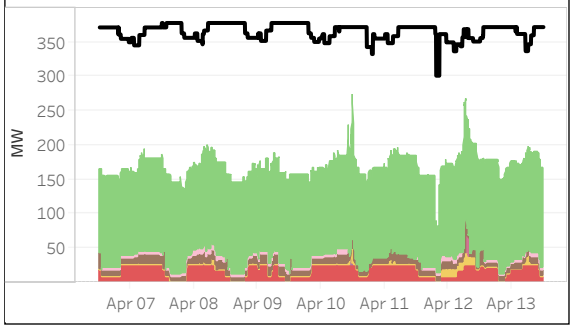

GEOTHERMAL



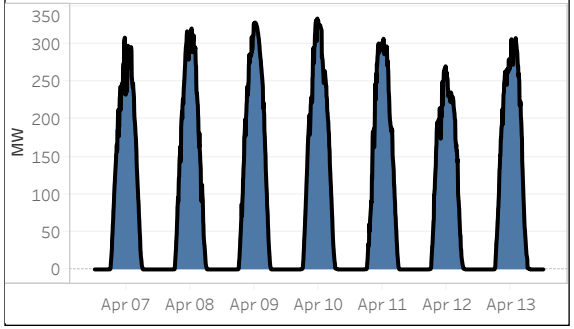

HYDRO



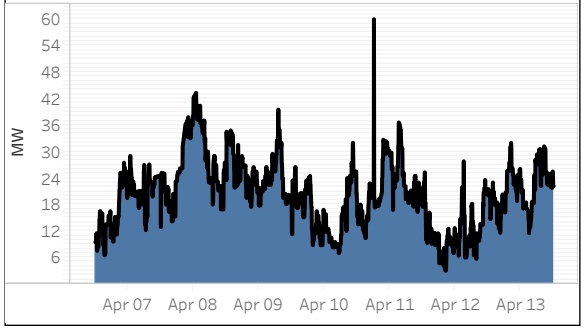

OIL




SOLAR




WIND

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## ENERGY OFFER PATTERN - MINDANAO

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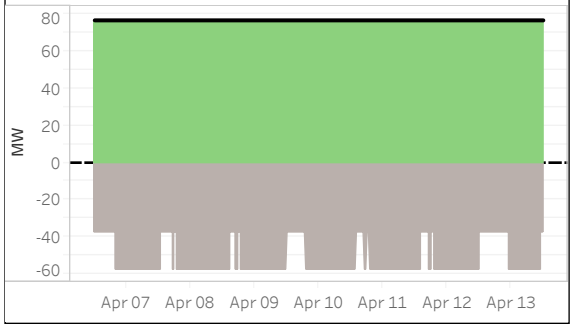


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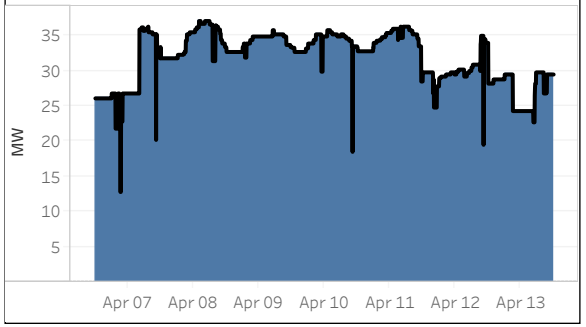
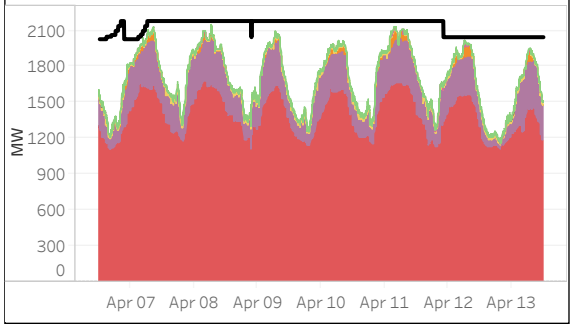



COAL

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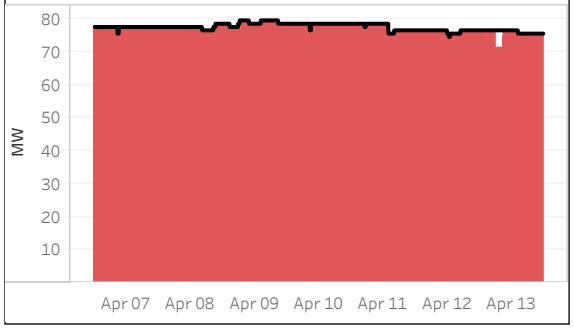
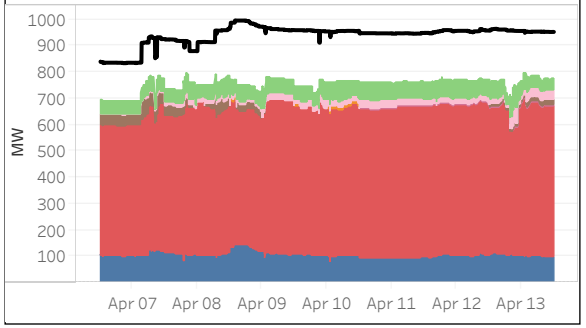
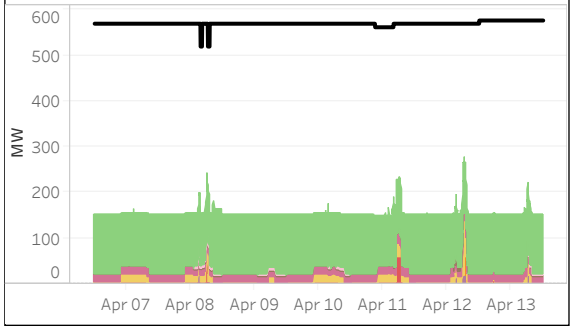


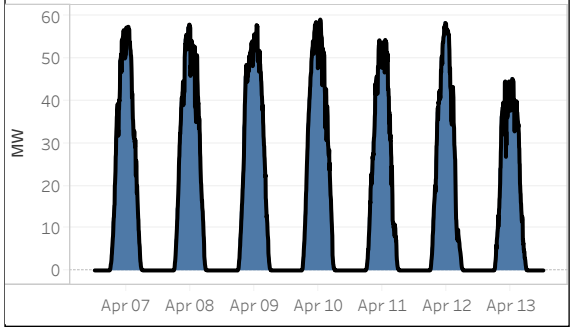

HYDRO




OIL




SOLAR

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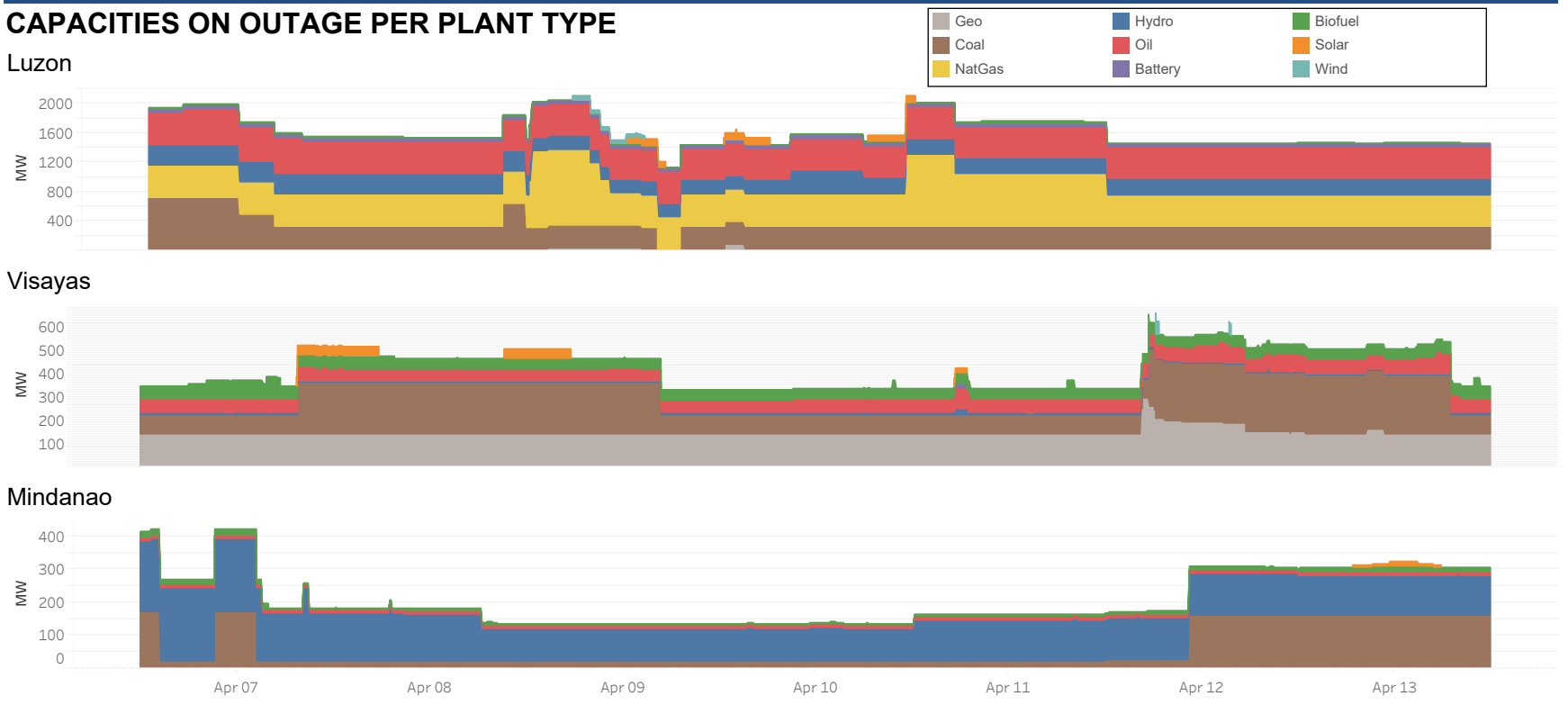
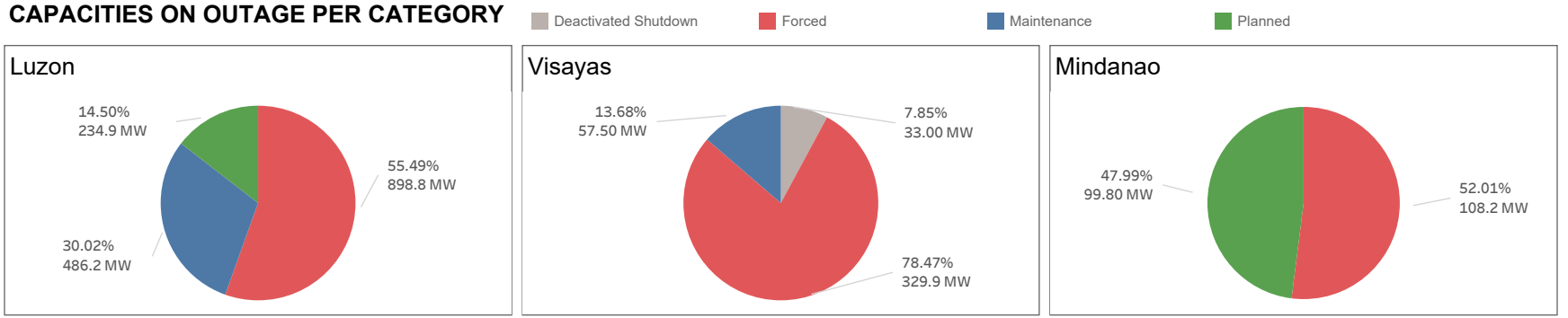
## CAPACITIES ON OUTAGE PER PLANT TYPE



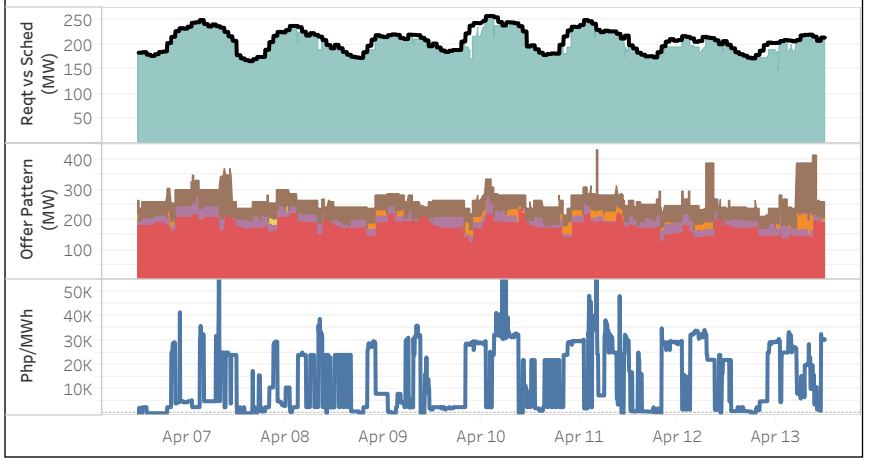

## CAPACITIES ON OUTAGE PER CATEGORY



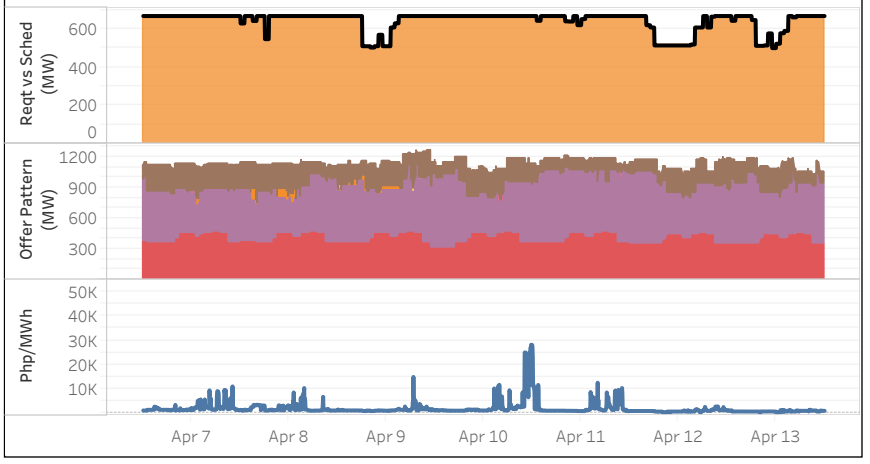
# RESERVE MARKET DATA - LUZON

All reserve prices will be capped at price offer cap as per ERC NOR - Case No. 2023-002 RC - PDM Section 2.2.1.4

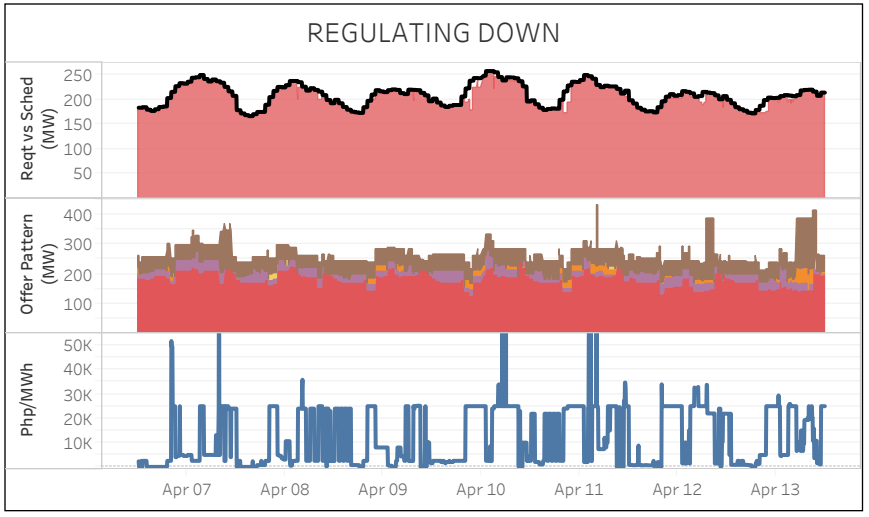
## REGULATING UP



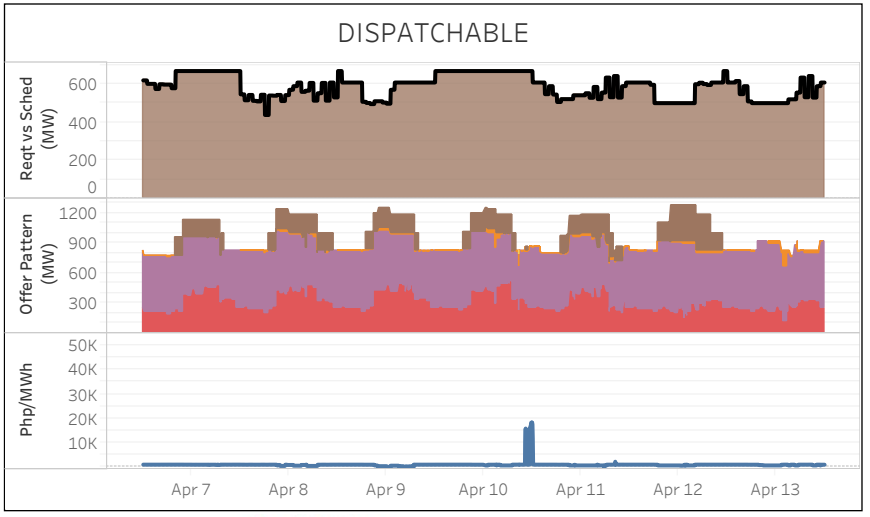

## CONTINGENCY




## REGULATING DOWN




## DISPATCHABLE




Reqt vs Sched Legends

- Reserve Requirement
- RU Schedule
- RD Schedule
- FR Schedule
- DR Schedule

Offer Price Range

- PHP 0
- PHP (0,5000]
- PHP (5000,10000]
- PHP (10000,15000]
- PHP (15000,20000]
- PHP (20000,25000]
- PHP (25000,30000]
- PHP (30000,32000]

# RESERVE MARKET DATA - VISAYAS

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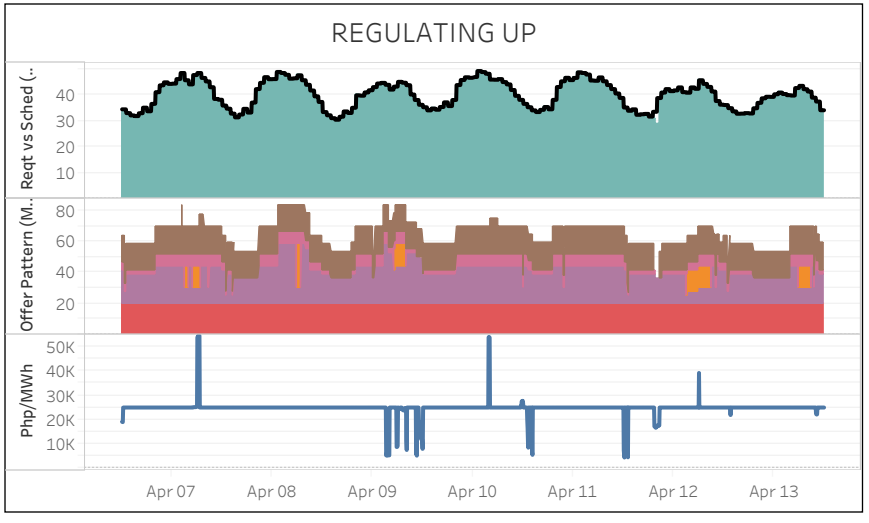
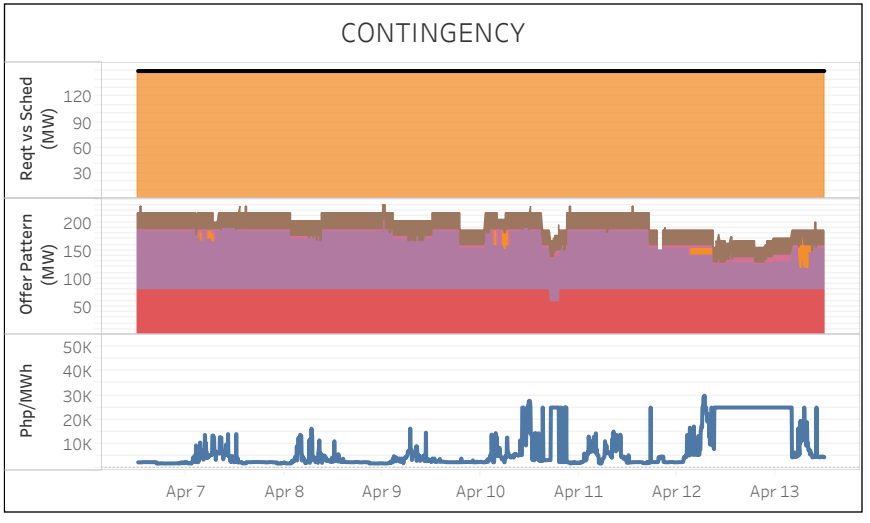
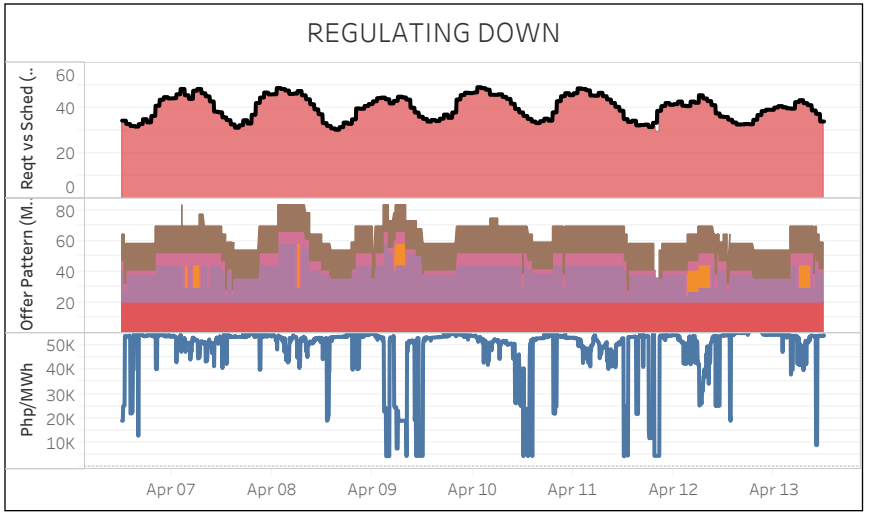
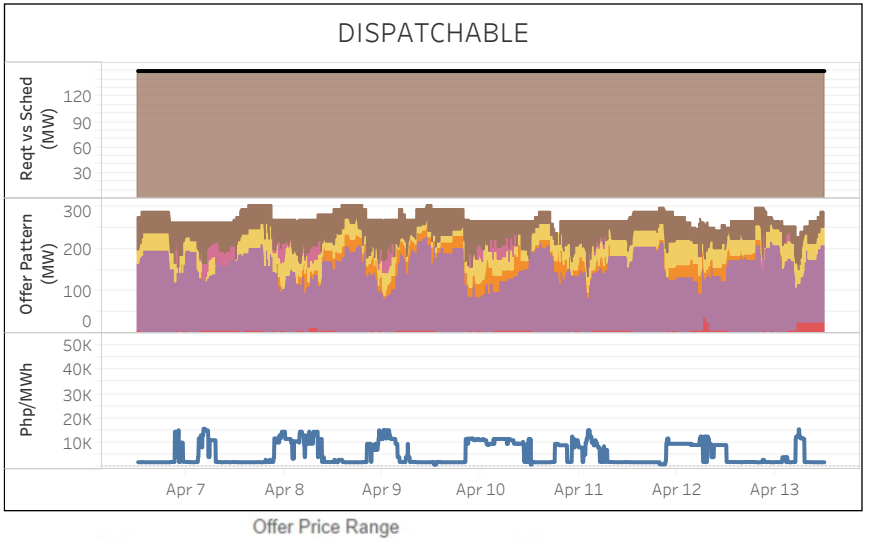



Reqt vs Sched Legends

- Reserve Requirement
- RU Schedule
- RD Schedule
- FR Schedule
- DR Schedule

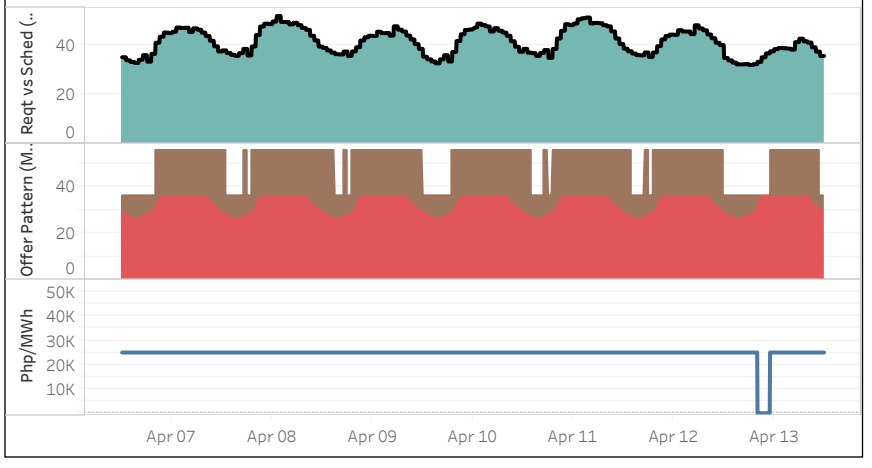
Offer Price Range

- PHP 0
- PHP (0,5000]
- PHP (5000,10000]
- PHP (10000,15000]
- PHP (15000,20000]
- PHP (20000,25000]
- PHP (25000,30000]
- PHP (30000,32000]

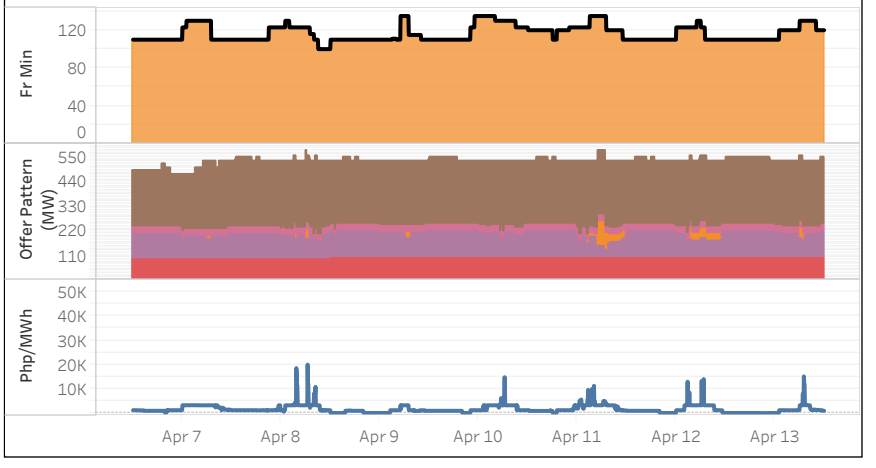
# RESERVE MARKET DATA - MINDANAO

All reserve prices will be capped at price offer cap as per ERC NOR - Case No. 2023-002 RC - PDM Section 2.2.1.4

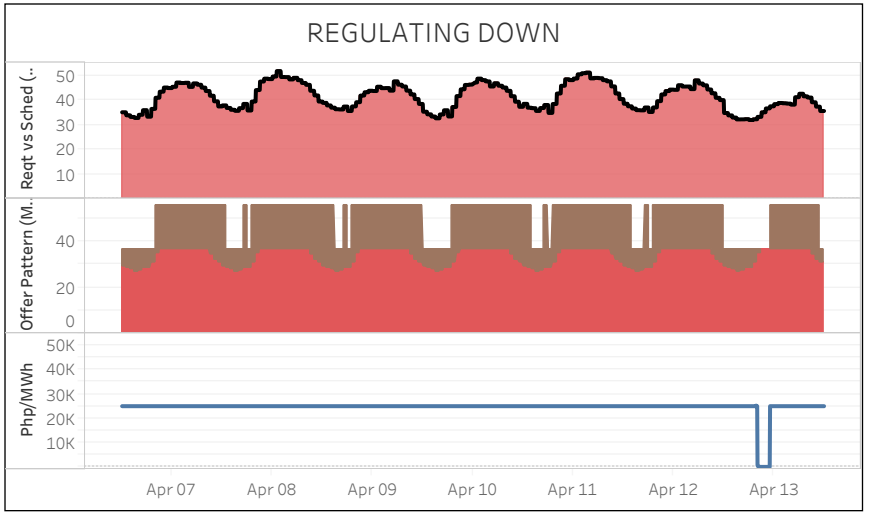
## REGULATING UP



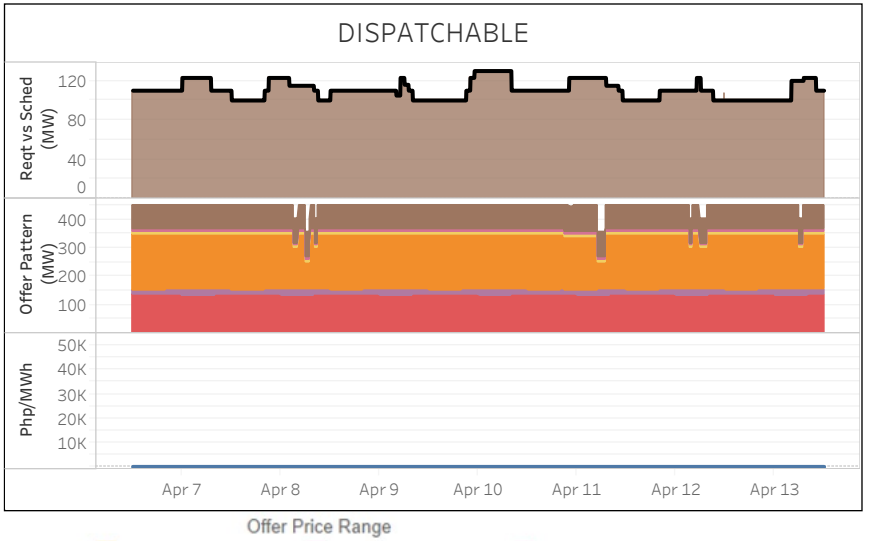

## CONTINGENCY




## REGULATING DOWN




## DISPATCHABLE




Reqt vs Sched Legends

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Offer Price Range

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- PHP (0,5000]
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- PHP (10000,15000]
- PHP (15000,20000]
- PHP (20000,25000]
- PHP (25000,30000]
- PHP (30000,32000]

# GLOSSARY OF TERMS

**CAPACITY ON OUTAGE**
Calculated for each 5-min interval as the sum of the capacity of all generating units on outage, which are further distinguished by plant type and category. The generating unit/s on outage and categories of outage are based on the SO's daily operations report. Cited below are the outage categories as defined in ERC Resolution No. 21, Series of 2016.

*Deactivated Shutdown* - refers to a condition where a generating unit is unavailable for service for an extended period of time for reasons not related to equipment and inactive for more than 60 days.
*Forced* - An outage that requires immediate removal of a unit from service, another outage state, or a reserve shutdown state.
*Maintenance* - An outage that does not require immediate removal from the In-Service state but requires a Unit to be removed from the available state before the next planned outage. This is scheduled at least seven (7) days in advance.
*Planned* - The state in which a Unit is unavailable due to inspection, testing, preventive maintenance or overhaul. A Planned Outage is scheduled with a pre-determined duration and is coordinated with the System Operator. The Planned Outage of a Unit shall be reflected in the Grid Operating and Management Program (GOMP).

**DEMAND**
Calculated for each 5-minute trading interval as the sum of the real time dispatch (RTD) schedule of all load resources plus regional losses.

**EFFECTIVE SUPPLY**
Calculated for each 5-minute trading interval as the sum of the offered capacity of all scheduled generators considering their offered ramp rates, nominated loading level of nonscheduled generators and projected output of preferential dispatch generators, adjusted for any over-riding constraints imposed by the System Operator (SO), and reserve offers. Output of generators on testing and commissioning were considered based on the over-riding constraints imposed by the SO.

**HERFINDAHL-HIRSCHMAN INDEX (HHI)**
It is a commonly accepted measure of market concentration that takes into account the relative size and distribution of participants in the market. The HHI is a number between 0 and 10,000, which is calculated as the sum of squares of the participant's market share. The HHI approaches zero when the market has very large number of participants with each having a relatively small market share. In contrary, the HHI increases as the number of participants in the market decreases, and the disparity in the market shares among the participants increases. The following are the widely used HHI screening numbers: (1) less than 1,500 - not concentrated; (2) 1,500 to 2,500 - moderately concentrated; and (3) greater than 2,500 - highly concentrated.

**MARKET RESIDUAL SUPPLY INDEX (Market RSI)**
The RSI is a dynamic continuous index measured as ratio of the available generation without a generator to the total generation required to supply the demand. The RSI is measured for each generator. The greater the RSI of a generator, the less will be its potential ability to exercise market power and manipulate prices, as there will be sufficient capacity from the other generators. In contrary, the lower the RSI, the greater the market power of a generator (and its potential benefit of exercising market power), as the market is strongly dependent on its availability to be able to fully supply the demand. In particular, a RSI greater than 100% for a generator means that the remaining generators can cover the demand, and in principle that generator cannot manipulate market price. On the other hand, a RSI less than 100% means that the generator is pivotal in supplying the demand.

The RSI for the whole market (Market RSI) is measured as the lowest RSI among all the generators in the market. A Market RSI less than 100% indicates the presence of pivotal generator/s

**MARKET SHARE**
The fraction of the total capacity or energy that a company or related group owns or controls in the market.

**MAJOR PARTICIPANT GROUP**
The grouping of generators by ownership or control.

# GLOSSARY OF TERMS

**NOMINATED CAPACITY**
The available capacity declared by self-scheduled generators.

**OFFERED CAPACITY**
The available capacity declared by scheduled generators.

**PIVOTAL SUPPLIER INDEX (PSI)**
The pivotal supplier index is a binary variable (1 for pivotal and 0 for not pivotal) for each generator. The index identifies whether a generator is pivotal in supplying the demand. The PSI is calculated as the percentage of time that a generator is pivotal in a period (i.e. monthly).

**POST MARKET RUN CALCULATION**
Price adjustment after consideration of different pricing conditions such as AP, SPC, PSM, and PEN.

**REGISTERED CAPACITY**
The capacity registered by a generator with WESM.

**REGISTERED CAPACITY (NET OF OUTAGE)**
The capacity registered by a generator with WESM less capacity on outage.

**RESERVE CATEGORIES**
*Regulating (RU and RD)* - Readily available and dispatchable generating capacity that is allocated exclusively to correct deviations from the acceptable nominal frequency caused by unpredicted variations in demand or generation output.
*Contingency (FR)* - Synchronized generation capacity from Qualified Generating Units and Qualified Interruptible Loads allocated to cover the loss or failure of a synchronized generating unit or a transmission element of the power import from a circuit interconnection.
*Dispatchable (DR)* - Generating Capacity that are readily available for dispatch in order to replenish the Contingency Reserves whenever a generating unit trips or a loss of a single transmission interconnection occurs.

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