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Appendix - A Purchasing Rates for Application of TBPM

Bulk Supply Tariff (BST) [7] has two cost components, the capacity cost and the energy charge. Capacity cost is charged for the maximum demand recorded for the month at the coincident system peak which occurs during 1915 and 1930 at present. This capacity cost reflects the cost of capacity of the network which is used to supply up to the input point of the concerned asset of DL. The cost of energy is charged only for active energy in three Time of Use (TOU) rates, while the cost of reactive energy is zero. The BST applicable for the Negombo branch is shown in Table A-1.

Table A-1 BST for 2013

Description	Code	Interval (in 24 hours)	Number of Hours	Unit Charge	Unit
TOU -Day	1	0530 to 1830	13	8.65	LKR/ kWh
TOU - Peak	2	1830 to 2230	4	10.85	LKR/ kWh
TOU - Off-Peak	3	2230 to 0530	7	6.49	LKR/ kWh
Capacity Charge	-	-		1,257,346.00	LKR/ MW

If the capacity cost is dissolved in the input active energy units through averaging. Thus the average capacity cost ACC per input kWh is found as (A.1).

$$ACC = \frac{1257346.00 \times MD(P)}{\sum E^{IP}} \quad (A.2)$$

Where,

$MD(P) = 29.639 \text{ MW}$ The kW maximum demand recorded between 1900 hrs to 2000 hrs for June 2013. The value is recorded on 6th of June 2013 (Appendix - E)

$\sum E^{IP} = 14,714,826$ Total kWh input to the asset during the month

$$ACC = 2.53 \text{ LKR /kW h}$$

Further for the purpose of elaboration the time intervals of TOU are floored to the nearest hour. Accordingly, the energy purchasing rates are assumed as sum of ACC and the respective TOU value. The values are shown in Table A-2.

Table A-2 Purchasing rates for TBPM application

Interval (in 24 hours)	Number of Hours	K_t^{bP} (LKR/ kWh)	K_t^{bQ} (LKR/ kVArh)
0500 to 1800	13	11.18	0.00
1800 to 2200	4	13.38	0.00
2200 to 0500	7	9.02	0.00



Appendix - B Numerical Examples for Observation 4 of Section 5.3

Let

S_Y^I = be a load point of the load curve S_t^I of the asset during the Y^{th} time interval.

R_Y^{FA} = be the revenue of fixed cost for the Y^{th} time interval related to S_Y^I power input.

W = be a the set of time intervals where $S_Y^I < S_t^I$ then,

$$C_{Fd} \frac{S_{peak}^I - S_Y^I}{S_{peak}^I} = \sum \{R_t^{FA} - R_Y^{FA}\} t \in W \quad (B.1)$$

Here, left hand side (LHS) of (B.1) is the additional fixed cost required to supply the power from S_Y^I to S_{peak}^I , based on the assumption 4.1.1.2. The right hand side (RHS) of (B.1) represents the additional recoveries in selling power from S_Y^I to S_{peak}^I during each interval t .

Let $Y = 17^{th}$ hour on 03rd of June 2013 and $S_{17}^I = 26,992$ kVA referring to Then

$$W = \{18, 19, 20, 21\}$$

By substituting values for the (LHS) of (B.1),

$$C_{Fd} \frac{S_{peak}^I - S_Y^I}{S_{peak}^I} = 980.51 \times \frac{31548 - 26992}{31548} = 141548.40 \text{ LKR}$$

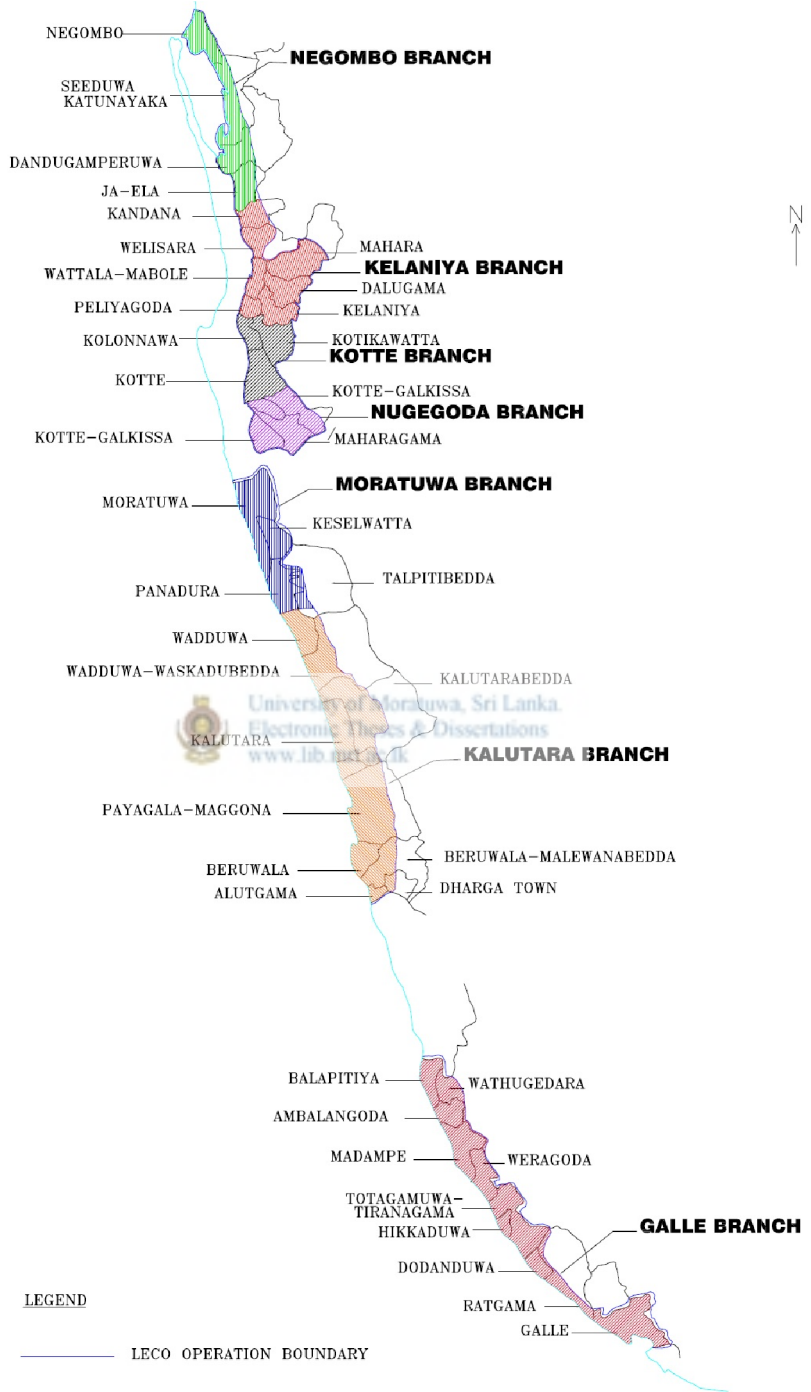
By substituting values for the RHS of (B.1),

$$\begin{aligned} \sum \{R_t^{fA} - R_Y^{fA}\} &= 5530.08 + 58686.35 + 93615.51 \\ &+ 122058 - 4 \times 47037.65 = 141539.34 \text{ LKR} \end{aligned}$$

The values of the LHS and RHS are almost equal, neglecting the errors due to rounding off of power S_t^I .

Therefore it can be concluded that the observation is correct.

Appendix - C Operation Area of Lanka Electricity Company (Private) Limited



Appendix - D 11 kV Network of Negombo Branch LECO



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Appendix - E Load Profile Data

Table E-1 Load profile data of 11 kV network of Negombo Branch- LECO for the month of June 2013

Time	T	P_t^l	Q_t^l	S_t^l	P_t^o	Q_t^o	S_t^o	P_t^l	Q_t^l
/dd hh:mm	(h)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)
/1 0:00	1	16,814.14	10,252.21	19,693.23	16,647.89	10,189.72	19,518.78	166.25	62.49
/1 1:00	1	15,975.42	9,999.52	18,846.87	15,823.15	9,942.29	18,687.46	152.27	57.23
/1 2:00	1	15,137.34	9,440.52	17,839.91	15,000.90	9,389.24	17,697.03	136.43	51.28
/1 3:00	1	14,890.07	9,232.02	17,519.83	14,758.49	9,182.57	17,381.96	131.58	49.46
/1 4:00	1	15,041.09	9,236.85	17,650.89	14,907.53	9,186.66	17,510.83	133.56	50.20
/1 5:00	1	16,275.96	9,374.01	18,782.41	16,124.73	9,317.17	18,623.01	151.23	56.84
/1 6:00	1	16,868.44	8,907.18	19,075.70	16,712.45	8,848.56	18,910.40	155.99	58.63
/1 7:00	1	16,691.44	9,200.13	19,059.02	16,535.72	9,141.60	18,894.41	155.72	58.53
/1 8:00	1	18,438.70	10,787.51	21,362.49	18,243.07	10,713.98	21,156.53	195.63	73.53
/1 9:00	1	21,008.24	11,987.14	24,187.55	20,757.45	11,892.88	23,923.05	250.79	94.26
/1 10:00	1	22,150.56	12,599.37	25,483.16	21,872.18	12,494.74	25,189.50	278.38	104.63
/1 11:00	1	22,362.43	12,239.22	25,492.68	22,083.84	12,134.52	25,198.07	278.59	104.71
/1 12:00	1	22,612.67	12,332.62	25,757.07	22,328.28	12,225.73	25,456.25	284.40	106.89
/1 13:00	1	21,166.22	11,932.06	24,297.80	20,913.13	11,836.94	24,030.65	253.09	95.12
/1 14:00	1	21,073.88	12,128.26	24,314.67	20,820.44	12,033.00	24,047.54	253.44	95.26
/1 15:00	1	20,873.37	12,366.73	24,261.77	20,621.04	12,271.89	23,996.38	252.34	94.84
/1 16:00	1	20,923.14	12,459.72	24,352.05	20,668.92	12,364.17	24,084.79	254.22	95.55
/1 17:00	1	20,224.96	11,777.83	23,404.41	19,990.15	11,689.58	23,157.12	234.82	88.26
/1 18:00	1	22,176.33	11,841.60	25,139.87	21,905.40	11,739.77	24,852.94	270.93	101.83
/1 19:00	1	26,968.05	13,308.82	30,073.25	26,580.35	13,163.10	29,661.13	387.70	145.72
/1 20:00	1	26,248.42	13,078.24	29,326.09	25,879.74	12,939.67	28,934.34	368.67	138.57
/1 21:00	1	24,163.49	12,119.07	27,032.31	23,850.23	12,001.33	26,699.54	313.26	117.74
/1 22:00	1	21,455.73	11,432.92	24,311.73	21,202.36	11,337.69	24,043.36	253.38	95.23
/1 23:00	1	17,515.39	10,091.73	20,214.65	17,340.22	10,025.89	20,030.02	175.17	65.84
/2 0:00	1	15,439.96	9,286.82	18,017.70	15,300.79	9,234.51	17,871.50	139.17	52.31
/2 1:00	1	14,918.12	9,250.09	17,553.19	14,786.04	9,200.44	17,414.79	132.08	49.64
/2 2:00	1	14,369.99	9,227.52	17,077.58	14,244.97	9,180.53	16,947.01	125.02	46.99
/2 3:00	1	14,004.06	8,743.22	16,509.32	13,887.22	8,699.31	16,386.97	116.84	43.91
/2 4:00	1	13,632.69	8,379.72	16,002.18	13,522.92	8,338.46	15,887.08	109.77	41.26
/2 5:00	1	14,749.01	8,557.66	17,051.89	14,624.37	8,510.81	16,920.58	124.65	46.85
/2 6:00	1	15,162.23	8,335.06	17,302.21	15,033.89	8,286.82	17,166.52	128.33	48.23
/2 7:00	1	14,580.96	7,986.32	16,624.85	14,462.48	7,941.79	16,499.55	118.48	44.53
/2 8:00	1	14,806.16	8,575.52	17,110.29	14,680.66	8,528.35	16,978.06	125.50	47.17

Time	T	P_t^I	Q_t^I	S_t^I	P_t^O	Q_t^O	S_t^O	P_t^L	Q_t^L
/dd hh:mm	(h)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)
/2 9:00	1	15,636.15	9,233.11	18,158.73	15,494.80	9,179.98	18,010.02	141.35	53.13
/2 10:00	1	18,065.77	10,289.83	20,790.69	17,880.47	10,220.19	20,595.23	185.30	69.64
/2 11:00	1	19,798.72	10,778.82	22,542.67	19,580.87	10,696.95	22,312.22	217.84	81.88
/2 12:00	1	20,018.91	10,970.07	22,827.60	19,795.52	10,886.11	22,591.37	223.38	83.96
/2 13:00	1	18,941.12	10,775.86	21,791.86	18,737.55	10,699.34	21,577.11	203.57	76.51
/2 14:00	1	18,230.52	10,624.62	21,100.58	18,039.66	10,552.88	20,899.58	190.86	71.74
/2 15:00	1	17,749.08	10,483.63	20,613.99	17,566.92	10,415.17	20,422.35	182.16	68.47
/2 16:00	1	17,536.32	10,305.30	20,340.15	17,358.97	10,238.64	20,153.50	177.35	66.66
/2 17:00	1	17,404.65	10,074.70	20,110.23	17,231.28	10,009.54	19,927.57	173.37	65.16
/2 18:00	1	18,824.86	10,319.04	21,467.61	18,627.30	10,244.79	21,258.70	197.56	74.25
/2 19:00	1	23,790.60	11,498.03	26,423.42	23,491.30	11,385.54	26,105.01	299.30	112.49
/2 20:00	1	23,735.45	11,463.78	26,358.87	23,437.61	11,351.84	26,042.00	297.84	111.94
/2 21:00	1	22,019.87	10,861.34	24,552.87	21,761.44	10,764.21	24,278.15	258.43	97.13
/2 22:00	1	19,167.70	10,148.78	21,688.67	18,966.05	10,072.99	21,475.01	201.65	75.79
/2 23:00	1	15,705.29	9,055.84	18,129.10	15,564.39	9,002.88	17,980.61	140.89	52.95
/3 0:00	1	13,854.91	8,790.96	16,408.52	13,739.49	8,747.58	16,287.84	115.42	43.38
/3 1:00	1	13,230.66	8,545.97	15,750.68	13,124.31	8,506.00	15,639.68	106.35	39.97
/3 2:00	1	12,882.12	8,307.23	15,328.37	12,781.39	8,269.37	15,223.23	100.72	37.86
/3 3:00	1	12,930.84	8,305.70	15,368.52	12,829.59	8,267.64	15,262.77	101.25	38.06
/3 4:00	1	13,486.77	8,281.87	15,826.63	13,379.39	8,241.51	15,714.02	107.38	40.36
/3 5:00	1	15,853.36	8,511.36	17,993.67	15,714.56	8,459.19	17,846.72	138.79	52.17
/3 6:00	1	16,991.51	8,380.04	18,945.62	16,837.65	8,322.21	18,782.05	153.87	57.83
/3 7:00	1	15,600.03	8,869.50	17,945.17	15,461.98	8,817.62	17,799.53	138.05	51.89
/3 8:00	1	18,544.45	10,986.79	21,554.73	18,345.28	10,911.94	21,345.25	199.17	74.86
/3 9:00	1	22,035.74	12,881.96	25,524.86	21,756.44	12,776.99	25,230.82	279.29	104.97
/3 10:00	1	21,065.05	12,022.63	24,254.48	20,812.86	11,927.84	23,988.51	252.18	94.78
/3 11:00	1	23,170.76	13,081.01	26,608.21	22,867.25	12,966.94	26,287.88	303.50	114.07
/3 12:00	1	23,014.76	13,002.22	26,433.63	22,715.22	12,889.64	26,117.51	299.53	112.58
/3 13:00	1	22,393.30	13,184.96	25,986.59	22,103.81	13,076.15	25,681.98	289.49	108.81
/3 14:00	1	22,512.52	13,371.42	26,184.13	22,218.61	13,260.95	25,875.08	293.91	110.47
/3 15:00	1	21,741.07	12,995.80	25,329.13	21,466.04	12,892.43	25,040.08	275.03	103.37
/3 16:00	1	21,063.03	12,839.15	24,667.69	20,802.18	12,741.10	24,393.99	260.85	98.04
/3 17:00	1	23,019.74	14,094.90	26,992.12	22,707.41	13,977.51	26,664.53	312.33	117.39
/3 18:00	1	24,398.09	13,859.37	28,059.74	24,060.57	13,732.51	27,703.66	337.52	126.86
/3 19:00	1	28,192.16	14,158.60	31,547.80	27,765.51	13,998.24	31,094.60	426.65	160.36
/3 20:00	1	27,396.22	13,703.53	30,632.33	26,993.97	13,552.35	30,204.98	402.25	151.19
/3 21:00	1	25,377.68	12,712.77	28,383.82	25,032.32	12,582.97	28,016.93	345.36	129.81
/3 22:00	1	21,942.84	11,678.50	24,857.11	21,677.97	11,578.95	24,576.54	264.87	99.55
/3 23:00	1	18,506.33	10,849.05	21,451.95	18,309.05	10,774.90	21,244.29	197.27	74.15

Time	T	P_t^I	Q_t^I	S_t^I	P_t^O	Q_t^O	S_t^O	P_t^L	Q_t^L
/dd hh:mm	(h)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)
/4 0:00	1	17,195.46	10,573.52	20,186.21	17,020.78	10,507.87	20,003.05	174.68	65.65
/4 1:00	1	16,511.50	10,497.23	19,565.82	16,347.39	10,435.54	19,394.27	164.11	61.68
/4 2:00	1	15,708.30	10,288.38	18,777.69	15,557.14	10,231.57	18,620.15	151.15	56.81
/4 3:00	1	15,347.37	9,882.00	18,253.65	15,204.54	9,828.32	18,104.52	142.83	53.68
/4 4:00	1	15,718.23	9,706.48	18,473.72	15,571.93	9,651.49	18,320.38	146.30	54.99
/4 5:00	1	18,054.25	10,056.23	20,666.00	17,871.16	9,987.42	20,472.59	183.08	68.81
/4 6:00	1	18,867.35	9,647.91	21,191.02	18,674.85	9,575.56	20,986.69	192.50	72.35
/4 7:00	1	17,168.85	9,965.05	19,851.24	16,999.92	9,901.56	19,673.29	168.93	63.49
/4 8:00	1	20,122.09	12,197.80	23,530.51	19,884.74	12,108.59	23,281.34	237.35	89.21
/4 9:00	1	23,204.52	13,502.08	26,846.89	22,895.54	13,385.95	26,521.49	308.97	116.13
/4 10:00	1	24,218.70	13,870.78	27,909.57	23,884.78	13,745.28	27,557.49	333.92	125.50
/4 11:00	1	24,017.11	13,471.40	27,537.25	23,692.04	13,349.23	27,194.02	325.07	122.18
/4 12:00	1	25,063.70	14,236.36	28,824.70	24,707.53	14,102.49	28,448.94	356.17	133.87
/4 13:00	1	25,019.78	14,635.13	28,985.80	24,659.62	14,499.76	28,606.64	360.17	135.37
/4 14:00	1	25,568.17	14,682.46	29,484.00	25,195.52	14,542.40	29,091.16	372.65	140.06
/4 15:00	1	25,535.41	14,365.86	29,299.06	25,167.41	14,227.55	28,910.58	367.99	138.31
/4 16:00	1	24,996.39	14,376.93	28,836.01	24,639.93	14,242.95	28,460.29	356.45	133.97
/4 17:00	1	24,530.33	14,357.94	28,423.36	24,184.00	14,227.78	28,058.79	346.33	130.17
/4 18:00	1	25,543.81	14,549.04	29,396.61	25,173.36	14,409.80	29,005.87	370.45	139.23
/4 19:00	1	29,014.90	14,456.43	32,416.85	28,564.42	14,287.11	31,938.18	450.48	169.31
/4 20:00	1	28,086.89	13,852.80	31,317.30	27,666.45	13,694.77	30,870.36	420.44	158.02
/4 21:00	1	26,047.70	13,023.20	29,121.92	25,684.14	12,886.56	28,735.67	363.56	136.64
/4 22:00	1	23,128.23	12,084.16	26,094.87	22,836.33	11,974.44	25,785.37	291.91	109.71
/4 23:00	1	19,961.93	11,271.51	22,924.34	19,736.64	11,186.84	22,686.57	225.28	84.67
/5 0:00	1	17,929.09	10,696.15	20,877.26	17,742.25	10,625.92	20,680.85	186.84	70.23
/5 1:00	1	16,989.93	10,535.88	19,991.56	16,818.60	10,471.49	19,812.05	171.33	64.39
/5 2:00	1	16,371.59	10,111.65	19,242.52	16,212.86	10,051.99	19,076.15	158.73	59.66
/5 3:00	1	16,162.33	9,832.65	18,918.30	16,008.91	9,774.98	18,757.28	153.43	57.67
/5 4:00	1	16,702.86	9,991.45	19,463.16	16,540.47	9,930.41	19,292.49	162.39	61.03
/5 5:00	1	19,144.58	10,221.19	21,702.25	18,942.68	10,145.31	21,488.42	201.90	75.89
/5 6:00	1	19,736.81	9,846.62	22,056.69	19,528.26	9,768.24	21,835.09	208.55	78.38
/5 7:00	1	17,745.59	10,160.09	20,448.31	17,566.34	10,092.72	20,259.30	179.25	67.37
/5 8:00	1	20,388.14	12,209.37	23,764.36	20,146.04	12,118.38	23,509.96	242.09	90.99
/5 9:00	1	22,793.08	13,480.09	26,480.88	22,492.47	13,367.10	26,164.68	300.61	112.98
/5 10:00	1	24,202.61	13,812.70	27,866.77	23,869.72	13,687.58	27,515.69	332.89	125.12
/5 11:00	1	24,798.08	13,888.24	28,422.31	24,451.78	13,758.08	28,056.63	346.30	130.16
/5 12:00	1	24,794.76	14,189.87	28,568.04	24,444.90	14,058.38	28,199.14	349.86	131.50
/5 13:00	1	24,269.26	13,891.77	27,963.87	23,934.04	13,765.78	27,610.41	335.22	125.99
/5 14:00	1	24,772.02	14,226.07	28,566.31	24,422.20	14,094.59	28,197.54	349.82	131.48

Time	T	P_t^I	Q_t^I	S_t^I	P_t^O	Q_t^O	S_t^O	P_t^L	Q_t^L
/dd hh:mm	(h)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)
/5 15:00	1	24,819.35	14,170.56	28,579.80	24,469.20	14,038.96	28,210.53	350.15	131.60
/5 16:00	1	24,187.05	13,858.87	27,876.19	23,853.93	13,733.66	27,524.96	333.12	125.20
/5 17:00	1	23,134.17	13,727.85	26,900.63	22,823.96	13,611.26	26,574.41	310.21	116.59
/5 18:00	1	25,282.32	14,185.97	28,990.30	24,922.04	14,050.56	28,609.90	360.28	135.41
/5 19:00	1	28,883.82	14,728.36	32,422.21	28,433.19	14,558.99	31,943.86	450.63	169.37
/5 20:00	1	28,218.96	14,067.09	31,530.82	27,792.77	13,906.91	31,077.97	426.19	160.18
/5 21:00	1	26,156.25	13,092.04	29,249.80	25,789.49	12,954.19	28,860.16	366.76	137.85
/5 22:00	1	23,119.90	12,216.02	26,148.82	22,826.78	12,105.85	25,838.22	293.11	110.17
/5 23:00	1	19,998.71	11,265.48	22,953.42	19,772.86	11,180.60	22,715.01	225.85	84.89
/6 0:00	1	18,144.06	10,893.52	21,163.07	17,952.06	10,821.36	20,961.35	192.00	72.16
/6 1:00	1	17,087.60	10,518.50	20,065.51	16,915.00	10,453.62	19,884.55	172.60	64.87
/6 2:00	1	16,470.95	10,129.57	19,336.50	16,310.67	10,069.32	19,168.44	160.28	60.24
/6 3:00	1	16,236.36	9,992.79	19,065.03	16,080.55	9,934.23	18,901.66	155.81	58.56
/6 4:00	1	16,781.37	9,986.66	19,528.13	16,617.90	9,925.21	19,356.25	163.48	61.44
/6 5:00	1	18,838.74	10,040.05	21,347.15	18,643.39	9,966.63	21,140.24	195.35	73.42
/6 6:00	1	19,593.07	9,784.77	21,900.46	19,387.46	9,707.49	21,682.00	205.61	77.28
/6 7:00	1	17,735.87	10,130.66	20,425.26	17,557.03	10,063.45	20,236.65	178.84	67.22
/6 8:00	1	20,288.90	12,040.39	23,592.60	20,050.30	11,950.71	23,341.67	238.61	89.68
/6 9:00	1	20,545.80	11,825.47	23,705.94	20,304.89	11,734.93	23,452.02	240.91	90.55
/6 10:00	1	22,243.14	12,329.49	25,431.74	21,965.88	12,225.28	25,138.76	277.26	104.21
/6 11:00	1	23,577.72	12,861.26	26,857.41	23,268.50	12,745.04	26,530.34	309.22	116.22
/6 12:00	1	23,512.20	13,180.92	26,954.79	23,200.74	13,063.86	26,625.91	311.46	117.06
/6 13:00	1	23,034.62	12,881.01	26,391.55	22,736.03	12,768.79	26,076.22	298.58	112.22
/6 14:00	1	23,429.50	12,944.24	26,767.43	23,122.36	12,828.80	26,442.80	307.15	115.44
/6 15:00	1	23,331.52	12,830.85	26,626.88	23,027.59	12,716.62	26,305.56	303.93	114.23
/6 16:00	1	22,512.58	12,705.22	25,850.32	22,226.12	12,597.55	25,547.97	286.46	107.67
/6 17:00	1	22,683.89	12,961.16	26,125.67	22,391.29	12,851.19	25,817.11	292.60	109.97
/6 18:00	1	26,205.54	14,412.47	29,907.35	25,822.10	14,268.35	29,501.98	383.43	144.11
/6 19:00	1	29,639.96	14,906.92	33,177.46	29,168.10	14,729.56	32,676.26	471.87	177.35
/6 20:00	1	27,104.84	13,830.92	30,429.70	26,707.90	13,681.72	30,008.35	396.94	149.19
/6 21:00	1	24,116.69	12,311.15	27,077.28	23,802.39	12,193.02	26,743.66	314.30	118.13
/6 22:00	1	22,220.06	11,547.71	25,041.58	21,951.25	11,446.68	24,756.49	268.82	101.04
/6 23:00	1	19,404.27	10,938.64	22,275.09	19,191.57	10,858.70	22,050.57	212.70	79.94
/7 0:00	1	18,012.79	10,689.43	20,945.76	17,824.72	10,618.74	20,747.97	188.07	70.69
/7 1:00	1	17,052.95	10,567.28	20,061.67	16,880.42	10,502.43	19,880.89	172.53	64.85
/7 2:00	1	16,494.21	10,307.48	19,450.02	16,332.04	10,246.53	19,280.22	162.17	60.95
/7 3:00	1	16,348.28	9,970.28	19,148.70	16,191.09	9,911.20	18,983.76	157.19	59.08
/7 4:00	1	16,788.48	10,069.73	19,576.84	16,624.19	10,007.98	19,404.21	164.29	61.75
/7 5:00	1	18,917.35	10,204.53	21,494.15	18,719.30	10,130.09	21,284.52	198.05	74.44

Time	T	P_t^I	Q_t^I	S_t^I	P_t^O	Q_t^O	S_t^O	P_t^L	Q_t^L
/dd hh:mm	(h)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)
/7 6:00	1	19,331.31	9,689.10	21,623.56	19,130.87	9,613.76	21,410.62	200.44	75.34
/7 7:00	1	17,687.86	10,050.17	20,343.71	17,510.45	9,983.49	20,156.53	177.42	66.68
/7 8:00	1	20,808.68	12,437.51	24,242.38	20,556.75	12,342.82	23,977.60	251.93	94.69
/7 9:00	1	24,477.92	14,197.29	28,297.20	24,134.66	14,068.27	27,935.61	343.26	129.01
/7 10:00	1	26,050.79	14,610.28	29,868.10	25,668.36	14,466.54	29,464.31	382.43	143.74
/7 11:00	1	27,166.11	15,109.89	31,085.47	26,751.87	14,954.20	30,647.85	414.24	155.69
/7 12:00	1	24,927.85	14,030.28	28,605.01	24,577.08	13,898.45	28,234.73	350.77	131.84
/7 13:00	1	24,333.29	13,761.75	27,955.23	23,998.28	13,635.84	27,601.69	335.01	125.91
/7 14:00	1	26,721.62	15,103.71	30,694.74	26,317.73	14,951.91	30,268.51	403.89	151.80
/7 15:00	1	27,377.45	15,362.10	31,392.97	26,954.98	15,203.31	30,946.91	422.47	158.79
/7 16:00	1	26,645.40	15,287.20	30,719.31	26,240.86	15,135.16	30,292.83	404.53	152.05
/7 17:00	1	25,088.28	14,498.15	28,976.17	24,728.35	14,362.87	28,596.92	359.93	135.28
/7 18:00	1	25,834.29	14,275.21	29,515.97	25,460.83	14,134.84	29,121.26	373.46	140.37
/7 19:00	1	29,211.73	14,942.43	32,811.60	28,750.21	14,768.96	32,321.77	461.52	173.46
/7 20:00	1	28,453.65	14,031.95	31,725.48	28,022.18	13,869.78	31,266.81	431.47	162.17
/7 21:00	1	26,354.49	13,107.44	29,434.06	25,983.10	12,967.85	29,039.39	371.39	139.59
/7 22:00	1	23,639.06	12,316.57	26,655.26	23,334.48	12,202.09	26,332.28	304.58	114.48
/7 23:00	1	20,573.70	11,547.16	23,592.67	20,335.09	11,457.48	23,340.73	238.61	89.68
/8 0:00	1	18,445.45	10,723.62	21,336.14	18,250.30	10,650.27	21,130.59	195.15	73.35
/8 1:00	1	17,066.34	10,180.75	19,872.28	16,897.05	10,117.12	19,694.32	169.29	63.63
/8 2:00	1	15,127.89	9,292.02	17,753.72	14,992.77	9,241.24	17,612.03	135.12	50.78
/8 3:00	1	5,057.76	3,229.55	6,000.91	5,042.32	3,223.74	5,984.78	15.44	5.80
/8 4:00	1	7,227.12	4,965.69	8,768.66	7,194.16	4,953.30	8,734.48	32.96	12.39
/8 5:00	1	7,155.21	4,546.34	8,477.40	7,124.41	4,534.76	8,445.19	30.81	11.58
/8 6:00	1	7,311.15	4,482.03	8,575.63	7,279.62	4,470.18	8,542.57	31.53	11.85
/8 7:00	1	6,889.97	4,111.30	8,023.37	6,862.37	4,100.93	7,994.35	27.60	10.37
/8 8:00	1	7,525.08	4,533.64	8,785.26	7,491.99	4,521.20	8,750.50	33.09	12.44
/8 9:00	1	13,140.46	7,949.89	15,358.14	13,039.35	7,911.89	15,251.97	101.11	38.00
/8 10:00	1	19,335.41	11,022.78	22,256.68	19,123.06	10,942.96	22,032.70	212.35	79.81
/8 11:00	1	21,850.62	12,232.85	25,041.81	21,581.80	12,131.81	24,757.93	268.82	101.04
/8 12:00	1	23,595.52	13,495.82	27,182.45	23,278.77	13,376.77	26,848.44	316.75	119.05
/8 13:00	1	22,117.22	12,964.07	25,636.67	21,835.48	12,858.18	25,340.10	281.74	105.89
/8 14:00	1	19,554.41	12,010.19	22,948.20	19,328.66	11,925.34	22,711.47	225.75	84.85
/8 15:00	1	19,505.26	11,909.31	22,853.60	19,281.36	11,825.16	22,618.70	223.89	84.15
/8 16:00	1	18,200.17	11,196.38	21,368.32	18,004.44	11,122.81	21,163.09	195.74	73.57
/8 17:00	1	17,518.78	10,604.09	20,478.14	17,339.01	10,536.52	20,289.39	179.77	67.57
/8 18:00	1	20,738.76	11,270.25	23,603.28	20,499.93	11,180.49	23,350.60	238.82	89.76
/8 19:00	1	25,491.82	12,452.60	28,370.76	25,146.77	12,322.91	28,003.82	345.04	129.69
/8 20:00	1	24,509.97	12,034.06	27,304.90	24,190.37	11,913.94	26,965.08	319.61	120.12

Time	T	P_t^I	Q_t^I	S_t^I	P_t^O	Q_t^O	S_t^O	P_t^L	Q_t^L
/dd hh:mm	(h)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)
/8 21:00	1	22,679.76	11,374.88	25,372.41	22,403.79	11,271.16	25,079.25	275.97	103.72
/8 22:00	1	20,308.72	10,877.26	23,038.21	20,081.20	10,791.75	22,797.29	227.53	85.52
/8 23:00	1	16,834.76	9,651.35	19,405.10	16,673.34	9,590.68	19,234.90	161.42	60.67
/9 0:00	1	15,255.26	9,398.51	17,918.01	15,117.63	9,346.78	17,773.72	137.63	51.73
/9 1:00	1	14,310.59	9,128.49	16,974.16	14,187.08	9,082.06	16,845.09	123.51	46.42
/9 2:00	1	13,781.74	9,060.64	16,493.38	13,665.12	9,016.81	16,371.88	116.61	43.83
/9 3:00	1	13,532.71	8,963.14	16,231.83	13,419.77	8,920.69	16,114.24	112.95	42.45
/9 4:00	1	13,813.21	8,961.22	16,465.36	13,696.99	8,917.54	16,344.11	116.22	43.68
/9 5:00	1	14,606.45	9,140.90	17,230.92	14,479.17	9,093.06	17,097.67	127.28	47.84
/9 6:00	1	14,851.62	8,278.65	17,003.14	14,727.69	8,232.07	16,872.22	123.93	46.58
/9 7:00	1	14,155.20	7,895.47	16,208.27	14,042.58	7,853.14	16,089.31	112.62	42.33
/9 8:00	1	14,217.63	8,341.64	16,484.05	14,101.15	8,297.86	16,361.44	116.48	43.78
/9 9:00	1	16,055.39	9,454.83	18,632.48	15,906.57	9,398.89	18,475.87	148.82	55.94
/9 10:00	1	17,735.64	10,109.90	20,414.78	17,556.99	10,042.75	20,226.33	178.66	67.15
/9 11:00	1	19,116.16	10,351.63	21,738.99	18,913.57	10,275.49	21,524.61	202.59	76.14
/9 12:00	1	19,377.08	10,649.43	22,110.66	19,167.50	10,570.66	21,889.08	209.57	78.77
/9 13:00	1	17,261.26	9,793.86	19,846.18	17,092.41	9,730.40	19,668.03	168.84	63.46
/9 14:00	1	17,821.57	10,401.70	20,635.01	17,639.04	10,333.09	20,442.81	182.53	68.61
/9 15:00	1	18,096.76	10,762.14	21,055.08	17,906.72	10,690.71	20,855.26	190.04	71.43
/9 16:00	1	17,830.11	10,450.02	20,666.78	17,647.02	10,381.20	20,474.05	183.10	68.82
/9 17:00	1	17,539.22	10,456.21	20,419.51	17,360.48	10,389.03	20,231.61	178.74	67.18
/9 18:00	1	19,955.69	11,006.90	22,789.94	19,733.04	10,923.22	22,554.59	222.65	83.68
/9 19:00	1	24,127.38	11,830.31	26,871.67	23,817.83	11,713.97	26,542.53	309.54	116.34
/9 20:00	1	24,163.10	11,520.97	26,769.17	23,855.92	11,405.52	26,442.21	307.19	115.46
/9 21:00	1	22,814.70	11,245.77	25,435.76	22,537.35	11,141.52	25,140.92	277.35	104.24
/9 22:00	1	20,258.29	10,658.07	22,890.89	20,033.66	10,573.64	22,652.80	224.63	84.43
/9 23:00	1	17,338.04	9,790.55	19,911.37	17,168.09	9,726.67	19,731.99	169.96	63.88
/10 0:00	1	15,594.62	9,226.73	18,119.73	15,453.88	9,173.83	17,971.68	140.75	52.90
/10 1:00	1	14,566.57	8,754.76	16,995.02	14,442.76	8,708.22	16,864.94	123.82	46.54
/10 2:00	1	14,115.77	8,599.83	16,529.12	13,998.65	8,555.81	16,406.22	117.12	44.02
/10 3:00	1	13,907.54	8,445.62	16,271.08	13,794.04	8,402.96	16,151.95	113.49	42.66
/10 4:00	1	14,424.69	8,474.55	16,729.90	14,304.71	8,429.46	16,603.62	119.98	45.10
/10 5:00	1	16,871.44	8,845.61	19,049.68	16,715.88	8,787.14	18,884.77	155.56	58.47
/10 6:00	1	17,777.79	8,773.25	19,824.72	17,609.31	8,709.93	19,645.62	168.48	63.32
/10 7:00	1	16,355.80	9,236.12	18,783.45	16,204.55	9,179.27	18,623.82	151.25	56.85
/10 8:00	1	18,853.17	10,938.61	21,796.68	18,649.50	10,862.06	21,582.13	203.66	76.55
/10 9:00	1	21,419.33	12,271.54	24,685.59	21,158.10	12,173.36	24,410.16	261.23	98.18
/10 10:00	1	24,566.06	13,802.58	28,178.05	24,225.69	13,674.65	27,818.69	340.37	127.93
/10 11:00	1	25,523.02	14,216.14	29,215.11	25,157.13	14,078.62	28,828.60	365.89	137.52

Time	T	P_t^l	Q_t^l	S_t^l	P_t^o	Q_t^o	S_t^o	P_t^l	Q_t^l
/dd hh:mm	(h)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)
/10 12:00	1	25,612.49	14,288.00	29,328.26	25,243.77	14,149.41	28,938.79	368.73	138.59
/10 13:00	1	25,327.72	14,101.97	28,988.95	24,967.48	13,966.57	28,608.39	360.24	135.40
/10 14:00	1	25,570.87	14,452.38	29,372.44	25,201.03	14,313.37	28,982.14	369.84	139.01
/10 15:00	1	25,886.11	14,684.94	29,761.35	25,506.41	14,542.23	29,360.74	379.70	142.71
/10 16:00	1	25,688.01	14,699.92	29,596.65	25,312.50	14,558.79	29,200.70	375.51	141.14
/10 17:00	1	24,248.66	13,665.10	27,834.02	23,916.55	13,540.27	27,483.45	332.11	124.83
/10 18:00	1	24,504.56	13,675.88	28,062.49	24,166.98	13,548.99	27,705.92	337.59	126.88
/10 19:00	1	28,342.54	14,192.82	31,697.57	27,911.83	14,030.94	31,240.00	430.71	161.88
/10 20:00	1	27,853.33	13,716.20	31,047.42	27,440.11	13,560.89	30,608.12	413.22	155.31
/10 21:00	1	25,926.57	12,875.56	28,947.66	25,567.35	12,740.55	28,565.90	359.22	135.01
/10 22:00	1	22,979.43	12,022.48	25,934.42	22,691.10	11,914.12	25,628.74	288.33	108.37
/10 23:00	1	19,721.12	10,965.21	22,564.54	19,502.85	10,883.18	22,333.94	218.27	82.04
/11 0:00	1	17,568.14	10,086.17	20,257.59	17,392.22	10,020.05	20,072.13	175.92	66.12
/11 1:00	1	16,690.45	9,862.04	19,386.36	16,529.34	9,801.49	19,216.87	161.11	60.55
/11 2:00	1	16,177.79	9,786.91	18,907.79	16,024.53	9,729.31	18,746.87	153.25	57.60
/11 3:00	1	15,977.03	9,735.02	18,709.25	15,826.98	9,678.62	18,551.79	150.05	56.40
/11 4:00	1	16,289.06	9,700.18	18,958.56	16,134.98	9,642.27	18,796.57	154.08	57.91
/11 5:00	1	18,695.83	9,940.58	21,174.25	18,503.63	9,868.34	20,970.65	192.20	72.24
/11 6:00	1	19,360.96	9,566.32	21,595.40	19,161.04	9,491.18	21,382.89	199.92	75.14
/11 7:00	1	17,513.63	9,918.02	20,126.95	17,339.97	9,852.75	19,943.70	173.66	65.27
/11 8:00	1	20,253.12	12,125.50	23,605.43	20,014.25	12,035.72	23,354.42	238.87	89.78
/11 9:00	1	23,894.66	14,049.64	27,719.07	23,565.28	13,925.84	27,372.46	329.37	123.80
/11 10:00	1	25,325.65	14,371.35	29,119.14	24,962.16	14,234.73	28,735.64	363.49	136.62
/11 11:00	1	26,599.65	14,964.24	30,519.99	26,200.34	14,814.16	30,098.46	399.30	150.08
/11 12:00	1	26,210.90	14,931.29	30,165.46	25,820.82	14,784.68	29,754.02	390.08	146.61
/11 13:00	1	25,276.33	14,128.01	28,956.76	24,916.89	13,992.91	28,577.14	359.45	135.10
/11 14:00	1	25,324.59	14,391.31	29,128.08	24,960.88	14,254.61	28,744.38	363.71	136.70
/11 15:00	1	25,079.13	14,383.63	28,911.10	24,720.82	14,248.96	28,533.34	358.31	134.67
/11 16:00	1	24,182.28	13,998.86	27,941.91	23,847.58	13,873.06	27,589.29	334.69	125.79
/11 17:00	1	23,076.56	13,489.59	26,730.07	22,770.27	13,374.47	26,407.60	306.29	115.12
/11 18:00	1	24,512.22	13,351.28	27,912.46	24,178.23	13,225.75	27,559.16	333.99	125.53
/11 19:00	1	28,013.39	13,802.71	31,229.23	27,595.31	13,645.58	30,784.79	418.08	157.14
/11 20:00	1	27,063.40	13,448.54	30,220.70	26,671.89	13,301.39	29,804.64	391.51	147.15
/11 21:00	1	25,263.99	12,461.02	28,169.95	24,923.82	12,333.16	27,808.33	340.18	127.86
/11 22:00	1	21,972.38	11,646.37	24,868.12	21,707.28	11,546.73	24,587.25	265.11	99.64
/11 23:00	1	18,727.00	10,608.67	21,523.11	18,528.42	10,534.03	21,313.56	198.58	74.64
/12 0:00	1	16,974.12	10,316.54	19,863.33	16,804.98	10,252.97	19,685.80	169.14	63.57
/12 1:00	1	16,412.93	10,100.54	19,271.87	16,253.72	10,040.70	19,104.94	159.21	59.84
/12 2:00	1	15,847.11	9,750.20	18,606.38	15,698.71	9,694.42	18,450.77	148.41	55.78

Time	T	P_t^I	Q_t^I	S_t^I	P_t^O	Q_t^O	S_t^O	P_t^L	Q_t^L
/dd hh:mm	(h)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)
/12 3:00	1	14,853.88	9,283.33	17,516.22	14,722.35	9,233.89	17,378.50	131.53	49.43
/12 4:00	1	15,417.01	9,377.19	18,044.83	15,277.43	9,324.72	17,898.33	139.58	52.46
/12 5:00	1	17,814.25	9,615.20	20,243.51	17,638.58	9,549.17	20,057.57	175.67	66.03
/12 6:00	1	19,203.67	9,606.94	21,472.64	19,006.01	9,532.65	21,262.64	197.65	74.29
/12 7:00	1	17,439.10	9,911.48	20,058.91	17,266.62	9,846.65	19,876.94	172.48	64.83
/12 8:00	1	19,370.59	11,412.34	22,482.46	19,153.91	11,330.89	22,254.47	216.68	81.44
/12 9:00	1	22,277.96	12,939.13	25,762.93	21,993.43	12,832.19	25,463.23	284.53	106.94
/12 10:00	1	20,920.54	12,307.42	24,272.24	20,667.98	12,212.49	24,006.47	252.55	94.92
/12 11:00	1	22,213.65	13,013.76	25,744.98	21,929.52	12,906.97	25,445.90	284.13	106.79
/12 12:00	1	22,400.30	13,108.62	25,953.99	22,111.54	13,000.09	25,650.00	288.76	108.53
/12 13:00	1	21,499.71	12,629.70	24,934.85	21,233.18	12,529.52	24,654.35	266.53	100.18
/12 14:00	1	21,931.94	12,897.37	25,443.12	21,654.44	12,793.07	25,151.09	277.51	104.30
/12 15:00	1	21,786.38	12,846.26	25,291.76	21,512.17	12,743.20	25,003.25	274.21	103.06
/12 16:00	1	21,166.79	12,758.46	24,714.60	20,904.95	12,660.05	24,439.59	261.84	98.41
/12 17:00	1	22,490.99	13,441.51	26,201.50	22,196.69	13,330.90	25,892.20	294.30	110.61
/12 18:00	1	24,074.38	13,295.04	27,501.53	23,750.16	13,173.18	27,158.84	324.23	121.86
/12 19:00	1	27,540.19	13,913.95	30,855.47	27,132.06	13,760.55	30,422.06	408.13	153.40
/12 20:00	1	27,008.82	13,317.96	30,113.86	26,620.08	13,171.85	29,700.61	388.75	146.11
/12 21:00	1	24,880.23	12,409.32	27,803.18	24,548.85	12,284.77	27,451.08	331.38	124.55
/12 22:00	1	21,669.62	11,629.05	24,592.83	21,410.35	11,531.60	24,318.32	259.27	97.45
/12 23:00	1	18,535.41	10,899.58	21,502.61	18,337.21	10,825.08	21,294.03	198.21	74.50
/13 0:00	1	16,649.31	10,198.27	19,524.45	16,485.89	10,136.85	19,353.05	163.41	61.42
/13 1:00	1	15,769.53	9,995.70	18,670.62	15,620.10	9,939.53	18,514.36	149.43	56.17
/13 2:00	1	14,473.19	9,241.15	17,171.84	14,346.78	9,193.64	17,039.76	126.41	47.51
/13 3:00	1	14,345.39	9,172.57	17,027.22	14,221.10	9,125.85	16,897.37	124.29	46.71
/13 4:00	1	14,842.39	9,055.09	17,386.52	14,712.80	9,006.39	17,250.55	129.59	48.71
/13 5:00	1	17,191.82	9,661.48	19,720.62	17,025.11	9,598.82	19,544.61	166.71	62.66
/13 6:00	1	18,620.61	9,418.20	20,866.95	18,433.95	9,348.04	20,668.73	186.66	70.16
/13 7:00	1	16,571.65	9,442.33	19,072.94	16,415.70	9,383.72	18,908.45	155.94	58.61
/13 8:00	1	18,383.92	10,876.10	21,360.20	18,188.33	10,802.59	21,154.46	195.59	73.51
/13 9:00	1	17,541.40	10,739.44	20,567.85	17,360.05	10,671.28	20,377.63	181.35	68.16
/13 10:00	1	19,773.30	11,928.99	23,092.94	19,544.69	11,843.07	22,852.86	228.61	85.92
/13 11:00	1	21,391.12	12,567.74	24,809.84	21,127.26	12,468.57	24,532.15	263.86	99.17
/13 12:00	1	21,046.77	12,577.89	24,518.76	20,789.06	12,481.03	24,247.91	257.71	96.86
/13 13:00	1	20,879.76	12,232.25	24,199.01	20,628.73	12,137.89	23,934.77	251.03	94.35
/13 14:00	1	21,021.90	12,348.86	24,380.62	20,767.09	12,253.08	24,112.45	254.81	95.77
/13 15:00	1	21,353.91	12,552.05	24,769.81	21,090.90	12,453.19	24,493.02	263.01	98.85
/13 16:00	1	21,417.44	12,567.91	24,832.62	21,153.09	12,468.56	24,554.39	264.35	99.36
/13 17:00	1	22,083.84	12,835.59	25,543.07	21,804.15	12,730.47	25,248.48	279.69	105.12

Time	T	P_t^I	Q_t^I	S_t^I	P_t^O	Q_t^O	S_t^O	P_t^L	Q_t^L
/dd hh:mm	(h)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)
/13 18:00	1	24,360.80	13,297.90	27,753.97	24,030.59	13,173.80	27,404.71	330.20	124.11
/13 19:00	1	27,127.92	13,689.82	30,386.43	26,732.11	13,541.05	29,966.08	395.82	148.77
/13 20:00	1	27,067.26	13,399.51	30,202.37	26,676.22	13,252.54	29,786.75	391.03	146.97
/13 21:00	1	25,625.73	12,884.86	28,682.70	25,273.05	12,752.31	28,308.10	352.67	132.55
/13 22:00	1	22,698.44	11,778.97	25,572.71	22,418.10	11,673.60	25,275.37	280.34	105.37
/13 23:00	1	19,495.48	10,819.17	22,296.37	19,282.37	10,739.07	22,071.19	213.11	80.10
/14 0:00	1	17,699.13	10,070.83	20,363.71	17,521.36	10,004.02	20,176.18	177.77	66.81
/14 1:00	1	16,885.57	9,778.98	19,512.84	16,722.35	9,717.64	19,340.88	163.22	61.35
/14 2:00	1	15,971.67	9,791.24	18,734.00	15,821.22	9,734.69	18,576.20	150.45	56.55
/14 3:00	1	15,736.52	9,795.96	18,536.42	15,589.23	9,740.59	18,382.14	147.29	55.36
/14 4:00	1	16,216.93	9,797.89	18,946.97	16,063.04	9,740.05	18,785.36	153.89	57.84
/14 5:00	1	18,493.56	9,959.48	21,004.83	18,304.42	9,888.39	20,804.62	189.13	71.09
/14 6:00	1	19,197.69	9,462.98	21,403.25	19,001.31	9,389.17	21,194.48	196.38	73.81
/14 7:00	1	17,282.13	9,747.85	19,841.69	17,113.36	9,684.42	19,663.55	168.77	63.43
/14 8:00	1	19,833.91	11,649.58	23,002.10	19,607.10	11,564.33	22,763.39	226.81	85.25
/14 9:00	1	23,163.58	13,361.37	26,740.94	22,857.04	13,246.15	26,417.89	306.54	115.21
/14 10:00	1	25,121.63	14,258.11	28,885.81	24,763.94	14,123.68	28,508.44	357.69	134.44
/14 11:00	1	25,914.97	14,488.01	29,689.87	25,537.10	14,345.98	29,290.79	377.88	142.03
/14 12:00	1	25,581.48	14,571.15	29,440.28	25,209.93	14,431.50	29,048.38	371.55	139.65
/14 13:00	1	24,842.88	14,157.24	28,593.63	24,492.39	14,025.51	28,223.96	350.49	131.73
/14 14:00	1	25,749.80	14,755.10	29,677.69	25,372.24	14,613.19	29,279.61	377.57	141.91
/14 15:00	1	25,529.18	14,479.53	29,349.55	25,159.92	14,340.74	28,959.95	369.26	138.79
/14 16:00	1	25,453.56	14,570.80	29,329.02	25,084.81	14,432.20	28,940.22	368.75	138.59
/14 17:00	1	23,551.10	13,790.99	27,291.86	23,231.80	13,670.98	26,955.75	319.30	120.01
/14 18:00	1	24,618.12	13,651.64	28,149.94	24,278.42	13,523.97	27,791.00	339.69	127.68
/14 19:00	1	28,570.74	14,659.05	32,111.91	28,128.69	14,492.90	31,642.81	442.04	166.14
/14 20:00	1	27,664.51	13,644.76	30,846.46	27,256.61	13,491.45	30,412.86	407.89	153.31
/14 21:00	1	25,913.70	12,910.25	28,951.58	25,554.38	12,775.19	28,569.77	359.32	135.05
/14 22:00	1	23,478.32	12,188.33	26,453.48	23,178.33	12,075.58	26,135.32	299.98	112.75
/14 23:00	1	20,224.23	11,166.05	23,101.95	19,995.44	11,080.06	22,860.12	228.79	85.99
/15 0:00	1	18,240.27	10,642.28	21,117.89	18,049.09	10,570.42	20,916.59	191.18	71.85
/15 1:00	1	17,271.55	10,349.91	20,135.22	17,097.75	10,284.59	19,952.59	173.80	65.32
/15 2:00	1	16,385.75	10,018.76	19,205.95	16,227.63	9,959.32	19,040.06	158.13	59.43
/15 3:00	1	16,115.89	9,950.47	18,940.27	15,962.11	9,892.67	18,779.08	153.78	57.80
/15 4:00	1	16,342.31	9,783.83	19,047.16	16,186.78	9,725.37	18,883.72	155.52	58.45
/15 5:00	1	17,257.06	9,814.85	19,852.89	17,088.10	9,751.35	19,674.65	168.96	63.50
/15 6:00	1	17,300.29	9,215.22	19,601.54	17,135.58	9,153.32	19,427.08	164.71	61.91
/15 7:00	1	17,014.74	9,523.93	19,498.89	16,851.75	9,462.67	19,326.76	162.99	61.26
/15 8:00	1	18,978.82	11,091.10	21,981.99	18,771.68	11,013.25	21,763.90	207.14	77.85

Time	T	P_t^I	Q_t^I	S_t^I	P_t^O	Q_t^O	S_t^O	P_t^L	Q_t^L
/dd hh:mm	(h)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)
/15 9:00	1	21,704.57	12,512.08	25,052.75	21,435.51	12,410.96	24,769.19	269.06	101.13
/15 10:00	1	23,711.18	13,513.19	27,291.51	23,391.89	13,393.18	26,954.73	319.29	120.01
/15 11:00	1	25,187.12	14,174.98	28,901.92	24,829.03	14,040.40	28,523.91	358.09	134.59
/15 12:00	1	25,211.26	14,416.50	29,042.09	24,849.69	14,280.60	28,660.83	361.57	135.90
/15 13:00	1	24,267.48	13,993.18	28,012.85	23,931.09	13,866.75	27,658.34	336.39	126.43
/15 14:00	1	23,672.27	13,772.48	27,387.17	23,350.73	13,651.63	27,048.54	321.53	120.85
/15 15:00	1	23,168.26	13,699.77	26,915.65	22,857.71	13,583.04	26,588.98	310.56	116.72
/15 16:00	1	22,467.16	13,427.06	26,173.63	22,173.48	13,316.68	25,864.99	293.67	110.38
/15 17:00	1	20,873.04	12,596.00	24,379.15	20,618.25	12,500.23	24,111.58	254.78	95.76
/15 18:00	1	22,576.36	12,718.16	25,912.23	22,288.52	12,609.98	25,608.39	287.83	108.18
/15 19:00	1	27,412.74	13,859.75	30,717.28	27,008.26	13,707.73	30,287.75	404.48	152.03
/15 20:00	1	27,190.34	13,435.07	30,328.47	26,796.04	13,286.87	29,909.34	394.31	148.20
/15 21:00	1	25,633.16	12,813.79	28,657.50	25,281.11	12,681.47	28,283.46	352.05	132.32
/15 22:00	1	23,446.39	12,139.38	26,402.61	23,147.56	12,027.07	26,085.63	298.83	112.32
/15 23:00	1	20,711.73	11,409.96	23,646.63	20,472.03	11,319.87	23,393.23	239.70	90.09
/16 0:00	1	18,570.88	10,724.01	21,444.86	18,373.73	10,649.91	21,237.11	197.14	74.10
/16 1:00	1	17,365.00	10,498.10	20,291.70	17,188.48	10,431.76	20,106.36	176.51	66.34
/16 2:00	1	16,621.48	10,154.66	19,477.95	16,458.84	10,093.53	19,307.32	162.64	61.13
/16 3:00	1	16,270.58	9,918.28	19,055.29	16,114.93	9,859.78	18,891.96	155.66	58.50
/16 4:00	1	16,218.45	9,828.46	18,964.09	16,064.28	9,770.51	18,802.24	154.17	57.94
/16 5:00	1	16,839.86	9,770.63	19,469.10	16,677.37	9,709.56	19,297.93	162.49	61.07
/16 6:00	1	16,128.17	8,836.84	18,390.42	15,983.19	8,782.35	18,237.10	144.98	54.49
/16 7:00	1	14,901.31	8,601.18	17,205.51	14,774.41	8,553.49	17,071.77	126.90	47.70
/16 8:00	1	15,475.78	9,155.76	17,981.31	15,337.17	9,103.66	17,835.51	138.60	52.09
/16 9:00	1	17,407.15	10,159.52	20,155.02	17,233.01	10,094.07	19,971.65	174.14	65.45
/16 10:00	1	19,061.54	10,866.63	21,941.43	18,855.17	10,789.06	21,723.75	206.38	77.57
/16 11:00	1	20,001.41	10,986.07	22,819.95	19,778.17	10,902.17	22,583.92	223.24	83.90
/16 12:00	1	19,677.31	10,964.13	22,525.73	19,459.80	10,882.37	22,295.96	217.52	81.75
/16 13:00	1	18,949.05	11,112.97	21,967.35	18,742.19	11,035.21	21,749.61	206.87	77.75
/16 14:00	1	18,281.81	10,933.52	21,301.80	18,087.29	10,860.41	21,097.36	194.52	73.11
/16 15:00	1	17,745.92	10,537.26	20,638.60	17,563.33	10,468.63	20,446.58	182.60	68.63
/16 16:00	1	17,754.72	10,500.07	20,627.21	17,572.32	10,431.52	20,435.34	182.40	68.55
/16 17:00	1	17,919.46	10,161.44	20,600.04	17,737.54	10,093.06	20,408.09	181.92	68.37
/16 18:00	1	19,684.06	10,471.80	22,296.20	19,470.95	10,391.71	22,070.47	213.11	80.10
/16 19:00	1	23,557.14	11,539.03	26,231.43	23,262.17	11,428.17	25,917.78	294.97	110.87
/16 20:00	1	24,059.70	11,693.12	26,750.67	23,752.94	11,577.82	26,424.38	306.76	115.30
/16 21:00	1	22,708.93	11,246.43	25,341.23	22,433.64	11,142.96	25,048.63	275.29	103.47
/16 22:00	1	20,029.55	10,778.76	22,745.65	19,807.77	10,695.40	22,510.87	221.78	83.36
/16 23:00	1	17,112.10	9,938.91	19,789.04	16,944.23	9,875.82	19,612.20	167.87	63.10

Time	T	P_t^l	Q_t^l	S_t^l	P_t^o	Q_t^o	S_t^o	P_t^l	Q_t^l
/dd hh:mm	(h)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)
/17 0:00	1	15,277.42	9,159.09	17,812.59	15,141.40	9,107.96	17,669.66	136.02	51.12
/17 1:00	1	14,139.81	8,794.13	16,651.45	14,020.95	8,749.46	16,526.95	118.86	44.67
/17 2:00	1	13,617.77	8,494.32	16,049.83	13,507.34	8,452.82	15,934.19	110.43	41.50
/17 3:00	1	13,256.64	8,323.54	15,653.11	13,151.60	8,284.06	15,543.18	105.04	39.48
/17 4:00	1	13,968.18	8,478.08	16,339.77	13,853.73	8,435.06	16,219.62	114.45	43.02
/17 5:00	1	16,310.50	8,800.44	18,533.22	16,163.26	8,745.10	18,377.37	147.24	55.34
/17 6:00	1	17,589.83	8,791.29	19,664.41	17,424.07	8,728.99	19,488.29	165.77	62.30
/17 7:00	1	16,165.09	8,704.70	18,359.79	16,020.59	8,650.39	18,206.82	144.50	54.31
/17 8:00	1	18,622.40	10,600.29	21,428.02	18,425.56	10,526.31	21,220.38	196.83	73.98
/17 9:00	1	21,386.74	12,242.54	24,642.90	21,126.41	12,144.70	24,368.40	260.33	97.84
/17 10:00	1	22,960.27	13,101.62	26,435.32	22,660.69	12,989.02	26,119.37	299.57	112.60
/17 11:00	1	23,527.26	13,379.22	27,065.39	23,213.24	13,261.19	26,734.13	314.02	118.03
/17 12:00	1	23,569.44	13,466.67	27,145.35	23,253.56	13,347.95	26,812.23	315.88	118.72
/17 13:00	1	22,720.59	13,093.63	26,223.43	22,425.80	12,982.83	25,912.75	294.79	110.80
/17 14:00	1	23,205.29	13,545.33	26,869.34	22,895.80	13,429.01	26,543.47	309.49	116.32
/17 15:00	1	23,215.48	13,517.22	26,863.99	22,906.11	13,400.95	26,538.19	309.37	116.28
/17 16:00	1	22,907.02	13,306.26	26,491.28	22,606.18	13,193.19	26,174.40	300.84	113.07
/17 17:00	1	22,673.86	12,982.36	26,127.49	22,381.22	12,872.37	25,818.93	292.64	109.99
/17 18:00	1	24,011.94	12,858.07	27,237.90	23,693.90	12,738.54	26,901.14	318.04	119.54
/17 19:00	1	27,780.55	13,584.45	30,924.04	27,370.60	13,430.37	30,488.11	409.94	154.08
/17 20:00	1	27,166.41	13,337.13	30,263.72	26,773.78	13,189.56	29,846.27	392.62	147.57
/17 21:00	1	25,362.58	12,507.47	28,278.92	25,019.76	12,378.62	27,914.49	342.81	128.85
/17 22:00	1	22,422.19	11,651.79	25,268.93	22,148.47	11,548.91	24,978.64	273.72	102.88
/17 23:00	1	19,278.36	10,701.65	22,049.50	19,069.95	10,623.32	21,829.29	208.42	78.33
/18 0:00	1	17,427.91	10,133.22	20,159.72	17,253.69	10,067.74	19,976.21	174.22	65.48
/18 1:00	1	16,257.24	9,894.30	19,031.42	16,101.98	9,835.94	18,868.48	155.27	58.36
/18 2:00	1	15,513.10	9,793.26	18,345.69	15,368.82	9,739.03	18,194.76	144.28	54.23
/18 3:00	1	15,309.00	9,629.11	18,085.50	15,168.79	9,576.41	17,938.78	140.21	52.70
/18 4:00	1	15,900.81	9,737.37	18,645.43	15,751.77	9,681.36	18,489.11	149.03	56.01
/18 5:00	1	18,126.70	9,873.20	20,641.16	17,944.06	9,804.55	20,447.95	182.64	68.65
/18 6:00	1	19,001.43	9,291.39	21,151.46	18,809.65	9,219.30	20,947.51	191.78	72.08
/18 7:00	1	17,063.82	9,520.59	19,540.10	16,900.14	9,459.07	19,367.21	163.68	61.52
/18 8:00	1	19,617.14	11,562.82	22,771.28	19,394.86	11,479.28	22,537.40	222.28	83.55
/18 9:00	1	22,409.79	13,028.19	25,921.66	22,121.74	12,919.93	25,618.28	288.04	108.26
/18 10:00	1	24,420.40	13,821.10	28,060.27	24,082.86	13,694.24	27,704.09	337.53	126.86
/18 11:00	1	25,194.40	14,154.17	28,898.06	24,836.41	14,019.62	28,520.11	357.99	134.55
/18 12:00	1	25,168.71	14,416.59	29,005.21	24,808.06	14,281.04	28,624.95	360.65	135.55
/18 13:00	1	23,753.40	13,851.93	27,497.28	23,429.28	13,730.11	27,155.97	324.12	121.82
/18 14:00	1	24,080.15	13,925.58	27,816.82	23,748.45	13,800.91	27,467.32	331.70	124.67

Time	T	P_t^I	Q_t^I	S_t^I	P_t^O	Q_t^O	S_t^O	P_t^L	Q_t^L
/dd hh:mm	(h)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)
/18 15:00	1	24,585.25	14,376.87	28,480.32	24,237.53	14,246.18	28,114.26	347.71	130.69
/18 16:00	1	24,285.48	14,233.17	28,149.02	23,945.80	14,105.50	27,791.49	339.67	127.67
/18 17:00	1	23,033.36	13,720.36	26,810.15	22,725.23	13,604.55	26,486.22	308.13	115.81
/18 18:00	1	23,678.73	13,390.73	27,202.83	23,361.51	13,271.50	26,868.07	317.22	119.23
/18 19:00	1	27,216.66	13,641.22	30,443.87	26,819.35	13,491.89	30,021.80	397.31	149.33
/18 20:00	1	26,662.18	12,928.28	29,631.27	26,285.79	12,786.81	29,230.90	376.39	141.47
/18 21:00	1	24,982.26	12,390.40	27,886.11	24,648.90	12,265.11	27,531.82	333.36	125.29
/18 22:00	1	22,250.32	11,737.92	25,156.62	21,979.03	11,635.95	24,869.12	271.29	101.97
/18 23:00	1	19,069.90	10,956.67	21,993.40	18,862.54	10,878.73	21,774.81	207.36	77.94
/19 0:00	1	17,044.33	10,128.11	19,826.44	16,875.82	10,064.78	19,649.25	168.51	63.33
/19 1:00	1	15,931.93	9,750.52	18,678.84	15,782.37	9,694.30	18,521.95	149.57	56.21
/19 2:00	1	15,566.34	9,853.90	18,423.09	15,420.84	9,799.22	18,270.93	145.50	54.69
/19 3:00	1	15,610.11	9,814.88	18,439.29	15,464.36	9,760.10	18,286.77	145.75	54.78
/19 4:00	1	15,970.42	9,702.32	18,686.61	15,820.73	9,646.06	18,529.49	149.69	56.26
/19 5:00	1	18,052.94	9,694.98	20,491.49	17,872.93	9,627.33	20,300.92	180.00	67.65
/19 6:00	1	19,018.19	9,402.37	21,215.47	18,825.25	9,329.85	21,010.38	192.95	72.52
/19 7:00	1	17,200.03	9,776.48	19,784.36	17,032.24	9,713.42	19,607.34	167.79	63.07
/19 8:00	1	20,043.58	11,831.82	23,275.24	19,811.35	11,744.53	23,030.92	232.23	87.28
/19 9:00	1	23,572.35	13,606.92	27,217.72	23,254.79	13,487.56	26,883.07	317.57	119.36
/19 10:00	1	25,492.09	14,353.20	29,255.10	25,125.20	14,215.30	28,867.81	366.89	137.90
/19 11:00	1	26,219.75	14,811.84	30,114.21	25,830.99	14,665.72	29,703.93	388.76	146.11
/19 12:00	1	25,970.85	14,794.14	29,888.99	25,587.89	14,650.20	29,485.05	382.96	143.94
/19 13:00	1	25,186.67	14,232.04	28,929.55	24,827.89	14,097.20	28,550.93	358.77	134.84
/19 14:00	1	25,601.31	14,732.63	29,537.73	25,227.29	14,592.05	29,143.51	374.01	140.57
/19 15:00	1	26,011.92	14,788.61	29,921.95	25,628.11	14,644.35	29,517.07	383.81	144.25
/19 16:00	1	25,613.55	14,681.74	29,523.00	25,239.91	14,541.31	29,129.07	373.64	140.43
/19 17:00	1	24,061.86	14,169.46	27,923.94	23,727.60	14,043.82	27,572.23	334.26	125.63
/19 18:00	1	24,859.00	13,834.04	28,449.09	24,512.05	13,703.64	28,082.56	346.95	130.40
/19 19:00	1	28,457.89	14,179.66	31,794.88	28,024.53	14,016.78	31,334.40	433.36	162.88
/19 20:00	1	27,811.98	13,387.53	30,866.36	27,403.56	13,234.02	30,431.80	408.42	153.50
/19 21:00	1	25,841.90	12,488.81	28,701.47	25,488.76	12,356.09	28,325.78	353.14	132.73
/19 22:00	1	22,903.50	11,621.10	25,683.08	22,620.74	11,514.82	25,382.85	282.77	106.28
/19 23:00	1	19,894.44	10,955.83	22,711.64	19,673.31	10,872.72	22,477.89	221.12	83.11
/20 0:00	1	17,918.15	10,463.99	20,749.82	17,733.58	10,394.61	20,555.48	184.57	69.37
/20 1:00	1	16,827.60	10,255.42	19,706.39	16,661.12	10,192.85	19,531.70	166.47	62.57
/20 2:00	1	16,238.53	10,045.88	19,094.75	16,082.23	9,987.13	18,930.95	156.30	58.75
/20 3:00	1	16,101.66	10,016.98	18,963.20	15,947.50	9,959.04	18,801.73	154.15	57.94
/20 4:00	1	16,534.26	9,985.52	19,315.60	16,374.32	9,925.41	19,147.64	159.94	60.11
/20 5:00	1	18,721.82	10,050.33	21,248.90	18,528.27	9,977.58	21,043.97	193.56	72.75

Time	T	P_t^I	Q_t^I	S_t^I	P_t^O	Q_t^O	S_t^O	P_t^L	Q_t^L
/dd hh:mm	(h)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)
/20 6:00	1	19,353.52	9,736.48	21,664.66	19,152.31	9,660.86	21,450.95	201.20	75.62
/20 7:00	1	17,567.51	9,874.76	20,152.63	17,393.41	9,809.33	19,968.82	174.10	65.44
/20 8:00	1	19,886.45	11,699.29	23,072.59	19,658.24	11,613.51	22,832.44	228.21	85.77
/20 9:00	1	23,482.57	13,603.71	27,138.39	23,166.85	13,485.05	26,805.77	315.72	118.66
/20 10:00	1	25,493.92	14,375.89	29,267.83	25,126.71	14,237.87	28,880.24	367.21	138.02
/20 11:00	1	26,198.44	14,606.92	29,995.34	25,812.74	14,461.96	29,587.94	385.69	144.96
/20 12:00	1	25,943.65	14,655.02	29,796.69	25,563.05	14,511.97	29,395.01	380.60	143.05
/20 13:00	1	25,289.04	14,435.98	29,119.29	24,925.54	14,299.36	28,735.94	363.49	136.62
/20 14:00	1	26,135.66	14,739.94	30,005.64	25,749.70	14,594.88	29,598.27	385.96	145.06
/20 15:00	1	26,394.31	14,675.73	30,199.95	26,003.34	14,528.78	29,786.90	390.97	146.95
/20 16:00	1	25,910.77	14,523.91	29,703.74	25,532.54	14,381.76	29,304.36	378.23	142.16
/20 17:00	1	23,210.42	13,580.33	26,891.42	22,900.42	13,463.81	26,565.08	310.00	116.51
/20 18:00	1	23,970.93	13,501.07	27,511.53	23,646.47	13,379.12	27,169.03	324.46	121.95
/20 19:00	1	28,275.27	14,183.02	31,633.04	27,846.31	14,021.79	31,177.36	428.96	161.23
/20 20:00	1	27,850.71	13,787.14	31,076.48	27,436.71	13,631.54	30,636.45	414.00	155.60
/20 21:00	1	26,254.69	13,146.82	29,362.35	25,885.10	13,007.91	28,969.71	369.59	138.91
/20 22:00	1	23,661.28	12,417.46	26,721.71	23,355.19	12,302.41	26,397.24	306.10	115.05
/20 23:00	1	20,013.20	11,217.25	22,942.43	19,787.57	11,132.44	22,704.16	225.64	84.81
/21 0:00	1	17,953.04	10,737.27	20,918.90	17,765.45	10,666.76	20,721.75	187.59	70.51
/21 1:00	1	16,895.56	10,240.00	19,756.45	16,728.23	10,177.11	19,580.79	167.32	62.89
/21 2:00	1	16,201.70	9,823.51	18,947.20	16,047.80	9,765.67	18,785.64	153.89	57.84
/21 3:00	1	16,032.56	9,728.04	18,753.08	15,881.80	9,671.38	18,594.82	150.76	56.66
/21 4:00	1	16,602.18	9,639.75	19,197.85	16,444.19	9,580.37	19,031.42	157.99	59.38
/21 5:00	1	18,630.52	9,842.81	21,070.76	18,440.19	9,771.28	20,869.08	190.32	71.53
/21 6:00	1	19,334.98	9,781.71	21,668.49	19,133.71	9,706.06	21,454.75	201.28	75.65
/21 7:00	1	17,546.81	9,811.49	20,103.63	17,373.56	9,746.37	19,920.65	173.25	65.12
/21 8:00	1	19,755.93	11,500.67	22,859.61	19,531.91	11,416.47	22,623.69	224.01	84.20
/21 9:00	1	22,311.21	12,905.02	25,774.59	22,026.43	12,797.98	25,474.53	284.78	107.04
/21 10:00	1	24,049.52	13,494.48	27,576.81	23,723.51	13,371.95	27,232.59	326.00	122.53
/21 11:00	1	25,051.48	14,130.85	28,762.08	24,696.85	13,997.56	28,387.78	354.63	133.29
/21 12:00	1	23,335.66	13,593.64	27,006.30	23,023.01	13,476.13	26,677.05	312.65	117.51
/21 13:00	1	23,591.25	13,634.10	27,247.67	23,272.98	13,514.48	26,912.31	318.27	119.62
/21 14:00	1	24,291.99	14,056.96	28,065.97	23,954.32	13,930.05	27,710.20	337.67	126.91
/21 15:00	1	24,545.96	14,094.85	28,304.93	24,202.52	13,965.77	27,942.88	343.45	129.08
/21 16:00	1	24,645.26	14,182.72	28,434.81	24,298.65	14,052.45	28,069.48	346.60	130.27
/21 17:00	1	23,966.95	13,783.36	27,647.71	23,639.27	13,660.20	27,302.31	327.68	123.16
/21 18:00	1	24,908.20	13,794.70	28,473.01	24,560.66	13,664.08	28,105.75	347.54	130.62
/21 19:00	1	28,068.50	14,469.02	31,578.36	27,641.02	14,308.35	31,124.83	427.48	160.67
/21 20:00	1	27,514.82	13,934.63	30,842.17	27,107.04	13,781.37	30,409.18	407.78	153.26

Time	T	P_t^I	Q_t^I	S_t^I	P_t^O	Q_t^O	S_t^O	P_t^L	Q_t^L
/dd hh:mm	(h)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)
/21 21:00	1	25,960.32	13,254.98	29,148.46	25,596.10	13,118.08	28,761.86	364.22	136.89
/21 22:00	1	23,086.75	12,162.75	26,094.64	22,794.85	12,053.04	25,785.28	291.90	109.71
/21 23:00	1	19,947.23	11,159.28	22,856.54	19,723.28	11,075.10	22,620.03	223.95	84.17
/22 0:00	1	18,039.74	10,753.62	21,001.73	17,850.66	10,682.56	20,802.96	189.08	71.07
/22 1:00	1	16,763.80	10,194.57	19,620.25	16,598.77	10,132.55	19,447.05	165.02	62.02
/22 2:00	1	16,061.31	9,793.04	18,811.41	15,909.61	9,736.02	18,652.23	151.70	57.02
/22 3:00	1	15,810.27	9,657.71	18,526.63	15,663.13	9,602.40	18,372.26	147.14	55.30
/22 4:00	1	16,106.54	9,733.27	18,819.07	15,954.72	9,676.20	18,659.64	151.82	57.06
/22 5:00	1	17,130.03	9,778.60	19,724.58	16,963.25	9,715.91	19,548.68	166.78	62.69
/22 6:00	1	17,588.26	9,457.84	19,969.92	17,417.30	9,393.58	19,788.93	170.96	64.25
/22 7:00	1	17,239.77	9,506.98	19,687.37	17,073.62	9,444.53	19,511.73	166.15	62.45
/22 8:00	1	18,730.29	10,786.75	21,614.30	18,530.02	10,711.47	21,403.21	200.27	75.27
/22 9:00	1	21,093.78	12,342.05	24,439.18	20,837.74	12,245.81	24,169.64	256.04	96.23
/22 10:00	1	22,733.13	13,300.38	26,338.09	22,435.75	13,188.61	26,025.04	297.37	111.77
/22 11:00	1	23,578.51	13,547.48	27,193.39	23,261.51	13,428.34	26,859.22	317.00	119.15
/22 12:00	1	23,750.73	13,801.52	27,469.61	23,427.26	13,679.94	27,128.90	323.47	121.58
/22 13:00	1	22,680.60	13,336.49	26,311.06	22,383.84	13,224.95	25,998.76	296.76	111.54
/22 14:00	1	21,893.09	13,085.64	25,505.71	21,614.21	12,980.82	25,212.62	278.87	104.82
/22 15:00	1	21,268.46	12,942.25	24,896.77	21,002.75	12,842.38	24,617.92	265.72	99.87
/22 16:00	1	20,200.84	12,440.48	23,724.24	19,959.56	12,349.80	23,471.30	241.28	90.69
/22 17:00	1	17,882.75	10,979.68	20,984.43	17,693.99	10,908.73	20,786.47	188.77	70.95
/22 18:00	1	19,868.28	11,479.58	22,946.23	19,642.57	11,394.75	22,708.38	225.71	84.83
/22 19:00	1	26,232.86	13,741.50	29,614.05	25,856.92	13,600.20	29,215.50	375.95	141.30
/22 20:00	1	25,177.90	12,851.90	28,268.32	24,835.34	12,723.14	27,904.70	342.56	128.75
/22 21:00	1	21,943.83	11,487.26	24,768.71	21,680.84	11,388.41	24,489.89	262.99	98.85
/22 22:00	1	21,326.12	11,433.09	24,197.49	21,075.11	11,338.75	23,931.73	251.00	94.34
/22 23:00	1	19,236.25	10,945.14	22,132.08	19,026.27	10,866.21	21,910.58	209.98	78.92
/23 0:00	1	17,411.94	10,432.36	20,298.02	17,235.32	10,365.98	20,112.43	176.62	66.38
/23 1:00	1	16,121.14	10,001.19	18,971.42	15,966.85	9,943.20	18,809.77	154.29	57.99
/23 2:00	1	15,315.74	9,750.72	18,156.22	15,174.43	9,697.60	18,008.52	141.31	53.11
/23 3:00	1	14,699.94	9,302.09	17,395.90	14,570.22	9,253.33	17,260.22	129.73	48.76
/23 4:00	1	14,248.74	8,976.94	16,840.78	14,127.16	8,931.24	16,713.58	121.58	45.70
/23 5:00	1	15,387.58	9,211.99	17,934.28	15,249.70	9,160.16	17,789.38	137.88	51.82
/23 6:00	1	15,537.61	8,834.67	17,873.69	15,400.66	8,783.19	17,729.21	136.95	51.47
/23 7:00	1	14,507.85	8,248.17	16,688.62	14,388.46	8,203.30	16,562.67	119.39	44.87
/23 8:00	1	14,458.83	8,651.38	16,849.46	14,337.12	8,605.64	16,721.55	121.70	45.74
/23 9:00	1	15,228.72	9,128.60	17,755.15	15,093.58	9,077.81	17,613.15	135.14	50.79
/23 10:00	1	16,270.21	9,491.65	18,836.43	16,118.11	9,434.48	18,676.27	152.10	57.17
/23 11:00	1	16,962.06	9,666.27	19,523.02	16,798.67	9,604.86	19,350.68	163.39	61.41

Time	T	P_t^I	Q_t^I	S_t^I	P_t^O	Q_t^O	S_t^O	P_t^L	Q_t^L
/dd hh:mm	(h)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)
/23 12:00	1	16,701.23	9,506.47	19,217.28	16,542.91	9,446.97	19,050.28	158.31	59.50
/23 13:00	1	16,562.96	9,767.61	19,228.57	16,404.46	9,708.04	19,061.81	158.50	59.57
/23 14:00	1	15,888.82	9,512.02	18,518.45	15,741.81	9,456.77	18,363.96	147.01	55.25
/23 15:00	1	14,763.95	9,056.68	17,320.44	14,635.35	9,008.34	17,185.57	128.60	48.34
/23 16:00	1	14,662.98	9,127.70	17,271.89	14,535.10	9,079.64	17,137.94	127.88	48.07
/23 17:00	1	14,694.58	9,143.83	17,307.23	14,566.17	9,095.57	17,172.73	128.41	48.26
/23 18:00	1	16,736.68	9,635.65	19,312.23	16,576.80	9,575.56	19,143.71	159.88	60.09
/23 19:00	1	21,275.33	10,926.47	23,917.10	21,030.12	10,834.31	23,656.88	245.22	92.17
/23 20:00	1	21,718.23	11,065.68	24,374.80	21,463.54	10,969.96	24,104.42	254.69	95.73
/23 21:00	1	21,139.96	10,773.79	23,727.05	20,898.63	10,683.09	23,470.85	241.34	90.71
/23 22:00	1	19,287.22	10,338.86	21,883.53	19,081.93	10,261.70	21,666.16	205.29	77.16
/23 23:00	1	16,751.30	9,530.65	19,272.76	16,592.07	9,470.80	19,104.79	159.23	59.85
/24 0:00	1	15,131.03	9,060.86	17,636.53	14,997.69	9,010.74	17,496.40	133.34	50.12
/24 1:00	1	14,126.69	8,726.24	16,604.54	14,008.50	8,681.82	16,480.66	118.19	44.42
/24 2:00	1	13,685.18	8,513.69	16,117.29	13,573.82	8,471.84	16,000.64	111.36	41.85
/24 3:00	1	12,623.90	8,198.17	15,052.34	12,526.77	8,161.66	14,951.01	97.13	36.51
/24 4:00	1	14,122.48	8,638.00	16,554.74	14,004.99	8,593.84	16,431.49	117.48	44.16
/24 5:00	1	15,688.85	9,094.93	18,134.44	15,547.88	9,041.95	17,985.92	140.97	52.99
/24 6:00	1	16,974.69	8,666.72	19,059.18	16,818.98	8,608.19	18,893.89	155.72	58.53
/24 7:00	1	15,548.86	8,895.11	17,913.40	15,411.30	8,843.41	17,768.34	137.56	51.70
/24 8:00	1	18,554.84	11,047.43	21,594.63	18,354.94	10,972.29	21,384.46	199.91	75.14
/24 9:00	1	19,808.35	11,963.15	23,140.61	19,578.80	11,876.87	22,899.55	229.55	86.28
/24 10:00	1	20,983.06	12,276.50	24,310.52	20,729.71	12,181.28	24,043.80	253.35	95.22
/24 11:00	1	22,097.20	12,833.75	25,553.69	21,817.27	12,728.54	25,258.84	279.92	105.21
/24 12:00	1	22,054.40	12,613.94	25,406.85	21,777.68	12,509.94	25,115.06	276.72	104.00
/24 13:00	1	18,349.00	10,473.97	21,127.94	18,157.64	10,402.05	20,926.12	191.36	71.92
/24 14:00	1	16,085.47	9,097.88	18,480.09	15,939.07	9,042.85	18,325.58	146.40	55.02
/24 15:00	1	18,169.69	10,270.99	20,871.77	17,982.94	10,200.80	20,674.68	186.75	70.19
/24 16:00	1	18,256.68	10,694.80	21,158.57	18,064.76	10,622.67	20,956.54	191.91	72.13
/24 17:00	1	17,015.48	10,068.08	19,771.01	16,847.91	10,005.10	19,594.75	167.57	62.98
/24 18:00	1	18,618.48	10,623.89	21,436.29	18,421.49	10,549.85	21,228.53	196.98	74.04
/24 19:00	1	25,052.82	13,015.60	28,232.06	24,711.14	12,887.17	27,869.69	341.68	128.42
/24 20:00	1	27,858.26	13,875.28	31,122.44	27,443.04	13,719.21	30,681.22	415.22	156.06
/24 21:00	1	25,603.23	12,886.92	28,663.54	25,251.03	12,754.55	28,289.45	352.20	132.38
/24 22:00	1	22,333.35	12,029.23	25,366.93	22,057.51	11,925.55	25,074.93	275.85	103.68
/24 23:00	1	19,063.53	11,194.21	22,107.21	18,854.03	11,115.46	21,886.70	209.51	78.74
/25 0:00	1	17,078.73	10,774.30	20,193.28	16,903.92	10,708.60	20,010.42	174.80	65.70
/25 1:00	1	16,103.66	10,391.12	19,165.15	15,946.20	10,331.93	19,000.79	157.46	59.18
/25 2:00	1	15,680.93	10,164.36	18,687.05	15,531.23	10,108.09	18,530.86	149.70	56.26

Time	T	P_t^I	Q_t^I	S_t^I	P_t^O	Q_t^O	S_t^O	P_t^L	Q_t^L
/dd hh:mm	(h)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)
/25 3:00	1	15,566.75	9,981.61	18,492.06	15,420.16	9,926.51	18,338.95	146.59	55.10
/25 4:00	1	16,047.18	10,224.11	19,027.46	15,891.97	10,165.77	18,865.25	155.20	58.33
/25 5:00	1	18,014.08	10,145.98	20,674.82	17,830.85	10,077.11	20,481.39	183.24	68.87
/25 6:00	1	18,543.04	9,777.68	20,962.99	18,354.65	9,706.87	20,763.35	188.38	70.80
/25 7:00	1	16,626.96	9,889.79	19,345.90	16,466.52	9,829.49	19,177.20	160.44	60.30
/25 8:00	1	19,267.70	11,587.13	22,483.45	19,050.99	11,505.68	22,255.81	216.70	81.45
/25 9:00	1	22,746.70	13,341.89	26,370.78	22,448.58	13,229.85	26,057.01	298.11	112.05
/25 10:00	1	23,698.11	13,627.39	27,336.89	23,377.75	13,506.98	26,999.22	320.35	120.41
/25 11:00	1	24,200.10	13,791.22	27,853.96	23,867.52	13,666.22	27,503.16	332.59	125.00
/25 12:00	1	23,153.32	13,396.96	26,749.85	22,846.57	13,281.67	26,426.67	306.74	115.29
/25 13:00	1	21,989.33	13,099.23	25,595.32	21,708.49	12,993.67	25,300.08	280.84	105.55
/25 14:00	1	22,949.03	13,532.90	26,642.02	22,644.75	13,418.53	26,321.89	304.28	114.36
/25 15:00	1	22,812.53	13,480.57	26,497.88	22,511.54	13,367.44	26,181.25	300.99	113.13
/25 16:00	1	22,636.61	13,615.56	26,415.90	22,337.48	13,503.13	26,101.67	299.13	112.43
/25 17:00	1	22,005.54	12,906.54	25,511.22	21,726.54	12,801.68	25,217.56	278.99	104.86
/25 18:00	1	23,067.29	12,721.40	26,342.62	22,769.81	12,609.59	26,028.18	297.48	111.81
/25 19:00	1	26,666.04	13,228.79	29,767.07	26,286.19	13,086.03	29,363.38	379.84	142.77
/25 20:00	1	26,305.16	13,062.31	29,369.80	25,935.38	12,923.33	28,976.83	369.77	138.98
/25 21:00	1	24,165.02	12,067.77	27,010.72	23,852.26	11,950.22	26,678.42	312.76	117.55
/25 22:00	1	20,750.62	11,225.43	23,592.34	20,512.02	11,135.75	23,339.83	238.60	89.68
/25 23:00	1	17,483.85	10,296.03	20,290.23	17,307.37	10,229.70	20,104.52	176.48	66.33
/26 0:00	1	15,644.52	9,801.27	18,461.19	15,498.41	9,746.35	18,308.26	146.10	54.91
/26 1:00	1	14,717.63	9,503.92	17,519.51	14,586.05	9,454.47	17,382.17	131.58	49.45
/26 2:00	1	14,275.29	9,419.03	17,102.69	14,149.90	9,371.90	16,972.10	125.39	47.13
/26 3:00	1	14,220.53	9,381.24	17,036.17	14,096.11	9,334.48	16,906.59	124.42	46.76
/26 4:00	1	14,529.16	9,164.52	17,178.03	14,402.66	9,116.97	17,045.70	126.50	47.54
/26 5:00	1	17,057.26	9,306.80	19,431.08	16,895.41	9,245.97	19,259.87	161.86	60.83
/26 6:00	1	18,217.50	9,117.99	20,371.92	18,039.59	9,051.12	20,182.91	177.91	66.87
/26 7:00	1	16,490.46	9,361.19	18,962.26	16,336.32	9,303.26	18,799.63	154.14	57.93
/26 8:00	1	18,696.75	10,979.00	21,681.95	18,495.22	10,903.26	21,469.85	201.53	75.74
/26 9:00	1	21,399.41	12,551.60	24,808.82	21,135.57	12,452.44	24,531.11	263.84	99.17
/26 10:00	1	22,482.55	12,931.81	25,936.40	22,194.18	12,823.42	25,632.44	288.37	108.39
/26 11:00	1	23,325.98	13,436.48	26,919.14	23,015.34	13,319.72	26,591.75	310.64	116.75
/26 12:00	1	23,253.51	13,408.09	26,842.18	22,944.64	13,292.00	26,516.67	308.86	116.09
/26 13:00	1	22,682.54	13,173.67	26,230.57	22,387.59	13,062.81	25,919.90	294.95	110.86
/26 14:00	1	23,279.72	13,358.59	26,840.22	22,970.90	13,242.52	26,514.65	308.82	116.07
/26 15:00	1	23,945.97	13,673.87	27,575.06	23,620.01	13,551.36	27,231.31	325.96	122.51
/26 16:00	1	23,496.75	13,589.96	27,143.77	23,180.90	13,471.25	26,810.99	315.84	118.71
/26 17:00	1	22,392.32	13,288.29	26,038.33	22,101.67	13,179.05	25,732.69	290.64	109.24

Time	T	P_t^I	Q_t^I	S_t^I	P_t^O	Q_t^O	S_t^O	P_t^L	Q_t^L
/dd hh:mm	(h)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)
/26 18:00	1	22,827.59	12,967.58	26,253.70	22,532.12	12,856.52	25,941.98	295.47	111.05
/26 19:00	1	27,710.51	13,918.44	31,009.61	27,298.30	13,763.51	30,571.74	412.22	154.93
/26 20:00	1	27,575.34	13,582.93	30,739.15	27,170.28	13,430.69	30,308.54	405.06	152.24
/26 21:00	1	25,711.86	12,841.08	28,740.09	25,357.77	12,708.00	28,363.88	354.09	133.08
/26 22:00	1	22,687.79	11,843.84	25,593.21	22,407.00	11,738.31	25,295.48	280.79	105.54
/26 23:00	1	19,465.67	11,045.40	22,381.09	19,250.94	10,964.69	22,154.53	214.73	80.71
/27 0:00	1	17,489.63	10,615.06	20,458.91	17,310.20	10,547.62	20,270.56	179.43	67.44
/27 1:00	1	16,454.60	10,387.61	19,459.09	16,292.28	10,326.60	19,289.29	162.32	61.01
/27 2:00	1	16,155.42	10,161.28	19,085.31	15,999.27	10,102.59	18,921.92	156.15	58.69
/27 3:00	1	15,904.23	9,852.31	18,708.62	15,754.18	9,795.91	18,551.39	150.04	56.39
/27 4:00	1	16,355.99	9,928.10	19,133.36	16,199.05	9,869.12	18,968.63	156.93	58.98
/27 5:00	1	18,595.09	9,917.81	21,074.64	18,404.70	9,846.25	20,872.99	190.39	71.56
/27 6:00	1	19,078.06	9,492.45	21,309.13	18,883.41	9,419.29	21,102.28	194.65	73.16
/27 7:00	1	16,731.02	9,607.17	19,293.12	16,571.45	9,547.19	19,124.90	159.57	59.97
/27 8:00	1	19,412.27	11,514.73	22,570.45	19,193.89	11,432.66	22,340.79	218.38	82.08
/27 9:00	1	21,774.84	12,566.81	25,140.97	21,503.88	12,464.97	24,855.43	270.95	101.84
/27 10:00	1	22,143.11	12,517.10	25,436.10	21,865.75	12,412.86	25,143.39	277.35	104.24
/27 11:00	1	23,090.80	13,053.32	26,524.98	22,789.19	12,939.96	26,206.68	301.61	113.36
/27 12:00	1	22,877.02	13,200.00	26,412.09	22,577.98	13,087.61	26,096.94	299.05	112.40
/27 13:00	1	22,425.34	13,124.32	25,983.53	22,135.92	13,015.54	25,678.85	289.42	108.78
/27 14:00	1	23,098.36	13,293.42	26,650.50	22,793.89	13,178.99	26,329.58	304.47	114.44
/27 15:00	1	24,668.44	14,051.73	28,389.84	24,322.93	13,921.87	28,025.41	345.51	129.86
/27 16:00	1	24,258.70	14,241.63	28,130.21	23,919.48	14,114.14	27,773.19	339.22	127.50
/27 17:00	1	22,712.73	13,641.37	26,494.44	22,411.82	13,528.27	26,178.30	300.91	113.10
/27 18:00	1	23,203.71	13,242.30	26,716.48	22,897.73	13,127.29	26,393.78	305.98	115.00
/27 19:00	1	28,067.33	14,281.68	31,491.93	27,642.19	14,121.89	31,040.59	425.14	159.79
/27 20:00	1	27,635.42	13,763.56	30,873.16	27,226.82	13,609.98	30,438.98	408.60	153.57
/27 21:00	1	26,272.57	13,087.44	29,351.82	25,903.25	12,948.63	28,959.38	369.32	138.81
/27 22:00	1	23,148.73	12,001.74	26,075.00	22,857.27	11,892.20	25,765.85	291.46	109.55
/27 23:00	1	19,810.18	11,135.83	22,725.54	19,588.79	11,052.62	22,491.80	221.39	83.21
/28 0:00	1	17,725.98	10,453.63	20,578.84	17,544.44	10,385.40	20,387.84	181.54	68.23
/28 1:00	1	16,809.35	10,167.66	19,645.24	16,643.91	10,105.48	19,471.53	165.44	62.18
/28 2:00	1	16,356.96	10,148.88	19,249.67	16,198.11	10,089.17	19,083.25	158.85	59.70
/28 3:00	1	16,109.67	9,874.67	18,895.26	15,956.62	9,817.14	18,734.73	153.05	57.53
/28 4:00	1	16,435.71	9,879.78	19,176.61	16,278.06	9,820.53	19,011.00	157.64	59.25
/28 5:00	1	18,306.70	9,931.64	20,827.22	18,120.75	9,861.75	20,630.46	185.95	69.89
/28 6:00	1	19,274.21	9,899.11	21,667.66	19,072.95	9,823.46	21,454.09	201.26	75.64
/28 7:00	1	16,993.77	9,928.83	19,681.72	16,827.72	9,866.42	19,506.87	166.06	62.41
/28 8:00	1	19,538.57	11,640.20	22,743.13	19,316.83	11,556.86	22,510.02	221.73	83.34

Time	T	P_t^I	Q_t^I	S_t^I	P_t^O	Q_t^O	S_t^O	P_t^L	Q_t^L
/dd hh:mm	(h)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)
/28 9:00	1	22,934.21	13,427.44	26,575.82	22,631.45	13,313.65	26,257.11	302.77	113.80
/28 10:00	1	24,584.46	14,347.70	28,464.93	24,237.12	14,217.15	28,099.21	347.34	130.55
/28 11:00	1	25,228.75	14,512.01	29,104.78	24,865.62	14,375.53	28,722.03	363.13	136.48
/28 12:00	1	24,561.48	14,257.90	28,399.90	24,215.73	14,127.95	28,035.70	345.75	129.95
/28 13:00	1	23,744.38	14,138.19	27,634.84	23,417.01	14,015.15	27,290.67	327.38	123.05
/28 14:00	1	24,656.96	14,562.97	28,636.44	24,305.42	14,430.85	28,266.64	351.54	132.13
/28 15:00	1	24,899.87	14,850.10	28,991.88	24,539.55	14,714.67	28,613.13	360.32	135.43
/28 16:00	1	24,394.12	14,607.37	28,433.22	24,047.56	14,477.11	28,069.05	346.57	130.26
/28 17:00	1	23,305.28	14,006.55	27,190.43	22,988.34	13,887.43	26,857.49	316.93	119.12
/28 18:00	1	24,280.61	13,840.50	27,948.29	23,945.76	13,714.64	27,595.12	334.84	125.85
/28 19:00	1	27,514.62	14,082.07	30,908.88	27,105.08	13,928.14	30,474.22	409.54	153.93
/28 20:00	1	27,111.03	13,456.90	30,267.08	26,718.32	13,309.29	29,849.72	392.71	147.60
/28 21:00	1	25,629.19	12,863.60	28,676.26	25,276.68	12,731.10	28,301.79	352.52	132.49
/28 22:00	1	22,764.05	11,911.23	25,692.01	22,481.09	11,804.88	25,392.02	282.96	106.35
/28 23:00	1	19,660.37	10,844.57	22,452.95	19,444.26	10,763.34	22,224.51	216.11	81.23
/29 0:00	1	17,544.02	10,201.84	20,294.58	17,367.46	10,135.48	20,108.62	176.56	66.36
/29 1:00	1	16,393.52	9,790.53	19,094.55	16,237.22	9,731.79	18,930.27	156.30	58.74
/29 2:00	1	15,871.50	9,639.88	18,569.64	15,723.67	9,584.32	18,414.48	147.82	55.56
/29 3:00	1	15,541.91	9,396.63	18,161.71	15,400.51	9,343.48	18,013.23	141.40	53.15
/29 4:00	1	15,896.06	9,497.42	18,517.17	15,749.07	9,442.17	18,362.67	146.99	55.25
/29 5:00	1	16,560.86	9,392.41	19,038.89	16,405.47	9,334.00	18,874.93	155.39	58.40
/29 6:00	1	16,887.60	8,843.85	19,063.18	16,731.81	8,785.30	18,898.02	155.78	58.55
/29 7:00	1	16,705.81	9,291.98	19,116.09	16,549.16	9,233.10	18,950.59	156.65	58.88
/29 8:00	1	19,086.69	10,999.43	22,029.28	18,878.65	10,921.24	21,810.02	208.03	78.19
/29 9:00	1	22,177.25	12,794.61	25,603.37	21,896.23	12,688.99	25,307.22	281.01	105.62
/29 10:00	1	23,460.26	13,388.98	27,012.01	23,147.47	13,271.42	26,682.13	312.79	117.56
/29 11:00	1	24,617.43	13,802.31	28,222.71	24,275.98	13,673.97	27,862.17	341.45	128.34
/29 12:00	1	24,671.65	13,894.19	28,315.00	24,327.96	13,765.02	27,952.20	343.69	129.18
/29 13:00	1	23,353.72	13,362.61	26,906.42	23,043.37	13,245.97	26,579.18	310.35	116.64
/29 14:00	1	22,882.61	13,256.00	26,444.96	22,582.82	13,143.33	26,129.12	299.79	112.68
/29 15:00	1	22,579.18	13,298.04	26,204.15	22,284.83	13,187.41	25,894.42	294.36	110.63
/29 16:00	1	22,244.56	13,223.02	25,877.96	21,957.49	13,115.12	25,576.12	287.07	107.90
/29 17:00	1	21,384.08	12,760.48	24,901.98	21,118.25	12,660.57	24,622.56	265.83	99.91
/29 18:00	1	24,590.79	13,426.05	28,017.24	24,254.29	13,299.58	27,661.33	336.50	126.47
/29 19:00	1	27,635.16	13,763.37	30,872.84	27,226.57	13,609.80	30,438.67	408.59	153.57
/29 20:00	1	27,158.17	13,453.32	30,307.72	26,764.40	13,305.32	29,889.21	393.77	148.00
/29 21:00	1	25,564.09	12,873.42	28,622.50	25,212.89	12,741.42	28,249.49	351.19	132.00
/29 22:00	1	23,131.48	11,872.79	26,000.55	22,841.68	11,763.87	25,693.02	289.80	108.92
/29 23:00	1	20,555.99	10,985.00	23,307.06	20,323.12	10,897.48	23,060.45	232.87	87.52

Time	T	P_t^I	Q_t^I	S_t^I	P_t^O	Q_t^O	S_t^O	P_t^L	Q_t^L
/dd hh:mm	(h)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)	(kVA)	(kW)	(kVAr)
/30 0:00	1	18,534.85	10,560.63	21,332.31	18,339.77	10,487.31	21,126.55	195.08	73.32
/30 1:00	1	16,904.40	9,944.44	19,612.51	16,739.50	9,882.46	19,438.98	164.89	61.98
/30 2:00	1	16,184.41	9,723.02	18,880.47	16,031.59	9,665.59	18,719.93	152.81	57.44
/30 3:00	1	15,711.09	9,342.46	18,278.95	15,567.86	9,288.63	18,128.34	143.23	53.83
/30 4:00	1	15,737.41	9,357.26	18,309.13	15,593.71	9,303.25	18,158.03	143.70	54.01
/30 5:00	1	16,543.56	9,487.79	19,071.12	16,387.64	9,429.19	18,906.73	155.91	58.60
/30 6:00	1	16,175.16	8,560.51	18,300.77	16,031.59	8,506.55	18,148.65	143.57	53.96
/30 7:00	1	14,894.06	8,189.89	16,997.27	14,770.21	8,143.34	16,866.33	123.85	46.55
/30 8:00	1	15,161.38	9,019.32	17,641.30	15,027.97	8,969.18	17,501.03	133.41	50.14
/30 9:00	1	16,812.36	9,957.70	19,539.99	16,648.69	9,896.18	19,367.84	163.67	61.52
/30 10:00	1	18,295.04	10,457.95	21,073.14	18,104.67	10,386.40	20,872.38	190.37	71.55
/30 11:00	1	19,337.97	10,649.24	22,076.31	19,129.05	10,570.71	21,855.44	208.92	78.52
/30 12:00	1	19,518.98	10,838.12	22,326.12	19,305.30	10,757.80	22,100.34	213.68	80.31
/30 13:00	1	18,688.14	10,587.82	21,479.02	18,490.37	10,513.49	21,270.33	197.77	74.33
/30 14:00	1	18,106.88	10,531.61	20,946.93	17,918.79	10,460.91	20,748.82	188.09	70.70
/30 15:00	1	17,693.17	10,405.19	20,525.99	17,512.56	10,337.30	20,335.92	180.61	67.88
/30 16:00	1	16,981.21	10,119.34	19,767.72	16,813.70	10,056.38	19,591.61	167.51	62.96
/30 17:00	1	16,858.37	9,924.62	19,562.79	16,694.31	9,862.96	19,390.15	164.06	61.66
/30 18:00	1	19,499.94	10,419.71	22,109.23	19,290.39	10,340.95	21,887.31	209.55	78.76
/30 19:00	1	24,096.48	11,717.14	26,794.24	23,788.71	11,601.47	26,466.90	307.76	115.67
/30 20:00	1	24,438.53	11,615.75	27,058.59	24,124.66	11,497.78	26,724.49	313.87	117.97
/30 21:00	1	23,032.73	11,099.73	25,567.77	22,752.50	10,994.40	25,269.61	280.23	105.33
/30 22:00	1	20,463.82	10,413.95	22,961.23	20,237.81	10,329.00	22,721.29	226.01	84.95
/30 23:00	1	17,471.13	9,595.71	19,932.84	17,300.81	9,531.69	19,752.75	170.32	64.02
Total	720.00	14,714,826.38	8,295,918.56	16,899,892.60	14,538,248.46	8,229,551.21	16,705,872.66	176,577.92	66,367.35

Appendix - F Incorporation of Long Run Marginal Costing Concept for TBPM

The proposed strategy was developed in Chapter 4 uses (F.1) and (F.2) as the costing function and its cost allocation function respectively.

$$R(S^I) = C_{Fd} \frac{S^I}{S^I_{peak}} \quad (F.1)$$

$$A(S^I) = \frac{1}{S^I} \times \left[\int_0^{S^I} \frac{C_{Fd}}{S^I_{peak}} \times \frac{1}{G(S^I)} dS^I \right] = \frac{C_{Fd}}{S^I \times S^I_{peak}} \int_0^{S^I} \frac{1}{G(S^I)} dS^I \quad (F.2)$$

In calculating the cost for fixed cost one concept is to calculate the cost based on long run marginal cost. In such a scenario, the long run marginal cost concepts can be easily incorporated with the proposed strategy. This can be achieved by simply redefining the $R(S^I)$ incorporating long run marginal cost parameters. As an example let us consider (F.3).

$$R(S^I) = \frac{C_m}{365} S^I \quad (F.3)$$



Where, C_m is the marginal cost per unit demand per year [LKR kVA⁻¹ year⁻¹] for the asset base.

It modifies the (F.2) as (F.4).

$$A(S^I) = \frac{C_m}{S^I \times 365} \int_0^{S^I} \frac{1}{G(S^I)} dS^I \quad (F.4)$$

For the purpose of illustration it is assumed that the input load curve of Primary Substations (PSS) is similar to the load curve data used in the section 5.1.4. Further for comparison purposes it is also assumed that there is effect of the losses in PSSs are negligible making the assumption input load curve is similar as output load curve.

The Table F-1 and Figure F-1 show input load curve data and the variation of fixed cost component $A_{LRMC}(S^I_t)$ taking $C_m = 3230$ LKR /kVA/Year which is calculated in Appendix - G. It also shows the recovery of fixed cost from apparent energy

kVAh, R_t^{FS} , for each hour (assuming that the recovery is from apparent energy instead of active energy). The results show that the total recovery 279,176.45 LKR is equal to the expected recovery from LRMC approach which is (F.5).

$$\frac{C_m}{365} \times S_{peak} = 3,230 \div 365 \times 31,548 = 279,176.45 \text{ LK R} \quad (F.5)$$

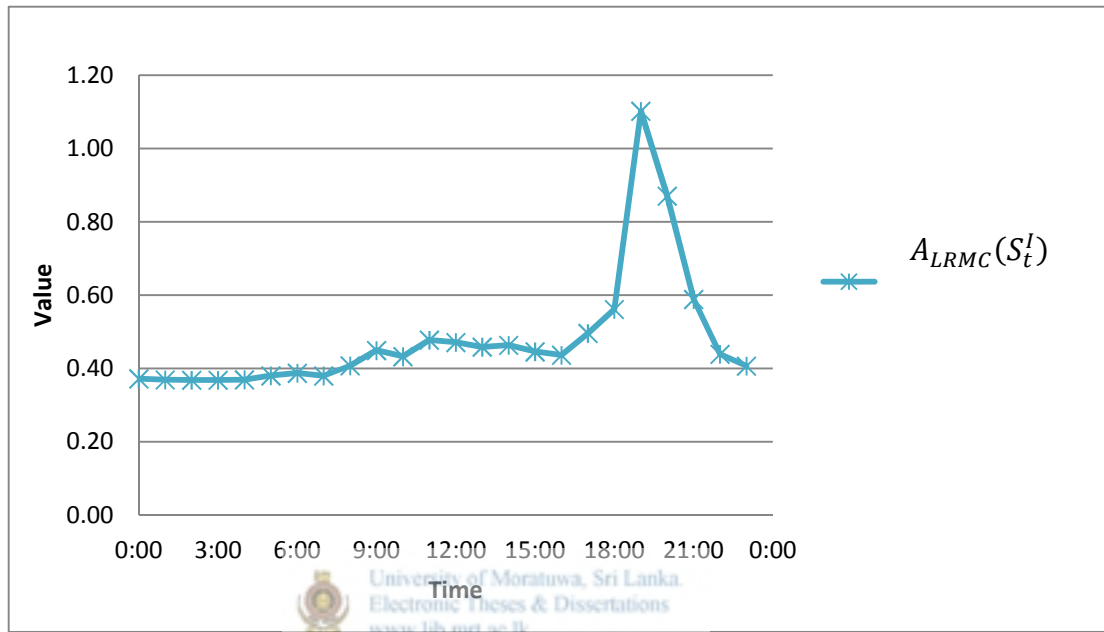


Figure F-1 Variation of fixed component with LRMC

It is worth to note that the percentage change in $A_{LRMC}(S_t^I)$ and $A(S_t^I)$ in Chapter 5 is similar.

Table F-1 Variation of cost components related to fixed cost with LRMC value

Hour	T	P_t^I	Q_t^I	S_t^I	$A_{LRMC}(S_t^I)$	R_t^{FS}
	(h)	(kW)	(kVAr)	(kVA)	(LKR/kVAh)	(LKR)
0:00	1	13,855	8,791	16,409	0.3724	6,110.54
1:00	1	13,231	8,546	15,751	0.3696	5,821.07
2:00	1	12,882	8,307	15,328	0.3687	5,651.90
3:00	1	12,931	8,306	15,369	0.3688	5,667.34
4:00	1	13,487	8,282	15,827	0.3698	5,853.07
5:00	1	15,853	8,511	17,994	0.3807	6,850.08
6:00	1	16,992	8,380	18,946	0.3877	7,345.62
7:00	1	15,600	8,870	17,945	0.3804	6,826.24
8:00	1	18,544	10,987	21,555	0.4079	8,792.46
9:00	1	22,036	12,882	25,525	0.4495	11,472.86
10:00	1	21,065	12,023	24,254	0.4329	10,498.95
11:00	1	23,171	13,081	26,608	0.4780	12,718.28
12:00	1	23,015	13,002	26,434	0.4714	12,460.79
13:00	1	22,393	13,185	25,987	0.4590	11,926.86
14:00	1	22,513	13,371	26,184	0.4638	12,145.37
15:00	1	21,741	12,996	25,329	0.4461	11,299.66
16:00	1	21,063	12,839	24,668	0.4370	10,780.24
17:00	1	23,020	14,095	26,992	0.4964	13,397.74
18:00	1	24,398	13,859	28,060	0.5616	15,759.67
19:00	1	28,192	14,159	31,548	1.1020	34,765.83
20:00	1	27,396	13,704	30,632	0.8705	26,664.51
21:00	1	25,378	12,713	28,384	0.5889	16,715.64
22:00	1	21,943	11,679	24,857	0.4393	10,919.92
23:00	1	18,506	10,849	21,452	0.4070	8,731.82
Total		473,503				279,176.45

Appendix - G Long Run Marginal Cost for 11 kV Primary Substations of Negombo Branch LECO

G.1 Methodology

This section estimates the long run marginal cost (LRMC) for primary substations (PSS) using long run incremental cost (LRIC) methodology. Marginal cost is the additional cost of production which occurs in a specified increment in output. It can be estimated in either short run or in long run terms. The short run marginal cost (SRMC) is the cost of an incremental electricity unit without making additional investments corresponding to the incremental growth. Such incremental cost is sufficient only to sustain the demand variations. In order to sustain the long term growth the infrastructure of the system also has to be developed. Cost of all such costs of long term sustainable growth is taken care of in the long run marginal costing (LRMC).

In literature there are three major approaches in calculating the LRMC [13]-[15] as described below.

- **Marginal Incremental Cost (MIC)**
Let us consider two scenarios A and B where A is the investment plan for present demand and B is the investment plan for involving an increased demand. MIC calculates the deference between the present value of the investment programs A and B, divided by the increment in demand.
- **Average Incremental Cost (AIC)**
is the present value of the incremental investment associated with increasing demand divided by the present value of the increment in demand.
- **Long Run Incremental Cost (LRIC)**
is the annuitized value of the capital expenditure divided by the increment in demand.

MIC and AIC methodologies require both load forecast and relevant optimal network expansion plan for the period of analysis (say 20 years). Unlike generation and transmission sector, distribution sector is subjected to rapid change. Therefore, LECO maintains its planning horizon as five years. With that practice, future network plan for the next 20 years is not available.

It is inappropriate to analyze a network asset which is having more than 20 years of life time for a short analyzing period. Therefore, for the purpose of this study LRIC is used to estimate the LRMC associated with Primary Substations (PSSs). The following assumptions are made on this calculation.

- i. Life time of a PSS is 25 years and it is designed to load for its 60% of capacity for reliability considerations.
- ii. The unit capacity of a PSS is 10 MVA which is the most common capacity related to the LECO.
- iii. The capital cost per 10 MVA PSS is 275 million LKR and the operation cost of it is 2 million LKR
- iv. The average energy loss is 1.5%.

The LRIC approach can be represented mathematically using (G.1).

$$LRIC = \frac{OPEX_{u+1} - OPEX_u}{DMD_{u+1} - DMD_u} + \frac{INV_j}{DMD_{j+1} - DMD_j} \times \frac{i}{1 - (1+i)^{-v}} \quad (G.1)$$

Where,

u = Base year for which costs are being calculated

j = the year in which the next large investment expenditures takes place or the year in which the system reaches capacity

DMD = Demand

OPEX = Operating expenditure

INV = Investment on capital expenditure

i = Opportunity cost of the capital

v = Asset life in years

By substituting the values mentioned in Table G- for (G.1) it can be calculated LRMC as 3,230 LKR/ kVA/Year.

Table G-1 Values for LRMC calculation

$OPEX_{u+1} - OPEX_u$	2,000,000 LKR
INV_j	275,000,000 LKR
$DMD_{u+1} - DMD_u$	6 MVA (10 MVA x 60% = 6 MVA)
$DMD_{j+1} - DMD_j$	6 MVA (10 MVA x 60% = 6 MVA)
i	10%
v	25 years

