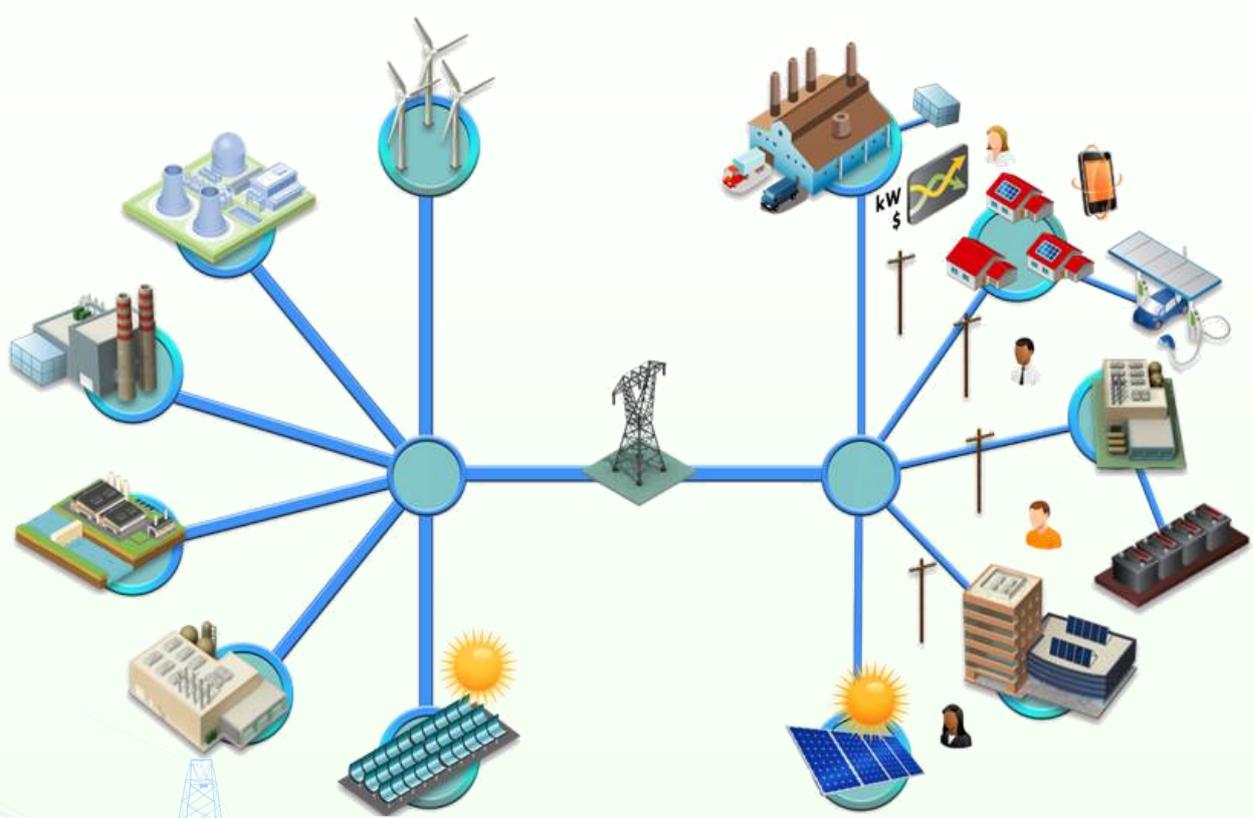




REIMAGING OF POWER SYSTEM

RECORD



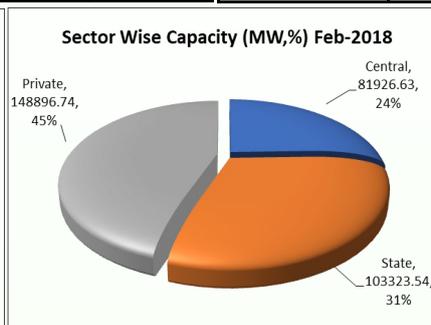
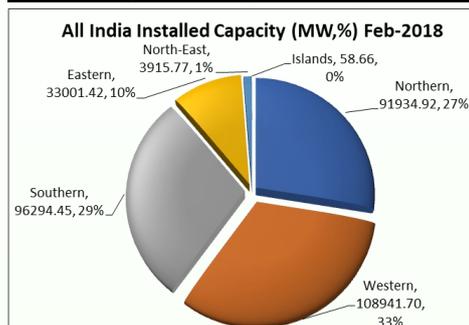
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OVERVIEW OF INDIAN POWER SYSTEM FOR FEB-2018

All India Installed Capacity (MW) as on 28-02-2018						All India Installed Capacity (MW) as on 28-02-2018		Peak Demand of DD & DNH				
Region	Thermal	Nuclear	Hydro	RES	Total	Sector	Generation (MW)	Utility	Feb-18			
Northern	58270.46	1620.00	19423.77	12620.69	91934.92				Peak Demand (MW)	Peak Met (MW)	Surplus/Deficit (-)	
Western	80315.11	1840.00	7447.50	19339.09	108941.70	Central	81926.63	DD	353	353	0	0
Southern	51617.26	3320.00	11808.03	29549.16	96294.45	State	103323.54					
Eastern	27021.64	0.00	4942.12	1037.66	33001.42	Private	148896.74	DNH	766	766	0	0
North-Eastern	2292.07	0.00	1342.00	281.70	3915.77	Total	334146.91					
Islands	40.05	0.00	0.00	18.61	58.66							
ALL	219556.59	6780.00	44963.42	62846.91	334146.92							



All India Plant Load Factor (PLF) in (%)

Sector	Feb-17	Feb-18
Central	72.93	76.59
State	54.41	61.76
Private	59.54	52.55
ALL India	61.53	62.59

Highlights of WR Grid for Feb-2018

- Maximum Peak Demand Met:** 50387 MW
- Energy Consumption:** Total Energy Consumption in the month of Feb-2018 was 29807 MUs at an average of 1042 MUs/day & Maxi-mum was 1107 MUs on 25.02.2018.
- Unrestricted Demand:** Maximum Unrestricted demand was 50493 MW and Average Peak Unrestricted demand was 43429 MW.
- Frequency Profile:** System frequency as per IEGC band is 49.90 Hz to 50.05 Hz. Maxi-mum, Minimum & Average Frequencies 50.21 Hz, 49.70 Hz & 49.98 Hz were respectively observed in the month of Feb-2018.
- Voltage Profile:** All 765KV nodes except Durg (high voltage node) of WR were within the IEGC limit. High Voltage (greater than 420 KV) at 400KV substations were observed at Khandwa, Raigarh, Wardha, Dhule, Parli, Boiser, Karad, Kalwa, Vapi, Mapusa and Magarwada. Highest of 84.85% of time above 420KV observed at Dehgham.
- Hydro Generation:** Total hydro generation of Western Region was 726 MUs at an average of 25.94 MUs/day in the month of Feb-2018.
- Wind Generation:** Total wind generation was 776 MUs at an average of 27.7 MUs/day in the month of Feb-2018.
- Solar Generation:** Total Solar generation was 471 MUs at an average of 17 MUs/day in the month of Feb-2018.
- Open Access Transaction Details for Feb-2018:**
 - ⇒ □ No. of approvals & Energy Approved in Intra-regional: 144 & 421.62 MUs.
 - ⇒ □ No. of approvals & Energy Approved in Inter-regional: 49 & 310.93 MUs

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List of Transmission Lines Commissioned/Ready for Commissioning During Feb-2018

Sector	Central				Pvt.			State				Total
	800	765	400	220	765	400	220	765	400	230	220	
Voltage Level (KV)	0	0	2	1	0	1	0	1	1	2	21	29
No. of Lines	0	0	2	1	0	1	0	1	1	2	21	29

List of Substations Commissioned/Ready for Commissioning During Feb-2018

Sector	Central				Pvt.			State				Total
	765	400	230	220	765	400	220	765	400	230	220	
Voltage Level (KV)	0	11	0	2	0	3	0	0	2	0	13	31
No. of Sub-stations	0	11	0	2	0	3	0	0	2	0	13	31

Region-wise Power Supply Position (Demand & Availability) in Feb-2017 & Feb-2018

Region	Energy (MUs)				Deficit /Surplus (%)	
	Demand		Energy Met		Feb-17	Feb-18
	Feb-17	Feb-18	Feb-17	Feb-18		
Northern	24600	25648	24222	25180	(1.5)	(1.8)
Western	27355	29394	27352	29393	(0.0)	(0.0)
Southern	24610	26632	24609	26604	(0.0)	(0.1)
Eastern	9224	9636	9214	9625	(0.1)	(0.1)
North Eastern	1089	1193	1071	1171	(1.7)	(1.8)
All India	86878	92503	86468	91973	(0.5)	(0.6)

Region-wise Peak Demand / Peak Met in Feb-2017 & Feb-2018

Region	Power (MW)				Deficit /Surplus (%)	
	Peak Demand		Peak Met		Feb-17	Feb-18
	Feb-17	Feb-18	Feb-17	Feb-18		
Northern	43262	44699	42723	43948	(1.2)	(1.7)
Western	47962	48789	47789	48683	(0.4)	(0.2)
Southern	41275	45466	41155	45325	(0.3)	(0.3)
Eastern	17174	18767	17029	18767	(0.8)	0.0
North Eastern	2243	2387	2234	2333	(0.4)	(2.3)
All India	144120	158520	143407	156720	(0.5)	(1.1)

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POWER TRADING

- ⇒ Emergence of IT has helped to create massive E-Commerce platforms in every walk of life. One such E-Commerce platform for transiting electricity for physical delivery, fine tuning daily requirements, sale of residual generation, optimal utilization of generating resources at marginal cost of production etc. has been made possible through the commencement of Power Exchanges.
- ⇒ For more information about IEX visit (www.iexindia.com); For more information about PXIL visit (www.powerexindia.com)

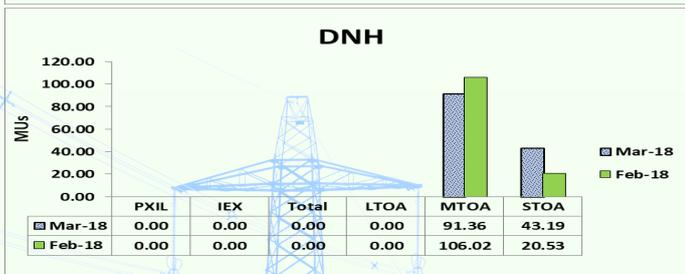
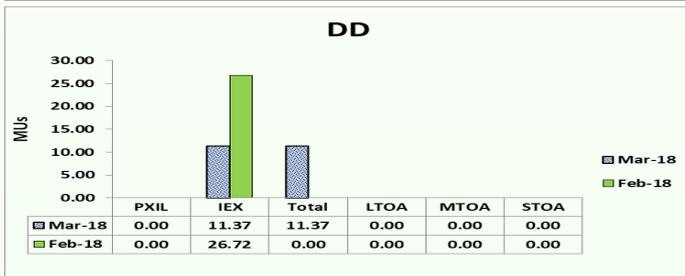


⇒ PXIL & IEX Trading summary

MARCH-2018	PXIL					IEX				
	Buy Bid (MWh)	Sell Bid (MWh)	MCP (₹/MWh)	Cleared Volume (MWh)	Marginal Clear Volume (MWh)	Buy Bid (MWh)	Sell Bid (MWh)	MCP (₹/MWh)	Cleared Volume (MWh)	Marginal Clear Volume (MWh)
Total	98304.0	306050.0	-	96000.0	95716.0	5338177.3	5393897.4	-	3955287.0	3955543.1
Min	0.0	50.0	0.0	0.0	0.0	2973.6	3711.9	1999.8	2788.9	2788.9
Max	101.5	200.0	5120.0	100.0	100.0	10479.4	12505.9	7319.9	8558.1	8558.1
Avg	33.0	102.8	1761.3	32.3	32.2	7175.0	7249.9	4018.9	5316.3	5316.6

FEB-2018	PXIL					IEX				
	Buy Bid (MWh)	Sell Bid (MWh)	MCP (₹/MWh)	Cleared Volume (MWh)	Marginal Clear Volume (MWh)	Buy Bid (MWh)	Sell Bid (MWh)	MCP (₹/MWh)	Cleared Volume (MWh)	Marginal Clear Volume (MWh)
Total	132720.0	376300.0	-	110400.0	110400.0	4325752.4	6269529.2	-	3325976.3	3340493.5
Min	0.0	50.0	0.0	0.0	0.0	3578.5	4649.6	1775.5	2878.5	2878.5
Max	301.5	550.0	3750.0	300.0	300.0	10845.1	16049.9	6065.5	7415.9	7573.4
Avg	49.4	140.0	622.5	41.1	41.1	6437.1	9329.7	3229.3	4949.4	4971.0

DD & DNH: OPEN ACCESS DETAILS



REC Trading Session March-2018

Trader Company	PXIL		IEX		
	Particular	Non-Solar	Solar	Non-Solar	Solar
Total Sell Bid (REC's)	705,405	-	2,079,799	-	-
Total Buy Bid (REC's)	743,556	-	2,256,422	-	-
Clearing Price (₹/Certificate)	1,500	-	1,500	-	-
Cleared Volume (REC's)	689,634	-	2,079,799	-	-

POWER MARKET UPDATE: MARCH 2018 Day-Ahead Market trades 3955 MU at an average price of Rs. 4.02 per unit

- The average Market Clearing Price (MCP) discovered in the day-ahead market was at Rs. 4.02 per unit, was also at par with the price of February-18 which was Rs. 3.23 per unit and 57% above Rs. 2.54 per unit in March-17.

The average MCP during different time-periods of the day was:

- * Morning (07:00 to 10:00 Hrs): Rs. 4.26 per unit
- * Day (11:00 to 17:00 Hrs): Rs 3.94 per unit
- * Evening peak (18:00 to 23:00 Hrs): Rs 4.70 per unit.
- * Night (01-06 Hrs and 24 Hrs): Rs 3.38 per unit

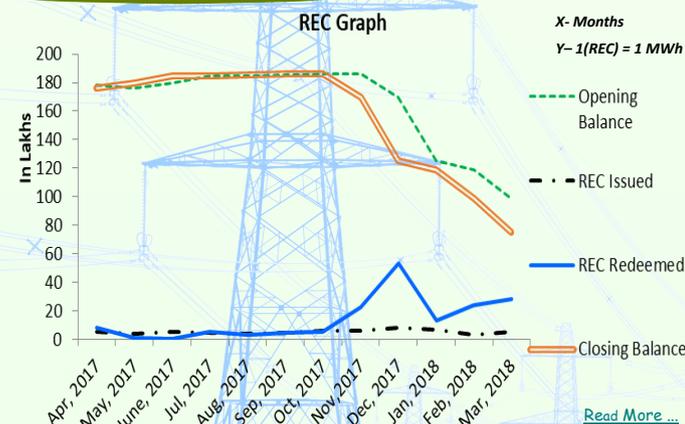
- A total of 3955 MU were cleared, which is almost at par with the 3326 MU traded last month and almost 18% more than 3364 MU traded in March-17. On a daily average basis about 128 MU were traded.

- With average daily sell and buy bids were 174 MU and 172 MU respectively.

- The One Nation, One Price was realized for 27 days in the month of March.

- On daily average basis 762 participants traded in the day-ahead power market in March-18.

RENEWABLE ENERGY CERTIFICATE MECHANISM (REC) FROM Apr-17 TO Mar-18

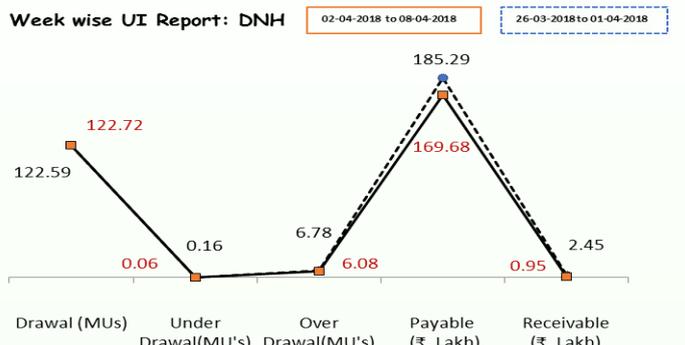
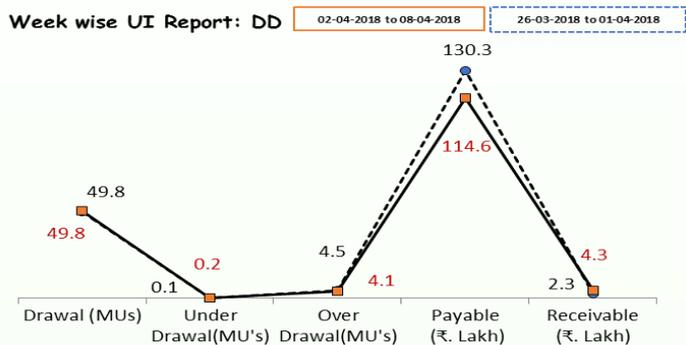


DEVIATION CHARGES

[DD User Click to get UI Report](#)
[DNH User Click to get UI Report](#)

DD-Deviation Charges						
FY 2017-18	Drawl (MUs)	Schedule (MUs)	UI Drawl (MUs)		UI Charges (₹. Lakh)	
			Under Drawl	Over Drawl	Payable	Receivable
Cumulative Total up to Mar-18	2533.61	2315.17	9.18	227.60	5708.77	149.60
02-04-2018 to 08-04-2018	49.84	45.89	0.16	4.10	114.59	4.25
02-04-2017 to 08-04-2017	48.56	45.15	0.03	3.44	76.18	0.57
26-03-2018 to 01-04-2018	49.75	45.37	0.13	4.52	130.27	2.29
26-03-2017 to 01-04-2017	49.03	47.26	0.25	2.01	49.33	3.65

DNH-Deviation Charges						
FY 2017-18	Drawl (MUs)	Schedule (MUs)	UI Drawl (MUs)		UI Charges (₹. Lakh)	
			Under Drawl	Over Drawl	Payable	Receivable
Cumulative Total up to Mar-18	6166.27	5996.48	43.61	215.40	5369.78	817.71
02-04-2018 to 08-04-2018	122.72	116.70	0.06	6.08	169.68	0.95
02-04-2017 to 08-04-2017	115.42	113.41	1.07	3.08	68.66	20.21
26-03-2018 to 01-04-2018	122.59	115.97	0.16	6.78	185.29	2.45
26-03-2017 to 01-04-2017	116.90	118.39	2.46	0.82	18.78	47.82



DD						
Month	FY 2016-17 (All Freq Hz)			FY 2017-18 (All Freq Hz)		
	Under Drawl in MU's	Over Drawl in MU's	UI Rate in ₹/Unit	Under Drawl in MU's	Over Drawl in MU's	UI Rate in ₹/Unit
April	4.06	(6.33)	(3.25)	1.29	(11.30)	(2.48)
May	1.76	(11.26)	(2.47)	0.87	(15.28)	(2.19)
June	1.39	(11.28)	(2.89)	1.09	(17.98)	(2.16)
July	1.92	(14.62)	(1.92)	0.97	(15.89)	(2.26)
Aug	2.46	(8.66)	(2.16)	0.19	(24.00)	(2.3)
Sep	2.49	(10.68)	(2.00)	0.39	(24.70)	(2.64)
Oct	2.78	(7.65)	(1.47)	0.13	(29.42)	(2.79)
Nov	3.24	(3.47)	(5.15)	0.22	(22.01)	(2.71)
Dec	9.63	(2.55)	(2.04)	0.66	(16.60)	(2.50)
Jan	2.67	(4.10)	(1.45)	1.04	(18.20)	(2.63)
Feb	0.76	(7.94)	(1.84)	1.33	(12.58)	(2.58)
Mar	0.88	(9.72)	(2.33)	0.99	(19.63)	(2.99)
Total	26.61	(99.97)	(2.18)	9.18	(227.6)	(2.55)

DNH						
Month	FY 2016-17 (All Freq Hz)			FY 2017-18 (All Freq Hz)		
	Under Drawl in MU's	Over Drawl in MU's	UI Rate in ₹/Unit	Under Drawl in MU's	Over Drawl in MU's	UI Rate in ₹/Unit
April	10.21	(1.07)	(2.02)	1.91	(21.52)	(2.31)
May	9.92	(2.31)	(1.25)	13.54	(2.97)	(1.49)
June	11.34	(0.63)	(1.75)	9.26	(3.65)	(1.98)
July	10.43	(1.34)	(7.45)	6.71	(6.66)	(0.96)
Aug	10.05	(2.21)	(1.57)	3.50	(14.68)	(2.15)
Sep	11.83	(1.96)	(1.72)	2.06	(22.87)	(2.74)
Oct	10.59	(1.96)	(1.98)	1.53	(28.73)	(2.67)
Nov	12.09	(1.17)	(1.95)	2.23	(17.81)	(2.87)
Dec	9.63	(2.55)	(1.95)	1.09	(21.60)	(2.53)
Jan	8.26	(3.17)	(1.92)	0.47	(26.01)	(2.45)
Feb	7.55	(3.32)	(1.65)	0.28	(22.83)	(2.46)
Mar	8.77	(3.61)	(1.93)	1.03	(26.07)	(2.73)
Total	120.67	(25.31)	(1.77)	43.61	(215.4)	(2.65)

REACTIVE ENERGY CHARGES FOR DD & DNH

FY 2017-18	DD-High Voltage				DD-Low Voltage				DNH-High Voltage			DNH-Low Voltage					
	GUJARAT		ISTS		Total	GUJARAT		ISTS		Total	ISTS		Total	ISTS		Total	
	Dok-diu	Una-diu	Mgr-Vap HV			Dok-diu	Una-diu	Mgr-Vap LV			Kpd-Vap HV	Kdl-Vap HV			Kpd-Vap LV		Kdl-Vap LV
Cumulative Total MVARh till Mar-2018	1241.1	-6302.2	209261.0		204199.9	6.6	-85.1	711.0		632.5	208525.0	203371.9		411896.9	8708.5	3269.3	11977.8
Cumulative Total Charges in (₹) till Mar-18	-166740.5	846639.0	-28184503.5		-27504605.0	891.0	-11488.5	95985.0		85387.5	-28095102.5	-27413692.0		-55508794.5	1175301.6	441035.5	1616337.1
26-03-2018 to 01-04-2018	40.6	-22.9	3643.4		3661.1	0.0	0.0	0.0		0.0	2756.3	2516.7		5273.0	33.7	0.8	34.5
Charges in (₹)	-5481.0	3091.5	-491859.0		-494248.5	0.0	0.0	0.0		0.0	-372100.5	-339754.5		-711855.0	4549.5	108.0	4657.5
02-04-2018 to 08-04-2018	52.7	-42.2	4194.5		4205.0	0.0	0.0	0.0		0.0	3231.8	3031.7		6263.5	0.0	0.0	0.0
Charges in (₹)	-7114.5	5697.0	-566257.5		-567675.0	0.0	0.0	0.0		0.0	-436293.0	-409279.5		-845572.5	0.0	0.0	0.0

Note: The REC charges has been revised to 13.5 paisa/KVARh from Apr-2017 as per clause of 6.6 of revised IEGC.

Note: Bracket Value () indicates the negative value(-ve). Note: For REC table -Ve Value indicates Receivable & +Ve Value indicates Payable.



POWER SECTOR ACTIVITIES



* MNRE

- Clarification to Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Solar PV Power Projects, notified on 03.08.2017, under clause 20 of these Guidelines.
- Revised schedule and enforcement date of Solar Photovoltaic Systems/Devices/Components Goods Order 2017.
- Affidavit format to be submitted by the wind turbine manufacturers along with bank guarantee towards LVRT compliance.
- Registrations are open for 17th, 5-Day Skill Development Program On Solar PV system Design using "PVSYST & PVSOL" software with cost economic and Policies at NISE (from 23rd to 27th April 2018).
- Tender for Design, development Supply & Installation of Class A+A+A+ Sun Simulator with built in Temperature Control Unit with complete accessories at National Institute of Solar Energy, Gurugram , Haryana.
- RFQ for Annual maintenance contract of three large size walk in Environmental chambers at NISE, Gurugram, including utilities for 2 years.
- Corrigendum - Amendment in the Guidelines for Implementation of a scheme for setting up of over 5000 MW Grid Connected Solar PV Power Projects with Viability Gap Funding (VGF) under Batch-IV of Phase II of the JNNSM.
- Advertisement for filling up the post of Deputy Director General (DDG)/ Scientist 'F' (Solar Thermal in-house R&D & Testing) in the National Institute of Solar Energy (NISE) on deputation / Short term contract basis.
- Corrigendum - Amendment in the Guidelines for Implementation of a scheme for setting up of over 2000 MW Grid Connected Solar PV Power Projects with Viability Gap Funding (VGF) under Batch-III of Phase II of the JNNSM.
- Compliance of WTG models to applicable CEA Technical standard for Connectivity to the Grid (as mentioned from time to time) stipulated in MNRE Guidelines/ Procedure for Revised List of Models and Manufacturers (RLMM) – Reg.

* MOP

- Flexibility in Generation and Scheduling of Thermal Power Stations to reduce emissions .
- Vacancy Circular for Member CERC .
- Annual Report 2017-18.

* CEA

- Electricity Generation Target 2018-19.
- National Electricity Plan - Volume I: Generation (Notified vide Extra ordinary Gazette No. 1871,Sl. No. 121,under part-III, Section IV dated 28.03.2018).

* CERC

- Order : Determination of levelled generic tariff for FY 2018-19 under Regulation 8 of the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2017.

- Report of the Expert Group Volume – II "Review of the Principles of Deviation Settlement Mechanism (DSM), Including Linkage with Frequency, In light of Emerging Markets".
- CERC, statutory body constituted under an Act of Parliament, invites applications for filling up of existing/ anticipated vacancies which may increase or decrease, on deputation/short-term contract on foreign service terms from the officials of Central/State Governments, Public Sector Undertakings, Autonomous Bodies etc.Last date of receipt of application is by Wednesday, the 25th April, 2018.
- Modification of REC Procedures.

* JERC

- Tariff Order on Petition No. 251/2017 True-up for FY 2016-17 APR of the FY 2017-18 and approval of ARR and determination of retail tariff of the FY 2018-19, filed by ED,Daman & Diu.
- Tariff Order on Petition No.255/2018 Annual Performance Review of FY 2017-18 and determination of retail supply tariff for FY 2018-19, filed by ED,Lakshadweep.
- Tariff Order on Petition No. 246/2017 True-up for FY 2015-16 and approval of ARR and determination of tariff of FY 2018-19, filed by PPCL.

* GERC

- Inviting comments/suggestions from the stakeholders in Suo-Motu Petition No. 1713/2018 on or before 07.05.2018.
- GIFT PCL – 1710/2018 – Petition for Determination of Tariff for FY 2018-19.
- AIL – 1708/2018 – Petition for Truing up of FY 2016-17 & Determination of Tariff for FY 2018-19.

* MERC

- MERC invites electronic bid proposals from reputed, competent and professional service providers who meet the minimum eligible criteria as specified in this Request for Proposal (RFP) for e-Tender for 'Empanelment of Advertising Agencies' for releasing advertisements relating to Public Notices, Tender Notices, and Recruitment Notices etc. in local and all over Maharashtra as per the requirement of the Commission.

* MISCELLANEOUS

- India's solar additions slowed by duty on China imports, GST: UN report.
- Marginal rise in wind tariffs in latest 2,000 Megawatt SECI auction.
 - ⇒ Wind tariffs climbed marginally in the latest reverse auction of 2,000 MW held by Solar Energy Corporation of India (SECI) on 05.04.2018, with winning tariffs reaching Rs 2.51-2.52 per unit. This was marginally higher than the tariff of Rs 2.44-2.45 per unit reached at the last SECI auction, also for 2000 MW, held in February-18.
- Solar power eclipsed fossil fuels in new 2017 generating capacity-UN.

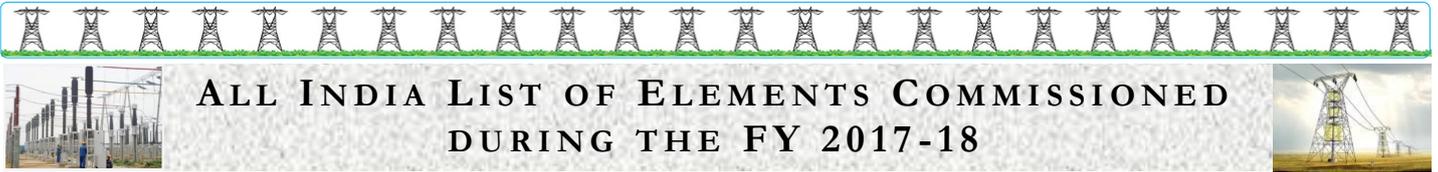
Note: Click on Head lines for More Info



- **India Yamaha Motor sets up 1,100 KW solar plant at TN unit.**
- **7 power dept offices in N Goa, 6 in S Goa to run on solar energy.**
 - ⇒ The Goa Energy Development Agency (GEDA) has identified 13 sub-division offices of the Goa electricity department in the state that will be solar powered. Six sub-division offices in South Goa and seven in North Goa will have grid connected rooftop solar plants.
- **Wind energy capacity addition declines under auction regime.**
 - ⇒ The capacity added has only been 1,739.14 MW through the year against a target of 4,500 MW, and far less than the 5,400 MW added in 2016-17 or even the 3,460 MW achieved in 2015-16.
- **India to achieve 60 GW wind capacity before 2022, say manufacturers.**
 - ⇒ The Indian wind industry is on course to achieve the government's 60 GW capacity target ahead of the 2022 deadline as it has already crossed 34 GW mark, the Indian Wind Turbine Manufacturers Association (IWTMA)
- **Cabinet nod soon for Rs 50,000 crore KUSUM scheme on solar farming.**
- **Avaada Power in talks with state govts for floating solar projects.**
- **Coal India sets 20 GW solar power generation target in next 10 yrs.**
- **Madhya Pradesh set to use solar thermal-based technologies in industries.**
- **India should open up solar PV market: Chinese manufacturer.**
- **Green energy share in Finnish power to hit high in 2018 but drop looms.**
- **Solar power tariffs rise in Gujarat reverse auction.**
 - ⇒ The lowest bid in the 500 MW auction conducted by Gujarat Urja Vikas Nigam Ltd (GUVNL) on 28.03.2018 came from Kalthia Engineering and Construction Ltd, which sought and won 50 MW at a tariff of Rs 2.98 per unit.
- **JERC turns down Chandigarh MC's solar power sale-grid request.**
- **Solar, wind and battery technologies fast squeezing dominance of fossil fuels: BNEF.**
- **SoftBank, Saudi Arabia announce massive solar power project.**
- **Solar power seeks its place under Spanish sun.**
- **Govt pushes ahead BIS implementation date for solar manufacturers and sellers.**
- **Himachal hydro project generating power costlier than market rate: CAG.**
 - ⇒ The stage-I of the 195-MW Integrated Kashang Hydro Electric Project, implemented by the Himachal Pradesh Power Corp Ltd, was completed with an outlay of Rs 789.84 crore against estimated cost of Rs 478.02 crore, a cost overrun of Rs 311.82 crore.
- **IEF meet cements India's pole position in global energy map.**
- **Telangana to spend Rs 38,000 crores for three power projects.**
- **Gencos Move CERC to Pass on Costs.**
 - ⇒ Power generation companies have approached electricity regulator for allowing them to pass on their investments made in equipment to meet stringent environmental norms to consumers.
- **Tanzania launches 240 MW power plant in bid to ease shortages.**
- **L&T's construction arm bags orders worth Rs 3,376 crore across segments.**
- **Cabinet approves rightsizing of Competition Commission of India.**
- **GE Power and Alstom picked to build Polish Ostroleka power plant.**
 - ⇒ A consortium of GE Power and Alstom Power was selected to build a 1,000 megawatt coal-fuelled power plant in Ostroleka for Polish state-run utilities Energa and Enea, Energa said on 04.04.2018.
- **Govt may revise coal production target of 1 bn tonnes set for 2020.**
- **SCCL aims to achieve 68 million tonne coal production in FY 2019.**
- **Trade unions to go on strike against commercial coal mining on 16th April.**
- **India sets October target for gas trading exchange ahead of east coast supplies.**
 - ⇒ Oil Minister Dharmendra Pradhan in a meeting with industry officials set a deadline of October 1st for the country's primary natural gas distribution regulator to set up the exchange, said three sources familiar with the discussions.
- **India records lowest crude oil production in seven years.**
- **Pakistan resumes fuel oil imports after four-month halt ahead of demand pickup.**
- **ONGC may gain Rs 1,500 crore in H1 with natural gas price hike.**
- **Small oil producer in Middle East announces biggest discovery in decades.**
- **PESB recommends Gurmeet Singh for Director-Marketing at Indian Oil Corp.**

List of Abbreviations

• BIS :Bureau of Indian Standards	• Regulatory Commission
• BNEF :Bloomberg New Energy Finance	• MNRE :Ministry of New & Renewable energy
• CAG :Comptroller and Auditor General	• MOP :Ministry of Power
• CEA :Central Electricity Authority	• MW :Megawatt
• CERC :Central Electricity Regulatory Commission	• NASA :National Aeronautics and Space Administration
• CM :Chief Minister	• NISE :National Institute of Solar Energy
• Cr :Crore	• NTPC :National Thermal Power Corporation
• ED :Electricity Department	• OM :Office Memorandum
• GE :General Electric	• ONGC :Oil and Natural Gas Corporation Limited
• GST :Goods and Services Tax	• PESB :Public Enterprise Selection Board
• GW :Gigawatt	• PPCL :Puducherry Power Corporation Limited
• IEF :International Energy Forum	• REC :Renewable Energy Certificate
• JERC :Joint Electricity Regulatory Commission	• RFQ :Request for Quotation
• JNSM :Jawaharlal Nehru National Solar Mission	• SCCL :Singareni Collieries Company Limited
• KUSUM :Kisan Urja Suraksha Evam Utthaan Mahaabhiyan	• SECI :Solar Energy Corporation of India Limited
• LED :Light Emitting Device	• TN :Tamilnadu
• MC :Municipal Corporation	• UN :United Nation
• MERC :Maharashtra Electricity	• US :United State



ALL INDIA LIST OF ELEMENTS COMMISSIONED DURING THE FY 2017-18

All India List of Substations, Transmission Lines & Generators Commissioned during Feb-2018

◆ Substations

- * 765/400 KV Greater Noida (New) (1500 MVA)
- * 765/132 KV Darlipali ICT No.II
- * 400/220 KV Tumkur (Pavagada) PS (3X500) (500 MVA)
- * 400/220 KV Pavagada ICT No. I (630 MVA)
- * 400/220 KV Patna S/S (500 MVA)
- * 400/220 KV Morena S/S (C-WRTL - TBCB) (40 MVA)
- * 400/220 KV Hinjewadi II (GIS) (1000 MVA)
- * 230/110 KV Pudukkottai (Additional) (160 MVA)
- * 230/110 KV Anuppankulam (Enhancement) (60 MVA)
- * 220/66 KV Pappankalan-III (63 MVA)
- * 220/66 KV Mansa (ICT Repl.) (200 MVA)
- * 220/66 KV KIADB Hardware Park (160 MVA)
- * 220/66 KV Gururam Sec.-56 (320 MVA)
- * 220/33 KV Karian S/S (160 MVA)
- * 220/132 KV Satgachia Aug. (160 MVA)
- * 220/132 KV Sahupuri (Aug.) II (40 MVA)
- * 220/132 KV Sahjahanpur (Aug.) (100 MVA)
- * 220/132 KV Sadaipur S/S (ICT-II) (315 MVA)
- * 220/132 KV Raebareli (S/S) Repl. Of 100 MVA (100 MVA)
- * 220/132 KV New Chanditala ICT-III (160 MVA)
- * 220/132 KV Nara Mzn (Aug.) I (40 MVA)
- * 220/132 KV Modipuram (40 MVA)
- * 220/132 KV Krishna Nagar (Aug.)

(160 MVA)

- * 220/132 KV Jalna MIDC (Nagewadi) (60 MVA)
- * 220/132 KV Gonda (Aug.) II (60 MVA)
- * 220/132 KV Gajokhar (Aug.) I (150 MVA)
- * 220/132 KV Fatehpur (Aug.) (60 MVA)
- * 220/132 KV Bhadrak (320 MVA)
- * 220/132 KV Azamgarh-II (60 MVA)
- * 220/132 KV Arambag (Aug.) (160 MVA)
- * 220/132 KV Alipurduar S/S (320 MVA)

◆ Transmission Lines

- * 400 KV Simhadri - Vemagiri (CKT NO. III)
- * 400 KV Sasaram-Deltonganj line
- * 400 KV Punatsangchu-I-Alipurduar
- * 400 KV Orai - Orai line (Q)
- * 400 KV Nabinagar-II-Gaya (Q)
- * 400 KV LILO of Vindhyachal - Jabalpur line (Q) (II Ckt.) at Rewa PS
- * 400 KV LILO of Orai - Mainpur at Bah
- * 400 KV LILO of one ckt. of Khandwa - Raigarh at Khargone TPP (KTL)
- * 400 KV LILO of Muradnagar - Muzafarnagar at Aatur
- * 400 KV LILO of Gooty - Tumkur (Vasantnarsapur) at Tumkur Pool (Ckt.-II)
- * 400 KV LILO of Botj Ckt. Cuddapah - Hindupur line (Q) at NP Kunta S/S
- * 400 KV LILO of Bellary - Tumkur (Vasantnarsapur) line (Q) at Tumkur Pool.
- * 400 KV Julurupadu - KTPS (Stage-VII)
- * 400 KV Jaipur STPP - Nirmal SS
- * 400 KV Extn. Kudankulam APP -

Tirunveli (Q)

- * 400 KV Both ckts of One LILO D/C portion of Simhadri - Vijayawada
- * 400 KV Both ckts of IInd LILO D/C portion of Simhadri - Vijayawada 400kV
- * 220 KV Vyankatpura - Waghodia (765kV PGCIL) Line
- * 220 KV Vasanthanasapur - Antharasanahally
- * 220 KV Pothencode - Kattakada
- * 220 KV Mukatsar - Malout
- * 220 KV Mukatsar - Kotkapura Ckt.- I
- * 220 KV LILO Urla - Khedamara (Bhilai) at Borjhara
- * 220 KV LILO of RTPS - Lingasugur at Mallat (Manvi)
- * 220 KV LILO of Indore - Indore - II (Jaitpura) line at Mangliya S/s
- * 220 KV LILO of Howrah - Foundry Park at N. Chanditala
- * 220 KV LILO of GHTP - Talwandi Sabo at Maur
- * 220 KV LILO of Bamnauli - Naraina at PPK-III
- * 220 KV Kishanganga - Amargarh line
- * 220 KV Kargil - Khalsti Line
- * 220 KV Kalwa - Borivali
- * 220 KV Aurangabad-II- Jalna MIDC (Negewadi)
- * 132 KV Agartala - AGTCCPP (CKT No. I)

◆ Generators

◆ Thermal

- * KSK Mahanadi Unit-3 was commissioned on 28- 02-2018

◆ Hydro

- * Nil

◆ Nuclear

- * Nil

Note 1: Data is taken from CEA and NLDC websites.

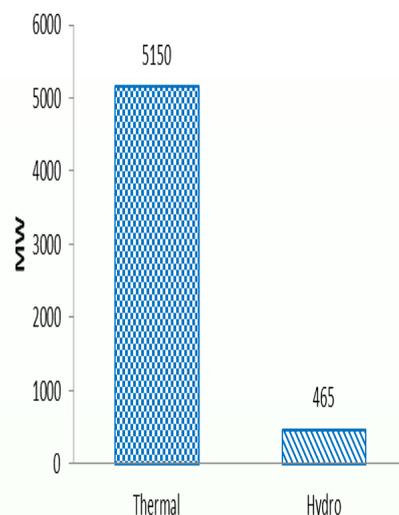
CEA : [Read more...](#)

NLDC: [Read more...](#)

All India No. of Generators Commissioned during FY 2017-18 (till Feb-2018)

Month	Thermal					Hydro					Nuclear				
	WR	NR	NER	ER	SR	WR	NR	NER	ER	SR	WR	NR	NER	ER	SR
Apr-17	3	1	0	2	2	0	0	1	2	0	0	0	0	0	0
May-17	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Jun-17	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
Jul-17	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0
Aug-17	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Sep-17	4	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Oct-17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nov-17	1	0	0	0	0	0	0	1	2	1	0	0	0	0	0
Dec-17	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Jan-18	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-18	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	12	3	0	4	3	0	2	5	5	1	0	0	0	0	0

Additional Generation Capacity During FY 2017-18 (Till Feb-2018)



All India No. of Line Reactors (LR), Transmission Lines (T/L), Substations (S/S) and Bus Reactors (BR) Commissioned for FY 2017-18 (till Feb-2018)

Month	800 KV		765 KV			400 KV			230 KV			220 KV			Total							
	T/L	S/S	LR	T/L	S/S	BR	LR	T/L	S/S	BR	LR	T/L	S/S	BR	LR	T/L	S/S	BR	LR	T/L	S/S	BR
Apr-17	0	0	0	2	3	0	0	9	7	0	0	2	3	0	0	4	12	0	0	17	25	0
May-17	0	0	0	1	0	0	0	16	9	0	0	1	2	0	0	5	8	0	0	23	19	0
Jun-17	0	1	0	0	1	0	0	19	17	0	0	3	2	0	0	17	25	0	0	39	47	0
Jul-17	1	0	0	3	2	0	0	9	11	0	0	0	2	0	0	0	5	0	0	13	20	0
Aug-17	0	0	0	2	1	0	0	22	14	0	0	2	0	0	0	9	5	0	0	35	20	0
Sep-17	0	1	0	2	2	0	0	11	11	0	0	0	1	0	0	8	6	0	0	21	21	0
Oct-17	0	0	0	0	0	0	0	18	7	0	0	2	0	0	0	5	10	0	0	25	17	0
Nov-17	0	0	0	0	0	0	0	12	12	0	0	0	1	0	0	7	8	0	0	19	21	0
Dec-17	0	0	0	2	3	0	0	13	11	0	0	1	0	0	0	11	9	0	0	27	23	0
Jan-18	0	0	0	0	1	0	0	1	2	0	0	0	0	0	0	0	4	0	0	1	7	0
Feb-18	0	0	0	0	2	0	0	17	5	0	0	0	2	0	0	15	22	0	0	32	31	0
Total	1	2	0	12	15	0	0	148	103	0	0	11	13	0	0	81	114	0	0	253	247	0

Note 2: No data for Branch Reactors (BR) and Line Reactors (LR) for the month of Feb-2018.

CEA : [Read more...](#)

NLDC: [Read more...](#)

* Tabulated Data is up to 220 KV level.

COMPARISON OF DD & DNHTARIFF ORDER 2018-19

DD Tariff Order

Sr. No	Parameter	Unit	FY 2017-18	FY 2018-19
1	Energy sales	MU	1843.86	2318.05
2	No. of consumers	Digit	62497	62631
3	Connected Load	MVA	1027983	884765
4	Wheeling Charge HT/EHT	Rs./ kWh	0.38	0.19
	Wheeling Charge LT			1.12
5	Cross Subsidy Surcharge (CSS)	Rs./ kWh	0.52	0.05
6	Transmission Loss	%	8.40	8.30
7	Distribution losses Loss	%	3.69	-
8	Losses for HT/EHT Network	%	1.81	1.81
9	Approved per unit cost of power purchase: R _{approved}	Paisa/ kWh	326	351
10	Power Purchase Quantum	Million Units	2127.27	2527.86
11	Power Purchase Cost	Rs. Crore	757.02	887.68
12	Solar RPO	%	2.50	3.6
13	Non-Solar RPO	%	4.20	5.40
14	Net-Revenue Requirement	Rs. Crore	839.58	979.23

DNH Tariff Order

Sr. No	Parameter	Unit	Category	FY 2017-18	FY 2018-19
1	Energy sales	MU	-	4228.16	5940.79
2	No. of consumers	Digit	-	71361	75,966
3	Connected Load	MVA	-	1655	1,447.23
4	Wheeling Charge HT/EHT	Rs./ kWh	11 KV - LT	0.19	0.82
			11 KV		0.08
			66 KV		0.03
5	Cross Subsidy Surcharge (CSS)	Rs./ kWh	11 KV and 66 KV	0	0
			220 KV		0.14
6	Transmission Loss	%	-	3.69	3.69
7	Distribution losses Loss	%	-	4.7	4.7
8	Losses for HT/EHT Network	%	-	3.22	3.22
9	Approved per unit cost of power purchase: R _{approved}	Paisa/ kWh	-	449	411
10	Power Purchase Quantum	Million Units	-	4641	6232.89
11	Power Purchase Cost	Rs. Crore	-	2067.96	2,562.98
12	Solar RPO	%	-	2.5	3.6
13	Non-Solar RPO	%	-	4.20	5.40
14	Net-Revenue Requirement	Rs. Crore	-	2129.77	2,601.20

JERC: [Read more...](#)



POWER SYSTEM SOLUTIONS THAT WORK FOR YOUR BUSINESS

Can You Imagine a World Without Power? ...Because, we can't.

We, at Panacean Energy Solution are committed to our core values integrity, excellence, enriched innovation and stand committed to nurture our talented work force and continually enhance our local insights and global perspective to bring about paradigm shift in the Indian Power Sector, through providing real solution.

We assist you to understand impact of Electricity Regulations applicable to you by providing tailor made gist of the new regulatory developments on case to case basis. With nation-wide experience of our team, and also with the valuable experience of handling overseas projects, we can assist you in planning and operations of your system.



Why Panacean?

Because....We Can Energize Your Business

We're extremely serious about being your power solution advocate. We envision an Indian Power Sector enriched with solutions to enhance its capability to ensure quality power to end consumers with reliability, efficiency and economy on ethical grounds through providing "IT and network" solutions to different segments of Indian Power Sector. Maximize long-term return to Owner.

Our Clients Prefer Working Directly With Us

Because we arm them with valuable resources for contract negotiation. We help them manage the minutest detail behind their big business decisions.

PanaCean®
(An ISO 9001:2015 Company)
More Power to You

Panacean Energy Solution





Area of Services



Power Services



- ◆ Power System Studies
- ◆ Utility Load Forecast
- ◆ Transmission and distribution planning
- ◆ Reactive Power Optimization
- ◆ Fault MVA calculation and improvements
- ◆ GPS/GIS Asset Mapping
- ◆ Load survey
- ◆ Street light survey
- ◆ Policy making
- ◆ Implementation of Electricity Act 2003 and State Regulations
- ◆ Operation and maintenance of substation
- ◆ Power System Training
- ◆ PSS@E Training
- ◆ Power Procurement under Case-I and Case-II bidding
- ◆ Tender Preparation and Management
- ◆ Project Management Consultant
- ◆ DSM Management
- ◆ Drawl and Generation schedule optimization
- ◆ Regulatory Support
- ◆ DPR preparation for submission to JERC / CEA.
- ◆ IPDS Scheme
- ◆ UDAY Scheme
- ◆ Smart city Implementation
- ◆ Techno commercial feasibility of substation
- ◆ Techno-commercial feasibility of transmission line
- ◆ T&D CAPEX optimization
- ◆ Distribution business optimization
- ◆ Transmission business optimization
- ◆ Optimal power scheduling for system operators

- ◆ Open Access implementation, operation and management
- ◆ Resources optimization in transmission and distribution business
- ◆ Training in system operation
- ◆ Support in Regulatory matters
- ◆ Energy Accounting

Renewable Energy



- ◆ Detailed Project Report preparation
- ◆ Feasibility Study for Renewable Power Generation
- ◆ EPC of Solar Power
- ◆ O&M of Renewable Power Plant Operation

Energy Efficiency

- ◆ Energy Audit
- ◆ Development of State Designated Agency
- ◆ Development of State Nodal Agency
- ◆ Power Quality Management



IT Services

- ◆ Software for Transmission and Distribution Companies
- ◆ Regulatory Information Management System
- ◆ Complaint Management System
- ◆ Customer Care Centre
- ◆ Standard of Performance
- ◆ Document Management System
- ◆ ERP for Power Company
- ◆ Energy management system
- ◆ Optimal Power Schedule

Area of Clients

Distribution Sector

- ◆ Electricity Department of Daman and Diu
- ◆ DNH Power Distribution Corporation Ltd.

Transmission Sector

- ◆ Maharashtra State Electricity Transmission Company Ltd.
- ◆ Reliance Infrastructure Ltd.
- ◆ Electricity Department of Darda and Nagar Haveli
- ◆ Uganda Electricity Transmission Company Ltd.

Generation Sector

- ◆ Essar M.P. Power Ltd.
- ◆ Ind-Barath Power

Others

- ◆ Indian Institute of Technology, Bombay
- ◆ Alok Industries
- ◆ Abhijeet Ferrotech Ltd.
- ◆ Reliance Industries Ltd.
- ◆ Macquarie Infrastructure
- ◆ IXORA Construction
- ◆ ICRA Management and Consultancy Services
- ◆ CLP India Pvt. Ltd., Mumbai

Reach us at

Registered Office

203, Antartica – D, Lodha Aqua CHS Ltd., Opp. to Thakur Mall, Mahajanwadi, Mira Road (E) Thane – 401107, Maharashtra.

Corporate Office

Mumbai

Gala No. 209, 2nd Floor, Nikisha Ind. Estate, Premises No 2, Pandurang Wadi, Mira Road (East), Thane- 401107.

Silvassa

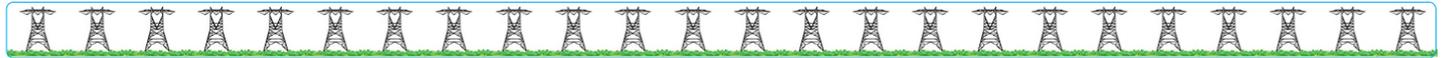
Flat No:A1/8, 2nd Floor, above Om Sai medical store, Opp Jalaram Temple, Kilvani naka, Silvassa - 396230.

Daman

1/320, Bhidbhajan Mahadev Chawl, Wadi Falia, New Vegetable Market, Nani Daman, Daman – 396210.

Surat

206, Santiniketan Flora Business Hub, Nr. Sanskartirth Gyanpith School, Abrama Road, Mota Varachha, Surat – 394105.



PANACEAN AT WORK FOR YOU

CONNECTING YOUR POWER NEEDS TO THE PANACEAN RESOURCES

Introduction
Power UI (Power System User Interface) is a cloud-based application specifically designed for power sectors organizations mainly, Transmission Utilities and Distribution Utilities. Presently, Power UI integrates various power system utilities such as Infrastructure management (MAPS), Complaint Management (CMS), Maintenance Management System (MMS), Regulatory Information Management system (RIMS), Inventory Management (Store).

Simple and Intuitive UI
We have kept in mind simplest ever user interface while designing the software. The user interface is so intuitive that, anyone having basic knowledge of operating computer will be able to handle various applications with ease. The technical modules only require basic training for successful operation. The software will have inbuilt guiding system for assuring hassle free completion of almost all activities.

Cloud Based:
The software run from cloud and is accessible over internet / intranet. This avoids installation of copies of software in each system. Management and upgradation of this cloud based application can become easier than ever.

Auto Backup:
The data of all enterprise applications is of utmost importance. Power UI comes with Auto Backup facility where an authorized person can schedule auto backup of full / partial data of the software. In case of data lost or hardware failure, no or minimal data is lost.

Event Notification:
The user and/or administrator will not be unaware of activities and events being carried out by the members. All activity updates will be delivered to the concerned person via appropriate notification. Apart from inbuilt notification system, such alerts can also be combined with Email and SMS notification.

IT SUPPORT TO YOUR POWER SOLUTIONS

- INFRASTRUCTUTR MANAGEMENT (MAPS)
- COMPLAINT MANAGEMENT SYSTEM (CMS)
- REGULATORY INFORMATION MANAGEMENT SYSTEM(RIMS)
- MAINTENANCE MANAGEMENT SYSTEM(MMS)
- INVENTORY MANAGEMENT(STORE)
- OPTIMAL POWER SCHEDULE

ONLINE ACCESS BROWSER COMPATIBILITY



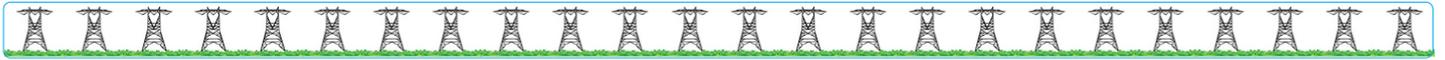
INDEPENDENT OF DATABASE

The software is compatible with Oracle, Microsoft SQL, and MySQL database.

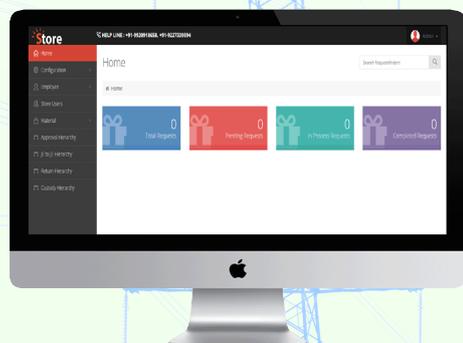
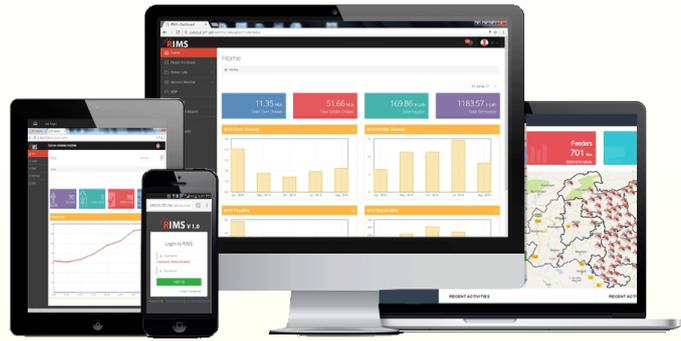


SECURITY

FLEXIBLE SOLUTIONS FOR YOUR POWER NEEDS



LAPTOP, Tablet & Mobile



REGULATORY INFORMATION MANAGEMENT SYSTEM IMS

RIMS keeps track of power purchase, power sale, trading, DSM (formerly known as “UI”), SEM data, Reliability Indices etc. It translates every bit of information for successful derivation various reports as intended by State Electricity Regulatory Commission.

COMPLAINT MANAGEMENT SYSTEM MS

CMS enables utility to get in touch with its consumers. At one end it provides feedback and complaints of consumers, and on the other end it provides analytical tools for identifying time-bound resolving consumer complaints and improving consumer satisfaction.

INVENTORY MANAGEMENT SYSTEM (STORE):

Full proof inventory management is ensured by Store. With self-auditing feature of the software, it is ensured that no material is lost unknowingly. It ensures accountability at every step right from receipt of the material to usage of the material. It also provides handful information for material usage pattern, consumption of various material and its category, material expenses many more at micro level as well as macro level. This helps in improving our planning procedures and material management. Readily available audit reports enhances applicability of the module for financial compliances.

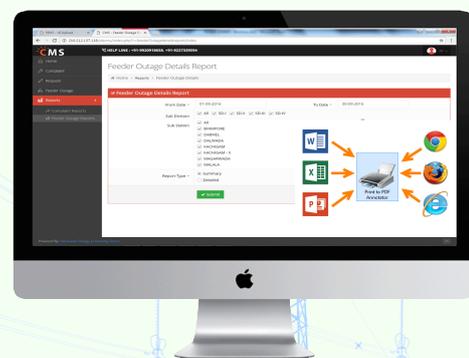
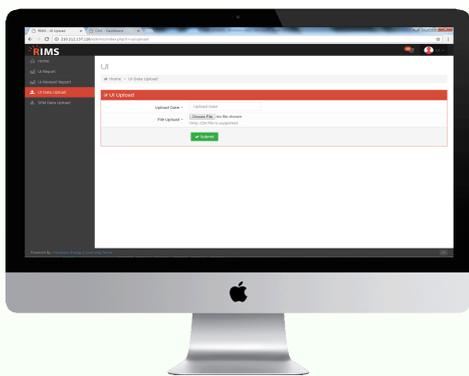
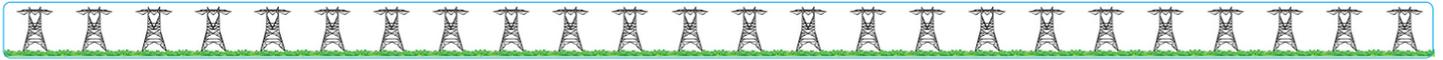


Transmission

Best Suitable Utilities

Distribution





M AINTENANCE MANAGEMENT SYSTEM (MMS)

MMS is designed to improve inbuilt maintenance management facilities and hence reduce the failure rates of equipment. With equipment being part of MMS, the concerned person is reminded for inspection and taking corrective actions. The module supports maintenance routines in various categories such as preventive maintenance, breakdown maintenance, event based maintenance, and routine maintenance. The software will ensure accountability of maintenance team and improves reliability of equipment in service.

This module contains all functionalities involved in maintenance management of a utility. Specific provisions for this objective are provided in this module as given below;

- ◆ Preventive & Routine Maintenance Operations
- ◆ Breakdown and Event based Operations

D ATA HANDLING:

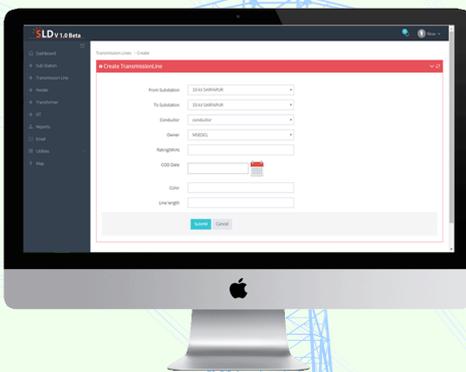
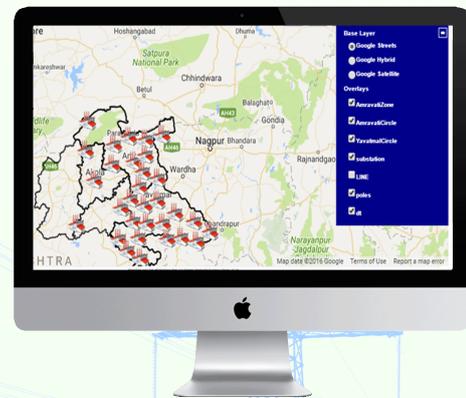
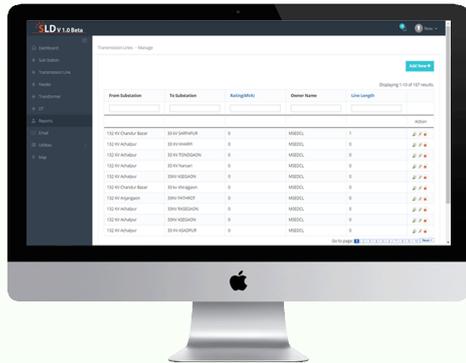
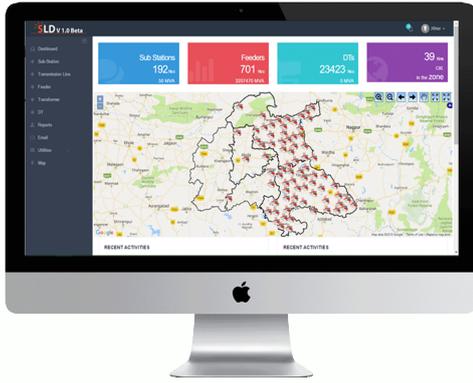
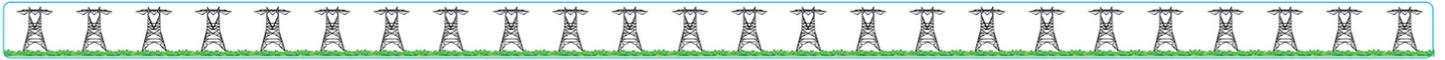
The software shall have a provision to handle huge volumes of data. Features such as import of excel files and import of data from databases shall be provided to facilitate bulk data entry and its corresponding map location display. Given below is a sample bulk data entry feature in POWERUI.

D ATA / REPORT EXPORT AND PRINTING FACILITIES:



O NLINE COMPLAINT AND FEEDBACK REPORTING

We are always listening to your feedback in terms of feature request, bug reporting, complaint, suggestion or any such thing for improving our service for your satisfaction. All such activities are only click away. User can report feedback online or by calling us on our helpline numbers.



MAPS includes infrastructure mapping of various assets of a utility. All assets with geotag (Longitude and Latitude) can be displayed and managed with ease.

POWERUI - MAPS

POWERUI MAPS is a map based application where all important assets and infrastructure of a Distribution company and transmission company are displayed on maps using their exact geographic coordinates. Display of all mapped distribution equipment on google maps, along with establishment of comprehensive database maintaining dynamic data of all attributes of major equipment in the distribution network is the core objective of this application. The map will be loaded with several customized user interactive features which aid in day to day monitoring and supervision of operations of the distribution network. Along with this, features facilitating operations such as assignment of O & M tasks to personnel based on equipment monitoring on map, tracking work status and review of operations on a large scale are provided in this application.

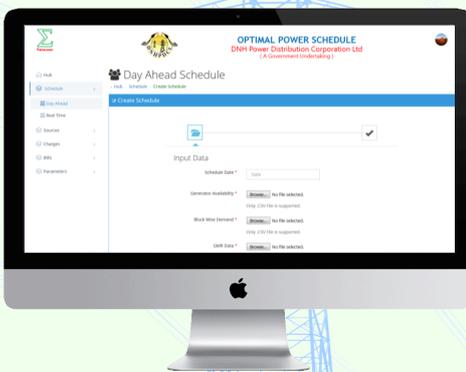
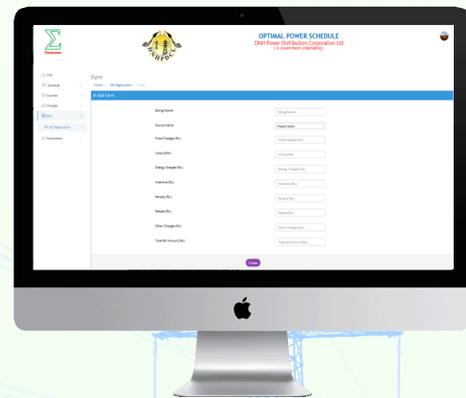
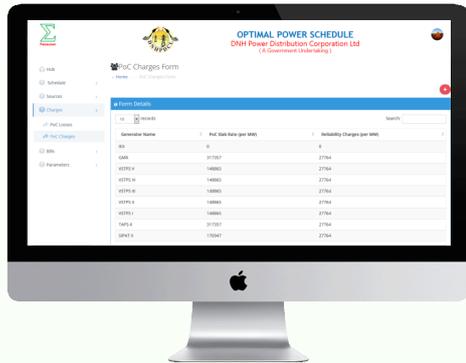
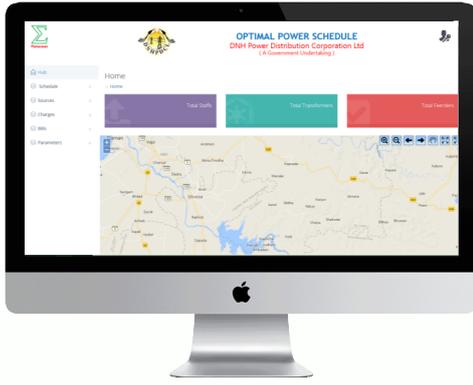
LAYER FACILITY:

Given a large and a highly dense network as that of MSEDCL, selective viewing of different components of maps is required. The Layer facility enables the user to turn ON/OFF display of certain elements on the map. This feature provides greater clarity of viewing and ease of operation of the software.

DATABASE - MAP COMMUNICATION:

Provision for any element to be inserted into the database or updation of any element in the database can be done through both map means and database means.

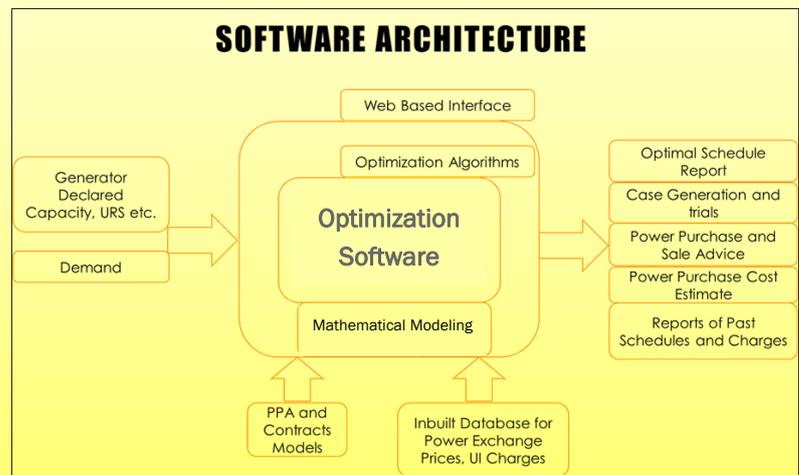




OPTIMAL POWER SCHEDULING SOFTWARE

The primary objective of this software shall be to provide Cost optimal generator wise day ahead schedule (MW) based on block wise demand of the utility and declared capacity of the generator; subject to all major constraints, with an account of all possible factors in determining the merit order of generators for each block.

Introduction: Optimal Power Scheduling is a custom made software for Power Distribution companies and load dispatch centres. Based on the principles of optimization, this software models complex issues of power purchase such as Power purchase agreements (PPA), Power Exchange, Un-scheduled Interchange (UI), and Un-requisitioned Surplus (URS) etc. into a single integrated platform using a industrial popular software to get an optimal power purchase solution. The schematic diagram of Optimal Power Scheduling Software is shown below,



FEATURES

- ◆ Day ahead and Intra-day optimal solutions for bidding.
- ◆ PPA Modelling concept, governing all PPA terms and Conditions.
- ◆ Analysis of Power Exchange and DSM prices based on Historical data.
- ◆ Indicative Power Purchase and Sale Solutions to bid optimally at the Power Market.
- ◆ Block wise Power Purchase cost estimation to explore all possible options to limit power purchase expenditure.
- ◆ Reports to analyse and summarize power scheduling over a period of time.