

**MARKET ASSESSMENT HIGHLIGHTS**
**Demand, Supply, and Price**

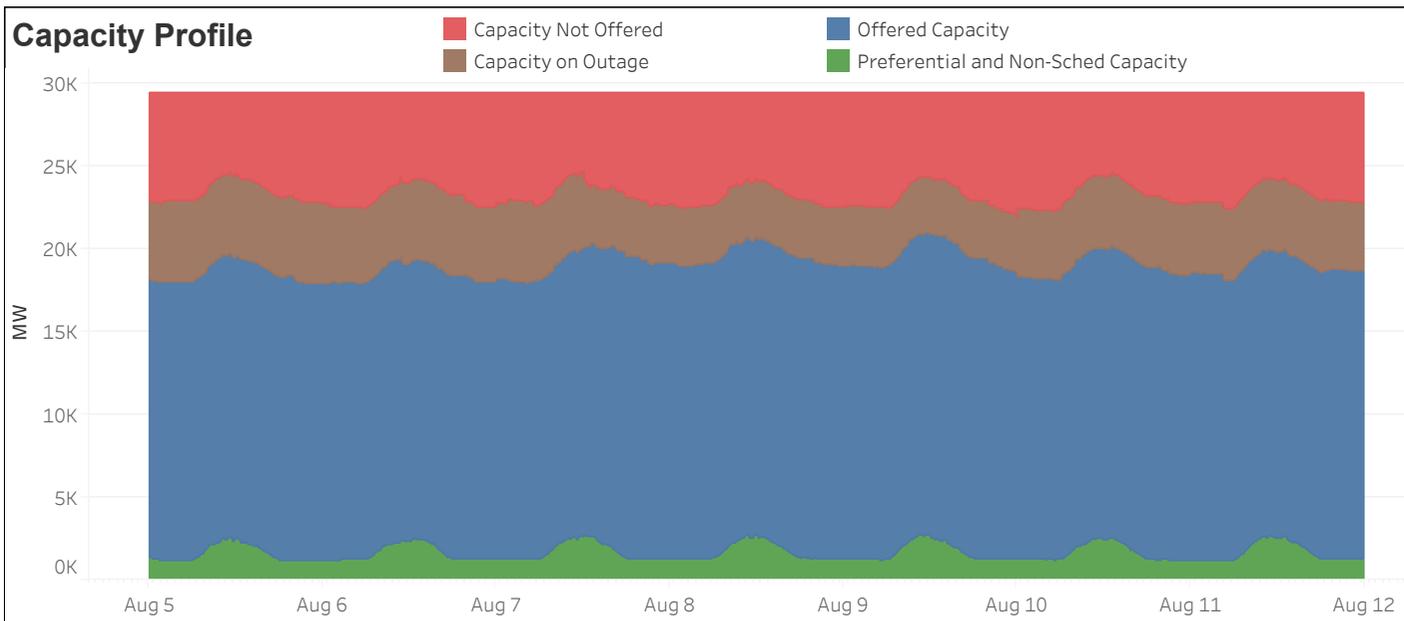
- Average weekly demand has increased in all regions, especially in Luzon region by 2.83%.
- Average weekly System GWAP has increased by 8.11% driven by the increase in Luzon GWAP by 11.38%. This week's prices might also be affected by the co-optimization of Energy and Reserve Markets when the Reserve Market resumed operation starting 05 August.
- Furthermore, PSM was observed from latter part of 10 August to early part of 11 August.

**Energy Offer Pattern Analysis**

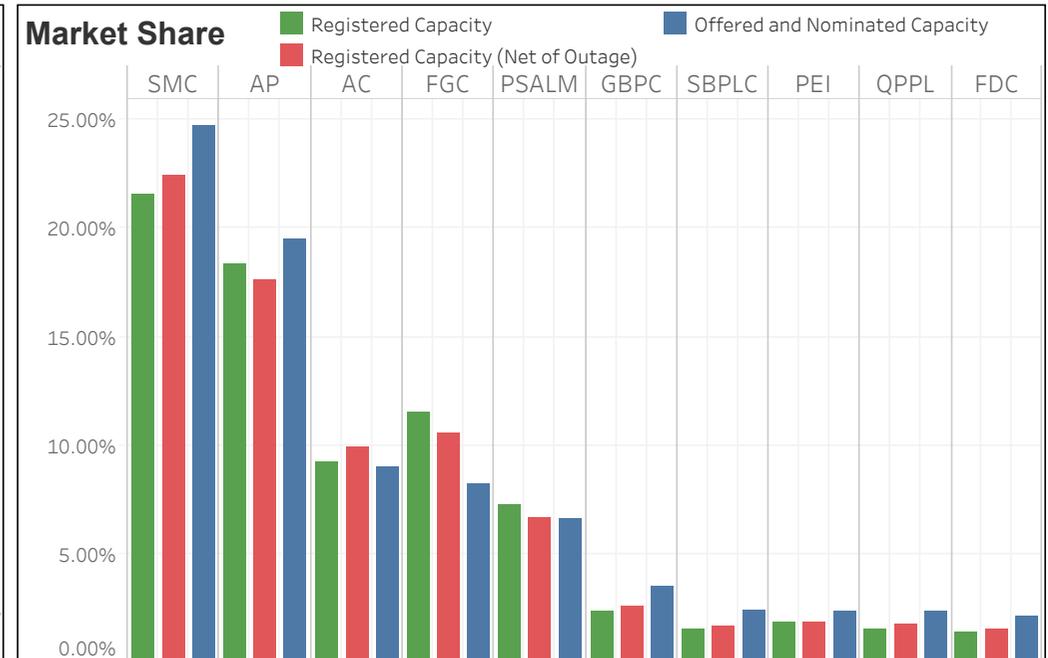
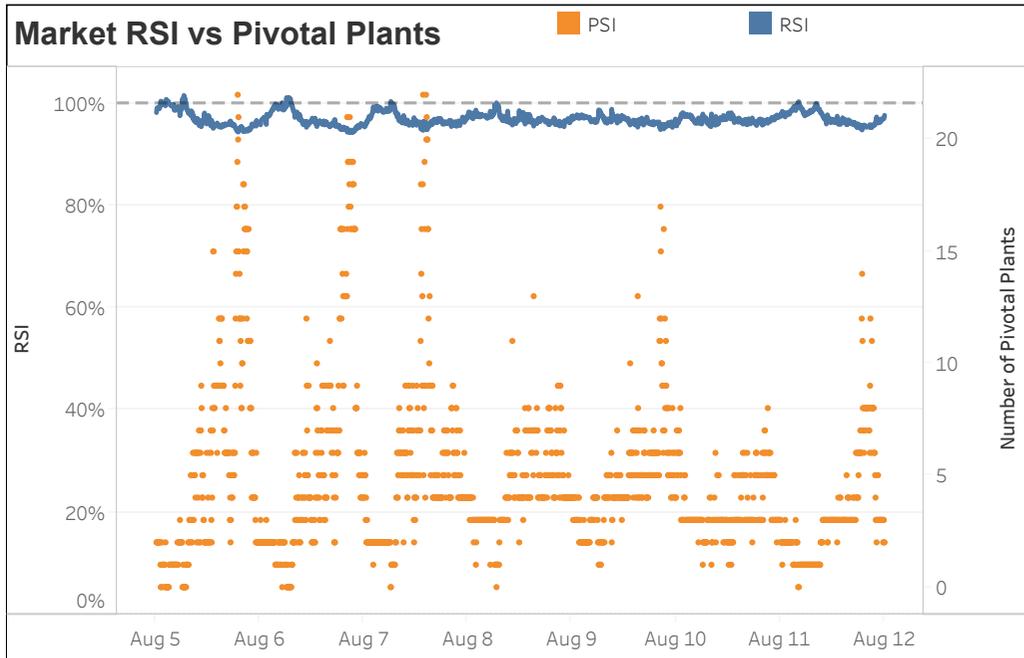
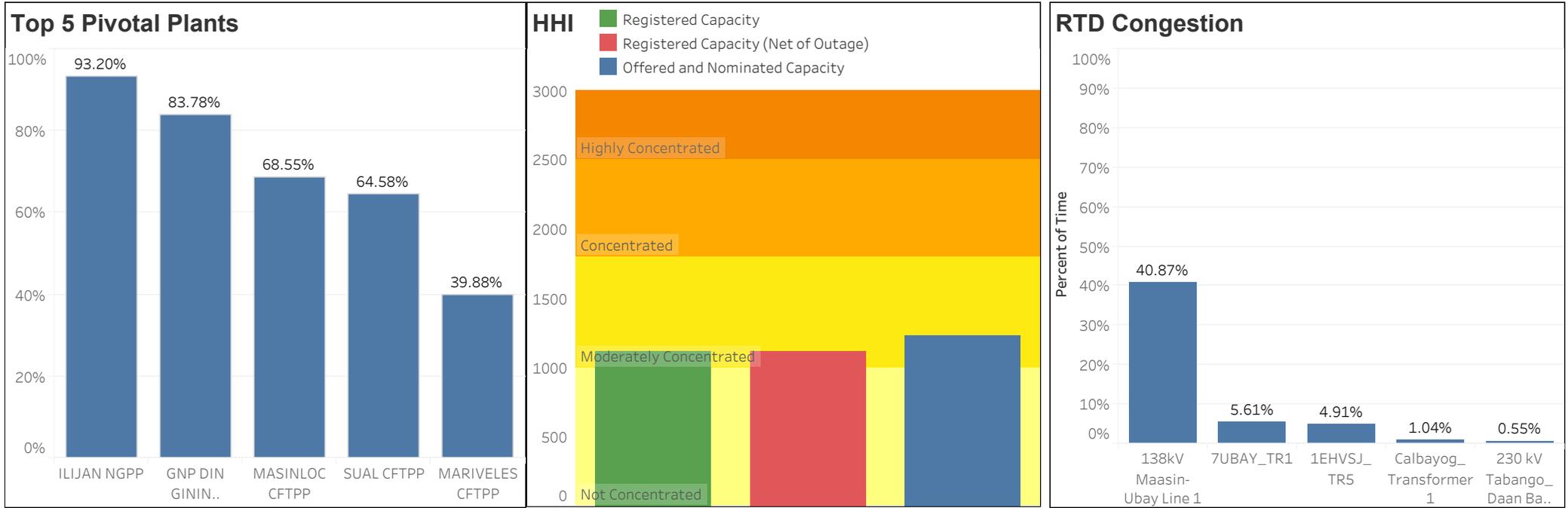
- The offered capacity of the Luzon Coal plants increased from 07 August and decreased again on August 10 due to outages.
- There was observed decrease in Luzon Geothermal nominated capacity by 60 MW starting at the latter part of 09 August.
- Luzon Natural Gas has uniform effective supply pattern starting its offered capacity decrease on 08 August.
- Luzon Wind has increasing nomination towards the end of the week and has recorded its peak more than twice of the previous week's peak.
- Visayas Biofuel has recorded nomination from 06 to 09 August of around 13MW compared to no nomination last week.
- Visayas Coal plants has recorded the highest gap between its offered capacities (line graph) and effective supply (area chart) on August 11.
- Mindanao Battery has almost constant offered capacity compared to its cyclic pattern last week.
- The rest of the offer pattern has no significant changes.

**Market Systems Advisory**

- Reserve Market resumed its commercial operation starting 05 August 2024.

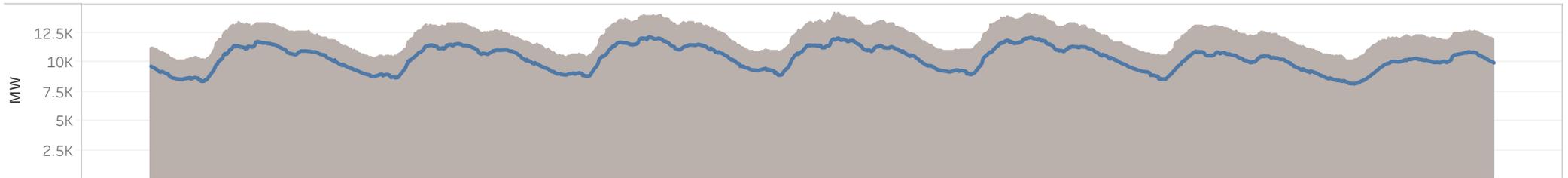

**SUMMARY OF AVERAGE VALUES**

Particulars	05 - 11 Aug 2024	29 Jul - 04 Aug 2024	% Change
<b>GWAP (Php/MWh)</b>			
System	5,892	5,450	8.11%
Luzon	6,416	5,761	11.38%
Visayas	6,586	6,618	-0.47%
Mindanao	3,268	3,374	-3.14%
<b>EFFECTIVE SUPPLY (MW)</b>			
Luzon	12,133	10,926	11.05%
Visayas	2,170	1,976	9.82%
Mindanao	3,353	2,959	13.30%
<b>DEMAND (MW)</b>			
Luzon	10,296	10,013	2.83%
Visayas	1,966	1,936	1.54%
Mindanao	2,038	2,012	1.27%
<b>OUTAGE (MW)</b>			
Luzon	3,431	3,827	-10.35%
Visayas	462	553	-16.48%
Mindanao	281	369	-23.78%
<b>RU PRICE (PHP/MWh)</b>			
Luzon	7,322	873	738.99%
Visayas	3,542	391	804.79%
Mindanao	5,808	0	
<b>RD PRICE (PHP/MWh)</b>			
Luzon	3,643	1,632	123.28%
Visayas	4,732	831	469.28%
Mindanao	5,333	0	
<b>FR PRICE (PHP/MWh)</b>			
Luzon	6,528	1,835	255.63%
Visayas	8,071	213	3,692.09%
Mindanao	1,221	0	
<b>DR PRICE (PHP/MWh)</b>			
Luzon	6,185	380	1,526.00%
Visayas	4,179	1,538	171.75%
Mindanao	69	0	

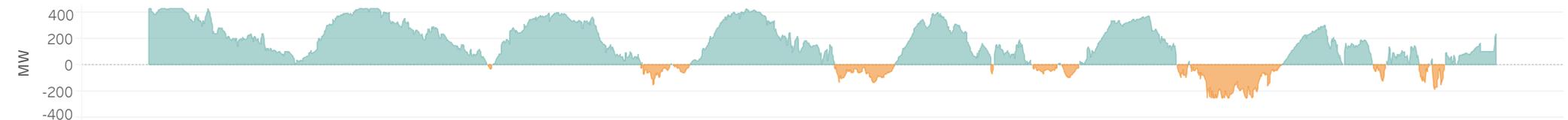




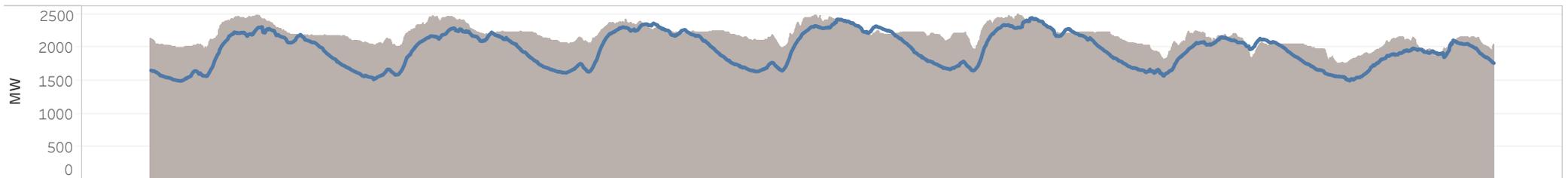
## LUZON SUPPLY AND DEMAND



## HVDC FLOW (BETWEEN LUZON AND VISAYAS)



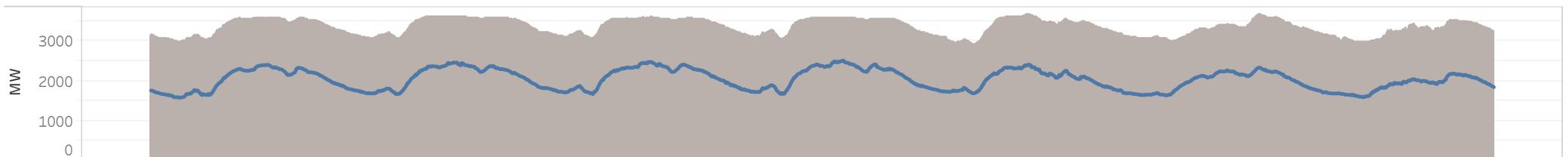
## VISAYAS SUPPLY AND DEMAND



## HVDC FLOW (BETWEEN VISAYAS AND MINDANAO)

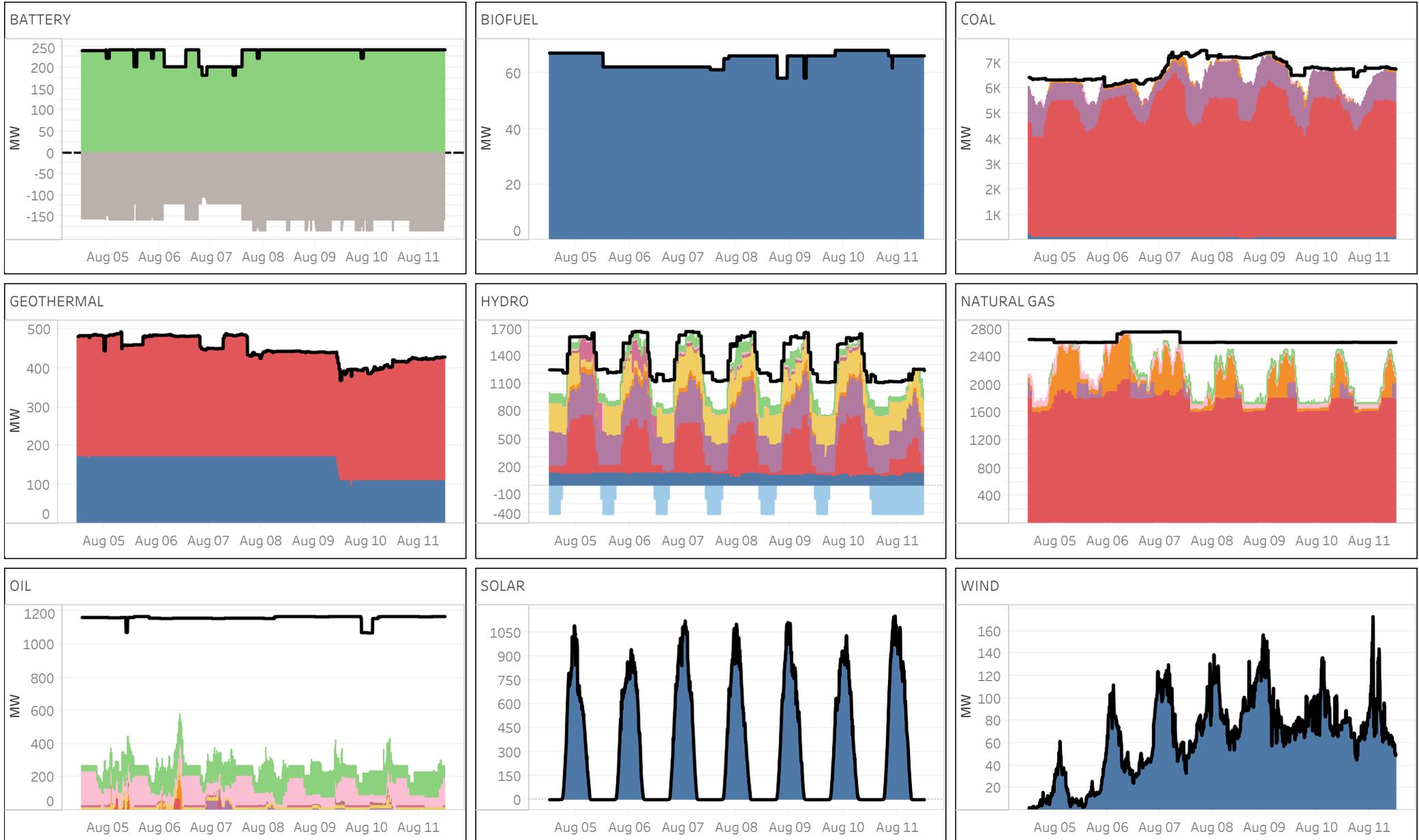


## MINDANAO SUPPLY AND DEMAND

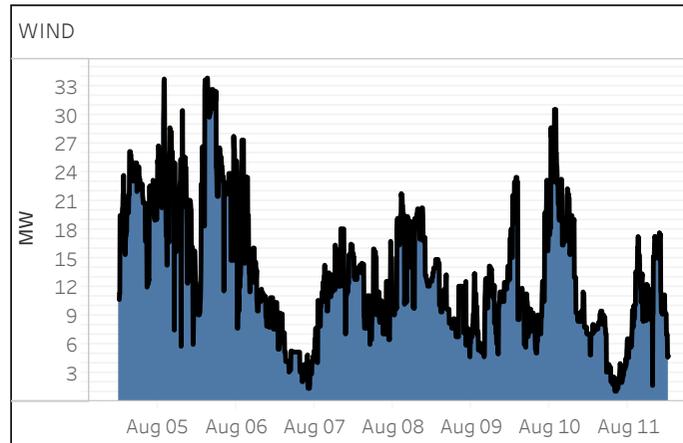
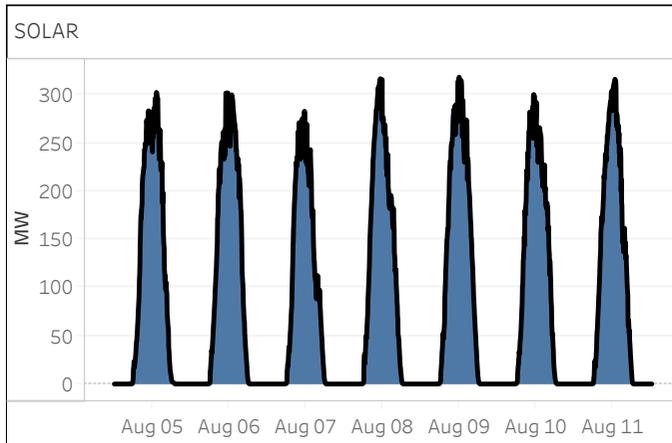
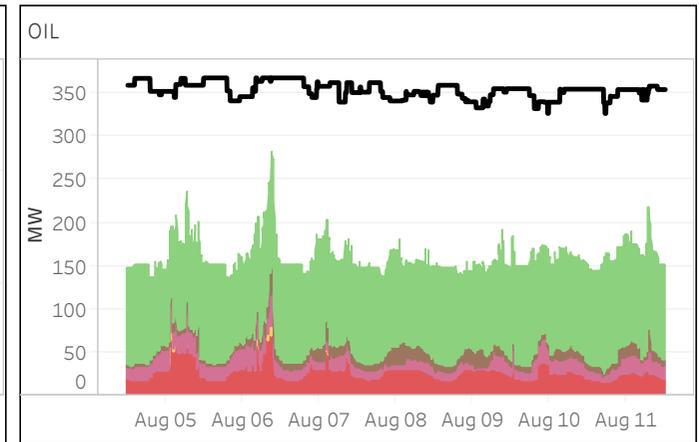
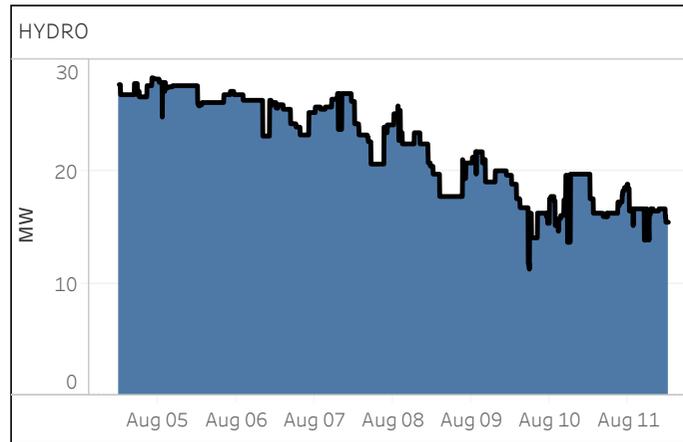
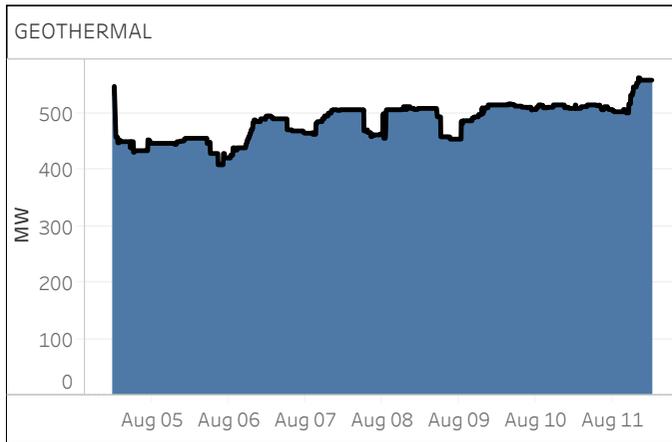
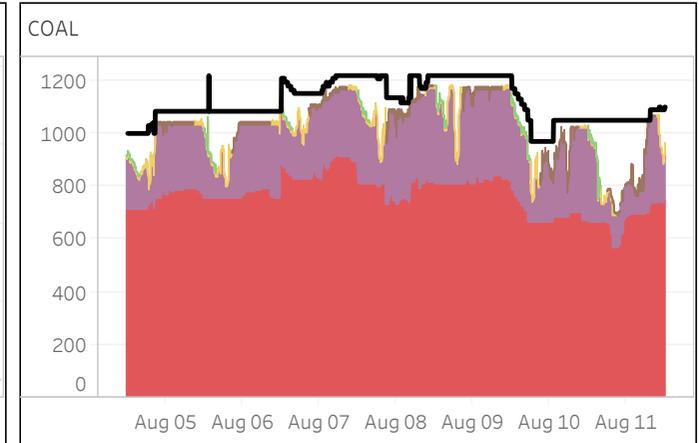
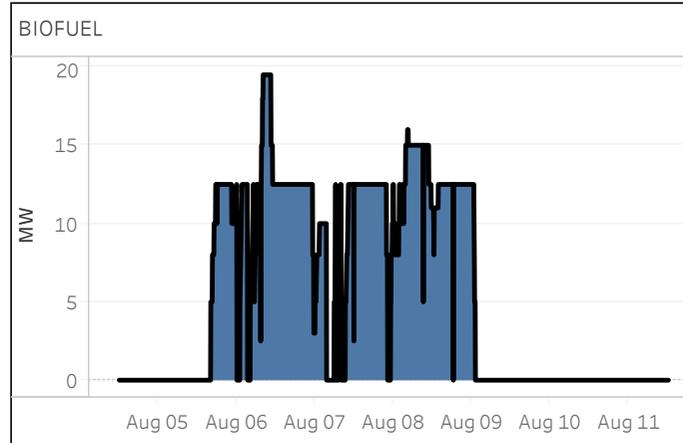
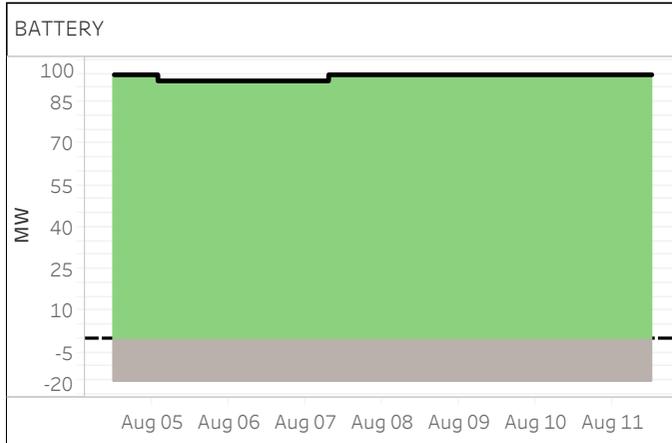


Aug 05      Aug 06      Aug 07      Aug 08      Aug 09      Aug 10      Aug 11

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

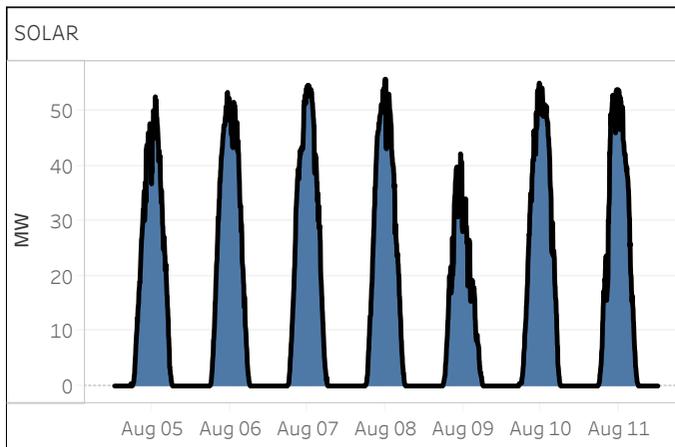
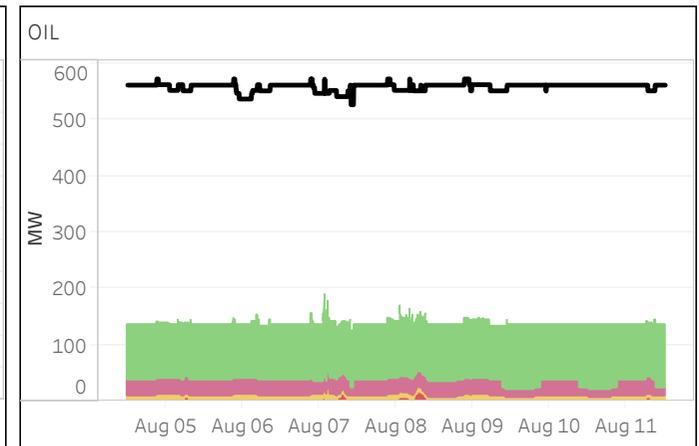
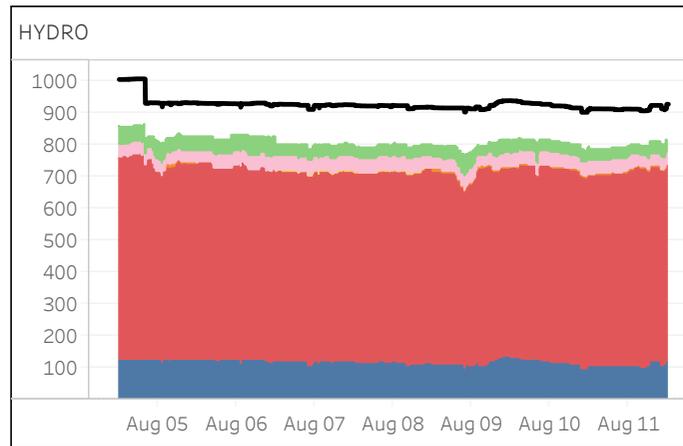
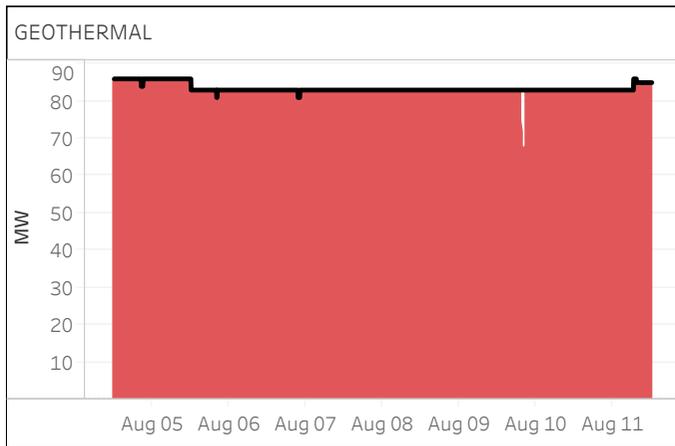
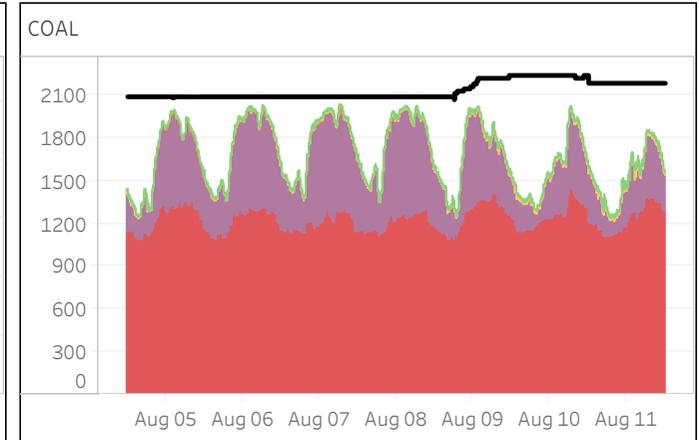
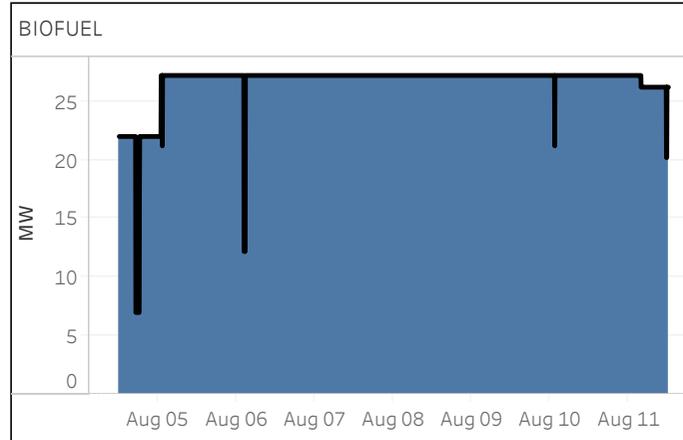
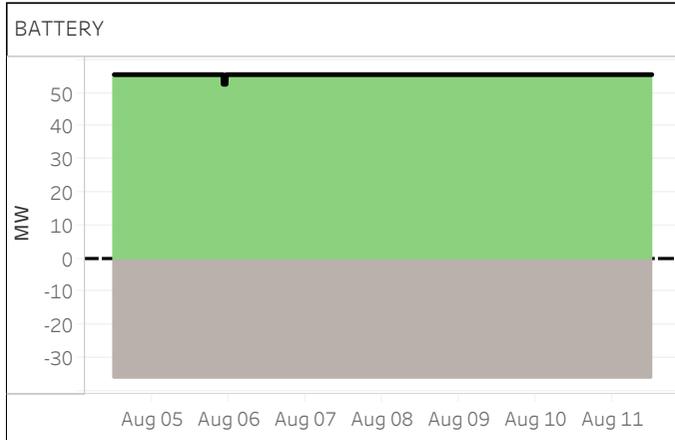
**ENERGY OFFER PATTERN - LUZON**

**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**

**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 - MINDANAO

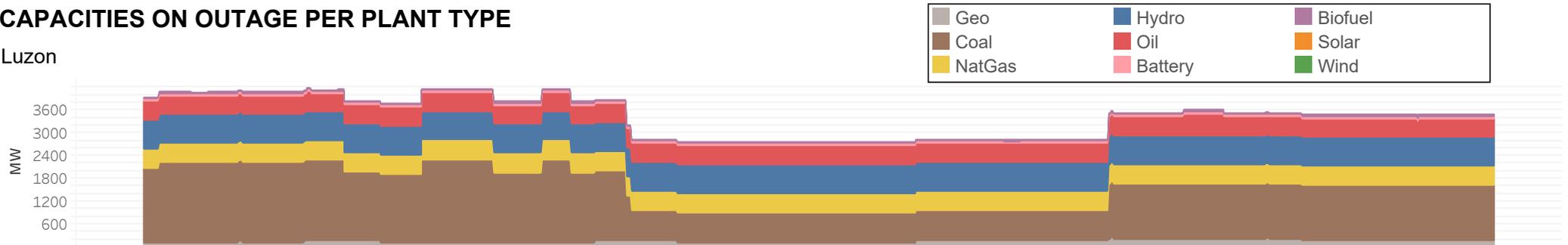


**NOTES:**

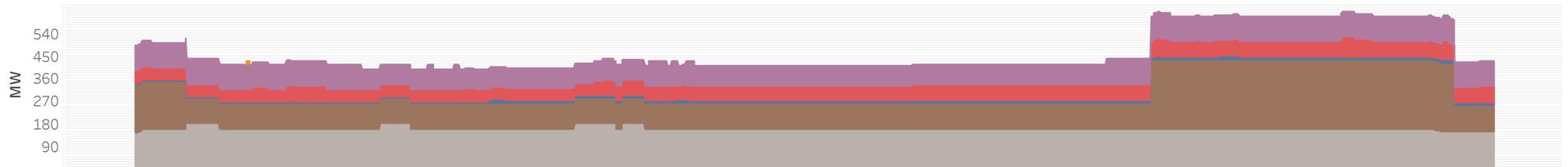
1. In Php (X, Y], it includes offer price greater than Php X but less than or equal to Php Y.
2. Reflected capacity are effective supply, adjusted for the submitted ramp rate and excluding any overriding constraint.

## CAPACITIES ON OUTAGE PER PLANT TYPE

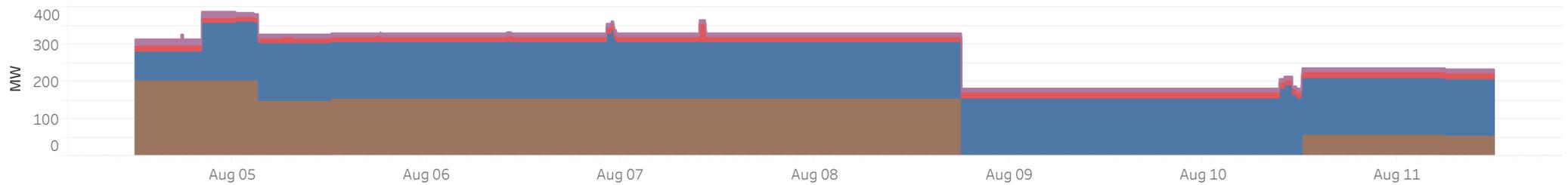
Luzon



Visayas

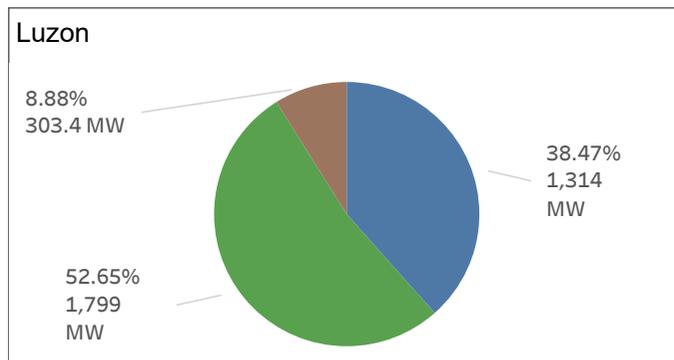


Mindanao

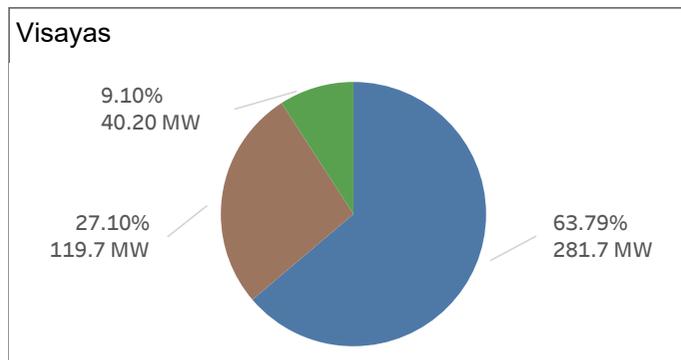


## CAPACITIES ON OUTAGE PER CATEGORY

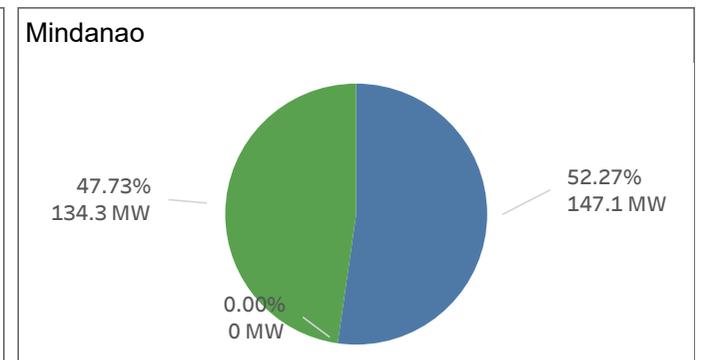
Luzon



Visayas

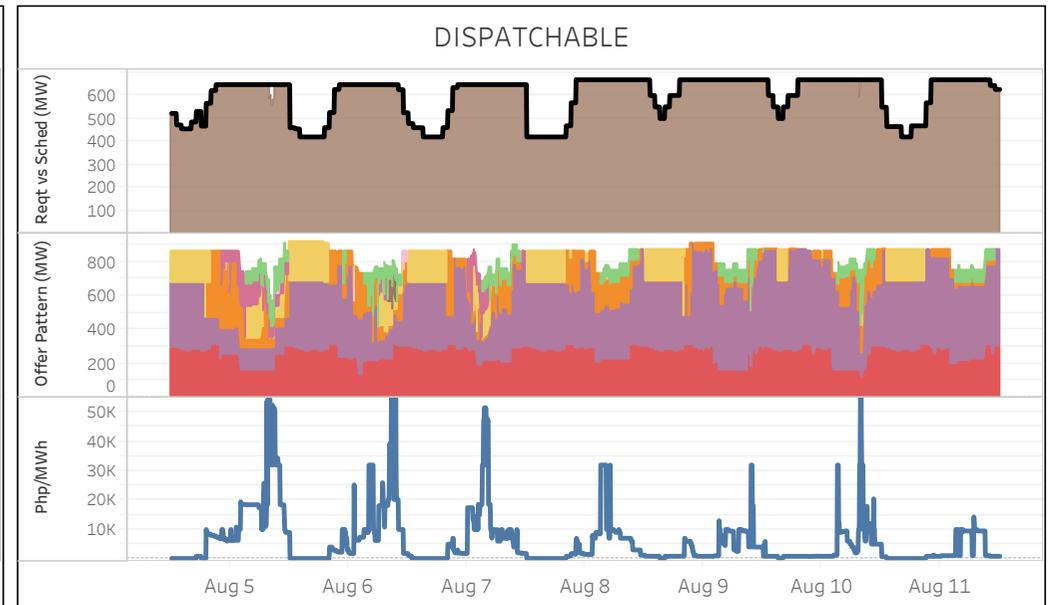
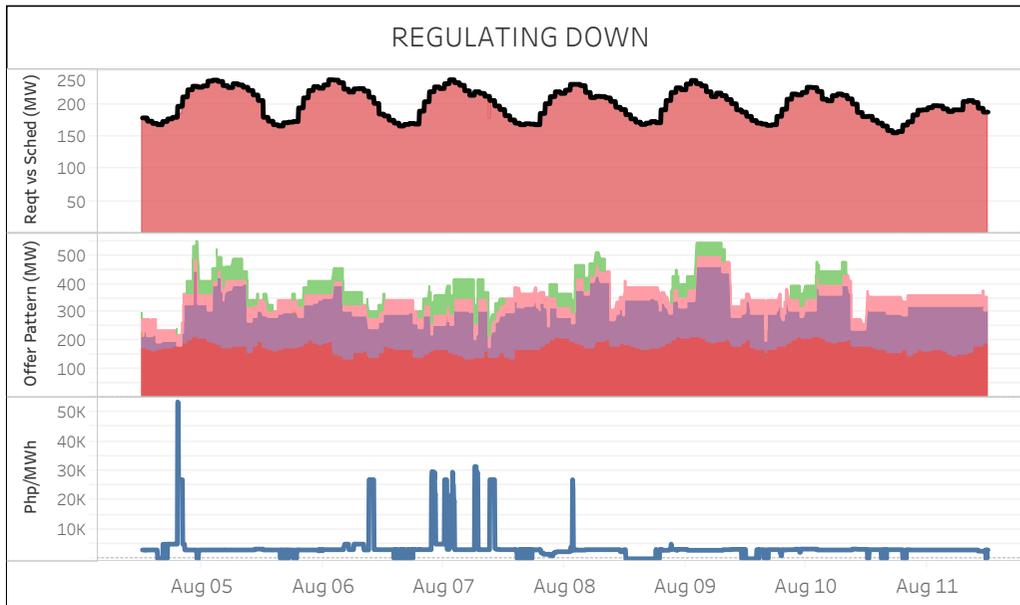
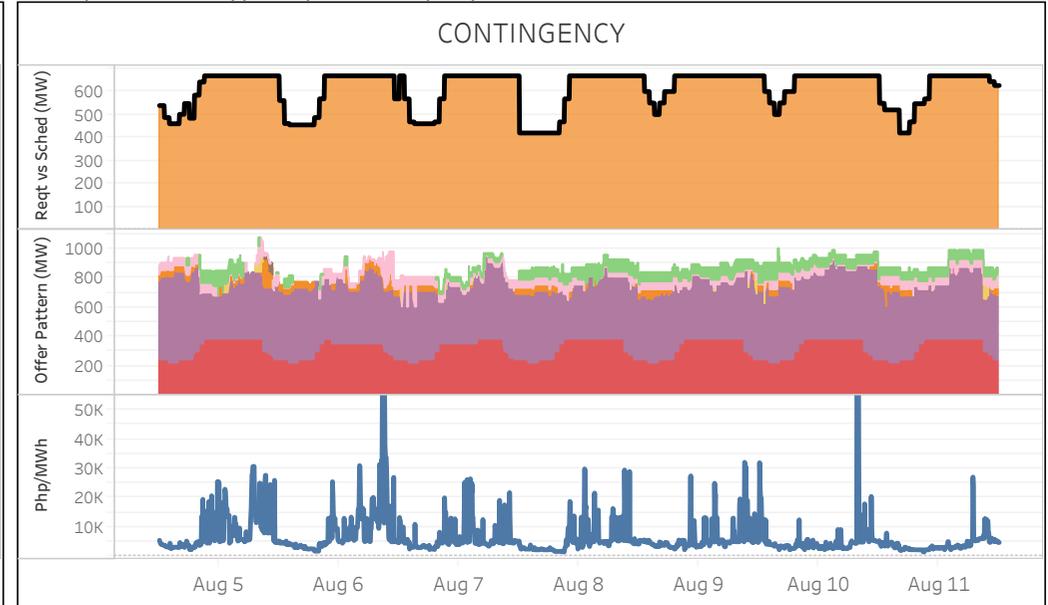
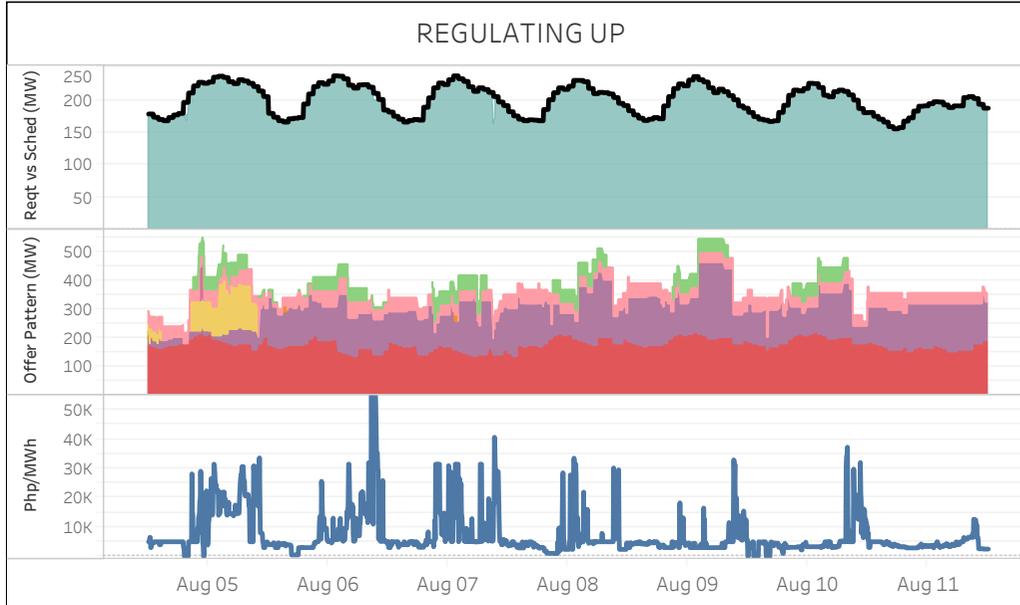


Mindanao



## 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



**Offer Price Range**

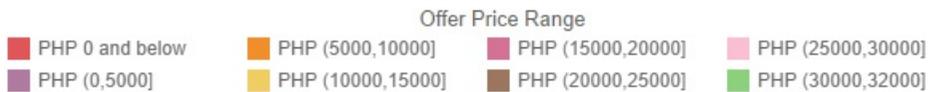
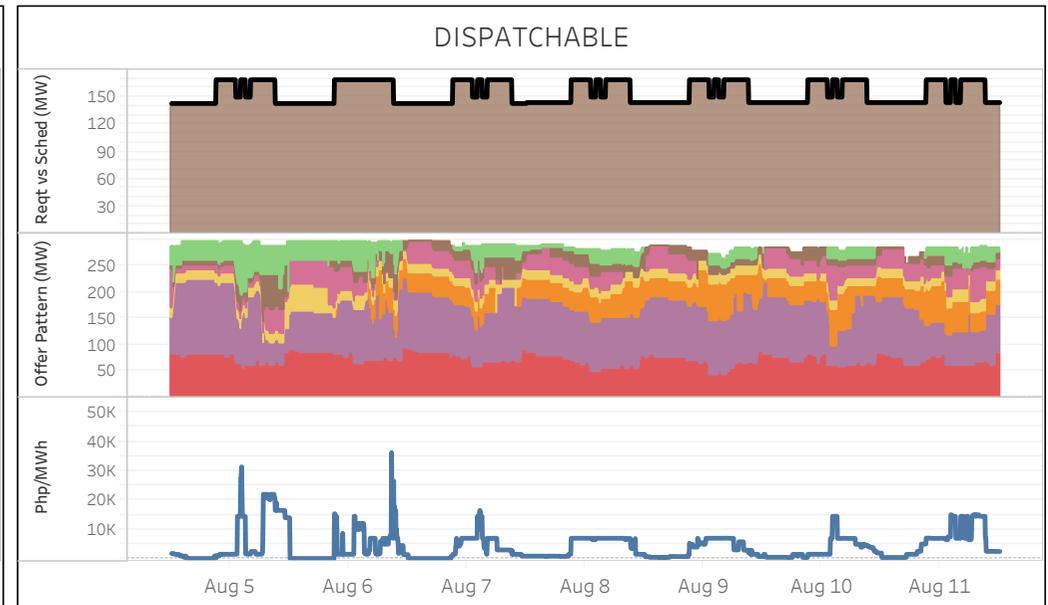
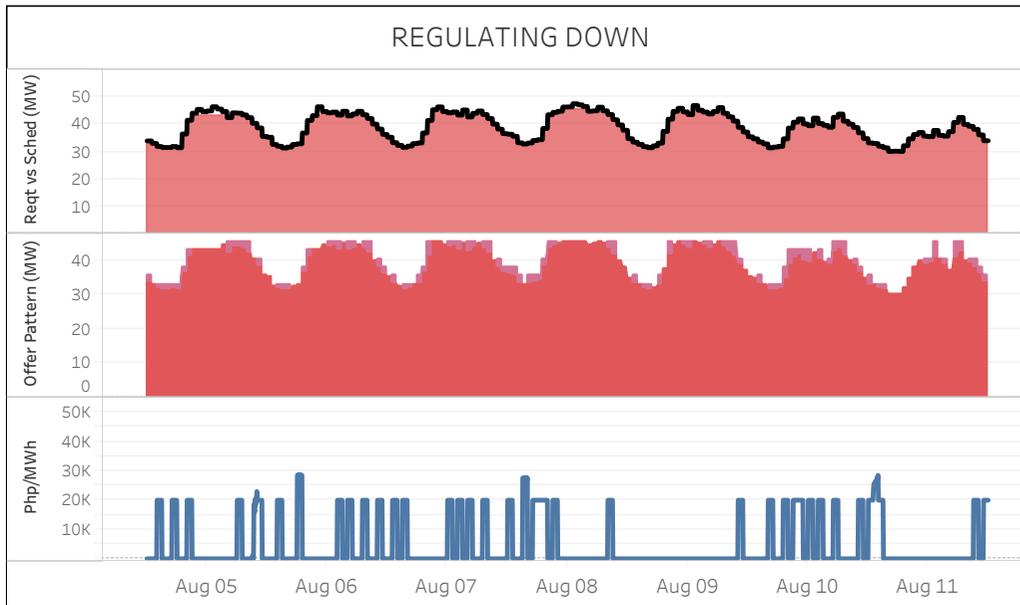
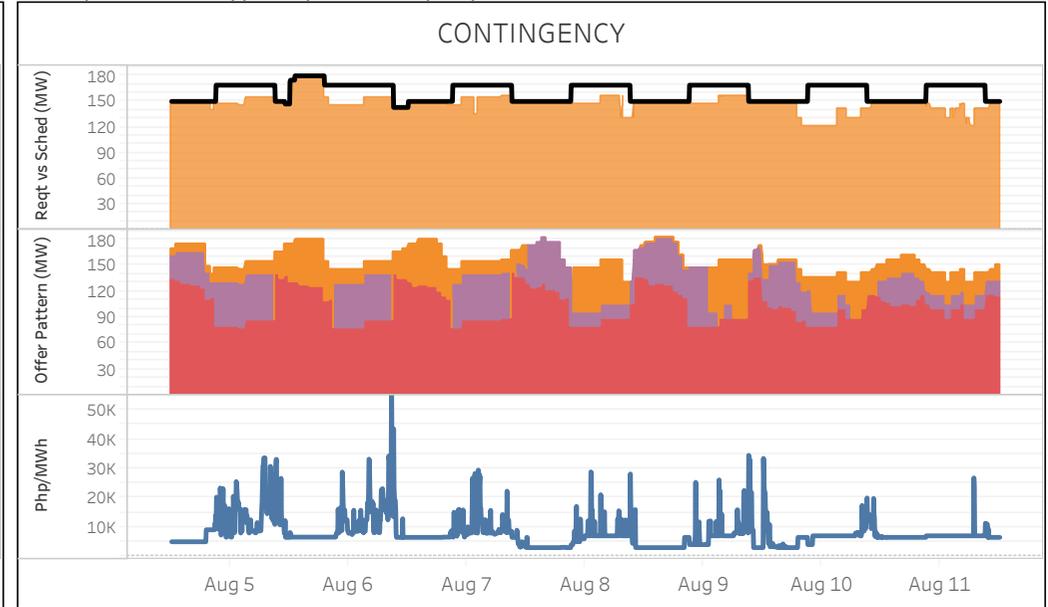
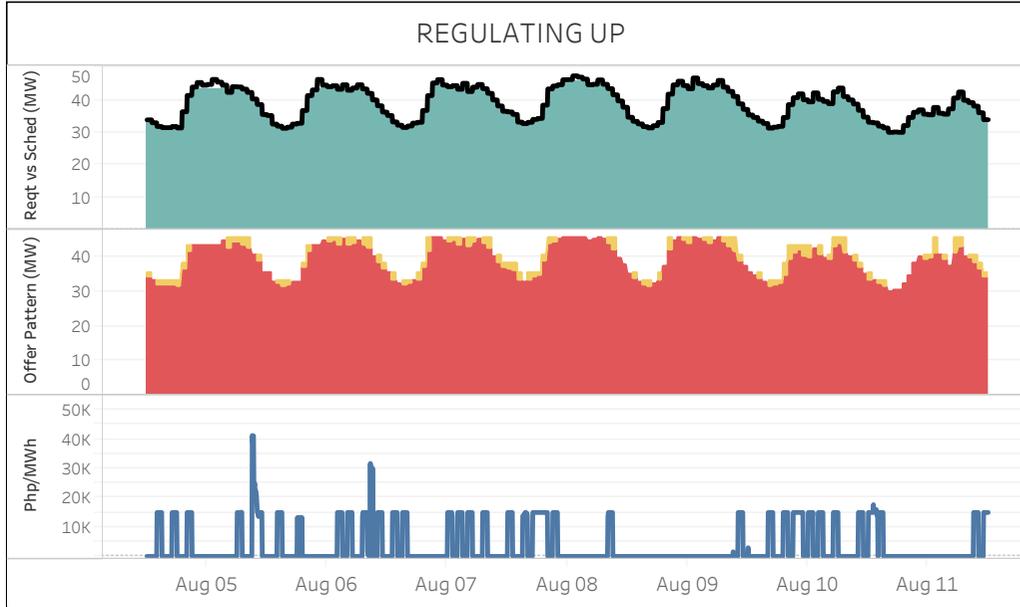
- PHP 0 and below
- PHP (5000,10000]
- PHP (15000,20000]
- PHP (25000,30000]
- PHP (0,5000]
- PHP (10000,15000]
- PHP (20000,25000]
- PHP (30000,32000]

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

NOTE: In Php (X, Y], it includes offer price greater than Php X but less than or equal to Php Y.

## RESERVE MARKET DATA - VISAYAS

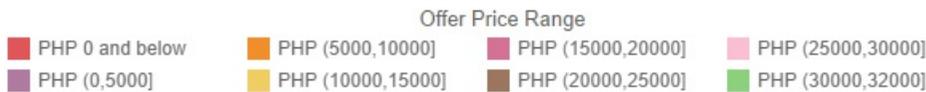
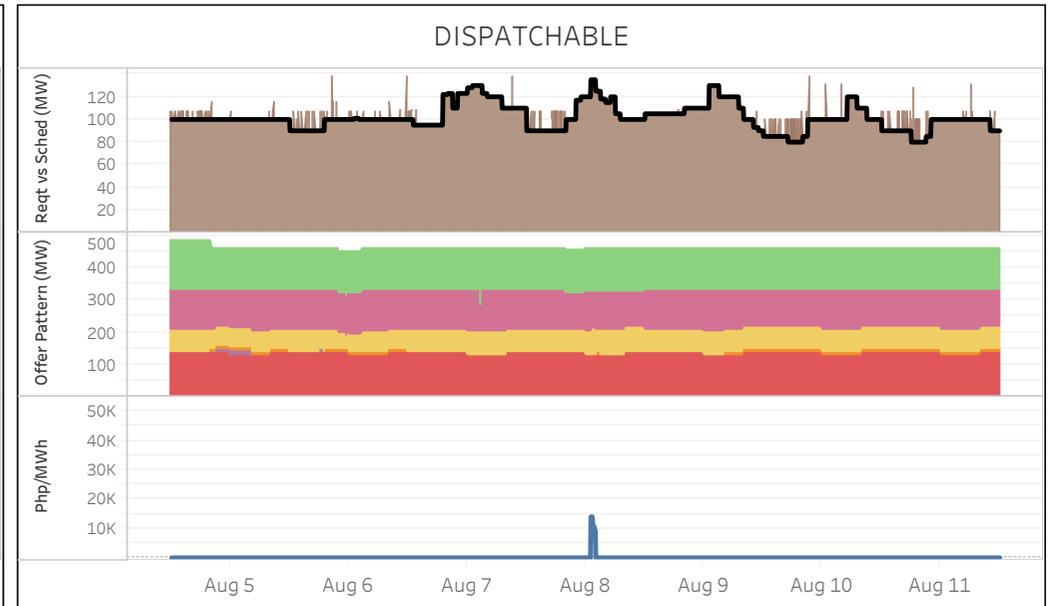
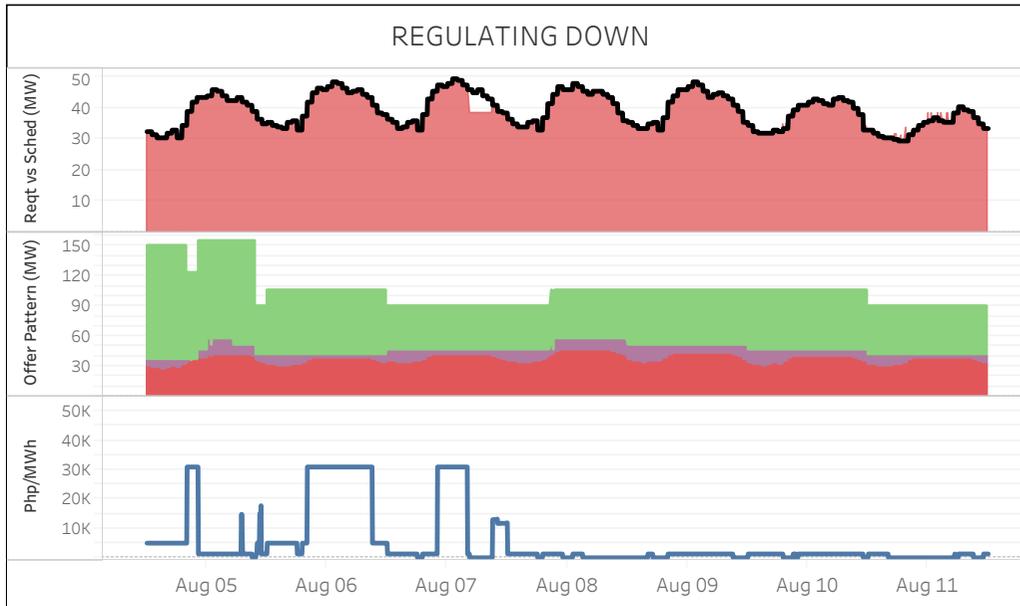
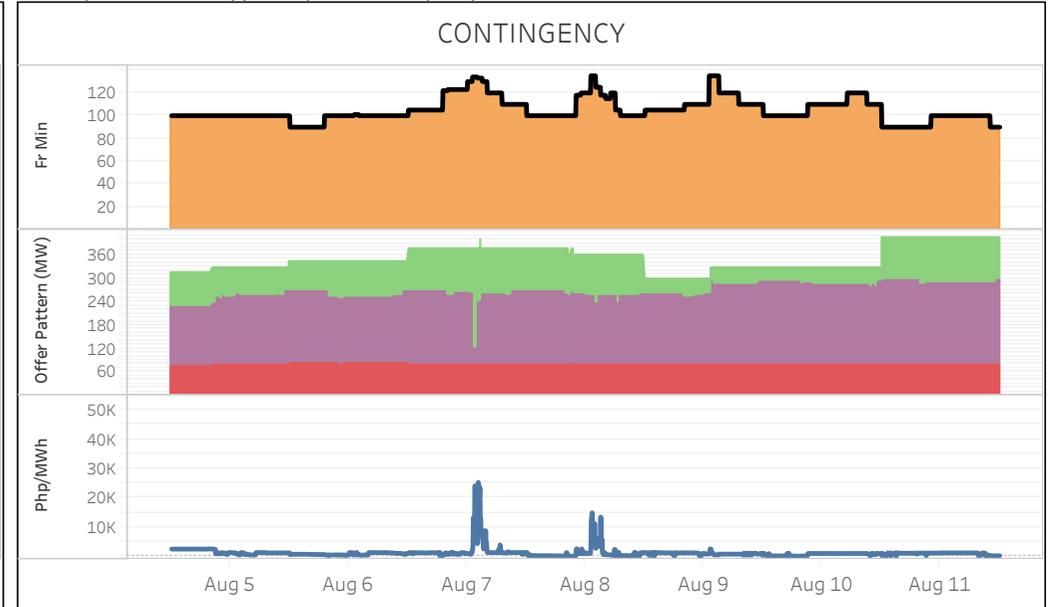
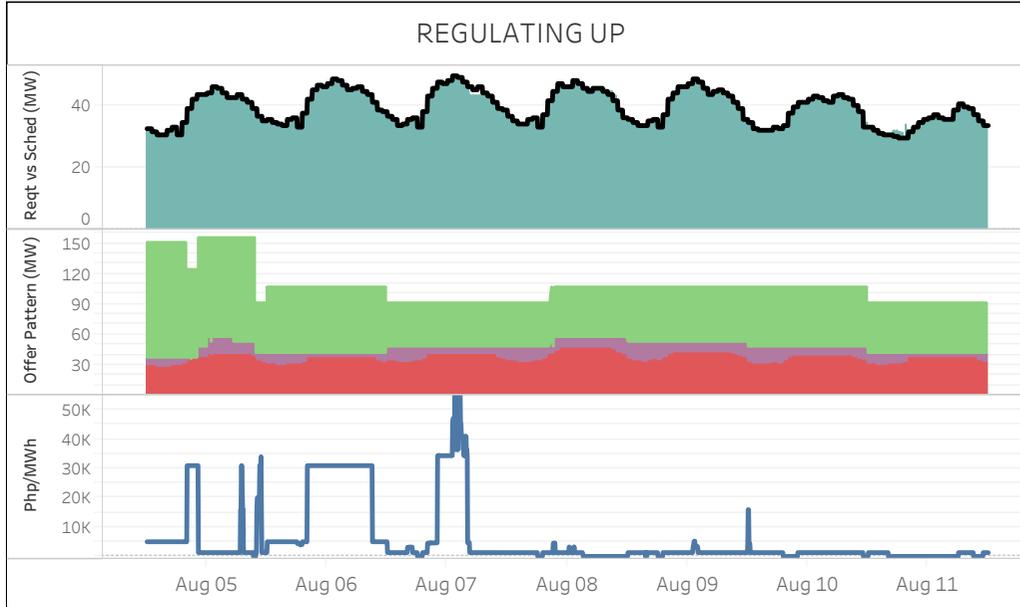
All reserve prices will be capped at price offer cap as per ERC NOR - Case No. 2023-002 RC - PDM Section 2.2.1.4



NOTE: In Php (X, Y], it includes offer price greater than Php X but less than or equal to Php Y.

## 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



NOTE: In Php (X, Y], it includes offer price greater than Php X but less than or equal to Php Y.

**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 Maintenance* - An outage that requires immediate removal of a unit from service, another outage state, or a reserve shutdown state.
- Planned* - 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.

**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 1,000 - not concentrated; (2) 1,000 to 1,800 - moderately concentrated; (3) greater than 1,800 - concentrated; and (4) 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.

**NOMINATED CAPACITY**

The available capacity declared by self-scheduled generators.

**GLOSSARY OF TERMS****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.

**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.

**DISCLAIMER**

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