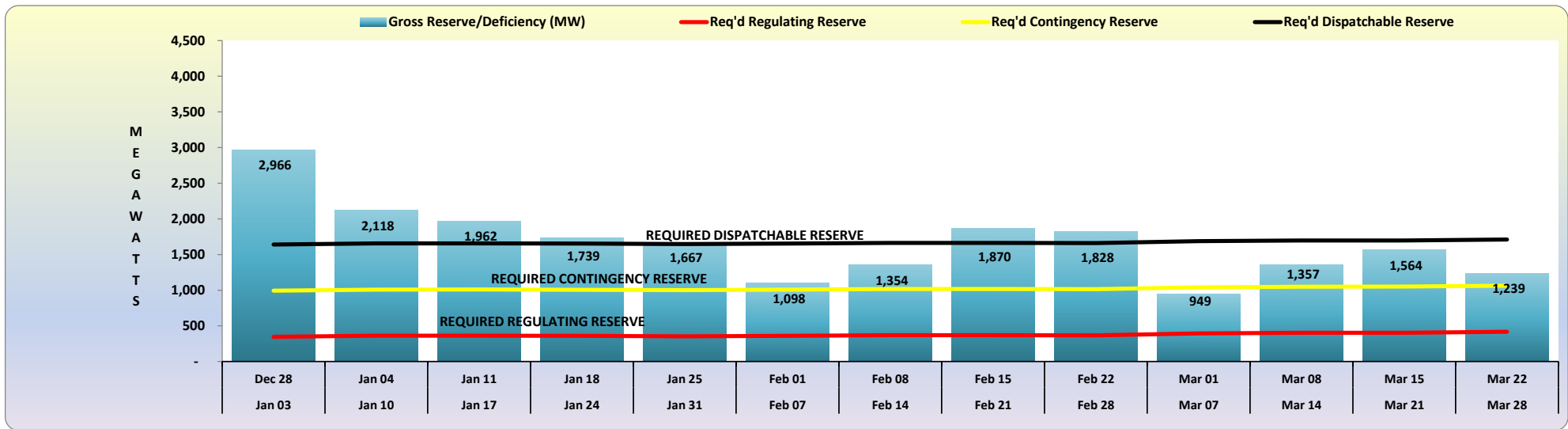


LUZON GRID (Actual Data) 2019 1st Quarter Reserve Profile

REVISION 1

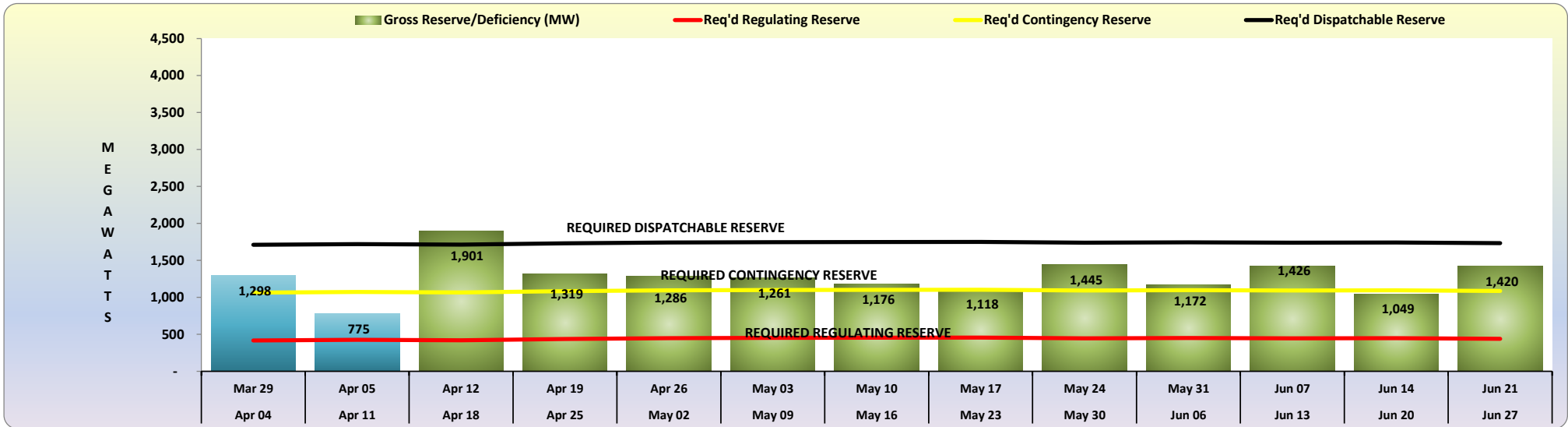


2018	1ST QUARTER												
	Dec 28	Jan 04	Jan 11	Jan 18	Jan 25	Feb 01	Feb 08	Feb 15	Feb 22	Mar 01	Mar 08	Mar 15	Mar 22
	Jan 03	Jan 10	Jan 17	Jan 24	Jan 31	Feb 07	Feb 14	Feb 21	Feb 28	Mar 07	Mar 14	Mar 21	Mar 28
Available Capacity (MW)	11,623	11,148	11,031	10,714	10,502	10,100	10,599	11,117	11,002	10,794	11,409	11,659	11,659
Thermal	-	-	-	-	-	-	-	-	-	-	-	-	-
Coal	4,793	4,402	4,214	3,388	3,235	3,665	3,906	4,466	4,374	3,900	4,810	5,174	5,086
Gas Turbine/Diesel	434	432	432	381	381	344	359	359	335	360	360	359	359
Combined Cycle/NatGas	3,405	3,322	3,307	3,692	3,691	3,598	3,651	3,479	3,836	3,710	3,708	3,682	3,733
Geothermal	377	393	394	390	505	438	427	490	455	582	357	341	394
HVDC	-	-	-	107	94	74	71	190	253	280	133	113	96
Wind Farm	136	153	238	290	195	6	208	101	42	133	79	44	35
Biomass	61	50	61	52	52	50	60	52	49	46	57	57	68
Solar	205	181	197	224	176	222	217	192	211	212	185	211	192
Hydro	2,212	2,215	2,188	2,190	2,173	1,703	1,700	1,788	1,447	1,571	1,720	1,678	1,696
System Load (MW)	8,657	9,030	9,069	8,975	8,835	9,002	9,245	9,247	9,174	9,845	10,052	10,095	10,420
Gross Reserve/Deficiency (MW)	2,966	2,118	1,962	1,739	1,667	1,098	1,354	1,870	1,828	949	1,357	1,564	1,239
Req'd Regulating Reserve	346	361	363	359	353	360	370	370	367	394	402	404	417
Req'd Contingency Reserve	647	647	647	647	647	647	647	647	647	647	647	647	647
Req'd Dispatchable Reserve	647	647	647	647	647	647	647	647	647	647	647	647	647

1. Peak Demand Forecast at 11,403 MW to occur in May 2019 based from the DOE Forecast.
2. Preventive Maintenance of Power Plants considered.
3. Embedded Generators considered.

LUZON GRID 2019 2nd Quarter Reserve Profile

REVISION 1

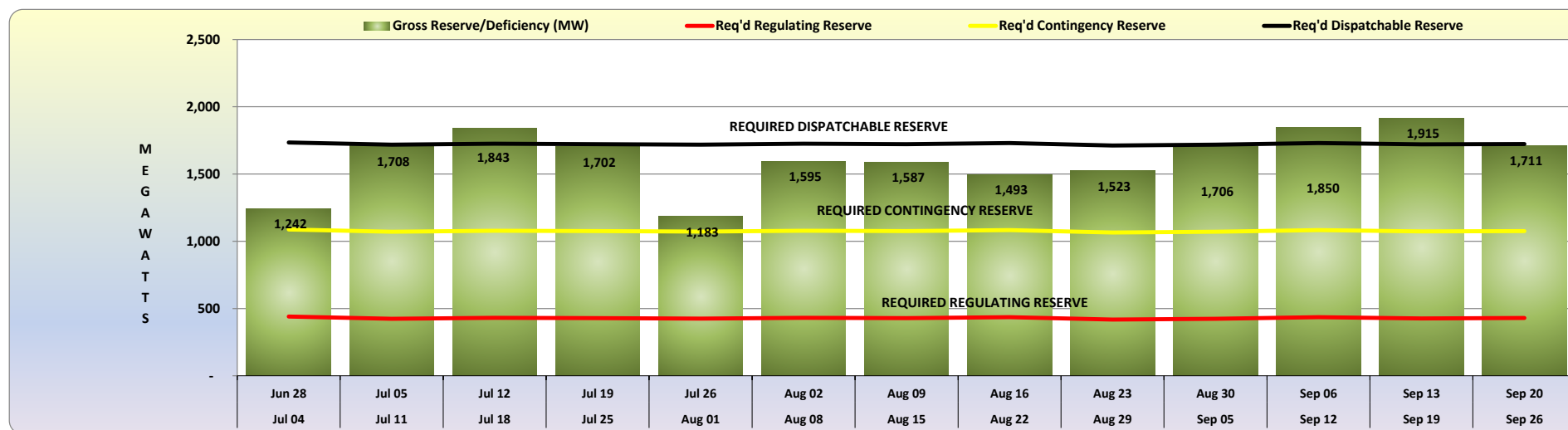


2018	2ND QUARTER												
	Mar 29	Apr 05	Apr 12	Apr 19	Apr 26	May 03	May 10	May 17	May 24	May 31	Jun 07	Jun 14	Jun 21
	Apr 04	Apr 11	Apr 18	Apr 25	May 02	May 09	May 16	May 23	May 30	Jun 06	Jun 13	Jun 20	Jun 27
Available Capacity (MW)	11,725	11,454	12,241	12,099	11,956	12,325	12,300	12,275	12,189	11,926	11,975	12,013	11,829
Thermal	-	150	150	150	150	150	150	150	150	150	150	150	150
Coal	5,072	4,576	5,382	5,381	5,382	5,764	5,764	5,764	5,764	5,764	5,764	5,764	5,614
Gas Turbine/Diesel	359	346	405	405	415	415	415	415	415	415	415	415	415
Combined Cycle/NatGas	3,707	3,709	3,830	3,830	3,830	3,830	3,830	3,830	3,830	3,830	3,830	3,830	3,830
Geothermal	400	453	504	473	473	504	504	504	504	465	465	459	459
HVDC	258	222	-	-	-	-	-	-	-	-	-	-	-
Wind Farm	38	88	84	89	11	27	34	42	22	9	46	58	20
Biomass	57	67	73	69	69	69	55	44	62	73	73	73	73
Solar	213	205	193	183	180	194	186	165	109	106	105	137	136
Hydro	1,621	1,638	1,620	1,520	1,446	1,371	1,361	1,361	1,333	1,114	1,127	1,127	1,132
System Load (MW)	10,427	10,679	10,500	10,940	11,220	11,310	11,370	11,403	11,150	11,250	11,130	11,210	10,990
Gross Reserve/Deficiency (MW)	1,298	775	1,901	1,319	1,286	1,261	1,176	1,118	1,445	1,172	1,426	1,049	1,420
Req'd Regulating Reserve	417	427	420	438	449	452	455	456	446	450	445	448	440
Req'd Contingency Reserve	647	647	647	647	647	647	647	647	647	647	647	647	647
Req'd Dispatchable Reserve	647	647	647	647	647	647	647	647	647	647	647	647	647

1. Peak Demand Forecast at 11,403 MW to occur in May 2019 based from the DOE Forecast.
2. Preventive Maintenance of Power Plants considered.
3. Embedded Generators considered.

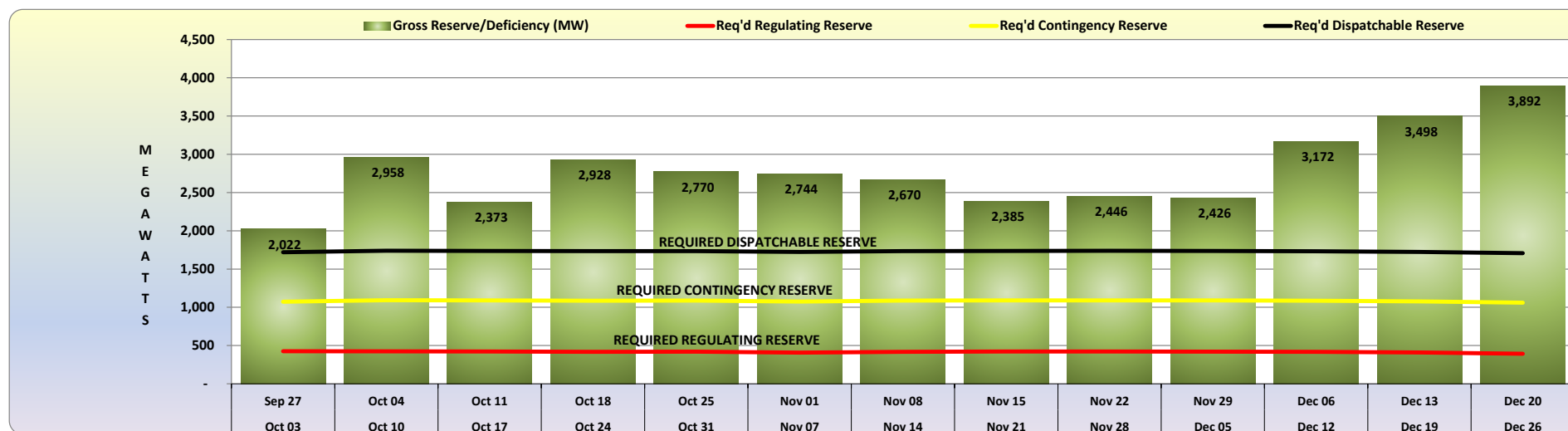
LUZON GRID 2019 3rd Quarter Reserve Profile

REVISION 1



2018	3RD QUARTER													
	Jun 28	Jul 05	Jul 12	Jul 19	Jul 26	Aug 02	Aug 09	Aug 16	Aug 23	Aug 30	Sep 06	Sep 13	Sep 20	
	Jul 04	Jul 11	Jul 18	Jul 25	Aug 01	Aug 08	Aug 15	Aug 22	Aug 29	Sep 05	Sep 12	Sep 19	Sep 26	
Available Capacity (MW)	11,756	11,812	12,127	11,916	11,307	11,879	11,801	11,897	11,477	11,810	12,254	12,079	11,945	
Thermal	150	150	150	150	150	150	150	150	150	150	150	150	150	
Coal	5,482	5,482	5,482	5,482	5,182	5,564	5,701	5,701	5,701	5,551	5,443	5,443	5,943	
Gas Turbine/Diesel	415	415	415	415	415	415	415	415	415	415	415	409	409	
Combined Cycle/NatGas	3,740	3,468	3,730	3,480	3,140	3,140	2,958	3,230	2,885	3,440	3,830	3,740	3,140	
Geothermal	459	459	459	459	459	465	465	463	463	463	463	465	465	
HVDC	-	-	-	-	-	-	-	-	-	-	-	-	-	
Wind Farm	10	9	12	40	24	160	155	90	50	117	27	12	15	
Biomass	73	73	73	73	63	56	56	56	56	56	55	55	51	
Solar	115	101	131	137	104	119	91	132	97	66	129	63	30	
Hydro	1,312	1,656	1,676	1,680	1,770	1,810	1,810	1,660	1,660	1,552	1,742	1,742	1,742	
System Load (MW)	11,010	10,600	10,780	10,710	10,620	10,780	10,710	10,900	10,450	10,600	10,900	10,660	10,730	
Gross Reserve/Deficiency (MW)	1,242	1,708	1,843	1,702	1,183	1,595	1,587	1,493	1,523	1,706	1,850	1,915	1,711	
Req'd Regulating Reserve	440	424	431	428	425	431	428	436	418	424	436	426	429	
Req'd Contingency Reserve	647	647	647	647	647	647	647	647	647	647	647	647	647	
Req'd Dispatchable Reserve	647	647	647	647	647	647	647	647	647	647	647	647	647	

1. Peak Demand Forecast at 11,403 MW to occur in May 2019 based from the DOE Forecast.
2. Preventive Maintenance of Power Plants considered.
3. Embedded Generators considered.



2018	4TH QUARTER													
	Sep 27	Oct 04	Oct 11	Oct 18	Oct 25	Nov 01	Nov 08	Nov 15	Nov 22	Nov 29	Dec 06	Dec 13	Dec 20	
	Oct 03	Oct 10	Oct 17	Oct 24	Oct 31	Nov 07	Nov 14	Nov 21	Nov 28	Dec 05	Dec 12	Dec 19	Dec 26	
Available Capacity (MW)	12,166	13,072	12,427	12,892	12,764	12,448	12,644	12,419	12,520	12,450	13,106	13,232	13,206	
Thermal	150	150	150	150	150	-	-	-	-	-	150	150	-	
Coal	6,093	6,761	6,882	6,235	5,891	5,901	5,901	5,751	5,751	5,601	5,945	6,095	6,095	
Gas Turbine/Diesel	409	415	415	415	415	415	415	415	415	399	399	399	405	
Combined Cycle/NatGas	3,140	3,140	2,440	3,440	3,475	3,475	3,650	3,650	3,650	3,650	3,650	3,650	3,740	
Geothermal	427	427	427	427	427	427	427	465	465	465	465	465	465	
HVDC	-	-	-	-	-	-	-	-	-	-	-	-	-	
Wind Farm	14	120	51	134	146	180	182	215	174	231	232	215	214	
Biomass	51	62	66	66	66	66	48	37	62	73	73	73	73	
Solar	140	95	94	124	112	82	124	22	129	129	110	103	132	
Hydro	1,742	1,902	1,902	1,902	2,082	1,902	1,897	1,864	1,874	1,902	2,082	2,082	2,082	
System Load (MW)	10,640	10,610	10,550	10,460	10,490	10,200	10,470	10,530	10,570	10,520	10,430	10,230	9,810	
Gross Reserve/Deficiency (MW)	2,022	2,958	2,373	2,928	2,770	2,744	2,670	2,385	2,446	2,426	3,172	3,498	3,892	
Req'd Regulating Reserve	426	424	422	418	420	408	419	421	423	421	417	409	392	
Req'd Contingency Reserve	647	668	668	668	668	668	668	668	668	668	668	668	668	
Req'd Dispatchable Reserve	647	647	647	647	647	647	647	647	647	647	647	647	647	

1. Peak Demand Forecast at 11,403 MW to occur in May 2019 based from the DOE Forecast.
2. Preventive Maintenance of Power Plants considered.
3. Embedded Generators considered.