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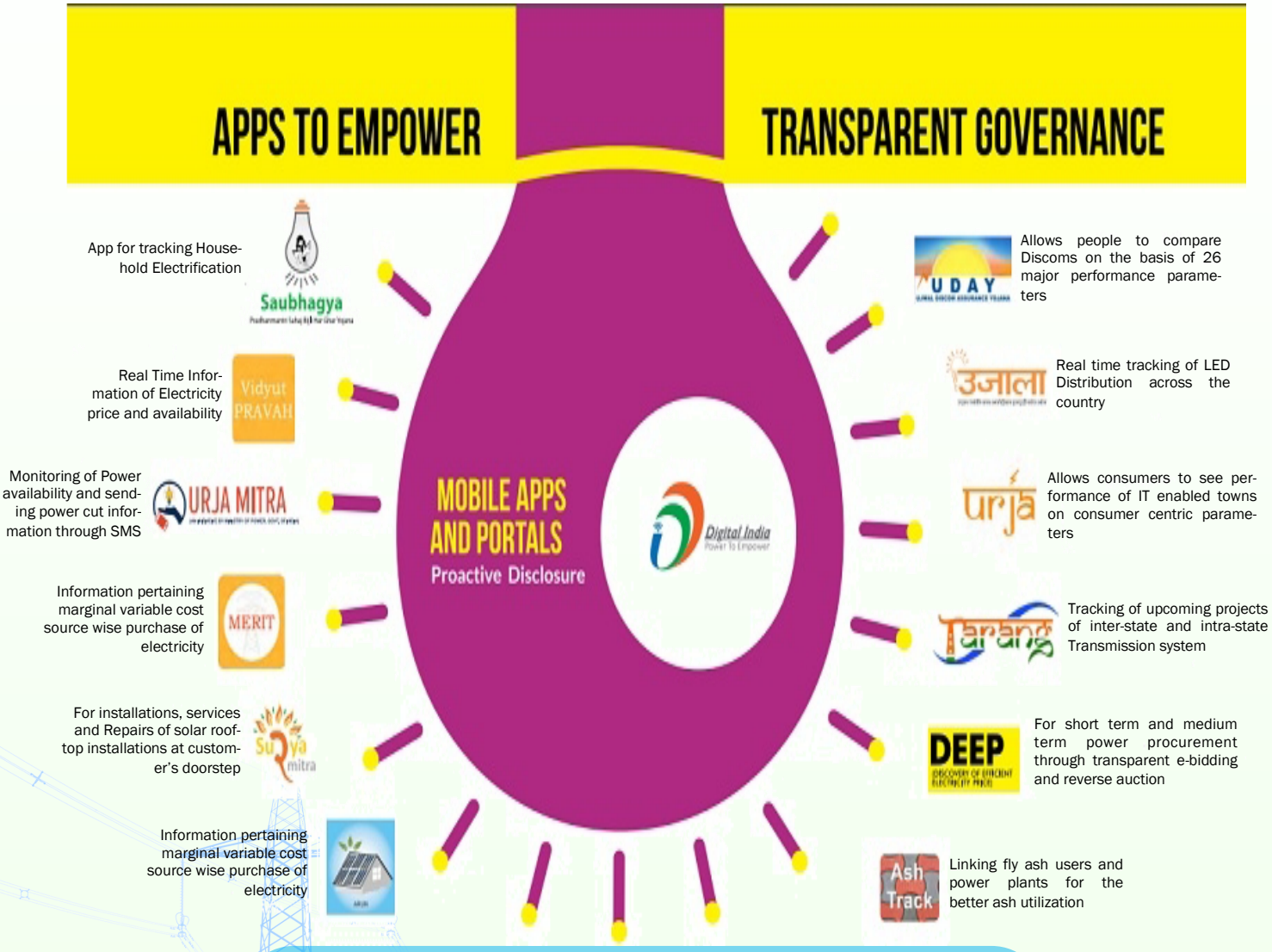
MAR
2019

POWER BULLETIN

Volume 5, Issue 12



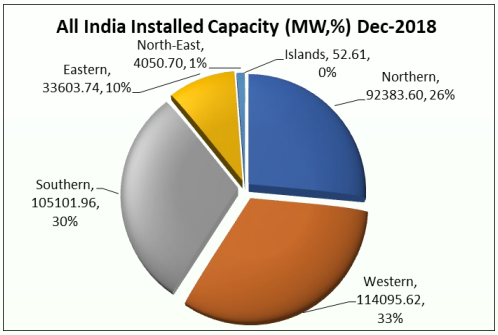
Inside

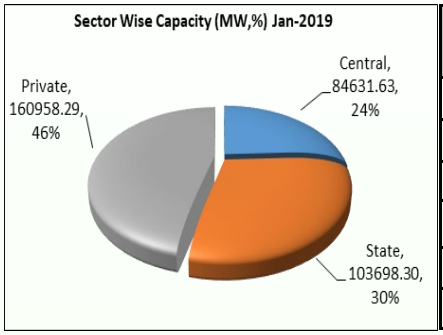
OVERVIEW OF INDIAN POWER SYSTEM FOR JAN-2019

All India Installed Capacity (MW) as on 31-01-2019					
Region	Thermal	Nuclear	Hydro	RES	Total
Northern	57061.46	1620.00	19707.77	13994.37	**92383.60**
Western	82675.11	1840.00	7547.50	22033.01	**114095.62**
Southern	53617.26	3320.00	11774.83	36389.87	**105101.96**
Eastern	27301.64	0.00	4942.12	1359.98	**33603.74**
North-Eastern	2331.83	0.00	1427.00	291.87	**4050.70**
Islands	40.05	0.00	0.00	12.56	**52.61**
ALL	**223027.35**	**6780.00**	**45399.22**	**74081.66**	**349288.23**

All India Installed Capacity (MW) as on 31-01-2019	
Sector	Generation (MW)
Central	84631.63
State	103698.30
Private	160958.29
Total	**349288.23**

Peak Demand of DD & DNH				
Utility	Jan-19			
	Peak Demand (MW)	Peak Met (MW)	Surplus/Deficit (-)	
			(MW)	(%)
DD	339	339	0	0
DNH	799	798	0	0





All India Plant Load Factor (PLF) in (%)		
Sector	Jan-18	Jan-19
Central	73.71	74.41
State	60.07	56.65
Private IPP	55.43	53.59
Private UTL	48.27	48.17
ALL India	**62.15**	**60.54**

Highlights of WR Grid for Jan-2019

- **Maximum Peak Demand Met:** 55171 MW
- **Energy Consumption:** Total Energy Consumption in the month of Jan-2019 was 33928 MUs at an average of 1094 MUs/day & Maxi-mum was 1127 MUs on 18.01.2019.
- **Unrestricted Demand:** Maximum Unrestricted demand was 55665 MW and Average Peak Unrestricted demand was 43707 MW.
- **Frequency Profile:** System frequency as per IEGC band is 49.90 Hz to 50.05 Hz. Maxi-mum, Minimum & Average Frequencies 50.28 Hz, 49.58 Hz & 49.99 Hz were respectively observed in the month of Jan-2019.
- **Voltage Profile:** All 765KV nodes except Wardha, Tamnar, Durg and Kotra (high voltage node) of WR were within the IEGC limit . High Voltage (greater than 420 KV) at 400KV substations were observed at Khandwa, Damoh, Nagda, Raipur, Raigarh, Bhilai, Wardha, Dhule, Parli, Boisar, Kalwa, Karad, Kasor, Amreli, Vapi, Mapusa, Kala, Magarwada, Hazira and Dehgaon. Highest of 65.95% of time above 420KV observed at Dehgaon.
- **Hydro Generation:** Total hydro generation of Western Region was 706.46 MUs at an average of 24.33 MUs/day in the month of Jan-2019.
- **Wind Generation:** Total wind generation was 1257 MUs at an average of 40.05 MUs/day in the month of Jan-2019.
- **Solar Generation:** Total Solar generation was 678 MUs at an average of 22 MUs/day in the month of Jan-2019.
- **Open Access Transaction Details for Jan-2019:**
  - ⇒ No. of approvals & Energy Approved in Intra-regional:123 & 823.22 MUs.
  - ⇒ No. of approvals & Energy Approved in Inter-regional: 149 & 763.62 MUs.

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List of Transmission Lines Commissioned/Ready for Commissioning During Jan-2019												Total
Sector	Central				Pvt.			State				
Voltage Level (KV)	800	765	400	220	765	400	220	765	400	230	220	
No. of Lines	0	1	1	1	0	0	0	0	3	1	1	**8**

List of Substations Commissioned/Ready for Commissioning During Jan-2019												Total
Sector	Central				Pvt.			State				
Voltage Level (KV)	765	400	230	220	765	400	220	765	400	230	220	
No. of Sub-stations	1	2	0	0	0	0	0	0	1	0	10	**14**

Region-wise Power Supply Position (Demand & Availability) in Jan-2018 & Jan-2019						
Region	Energy (MUs)				Deficit /Surplus (%)	
	Demand		Energy Met			
	Jan-18	Jan-19	Jan-18	Jan-19	Jan-18	Jan-19
Northern	28874	29507	28361	29068	**(1.8)**	**(1.5)**
Western	31569	32070	31566	32063	**0.0**	**0.0**
Southern	28028	27577	28000	27565	**(0.1)**	**0.0**
Eastern	10769	11179	10704	11166	**(0.6)**	**(0.1)**
North Eastern	1332	1318	1311	1299	**(1.6)**	**(1.4)**
All India	**100572**	**101651**	**99942**	**101161**	**(0.6)**	**(0.5)**

Region-wise Peak Demand / Peak Met in Jan-2018 & Jan-2019						
Region	Power (MW)				Deficit /Surplus (%)	
	Peak Demand		Peak Met			
	Jan-18	Jan-19	Jan-18	Jan-19	Jan-18	Jan-19
Northern	47214	47925	46252	47356	(2.0)	(1.2)
Western	50477	53698	50085	53505	(0.8)	(0.4)
Southern	43306	44560	43115	44560	(0.4)	0.0
Eastern	18526	19641	18256	19523	(1.5)	(0.6)
North Eastern	2339	2575	2317	2552	(0.9)	(0.9)
All India	**158640**	**163224**	**156720**	**162349**	**(1.2)**	**(0.5)**

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POWER TRADING

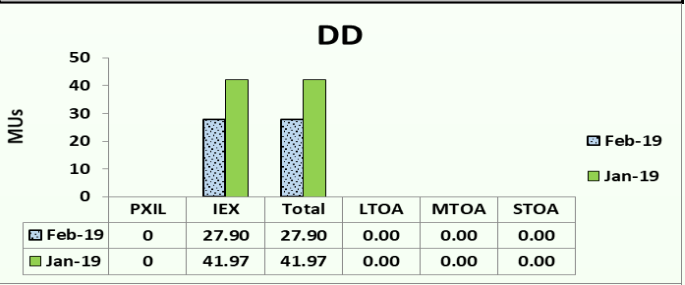
⇒ Emergence of IT has helped to create massive E-Commerce platforms in every walk of life. One such E-Commerce platform for transiting electricity for physical delivery, fine tuning daily requirements, sale of residual generation, optimal utilization of generating resources at marginal cost of production 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)

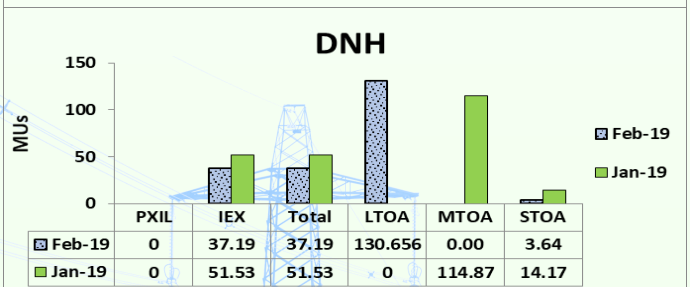
⇒ PXIL & IEX Trading summary

FEB-2019	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	**1665.2**	**436676.0**	-	**926.0**	**926.0**	**3762974.7**	**7211786.4**	-	**2794087.4**	**2855618.4**
Min	0.0	0.0	0.0	0.0	0.0	2273.1	5568.6	1500.3	2114.4	2087.6
Max	10.5	351.5	4500.0	10.5	10.5	11746.3	19895.1	5223.8	7930.9	8224.5
Avg	0.6	162.5	497.4	0.3	0.3	5599.7	10731.8	3084.0	4157.9	4249.4
JAN-2019	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	**28220.0**	**154210.0**	-	**0.0**	**0.0**	**4863875.4**	**7651553.6**	-	**3280860.2**	**3287269.9**
Min	0.0	0.0	0.0	0.0	0.0	2664.7	4277.9	1498.8	2172.9	2172.9
Max	126.5	510.0	3250.0	0.0	0.0	12944.8	20686.4	6775.6	8007.0	8007.0
Avg	9.5	51.8	851.8	0.0	0.0	6537.5	10284.4	3330.3	4409.8	4418.4

DD & DNH: OPEN ACCESS DETAILS



	PXIL	IEX	Total	LTOA	MTOA	STOA
Feb-19	0	27.90	27.90	0.00	0.00	0.00
Jan-19	0	41.97	41.97	0.00	0.00	0.00

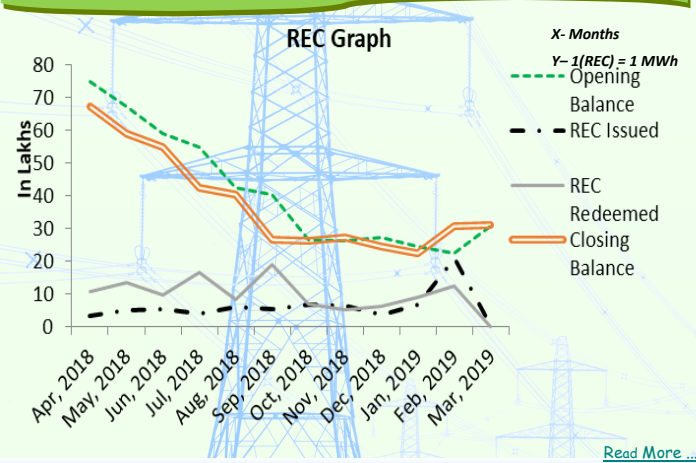


	PXIL	IEX	Total	LTOA	MTOA	STOA
Feb-19	0	37.19	37.19	130.656	0.00	3.64
Jan-19	0	51.53	51.53	0	114.87	14.17

REC Trading Session Feb-2019

Trader Company	PXIL		IEX	
Particular	Non-Solar	Solar	Non-Solar	Solar
Total Sell Bid (REC's)	1,83,516	1,19,081	14,46,856	6,88,507
Total Buy Bid (REC's)	2,82,100	2,45,778	9,28,439	5,67,273
Clearing Price (₹/Certificate)	1,555	1,908	1,395	1,500
Cleared Volume (REC's)	1,56,493	25,056	6,54,592	3,83,708

RENEWABLE ENERGY CERTIFICATE MECHANISM (REC) FROM APR-18 TO MAR-19



POWER MARKET UPDATE: February 2019
Day Ahead Market Trades 2,879 MU with Avg. MCP at Rs. 3.08 per unit

- The average Market Clearing Price (MCP) at Rs.3.08 per unit registered 4% decline over Rs. 3.23 per unit during Feb-18.

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

* Morning (07:00 to 10:00 Hrs): Rs. 3.87 per unit
* Day (11:00 to 17:00 Hrs): Rs. 3.19 per unit
* Evening peak (18:00 to 23:00 Hrs): Rs. 3.49 per unit
* Night (01-06 Hrs and 24 Hrs): Rs. 2.19 per unit

- The electricity market at IEX– the Day Ahead Market (DAM) and Term Ahead Market (TAM) combined traded 2,879 MU electricity in Feb-19 registering a decline of 15% over 3,343 MU traded in Feb-18.
- The One Nation, One Price was realized for 4 days in the month of Feb-19 primarily due to constraints in southern import.
- On daily average basis 722 participants traded in the power market in Feb-19.

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DEVIATION CHARGES

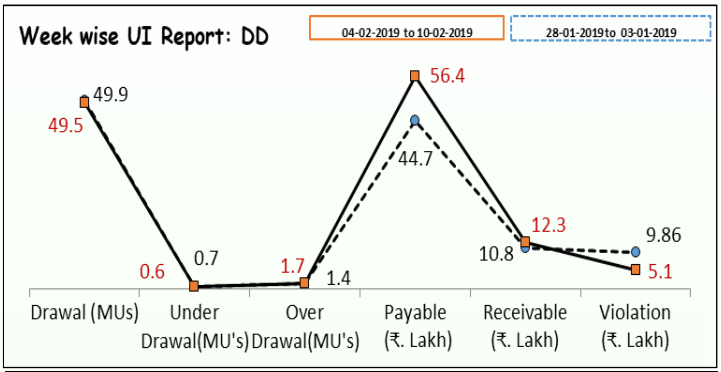
DD User Click to get UI Report
DNH User Click to get UI Report

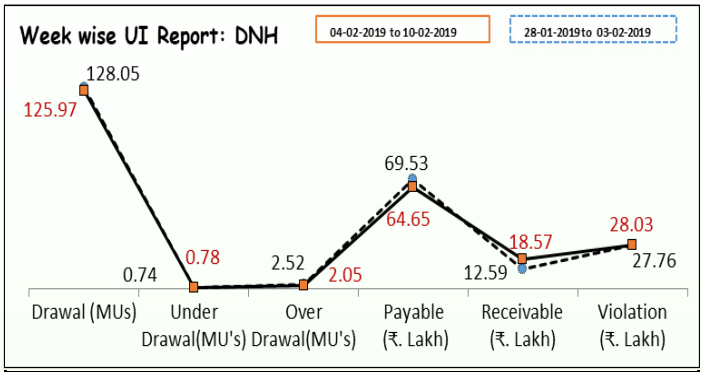
DD-Deviation Charges

FY 2018-19	Drawl (MUs)	Schedule (MUs)	UI Drawl (MUs)		UI Charges(₹. Lakh)		
			Under Drawl	Over Drawl	Payable	Receivable	Violation
Cumulative Total up to Jan-19	**2157.86**	**1921.80**	**4.96**	**241.03**	**6636.50**	**120.28**	**53.50**
04-02-2019 to 10-02-2019	47.07	46.21	0.69	1.55	55.17	19.57	6.19
04-02-2018 to 10-02-2018	50.26	47.63	0.31	2.94	73.25	6.02	--
11-02-2019 to 17-02-2019	49.54	48.45	0.57	1.66	56.41	12.3	5.11
11-02-2018 to 17-02-2018	47.96	45.33	0.44	3.08	70.29	8.69	--

DNH-Deviation Charges

FY 2018-19	Drawl (MUs)	Schedule (MUs)	UI Drawl (MUs)		UI Charges (₹. Lakh)		
			Under Drawl	Over Drawl	Payable	Receivable	Violation
Cumulative Total up to Jan-19	**5274.48**	**5057.39**	**12.48**	**229.61**	**6022.31**	**266.60**	**197.33**
04-02-2019 to 10-02-2019	128.05	126.27	0.74	2.52	69.53	12.59	27.76
04-02-2018 to 10-02-2018	122.18	115.72	0.04	6.50	150.04	0.69	--
11-02-2019 to 17-02-2019	125.97	124.7	0.78	2.05	64.65	18.57	28.03
11-02-2018 to 17-02-2018	122.87	118.22	0.07	4.72	103.07	1.26	--





DD

Month	FY 2017-18 (All Freq Hz)			FY 2018-19 (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	1.29	(11.30)	(2.48)	0.30	(19.56)	(2.79)
May	0.87	(15.28)	(2.19)	0.57	(27.91)	(3.43)
June	1.09	(17.98)	(2.16)	0.23	(24.82)	(2.61)
July	0.97	(15.89)	(2.26)	0.16	(31.37)	(2.54)
Aug	0.19	(24.00)	(2.3)	0.10	(28.24)	(2.52)
Sep	0.39	(24.70)	(2.64)	0.14	(33.75)	(2.92)
Oct	0.13	(29.42)	(2.79)	0.37	(25.13)	(2.58)
Nov	0.22	(22.01)	(2.71)	0.65	(19.69)	(2.48)
Dec	0.66	(16.60)	(2.50)	0.20	(23.87)	(2.57)
Jan	1.04	(18.20)	(2.63)	2.25	(6.69)	(4.20)
Feb	1.33	(12.58)	(2.58)	-	-	-
Mar	0.99	(19.63)	(2.99)	-	-	-
Total	**9.18**	**(227.6)**	**(2.55)**	**4.96**	**227.65**	**2.98**

DNH

Month	FY 2017-18 (All Freq Hz)			FY 2018-19 (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	1.91	(21.52)	(2.31)	0.39	(22.51)	(2.70)
May	13.54	(2.97)	(1.49)	2.03	(16.76)	(3.40)
June	9.26	(3.65)	(1.98)	1.43	(15.89)	(2.57)
July	6.71	(6.66)	(0.96)	0.43	(25.32)	(2.37)
Aug	3.50	(14.68)	(2.15)	0.33	(35.64)	(2.35)
Sep	2.06	(22.87)	(2.74)	0.50	(33.89)	(2.73)
Oct	1.53	(28.73)	(2.67)	1.76	(26.70)	(2.64)
Nov	2.23	(17.81)	(2.87)	2.36	(18.13)	(2.67)
Dec	1.09	(21.60)	(2.53)	0.57	(27.12)	(2.56)
Jan	0.47	(26.01)	(2.45)	2.68	7.65	3.84
Feb	0.28	(22.83)	(2.46)	-	-	-
Mar	1.03	(26.07)	(2.73)	-	-	-
Total	**43.61**	**(215.4)**	**(2.65)**	**12.48**	**229.61**	**2.65**

REACTIVE ENERGY CHARGES FOR DD & DNH

FY 2018-19	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 Jan-2018	-2097.8	-1323.2	175572.6	**172151.6**	58.7	5.0	-5.5	**58.2**	190256.2	80795.6	**271051.8**	6443.5	3582.9	**10026.4**
Cumulative Total Charges in (₹) till Jan-18	144184.5	7361.5	-17007953.0	**-16856407.0**	8218.0	700.0	-770.0	**8148.0**	-23873937.0	-8917773.5	**-32791710.5**	902090.0	501606.0	**1403696.0**
04-02-2019 to 10-02-2019	104.2	-7.3	0.0	**96.9**	0.0	0.0	0.0	**0.0**	8978.9	2458.5	**11437.4**	0.0	0.0	**0.0**
Charges in (₹)	-14588.0	1022.0	0.0	**-13566.0**	0.0	0.0	0.0	**0.0**	-1257046.0	-344190.0	**-1601236.0**	0.0	0.0	**0.0**
11-02-2019 to 17-02-2019	96.1	-8.0	4766.1	**4854.2**	0.0	0.0	0.0	**0.0**	8654.1	2703.6	**11357.7**	0.0	0.2	**0.2**
Charges in (₹)	-13454.0	1120.0	-667254.0	**-679588.0**	0.0	0.0	0.0	**0.0**	-1211574.0	-378504.0	**-1590078.0**	0.0	28.0	**28.0**

Note: The REC chargers has been revised to 14 paisa/KVARh from Apr-2018 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

- Retrofitting of Transmission Lines & Wind Turbines to avoid bird collision in Great Indian Bustard (GIB) habitats of Rajasthan & Gujarat.
- Regarding Design, Development, Supply, Installation & Commissioning of ignitability Test Facilities for Solar PV Module as per IEC 61730-2: 2016(MST-24) at National Institute of Solar Energy (NISE) Gurugram, Haryana-122003, India.

* UPERC

- Uttar Pradesh Electricity Regulatory Commission issued a draft of EV Charging Tariff on the date 25th February 2019.

* SECI

- SECI issued an RfS for 7500 MW Solar Power Projects in Leh & Kargil Districts, Jammu & Kashmir.
- Request for Selection (RfS) Document For Implementation of 97.5MWp Grid Connected Rooftop Solar PV System Scheme for Government Buildings in different States/ Union Territories of India under CAPEX/ RESCO Model under Global Competitive Bidding.
- Selection of Owner Engineer Required During Design, Supply & Installation of 160 MW Solar-Wind Hybrid Project at Ramagiri, Andhra Pradesh, India.
- Request for Selection (RfS) Document for Setting up of 1200 MW ISTS-Connected Wind Power Projects (TRANCHE-VII)

* CERC

- CERC issued a draft of "Fees and Charges of Regional Load Dispatch Center and Other related matters.
- CERC proposes to engage staff Consultants to assist Commission in the area of Regulatory Affairs in accordance with the CERC (Appointment of Consultants) (Amendment) Regulation, 2010 as amended from time to time in discharge of its functions

* MISCELLANEOUS

- **Solar Energy Corporation of India Ltd. Amends RfS for 3 GW Solar Tender Linked with 1.5 GW Manufacturing**
  - ⇒ Timeline for project commissioning is 36 months.
- **REIL Issues Tender to Set Up 270 EV Charging Stations Across India**
  - ⇒ Procurement will be for AC and DC charging equipment.
- **Energy Efficiency Program for Residential Sector Launched**
  - ⇒ The program is expected to save 90 billion units of electricity annually by 2030.
- **Assam Lays Foundation for 70 MW Solar Park Project**
  - ⇒ The Assam Power Generation Company issued the tender for development of the Amguri Solar Park Project in January 2019. Assam Chief Minister Sarbananda Sonowal has laid the foundation stone of the 70 MW Amguri Solar Park in Sivasagar district.
- **Aligarh Muslim University Adds New Solar Rooftop; Total Capacity Reaches 6.5 MW**
- **Uttar Pradesh Targets 3.2 GW of Solar Power by March 2021**
  - ⇒ Uttar Pradesh has 872 MW of solar power in operation at present, excluding rooftop solar
- **India Imposes Anti-dumping Duty on Import of Tempered Solar Glass from Malaysia for 5 Years**
  - ⇒ Gujarat Borosil had filed a petition in February 2018 for imposition of anti-dumping duty on import of tempered solar glass.
- **KfW and Bank of Baroda to Refinance Solar Projects in India**
  - ⇒ The $113 million funding agreement is part of the Solar Partnership II – Promotion of Solar PV in India.
- **EESL Launches Energy Efficient Air Conditioning Program**
- **Government and Solar Developers Discuss SECI's 7.5 GW Solar Projects Planned in J&K**
  - ⇒ In November 2018, the Ministry of New and Renewable Energy had launched a plan to implement 23 GW of ultra-mega solar projects in the Leh and Ladakh regions of Jammu & Kashmir. The Phase-I of the project would entail setting up 2,500 MW solar PV capacity in Kargil region and 5,000 MW in Leh district. This will be India's largest tender so far in terms of capacity.
- **India Likely to Impose Anti-Dumping Duty on Solar EVA Sheet Imports for 5 Years**
  - ⇒ Duty recommended on imports from China, Thailand, Saudi Arabia, and Malaysia.
- **MERC Asks DISCOM to Reduce ₹0.18/kWh from Solar Tariff to Account for Safeguard Duty**
  - ⇒ The Commission was responding to a petition filed by MSEDCL.
- **MNRE Gets ₹1.75 Billion for Renewable Energy Research and Technology Development**
  - ⇒ The President of India has given his approval for the continuation of renewable energy research and technology development (RETD) program for implementation during 2017-18 and 2019-20 at the cost of ₹1.75 billion (~$24.70 million). The program comes under the Ministry of New and Renewable Energy (MNRE).
- **50 MW of Solar Projects to be Developed in Pavagada Solar Park at a Tariff of ₹1.24/kWh**
  - ⇒ Karnataka commission has fixed the levelized tariff of ₹1.24/kWh for 24 years.
- **Indian Solar Cell and Module Imports Decline by 37% Year-over-Year in CY 2018**
  - ⇒ The effect of 25 percent safeguard duty was clearly visible in Q4. In calendar year (CY) 2018, the Indian solar sector imported solar modules and cells totaling nearly $2.59 billion (~₹184.57 billion), a 37 percent decline from the $4.12 billion (~₹269 billion) recorded during the preceding year. In 2018, Indian solar exports also decreased with $106.89 million (~₹ 7.61 billion) in exports, a decline of 19 percent from 2017 when the figure stood at $132.29 million (~₹8.6 billion), according to the latest trade data.

Note: Click on Head lines for More Info

- **SECI Issues Tenders for 1.2 GW Solar, 1.2 GW Hybrid, and 1.2 GW of Solar with Storage**
  - ⇒ The detailed RfS will be available for download from March 8, 2019. The Solar Energy Corporation of India Ltd. recently issued three tenders for the expansion of renewable capacity in the country. One for solar, one for solar with storage, and one for the solar-wind hybrid.
- **OPIC Provides Initial Financing for SunFunder's $85 Million Solar Energy Transformation Fund**
  - ⇒ As one of the major industrial hubs in the country, Aurangabad is among the areas in the state that have been witnessing huge unrest over the tariff policies of the state government.
- **No Increase in RPO of Captive Projects if Additional Capacity Not Added: Ministry of Power**
  - ⇒ The Ministry of Power has passed an order stating that the renewable purchase obligations (RPO) of captive power projects should be fixed at the appropriate level in the year such projects are commissioned.
- **Government Proposes $700 Million Plan for EV Infrastructure Revamp in the Next 5 Years**
  - ⇒ The Ministry of Power has also proposed a $12 billion plan to reduce emissions from power plants.
- **Electric vehicles to get cheaper by up to Rs 2.5 lakh**
  - ⇒ Electric Vehicle will get cheaper by Rs 20,000 to Rs 2.5 lakh, following the government's go-ahead to Niti Aayog's proposal to give purchase rebate as incentive to buyers.
- **FAME-II will help commit investments in EV: Auto industry**
  - ⇒ Automobile industry players Friday said the government's announcement of Rs. 10,000-crore FAME-II scheme brings clarity and policy stability, and will provide a big fillip to popularization of electric vehicles in India.
- **Green companies continue to bid aggressively for solar power projects**
  - ⇒ Renewable energy firms are continuing with aggressive bids for solar projects, with the winners in the latest auction including Finland's Fortum and US-based Acme quoting a tariff of Rs 2.48 per unit.
- **Adani starts solar panel retailing in Rajasthan**
  - ⇒ The channel partner in the state will be responsible for all the retail requirements. It will be assigned an exclusive territory to manage orders of solar panels up to 150KW and be responsible for overall lead generation, conversion and service.
- **SECI Issues Two Tenders for 14 MW Solar With 42 MWH Battery Energy Storage in Leh and Kargil**
  - ⇒ The detailed Request for Selection Document will be available on March 15, 2019.The SECI has issued a tender for setting up 14 MW of solar power projects with 42 MWh battery energy storage system (7MW/21MWh each) in Leh and Kargil division.
- **NIT for setting up of 250 MW Floating Solar PV Power Plants in Tamil Nadu**
  - ⇒ Solar Energy Corporation of India Ltd. (SECI) invites online bids for 250 MW Floating Solar PV Power Plant in the state of Tamil Nadu, India.
- **Kerala Commission Approves Modifications in Bid Documents for 200 MW of Solar Projects**
  - ⇒ After 3 months of process Kerala modified Documents.
- **APERC move to reduce PPA duration worries green energy companies**
  - ⇒ Reduction on PPA time period may disrupt the investments in the states of Andhra Pradesh.
- **Rajasthan 750 MW solar auction: Five firms to invest Rs. 3,000 crore**
  - ⇒ Rajasthan opened an auction for 7.5 GW and state got huge investments.
- **Setting up of 150 MW Floating Solar PV Power Plants at Ranchi, Jharkhand**
  - ⇒ Solar Energy Corporation of India Ltd. (SECI) invites online bids for 100 MW Floating Solar Power Plant at the reservoir of Getalsud Dam, Ranchi, Jharkhand and 50 MW Floating Solar Power Plant at the Reservoir of Dhurwa Dam, Ranchi, Jharkhand.
- **BHEL installs first solar EV charging station on Delhi-Chandigarh highway**
  - ⇒ The project is covered under the Faster Adoption and Manufacturing of (Hybrid) & Electric Vehicles in India scheme of DHI
- **Gujarat's green energy policy will lead to land hoarding, fear small firms**
  - ⇒ New policy does not make power purchase agreements mandatory while applying for land for new projects in the state.
- **MNRE to Frame Rules for Manufacture, Disposal, Import of Antimony-Coated Solar Modules**
  - ⇒ The MNRE will soon come up with a blueprint for the utilization, manufacture, disposal, and import of solar photovoltaic (PV) module and glass containing antimony.
- **Solar and Renewable Energy Policy Roundup from February 2019**
  - ⇒ The shortest month of the year came with a spate of policy highlights from the center and the state.
- **India's ₹ 100 Billion Budget to Promote Adoption and Manufacturing of Electric Vehicles**
  - ⇒ The next big ting in India is getting good investments nowadays. The program has a total budget of ₹ 100 billion.
- **Government Readies Blueprint for EV and Battery Manufacturing**

List of Abbreviations

- **APERC** :Andhra Pradesh Electricity Regulatory Commission
- **BHEL** :Bharat Heavy Electricals Limited
- **CERC** :Central Electricity Regulatory Commission
- **CAPEX** :Capital Expenditure
- **EVA** :Ethylene Vinyl Acetate
- **EV** :Electric Vehicle
- **EESL** :Energy Efficiency Services Limited
- **GW** ;Giga Watt
- **GIB** :Great Indian Bustard
- **ISTS** :Inter State Transmission System
- **JNNSM** :Jawaharlal Nehru National Solar Mission
- **J&K** :Jammu & Kashmir
- **KfW** :Kreditanstalt für Wiederaufbau
- **MOP** :Ministry of Power
- **MNRE** :Ministry of New & Renewable Energy
- **MW** :Mega Watt
- **MVA** :Mega Voltage Ampere
- **MWH** :Mega Watt Hour
- **MSEDCL** :Maharashtra State Electricity Distribution Company Limited
- **NISE** :National Institute of Solar Energy
- **NDMC** :New Delhi Municipal Council
- **NITI Aayog** :National Institute of Transforming India
- **NIT** :Notice Inviting Tender
- **OPIC** :Overseas Private Investment Corporation
- **PV** :Photovoltaic
- **PPA** :Power Purchase Agreement
- **RPO** :Renewable Purchase Obligation
- **RETD** :Renewable Energy Technology Deployment
- **RESCO** :Renewable Energy Service Company
- **SECI** :Solar Energy Corporation of India
- **RfS** :Request for Selection
- **SECI** :Solar Energy Corporation of India Limited
- **UPERC** :Uttar Pradesh Electricity Regulatory Commission
- **FAME** :Faster Adoption & Manufacturing of Electric Vehicles

ALL INDIA LIST OF ELEMENTS COMMISSIONED DURING THE FY 2018-19

All India List of Substations, Transmission Lines & Generators Commissioned during Jan-2019

♦ Substations

* 765/400 KV Extn. at Gaya S/S (1x1500 MVA)
* 765/400 KV Banaskantha
* 400/220 KV Unchahar Stage-IV
* 400/220 KV Extn at Gaya s/s
* 400/220 Azamgarh (Aug) T/F-II (500-315)
* 400/132 KV Up-grading of 132/33 kV Imphal S/S to 400/132 kV (Installation of 7x105 MVA ICT)
* 400/132 KV NSTPP (NPGC)
* 220/132 Extn. at Imlikhera (Pirankaliyar)
* 220/132 Banda (Aug) T/F-I (200-160)
* 220/132 Kanpur Dehat (New) 160 MVA (100 MVA T/F already energized in May
* 220/132 Bastara (Capacity Addition)
* 220/132 Saharanpur (Aug) T/F-I (200-160)
* 220/132 Maath Mathura (New) T/F-I
* 220/132 Kaithal (Capacity Addition)
* 220/132 Nissing (Capacity Addition)
* 220/132 Rania (Capacity Addition)
* 220/33 Sector-6 Sonepat (Capacity Addition)

♦ Transmission Lines

* 765 KV Salem - Madhugiri (PNMTL-TBCB)
* 765kV Bhuj-Banaskantha-2 (PGCIL)
* 400 kV Tumkur-Dharmapuri-2 (Power Grid)
* 400 KV Silchar-Imphal (already charged at 132kV (PGCIL)
* 400kV Jeerat-Subhashgram (PGCIL)
* 400 KV Biharshariff (Ckt. III and IV) - Kahalgaon (NTPC)
* 400 KV Hindupur - Uravakonda Quad Moose line
* 400 KV Jaisalmer -2 -Barmer line (RRVPNL)
* 400 KV Teesta -III - Kishanganj line (Executing Agency -TVPTL)
* 230 kV NNTPS-MINES D/C (NNTPS)
* 230 kV Myvadi-Kurukathi D/C (TNTRANSCO)
* 230 KV Teesta -III - Kishanganj line (Executing Agency -TVPTL)
* 220kV Chaibasa(JUSNL)-Ramchandrapur D/C (JSUNL)
* 220kV Parli(MS)-Osmanabad (MSETCL)
* 220 KV LILO of one ckt. Indravati - Theruvali at Kashipur
* 220 KV (JnK) Alusteng-Drass ((Part of Alusteng - Drass -Kargil Khalsti-Leh)
* 132kV Ambala RD I-Bhagwanpur (UPPTCL)

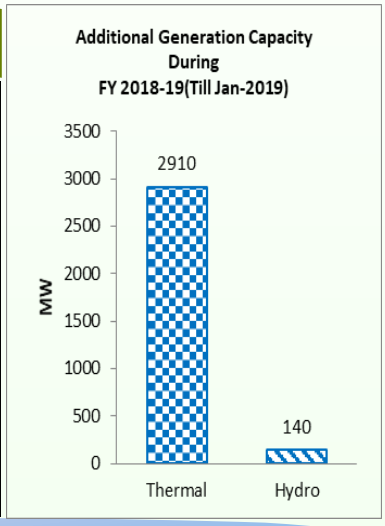
♦ Generators

♦ Thermal

* NTPP(BRBCL)-Nabinagar Unit–3 capacity 250 MW was commissioned on 01.01.2019 in Bihar by BRBCL.
* NSTPP(NPGCL)-Nabinagar Unit-1 capacity 660 MW was commissioned on 14.01.2019 in Bihar by NPGCL.
* IB Stage 2(OPGC) Unit-4 capacity 660 MW was commissioned on 23-01-2019 in Odisha by OPCG.

All India No. of Generators Commissioned during FY 2018-19 (till Jan-2019)

Month	Thermal					Hydro					Nuclear				
	WR	NR	NER	ER	S R	WR	NR	NER	ER	SR	WR	NR	NER	ER	SR
Apr-18	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
May-18	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Jun-18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul-18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aug-18	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sep-18	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Oct-18	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nov-18	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dec-18	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Jan-19	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
Total	**5**	**0**	**0**	**3**	**1**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**



All India No. of Line Reactors (LR), Transmission Lines (T/L), Substations (S/S) and Bus Reactors (BR) Commissioned for FY 2018-19 (till Jan-2019)

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-18	0	0	0	4	4	0	0	14	10	0	0	0	0	0	0	8	5	0	0	26	19	0
May-18	0	0	0	0	2	0	0	19	12	0	0	3	0	0	0	10	8	0	0	32	22	0
Jun-18	0	0	0	4	1	0	0	8	9	0	0	0	0	0	0	15	8	0	0	27	18	0
Jul-18	0	0	0	2	0	0	0	10	9	0	0	0	3	0	0	16	17	0	0	28	29	0
Aug-18	0	0	0	4	3	0	0	15	8	0	0	0	0	0	0	16	17	0	0	35	28	0
Sep-18	0	0	0	0	0	0	0	14	8	0	0	0	2	0	0	17	12	0	0	31	22	0
Oct-18	0	0	0	3	0	0	0	11	9	0	0	0	2	0	0	22	11	0	0	36	22	0
Nov-18	0	0	0	3	0	0	0	10	10	0	0	1	0	0	0	7	10	0	0	21	20	0
Dec-18	0	0	0	2	1	0	0	7	4	0	0	3	0	0	0	10	9	0	0	22	14	0
Jan-19	0	0	0	2	2	0	0	7	5	0	0	0	3	0	0	4	10	0	0	17	17	0
Total	**0**	**0**	**0**	**24**	**13**	**0**	**0**	**115**	**84**	**0**	**0**	**7**	**10**	**0**	**0**	**125**	**107**	**0**	**0**	**275**	**211**	**0**

Note 1: Data is taken from CEA and NLDC websites.
Note 2: No data for Branch Reactors (BR) and Line Reactors (LR) for the month of Jan-2018.
* Tabulated Data is up to 220 KV level.

CEA : Read more...
NLDC: 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 Dadra 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

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Corporate Office

Mumbai

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

Silvassa

Flat no 503, 1st Floor, Radha krishna tower, Opp. petrol pump, Amli, Silvassa-396230.

Daman

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

Surat

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

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.

FLEXIBLE SOLUTIONS FOR YOUR POWER NEEDS

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.

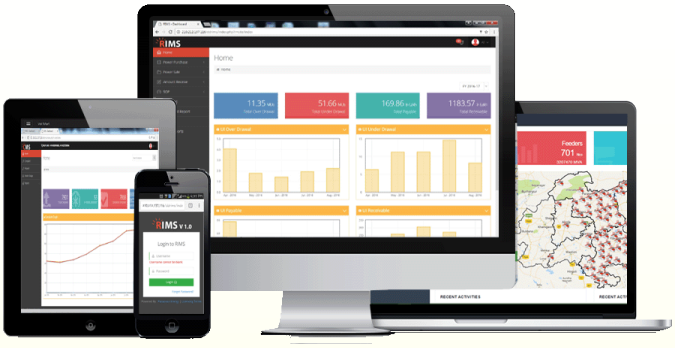
Auto Backup:

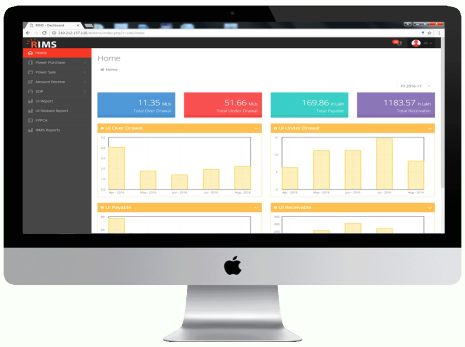
The data of all enterprise applications is of utmost importance. Power UI comes with Auto Backup facility where an authorized person can schedule auto backup of full / partial data of the software. In case of data lost or hardware failure, no or minimal data is lost.

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.

LAPTOP, TABLET & MOBILE FRIENDLY



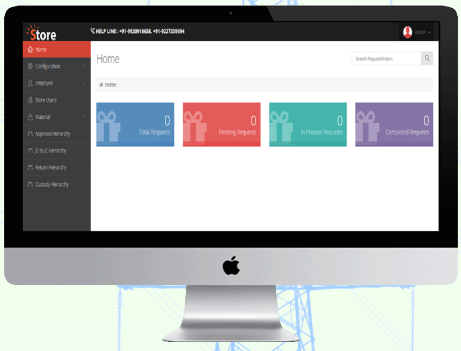


REGULATORY INFORMATION MANAGEMENT SYSTEM RIMS

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 CMS

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.

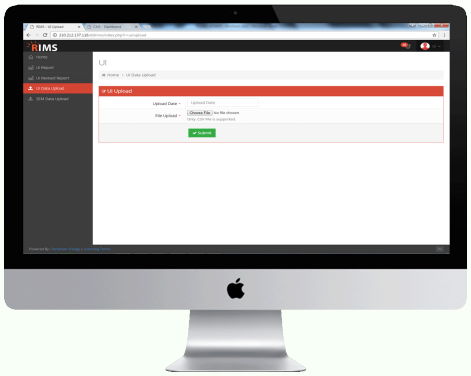


INVENTORY MANAGEMENT SYSTEM (STORE):

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.

Maintenance Management System (MMS)

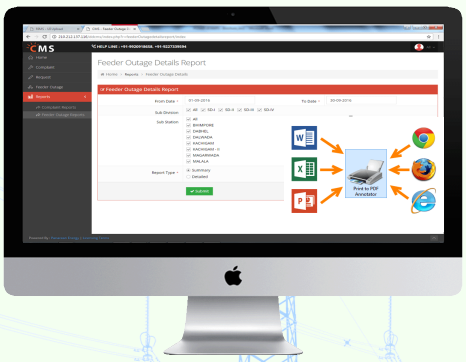
MMS it designed to improve inbuilt maintenance management facilities and hence reduce the failure rates of equipment. With equipment being part of MMS, the concerned person is reminded for inspection and taking corrective actions. The module supports maintenance routines in various categories such as 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

Data Handling:



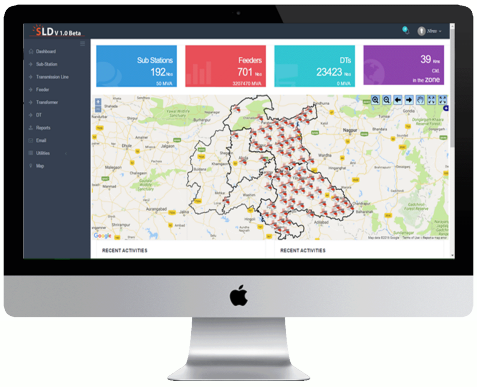
The software shall have a provision to handle huge volumes of data. Features such as import of excel files and import of data from databases shall be provided to facilitate bulk data entry and its corresponding map location display. Given below is a sample bulk data entry feature in POWERUI.

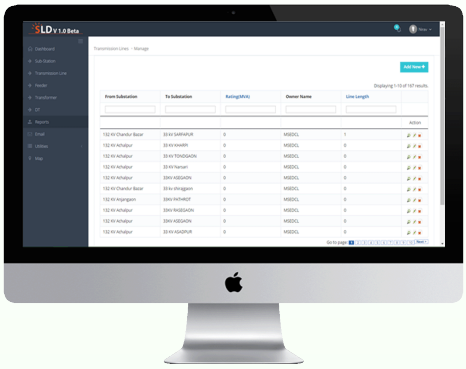
Data / Report Export and Printing Facilities:

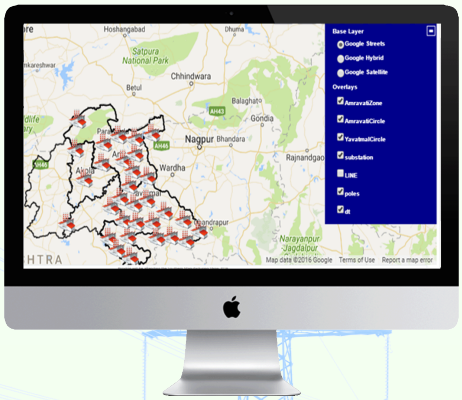


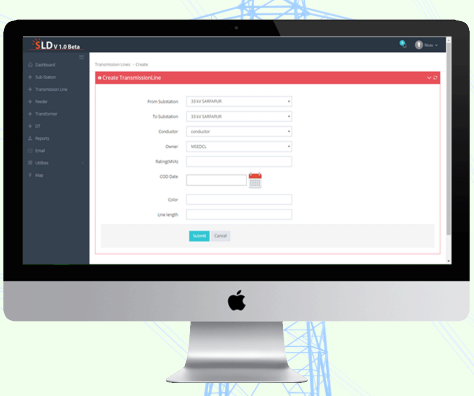
Online Complaint and Feedback Reporting

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

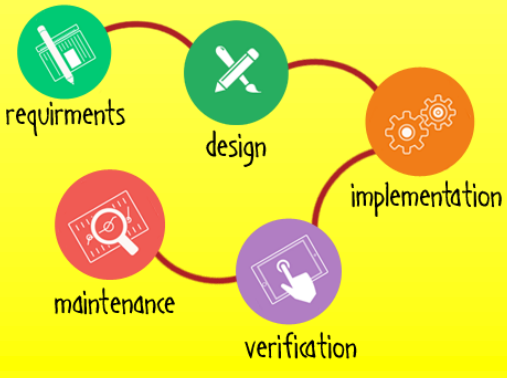
POWERUI MAPS is a map based application where all important assets and infrastructure of a Distribution company and transmission company are displayed on maps using their exact geographic coordinates. Display of all mapped distribution equipment on google maps, along with establishment of comprehensive 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.

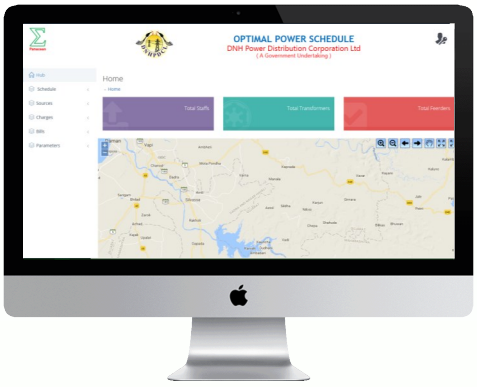
LAYER FACILITY:

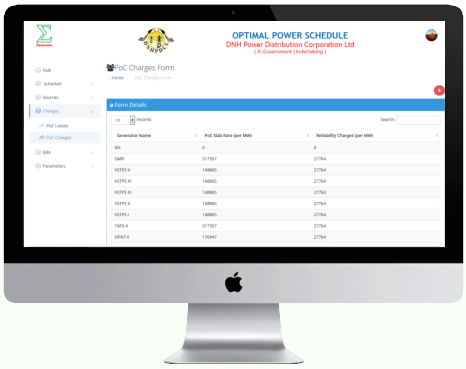
Given a large and a highly dense network as that of MSEDCL, selective viewing of different components of maps is required. The Layer facility enables the user to turn ON/OFF display of certain elements on the map. This feature provides greater clarity of viewing and ease of operation of the software.

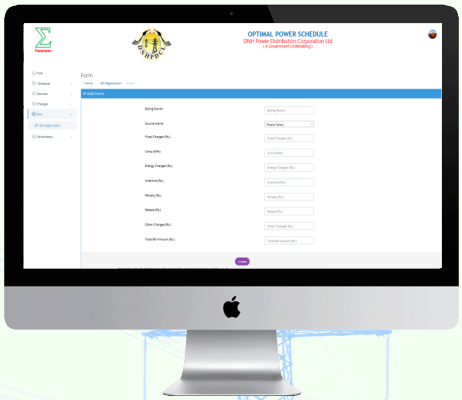
DATABASE – MAP COMMUNICATION:

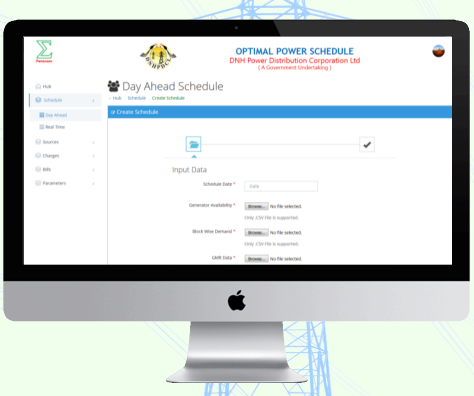
Provision for any element to be inserted into the database or updation of any element in the database can be done through both map means and database means.







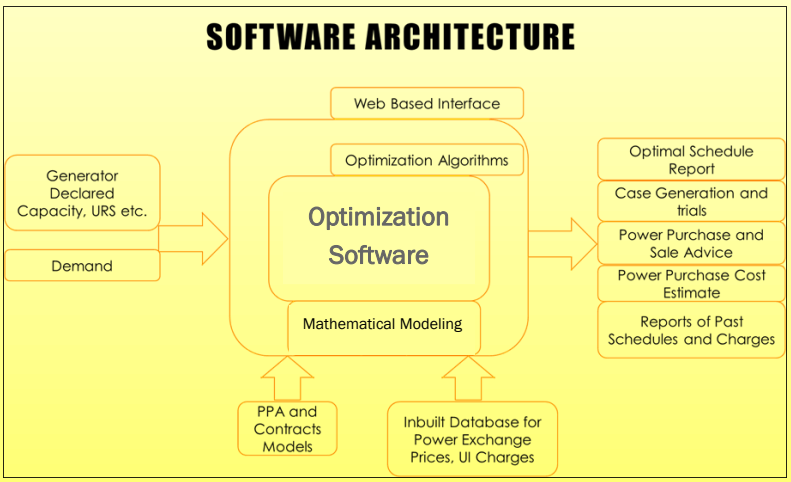




OPTIMAL POWER SCHEDULING SOFTWARE

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, Unscheduled 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.

Feasibility Study for Renewable Power Generation : Feasibility studies involve studying the technical and financial implications of commissioning of a project. Feasibility studies are almost always conducted where large sums are at stake. Various renewable energy options such as solar, wind, biomass etc., are evaluated for commercial availability, economic feasibility, siting potential, and climatic resource. It is an assessment of the practicality of a proposed Renewable Power Generation plan or method.

O&M of Renewable Power Plant Operation : Panacean undertakes Operation and maintenance of several solar plants for its clients. With increasing emphasis on solar power by the Govt. of India our experience in O & M of solar plants is very valuable.

Detailed Project Report Preparation (DPR): is a part of the total business plan submitted to venture capitalists or financial institutions. It is the culmination of all analyses related to the project. The analyses of market demand as well as technical and financial are presented in a systematic format, in the DPR. The Estimate for the proposal of any scheme majorly is based on various factors such as

- Estimate of scheme is prepared on budgetary offer received for similar work of scheme by venture capitalists.
- The estimate also considers expenses towards the cost of civil structure works, transportation, installation, testing, commissioning charges & contingencies.
- Land cost
- Packing, forwarding, inland transportation & insurance at the rate of 2.5% for all equipment have been considered.
- Erection, testing & commissioning charges are considered as 8% of supply cost for mechanical & electrical equipment.
- 3% of the equipment cost has been considered towards cost of spares.
- Goods & Service tax at the rate of 18%.

We have the experience of DPR preparation for various schemes.