

MARKET OUTCOMES



Load Weighted
Average Price

PHP 4.40/KWH

SYSTEM-WIDE

Luzon:PHP 4.01/KWH

Visayas:PHP 5.30/KWH

Mindanao:PHP 5.35/KWH



Average Supply

19,892 MW

SYSTEM-WIDE

Luzon: 13,978 MW

Visayas: 2,570 MW

Mindanao: 3,344 MW



Average Demand

14,126 MW

SYSTEM-WIDE

Luzon: 9,994 MW

Visayas: 2,029 MW

Mindanao: 2,103 MW

HVDC AVERAGE MW FLOW



LUZON TO VISAYAS

>>> 148 MW

47.42% of the time

VISAYAS TO LUZON

<<< 200 MW

50.05% of the time

VISAYAS TO MINDANAO

>>> 41 MW

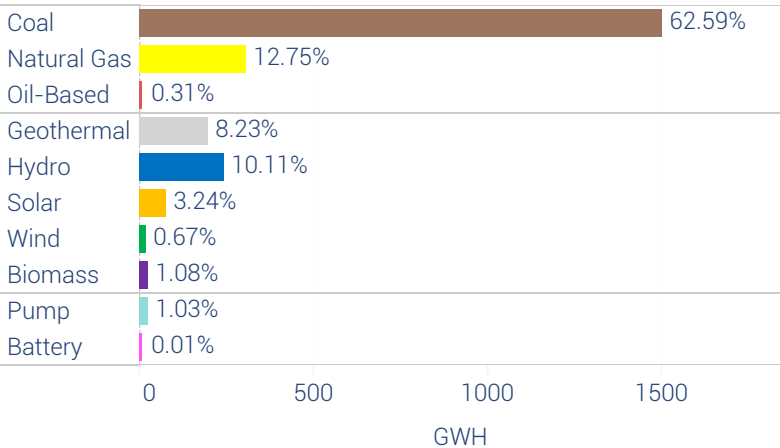
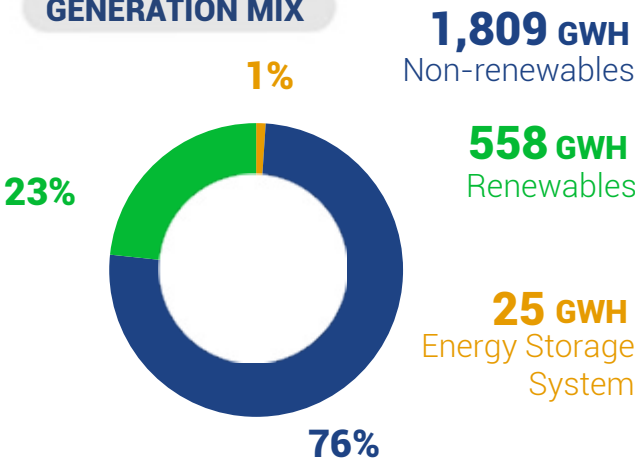
3.13% of the time

MINDANAO TO VISAYAS

<<< 224 MW

96.43% of the time

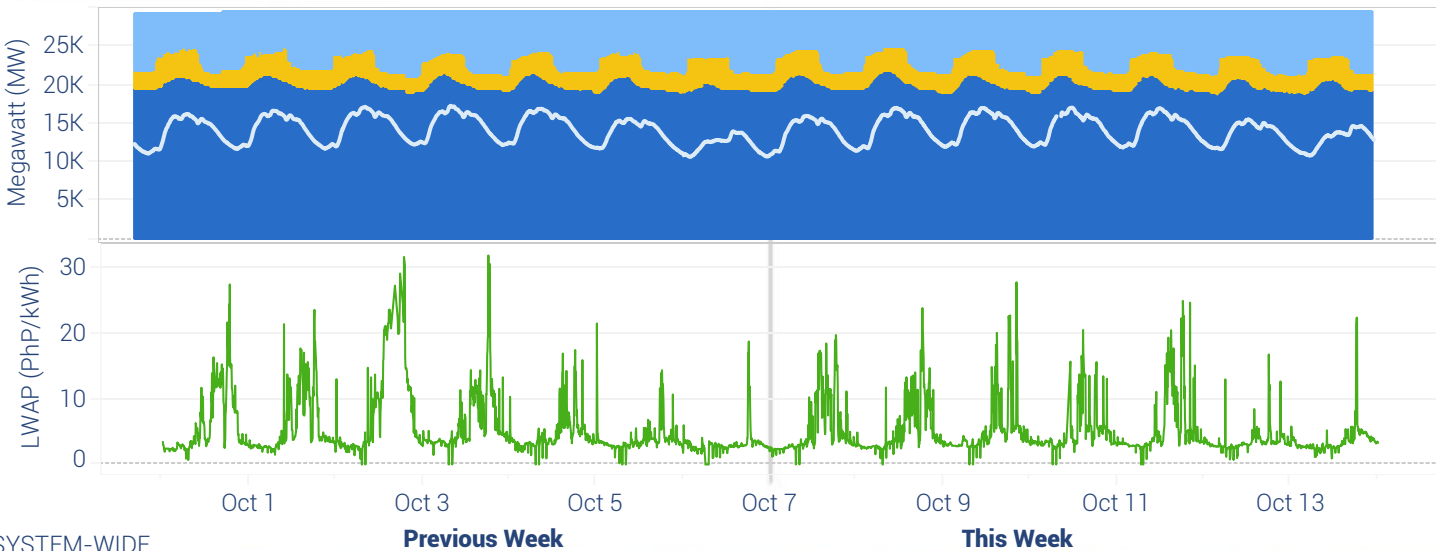
GENERATION MIX



SYSTEM-WIDE

SUPPLY DEMAND PRICE

Outage Capacity Derated Capacity Available Capacity Demand



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ROLLING AVERAGE GENERATOR WEIGHTED AVERAGE PRICE



PRICE DISTRIBUTION

System

	Below 0 P/kWh	0 - 2.5 P/kWh	2.5 - 5 P/kWh	5 - 10 P/kWh	Above 10 P/kWh
Oct 07	1%	27%	48%	22%	2%
Oct 08	0%	16%	53%	26%	5%
Oct 09	0%	3%	66%	23%	8%
Oct 10	0%	3%	66%	22%	8%
Oct 11	0%	6%	65%	21%	7%
Oct 12	0%	12%	84%	3%	1%
Oct 13	0%	22%	72%	5%	1%

Luzon

	Below 0 P/kWh	0 - 2.5 P/kWh	2.5 - 5 P/kWh	5 - 10 P/kWh	Above 10 P/kWh
Oct 07	1%	29%	68%	2%	0%
Oct 08	0%	17%	59%	22%	2%
Oct 09	0%	3%	67%	23%	7%
Oct 10	0%	3%	69%	19%	8%
Oct 11	0%	7%	66%	22%	5%
Oct 12	0%	12%	85%	2%	1%
Oct 13	0%	23%	71%	5%	1%

Visayas

	Below 0 P/kWh	0 - 2.5 P/kWh	2.5 - 5 P/kWh	5 - 10 P/kWh	Above 10 P/kWh
Oct 07	1%	22%	46%	10%	22%
Oct 08	0%	13%	52%	16%	19%
Oct 09	0%	2%	66%	19%	13%
Oct 10	0%	3%	64%	20%	12%
Oct 11	0%	4%	67%	9%	19%
Oct 12	0%	12%	80%	6%	2%
Oct 13	0%	24%	66%	9%	2%

Mindanao

	Below 0 P/kWh	0 - 2.5 P/kWh	2.5 - 5 P/kWh	5 - 10 P/kWh	Above 10 P/kWh
Oct 07	1%	20%	48%	10%	21%
Oct 08	0%	12%	55%	14%	19%
Oct 09	0%	2%	66%	19%	13%
Oct 10	0%	3%	67%	18%	12%
Oct 11	0%	3%	66%	11%	20%
Oct 12	0%	10%	85%	2%	2%
Oct 13	1%	21%	73%	4%	1%

PRICING CONDITION

	LUZON					VISAYAS					MINDANAO				
	OK	PEN	PSM	SEC	AP	OK	PEN	PSM	SEC	AP	OK	PEN	PSM	SEC	AP
Oct 07	288	0	0	0	0	288	0	0	0	0	288	0	0	0	0
Oct 08	288	0	0	0	0	288	0	0	0	0	288	0	0	0	0
Oct 09	288	0	0	0	0	288	0	0	0	0	288	0	0	0	0
Oct 10	275	4	0	0	9	275	4	0	0	9	275	4	0	0	9
Oct 11	287	1	0	0	0	287	1	0	0	0	287	1	0	0	0
Oct 12	288	0	0	0	0	288	0	0	0	0	288	0	0	0	0
Oct 13	275	13	0	0	0	275	13	0	0	0	275	13	0	0	0

REGIONAL INTERCONNECTION

VISAYAS-LUZON HVDC INTERCONNECTION

From Luzon to Visayas

	Maximum	Average	% of Time
Oct 07	125	107	69%
Oct 08	125	107	55%
Oct 09	250	182	53%
Oct 10	250	148	48%
Oct 11	250	217	55%
Oct 12	250	163	39%
Oct 13	125	61	14%

From Visayas to Luzon

	Maximum	Average	% of Time
Oct 07	129	44	27%
Oct 08	282	103	42%
Oct 09	395	273	47%
Oct 10	420	316	48%
Oct 11	420	218	45%
Oct 12	420	160	59%
Oct 13	420	209	82%

MINDANAO-VISAYAS HVDC INTERCONNECTION

From Visayas to Mindanao

	Maximum	Average	% of Time
Oct 07	38	13	8%
Oct 08	0	0	0%
Oct 09	0	0	0%
Oct 10	0	0	0%
Oct 11	93	56	14%
Oct 12	0	0	0%
Oct 13	0	0	0%

From Mindanao to Visayas

	Maximum	Average	% of Time
Oct 07	311	136	92%
Oct 08	386	177	100%
Oct 09	450	250	100%
Oct 10	450	266	97%
Oct 11	450	208	86%
Oct 12	450	238	100%
Oct 13	450	283	100%

SUPPLY, DEMAND, AND PRICE TABLE

Luzon

	SUPPLY			DEMAND			PRICE		
	MIN	AVE	MAX	MIN	AVE	MAX	MIN	AVE	MAX
Oct 07	13,447	14,187	15,482	7,661	9,661	11,090	-1	2,968	13,221
Oct 08	13,502	14,300	15,781	8,116	10,269	12,078	-1	3,769	21,272
Oct 09	13,095	14,012	15,271	8,574	10,461	12,014	0	4,687	26,796
Oct 10	13,033	13,932	15,248	8,614	10,355	12,080	0	4,674	19,788
Oct 11	13,341	14,041	15,414	8,528	10,335	11,941	0	4,342	23,735
Oct 12	12,739	13,776	14,925	8,319	9,762	11,031	671	3,129	12,570
Oct 13	12,999	13,598	14,650	7,678	9,135	10,369	879	3,486	21,706

Visayas

	SUPPLY			DEMAND			PRICE		
	MIN	AVE	MAX	MIN	AVE	MAX	MIN	AVE	MAX
Oct 07	2,449	2,556	2,781	1,478	2,003	2,407	0	6,398	26,060
Oct 08	2,477	2,575	2,805	1,633	2,082	2,452	-1	6,056	26,734
Oct 09	2,476	2,570	2,788	1,686	2,113	2,480	0	5,379	26,917
Oct 10	2,489	2,568	2,811	1,655	2,064	2,459	0	5,042	19,641
Oct 11	2,478	2,584	2,815	1,611	2,087	2,496	0	6,116	26,368
Oct 12	2,376	2,565	2,766	1,613	1,975	2,297	674	3,408	21,688
Oct 13	2,474	2,574	2,787	1,574	1,882	2,223	874	3,705	21,702

Mindanao

	SUPPLY			DEMAND			PRICE		
	MIN	AVE	MAX	MIN	AVE	MAX	MIN	AVE	MAX
Oct 07	3,178	3,268	3,369	1,570	2,107	2,556	0	6,256	26,255
Oct 08	3,351	3,378	3,421	1,671	2,148	2,537	-1	5,956	27,101
Oct 09	3,344	3,369	3,401	1,716	2,167	2,606	0	5,307	26,762
Oct 10	3,316	3,381	3,419	1,716	2,160	2,566	0	4,987	19,972
Oct 11	3,209	3,262	3,403	1,755	2,189	2,609	0	6,341	27,787
Oct 12	3,292	3,327	3,404	1,721	2,034	2,319	677	3,263	22,050
Oct 13	3,288	3,459	3,557	1,609	1,916	2,308	0	3,232	21,461

GENERATION MIX TABLE

Luzon

	NON-RENEWABLE ENERGY			RENEWABLE ENERGY					ESS	
	Coal	Natural Gas	Oil-Based	Geothermal	Hydro	Solar	Wind	Biomass	Pump	Battery
Oct 07	62.49%	18.41%	0.00%	5.25%	7.33%	3.22%	1.10%	0.64%	1.56%	0.00%
Oct 08	62.73%	18.38%	0.00%	4.91%	6.90%	3.80%	0.62%	0.61%	2.02%	0.03%
Oct 09	64.32%	18.54%	0.02%	4.90%	6.20%	3.17%	0.27%	0.62%	1.96%	0.01%
Oct 10	64.14%	18.76%	0.05%	4.76%	6.24%	3.04%	0.36%	0.61%	1.98%	0.06%
Oct 11	63.56%	17.82%	0.02%	4.71%	7.76%	3.60%	0.54%	0.69%	1.31%	0.00%
Oct 12	62.70%	16.43%	0.00%	5.24%	8.52%	3.92%	1.26%	0.72%	1.19%	0.03%
Oct 13	61.53%	17.42%	0.01%	5.50%	8.12%	4.22%	2.45%	0.76%	0.00%	0.00%

Visayas

	NON-RENEWABLE ENERGY		RENEWABLE ENERGY					ESS
	Coal	Oil-Based	Geothermal	Hydro	Solar	Wind	Biomass	Battery
Oct 07	57.21%	1.31%	32.47%	1.15%	5.01%	0.16%	2.69%	0.00%
Oct 08	58.00%	0.87%	31.26%	1.37%	4.70%	0.03%	3.75%	0.00%
Oct 09	58.75%	0.82%	31.11%	1.15%	4.26%	0.18%	3.73%	0.00%
Oct 10	59.17%	0.85%	31.16%	1.20%	3.93%	0.05%	3.64%	0.00%
Oct 11	58.89%	1.19%	31.02%	1.19%	4.71%	0.04%	2.97%	0.00%
Oct 12	57.22%	0.60%	33.13%	1.02%	4.50%	0.22%	3.30%	0.00%
Oct 13	56.19%	0.64%	33.47%	1.13%	5.29%	0.22%	3.06%	0.01%

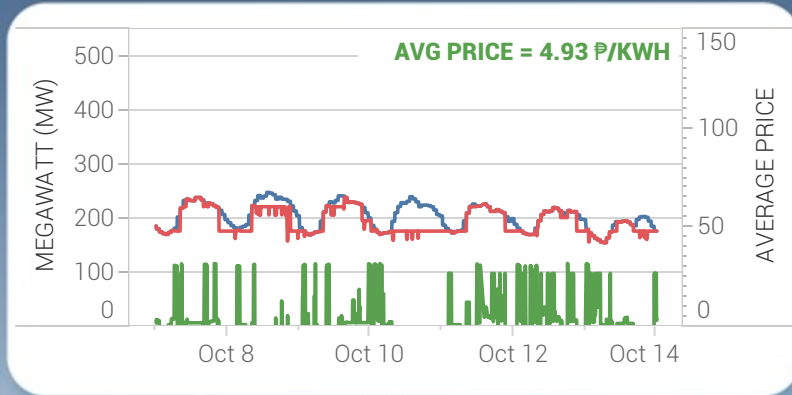
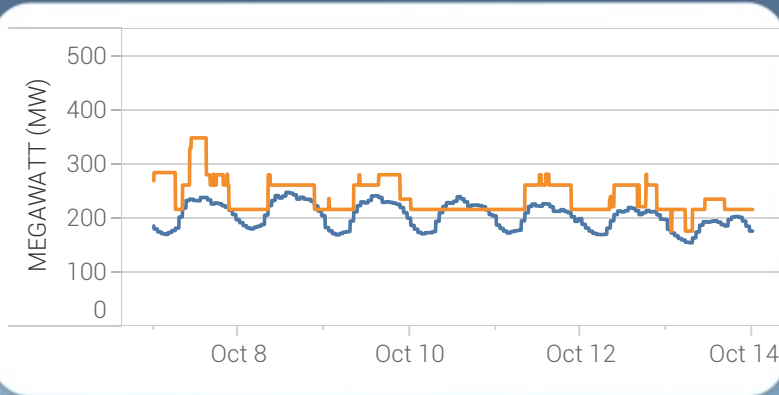
Mindanao

	NON-RENEWABLE ENERGY		RENEWABLE ENERGY				ESS
	Coal	Oil-Based	Hydro	Geothermal	Solar	Biomass	Battery
Oct 07	63.51%	1.58%	29.28%	3.68%	0.72%	1.22%	0.00%
Oct 08	65.49%	1.38%	27.72%	3.55%	0.75%	1.10%	0.00%
Oct 09	66.49%	1.37%	27.09%	3.30%	0.70%	1.05%	0.00%
Oct 10	66.05%	1.05%	27.93%	3.24%	0.65%	1.08%	0.00%
Oct 11	63.76%	1.91%	28.99%	3.50%	0.74%	1.10%	0.00%
Oct 12	62.01%	0.10%	32.49%	3.58%	0.69%	1.14%	0.00%
Oct 13	60.82%	0.37%	34.06%	2.87%	0.77%	1.12%	0.00%

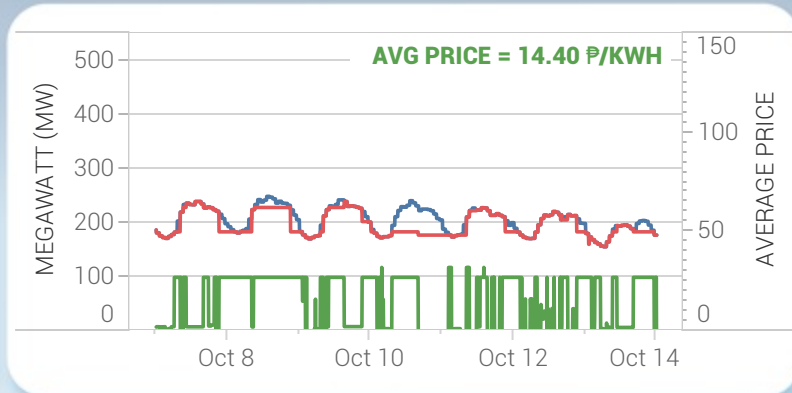
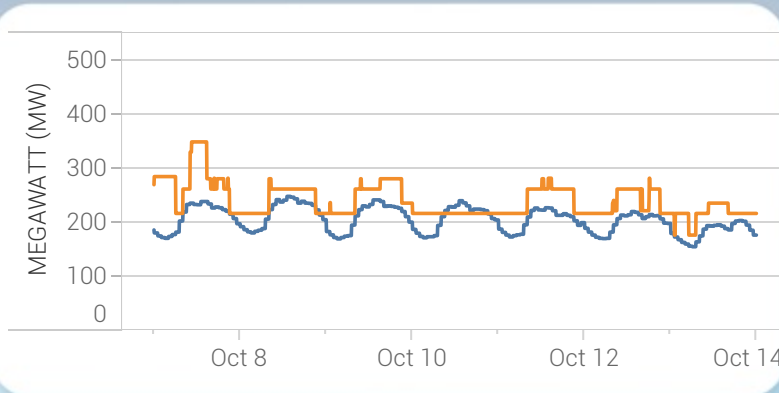
LUZON RESERVES

■ Reserve Requirement ■ Reserve Offers ■ Reserve Schedule ■ Zonal Reserve Price

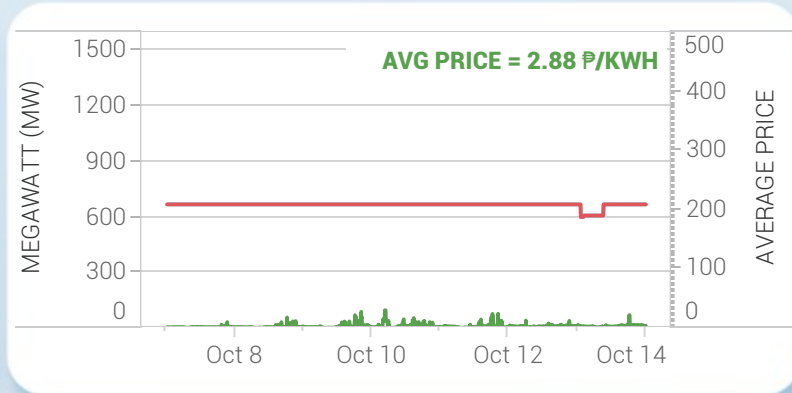
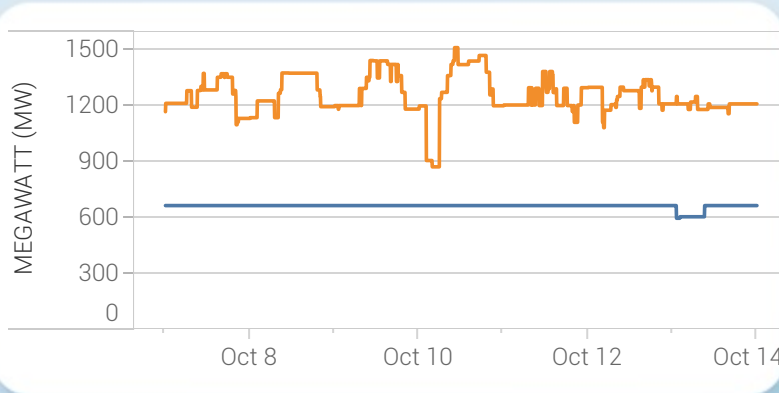
REGULATION UP RESERVE



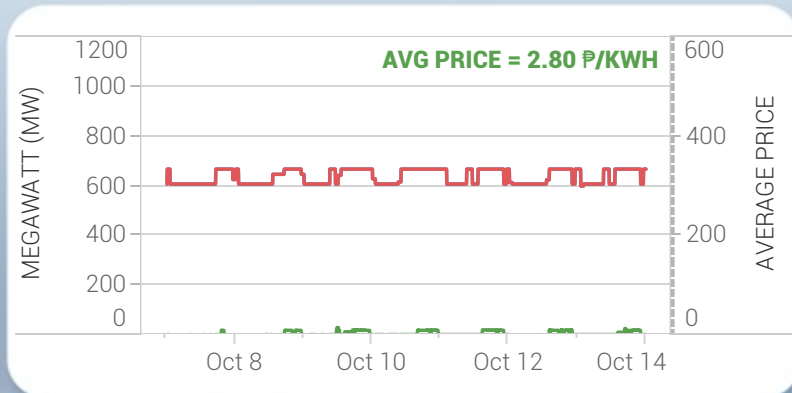
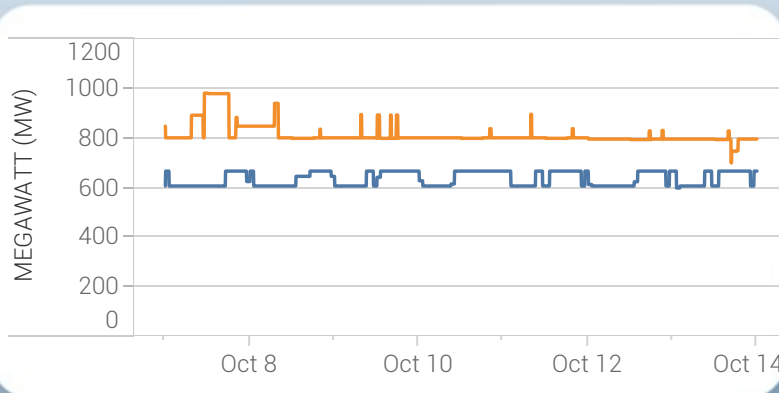
REGULATION DOWN RESERVE



CONTINGENCY RESERVE



DISPATCHABLE RESERVE



VISAYAS RESERVES

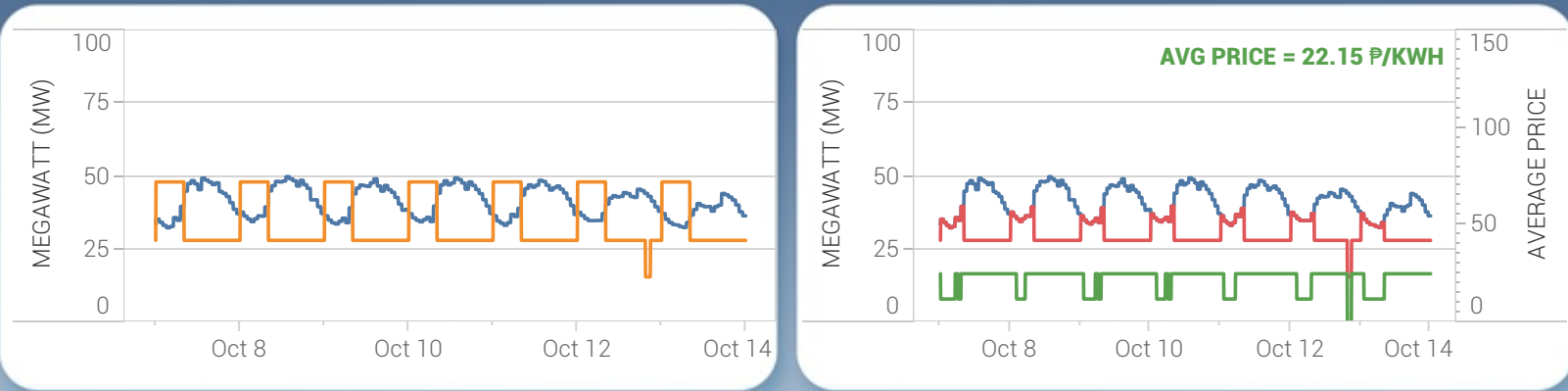
Reserve Requirement

Reserve Offers

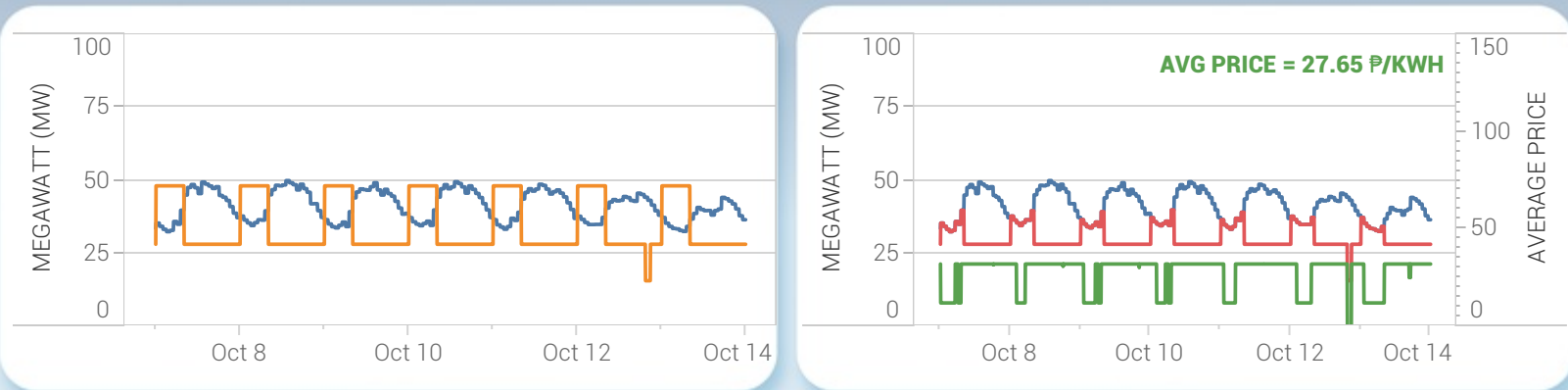
Reserve Schedule

Zonal Reserve Price

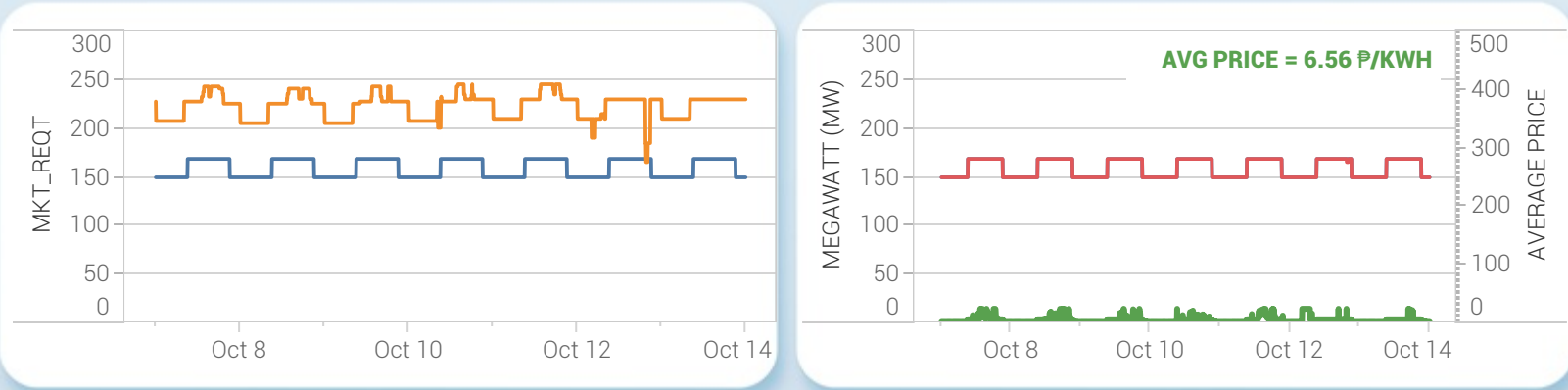
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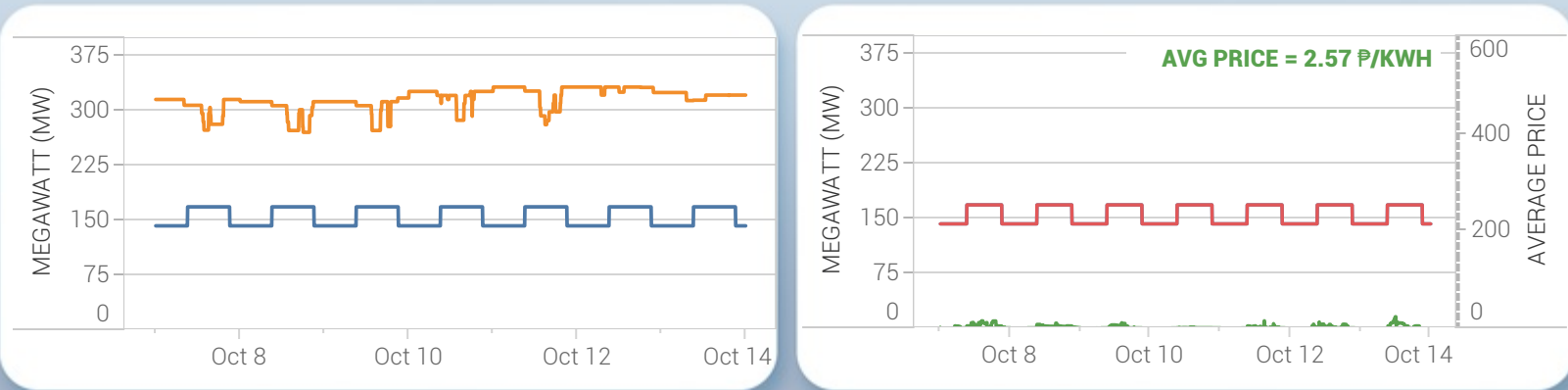
REGULATION DOWN RESERVE



CONTINGENCY RESERVE



DISPATCHABLE RESERVE



MINDANAO RESERVES

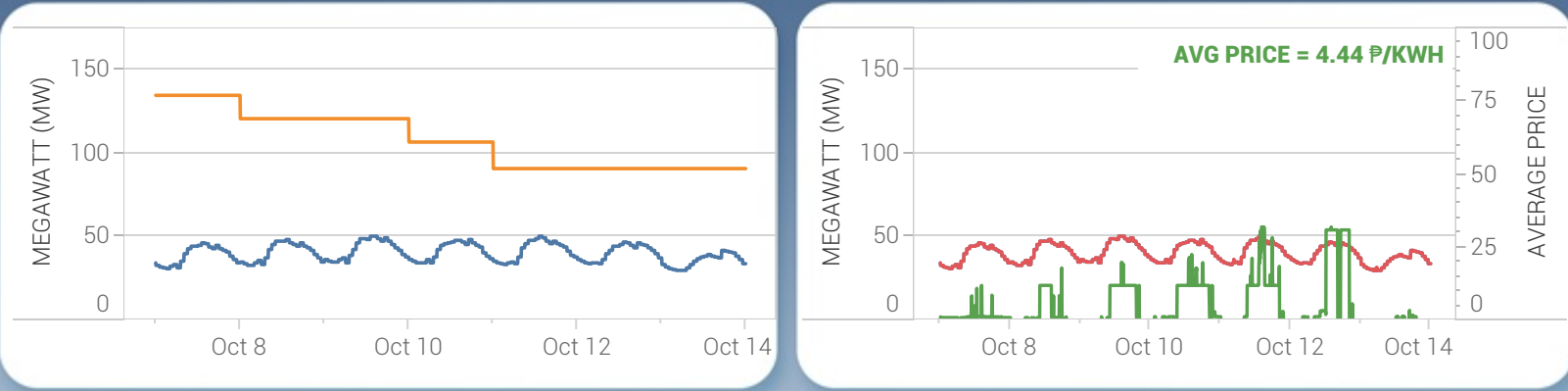
Reserve Requirement

Reserve Offers

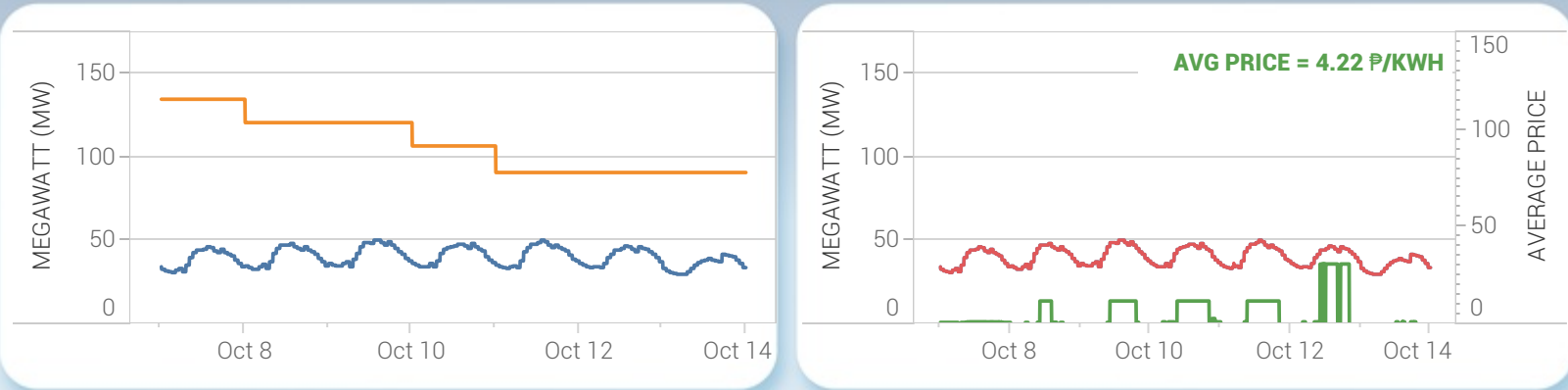
Reserve Schedule

Zonal Reserve Price

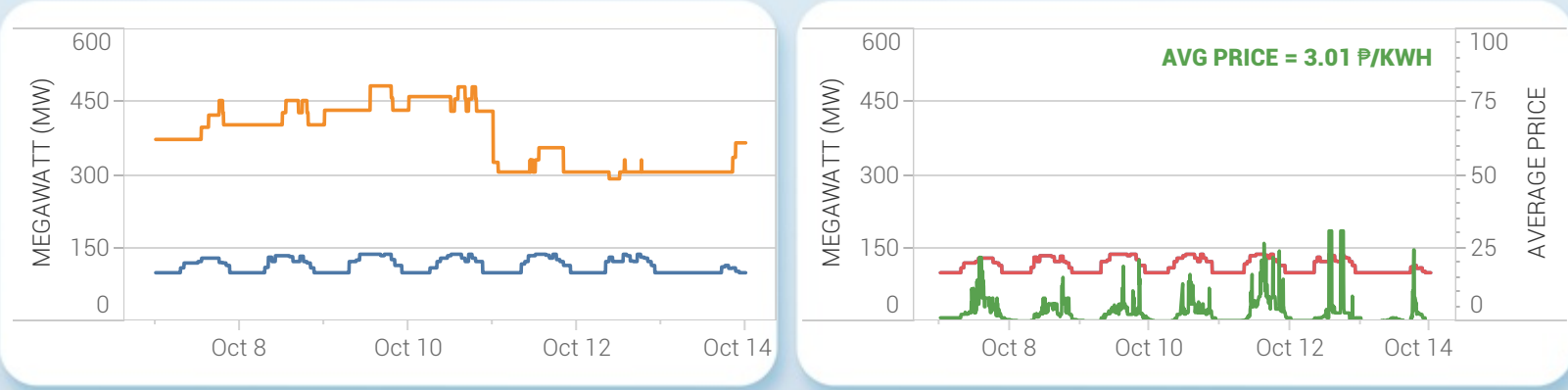
REGULATION UP RESERVE



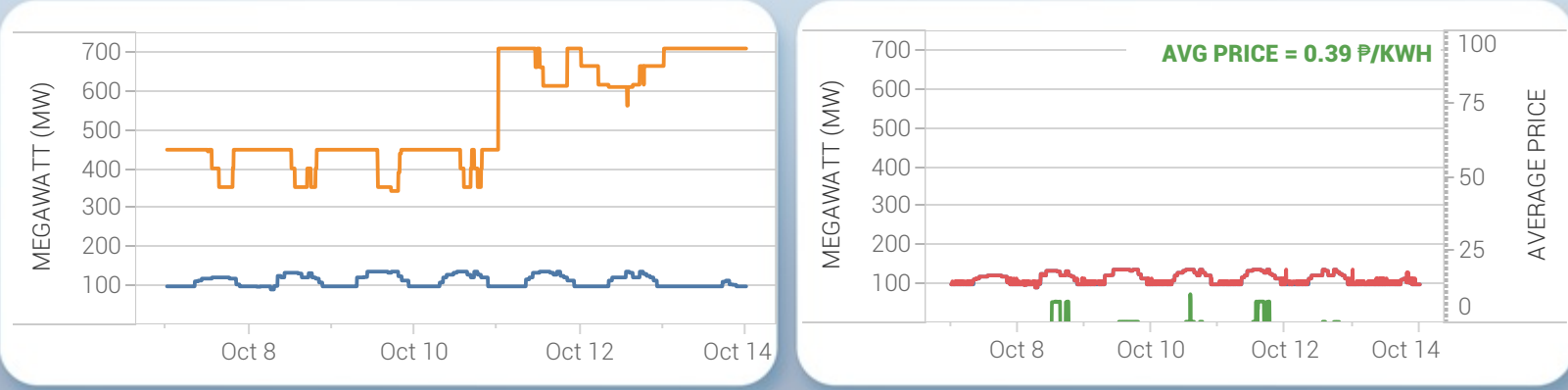
REGULATION DOWN RESERVE



CONTINGENCY RESERVE



DISPATCHABLE RESERVE



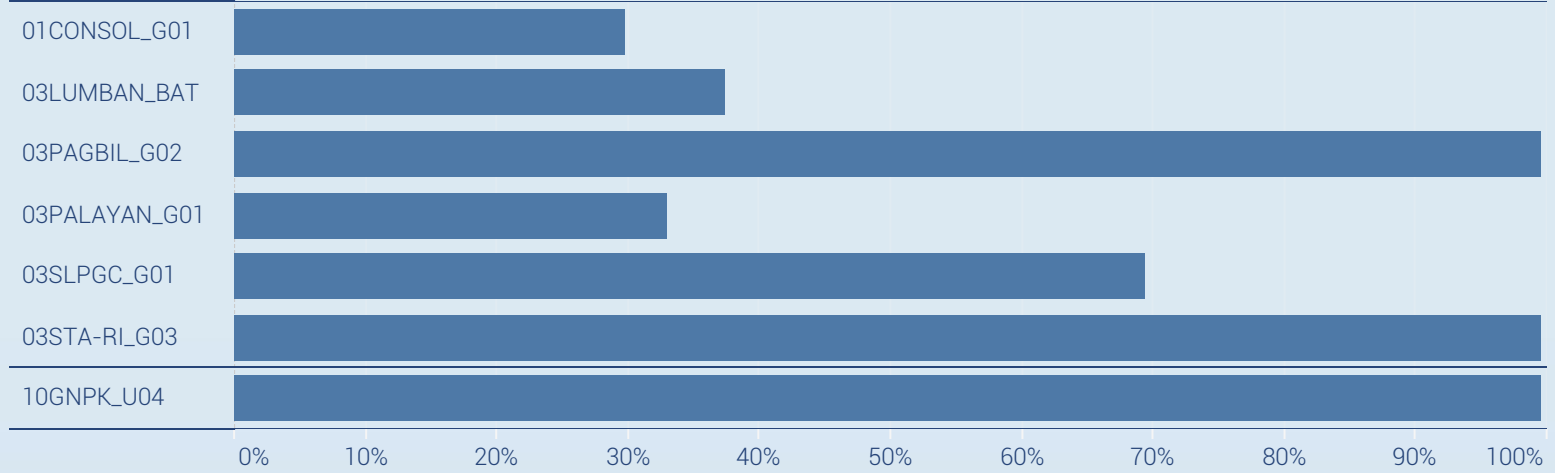
AVERAGE RESERVE REQUIREMENT AND SCHEDULE

LUZ	Regulation Up			Regulation Down			Contingency Reserve			Dispatchable Reserve		
	Req't	Sched	Surplus or Deficit	Req't	Sched	Surplus or Deficit	Req't	Sched	Surplus or Deficit	Req't	Sched	Surplus or Deficit
Oct 07	211	205	-6	211	206	-4	668	668	0	626	626	0
Oct 08	219	199	-20	219	207	-12	668	668	0	634	634	0
Oct 09	211	204	-6	211	207	-3	668	668	0	642	642	0
Oct 10	208	176	-32	208	179	-29	668	668	0	643	643	0
Oct 11	204	199	-5	204	200	-4	668	668	0	643	643	0
Oct 12	199	195	-5	199	196	-3	668	668	0	631	631	0
Oct 13	183	176	-7	183	179	-5	648	648	0	640	640	0

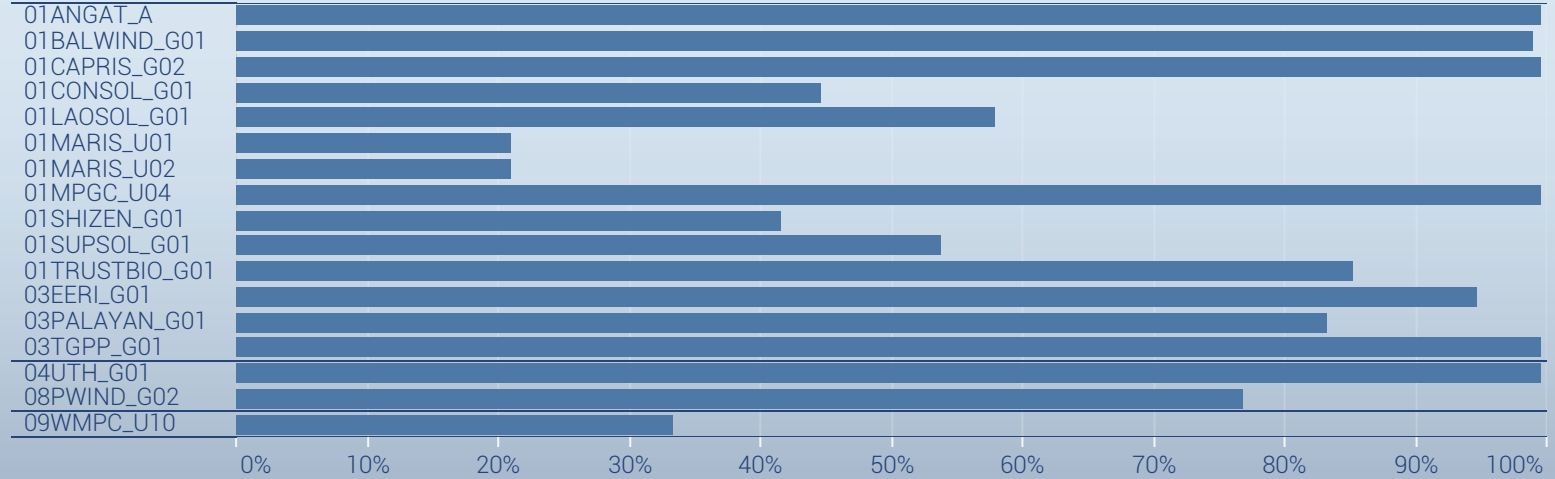
VIS	Regulation Up			Regulation Down			Contingency Reserve			Dispatchable Reserve		
	Req't	Sched	Surplus or Deficit	Req't	Sched	Surplus or Deficit	Req't	Sched	Surplus or Deficit	Req't	Sched	Surplus or Deficit
Oct 07	42	30	-11	42	30	-11	160	160	0	156	156	0
Oct 08	43	31	-12	43	31	-12	160	160	0	156	156	0
Oct 09	42	31	-11	42	31	-11	160	160	0	156	156	0
Oct 10	42	31	-11	42	31	-11	159	159	0	156	156	0
Oct 11	42	31	-11	42	31	-11	160	160	0	156	156	0
Oct 12	40	30	-11	40	30	-11	160	159	0	156	156	0
Oct 13	38	30	-8	38	30	-8	160	160	0	156	156	0

MIN	Regulation Up			Regulation Down			Contingency Reserve			Dispatchable Reserve		
	Req't	Sched	Surplus or Deficit	Req't	Sched	Surplus or Deficit	Req't	Sched	Surplus or Deficit	Req't	Sched	Surplus or Deficit
Oct 07	39	39	0	39	39	0	113	113	0	110	112	2
Oct 08	41	41	0	41	41	0	116	116	0	115	116	1
Oct 09	43	43	0	43	43	0	120	120	0	119	121	2
Oct 10	42	42	0	42	42	0	117	117	0	117	118	1
Oct 11	42	42	0	42	42	0	117	117	0	117	119	2
Oct 12	41	41	0	41	41	0	116	116	0	115	117	2
Oct 13	36	36	0	36	36	0	102	102	0	102	105	3

GENERATORS ON OUTAGE



GENERATORS WITH SYSTEM OPERATOR OVERRIDING CONSTRAINT



FREQUENT CONGESTIONS

