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POWER BULLETIN

AUG
2018

Volume 5, Issue 05

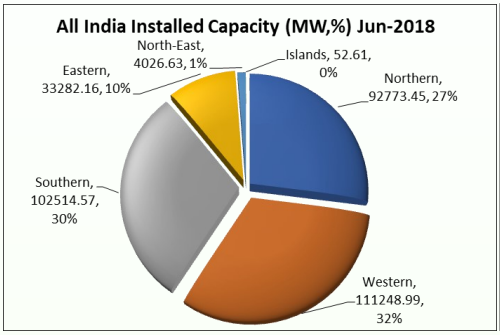
Inside

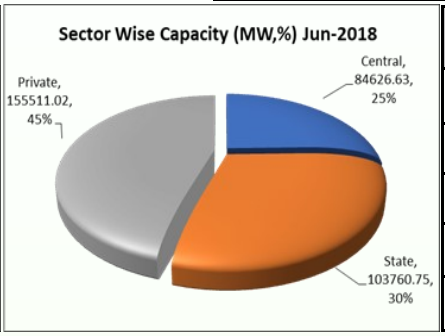
OVERVIEW OF INDIAN POWER SYSTEM FOR JUN-2018

All India Installed Capacity (MW) as on 30-06-2018					
Region	Thermal	Nuclear	Hydro	RES	Total
Northern	58626.46	1620.00	19653.77	12873.22	**92773.45**
Western	81415.11	1840.00	7547.50	20446.38	**111248.99**
Southern	53017.26	3320.00	11808.03	34369.28	**102514.57**
Eastern	27301.64	0.00	4942.12	1038.40	**33282.16**
North-Eastern	2292.07	0.00	1452.00	282.56	**4026.63**
Islands	40.05	0.00	0.00	12.56	**52.61**
ALL	**222692.59**	**6780.00**	**45403.42**	**69022.40**	**343898.41**

All India Installed Capacity (MW) as on 30-06-2018	
Sector	Generation (MW)
Central	84626.63
State	103760.75
Private	155511.02
Total	**343898.40**

Peak Demand of DD & DNH				
Utility	Jun-18			
	Peak Demand (MW)	Peak Met (MW)	Surplus/Deficit (-)	
			(MW)	(%)
DD	382	382	0	0
DNH	792	792	0	0





All India Plant Load Factor (PLF) in (%)		
Sector	Jun-17	Jun-18
Central	69.00	70.72
State	51.00	55.98
Private	62.53	67.65
ALL India	56.72	59.17

Highlights of WR Grid for June-2018

- **Maximum Peak Demand Met:** 52739 MW
- **Energy Consumption:** Total Energy Consumption in the month of June-2018 was 32446 MUs at an average of 1082 MUs/day & Maxi-mum was 1158 MUs on 01.06.2018.
- **Unrestricted Demand:** Maximum Unrestricted demand was 52905 MW and Average Peak Unrestricted demand was 45067 MW.
- **Frequency Profile:** System frequency as per IEGC band is 49.90 Hz to 50.05 Hz. Maxi-mum, Minimum & Average Frequencies 50.24 Hz, 49.60 Hz & 49.98 Hz were respectively observed in the month of June-2018.
- **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, Wardha, Dhule, Parli, Boisar, Amreli, Karad, Kalwa, Dehgaon, Vapi, Mapusa and Magarwada. Highest of 72.04% of time above 420KV observed at Dhule.
- **Hydro Generation:** Total hydro generation of Western Region was 480.24 MUs at an average of 16.01 MUs/day in the month of June-2018.
- **Wind Generation:** Total wind generation was 3296 MUs at an average of 110 MUs/day in the month of June-2018.
- **Solar Generation:** Total Solar generation was 518 MUs at an average of 17 MUs/day in the month of June-2018.
- **Open Access Transaction Details for** June-2018:

  ⇒ No. of approvals & Energy Approved in Intra-regional: 126 & 579.88 MUs.

  ⇒ No. of approvals & Energy Approved in Inter-regional: 77 & 193.48 MUs.

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List of Transmission Lines Commissioned/Ready for Commissioning During Jun-2018												Total
Sector	Central				Pvt.			State				
Voltage Level (KV)	800	765	400	220	765	400	220	765	400	230	220	
No. of Lines	0	2	1	0	0	0	0	0	2	0	12	**17**

List of Substations Commissioned/Ready for Commissioning During Jun2018												Total
Sector	Central				Pvt.			State				
Voltage Level (KV)	765	400	230	220	765	400	220	765	400	230	220	
No. of Sub-stations	1	6	0	0	0	0	0	0	2	0	6	**15**

Region-wise Power Supply Position (Demand & Availability) in Jun-2017 & Jun-2018						
Region	Energy (MUs)				Deficit /Surplus (%)	
	Demand		Energy Met			
	Jun-17	Jun-18	Jun-17	Jun-18	Jun-17	Jun-18
Northern	33672	37620	33202	37149	**(1.4)**	**(1.3)**
Western	28839	31062	28839	31060	**0.0**	**(0.0)**
Southern	24377	25976	24374	25948	**(0.0)**	**(0.1)**
Eastern	11904	12870	11825	12861	**(0.7)**	**(0.1)**
North Eastern	1438	1471	1396	1418	**(2.9)**	**(3.6)**
All India	**100230**	**108999**	**99636**	**108436**	**(0.6)**	**(0.5)**

Region-wise Peak Demand / Peak Met in Jun-2017 & Jun-2018						
Region	Power (MW)				Deficit /Surplus (%)	
	Peak Demand		Peak Met			
	Jun-17	Jun-18	Jun-17	Jun-18	Jun-17	Jun-18
Northern	56119	58280	54890	57795	(2.2)	(0.8)
Western	47324	51082	47034	50915	(0.6)	(0.3)
Southern	38912	42712	38844	42658	(0.2)	(0.1)
Eastern	19255	20559	18987	20559	(1.4)	0.0
North Eastern	2499	2640	2387	2564	(4.5)	(2.9)
All India	**155547**	**171004**	**153179**	**170241**	**(1.5)**	**(0.4)**

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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.

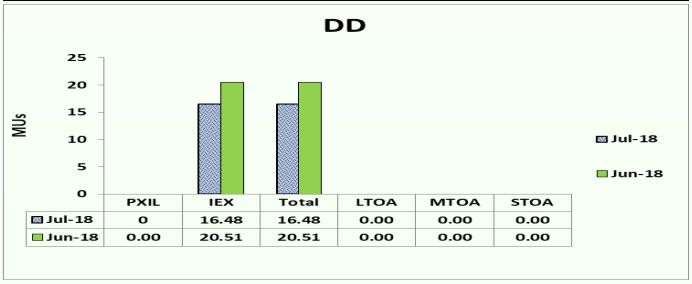
⇒ For more information about IEX visit (www.iexindia.com); For more information about PXIL visit (www.powerexindia.com)

⇒ PXIL & IEX Trading summary

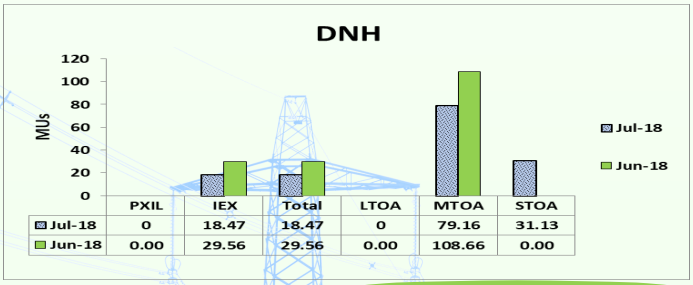
JUL-2018	PXIL					IEX				
	Buy Bid (MWh)	Sell Bid (MWh)	MCP (₹/MWh)	Cleared Volume (MWh)	Marginal Clear Volume (MWh)	Buy Bid (MWh)	Sell Bid (MWh)	MCP (₹/MWh)	Cleared Volume (MWh)	Marginal Clear Volume (MWh)
Total	**122688.0**	**292504.0**	-	**117056.0**	**105784.0**	**4981169.7**	**7337044.8**	-	**4054408.8**	**4061238.3**
Min	1.5	0.0	0.0	0.0	0.0	3506.9	5689.6	1796.8	3229.0	3229.0
Max	138.5	247.0	5950.0	137.0	125.0	11506.5	15326.7	8975.6	8729.7	8733.4
Avg	41.2	98.3	3360.8	39.3	35.5	6695.1	9861.6	3461.5	5449.5	5458.7

JUN-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	**65738.0**	**278936.0**	-	**61562.0**	**61562.0**	**5961803.9**	**7918144.3**	-	**4965187.5**	**4984887.3**
Min	0.0	0.0	0.0	0.0	0.0	3976.4	6490.8	2025.2	3304.9	3352.5
Max	300.0	350.0	8640.0	300.0	300.0	14129.4	17202.6	10600.3	9962.6	9962.6
Avg	22.8	96.9	2047.3	21.4	21.4	8280.3	10997.4	3732.0	6896.1	6923.5

DD & DNH: OPEN ACCESS DETAILS



	PXIL	IEX	Total	LTOA	MTOA	STOA
Jul-18	0	16.48	16.48	0.00	0.00	0.00
Jun-18	0.00	20.51	20.51	0.00	0.00	0.00

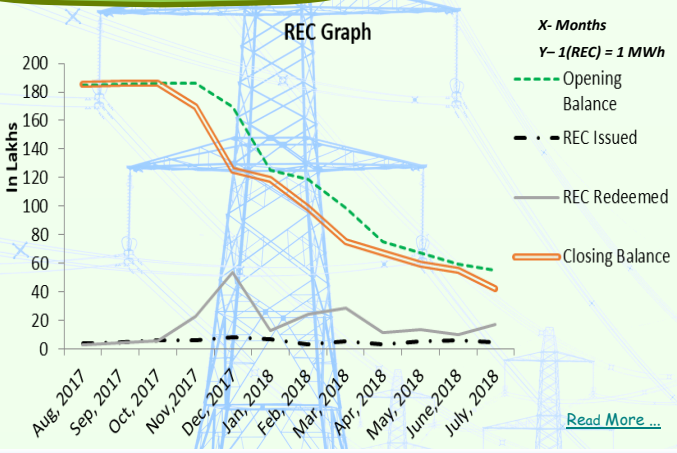


	PXIL	IEX	Total	LTOA	MTOA	STOA
Jul-18	0	18.47	18.47	0	79.16	31.13
Jun-18	0.00	29.56	29.56	0.00	108.66	0.00

REC Trading Session July-2018

Trader Company	PXIL		IEX	
Particular	Non-Solar	Solar	Non-Solar	Solar
Total Sell Bid (REC's)	48,721	1,427,593	264,901	2,258,417
Total Buy Bid (REC's)	276,832	574,308	655,553	808,324
Clearing Price (₹/Certificate)	1,050	1,000	1,200	1,000
Cleared Volume (REC's)	43,449	574,308	191,988	808,324

RENEWABLE ENERGY CERTIFICATE MECHANISM (REC) FROM Aug-17 TO July-18



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POWER MARKET UPDATE: JULY 2018 The Day-ahead market Trade of 4,028 MUs with Avg. Price at Rs. 3.46 per unit

- The average Market Clearing Price (MCP) discovered in the day-ahead market was at Rs. 3.46 per unit, was decline with the price of June-18 which was Rs. 3.73 per unit and 39% above Rs. 2.49 per unit in July-17.

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

* Morning (07:00 to 10:00 Hrs): Rs. 3.05 per unit
* Day (11:00 to 17:00 Hrs): Rs. 2.94 per unit
* Evening peak (18:00 to 23:00 Hrs): Rs. 4.84 per unit
* Night (01-06 Hrs and 24 Hrs): Rs. 3.03 per unit

- A total of 4028 MU were cleared, which is decline with the 4965 MU traded last month and almost 10% more than 3669 MU traded in Jul-17. On a daily average basis about 130 MU were traded.
- With average daily sell and buy bids were 237 MU and 161 MU respectively.
- The One Nation, One Price was realized for 21 days in the month of July-18.
- On daily average basis 659 participants traded in the day-ahead power market in July-18.

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DEVIATION CHARGES

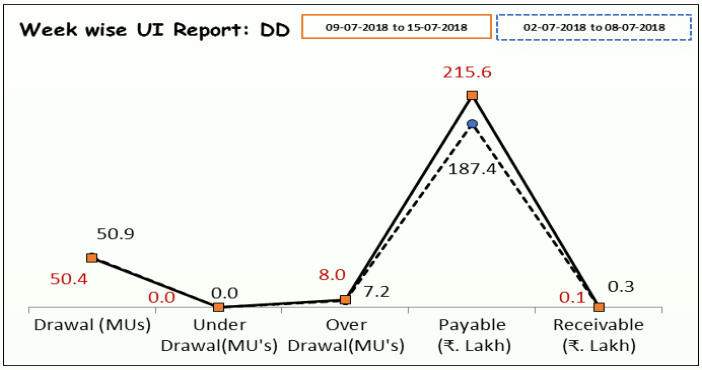
DD User Click to get UI Report
DNH User Click to get UI Report

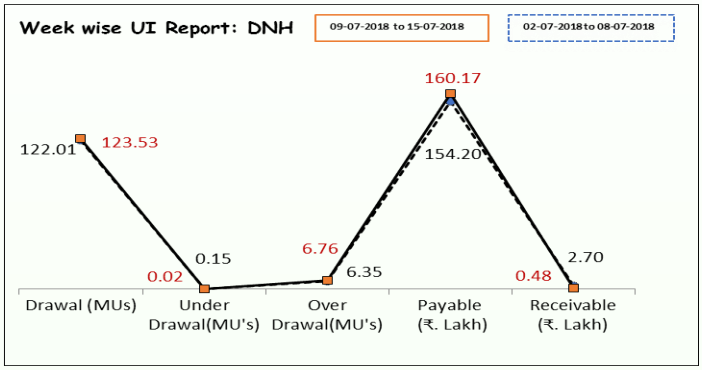
DD-Deviation Charges

FY 2018-19	Drawl (MUs)	Schedule (MUs)	UI Drawl (MUs)		UI Charges(₹. Lakh)	
			Under Drawl	Over Drawl	Payable	Receivable
Cumulative Total up to Jun-19	**665.07**	**593.87**	**1.09**	**72.29**	**2140.85**	**23.85**
09-07-2018 to 15-07-2018	50.44	42.49	0.00	7.96	215.63	0.11
09-07-2017 to 15-07-2017	46.67	43.41	0.34	3.61	73.10	4.30
02-07-2018 to 08-07-2018	50.87	43.66	0.01	7.22	187.36	0.30
02-07-2017 to 0 8-07-2017	45.13	43.22	0.39	2.30	59.61	5.27

DNH-Deviation Charges

FY 2018-19	Drawl (MUs)	Schedule (MUs)	UI Drawl (MUs)		UI Charges (₹. Lakh)	
			Under Drawl	Over Drawl	Payable	Receivable
Cumulative Total up to Jun-19	**1599.31**	**1548.00**	**3.85**	**55.16**	**1548.84**	**79.16**
09-07-2018 to 15-07-2018	123.53	116.79	0.02	6.76	160.17	0.48
09-07-2017 to 15-07-2017	112.13	113.12	2.08	1.09	21.35	37.97
02-07-2018 to 08-07-2018	122.01	115.81	0.15	6.35	154.20	2.70
02-07-2017 to 0 8-07-2017	110.84	111.83	1.90	0.91	21.23	38.14





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)	-	-	-
Aug	0.19	(24.00)	(2.3)	-	-	-
Sep	0.39	(24.70)	(2.64)	-	-	-
Oct	0.13	(29.42)	(2.79)	-	-	-
Nov	0.22	(22.01)	(2.71)	-	-	-
Dec	0.66	(16.60)	(2.50)	-	-	-
Jan	1.04	(18.20)	(2.63)	-	-	-
Feb	1.33	(12.58)	(2.58)	-	-	-
Mar	0.99	(19.63)	(2.99)	-	-	-
Total	**9.18**	**(227.6)**	**(2.55)**	**1.09**	**(72.29)**	**(2.97)**

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)	-	-	-
Aug	3.50	(14.68)	(2.15)	-	-	-
Sep	2.06	(22.87)	(2.74)	-	-	-
Oct	1.53	(28.73)	(2.67)	-	-	-
Nov	2.23	(17.81)	(2.87)	-	-	-
Dec	1.09	(21.60)	(2.53)	-	-	-
Jan	0.47	(26.01)	(2.45)	-	-	-
Feb	0.28	(22.83)	(2.46)	-	-	-
Mar	1.03	(26.07)	(2.73)	-	-	-
Total	**43.61**	**(215.4)**	**(2.65)**	**3.85**	**(55.16)**	**(2.86)**

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 Jun-2018	-1123.9	-1146.9	37246.9	**34976.1**	0.0	0.3	-5.5	**-5.2**	20664.7	17141.3	**37806.0**	903.9	-172.7	**731.2**
Cumulative Total Charges in (₹) till Jun-18	150825.0	155866.0	-5097918.5	**-4791227.5**	0.0	40.5	-742.5	**-702.0**	-2839420.5	-2357152.0	**-5196572.5**	122026.5	-23314.5	**98712.0**
09-07-2018 to 15-07-2018	-143.0	-156.3	4943.6	**4644.3**	0.0	0.0	0.0	**0.0**	5766.9	2427.6	**8194.5**	0.0	37.8	**37.8**
Charges in (₹)	20020.0	21882.0	-692104.0	**-650202.0**	0.0	0.0	0.0	**0.0**	-807366.0	-339864.0	**-1147230.0**	0.0	5292.0	**5292.0**
16-07-2018 to 22-07-2018	-303.5	46.3	7367.9	**7110.7**	0.0	0.0	-5.5	**-5.5**	8283.7	3549.3	**11833.0**	0.0	0.0	**0.0**
Charges in (₹)	42490.0	-6482.0	-1031506.0	**-995498.0**	0.0	0.0	-770.0	**-770.0**	-1159718.0	-496902.0	**-1656620.0**	0.0	0.0	**0.0**

Note: The REC chargers 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

- Administrative Approval of "Scale Up of Access of Clean Energy Scheme" for the period FY 2018-2019 to 2019-2020.
- Continuation of Off-Grid and Decentralized Solar PV Applications programme in Phase 3 for Financial Years 2018-19 and 2019-20.
- Development of India's First 1.0 GW Offshore wind project off the coast of Gujarat.
- RLMM procedure and inclusion of WTG Manufacturer/ Model in the RLMM list of MNRE (OM dated 07.08.2018).
- Invitation for Expression of Interest (EOI) / Proposals for assessment of Biomass Power and Bagasse Cogeneration Potential in the Country. (Last date is 31.08.2018 up to 16:00 hours).
- Corrigendum - Tender Document for Planning, Design, Development, Supply, Execution and Commissioning of Class 100K Clean Room for Advanced PV characterization laboratory on Turnkey basis at National Institute of Solar Energy, Gurugram, Haryana.
- Programme on Energy from Urban, Industrial and Agricultural Wastes/Residues for 2017-18, 2018-19 & 2019-20 – Reg.
- Akshay Urja magazine for the month of May – June, 2018.
- Notification of "Quality control order of Solar Photo voltaic Systems, Devices and Components Goods" dated 13.07.2018.

MOP

- Draft concept note on Merit Order Operation-Flexibiling in Generation and Scheduling of Thermal Power Stations to reduce the cost of power to the consumer.
- Selection for the post of Director (Civil), SJVNL Ltd. , a Schedule -A CPSE.

CEA

- Load Generation Balance Report 2018-19.
- 1st meeting of National Committee on Transmission.
- Electricity Generation Program for the year 2019-20-reg.
- Formats for Electricity Generation Program for the year 2019-20- reg.
- Minutes of 106th CLPTCC Meeting held at Mahabaleshwar, Maharashtra on 25thMay,2018.

CERC

- Draft Central Electricity Regulatory Commission (Open Access in inter-State Transmission) (Fifth Amendment) Regulations, 2018".
- Clarification regarding Escalation Rates for Domestic Coal as per the directions of Hon'ble High Court of Delhi.
- Discussion Paper on "Re-Designing Real Time Electricity Market in India".
- (Suo-Motu) Order 07/SM/2018 : Pilot Project on 05-Minute Scheduling, Metering, Accounting and Settlement for Thermal/Hydro, and on Hydro as Fast Response Ancillary Services (FRAS).

JERC

- Final JERC MYT (Generation, Transmission and Distribution) Regulations, 2018.

MERC

- Inviting Comments on Application of Maharashtra State Power Generation Company Limited (MSPGCL) for grant of Intra-State Trading Licence within the State of Maharashtra under Section 15 of the Electricity Act, 2003.(Case No. 104 of 2018).

NISE

- Inviting Expression of Interest for Replacement of identified worn out/defective components/sub-systems; debugging and operationalization of softwares and ;Supply of technical manpower having necessary expertise for operation & maintenance and Preventive Maintenance for 1 MW Solar Thermal Power Plant Installed at NISE.
- Corrigendum for Supply, Installation, Commissioning and Maintenance of Data Acquisition Systems for Performance Monitoring of Solar PV Systems at Various locations in India
- Corrigendum of Clean Room Tender for Advanced PV characterization on turnkey basis at NISE.

SECI

- EOI for Empanelment of agency for carrying out Batyhymetric survey and Hydrographic survey for all floating solar PV project executed by SECI .
- Notice Inviting Tender For Gap Assessment Of SECI's Project Management Practices As Per Project Management Maturity Model (PMMM)-Level 3 .
- Tender For 150 MW (AC) Solar PV Power Plant At Various Locations Of Singareni Collieries Company Limited, Telangana .
- Setting up of 2 MW Grid connected Solar Power Project with 01 MWh BESS at KAZA, Himachal Pradesh.

MISCELLANEOUS

- **NTPC asks bidders for additional tariffs for tender floated earlier.**
  - ⇒ State-run NTPC has asked solar power developers prequalified for a 2,000 MW tender it floated earlier this year to submit additional tariffs reflecting the impact of safeguard duty.
- **With 4 years to go, only 6 per cent of solar rooftop capacity target met.**
  - ⇒ Against the target of 40,000 MW of rooftop solar power capacity by 2022, India has installed just about 2,538 MW as of March 2018.
- **SEZ solar units hit by blind spot in safeguard duty.**
- **Govt to bid out 25 GW solar capacities in Ladakh.**
  - ⇒ The government will come out with a single bid for setting up 25 GW of solar capacity in Ladakh, Power Minister R K Singh said, and asserted that renewable energy is a must for sustainable development. He also said that India will achieve the target of having 175 GW of renewable energy before 2022.
- **PM Modi asks officials to ensure solar energy benefits reach farmers.**

Note: Click on Head lines for More Info

- **Luminous Power aims to double revenue from solar products in five years.**
- **India never imposes development projects on any country: V K Singh.**
- **India to comfortably achieve 100 GW solar energy target by 2022: Government.**
  ⇒ India is all set to comfortably achieve 100 GW of solar energy capacity by 2022 and has already installed solar capacity of 23.12 GW till July this year, Parliament was informed
- **Solar cookout aims to woo traditional chefs, cut carbon.**
- **UN environment chief lauds India's efforts to use solar energy, curb plastics.**
- **France approves bids for solar power projects of 720 Megawatt capacity**
- **Gujarat leads India in approved capacity of solar parks**
- **Maharashtra Discom plans Rs. 1.25/unit levy on rooftop solar prosumers.**
- **SECI cancels 2,000 MW wind tender as infra woes keep bidders away.**
- **MNRE seeks exemption from safeguard duty for current solar power projects.**
  ⇒ Solar power developers had voiced their concerns about raising additional capital in a recent meeting with MNRE officials, saying they did not factor in safeguard duty while bidding for projects, officials said .
- **Suzlon eyes 30% of 20,000 MW wind capacity to be installed by FY21.**
- **KSEB aims to generate 500 MW electricity from rooftop solar plants.**
  ⇒ The Kerala State Electricity Board Limited's Soura Roof Top solar power plant project is getting good response from the public. So far, 2065 persons including the owners of residential buildings and commercial buildings have registered with the KSEBL for taking part in the Soura venture.
- **IIT-Roorkee researcher develops heating system using tapped solar energy.**
- **Upgrading power projects may lead to savings of $3 billion: GE.**
- **ISRO receives response from 141 firms for lithium-ion tech.**
- **India's energy deficit down to 1% in four years: NITI Aayog.**
- **PM Narendra Modi reviews household electrification scheme.**
- **Only 1% of China electric car startups to survive, investor says.**
- **PTC India first quarter net profit down 5.9 per cent at Rs 61.44 crore.**
- **Burning Mumbai refinery unit has 72 tons of fuel.**
- **Mahul's 80% villagers face health issues from nearby oil refineries, chemical plants.**
- **Indian Oil buys US crude to part replace Iran cargoes.**
- **Amritsar: CNG set to help reduce pollution level in holy city.**
- **Number of power plants facing coal shortage has come down, says govt.**
- **Britain's Centrica invests in Israeli electric vehicle start-up.**
- **Sans policy, Kerala pushes for waste-to-energy model.**
- **World's first thermal battery plant to be inaugurated by Andhra CM.**
  ⇒ Manufactured by the Bharat Energy Storage Technology Private Limited (BEST), the first-of-its-kind cell is aimed at boosting up renewable sources of energy production, instead of non-renewable fossil fuel-based energy generation.
- **EESL to supply smart electricity meters for 1.8 million consumers in Bihar.**
- **India to have 2.5 per cent peak-time power surplus this financial year: CEA.**
- **India aims to cut oil imports by $1.74 billion by using biofuels: Modi**
- **India-born British billionaire launches renewable plan in Australia**
  ⇒ The plan will include a 120 MW lithium-ion battery bigger than the 100 MW battery built by Elon Musk's Tesla in South Australia in 2017
- **Solar panel equipment maker Meyer Burger feels bite of Chinese subsidies cut.**
  ⇒ The figures confirm Meyer Burger's preliminary results announcement on July 19, but add a renewed restructuring Programme that the company hopes will keep its costs in check.
- **Wind turbine maker Vestas Quarter 2 beats forecast, adjusts 2018 outlook slightly lower.**
  ⇒ Earnings before interest and tax (EBIT) of 259 million euros ($293.52 million) came in above the 204 million expected by analysts in a Reuters poll.
- **Prime Minister Modi promises to give farmers access to global markets, focus on solar.**
- **Adani Green Energy says solar tender for 300 MW projects annulled.**
- **West Bengal to add over 2,000 MW power capacity over five years.**
  ⇒ West Bengal, which has been incorporating the latest technologies to reduce transmission and distribution losses, is expecting to add over 2,000 megawatt (MW) of power in the next five years including 300 MW of solar power.

List of Abbreviations

- **CEA** :Central Electricity Authority
- **CERC** :Central Electricity Regulatory Commission
- **CLPTCC** :Power & Telecommunication Co-ordination Committee
- **CNG** :Compressed Natural Gas
- **CPSE** :Central Public Sector Enterprises
- **DRDO** :Defense Research and Dvelopment Organization
- **EESL** :Energy Efficiency Services Limited
- **EOI** :Expression of Interest
- **GE** :General Electric
- **GERC** :Gujarat Electricity Regulatory Commission
- **GSPC** :Gujarat State Petroleum Corporation
- **GST** :Good & Services Tax
- **IIT** :Indian Institute of Technology
- **ISRO** :Indian Space Research Organization
- **JERC** :Joint Electricity Regulatory Commission
- **KSEBL** :Kerala State Electricity Board Limited
- **MYT** :Multi Year Tariff
- **MERC** :Maharashtra Electricity Regulatory Commission
- **MNRE** :Ministry of New & Renewable energy
- **MOP** :Ministry of Power
- **NISE** :National Institute of Solar Energy
- **NTPC** :National Thermal Power Corporation
- **O & M** :Operation & Maintenance
- **OM** :Office Memorandum
- **PTC** :Power Trading Corporation
- **PV** :Photovoltaic
- **RLMM** :Revised List of Models and Manufacturers
- **SECI** :Solar Energy Corporation of India Limited
- **SJVNL** :Satluj Jal Vidyut Nigam Ltd
- **US** :United State
- **UN** :United Nation
- **UP** :Uttar Pradesh
- **WTG** :Wind Turbine Generator

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

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

♦ Substations

* 765/400 KV Warora PS (PWTLTBCB) (3000 MVA)
* 400/230 KV Pondicherry (Extn) (500 MVA)
* 400/230 KV Tirunelveli GIS ICT No. I (MVA)
* 400/220 KV Gooty (Extn) (500 MVA)
* 400/220 KV Degham (Extn) (500 MVA)
* 400/220 KV Khammam (Extn) (500 MVA)
* 400/220 KV Tirunelveli Pooling station (1000 MVA)
* 400/220 KV Warangal (Extn) (500 MVA)
* 400/220 KV Bhopal (Sukhi Sewaniya) (Addl.) (315 MVA)
* 400/220 KV Kalikiri (630 MVA)
* 220/66 KV Maur (100 MVA)
* 220/33 KV Mandola Vihar (New ICT-I) (60 MVA)
* 220/33 KV Barsaitha Desh ICT No. I (100 MVA)
* 220/132 KV Jalkot (100 MVA)
* 220/132 KV Mund (100 MVA)
* 220/132 KV Betul (Addl.) (160 MVA)
* 220/132 KV Suwasara S/S (160 MVA)
* 220/132 KV Sonapur ICT No. I (100 MVA)
* 132/33 KV Namsai ICT No. I (15 MVA)
* 132/33 KV Namsai ICT No. II (15 MVA)
* 132/33 KV Pavoi (Replacement of 16MVA ICT) (40 MVA)

♦ Transmission Lines

* 765 KV Gadarwara - Warora PS (PWTL-TBCB)
* 765 KV Warora PS - Parli (PPTL-TBCB)
* 765 KV Warora (PS) - New Parli
* 765 KV Warora (PS) - New Parli
* 400 KV LILO of Exiting Neyveli TS-II - Pondycherry at NNTPS Gen. Yard
* 400 KV LILO of 400kV Gajwel - Yeddumallaram
* 400 KV LILO of one ckt. Kosamba - Choraina at Sanand-II GIDC
* 400 KV Banda-Orai
* 400 KV Chorania-Charal (LILO of Chorania-Kosamba-I at Charal)
* 400 KV Kosamba-Charal (LILO of Chorania-Kosamba-I at Charal)
* 400 KV Gajwel-Narsapur
* 400 KV Narsapur-Shankarapally
* 220 KV Barauni TPS Exte. - Hazipur-I
* 220 KV Barauni TPS Exte. - Hazipur-II
* 220 KV Darbhanga (Essel) - Darbhanga (BSPTCL)
* 220 KV Khaperkheda-II -Khaperkheda-I (Reorientation work)
* 220 KV Legship - New Malli
* 220 KV LILO of Both ckt Badod -Kota - Modak at Suwasara
* 220 KV LILO of Kasor - Vartej and Karamsad - Vartej at
* 220 KV LILO of Khara (HPS) - Shamli at Saharanpur (PG)
* 220 KV LILO of Sahibabad - Noida Sec-62 at Indirapuram
* 220 KV LILO of Simbhaoli - Shatabdinagar at Hapur (765)
* 220 KV Madhepura - Laukahi(BSPTCL)
* 220 KV Saharanpur (PG) -Sarsawa
* 220 KV Saharanpur-Sarsawan
* 220 KV LILO of Khara-Shamli at Saharanpur-PG
* 220 KV Rewa-Barsaitha Desh
* 132 KV LILO of Aizawl (PG)-Jiribam (PG) at Tipaimukh
* 132 KV LILO of Sarusajai-Samaguri at Sonapur
* 132 KV CTPS-Sonapur
* 132 KV Sonapur-Narengi
* 132 KV Tezu (PG) -Namsai (PG)

♦ Generators

♦ **Thermal**

* Nil

♦ **Thermal**

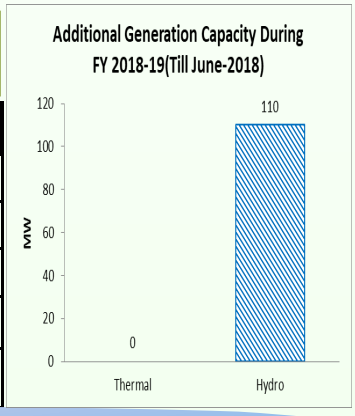
* Nil

♦ **Thermal**

* Nil

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

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
Total	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**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 June-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-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
Total	**0**	**0**	**0**	**8**	**7**	**0**	**0**	**41**	**31**	**0**	**0**	**3**	**0**	**0**	**0**	**33**	**21**	**0**	**0**	**85**	**59**	**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 June-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: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 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.

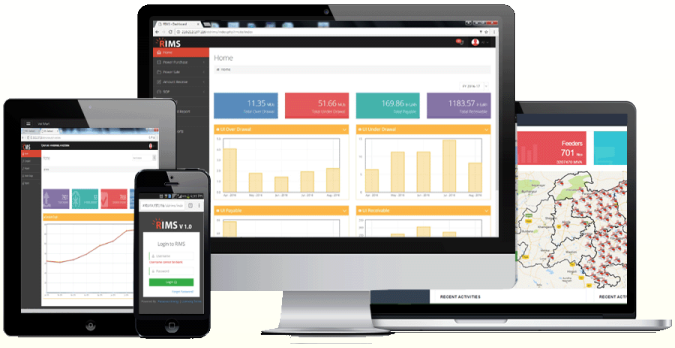
Auto Backup:

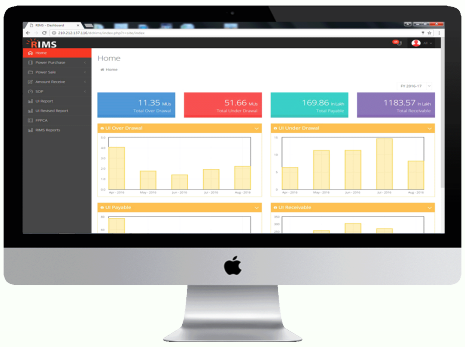
The data of all enterprise applications is of utmost importance. Power UI comes with Auto Backup facility where an authorized person can schedule auto backup of full / partial data of the software. In case of data lost or hardware failure, no or minimal data is lost.

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



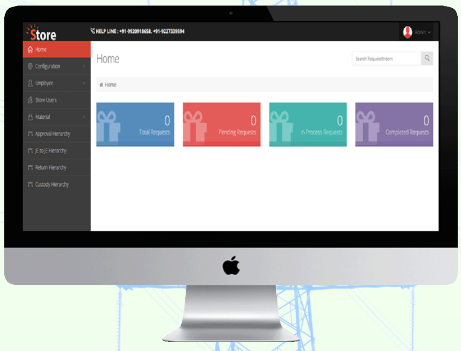


Regulatory Information Management System
RIMS

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.

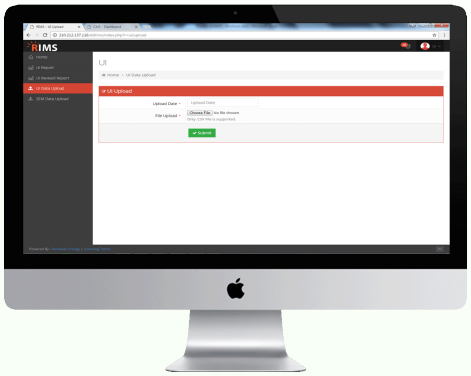


Inventory Management System (Store):

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)

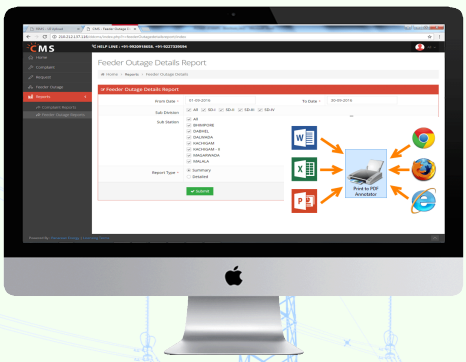
MMS it designed to improve inbuilt maintenance management facilities and hence reduce the failure rates of equipment. With equipment being part of MMS, the concerned person is reminded for inspection and taking corrective actions. The module supports maintenance routines in various categories such as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



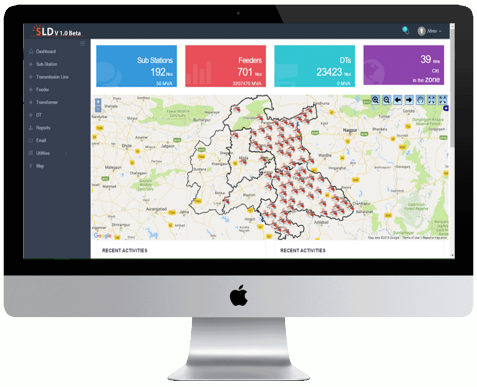
The software shall have a provision to handle huge volumes of data. Features such as import of excel files and import of data from databases shall be provided to facilitate bulk data entry and its corresponding map location display. Given below is a sample bulk data entry feature in POWERUI.

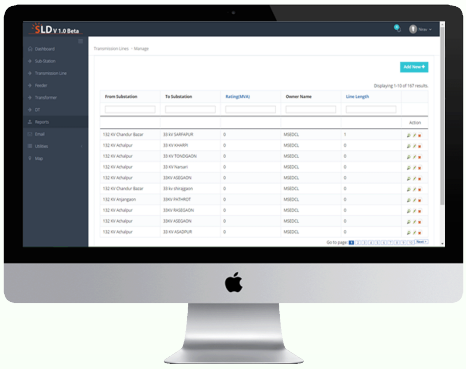
Data / Report Export and Printing Facilities:

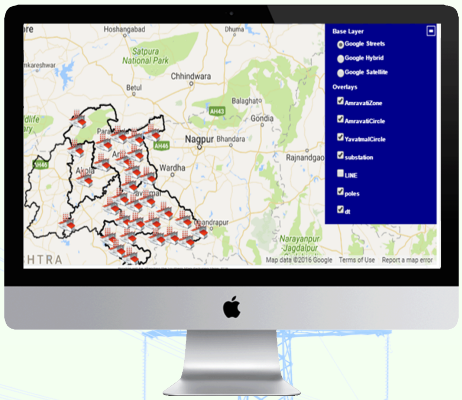


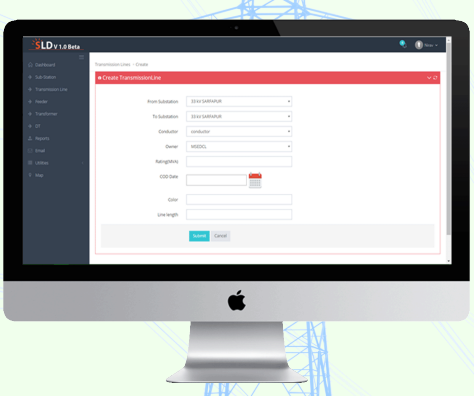
Online Complaint and Feedback Reporting

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

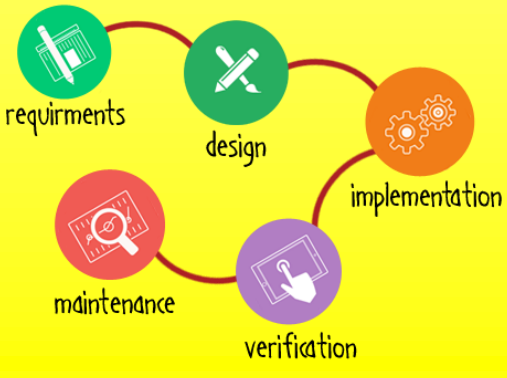
POWERUI MAPS is a map based application where all important assets and infrastructure of a Distribution company and transmission company are displayed on maps using their exact geographic coordinates. Display of all mapped distribution equipment on google maps, along with establishment of comprehensive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

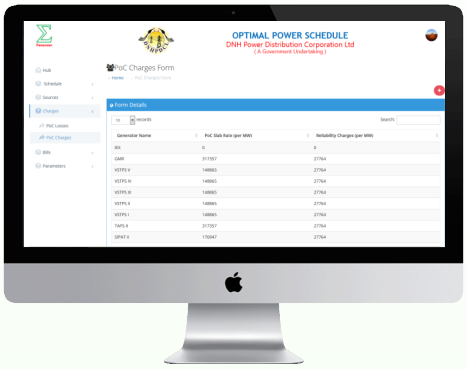
LAYER FACILITY:

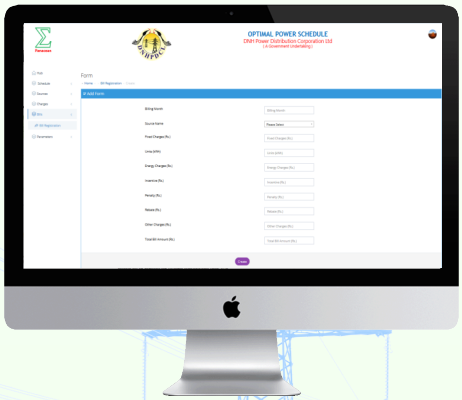
Given a large and a highly dense network as that of MSEDCL, selective viewing of different components of maps is required. The Layer facility enables the user to turn ON/OFF display of certain elements on the map. This feature provides greater clarity of viewing and ease of operation of the software.

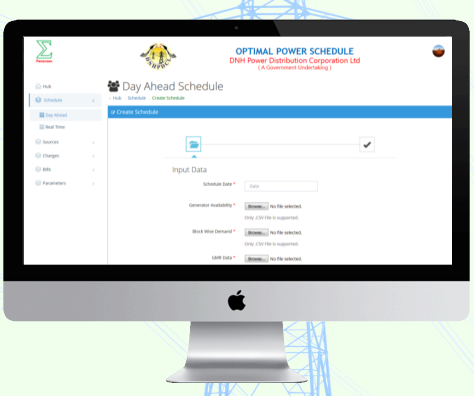
DATABASE – MAP COMMUNICATION:

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.





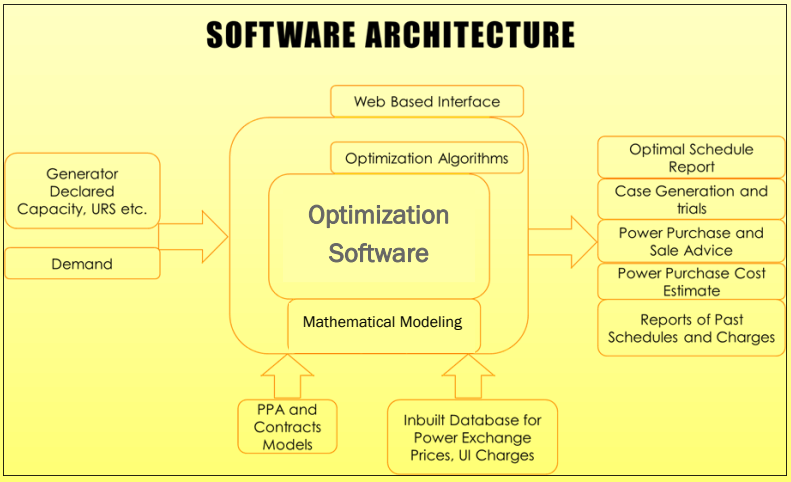




OPTIMAL POWER SCHEDULING SOFTWARE

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.