

BEFORE MAHARASHTRA ELECTRICITY REGULATORY COMMISSION,

Case No. of 2016

IN THE MATTER OF:

Petition seeking directions for optimization of power generation in the state of Maharashtra by reducing the technical minimum operation of the generating power plant as per CERC defined norms.

AND IN THE MATTER OF:

Petition under Sections 33(1) and 33(4) read with 86 of the Electricity Act, 2003 and applicable provisions of the Maharashtra State Grid Code and the Maharashtra Scheduling and Dispatch Code

AND IN THE MATTER OF:

Maharashtra State Electricity Distribution Company Limited

5th Floor, Prakashgad,
Plot No. G-9, Bandra (East),
Mumbai - 400051

Affidavit

I, Paresh Ramchandra Bhagwat, S/o Shri. Ramchandra Bhagwat, aged about 44, having my office at Maharashtra State Electricity Distribution Co. Ltd., Prakashgad, Plot No.G-9, Anant Kanekar Marg, Bandra (East), Mumbai-400 051 do solemnly affirm and say as follows :-

I am the Chief Engineer (Power Purchase) of Maharashtra State Electricity Distribution Co. Ltd., the petitioner in the above matter and am duly authorized to make this affidavit.

The averments made in the enclosed petition are based on the information received from the concerned officers of the Company and I believe them to be true.

I say that there are no proceedings pending in any court of law/ tribunal or arbitrator or any other authority, wherein the Petitioners are a party and where issues arising and/or reliefs sought are identical or similar to the issues arising in the matter pending before the Commission.

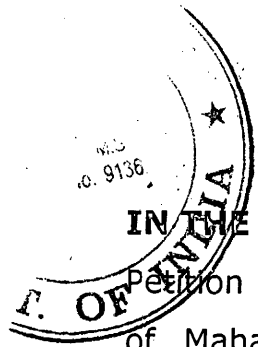
I solemnly affirm at Mumbai on this 07 Day of January 2017 that the contents of this affidavit are true to my knowledge, no part of it is false and nothing material has been concealed there from.


Chief Engineer (Power Purchase)
MSEDCL

Identified before me

**BEFORE THE HON'BLE MAHARASHTRA ELECTRICITY
REGULATORY COMMISSION, MUMBAI**

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5th Floor, Prakashgad,
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Mumbai - 400051

...PETITIONER

VERSUS

1. Maharashtra State Load Despatch Centre,

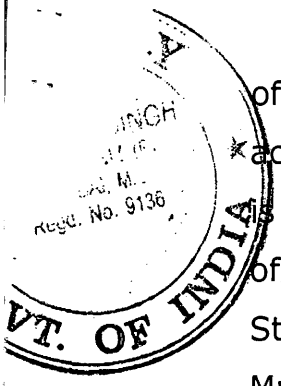
Thane-Belapur Road, P.O. Airoli,
Navi Mumbai - 400 708

2. Maharashtra State Power Generation Company Limited

Hong Kong Bank Building, M.G. Road, Fort
Mumbai 400 001


...RESPONDENTS

1. Maharashtra State Electricity Distribution Company Limited (hereinafter to be referred "MSEDCL") is a Company constituted under the provisions of Government of Maharashtra General Resolution No. PLA - 1003 / C. R. 8588 dated 25th January 2005 and is duly registered with the Registrar



of Companies, Mumbai on 31st May 2005. MSEDCL is functioning in accordance with the provisions envisaged in the Electricity Act, 2003 and is engaged, within the framework of Electricity Act, 2003, in the business of distribution of electricity to its consumers situated over the entire State of Maharashtra, except Mumbai City & its suburbs (excluding Mulund & Bhandup).

2. Present Petition is filed under Sections 33(1) and 33(4) read with 86 of the Electricity Act, 2003 and applicable provisions of the Maharashtra State Grid Code and the Maharashtra Scheduling and Dispatch Code.
3. MSEDCL submits that one of the objective of the Electricity Act -2003, Sec.73(a), National Electricity Policy and Tariff Policy is to ensure availability of the electricity to the consumers at reasonable and Competitive rate.
4. MSEDCL submits that, as per tariff policy, a two-part tariff structure should be adopted for long term contract to facilitate Merit Order Dispatch. As per MYT Regulation 2011, regulation 39 , the tariff for sale of electricity from a thermal power generating station shall comprise of two parts, namely; Annual Fixed Charge and Energy (variable) Charges (for recovery of primary & secondary fuel cost). Thus, any cost towards the power generation from the thermal generating station shall include either in Annual Fixed Charge or Energy (Variable) charges. As per regulation 48.5 of MYT Regulation 2011, the energy charge shall be the sum of the cost of normative quantities of primary and secondary fuel for delivering Ex-bus one KW of electricity.
5. In line with the tariff policy, Hon'ble Commission vide its Order no. 42 of 2007 dated 17.05.2007 has directed MSLDC to prepare Merit Order Stack (MOD) for the state to facilitate economic load dispatch.



6. MSEDCL humbly submits that, in accordance with above mentioned order, MSLDC requests MSEDCL to submit the variable rate of its different contracted thermal plant for preparation of merit order dispatch stack every month. MSEDCL submits the requested data of various Thermal/Gas generating stations which includes Central Sector, MSPGCL and IPPs (Independent Power Producers) Thermal/Gas generating stations. MSLDC, after collecting data from MSEDCL as well as other utilities in the state i.e. TATA, BEST and R-Infra and State Generation Companies, prepares monthly state MOD stack.

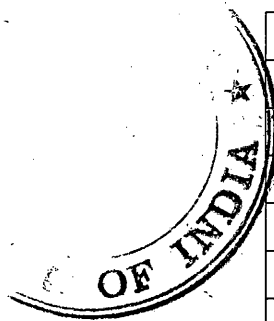
7. To optimize generating sources, zero schedule is provided to the costlier generating station. A zero schedule to power plant depends on demand supply situation as well as technical constraints in transmission network. Forecasting demand and supply is a rigorous and challenging task; demand side factors such as seasonal variations, consumption pattern etc. fluctuate demand unexpectedly in a wide range. On the other hand, supply side factors like infirm generation such as wind and solar inject significant unscheduled power to the grid. Also in real time operation, thermal generating plants, scarcity in water unavailability, breakdown, technical problem etc. in order to manage this season variation, MSEDCL to give zero schedules to costly generating units placed in higher stack of MOD. Thus MSEDCL ensures the economic power dispatch to the consumers by following MOD principle which is prescribed in Hon'ble Commission ABT Order.

8. In furtherance of above optimization methodology, MSLDC backs down available thermal plant so as to match with variation in daily power demand. Such situations generally arise during the night hours when industrial commercial and residential demand is at its low.

Technical minimum of power plant

9. It is submitted that the Generation plant can't be instantly made on and off from the system. It takes at least 4 hours to start the generating plant and sometimes it takes up to 24 hours to start generating plant from cold state of operation as such, it is not possible to completely shutdown plant everyday just on the basis of demand. Startup time needs to be taken into consideration while backing down any generating plant. Thus, as demand declines, generation of the particular plant is reduced to technical minimum level; a technical minimum is level at which plant is run to it's lowest level. After reducing the generation to the level of technical minimum, the same generating plant can't be back down further, as such next plant in MOD stack needs to be backed down if demand is reduced further.
10. Due to the technical limitation of thermal power plant, each plant can be backed down maximum to its technical minimum.
11. The list of Generating plants & their technical minimum level is as below: (As per CERC regulation for central sector & MSLDC data for generators.)

Sr. No.	Station Name	Contracted Capacity in MW	Technical Minimum Capacity in MW	% Tech. Minimum
	Central Sector			
1	MSTPS (Mouda)	400	220	55
2	Kahalgaon -ER	148	81	55
3	VSTPS-IV	322	177	55
4	VSTPS-V	175	96	55
5	VSTPS-III Unit-9,10	295	162	55
6	KSTPS-III Unit-7	134	74	55
7	SSTPS: I	612	337	55
8	VSTPS-I Unit-1 to 6	458	252	55
9	SSTPS-II	293	161	55
10	VSTPS-II Unit -7,8	356	196	55
11	KSTPS I AND II Unit-1 to 6	664	365	55



	MSPGCL			
1	GTPS Uran	672	369.6	55
2	Bhusawal Unit - 04	500	322	64
3	Bhusawal Unit - 05	500	322	64
4	Koradi Unit - 08	660	432	65
5	Koradi Unit - 09	660	432	65
6	Chandrapur Unit - 08	500	329	66
7	Chandrapur Unit - 09	500	329	66
8	Parali Unit - 8	250	166	66
9	*Parali Unit - 06	250	166	66
10	*Parali Unit - 07	250	166	66
11	Paras Unit - 03	250	167	67
12	Khaperkheda Unit - 05	500	335	67
13	Nasik Unit - 05	210	141	67
14	Khaperkheda Unit - 03	210	141	67
15	Chandrapur Unit - 06	500	337	67
16	Chandrapur Unit - 07	500	337	67
17	Nasik Unit - 03	210	142	68
18	Nasik Unit - 04	210	142	68
19	Khaperkheda Unit - 04	210	142	68
20	Khaperkheda Unit - 02	210	143	68
21	Chandrapur Unit - 05	500	341	68
22	Paras Unit - 04	250	171	68
23	Bhusawal Unit - 03	210	144	69
24	Khaperkheda Unit - 01	210	146	70
25	Chandrapur Unit - 04	210	149	71
26	Chandrapur Unit - 03	210	152	72
27	Koradi Unit - 07	210	155	74
	IPP			
1	JSW U1, Jaigad	300	190	63
2	Ratan India Unit-1	270	172	64
3	Ratan India Unit-2	270	172	64
4	Ratan India Unit-3	270	172	64
5	Ratan India Unit-4	270	172	64
6	Ratan India Unit-5	270	172	64
7	APML Unit-1	660	462	70
8	APML Unit-4	660	462	70
9	APML Unit-5	660	462	70
10	APML Unit-2	660	462	70
11	APML Unit-3	660	462	70

Technical Minimum Level and the Orders

Generation stations under jurisdiction of CERC

12. MSEDCL submits that, CENTRAL ELECTRICITY REGULATORY COMMISSION (INDIAN ELECTRICITY GRID CODE) (FOURTH AMENDMENT) REGULATIONS 2016, Para 6.3B regarding technical minimum is as under:

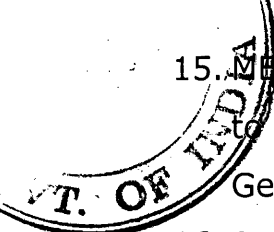
*The technical minimum for operation in respect of a unit or units of a Central Generating Station of inter-State Generating Station shall be **55% of MCR loading or installed capacity of the unit of at generating station.***

13. The above norms have been finalized by CERC after exhaustively taking in to consideration the views of all the generators as well as other stake holders. While finalizing the above provisions in regulation, CERC has referred its observation in hearing dated 28.5.2013 in Petition No 142/MP/2012

The control range for coal fired units is generally taken as 50% to 100% MCR and the rated steam temperature can be maintained in this range. However, the units can operate at any lower load without any limits; and minimum load without oil support is taken as about 30% MCR and operation below this limit needs oil support. The CEA Technical Standards for Construction of Electric Plants and Electric Lines Regulations - 2010 prescribe a control load of 50% MCR. The operating capability generally specified in the technical specifications also stipulate continuous operation without oil support above 30% MCR load and control load range of 50% to 100% TMCR

14. Accordingly as per this CERC regulation, the technical minimum level of central sector Generating units (under the Jurisdiction of CERC), irrespective of their capacity, life or type of technology or any such other differences are fixed at 55 %.

Generating stations under the Jurisdiction of MERC

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15. MERC vide order dtd 27th June 2012 in case no 109 of 2011 has directed to conduct the study for determination of Technical Minimum of Generating stations in Maharashtra through the third party i.e. CPRI.
 16. As per MERC work order No. MERC/TECH/CPRI-1213/08/01020, a team consisting of Additional director CPRI, Executive Engineer SLDC and officer of the concern power station has studied the unit wise technical minimum as fixed the technical Minimum and prepared the report on technical minimum. The report is consisting study of technical minimum for 35 units of MAHAGENCO and IPPs.
 17. As per the reports, the technical Minimum capacity of these generating stations is in the range of 55-80 % of their Installed capacity.
 18. MSEDCL submits that, other than these 19 Units the technical min capacity of balance MSPGCL's units is not verified and is accepted as it is declared by MSPGCL.
 19. Further technical Minimum capacity of IPPs generating stations is in the range of 55-80 % of their Installed capacity and it is not checked/verified and accepted as it is declared by IPPs in the state.

Availability of Additional capacity

20. MSEDCL re submits that CERC after conducting the detail study vide regulation has determined the technical minimum limit 55 % which irrespective of the Rated capacity, life age of installation, technology or such other difference in the generating stations. It is pertinent to mention here that according to this regulation all the plants coming under the jurisdiction of CERC are efficaciously operative.
21. Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2010 has provided technical specification for thermal plants which are applicable uniformly across India. If plants and equipment are designed with this uniform

specification, the power plant should have similar performance parameter including technical minimum specification for state and central sector plants.

The following chart shows the additional flexible capacity available if the technical minimum level is made uniform to 55 % to all generation plants in the state.

Sr.no	Station Name	Contracted Capacity in MW	Existing Technical Minimum Capacity		Revised Tech. Mini Capacity	Diff
			%	MW	55%	
	MSPGCL					
2	Bhusawal Unit - 04	500	64	322	275	47
3	Bhusawal Unit - 05	500	64	322	275	47
4	Koradi Unit - 08	660	65	432	363	69
5	Koradi Unit - 09	660	65	432	363	69
6	Chandrapur Unit - 08	500	66	329	275	54
7	Chandrapur Unit - 09	500	66	329	275	54
8	Parali Unit - 8	250	66	166	138	29
9	*Parali Unit - 06	250	66	166	138	29
10	*Parali Unit - 07	250	66	166	138	29
11	Paras Unit - 03	250	67	167	138	30
12	Khaperkheda Unit - 05	500	67	335	275	60
13	Nasik Unit - 05	210	67	141	116	26
14	Khaperkheda Unit - 03	210	67	141	116	26
15	Chandrapur Unit - 06	500	67	337	275	62
16	Chandrapur Unit - 07	500	67	337	275	62
17	Nasik Unit - 03	210	68	142	116	27
18	Nasik Unit - 04	210	68	142	116	27
19	Khaperkheda Unit - 04	210	68	142	116	27
20	Khaperkheda Unit - 02	210	68	143	116	28
21	Chandrapur Unit - 05	500	68	341	275	66
22	Paras Unit - 04	250	68	171	138	34
24	Bhusawal Unit - 03	210	69	144	116	29
27	Khaperkheda Unit - 01	210	70	146	116	31
28	Chandrapur Unit - 04	210	71	149	116	34
29	Chandrapur Unit - 03	210	72	152	116	37
30	Koradi Unit - 07	210	74	155	116	40

	IPP					
2	JSW U1, Jaigad	300	63	190	165	25
3	Ratan India Unit-1	270	64	172	149	24
4	Ratan India Unit-2	270	64	172	149	24
5	Ratan India Unit-3	270	64	172	149	24
6	Ratan India Unit-4	270	64	172	149	24
7	Ratan India Unit-5	270	64	172	149	24
8	APML Unit-1	660	70	462	363	99
9	APML Unit-4	660	70	462	363	99
10	APML Unit-5	660	70	462	363	99
11	APML Unit-2	660	70	462	363	99
12	APML Unit-3	660	70	462	363	99
<i>Additional capacity(approx)</i>						1703

23. MSEDCL submits that by making uniform technical minimum level (55%) additional flexibility of 1703 MW capacity will be available in real time operations. The details of additional flexibility capacity available and additional low cost MUs is given below:

	MSPGCL		IPPS		Total	
	Additional MW	additional MUs	Additional MW	additional MUs	Additional MW	additional MUs
below Rs.2	0	0	223	1562.78	223	1562.784
Betn Rs 2.00 to 2.50	368.00	2578.94	297	2081.38	665	4660.32
Upto 2.50	368.00	2578.94	520.00	3644.16	888	6223.104
Betn Rs 2.50 to 2.75	590	4134.72	0	0.00	590	4134.72
upto 2.75	958.00	6713.66	520.00	3644.16	1478	10357.82
above 3	107	749.86	117.5	823.44	224.5	1573.296
Total	1065.00	7463.52	637.50	4467.60	1703	11931.12

24. Thus additional about 1703 MW capacity & about 10357.82 MUs will be available below Rs.2.75 (present highest MOD units operational) out of these additional about 888 MW capacity & about 6223.104 MUs is of Rs 2.00 to 2.50.

25. For the month of Dec 2016, the commercial obligation due to existing technical minimum(>55%) is estimated at 14.68 cr and the annual financial obligation is @ 150 cr. The calculation sheet for the month of Dec 2016 is annexed as **Annexure- A**

26. Also as per MNRE RE plan 175GW RE capacity addition is proposed by 2022. This will lead to increase in RPO obligation and MSEDCL has to contract more and more renewable energy. The renewable energy is infirm in nature and is not scheduled. Providing backing down limit to 55%, will lead to more flexibility for accommodating the increasing renewable energy generation.

The Wind mills have more pronounced generation during the monsoon season that too at night period and energy to the tune of 3000 MW is injected into the grid without schedule. When infirm energy in such high quantum is injected, issues such as grid stability as well as economic operation arise and If the technical minimum level of thermal generating station is reduced, there will be more scope to accommodate renewable Energy and with better grid stability as well as in economic manner.

Thus there is an opportunity to utilize this stranded low cost power capacity. The reduction in technical minimum to 55% of thermal generating units will facilitate to run low cost unit at full capacity by reducing high cost units generation to their technical minimum capacity. In turn it will help full for integration of renewable energy economically and cheaper power available to consumer.

MSEDCL demand during night ours drops down to approx. 11500 to 12000, while its peak demand during the evening time rises to 17000 to 17500. As it is visible, there is a gap of 5500 MW between peak and non peak hours. if technical minimum is brought down to 55% , MSEDCL can back down required generation with less power plant kept on bar and it will give more flexibility to take out even more generators out for zero scheduling leading to further optimization of available generation.

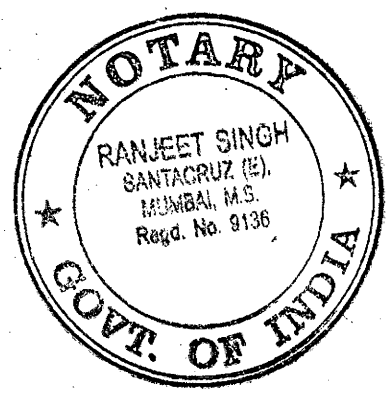
MSEDCL's Prayer

MSEDCL humbly pray for following relief:

- a) To set the Technical minimum capacity of all Generating stations coming under the jurisdiction of MERC and having PPA with MSEDCL at uniform level of 55 %.
- b) To issue the directions to MSLDC for backing down the power plant to 55% while managing the demand by observing the MOD.
- c) To pass any other order/relief as the Hon'ble Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice;
- d) To condone any error/omission and to give opportunity to rectify the same;
- e) To permit the Petitioner to make further submissions, addition and alteration to this Petition as may be necessary from time to time;

Ranjit

Deponent

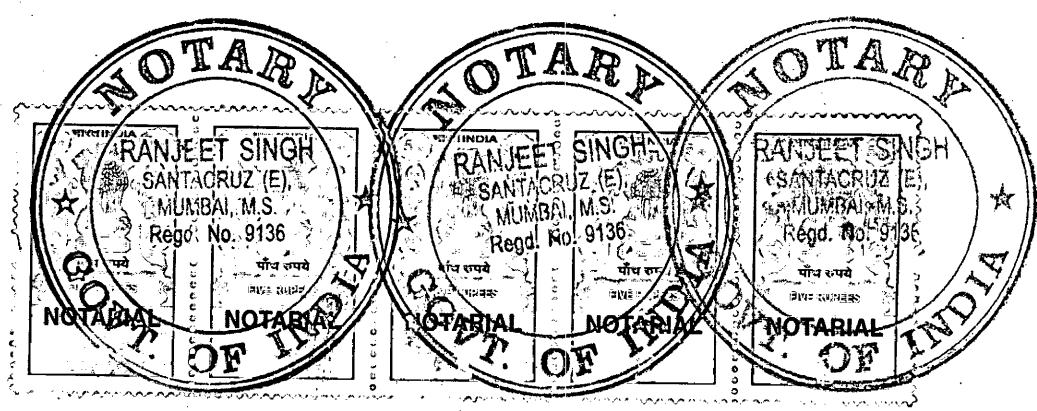
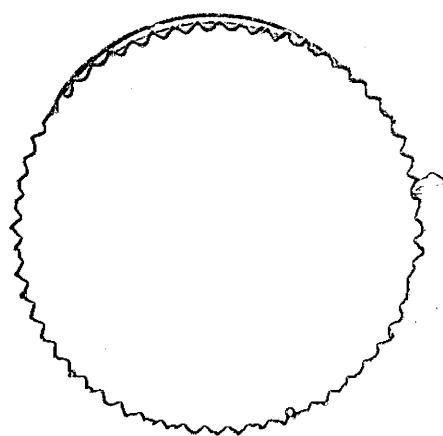


BEFORE ME

Ranjit

RANJEET SINGH
M.Sc.LL.B
NOTARY
MAHARASHTRA
GOVT OF INDIA

- 7 JAN 2017



Annexure -A

Saving in Power Purchase cost due to change of Existing Tech Minimum of all Generator to 55%

DATE	As per Present Tech Min						With 55% Tech Min						Per Day Saving					
	Total Backdown		Intra State Generator Backdown		CS Generator Backdown		Total Backdown		Intra State Generator Backdown		CS Generator Backdown		Total Backdown		Intra State Generator Backdown		CS Generator Backdown	
	Quantu m of BD in MUS	Cost of BD in Rs. in lakhs	Quantu m of BD in MUS	Cost of BD in Rs. in lakhs	Quantu m of BD in MUS	Cost of BD in Rs. in lakhs	Quantu m of BD in MUS	Cost of BD in Rs. in lakhs	Quantu m of BD in MUS	Cost of BD in Rs. in lakhs	Quantu m of BD in MUS	Cost of BD in Rs. in lakhs	Quantu m of BD in MUS	Cost of BD in Rs. in lakhs	Quantu m of BD in MUS	Cost of BD in Rs. in lakhs	Quantu m of BD in MUS	Cost of BD in Rs. in lakhs
01-12-16	30.8	704.6	20.4	497.4	10.4	207.3	30.8	751.5	22.6	575.8	8.2	175.6	0.0	-46.8	-2.2	-78.5	2.2	31.6
02-12-16	29.7	656.3	18.1	433.4	11.6	222.9	29.7	708.8	21.6	535.6	8.1	173.2	0.0	-52.5	-3.5	-102.2	3.5	49.8
03-12-16	33.9	736.1	20.7	502.3	13.2	233.8	33.9	796.9	25.3	625.5	8.6	171.4	0.0	-60.9	-4.5	-123.2	4.5	62.4
04-12-16	23.3	553.9	16.3	409.2	7.0	144.7	23.3	587.2	18.8	489.7	4.4	97.5	0.0	-33.3	-2.6	-80.5	2.6	47.2
05-12-16	17.8	417.9	11.3	283.2	6.4	134.7	17.8	445.6	14.6	373.4	3.2	72.3	0.0	-27.8	-3.2	-90.2	3.2	62.4
06-12-16	18.7	441.7	12.3	307.1	6.4	134.6	18.7	470.0	14.8	381.3	3.9	88.7	0.0	-28.3	-2.5	-74.2	2.5	45.9
07-12-16	19.6	465.3	14.3	353.4	5.3	111.9	19.6	491.4	15.8	406.2	3.8	85.2	0.0	-26.1	-1.5	-52.8	1.5	26.7
08-12-16	18.6	427.1	12.6	304.8	6.0	122.3	18.6	457.7	14.3	363.2	4.3	94.5	0.0	-30.6	-1.7	-58.4	1.7	27.8
09-12-16	28.7	650.7	18.6	449.6	10.1	201.1	28.7	698.0	22.1	554.3	6.7	143.7	0.0	-47.2	-3.5	-104.6	3.5	57.4
10-12-16	35.0	758.9	20.8	496.9	14.2	262.0	35.0	808.7	23.6	580.3	11.4	228.3	0.0	-49.8	-2.9	-83.4	2.9	33.6
11-12-16	35.9	766.4	19.7	469.1	16.3	297.4	35.9	815.0	23.6	570.3	12.3	244.7	0.0	-48.6	-4.0	-101.3	4.0	52.7
12-12-16	42.4	901.1	18.4	461.3	24.0	439.9	42.4	973.8	25.9	650.0	16.4	323.9	0.0	-72.7	-7.6	-188.7	7.6	116.0
13-12-16	26.3	567.2	12.8	327.6	13.5	239.6	26.3	617.5	16.8	437.1	9.5	180.5	0.0	-50.3	-4.1	-109.4	4.1	59.1
14-12-16	21.1	464.6	11.1	281.3	10.0	183.3	21.1	506.4	14.8	381.1	6.2	125.3	0.0	-41.8	-3.7	-99.8	3.7	58.0
15-12-16	17.6	404.0	10.1	259.5	7.5	144.5	17.6	439.4	13.5	351.7	4.1	87.7	0.0	-35.4	-3.4	-92.3	3.4	56.9
16-12-16	28.7	663.2	17.5	443.1	11.2	220.1	28.7	713.8	21.6	561.1	7.1	152.8	0.0	-50.6	-4.2	-118.0	4.2	67.4
17-12-16	25.9	610.4	17.4	434.6	8.4	175.8	25.9	649.3	20.4	528.1	5.4	121.2	0.0	-39.0	-3.0	-93.6	3.0	54.6
18-12-16	36.0	799.3	21.4	518.7	14.6	280.5	36.0	858.0	26.5	658.8	9.5	199.2	0.0	-58.8	-5.1	-140.1	5.1	81.3
19-12-16	38.6	842.7	22.6	549.0	16.0	293.7	38.6	911.3	28.5	706.0	10.1	205.3	0.0	-68.7	-5.9	-157.0	5.9	88.4
20-12-16	37.5	826.3	21.3	520.1	16.2	306.2	37.5	891.2	27.9	688.7	9.6	202.6	0.0	-64.9	-6.6	-168.5	6.6	103.6
21-12-16	30.2	689.6	18.5	457.5	11.7	232.1	30.2	742.6	23.7	599.5	6.5	143.1	0.0	-53.0	-5.2	-142.0	5.2	88.9
22-12-16	31.7	731.9	20.0	504.3	11.6	227.6	31.7	790.2	25.6	658.9	6.0	131.3	0.0	-58.4	-5.6	-154.7	5.6	96.3
23-12-16	31.1	731.8	20.2	510.5	10.9	221.3	31.1	783.6	25.3	655.2	5.8	128.4	0.0	-51.8	-5.1	-144.7	5.1	93.0
24-12-16	26.2	635.4	19.1	481.7	7.2	153.7	26.2	669.7	23.4	604.8	2.8	64.9	0.0	-34.3	-4.4	-123.0	4.4	88.8
25-12-16	28.3	680.1	19.9	500.9	8.4	179.2	28.3	721.6	24.5	633.7	3.8	87.9	0.0	-41.5	-4.6	-132.8	4.6	91.3
26-12-16	28.8	686.7	18.7	464.7	10.1	222.0	28.8	728.9	22.2	573.0	6.6	155.9	0.0	-42.2	-3.4	-108.3	3.4	66.0
27-12-16	29.0	651.4	17.4	428.8	11.6	222.5	29.0	702.6	22.0	553.8	7.0	148.8	0.0	-51.3	-4.6	-125.0	4.6	73.7
28-12-16	31.8	714.2	17.8	439.3	14.0	275.0	31.8	767.2	22.4	564.3	9.4	202.9	0.0	-53.0	-4.6	-125.0	4.6	72.1
29-12-16	31.7	705.2	19.3	474.4	12.4	230.7	31.7	759.1	23.8	596.9	7.9	162.2	0.0	-54.0	-4.5	-122.5	4.5	68.5
30-12-16	33.7	801.1	21.0	522.3	12.7	278.9	33.7	844.1	24.3	629.4	9.4	214.7	0.0	-43.0	-3.3	-107.1	3.3	64.2
31-12-16	34.6	794.7	23.1	568.2	11.5	226.6	34.6	850.1	27.3	689.7	7.3	160.4	0.0	-55.4	-4.2	-121.5	4.2	66.1
Total	903	20480	553	13654	350	6826	903	21951	678	17177	226	4774	0	-1472	-125	-3523	125	2052

Net Saving= Rs. -1471.69 Lakhs for the Month
 Net Saving= Rs. -47.47 Lakhs per day