wbidc

West Bengal
Industrial Development Corporation

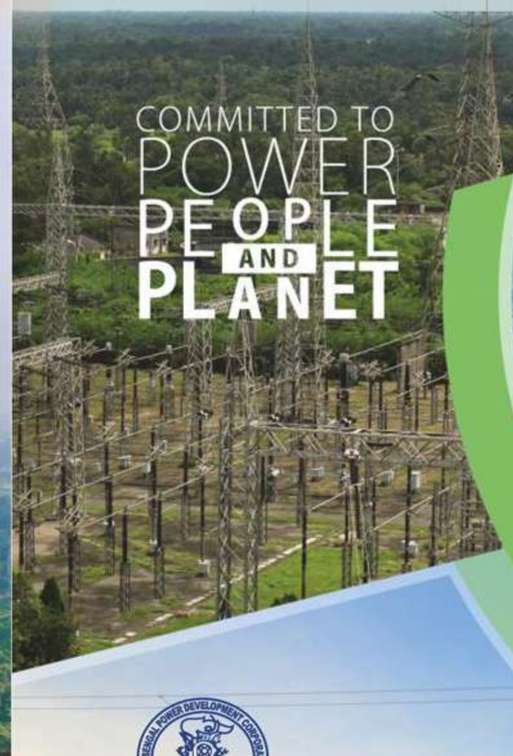
The West Bengal Power Development Corporation Limited
A Government of West Bengal Enterprise

Registered & Corporate Office:
Bidyut Unnayan Bhaban
Block-LA, Plot No. 3/C, Sector-III,
Salt Lake City, Kolkata - 700106

Email: wbpdcl@wbpdcl.co.in
Website: www.wbpdcl.co.in

Phone: (033) 23393200, 23350571
Fax: CMD (033) 23350523, Directors (033) 23393286
Planning Cell (033) 23350516, (IT & MIS, CIVIL) (033) 23350424
HR&A (033) 23393197, F&A (033) 23393186
Corporate Communication (033) 23393506

WBPDCL



wbidc

West Bengal
Industrial Development Corporation

WBPDCL

The West Bengal Power Development Corporation Limited

A Government of West Bengal Enterprise | CIN: U40104WB1985SGC039154

CMD's Message

The West Bengal Power Development Corporation Limited, WBPDCL is a state owned premier thermal power generation company in India and the largest in West Bengal. Since its inception in 1985, the organization has unflinchingly served the State and the Nation.

In the course of its journey, the organization has not only achieved many milestones, but also faced challenges of time and met them by remaining true to its mission and vision.

Fully aware of its commitment and responsibilities towards global issues like climate change, WBPDCL have continuously upgraded the technology and knowledge base of its human resources to rise up to the situation.

WBPDCL is managing its own Coal Mines and also diversified into Solar Power generation units – rooftop, ground mounted as well as floating.

With a pool of best performing plants, WBPDCL plants proved its mantle by clocking 1st position by Bakreswar TPS, 2nd by Santaldih TPS and 5th by Sagardighi TPS in the CEA PLF based ranking of thermal power plants in FY22-23. As an organization, WBPDCL placed itself in the top slot as one of the best performing power generation PSU.

With a committed and competent workforce, and a robust strategy, WBPDCL is marching ahead towards sustainable development with focus on growth, social inclusion and environmental protection.

Dr. P.B. Salim, IAS
Chairman and Managing Director

WBPDCL

The West Bengal Power Development Corporation Limited

(A Government of West Bengal Enterprise)

The West Bengal Power Development Corporation Limited (WBPDCL) is a state-owned premier thermal power generation company and has a current installed capacity of 4265 MW in its power plants located at Sagardighi, Bakreswar, Kolaghat, Bandel and Santaldih.

Incorporated in 1985, WBPDCL has reached a leadership position through excellence, agility and dedication. Owner of 7 captive coal mines and catering to about 60% of the total electricity requirement of West Bengal, the company has led the state onto the path of light.

A Green Initiative - 40 kW Grid Connected Solar PV Rooftop Plant on the Corporate Office of WBPDCL

Sagardighi
Thermal Power Project

1600 MW (2 x 300 MW + 2 x 500 MW)

- 3.511 MWp rooftop solar power plant
- 10 MW ground mounted solar power plant
- 5 MW floating solar power plant
- Order for 10 MW + 5 MW + 5 MW floating solar power plant has been placed

660 MW super critical unit BTG package of Sagardighi unit no. 5 is awarded to M/s. BHEL on EPC basis. Job in progress. Commissioning in January 2024.

Natural Draught Cooling Tower (NDCT) package is awarded to Paharpur Cooling Towers Limited on EPC basis.

The unit has salient features like Spiral wall evaporator, Two Axial ID Fans, Two double flow LP turbine, Concrete volute CW pump.

The project is conceived with Twin Wagon Tippler, Wet limestone based FGD, Selective catalytic reduction system, RO plant for zero discharge.

The Sagardighi Thermal Power Project or SgTPP is the newest and the largest power generating project of West Bengal.

Starting its operation in 2008, the Sagardighi Thermal Power Project is located in the district of Murshidabad. The Sagardighi Thermal Power Project is spread across 1766 acres of land. The river Bhagirathi, which is situated approximately 4.5 kilometers away acts as the source of water for the power project.

Since starting operations, the power project has made significant contributions in meeting the power demand of the state. It began production in Phase I with two 300 MW units in 2008. Unit 3 of Sagardighi Thermal Power Project with an installed capacity of 500 MW was inaugurated by the Honourable Chief Minister of West Bengal, Mamata Banerjee on December 16, 2015. Another 500 MW unit, i.e. Unit 4 has been inaugurated on April 12, 2017, by the Honourable Chief Minister of West Bengal, Mamata Banerjee. The current total installed capacity of Sagardighi Thermal Power Project is 1600 MW.

Best Performance

- The plant has produced 12530.5 MU in FY 2022-23, which is highest ever yearly generation
- Plant has achieved ever lowest yearly specific oil consumption of 0.17 ml/KWH in FY 2022-23

Achievements

- Sagardighi TPP ranked 5th in all India PLF based ranking for financial year 2022-23 with PLF 89.29%
- Both stages of the station recovered full fixed cost with availability of 88.64% in FY 2022-23

Power Generation (MU)

2022-23	2021-22	2020-21	2019-20	2018-19
12530.5	11885.639	9595.231	6695.285	6050.919

Bakreswar
Thermal Power Station

1050 MW (5 x 210 MW)

- 2.866 MWp rooftop solar power plant
- Mega Floating solar plant have been planned over Bakreswar Dam. Approval received from Department of Economic Affairs, GOI for DPR and feasibility study.
- Order Placed for 10 MW Floating Solar Plant.

Established in 1999, the Bakreswar Thermal Power Station or BkTPS is one of the most reliable and prestigious thermal power plants of West Bengal. Located in Birbhum district, the Bakreswar Thermal Power Station is 220 km away from Kolkata.

In the first phase, 3 X 210 MW Units were commissioned during 1999-2001. In the second phase 2 X 210 MW Units were commissioned during 2007–2010.

Best Performance

- Bakreswar achieved lowest ever yearly APC of 8.47% in FY 2022-23
- BKTPP achieved its ever lowest SOC of 0.18ml/KWH in FY 2022-23

Achievements

- Achieved 1st position in all India PLF based merit ranking with PLF 92.38% in FY 2022-23

Power Generation (MU)

2022-23	2021-22	2020-21	2019-20	2018-19
8497.16	8313.728	7896.532	6996.73	7182.224

Kolaghat
Thermal Power Station

840 MW (4 x 210 MW)

- 2.27 MWp rooftop solar power plant

One of the oldest and one of the most reliable workhorses of the power generation infrastructure of the state, the Kolaghat Thermal Power Station or KTPS has served and propelled the growth of West Bengal for many decades.

Situated on the banks of river Rupnarayan in Purba Medinipur district, the Kolaghat Thermal Power Station started its operations in the first phase between 1984 and 1990 with three units. In the next phase, another three Units were commissioned between 1991 and 1993. Presently KTPS unit-1 and unit-2 have been decommissioned and the present plant capacity is 840 MW (4 x 210 MW).

Best Performance

- Best achieved Specific oil consumption(SOC) 0.09 ml/kwh in September 2020
- Achieved 0.86 SOC & PLF 67.55% after 10 yrs in FY 2022-23
- Highest generation of 864 MW on 28/10/2022 (during festive season)

Power Generation (MU)

2022-23	2021-22	2020-21	2019-20	2018-19
4970.48	4271.374	1769.357	2866.86	4422.867

Bandel
Thermal Power Station

275 MW (1 x 60 MW + 1 x 215 MW)

- 1.08 MWp rooftop solar power plant

The journey of the Bandel Thermal Power Station or BTPS is an inspiring saga of committed service, a motivating story of overcoming challenges and obstacles with grit and determination and a dramatic revival.

Established over five decades ago in 1965, with an initial capacity of just 60 MW, the Bandel Thermal Power Station has traversed a long and eventful journey. Located on the western bank of the river Hooghly, the Bandel Thermal Power Station is a reliable warhorse that has served and is still serving the state of Bengal with distinction and dedication and remains a prominent player in the state's power supply chain.

The fifth unit of BTPS installed in the year 1982 with 210 megawatts capacity had the distinction of being the first of its kind in eastern India and only the fifth in the whole country.

Present plant capacity is 275 MW (1X 60 MW + 1 X 215 MW).

BTPS crossed glorious 60 years (Diamond Jubilee) since its journey from 28/04/1962.

Best Performance

- Bandel TPS achieved PLF 77.01% & SOC 0.88ml/KWH in FY 2022-23

Power Generation (MU)

2022-23	2021-22	2020-21	2019-20	2018-19
1855.19	1730.017	1170.711	861.13	1315.36

Santaldih
Thermal Power Station

500 MW (2 x 250 MW)

- 0.807 MWp rooftop solar power
- Order placed for 7.5 MW floating and 20 MW ground mounted solar power plants

Located on the banks of river Damodar in the district of Purulia, the Santaldih Thermal Power Station started its operations in the year 1974.

For more than four decades, the Santaldih Thermal Power Station has been steadily meeting the power needs of the state and has made significant contribution to its growth story.

With Unit 5 and 6 of 250 MW (each), the present capacity of the station is 500 MW.

Best Performance

- Santaldih TPP achieved its best ever yearly PLF 91.36% and lowest APC of 8.04% in FY 2022-23

Achievements

- Santaldih TPP has ranked 2nd as per CEA merit order based on Plant Load Factor in FY 2022-23
- Santaldih TPP has no demurrage on account of coal unloading since November 2020 till 31st March 2023

Power Generation (MU)

2022-23	2021-22	2020-21	2019-20	2018-19
4001.76	3904.05	3442.358	3694.32	3552.62

Barjore Coal Mine

Coal Mines

The West Bengal Power Development Corporation Limited (WBPDCL) has been allotted Seven (7) No. of Coal Blocks by Ministry of Coal, Government of India, for supplying coal to its Thermal Power Plants. These are :

1. Pachhwara (North)
2. Barjora (North)
3. Barjora
4. Gangaramchak & Gangaramchak - Bhadulia
5. Tara (East) & Tara (West)
6. Deocha-Pachami-Dewanganj-Harinsingha

Geological report of Deocha-Pachami-Dewanganj-Harinsingha Coal Block has been forwarded by CMPDIL to WBPDCL.

The details of coal production schedule and achievement in respect of production and despatch has been given below.

Production Schedule as per approved Mining Plan (MMT):

FINANCIAL YEAR	PACHHWARA (NORTH)	BARJORA (NORTH)	BARJORA	GANGARAMCHAK & GANGARAMCHAK - BHADULIA	TARA (EAST) & TARA (WEST)	TOTAL PRODUCTION
2022-23	15	3	Reserve will be exhausted	1	2	21
2023-24	15	3		1	2	21*
2024-25	15	3		1	4	23

*without TARA, coal production will be 19 MMT

- In FY 2022-23, WBPDCL recorded 5.81% generation growth compared with previous FY 2021-22 with increase of 74% coal receipt from its captive mines.
- In FY 2022-23, Pachwara (North) mine achieved the peak rated capacity of 15 MMT per annum
- Gangaramchak mine has produced 1.2 MMT against the peak rated capacity of 1 MMT
- WBPDCL has established a state of the art Group Vocational Training Centre at Rupnarayanpur, Paschim Burdwan for imparting training to the employees.

Deocha-Pachami-Dewanganj-Harinsingha (DPDH) Coal Block

Deocha-Pachami-Dewanganj-Harinsingha (DPDH) Coal Block is a greenfield mining project and is a regionally explored block.

Coal supply from Deocha-Pachami-Dewanganj-Harinsingha coal block will make WBPDCL self reliant in the field of fuel supply liberating it from its dependence on external agencies. This will be a paradigm shift and usher in a new era for WBPDCL.

Deocha-Pachami-Dewanganj-Harinsingha (DPDH) coal block has been allocated to WBPDCL under CBA rule 2017 and MMDR Act 1957 vide allotment order No. F. No. CBA 1 – 38011/2/2017-CBA 1 (FTS: 334295) dated December 17, 2019 of the Ministry of Coal, Government of India.

Solar

WBPDCL present Solar capacity 25.58 MW

Further capacity addition awaited

Sagardighi

- Order for 10 MW + 5 MW + 5 MW floating solar power plant has been placed.

Bakreswar

- Order Placed for 10 MW Floating Solar Plant.

Santaldih

- Order placed for 7.5 MW floating and 20 MW ground mounted solar power plants

आलोश्री

As per the green and eco-friendly initiatives undertaken by WBPDCL, rooftops, floating and ground mounted solar power generation panels have been installed.

Simulator at Bakreswar

The Power Plant Simulator unit at Bakreswar Thermal Power Station provides hands on experience on Power Plant Operation & Maintenance activities for different levels of professionals and trainees.

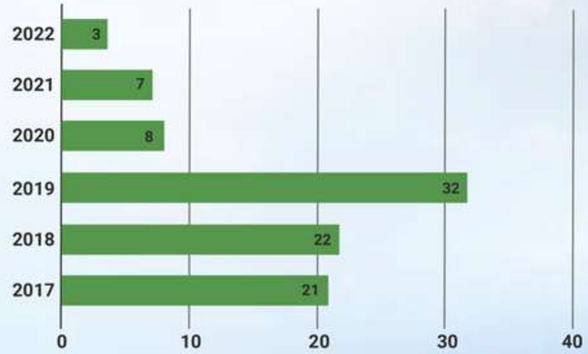
The system was supplied by the GSE Power System Inc., USA, and installed in 2002. It is a full size replica of a 210 MW power plant control room.

It is a prime institute of the state which caters to the prime power organizations such as ERPC, ERLDC, NSPCL, NLCIL, Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited etc.

New simulator for 500MW is being installed by M/s. Emerson, with a provision for addition for 660 MW.

Safety Performance

Status of Total Reported Accident
2017, 2018, 2019, 2020, 2021, 2022



Plants running accident free (number of days) upto 31-10-2023;
STPS - 309, KTPS - 61 BKTPP - 468, SGTPP - 128, BTPS - 698

Our Goal:

ZERO Incident And Zero Injury

- All the power stations of WBPDCL have achieved & maintained IS/ISO 45001:2018 certification for Safety Management.
- Continuous improvement in safety performance is being verified through internal audit and external audits.
- Safety Manual, Safety Hand Book, Construction Safety Manual etc. released for users for development of awareness and compliance.
- KPI (Key Performance Indicator) based Safety Performance Evaluation process introduced in 2017.
- Safety Compliance requirement being monitored on regular basis.

Environment

Environment Performance at WBPDCL Plants

- Stack Emission maintained within limit
- Ash utilization of the last 5 years has improved
- Effluent data maintained on a real time basis and kept within limit
- Specific water consumption maintained within a specified limit of 3.50 m3/MWH

Major initiative on Environment Management

- All WBPDCL plant has been certified with ISO:14001:2015.
- To minimize specific water consumption:
  i. Ash water recovery system has been provided in most of all plants.
  ii. Effluent Treatment Plants (ETP) have already been installed at Kolaghat Thermal Power Station, Santaldih Thermal Power Station & Sagardighi Thermal Power Project Phase-II, BTPS and Bakreswar are in progress.
- Fly ash brick manufacturing machines have been installed at Sagardighi Thermal Power Project.
- Zero Liquid Discharge (ZLD) has been installed at Sagardighi Thermal Power Project, completion in STPS within February 2024.
- ASH park has been setup at all Power Projects.
- Rainwater harvesting implemented in all five plants.

Stack Emission

WBPDCL - Bakreswar Thermal Power Station Emission Data (mg/Nm³)

Limits:- U#1, U#2 & U#3: PM=100mg/Nm³, SO_x=600mg/Nm³; NO_x=600mg/Nm³
U#4, U#5: PM=50mg/Nm³, SO_x=600mg/Nm³; NO_x=450mg/Nm³

WBPDCL - Bandel Thermal Power Station Emission Data (mg/Nm³)

Limits:- All units: PM=100mg/Nm³, SO_x=600mg/Nm³; NO_x=600mg/Nm³

WBPDCL - Kolaghat Thermal Power Station Emission Data (mg/Nm³)

Limits:- All units: PM=100mg/Nm³, SO_x=600mg/Nm³; NO_x=600mg/Nm³

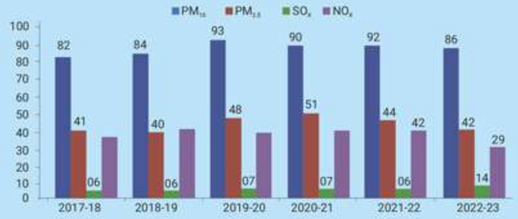
WBPDCL - Sagardighi Thermal Power Project Emission Data (mg/Nm³)

Limits:- U#1, U#2: PM=50mg/Nm³, SO_x=600mg/Nm³; NO_x=450mg/Nm³
U#3, U#4: PM=50mg/Nm³, SO_x=200mg/Nm³; NO_x=450mg/Nm³

WBPDCL - Santaldih Thermal Power Station Emission Data (mg/Nm³)

Limits:- U#5 & U#6: PM=50mg/Nm³, SO_x=600mg/Nm³; NO_x=450mg/Nm³

WBPDCL - Bakreswar Thermal Power Station
Ambient Air Data (µg/m³)

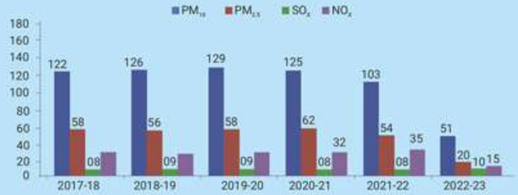


Limits:- PM_{10}=100µg/m³; $PM_{2.5}$=60µg/m³; SO_2=80µg/m³; NO_2=80µg/m³

WBPDCL- Bandel Thermal Power Station
Ambient Air Data (µg/m³)

Limits:- PM_{10}=100µg/m³; $PM_{2.5}$=60µg/m³; SO_2=80µg/m³; NO_2=80µg/m³

WBPDCL - Kolaghat Thermal Power Station
Ambient Air Data (µg/m³)



Limits:- PM_{10}=100µg/m³; $PM_{2.5}$=60µg/m³; SO_2=80µg/m³; NO_2=80µg/m³

WBPDCL - Santaldih Thermal Power Station
Ambient Air Data (µg/m³)

Limits:- PM_{10}=100µg/m³; $PM_{2.5}$=60µg/m³; SO_2=80µg/m³; NO_2=80µg/m³

WBPDCL - Sagardighi Thermal Power Project
Ambient Air Data (µg/m³)

Limits:- PM_{10}=100µg/m³; $PM_{2.5}$=60µg/m³; SO_2=80µg/m³; NO_2=80µg/m³

Corporate Social Responsibility

The joy of bringing smiles to the faces of those who are deprived is unparalleled...the happiness of extending a helping hand to the needy is unmatched... the satisfaction of giving back to to society is unequalled...

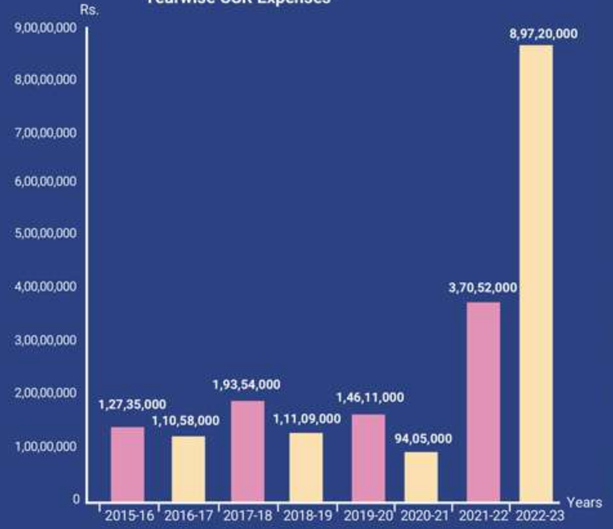
At WBPDCL, we are committed towards bringing about societal changes by contributing towards the upliftment of people. As a socially conscious organization and as a responsible corporate citizen, WBPDCL has been at the very forefront of taking up Corporate Social Responsibility (CSR) initiatives across the state.

We are determined to ensure sustainable and balanced socio-economic development based on unique features of participative ownership involving every stakeholder.

Since the framing of the CSR Policy in 2016, WBPDCL has taken up numerous CSR activities in a vast range of fields that includes income generation, water and electricity, sanitation, health and hygiene, communication, infrastructure etc. and has been covering project beneficiaries at Bandel, Kolaghat, Santaldih, Bakreswar and Sagardighi where the Power Stations are located and also at the Coal Mines.

The primary goal is to improve the socio–economic status of the people by following a holistic approach and providing them with sustainable development solutions. Our focus has always been and will remain to carry out community development activities in a transparent and participative manner aimed at benefiting people and the society at large.

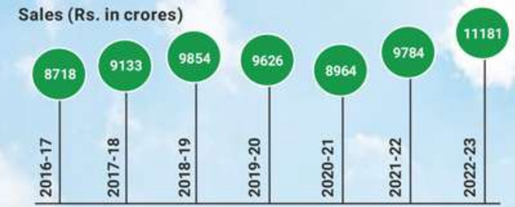
Yearwise CSR Expenses

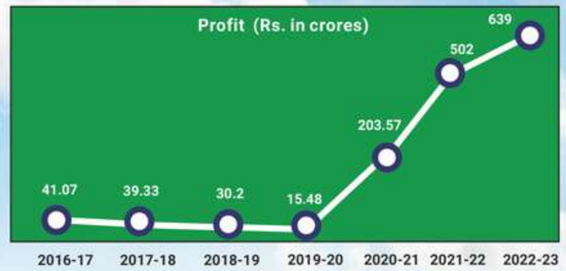


Achievements

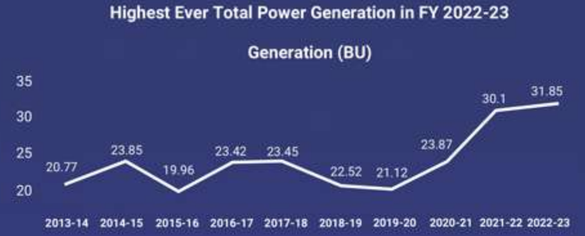
- WBPDCL achieved its best ever yearly generation 31853 MU in FY 2022-23 increased 33% over last two FY.
- WBPDCL recorded the highest ever peak generation in its history 4450 MW on 20.10.2023 against capacity 4265 MW (during festive season)
- Achieved lowest ever yearly APC 8.44% in FY 2022-23
- Achieved best ever yearly specific oil consumption 0.33 ml/kwh in FY 2022-23
- WBPDCL achieved its best ever yearly PLF 85.26% against All India Coal Based Thermal Utilties PLF 64.2% in FY 2022-23
- In FY 2022-23, 18.7 MMT captive coal production by enhancement of 64% growth over FY 2022-23
- NABL accredited Chemical Laboratory, C&I Laboratory and testing Laboratory have been established in different projects.

Financial Growth





Generation Growth



Coal Consumption (MMT)

	2018-19	2019-20	2020-21	2021-22	2022-23
KTPS	3.88	2.59	1.3	3.2	4.05
BKTPS	4.16	4.27	4.5	4.86	4.92
BTPS	1.11	0.73	0.76	1.31	1.41
STPS	2.49	2.38	2.25	2.61	2.85
SGTPP	3.61	4.29	5.92	7.16	7.77
WBPDCL	15.25	14.26	14.73	19.14	21

Awards

- PRCI Excellence Awards 2020
- SKOCH AWARD OF MERIT Corporate Excellence GOLD award for Solar PV Projects in Thermal Power Plant
- Solar Roof Series Excellence Award for "Outstanding contribution in promoting Solar Rooftop Sector in the State"- awarded by SOLAR QUARTER, a leading Indian solar magazine

Chief Minister's 'Excellence In Public Service' Medal and Certificate for the year 2023 awarded to Dr. P. B. Salim, IAS, in recognition of outstanding contribution and exemplary dedication to Public Service rendered to the State of West Bengal.

The West Bengal Power Development Corporation Limited (WBPDCL) has won the prestigious Mobile App Utilities Award for Gentrack [Generation & Rake Tracking] in 2022, an in-house developed mobile app for Generation and Rake Tracking by IT Department, WBPDCL.

WBPDCL has been awarded 'Excellence in Employee Engagement' under the prestigious Chanakya series of National Awards 2023 by Public Relations Council of India (PRCI).

WBPDCL wins Public Relations Council of India (PRCI) Excellence Awards for Corporate Collaterals in multiple categories at the 17 th PRCI Global Communication Conclave 2023.

The West Bengal Power Development Corporation Limited (WBPDCL) won the Corporate Governance Award at the Business Excellence Awards organized by The Associated Chambers of Commerce and Industry of India (ASSOCHAM), on occasion of the Manufacturing and MSME Conclave 2022.

Gallery

Hon'ble Chief Minister of West Bengal, Mamata Banerjee, visited the pavilion of Department of Power at Pragati Utsav 2012

Hon'ble Chief Minister of West Bengal, Mamata Banerjee, inaugurated the 500 MW Unit - 3 of Sagardighi Thermal Power Project

Sri Aroop Biswas, Hon'ble Minister-in-charge, Power, Housing, Youth Services and Sports Department, Govt. of West Bengal observing the generation and other parameters at the control room of Kolaghat Thermal Power Station on 19th May, 2022.

Sri Aroop Biswas, Hon'ble Minister-in-Charge, Power, Housing, Youth Services and Sports Department, Govt. of West Bengal and Janab Akhruzzaman, Hon'ble Minister of State, Power Department, Govt. of West Bengal in a meeting with WBPDCL authorities on 1st June, 2021.

Inauguration of 'Job Oriented Free Skill Development Programme for the unemployed youth from in and around Thermal Power Stations of WBPDCL' (A CSR Initiative of WBPDCL) & 'Ash Water Recircultaion & Recovery System with Lagoon at Sagardighi Thermal Power Project of WBPDCL' by Sri Aroop Biswas, Hon'ble Minister-in-Charge, Dept. of Power, Housing, Youth Services & Sports, GoWB, in presence of Dr.P.B.Salim, IAS, Chairman & Managing Director, WBPDCL.