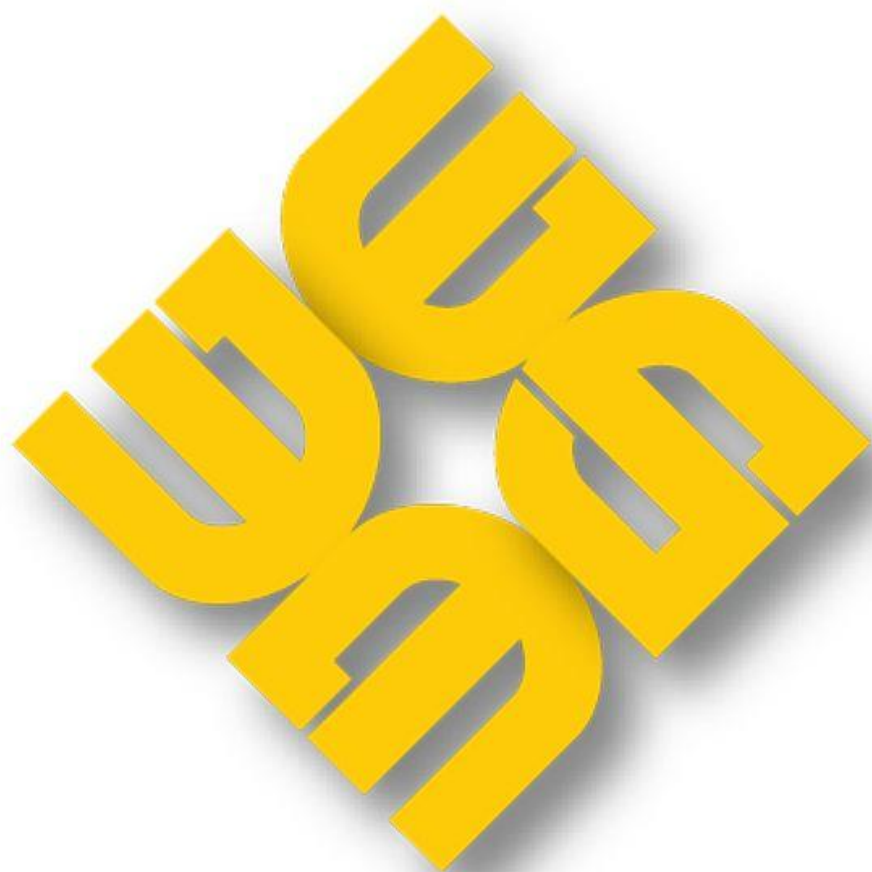


**MAG-MMAR-2019-05**

# **MONTHLY MARKET ASSESSMENT REPORT**

For the Billing Period 26 April to 25 May 2019



**PHILIPPINE  
ELECTRICITY  
MARKET  
CORPORATION**

**MARKET ASSESSMENT GROUP  
(MAG)**

## Monthly Market Assessment Report for May 2019 Billing Month

### 1. Summary

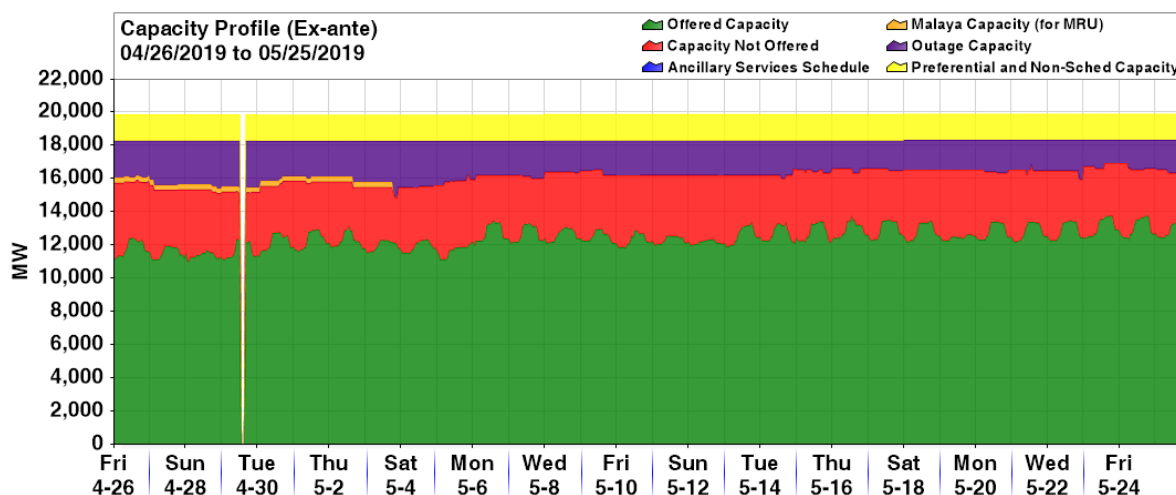
The May billing month was still marked by a growing level of demand as hotter temperatures continue due to summer season. Meanwhile, effective supply increased due to decrease in the outage capacity. It was also noted that major coal plants resumed its operation on April 30, 2019 for Mariveles unit 2 and May 5, 2019 SMC units 1 and 2 from forced outages due to 6.1 magnitude earthquake in Luzon. With the return of major coal plants with relatively lower offers, the market prices for May billing period decreased by 9.1 percent at PhP6,647/MWh compared to April with an average price of PhP7,315/MWh.

### 2. Market Outcomes

#### 2.1. Capacity Profile

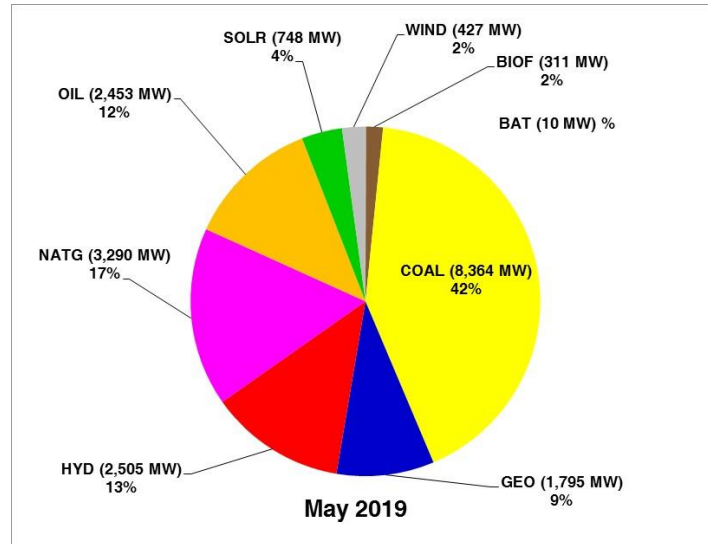
At the start of the May billing month, the WESM registered capacity increased at 19,902 MW due to the registration of the 7.4-MW oil-based facility (units 1 to 6) of Therma Power Visayas, Inc.

Of the said total WESM registered capacity, only about 2 percent or an average of 12,438 MW was offered in the market.



**Figure 1. Capacity Profile**

	May 2019		April 2019	
	Average (in MW)	% of RegCap	Average (in MW)	% of RegCap
Preferential and Non-Sched Capacity	1,573	8%	1,560	8%
Outage Capacity	2,099	11%	2,416	12%
Malaya Capacity (for MRU)	300	2%	300	2%
Capacity Not Offered	3,693	19%	3,258	16%
Offered Capacity	12,438	62%	11,752	59%
Registered Capacity (by the end of the billing month)	19,902		19,876	



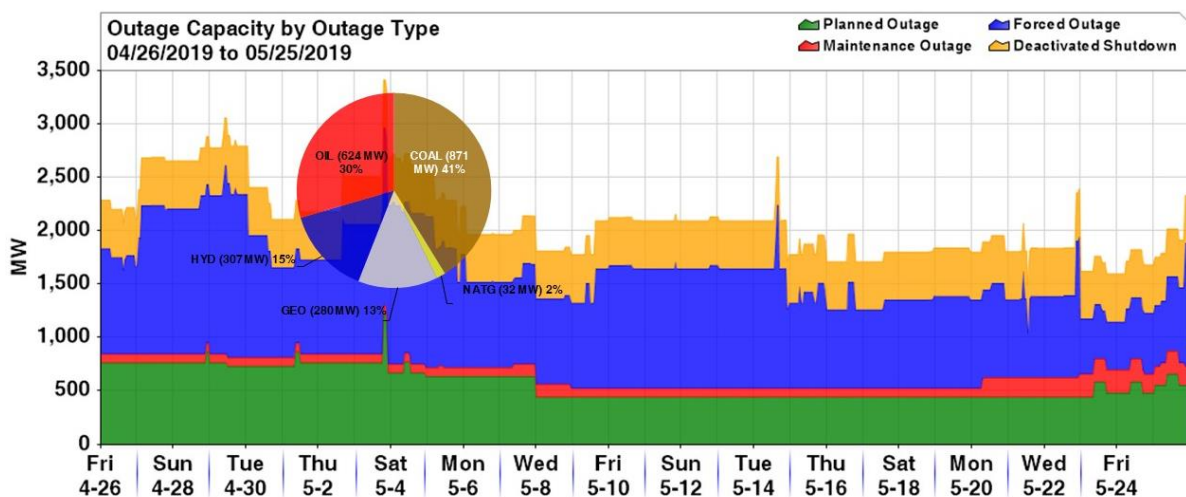
**Figure 2.** Registered Capacity Mix, May 2019

## 2.2. Outage Capacity

About 11 percent of the total registered capacity or an average of 2,099 MW were on outage. Bulk of which, at 47 percent, were related to forced outages, averaging at 978 MW. Planned outages, averaging at 566 MW, accounted for 27 percent of the total outage capacity.

On the other hand, based on type of resource, coal plants contributed 41 percent or an average of 871 MW of the total outage capacity this month which is 41 percent lower than previous month with 1,469 MW due to the resumption of major coal plants that went on outage due to the 6.1 magnitude earthquake that struck the Luzon.

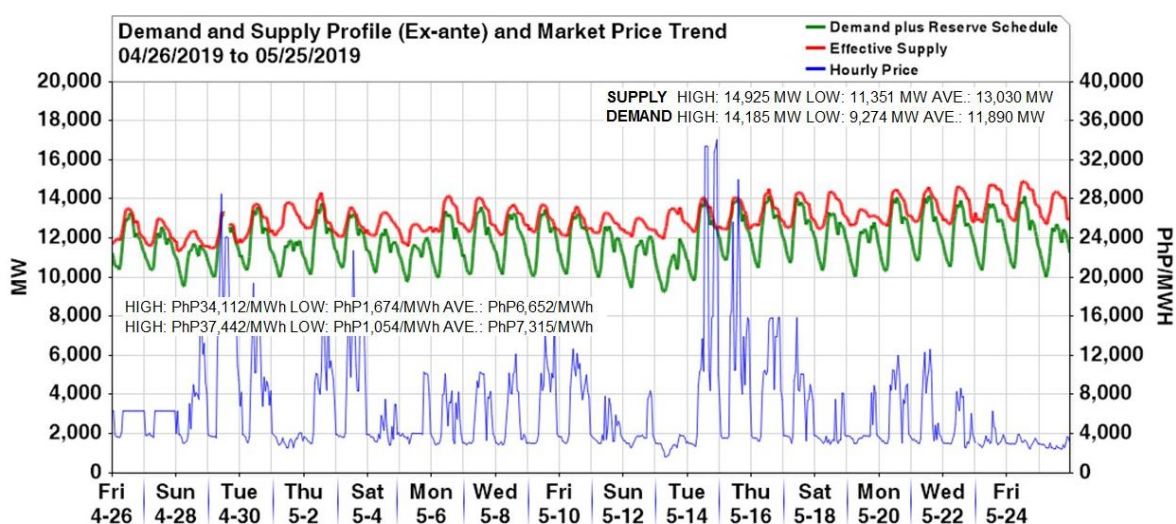
Lower level of capacity on outage was recorded at 2,099 MW compared to an average of 2,416 MW in April.



**Figure 3.** Outage Capacity by Outage Category

## 2.3. Supply and Demand

Higher average effective supply level was observed this month, increasing by 5.4 percent, at 13,030 MW from 12,363 MW in the previous month. Meanwhile, demand plus reserve schedule also increased by 6.1 percent to an average of 11,890 MW from last month's 11,205 MW due to the hot temperatures that continued to prevail during the summer months. Driven by the higher rate of increase in demand, supply margin tightened to an average of 1,136 MW from 1,159 MW in April.



**Figure 4.** Demand and Supply Profile vs. Market Prices

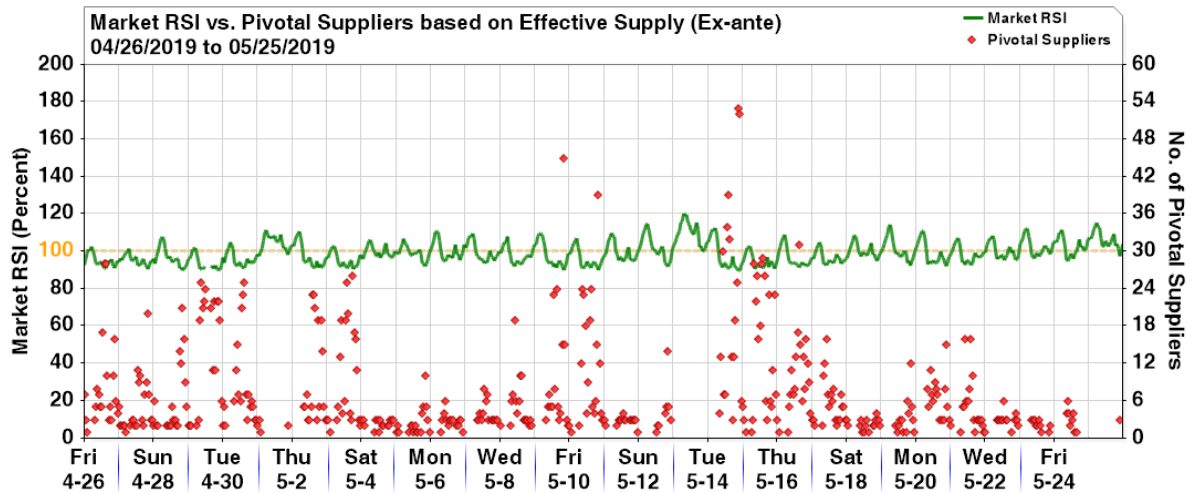
## 2.4. Market Prices

The average market price for May billing month is at PhP6,647/MWh compared to PhP7,315/MWh. It may be recalled that on the previous month, the spikes in the market prices were noted due to the dispatch of higher price oil-based plants following the outage of coal plants due to the 6.1 magnitude earthquake. Meanwhile, for May billing month, the major coal power plants SMC units 1 and 2 (150 MW each) and Mariveles unit 2 (316 MW) resumed its operation on April 22 and May 05, 2019, respectively which are on forced outage from April 22, 2019 due to the 6.1 magnitude earthquake in Luzon. In addition, hydro power plants such as Magat units 3 and 4 (95MW) and Binga unit 4 (35 MW) also resumed its operation from annual preventive maintenance. With the return of major coal plants with relatively lower offers, the market prices for May billing period decreased by 9.1 percent at PhP6,647/MWh compared to April with an average price of PhP7,315/MWh.

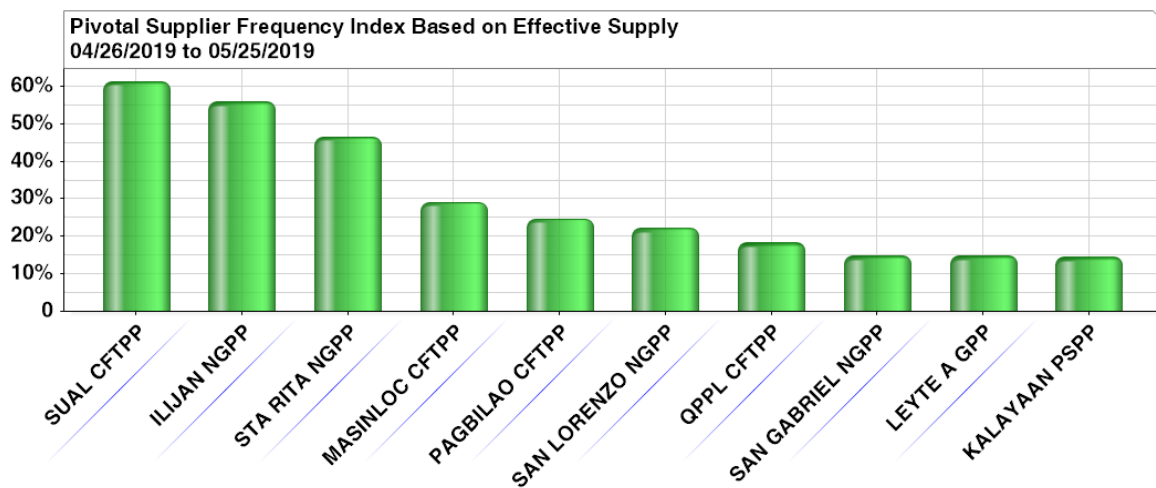
### 3. Structural Competition Indices

#### 3.1. Pivotal Plants

The market RSI fell below the 100-percent mark in 61.79 percent of the time in the May billing month, indicating the presence of pivotal suppliers during the period. This was lower than previous month's 67.7 percent following the tighter supply margin this month. Most frequent pivotal suppliers during the billing month were Sual CFTPP, Ilijan NGPP and Sta. Rita NGPP.



**Figure 5.** Market RSI vs. Pivotal Suppliers

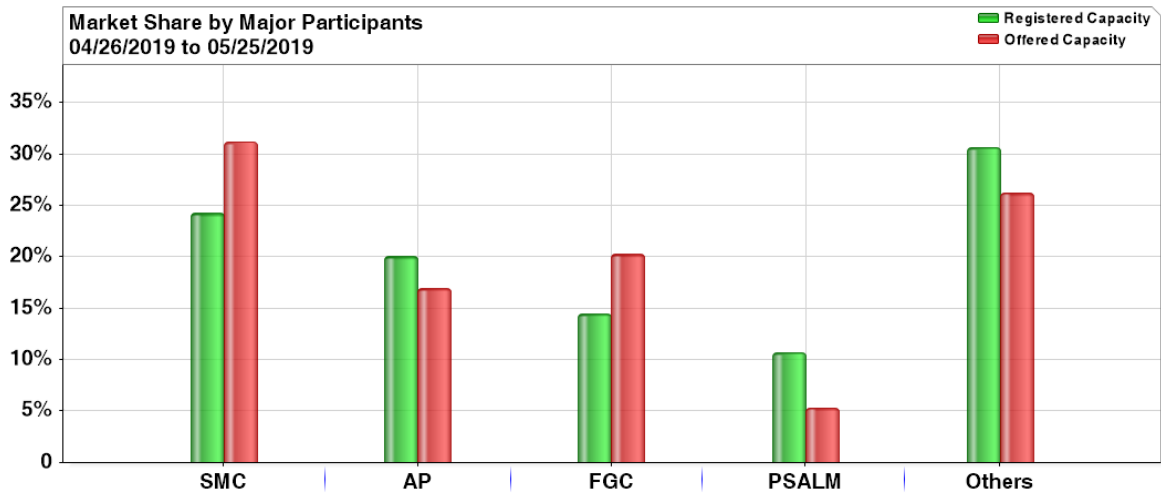


**Figure 6.** Top Pivotal Plants

#### 3.2. Market Concentration

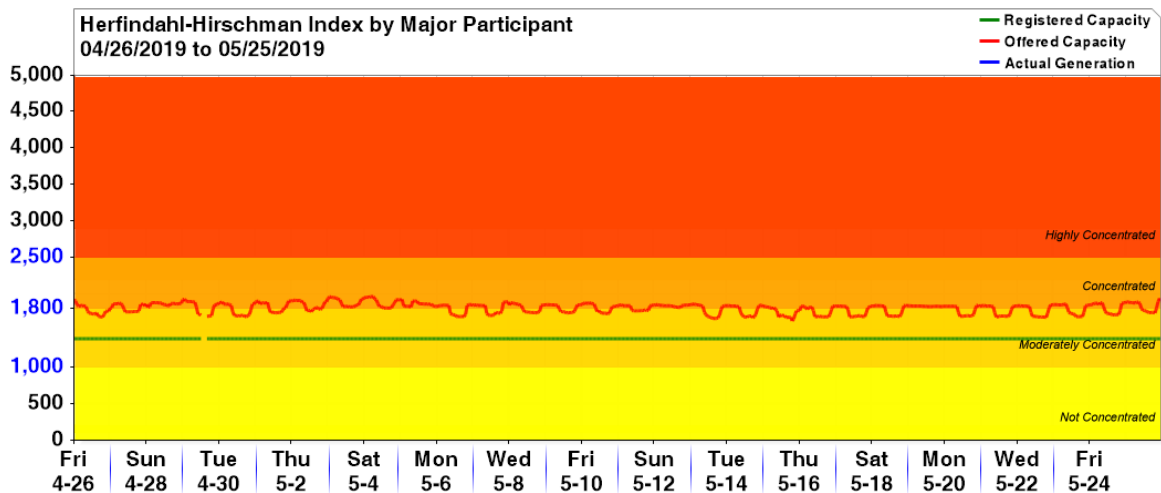
San Miguel Corporation (SMC), Aboitiz Power (AP), First Gen Corporation (FGC) and Power Sector Asset and Liabilities Management (PSALM) continued to dominate the market. Their combined market share comprised 69.39 percent of the total registered capacity in the WESM, with SMC holding the top spot at

24.3 percent followed by AP (20 percent), FGC (14.4 percent) and PSALM (10.7 percent).



**Figure 7. Market Share**

With the decrease in the reported outage for the billing month, the market shares of SMC and FGC based on offered capacity decreased to 31.2 percent and 20.3 percent, respectively. AP held a market share of 16.9 percent. Accordingly, the Herfindahl-Hirschman Index (HHI) calculated based on offered capacity by major participants' grouping indicated a concentrated market for 61.92 percent of the time and moderately concentrated market for 38.08 percent. Meanwhile, trading intervals 1400H-1600H were affected by the declaration of Market Intervention events initiated by the System Operator.



**Figure 8. Hourly HHI based on Major Participant Grouping**



## List of Major Plant Outages

Region	Plant Type	Plant / Unit Name	Capacity (MW)	Date Out	Date In	Duration	Outage Type	Remarks
LUZON	GEO	Tiwi 3	43.7	10/23/2005 13:26			Deactivated Shutdown	Tiwi 3 decommissioned since May 26 2009
LUZON	GEO	Makban 6	55	04/11/2013 22:44			Deactivated Shutdown	Conducted gas compressor test
VISAYAS	GEO	PGPP2 Unit 4	20	06/27/2014 6:07			Forced Outage	Steam being utilized by Nasulo plant
LUZON	OIL	Malaya 2	350	05/19/2018 13:01			Deactivated Shutdown	Burnt air heater 2A. RECLASSIFIED FROM FORCE. OMC OUTAGE
VISAYAS	GEO	Upper Mahiao 2	32	09/03/2018 6:01			Forced Outage	Tripped
LUZON	OIL	SLPGC 4	25	11/22/2018 11:56			Maintenance Outage	On extended maintenance shutdown until 24 April 2019
LUZON	GEO	Tiwi 1	59	11/29/2018 13:31			Maintenance Outage	Maintenance Outage
LUZON	COAL	Calaca 1	300	12/30/2018 22:38			Planned Outage	APMT until 25 June 2019 (GOMP)
LUZON	GEO	Makban 5	55	02/08/2019 16:08			Forced Outage	Low Steam Supply. Divert Steam Supply to unit 3
LUZON	HYD	Magat 1	95	03/10/2019 6:01	05/03/2019 20:45	55	Planned Outage	Annual preventive maintenance and testing (GOMP)
LUZON	HYD	San Roque 2	145	03/11/2019 15:01			Planned Outage	Planned outage until September 11 2019
VISAYAS	BIOF	SCBE	8.3	03/29/2019 15:50			Forced Outage	Due to internal problem
LUZON	COAL	GN Power 2	316	04/22/2019 17:11	05/05/2019 19:25	13	Forced Outage	Affected by tripping of Hermosa-Limay 230kV L1. L2 and L3 caused by 6.1 magnitude earthquake
LUZON	COAL	SMC 1	150	04/22/2019 17:11	04/30/2019 16:36	8	Forced Outage	Isolated due tripping of Hermosa-Limay 230kV L1. L2 and L3 caused by 6.1 magnitude earthquake
LUZON	COAL	SMC 2	150	04/22/2019 17:11	04/30/2019 14:26	8	Forced Outage	Isolated due tripping of Hermosa-Limay 230kV L1. L2 and L3 caused by 6.1 magnitude earthquake
VISAYAS	COAL	TPC Sangi 2	85	04/22/2019 22:56	04/26/2019 6:31	3	Forced Outage	MANUALLY CUT-OUT DUE TO FURNACE PRESSURE HIGH - HIGH
LUZON	HYD	Magat 3	95	04/23/2019 7:01	05/07/2019 23:20	15	Planned Outage	Annual preventive maintenance and testing
LUZON	HYD	Magat 4	95	04/23/2019 7:01	05/07/2019 23:20	15	Planned Outage	Annual preventive maintenance and testing
VISAYAS	COAL	TPC Sangi 1	60	04/23/2019 21:41	05/04/2019 6:31	10	Forced Outage	Boiler tube leak
LUZON	COAL	SLTEC 1	121	04/25/2019 15:33	04/26/2019 14:05	1	Forced Outage	Batangas SIPS activation
LUZON	HYD	Binga 4	35	04/25/2019 20:00	04/29/2019 11:30	4	Planned Outage	Annual preventive maintenance
LUZON	OIL	MGTPP	100	04/26/2019 15:36	04/26/2019 22:46	0	Forced Outage	Actuation of Fire System Trip
VISAYAS	GEO	PGPP1 Unit 2	37.5	04/26/2019 16:53	04/27/2019 18:49	1	Forced Outage	Auto-tripped. Under investigation
LUZON	NATG	Sta. Rita 3	265.5	04/27/2019 0:45	04/30/2019 1:55	3	Forced Outage	Replacement of burner for combustion chamber
LUZON	COAL	Calaca 2	300	04/27/2019 2:49	05/05/2019 4:56	8	Forced Outage	Boiler Tube Leak
VISAYAS	SOLR	Montesol 1	14.4	04/27/2019 9:18	04/27/2019 16:29	0	Forced Outage	Affected by PMS of 69KV Amlan-Guihulngan Sub TL per PAN NEGROS-2019-04-0003.
VISAYAS	OIL	Bohol 1	4	04/27/2019 9:28	04/28/2019 18:05	1	Forced Outage	High EGT at A bank
VISAYAS	OIL	CENPRI 1	4.2	04/27/2019 9:53	04/28/2019 0:01	0	Forced Outage	Auto-tripped due to high winding temperature
VISAYAS	OIL	CENPRI 1	4.2	04/28/2019 0:01			Forced Outage	Due to high winding temperature
VISAYAS	BIOF	URC 1	40	04/28/2019 0:53			Forced Outage	Offline due to Boiler problem
VISAYAS	BIOF	URC 2	40	04/28/2019 1:59	04/28/2019 4:09	0	Forced Outage	Offline due to Boiler problem
VISAYAS	BIOF	URC 2	40	04/28/2019 5:04	04/28/2019 10:26	0	Forced Outage	Offline due to Boiler problem
VISAYAS	BIOF	HPCO	3	04/28/2019 17:26	04/29/2019 17:00	1	Maintenance Outage	Offline due to weekly maintenance
LUZON	COAL	SLTEC 1	121	04/28/2019 17:38	04/30/2019 1:00	1	Forced Outage	Boiler Tube Leak
VISAYAS	OIL	PB102 Unit 1	6	04/28/2019 18:16			Forced Outage	Internal fault
LUZON	HYD	Binga 3	35	04/28/2019 21:31	04/28/2019 23:00	0	Planned Outage	Removal of Unit 4 draft tube stoplogs
LUZON	HYD	Binga 1	35	04/28/2019 21:34	04/28/2019 23:00	0	Planned Outage	Removal of Unit 4 draft tube stoplogs
LUZON	HYD	Binaa 2	35	04/28/2019 21:34	04/28/2019 23:00	0	Planned Outage	Removal of Unit 4 draft tube stoplogs
LUZON	OIL	MGTPP	100	04/29/2019 8:15	04/29/2019 13:45	0	Forced Outage	Starting failure
LUZON	HYD	Kalayaan 2	180	04/29/2019 9:23	04/29/2019 11:32	0	Forced Outage	Failed start-up
LUZON	HYD	Angat M 3	50	04/29/2019 11:27	05/02/2019 16:28	3	Forced Outage	Tripped due to High Bearing Temperature
LUZON	GEO	Tiwi 5	57	04/29/2019 16:20	04/29/2019 17:27	0	Forced Outage	Tripped at 35MW load
VISAYAS	BIOF	HPCO	3	04/30/2019 8:52	04/30/2019 9:06	0	Forced Outage	Offline to facilitate shift from unit 1 to unit 2
VISAYAS	BIOF	HPCO	3	04/30/2019 9:52	05/03/2019 5:54	3	Forced Outage	Emergency offline due to boiler problem
VISAYAS	SOLR	San Carlos 1	19.8	05/01/2019 6:00	05/01/2019 9:15	0	Forced Outage	Affected by tripping of 69KV Cadiz - San Carlos Sub TL CO.
VISAYAS	SOLR	San Carlos 2	19.8	05/01/2019 6:00	05/01/2019 9:18	0	Forced Outage	Affected by tripping of 69KV Cadiz - San Carlos Sub TL CO.
VISAYAS	SOLR	San Carlos Sun	46.8	05/01/2019 6:00	05/01/2019 9:21	0	Forced Outage	Affected by tripping of 69KV Cadiz - San Carlos Sub TL CO.
LUZON	HYD	Binga 1	35	05/01/2019 8:01	05/01/2019 11:01	0	Planned Outage	Annual Preventive Maintenance
LUZON	HYD	Binga 2	35	05/01/2019 8:01	05/01/2019 11:01	0	Planned Outage	Annual Preventive Maintenance
LUZON	HYD	Binga 3	35	05/01/2019 8:01	05/04/2019 22:35	4	Planned Outage	APM until 05 May 2019
LUZON	HYD	Binga 4	35	05/01/2019 8:01	05/01/2019 11:01	0	Planned Outage	Annual Preventive Maintenance
VISAYAS	GEO	PGPP1 Unit 3	37.5	05/01/2019 8:32	05/03/2019 16:36	2	Forced Outage	Auto-tripped. cause of tripping under investigation
LUZON	COAL	Pagbilao 1	382	05/02/2019 15:27	05/14/2019 21:14	12	Forced Outage	Tripped due to excessive water leak at feed water flow sensing line
VISAYAS	BIOF	URC 2	40	05/03/2019 11:55	05/04/2019 14:55	1	Forced Outage	Emergency offline due to boiler problem
VISAYAS	OIL	Bohol 1	4	05/03/2019 16:47	05/04/2019 8:17	1	Forced Outage	Cut out due to High exhaust gas temperature at cyl. B bank
LUZON	HYD	Kalayaan 1	180	05/03/2019 17:08	05/03/2019 21:21	0	Forced Outage	Main Transformer tripping with neutral overcurrent indication(RECLASSIFIED FROM FORCE. OMC OUTAGE)
LUZON	OIL	Malaya 1	300	05/03/2019 18:21			Forced Outage	Declared unavailable due to motorization of unit generator caused by the non-opening of phase B of PCB 8-05CB08MAL
LUZON	COAL	SBPL	455	05/03/2019 18:41	05/03/2019 21:58	0	Planned Outage	Unit tripped at 210MW load. (Commissioning Test)
VISAYAS	GEO	PGPP1 Unit 3	37.5	05/04/2019 0:09	05/04/2019 2:22	0	Forced Outage	Offline to facilitate immediate repair for one inch drain pipe of gland steam sealing line
LUZON	HYD	Binga 1	35	05/04/2019 8:01	05/04/2019 12:00	0	Planned Outage	On total plant shutdown in relation to APM activities of Unit 3
LUZON	HYD	Binga 2	35	05/04/2019 8:01	05/04/2019 12:00	0	Planned Outage	On total plant shutdown in relation to APM activities of Unit 3
LUZON	HYD	Binga 4	35	05/04/2019 8:01	05/04/2019 12:00	0	Planned Outage	On total plant shutdown in relation to APM activities of Unit 3
VISAYAS	BIOF	URC 2	40	05/04/2019 17:02	05/04/2019 19:54	0	Forced Outage	Emergency offline due to boiler problem
VISAYAS	BIOF	HPCO	3	05/04/2019 18:18	05/04/2019 19:19	0	Forced Outage	Offline due to internal problem
VISAYAS	BIOF	URC 2	40	05/05/2019 7:01	05/05/2019 9:12	0	Forced Outage	Offline due to Boiler problem
VISAYAS	GEO	PGPP2 Unit 1	20	05/05/2019 7:06	05/05/2019 10:17	0	Maintenance Outage	Offline due to Maintenance activities
LUZON	GEO	Tiwi 6	57	05/05/2019 9:02	05/05/2019 11:42	0	Forced Outage	Tripped by excitation trouble
VISAYAS	BIOF	HPCO	3	05/05/2019 10:44	05/07/2019 3:54	2	Maintenance Outage	Offline due to weekly maintenance
VISAYAS	OIL	Bohol 3	4.2	05/05/2019 10:51	05/05/2019 17:05	0	Forced Outage	Severe fuel leak at cylinder 12
LUZON	NATG	San Lorenzo 2	261.8	05/05/2019 21:11	05/06/2019 1:23	0	Forced Outage	Tripped while in the process of fuel change-over from gas to oil
VISAYAS	BIOF	URC 2	40	05/06/2019 1:39	05/06/2019 3:07	0	Forced Outage	Offline due to boiler problem
VISAYAS	OIL	PDP3 C	12	05/06/2019 18:58	05/06/2019 19:29	0	Forced Outage	High exhaust gas temperature
LUZON	HYD	Ambuklao 1	35	05/07/2019 8:01	05/08/2019 22:27	2	Maintenance Outage	Internal leak on unit 1 turbine governor servomotors
VISAYAS	GEO	Mahagadong B1	5	05/07/2019 9:55	05/07/2019 20:06	0	Forced Outage	Tripped with load of 36 MW. Under assessment by Plant Personnel.
VISAYAS	COAL	PALM 1	135	05/07/2019 14:23	05/07/2019 23:29	0	Forced Outage	Due to internal trouble
VISAYAS	SOLR	San Carlos 1	19.8	05/07/2019 14:23	05/07/2019 15:07	0	Forced Outage	Affected by Grid Fluctuation due to tripping of PCPC (134.8MW)
VISAYAS	SOLR	San Carlos 2	19.8	05/07/2019 14:23	05/07/2019 15:07	0	Forced Outage	Affected by Grid Fluctuation due to tripping of PCPC (134.8MW)
VISAYAS	BIOF	HPCO	3	05/07/2019 15:43	05/08/2019 8:17	1	Forced Outage	Offline due to low voltage at 13.8kV side
LUZON	HYD	Ambuklao 3	35	05/08/2019 18:01	05/08/2019 22:04	0	Forced Outage	Lube oil high pressure pump trouble
LUZON	HYD	Kalayaan 2	180	05/09/2019 8:48	05/09/2019 11:41	0	Forced Outage	Failed to synchronize
VISAYAS	SOLR	Isasol 3	40.5	05/09/2019 12:17	05/09/2019 13:33	0	Forced Outage	Isolated due to tripping of 69KV Cadiz-Manapla Solar Line
LUZON	COAL	GN Power 1	316	05/09/2019 14:21	05/21/2019 12:59	12	Forced Outage	High Turbine Vibration
VISAYAS	GEO	Upper Mahiao 1	32	05/09/2019 23:00	05/10/2019 15:23	1	Forced Outage	Loss of excitation
VISAYAS	OIL	Bohol 2	4	05/10/2019 10:53	05/10/2019 21:01	0	Forced Outage	Lube oil leak on copper tubing for instrumentation
VISAYAS	BIOF	HPCO	3	05/11/2019 14:58	05/11/2019 15:13	0	Forced Outage	Offline due to internal problem
LUZON	GEO	Makban 3	63	05/11/2019 19:52	05/11/2019 20:07	0	Forced Outage	Generator Trouble
VISAYAS	BIOF	FFHC	13	05/12/2019 8:16	05/12/2019 22:25	1	Forced Outage	Emergency offline due to sugar entrainment on condensate water
VISAYAS	BIOF	HPCO	3	05/12/2019 17:47	05/13/2019 12:35	1	Maintenance Outage	Offline due to weekly maintenance
VISAYAS	GEO	PGPP1 Unit 1	37.5	05/12/2019 18:47	05/13/2019 0:09	0	Forced Outage	Auto-tripped due to tripping of vacuum pump
VISAYAS	BIOF	HPCO	3	05/13/2019 12:35	05/15/2019 14:56	2	Forced Outage	Isolated due to tripping of 69KV Bacolod-Silay Sub TL. customer owned and maintained line
VISAYAS	SOLR	Silay	20	05/13/2019 12:35	05/15/2019 5:59	2	Forced Outage	Isolated due to tripping of 69KV Bacolod-Silay Sub TL. customer owned and maintained line
LUZON	HYD	Kalayaan 3	180	05/14/2019 13:11	05/14/2019 16:52	0	Forced Outage	Declared unavailable due to Generator Breaker Problem
LUZON	GEO	Tiwi 6	57	05/14/2019 14:32	05/14/2019 16:30	0	Forced Outage	Tripped due to excitation trouble
LUZON	HYD	Kalayaan 1	180	05/14/2019 14:32	05/14/2019 16:42	0	Forced Outage	Tripped due to arclash of exploded grading capacitor of PBC 8- 02CB24SJU
LUZON	HYD	Kalayaan 2	180	05/14/2019 14:32	05/14/2019 16:34	0	Forced Outage	Tripped due to arclash of exploded grading capacitor of PBC 8- 02CB24SJU
VISAYAS	OIL	PB102 Unit 3	6	05/14/2019 18:58	05/15/2019 17:15	1	Forced Outage	due to lube oil inlet pressure low
LUZON	GEO	Bacman 1	60	05/14/2019 22:22	05/15/2019 22:22	1	Forced Outage	Tripped due to High Bearing Vibration
LUZON	COAL	SMC 3	150	05/15/2019 5:19	05/15/2019 6:53	0	Forced Outage	Offline due to high Drum Level
LUZON	OIL	MGTPP	100	05/15/2019 8:45	05/15/2019 15:11	0	Forced Outage	Low pressure solenoid valve trouble
VISAYAS	OIL	CENPRI 5	6.4	05/15/2019 16:57	05/15/2019 17:19	0	Forced Outage	Auto-tripped due to jacket water low pressure
LUZON	NATG	Ilijan A1	190	05/15/2019 17:19	05/15/2019 23:35	0	Forced Outage	Cumbustor Pressure Fluctuation(CPF) trouble. Tripped at 190MW load. System Frequency is 59.34Hz.
LUZON	NATG	Sta. Rita 1	257.3	05/16/2019 13:45	05/16/2019 18:27	0	Forced Outage	Emergency shutdown due to open vent valve of gas supply
LUZON	OIL	Limay 4	90	05/17/2019 13:11	05/20/2019 21:29	3	Forced Outage	Sudden closure of diverter damper. Declared not available at 1449H.
LUZON	BIOF	iPower 2	12	05/18/2019 12:00			Forced Outage	Emergency plant shutdown due to leak at cooling tower
VISAYAS	BIOF	HPCO	3	05/18/2019 18:26	05/18/2019 20:46	0	Forced Outage	Offline due to low voltage at 13.8kV side
VISAYAS	OIL	Bohol 3	4.2	05/18/2019 19:41	05/18/2019 23:14	0	Forced Outage	Fuel oil leak at A Bank header
VISAYAS	GEO	PGPP1 Unit 2	37.5	05/18/2019 22:41	05/19/2019 22:31	1	Forced Outage	Auto tripped. On going investigation
LUZON	HYD	Magat 2	95	05/20/2019 6:01			Maintenance Outage	Maintenance outage until 18 July 2019
VISAYAS	SOLR	Isasol 2	27.2	05/20/2019 8:03	05/20/2019 9:50	0	Forced Outage	Auto-tripped due to vegetation along their 13.8kV line
LUZON	OIL	Limay 1	60	05/20/2019 12:29	05/20/2019 21:09	0	Forced Outage	Failed to synchronized due to cooler fan trouble
VISAYAS	GEO	Mahagadong A1	5	05/21/2019 7:08			Forced Outage	Emergency shutdown
LUZON	NATG	Sta. Rita 1	257.3	05/21/2019 9:08	05/21/2019 10:37	0	Forced Outage	Tripped due to GT protection triggered by radio interference signal.
LUZON	COAL	GN Power 1	316	05/21/2019 13:02	05/22/2019 23:38	1	Forced Outage	Emergency shutdown due to intercept valve 2 trouble
LUZON	OIL	SLPGC 3	25	05/21/2019 14:00			Forced Outage	Burnt Medium Voltage Circuit Breaker

VISAYAS	OIL	Bohol 2	4	05/21/2019 14:47	05/21/2019 19:05	0	Forced Outage	Emergency cut out due to severe oil leak at cyl. copper tubing
VISAYAS	GEO	Mahanagdong B1	5	05/22/2019 12:45			Forced Outage	AVR 24VDC power failure
LUZON	COAL	SBPL	455	05/22/2019 20:33	05/22/2019 23:32	0	Forced Outage	Tripped at 400MW load. Feedwater flow problem. On Commissioning Test.
LUZON	OIL	Limay 1	60	05/22/2019 20:55	05/23/2019 13:36	1	Forced Outage	Fuel Nozzle flow-off valve malfunction
VISAYAS	GEO	PGPP1 Unit 2	37.5	05/22/2019 22:04	05/24/2019 17:15	2	Maintenance Outage	Offline due to maintenance activities
LUZON	HYD	Binga 1	35	05/23/2019 8:01	05/23/2019 16:51	0	Planned Outage	Installation of unit 2 draft tube stoplogs
LUZON	HYD	Binga 2	35	05/23/2019 8:01			Planned Outage	Unit 2 APM
LUZON	HYD	Binga 4	35	05/23/2019 8:01	05/23/2019 16:51	0	Planned Outage	Installation of unit 2 draft tube stoplogs
LUZON	HYD	Binga 3	35	05/23/2019 8:07	05/23/2019 16:51	0	Planned Outage	Installation of unit 2 draft tube stoplogs
LUZON	COAL	SLTEC 1	121	05/24/2019 5:19			Forced Outage	Boiler Tube Leak
LUZON	HYD	Binga 1	35	05/24/2019 8:01	05/24/2019 16:50	0	Planned Outage	Protection testing of overhead lines and power intake trash rack cleaning
LUZON	HYD	Binga 3	35	05/24/2019 8:01	05/24/2019 16:50	0	Planned Outage	Protection testing of overhead lines and power intake trash rack cleaning
LUZON	HYD	Binga 4	35	05/24/2019 8:01	05/24/2019 16:50	0	Planned Outage	Protection testing of overhead lines and power intake trash rack cleaning
VISAYAS	GEO	Malibog 3	72	05/25/2019 0:36			Planned Outage	Annual PMS
VISAYAS	GEO	PGPP1 Unit 1	37.5	05/25/2019 4:12	05/25/2019 20:24	1	Maintenance Outage	Offline to conduct repair of cooling tower leak at cooling tower hot distribution basin
LUZON	HYD	Binga 1	35	05/25/2019 8:09	05/25/2019 16:01	0	Planned Outage	Protection testing of overhead lines and power intake trash rack cleaning
LUZON	HYD	Binga 3	35	05/25/2019 8:09	05/25/2019 16:01	0	Planned Outage	Protection testing of overhead lines and power intake trash rack cleaning
LUZON	HYD	Binga 4	35	05/25/2019 8:09	05/25/2019 16:10	0	Planned Outage	Protection testing of overhead lines and power intake trash rack cleaning
LUZON	COAL	SLTEC 2	122.9	05/25/2019 8:22			Forced Outage	On emergency shutdown due to boiler tube leak
LUZON	COAL	SBPL	455	05/25/2019 20:26	05/25/2019 23:52	0	Forced Outage	Tripped due to GSUT Oil Temperature High High (On commissioning Test)
LUZON	OIL	Limay 5	60	05/25/2019 23:51			Forced Outage	Blow off valve trouble