

URJASVINI

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A quarterly magazine of Bihar State Power (Holding) Company Limited

हमारा आधार, ऊर्जासहित बिहार



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URJASVINI

EDITORIAL



In the trajectory of development, technology and electricity work hand in hand, creating a harmonious tune that reflects in every facet of our lives. The latest issue of 'Urjasvini' delves into the relationship between these two pillars, unravelling the complexities behind them.

As our lives become more intertwined with technology, so does our dependence on the electricity that powers it all. The issue unveils the nuts and bolts of this symbiotic connection, showcasing how electricity is not just a utility but an expression of technological prowess.

Our team of engineers have penned the articles to decode the advancements that have shaped the power sector.

The narrative takes a positive turn as we showcase Bihar SLDC's pioneering efforts in adopting new technology. The establishment of a state-of-the-art cyber security operation centre and the integration of 4100+ ABT meters exemplify a commitment to efficiency and security. Through automation and institutional capacity building, Bihar SLDC is not just embracing technology but empowering its workforce, ultimately improving the quality of services rendered.

The issue also explores Bihar's strides in Renewable Energy and the installation of Smart Prepaid Meters, underlining Bihar's dedication to a sustainable future. We unravel the technological intricacies of Gas Insulated Stations, monopoles, and the use of optical fibress for electricity supply, illustrating how innovation is shaping the infrastructure of power distribution.

However, with great innovation comes great responsibilities. The confluence of electricity and technology also exposes us to the shadows of the digital realm – cyberattacks. In the power sector, these attacks are not mere disruptions; they pose a threat to the very core of our power supply system. The issue sheds light on the malicious intents behind cyber intrusion attempts and the potential consequences, emphasizing the need for robust cybersecurity measures. It explores the tactics and techniques used in cyber-attacks, highlighting the importance of bridging the gap between IT and OT systems to fortify our defences.

In a world where technology can sometimes seem overwhelming, 'Urjasvini' strives to present these technological wonders in a captivating manner. The articles are crafted to attract even those who find technology mundane, providing an engaging perspective on the implications and advancements that have seamlessly made an essential part of our lives.

As we navigate this electrified technological landscape, 'Urjasvini' invites you to join us in celebrating the fascinating journey of progress. Together, let us embrace the synergy of electricity and technology, propelling us towards a future where innovation lights up not only our homes but also the path to a brighter tomorrow.

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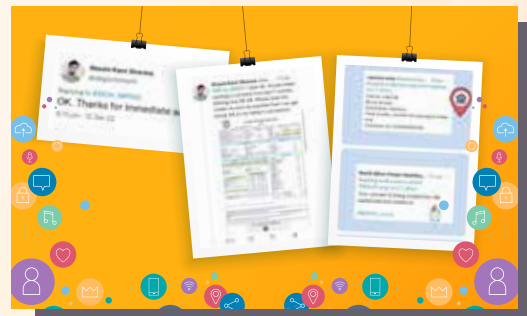
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BID ADIEU



Bihar gets SLDC Excellence Awards



NPSC (National Power Systems Conference) instituted the LDC (Load Despatch Centre) excellence award in 2020, and the selection criteria and sustainability model of the award were adopted as per the recommendation of the sub-committee consisting of Sh. S. K. Soonee (Chairperson), Prof. A K Pradhan, Prof. K. Shanti Swarup, and Dr. Sanjay Shri Krishna Kulkarni. The “LDC Excellence Award” is instituted to recognize the exceptional work done by the Load Despatch Centres (LDCs) in the Indian power sector.

This award aims to inculcate the habit of excellence in all spheres of the functioning of the LDC and to improve the governance process. This award will recognize the critical role played by LDCs in the entire electricity value chain and aims to inculcate a spirit of healthy competition among LDCs. LDC Excellence Award has been categorized into four categories depending on their peak demand-met, energy consumed and Renewable Energy installed capacity.

1. Regional Load Despatch Centres (RLDCs)
2. Large State Load Despatch Centres (Large SLDCs)
3. Medium State Load Despatch Centres (Medium SLDCs)
4. Emerging State Load Despatch Centres (Emerging SLDCs)



Bihar SLDC comes under Medium SLDCs with Delhi, Chhattisgarh, Odisha, Kerala, DVC, Jammu & Kashmir/ Ladakh, Uttrakhand, Himachal Pradesh, Assam & Jharkhand.

Bihar State Load Despatch Centre (BSLDC) has clinched the prestigious '3rd LDC Excellence Award 2023' in Medium category.

Bihar SLDC has adopted new technology and automated several process. It is amongst the first SLDC to establish a state of the art, next generation cyber security operation centre.

Bihar SLDC has deployed 4100+ ABT meters integrated with SAMAST system, providing highly accurate reports, effortless meter data analysis and significant reduction in reporting time of meter data. SLDC automated system balancing mechanism is a software based centralized solution for DSM minimization.

Bihar SLDC is focused on institutional capacity building through regular training, field visits and knowledge sharing sessions etc for its officials. These activities have improved quality of services rendered by the SLDC to its stakeholders.



Together for a Greener Future...



In the constantly evolving and expanding sector of renewable and green energy; expert-led training is very valuable to ensure the organizations to access new opportunities, attract & develop talented personnel and position themselves at the forefront of the sector.

An in-house workshop was organized on Renewable Energy by BSPGCL and BREDa on 12.01.2024 in the premises of Vidyut Bhawan which was attended by officers of Bihar State Power Generation Company Limited (BSPGCL), Bihar Renewable Energy Development Agency (BREDa), Bihar Hydroelectric Power Corporation (BHPC), Power Management Cell (PMC), BSPHCL and Bihar Discoms. In the workshop for the first time all the Govt. organizations of Bihar involved in Power Generation and Distribution of Power in Bihar assembled together and exchanged their ideas and experiences on Green energy.

There are numerous advantages of participating in a workshop as it provides a platform to be interactive and collaborative, which can help to foster a sense of community and encourage participants to learn from one another. These types of environment leads to increased confidence, as individuals are given the chance to practice and improve their skills and there is exchange of knowledge in a supportive setting.

In the workshop a variety of topics including RPO Trajectory, Solar, Hydro and Biomass Energy were discussed in detail with presentation on each topic. Power Management cell gave presentation on Renewable Power Obligations of Bihar Discoms and explained way forward on how Bihar Discoms endeavor to fulfill RPO Obligation in accordance with the finalized RPO trajectory as notified by Ministry of Power.

BSPGCL gave overview on various solar projects that are being taken up by Generation company in Bihar. One of its projects (Ground Mounted Solar Project) which is largest in terms of storage capacity and is first of its kind is to be installed in Kajra, Lakhisarai. BSPGCL is also involved in the installation of Solar Power Projects near canal bank and floating solar power plant at Phulwaria Dam.









Presentation by BSPGCL



Presentation by BREDA

BHPC which is a Nodal Agency for promoting and developing hydro power in Bihar gave overview on the projects which are to be installed in future as well as about the projects which are in Operation. BHPC is also exploring new opportunities in solar sector in Bihar and is planning to install solar plants on vacant land and rooftop of Power houses.

BREDA which is State Nodal Agency (SNA) of MNRE, Govt. of India deliberated in the workshop on the projects that are carried out by them. BREDA is undertaking rooftop solar projects under 'Jal Jeevan Hariyali Abhiyaan', installation of floating solar power plant under 'Niche Macchli Upar Bijli' scheme, installation of solar pumps under 'Saur Kranti Sinchai Yojana', installation of Solar Street Light under 'Mukhyamantri Grameen Solar Street light Yojana' as well as undertaking installation of Ground Mounted Solar Power Projects.

In the workshop an expert of Biomass sector from Decentralised Energy Systems Pvt. Ltd. gave orientation about biomass generation and its potential in Bihar. Biomass is fuel that is developed from organic materials, a renewable and sustainable source of energy used to create electricity or other forms of power. It provides a sustainable and affordable alternative to fossil fuel based power plants at low power levels. Biomass projects are not only eco-friendly projects as it is CO₂ neutral but also Biomass production and conversion activities stimulate local economics by providing employment opportunities and product and market opportunities for agribusiness. There are tremendous economic, social and environmental benefits associated with biomass which make it an attractive renewable energy option. Government sources indicate that Bihar possesses a renewable energy (RE) potential of over 12.559 GW. This potential includes solar energy (11.2 GW), biomass gasifier/ co-generation (619 MW), bagasse co-generation (300 MW), wind power (144 MW), and waste-to-energy (73 MW).

Promotion of Bioenergy in Bihar can create multiple benefits by promising a pathway towards sustainable development and by economic development of villages by creating employment opportunities in the state.



Presentation by BHPC



Presentation by PMC



Empowering the future

“The Intricate connect of Electricity and Technology”

GAS INSULATED SWITCHGEAR/ SUB-STATION

As the population in cities increases and space and electrical requirements become a critical factor, devices such as the Gas Insulated Switchgear (GIS) becomes the best option due to their size and functionality features. This device is opposed to the Air Insulated Switchgear (AIS), since it is much more compact, safe and easy to maintain, so it is especially effective when an electrical substation is required in a small space.

A Gas-Insulated Switchgear is a composite device encapsulated in a solid metal frame that houses different electrical devices such as circuit breakers, busbars, transformers, earth switches, surge arrestors, etc. All these devices are immersed in Sulphur Hexafluoride Gas (SF_6) inside shielded compartments that are bordered by barrier devices. The main function of a GIS substation is to switch, separate, transform, measure and distribute electrical energy in power systems. The main feature of a GIS device is the use of SF_6 , an inert gas with exceptional insulation properties, and chemical and thermal stability. By comparison, a GIS unit only requires centimeters for effective insulation, while an Air-Insulated Switchgear unit would need meters to perform the same function.

All these features make GIS a much more reliable device with less space and maintenance requirements than AIS. These devices have been used with great success since the late 1960s and early 1970s.

Switchgear using SF_6 protects electrical power supply and distribution by interrupting the flow of current in an electrical circuit when necessary. Under normal conditions, the breaker contacts are closed, but when a failure occurs in the electrical system, these contacts separate and an arc occurs between them. The displacement of the mobile contacts is synchronized with that of a valve that allows the entry of high-pressure SF_6 into the chamber where the arc is occurring. The properties of SF_6 allow the absorption of free electrons in the path of the arc, forming ions that do not carry electrical charge — because they become too heavy. The dielectric strength of the gas increases notably, so the arc is extinguished.

Due to its ability to rapidly recombine, as the arc is extinguished, the pressure of the SF_6 also decreases, so it is stored in a low-pressure tank and then in a high-pressure tank ready for reuse. Due to these properties, SF_6 insulation is much more effective than air insulation i.e. about three times—which makes these substations ideal for medium and high-voltage power systems.



In Bihar, implementing GIS technology marks a substantial step forward in modernizing the state's power infrastructure. The state has installed 19 GIS bays, 1 GIS substation, and 3 GIS are under construction, a move that significantly enhances the efficiency and reliability of its power transmission system. This adoption is particularly impactful given Bihar's increasing energy demands and the challenges posed by its densely populated urban centers.

The introduction of GIS in Bihar addresses several key issues. In urban areas, where space is a critical constraint, GIS provides an effective solution for power distribution without requiring large land areas. This is crucial in minimizing the urban landscape disruption and reducing the environmental footprint of power infrastructure. Additionally, the enhanced reliability and safety of GIS are vital in ensuring a stable and secure power supply, which is essential for both residential and industrial consumers.

Despite the clear benefits, implementing GIS comes with its challenges. The initial costs associated with GIS are higher than those for conventional substations, which can be a significant factor in budgetary planning. Additionally, the operation and maintenance of GIS require a higher level of technical expertise. There is also the environmental consideration regarding using SF₆ gas, a potent greenhouse gas. Proper handling and disposal of SF₆ are critical to mitigate its environmental impact.

In conclusion, adopting Gas-Insulated Substations in Bihar indicates the state's commitment to adopting advanced and sustainable technologies in its energy sector. This initiative caters to the immediate need for space-efficient power transmission solutions and sets a precedent for other regions in India to follow. As Bihar continues its path of development and modernization, the role of GIS in its electrical infrastructure will be pivotal in ensuring a stable, efficient and environmentally responsible power distribution network.

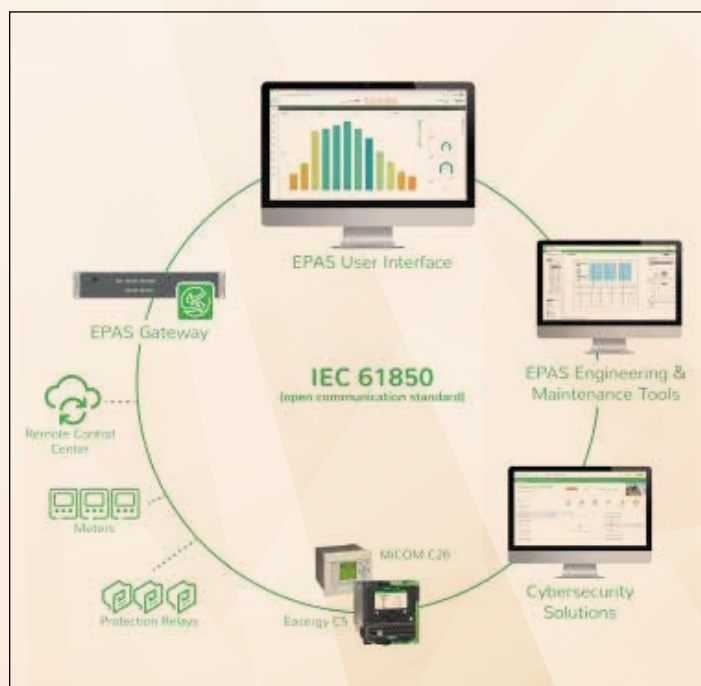


SUBSTATION AUTOMATION SYSTEM (SAS)

A Substation Automation System is a collection of hardware and software components that are used to monitor and control an electrical system, both locally and remotely. A Substation Automation System also automates some repetitive, tedious and error-prone activities to increase the overall efficiency and productivity of the system.

Early substations consisted of mechanical relays and meters that barely supported recording and had no means of communication. Fault recorders were capturing information mainly in the form of paper charts, so reading and analyzing the information was not a straight forward process. Lack of communication caused any maintenance or troubleshooting to be costly and lengthy because manpower had to be sent to substations that were often far away and hard to reach.

With the introduction of microprocessor technology, digital protection and control, devices became more intelligent. Intelligent Electronic Devices (IEDs) being implemented in substations today contain valuable information both operational and non-operational, needed by many user groups within the utility. An IED is any device that incorporates one or more processors with the capability to receive or send data/ control from or to an external source (e.g., electronic multi function meters, digital relays, controllers). IED technology can help utilities to improve reliability, gain operational efficiencies, and enable asset management programs including predictive maintenance, life extensions and improved planning.



> ERA OF SMART UTILITIES

In line to the Government of India's (GoI) vision of 100 percent transition to Smart Prepaid Metering across the country, Bihar DISCOMs (SBPDCL+NBPDC) are one of the front runners since commencement of their first roll out in 2019 (first ever in the country). The projects include end-to-end AMI implementation from Feeders to Distribution Transformers (DTs) and all end consumers to enable complete energy accounting at DT level with zero manual intervention.



As on date more than 2.5 million Smart Prepaid Meters have been commissioned and successfully operational in the state. A quick glance of the projects undertaken by the Bihar DISCOMs:

Total AMISP awarded:	7	No. of projects commenced:	3
No. of metering points (Awarded):	171 Lakh	No. of projects to be started:	4
No. of districts covered:	38 (NB-21+SB-17)	No. of meters commissioned:	25.9 Lakh (NB-14.7 + SB-11.2)
Percentage of urban area:	13.7%		
Percentage of rural area:	86.3%		

Projects commenced

EESL (23.5 Lakh=13.2+10.3) (SB+NB) Commencement: Jan' 2019 Meters commissioned (SB):>8.5 Lakh Meters commissioned (NB):>6.7 Lakh	Secure Meters Limited (26 Lakh) (NB) Commencement: July'2022 Meters commissioned: 8 Lakh	Genus Power (10 Lakh)(SB) Commencement: May' 2022 Meters commissioned: 2.7 Lakh
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Contract signed & Installation yet to commence

(NB) NCC (25 Lakh) In Pre-Installation Phase	(NB) Adani (28 Lakh) In Pre-Installation Phase	(NB) Hi-Print (24 Lakh) In Pre-Installation Phase	(SB) Intellismart (35 Lakh) In Pre-Installation Phase
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The following six towns in NBPDCCL and three Divisions in SBPDCL saturated under Urban Projects and one Division & two Subdivisions are saturated in NBPDCCL under Smart Metering Projects in Rural areas.

- NBPDCCL :- Khagaria, Dalsinghsarai, Rosera, Bairstonia, Raxaul, Samastipur (under Urban Projects)
Muzaffarpur (Urban-I), Ramdyalu & Bettiah (under Rural Projects)
- SBPDCL :- Bankipur, Rajendra Nagar, Ashiyana, (under Urban Projects)

Government of Bihar has equal emphasis on smart pre-payment metering deployment in both urban and rural areas of the state. The initiative envisages improvement in financial and operational efficiency of the Discoms, effective empowerment of last mile end consumers, and most importantly makes Bihar distribution infrastructure future ready for evolving energy mix through both grid connected and Distributed Renewable Energy (RE) generation.

➤ Key benefits of Smart Meters

Utility Benefits

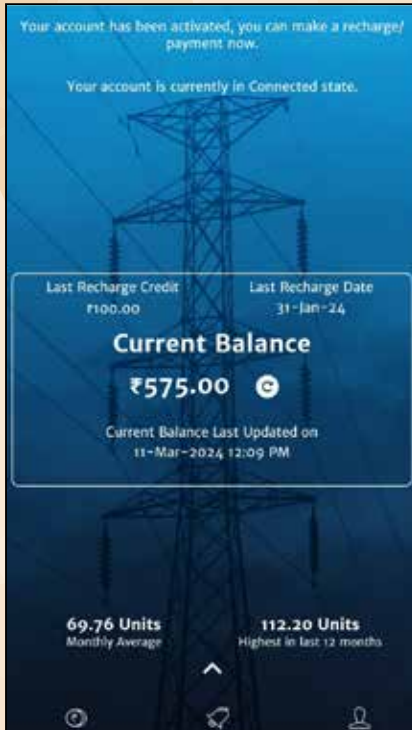
Accurate billing	Efficient energy accounting	Better revenue realization	Improved operational efficiency
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Consumer Benefits

Informed decision making	Pay as you use	No average billing/ No erroneous billing	Transparent energy monitoring
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➤ Activities under taken for effective roll out

Smart metering deployment has been the solution to improve relationship with consumers and improves competency of DISCOM 's to solve the perennial problem of billing. Whereas, pre-payment technology will address the billing and collection part, empowering people and building robust processes will ensure the true success of the programme.



MONOPOLES

Once widely used only in US and European countries, monopoles are now becoming popular in India too. This is because monopoles have distinct advantages over the lattice towers w.r.t space, speed of erection, short delivery time and more.

The benefit of smaller base installation space, even while rising higher than 40 to 50 m, makes monopoles an eco-friendly alternative as well.

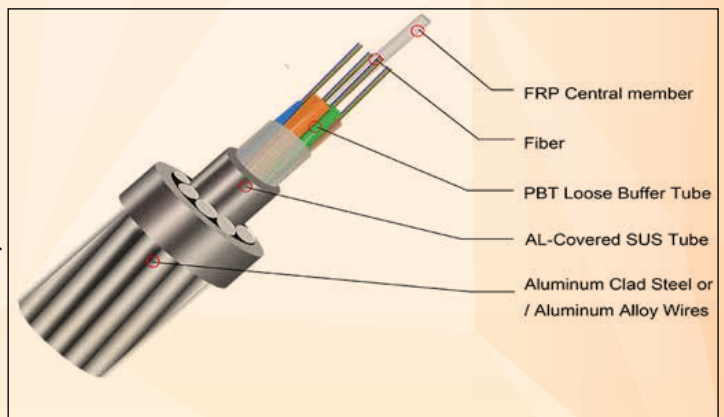


Monopole towers are primarily used in urban areas where space and aesthetics are major considerations areas where environmental or land use constraints are significant and high-voltage transmission lines are over shorter distance.

In Bihar, many monopoles have been erected in required areas. Installing monopole towers in Bihar marks a step forward in the state's journey towards an improved and modern power transmission system. This move addresses the practical needs of a growing population and expanding urban areas and reflects a commitment to integrating infrastructure development with environmental and aesthetic considerations. As Bihar continues to grow, adopting such modern technologies in its power sector will play a crucial role in its overall development.

OPTICAL GROUND WIRE (OPGW)

An optical ground wire (also known as an OPGW or, in the IEEE standard, an optical fibres composite overhead ground wire) is a type of cable that is used in overhead power lines. Such cable combines the functions of grounding and communications. An OPGW cable contains a tubular structure with one or more optical fibres in it, surrounded by layers of steel and aluminum wire. The OPGW cable is run between the tops of high-voltage electricity pylons. The conductive part of the cable serves to bond adjacent towers to earth ground, and shields the high-voltage conductors from lightning strikes. The optical fibress within the cable can be used for high-speed transmission of data, either for the electrical utility's own purposes of protection and control of the transmission line, for the utility's own voice and data communication, or may be leased or sold to third parties to serve as a high-speed fibres interconnection between cities.



The optical fibre itself is an insulator and is immune to power transmission line and lightning induction, external electrical noise and crosstalk. Typically, OPGW cables contain single-mode optical fibres with low transmission loss, allowing long distance transmission at high speed. The outer appearance of OPGW is similar to Aluminium- Conductor Steel-Reinforced Cable (ACSR) usually used for shield wires.

The implementation of OPGW in Bihar, with approximately 8700 kilometers already in place, marks a significant step in enhancing the state's power transmission infrastructure and communication capabilities.

The deployment of OPGW in Bihar, covering a remarkable distance of 8700 kilometers, is a testament to the state's commitment to improving its infrastructure. By leveraging the dual benefits of OPGW, Bihar is not only enhancing the efficiency and reliability of its power grid but also laying the foundation for a robust communication network, crucial for the state's ongoing development and modernization efforts.

HIGH TEMPERATURE LOW SAG (HTLS)

A transmission line is a structure used to carry power or signals over large distances. A transmission line is made up of the structure and the relative cables passing through it. In this case we are talking about high voltage power lines which can be overhead, with an infrastructure made up of pylons (commonly in metal, but also in wood or concrete) and conductors, or underground, with an infrastructure made up of underground pipes (cable ducts where the cables pass). The conductor, therefore, is a fundamental element of the transmission line and must be chosen with particular care and according to criteria of sustainability, economy and performance. In this scenario, HTLS is the acronym that identifies the type.

HTLS stands for High-Temperature Low Sag, it is a conductor capable of not physically deteriorating and maintaining its transmission capabilities intact at higher temperatures than conventional conductors.

High Temperature Low Sag Conductors (HTLS) can withstand operating temperatures of upto 210°C, thus carrying higher power compared to conventional conductors. These conductors can be applied when there is a need to use an existing OHL that has clearance problems (ampacity limitations) and restrictions to the use of new and higher towers. HTLS conductors will allow an increase of the ampacity without the need to modify most of the existing towers.

Aluminum Conductor Composite Core Conductors: These are "High-Temperature Low Sag" (HTLS) Conductors with excellent electrical characteristics, excellent sag tension characteristics and superior corrosion resistance to that of ACSR. As compared to ACSR they have lighter weight, comparable strength and current carrying capacity, lower electrical losses and superior corrosion resistance which has given this conductor wide acceptance as a transmission conductor.

To enhance and modernize its power transmission capabilities, Bihar has adopted HTLS technology and is reconductoring existing lines. Notably, Bihar has replaced traditional conductors with HTLS in 132 kV transmission lines covering 1235.57 ckm and 220 kV transmission lines covering 27.996 ckm.



Bihar's initiative to upgrade its power transmission lines with HTLS conductors is a forward looking approach that aligns with the broader goals of enhancing the efficiency and reliability of its power infrastructure. By reconductoring significant lengths of its 132 kV and 220 kV lines, Bihar addresses its current electricity demands. It lays the foundation for a robust and sustainable power transmission system to meet future challenges.

SMART UTILIZATION OF e-GOVERNANCE THROUGH APPLICATIONS AND MODULES (SUGAM)

Brief Introduction

BSPTCL serves as the essential foundation of the power sector in Bihar. Striving to emerge as an exemplary State Transmission Utility (STU) and transmission licensee, BSPTCL has undertaken numerous initiatives aimed at enhancing organizational efficiency and adopting best practices. Among these initiatives, Project SUGAM, focusing on Enterprise Resource Planning (ERP) implementation, stands out.

Project SUGAM represents an effort towards a more efficient BSPTCL, contributing to improved performance in our respective roles. ERP implementation benefits our colleagues in myriad ways both in Headquarter and in all our field offices.

We take immense pleasure and pride in announcing the initiation of Project SUGAM, a pivotal step in our commitment to digital transformation within BSPTCL. This project involves the comprehensive implementation of SAP-ERP across all BSPTCL locations, marking a significant leap forward in our technological evolution. The chosen suite for this endeavor is SAP S/4 HANA.

SAP (System, Application and Products in Data Processing): SAP is a robust software solution designed to standardize, streamline, and integrate business processes seamlessly. Encompassing finance, human resources, procurement, Project Systems, and various other functions, SAP-ERP serves as the cornerstone for operational efficiency and data coherence.

Operational Integration: SAP-ERP systems operate on an integrated software platform, utilizing common data definitions across departments. This integration ensures a harmonious workflow, with all functions operating on a single, unified database.



Business Processes:

- **Financial Accounting (FICO module) –**

All Financial Transactions and data i.e. GL, AP, AR, Asset accounting, Trail Balance, Balance Sheet, P & L accounting statements are implemented by the FICO module of our SUGAM.

- **Material Management (MM Module) –**

The MM module of SUGAM deals with all Material Procurement & Inventory activities done across BSPTCL.

- **Project Systems (PS module) –**

This module of SUGAM handles all the Project/budget planning, monitoring, and control activities of BSPTCL.

- **Human Resource & Payroll –**

The HR & Payroll module deals with Payroll and all information related to the employees of BSPTCL.

- **Plant Maintenance –**

All the Operation & Maintenance related Processes and its integration with other modules are performed via this module of SUGAM.

- **ESS/MSS (Employee Self Service/ Manager Self Service) –**

This module is beneficial for all employees of BSPTCL as it deals with Employee Services and Management approval services.

- **File Lifecycle Management (FLM) –**

The File Lifecycle Management module or FLM module provides a simple and digitized solution for the movement of files.

- **BIBO (Business Intelligence and Business Objects) –**

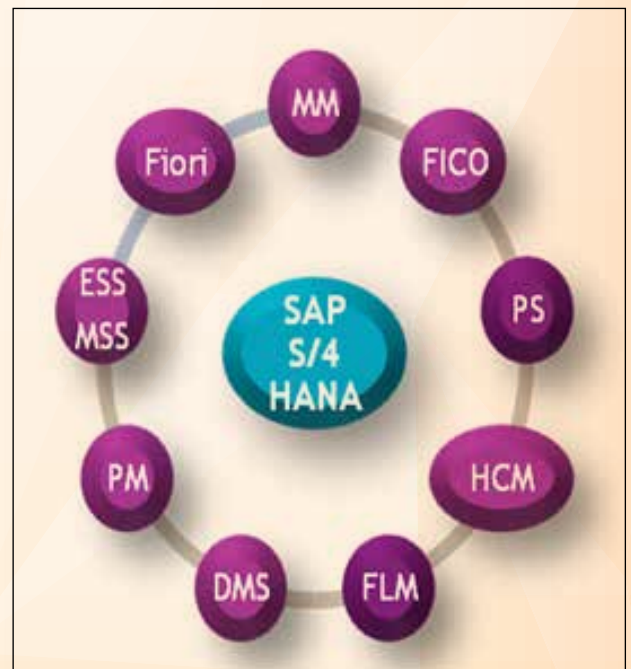
This BIBO i.e. Business Intelligence is the reporting tool and Business Objects is the analytical tool.

- **FIORI –**

This is a Web based apps for approval in certain cases.

Key Benefits:-

- Automatic accounting reconciliation and generation of financial statements.
- Online availability of SOR for preparing estimates through ERP.
- Real time information on inventory stock across BSPTCL.
- Salary processing.



- Online request and approvals related to ACR, TA/DA, Leave, NOC, Income Tax, LTC, various type of reimbursements etc.
- Mobile application for key processes for quick information and approvals.
- The concerned can view details related to salary, Leave Position, Personal details “Anytime” and also track their request.
- Real time data related to organization can be accessed anytime by the management.



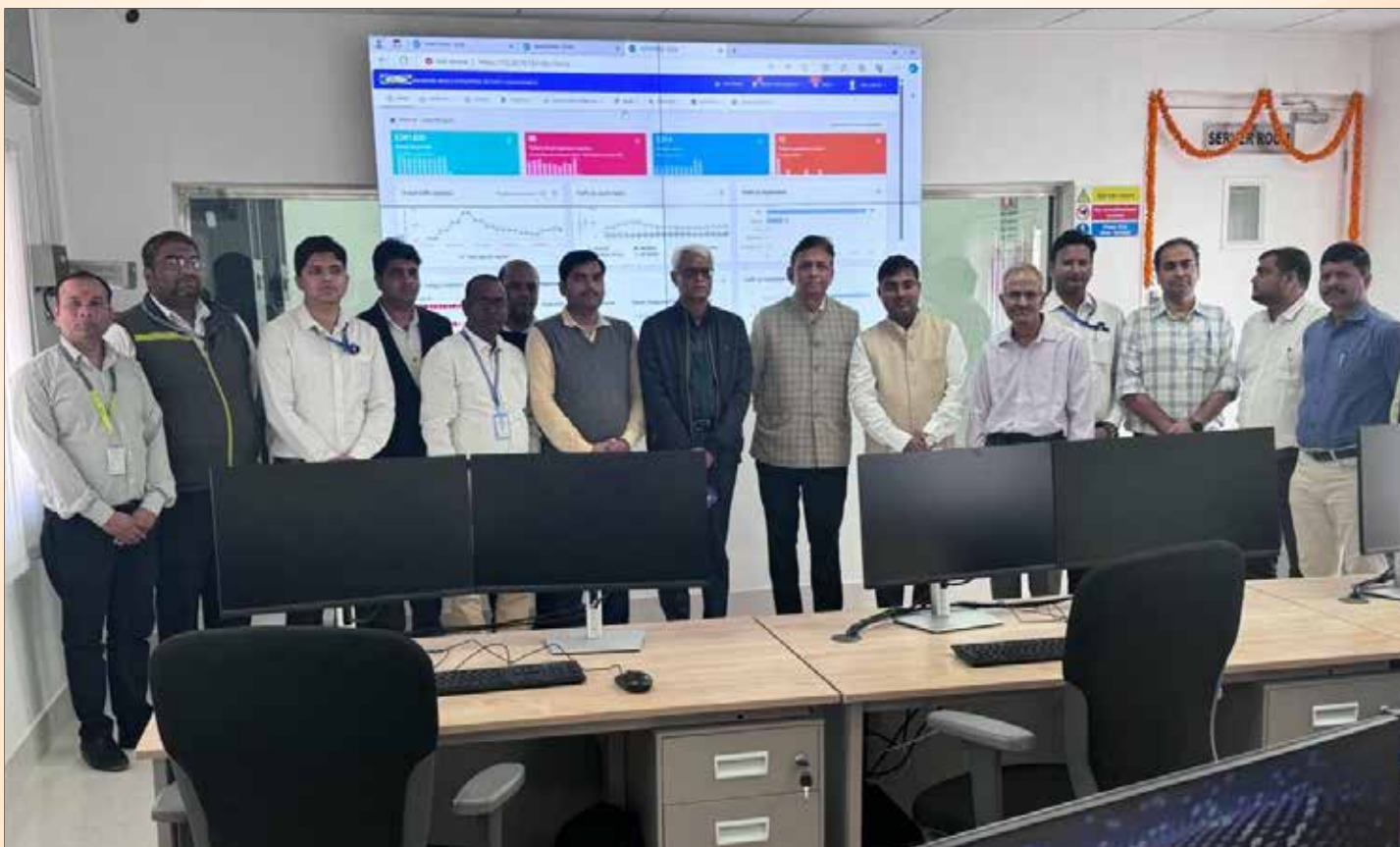
- Business processes are integrated end to end across departments and Circles, Divisions, Sub stations etc. All information are available to the users based on authorization.
- Better financial management and faster financial reconciliation/financial statements.
- Business Processes improvements and adoption of best business practices.
- Cross-functional integration of enterprise-wide functions, Visibility & Transparency within departments.
- Online availability of MIS reports – With the availability of MIS reports, now it is not required to manually compile data from multiple sources.
- Not required to maintain multiple ledgers and manually fill different formats.
- Role based access ensures employee authorization to carry out our day-to-day transactions through the ERP system.
- No need to run-around for approvals & file processing. Work-flows configured in ERP takes care of many such activities.



CYBER SECURITY OPERATIONAL CENTRE (C-SOC)

Cyber intrusion attempts and Cyber-attacks in any critical sector are carried out with a malicious intent. In Power Sector it's either to compromise the Power Supply System or to render the grid operation insecure. Any such compromise may result in malicious operations / damage of equipments or even in a cascading grid brownout / blackout. The artificial air gap created by deploying firewalls between any IT and OT System can be jumped by any insider or outsider through social engineering. Cyber-attacks are staged through tactics & techniques of Initial Access, Execution, Persistence, Privilege Escalation, Defence Evasion, Command and Control, Exfiltration.

After gaining the entry inside the system through privilege escalation, the control of IT network and operations of OT systems can be taken over even remotely by any cyber adversary. The gain of sensitive operational data through such intrusions may help the Nation/State sponsored or non-sponsored adversaries and cyber attackers to design more sinister and advanced cyber-attacks.



BSPTCL is presently carrying on intra state transmission and wheeling of electricity under license issued by BERC. It is also discharging the functions of State Load Despatch Centre from its headquarter at Vidyut Bhawan, Patna. State Load Despatch Centre (SLDC) is the apex body to ensure integrated operation of the power system in Bihar. It is the strategic functional unit of Bihar State Power Transmission Company Limited (BSPTCL) for discharging various functions specified under section 32 of Indian Electricity Act, 2003. Services of SLDC include real-time secure and economic operation of the State grid in accordance with the Grid Standards and the State Grid Code. For this purpose, it coordinates with all key stakeholders like Regional Load Despatch Centres, other SLDCs, State generating companies, BSPTCL, DISCOMs (NBPDC, SBPDC), GENCOs, ULDC, Jharkhand, UP, ERLDC, Nepal, Non-Conventional Generating Units (including Solar, Bagasse, Hydel) and Open access

Outage of IT and OT system in SLDC due to power failure, equipment failure or any other reason leads to the absence of real time visibility of the dynamic state of the power system and impacts the monitoring of real time operations. The outage causes the inability to monitor the power flow of the various sub-station distributed across Bihar. The outage of the IT & OT system will cause delay in restoration of elements which are under planned shutdown or under emergency outage. It is imperative to note that since all Load Despatch Centres, whether at the State, Regional and National levels, are interconnected for real time data exchange through their OT and IT systems, any cyber threat that breaches through any of the OT and IT systems at any Load Despatch Centre would easily infiltrate the Load Despatch Centres' systems and lead to a grid collapse or incapacitation of the underlying ICT systems. Bihar SLDC, being a part of this national network, therefore, also assumes an important link in the entire power system network.



From the diverse categories of consumers inside the Bihar State with an estimated population of 140 million, it is disastrous even for an hour's timeframe after which the impact level of non-availability of the ICT infrastructure consisting of SAMAST, SCADA & Metering Infrastructure along with their associated dependencies will be very significant to the State Economy, Public Health, Public Safety, Customers, Business, Communications, Banking etc. along with that have a cascading effect on the neighbouring states both in economy as well the reliability and security of power supply in the Grid. It can be seen from the above how incapacitation or destruction of the ICT infrastructure and its system at SLDC Bihar can severely impact the business and industrial process, security and health system of Bihar state.



Govt. of Bihar has declared the SCADA (Supervisory Control and Data Acquisition System) and WBES (Web Based Energy Scheduling System) of SAMAST and their associated information infrastructures dependencies of SLDC (State Load Despatch Centre) Bihar as “Protected Systems” through Gazette notification of Energy Dept. As per Information Technology (Information Security Practices and Procedures for Protected System) Rules - 2018 published by MeitY, it is mandate to establish a Cyber Security Operation Centre (C-SOC) for the organisation having “Protected System”.

Identification of Critical Business Processes / Functions and their underlying Critical Information Infrastructure (CII) & Establishment of C-SOC will enable the BSPTCL and Bihar SLDC in coordination with other stakeholders, to take necessary measures to strengthen them to be cyber-resilient and withstand large-scale cyber-attacks.

Since SLDC has been declared as Protected Information Infrastructure, keeping in view the foreign geographies, increasing innovative & advanced cyber-attacks and malwares, threats emanating from emerging technologies bots, dark web, social engineering, cloud etc. First among all state SLDCs, Bihar SLDC intended to set-up on-premises state-of-the-art Next Generation Security Operations Centre (SOC) which can withstand logs / data at extremely high concurrency operating on 24x7x365 basis. Establishing a dedicated Cyber Security Operational Center (C-SOC) stands out as a paramount best practice in safeguarding critical infrastructure like the power sector. A C-SOC serves as the nerve center for continuous monitoring, threat detection and rapid response to cyber incidents. It acts as a hub for aggregating threat intelligence, coordinating incident responses and fortifying the cybersecurity posture. This approach is not only sustainable but also highly replicable and scalable, offering a proactive model that can be adopted by other states and sectors seeking to enhance their cyber resilience and protect vital systems from evolving cyber threats.

AUTOMATED SYSTEM BALANCING MECHANISM

The Automated System Balancing Mechanism (ASBM) developed by Bihar SLDC is a unique application and first in India of its kind designed to enhance operational efficiency by implementing cutting-edge automation, focusing on load curtailment to minimize DSM (Deviation Settlement Mechanism) charges, improve system balance, ensure real-time accurate data, and introduce exciting features such as 33kV feeder-level monitoring.

The main objectives of ASBMR to enable advanced automation algorithms, to optimize load curtailment strategies, reducing DSM charges and ensuring cost-effectiveness for the power system, integrating smart grid technologies for real-time monitoring & control & enhancing the overall system balance and reliability.

Upgraded system offers real-time insights into the state's load at various levels, including districts load, Grid Substations (GSS) load, and 33kV feeders load and provide instant and accurate information, facilitating better decision-making for load despatch operations. Introducing a comprehensive feeder-level monitoring system for granular control and analysis enables proactive management of vast distribution networks.



Important Features-

Predictive Analytics :- Utilizes Application Programming Interface (API) algorithms to forecast load patterns and anticipate potential issues, allowing for proactive interventions. Incorporate demand response mechanisms into the automated system to minimize the DSM charges.

Demand Response Integration :- Incorporates demand response mechanisms to efficiently manage power consumption during peak periods.

Security Measures :- Only authorised person can access Automated System Balancing Mechanism and it is protected from potential threats, to ensure the integrity of the automated systems.

Infrastructure Upgradation :- Enhances the hardware and software infrastructure to support advanced automation.

Algorithmic Integration :- Integrates sophisticated load forecasting algorithms to optimize load curtailment strategies. Implement real-time analytics for system balancing, ensuring optimal utilization of resources.

Feeder-Level Monitoring System :- Advanced meters installed at feeder points for accurate real-time data collection per minute and develop a centralized monitoring system to analyse and manage distribution level networks.

Security Measures :- Strengthens security measures to protect

Benefits-

Cost Savings :- Efficient load curtailment strategies will lead to significant reductions in DSM charges, resulting in cost savings for the power system.

Enhanced Reliability :- Real-time data and improved system balance will enhance the reliability and stability of the power grid.

Operational Efficiency :- Feeder-level monitoring and advanced features will streamline load despatch operations, improving overall operational efficiency.

Future-Proofing :- The integration of predictive analytics and demand response features will future-proof the State Load Despatch Centre against evolving energy landscape challenges.

Conclusion :- The upgradation for the State Load Despatch Centre not only addresses current challenges but also positions the system for future advancements. The implementation of Automated System Balancing Mechanism and its features will undoubtedly lead to a more resilient, efficient, and adaptive power management system.



Bihar Roundtable Investor's Meet - 2024

The 'Bihar Roundtable investor's meet' for Electrical Power Transmission & Distribution and Renewable Energy Equipment Manufacturing Industry was organized by the Industries and Energy Departments of Bihar on February 5, 2024 in Vidyut Bhawan-III, Patna with a view to strategically fuel Bihar's Energy ambitions and drawing investments to the state.

The Roundtable set the stage to attract investments in the power sector and renewable energy. The convergence of investors marked a significant moment for Bihar, as it sought to bolster its power infrastructure, promoted sustainable energy and catalyzed economic growth.

Hon'ble Energy Minister of Bihar, Shri Bijendra Prasad Yadav while welcoming the delegates in the Roundtable mentioned that, "the enabling policies of Bihar have laid red carpet welcome for the investors. We have attractive incentives, investor-friendly policies, robust infrastructure and luring subsidies for the investors".

Additional Chief Secretary, Industries Department, Shri Sandeep Poundrik enlightened us with the fact that Bihar as a state is growing at breakneck speed, with third highest GSDP growth rate during the fiscal 2021-2022. Bihar is recording growth of 10.9%, as against the national growth of 8.75%. Also, three basic requirements for setting up the industries—land, water and electricity—are available in plenty in the state. We have 3000 acres of industrial land bank, 24 lakh square feet of plug and play facility on low monthly rental, 75 Industrial Areas with good water and power supply and 1176 functional units on BIADA land which makes Bihar a great region to have blasting industrial emergence in the coming years.

In addition to that, Principal Secretary, Energy Dept-cum-CMD, BSPHCL, Shri Sanjeev Hans detailed the major reforms in the power sector that has promoted Bihar as one of the biggest investment spots. Over the years Bihar's rise has been astronomical. BSPHCL has built robust power infrastructure that is capable of supplying more than 7000 MW. We are now supplying electricity in Bihar for 23.5 hours in urban areas and uninterrupted 24 hours in dedicated feeders for industries. BSPHCL has created national record with installations of more than 26 lakhs Smart Prepaid Meters. This also sheds light on scope of Smart meter manufacturing potential in the state.

The DISCOMs have also shown continuous improvement on operational and financial parameters. Profit of Rs.215 crore in fiscal year 2022-2023 and also expectation of gain in next financial year indicates that both the DISCOMs are potentially viable.





In coming 10 years there is going to be large scope of growth in power sector like manufacturing of Power Transformer, Low Tension Cable, Metering Transformer oil etc. It offers more than Rs.9000 crores investment opportunities in power equipment procurement.

Our CMD Shri Sanjeev Hans also mentioned that under 'Jal Jeevan Hariyali Mission', Bihar has prepared a plan for generation of 1000 MW rooftop solar energy on govt. buildings in next two-three years worth Rs. 4,600 crores. This can provide an attractive investment opportunity in Bihar. Schemes like – Feeder level Solarisation under Krishi Road Map-4, Mukhyamantri Gramin Solar Street Light Yojana, notification of second Renewable Energy Policy, approved expenditure for installation of solar power plants along the canal with total capacity of 250 MW spread over 500 km with an outlay of Rs. 1,588 crores, provide immense investment opportunities.

Later to addressals by higher officials, a Q&A session was held with about 70 participating investors who lauded the state government for policies that were investor-friendly. Prominent companies that participated included Adani Power, Intellismart Infrastructure Private Limited, Tata Power, Schneider Electric India etc.

Director Industries, Pankaj Dixit, MD SBPDCL, Sri Mahendra Kumar and MD NBPDCCL, Dr. Aditya Prakash and other senior officials were present on this occasion. The event concluded on a successful note with gifts & souvenirs to officers followed by high tea.



ऊर्जा के क्षेत्र में 'कदम दर कदम बढ़ते गए हम'

ऊर्जा के क्षेत्र में प्रगति की दिशा में बिहार को आगे बढ़ाने के लिए संकल्पित मुख्यमंत्री श्री नीतीश कुमार अक्सर कुछ-न-कुछ करते रहने के लिए जाने जाते हैं।

लक्ष्य निर्धारित कर बिहार बिजली के विकास में अनेक कीर्तिमान स्थापित करने वाले हमारे मुख्यमंत्री बिहार स्टेट पावर (होल्डिंग) कंपनी लिमिटेड एवं इसकी अनुषंगी कंपनियों के 11वाँ स्थापना दिवस के अवसर पर भी कुछ वैसा ही कर गये जिसकी हमें उम्मीद थी।

उन्होंने इस खास अवसर पर पटना के ऊर्जा ऑडिटोरियम में एक बार फिर ₹13,934.89 करोड़ की विभिन्न योजनाओं का उद्घाटन, शिलान्यास एवं शुभारम्भ कर इतिहास रचने की शानदार पहल की। बेहतरीन कार्यक्रम के इस महत्वपूर्ण सत्र में संबोधन के दौरान मुख्यमंत्री ने 2024 तक सभी घरों में स्मार्ट मीटर लगाने एवं ऊर्जा के उज्वल भविष्य के लिए सोलर ऊर्जा को बढ़ावा देने का अनूठा नसिहत दे कर बिहारवासियों के हित में एक नया कदम बढ़ाया।

जब इस विशेष अवसर पर ऊर्जा मंत्री, श्री बिजेन्द्र प्रसाद यादव ने कई सालों बाद पहली बार विद्युत वितरण कंपनियों के राजस्व में वृद्धि समेत अनेकानेक नयी उपलब्धियों का श्रेय ऊर्जा परिवार के सदस्यों को देने लगे तो हॉल में उपस्थित लोग कुछ क्षण के लिए भावुक भी हुए और उनकी जोरदार तालियों के मधुर ध्वनी से माहौल खुशनुमा भी हो गया।

बिहार सरकार के माननीय भूमि एवं राजस्व मंत्री, मध निषेध एवं निबंधन मंत्री समेत बिहार के वरिष्ठ प्रशासनिक अधिकारियों का इस कार्यक्रम में शामिल होना भी इस मौके की खासियत रही। स्वागत भाषण ऊर्जा विभाग के प्रधान सचिव-सह-बिहार स्टेट पावर (होल्डिंग) कंपनी लिमिटेड के अध्यक्ष-सह-प्रबंध निदेशक श्री संजीव हंस, धन्यवाद ज्ञापन साउथ बिहार पावर डिस्ट्रीब्यूशन कंपनी लिमिटेड सह जेनरेशन के प्रबंध निदेशक श्री महेन्द्र कुमार एवं आगत अतिथियों का स्वागत नॉर्थ बिहार पावर डिस्ट्रीब्यूशन कंपनी लिमिटेड सह-ट्रांसमिशन के प्रबंध निदेशक डॉ० आदित्य प्रकाश ने की।



एहसास का आगाज़

इसके साथ ही वह खुशनुमा दौर भी आया जिसका इंतजार सबको बेसब्री से था। गीत, गज़ल, कव्वाली एवं शैरो शायरी की जब महफिल सजी तो लोग उस शख्सियत को सुनने को बेताब दिखे जिसे रेडियो, टेलीविजन, यूट्यूब, सोशल मीडिया एवं अन्य चैनलों के माध्यम से पिछले पाँच दशकों से सम्मान के साथ इत्मीनान से लोग अक्सर सुनना एवं देखना पसन्द करते हैं। स्थापना दिवस के अवसर पर पटना स्थित ऊर्जा ऑडिटोरियम भी उस दिन इस ऐतिहासिक पल का गवाह बना, जब पद्मश्री से सम्मानित अंतर्राष्ट्रीय स्तर के ख्याति प्राप्त गज़ल एवं भजन गायक उस्ताद अहमद हुसैन एवं उस्ताद मुहम्मद हुसैन के युगल गायकी ने समां बांध दिया। कार्यक्रम की शानदार शुरुआत भजन से हुई और "चल मेरे साथ ही चल, ए मेरी जाने गज़ल" के साथ जब इस मशहूर जोड़ी ने गज़ल की गंगा बहायी तो उपस्थित लोग उसमें गोते लगाते रहे। सुर, लय और ताल का खूबसूरत सिलसिला ऐसे ही आगे बढ़ने लगा और लोग वाह-वाह कहते नज़र आने लगे।

आगे "मैं हवा हूँ, कहाँ वतन मेरा, दस्त मेरा न ये चमन मेरा" की शानदार प्रस्तुति ऑडिटोरियम में मौजूद पदाधिकारियों एवं कर्मचारियों को मंत्र मुग्ध कर देने के लिए काफी था। सुरों की इस सांस्कृतिक संध्या में आये सभी लोगों ने इस ऐतिहासिक 'एहसास-ए-गज़ल', का भरपूर आनन्द उठाया। इस अवसर पर गज़ल की दुनिया में अनूठा पहचान कायम करने वाले उस्ताद अहमद हुसैन के पुत्र जावेद हुसैन द्वारा प्रस्तुत बेहतरीन गीत और गज़लों पर भी लोगों ने खूब तालियां बजाईं।

कार्यक्रम के शुभारम्भ होने के पूर्व इन विश्व विख्यात फनकारों को आदरणीय अध्यक्ष सह-प्रबंध निदेशक श्री संजीव हंस द्वारा अंगवस्त्र एवं प्रतीकचिन्ह देकर सम्मान प्रदान किया गया।





ई-ऊर्जस्विनी का लोकार्पण

ऊर्जा प्रक्षेत्र में विकास की दिशा में सकारात्मकता बढ़ाने, ऊर्जा के क्षेत्र में लगातार किए जा रहे कार्यों एवं उसके प्रचार प्रसार में सशक्त भूमिका स्थापित करने एवं विद्युत परिवार के सदस्यों की लेखन क्षमता में वृद्धि लाने के उद्देश्यों से बिहार स्टेट पावर (होल्डिंग) कंपनी लिमिटेड एवं उसकी अनुषंगी कंपनियों के द्वारा ई - मैगज़ीन "ऊर्जस्विनी" की शुरुआत की गई, जिसका लोकार्पण अध्यक्ष - सह - प्रबंध निदेशक श्री संजीव हंस के द्वारा किया गया।



ऊर्जा परिवार से ऊर्जान्वित हुआ ऊर्जा पार्क

आवश्यक सेवा से जुड़े होने के कारण विद्युतकर्मियों के लिए मनोरंजन का दिन वैसे तो कम होता है, मगर जब अपनी कंपनी की ओर से नये साल के स्वागत एवं क्रिसमस के अवसर पर ऊर्जा कार्निवल-2023 का आयोजन हो तो व्यवहारिक तौर पर एक मनोरंजन का खुशनुमा माहौल तो बनता है। 23 दिसम्बर का भी दिन कुछ वैसा ही था जो विशेष रूप से ऊर्जा परिवार के नाम समर्पित रहा।

बिहार स्टेट पावर (होल्डिंग) कंपनी लिमिटेड के अध्यक्ष-सह-प्रबंध निदेशक श्री संजीव हंस एवं नॉर्थ बिहार पावर डिस्ट्रीब्यूशन कंपनी लिमिटेड के प्रबंध निदेशक डॉ० आदित्य प्रकाश की मौजूदगी में ऊर्जा कार्निवल जश्र मनाया गया। इस खास अवसर पर ऊर्जा परिवार के हजारों सदस्यों के उत्साह और उमंग से ऊर्जा पार्क दिन भर मेला के रूप में गुलजार रहा। इस मौके पर लोग पार्क में सजे मुक्ताकाश मंच से प्रस्तुत सुमधुर गीत-संगीत को सुनकर लोग रोमांचित हो रहे थे। एक तरफ बच्चे एवं महिलाएं जादूगरी का आनन्द ले रहे थे तो दूसरी ओर लोग अनेक स्वादिष्ट व्यंजनों का जमकर लुत्फ उठाने में मशगूल रहे।



इस खुशनुमा माहौल में सभी लोग खेल-कूद और मनोरंजन का भरपूर आनंद ले रहे थे तथा अपने अध्यक्ष-सह-प्रबंध निदेशक महोदय, प्रबंध निदेशक महोदय एवं शीर्ष अधिकारियों के साथ चहलकदमी कर वित्तिये हर सुखद क्षण को लोग अपने मोबाईल में कैद करने में व्यस्त रहे।



A Captured Moment

A thoughtful New Year Gift by CMD sir sparks Joy & Unity !!

In a delightful start to the New Year, each member of Urja Parivar was pleasantly surprised with a thoughtful personalized gift-“A contemporary table-top photo frame”. On the fresh year, the air at Bihar State Power Holding Company Limited was filled not only with the excitement of new beginning but also with a sense of appreciation and gratitude. This sentiment was beautifully encapsulated in the surprise gift bestowed upon each one in the company by our esteemed CMD Sri Sanjeev Hans Sir.



The beautifully crafted table-top photo frames served as more than just a decorative item. The thoughtful touch lied in the personalization as the table top was beautifully designed with an elegant picture of the employees in the front with the Yearly Calendar of our company at the back side making it more useful to them. The idea of this elegant and distinguished gift brought smiles & served as a canvas for employees to display moments that matter most to them.

Since it happened for the first time in the organisation, the idea came out to be the real surprise for everyone. With the very start of the day the frames started getting distributed in each table and the surprise getting unfolded to each member of Urja Parivar. People out of excitement & glee were waiting for their piece to arrive. Some were calling their friends & colleagues and were sharing the feeling when they received the gift and some were asking others if their token arrived or not !!! New Year turned to be the real festival altogether that day, everyone was clicking pictures, posting on social media, thanking CMD Sir & the company for this gracious present. There was a sense of belongingness & gratitude in everybody in the Urja Parivar.

In a world often characterized by the hustle and bustle of work life, where deadlines and targets become the focal points of our attention, respected CMD sir’s decision to embrace the sentimental value of a photo frame speaks volumes. It’s a reminder that our workplace is a family – a place where shared experiences and milestones shape our journey together.

Members of Urja Family were excited to put across their feelings about receiving the wishes from CMD sir in the form of an admirable gift.

खुशियों का मौका तो कई बार आया, मगर ऐसी खुशी पहली बार महसूस हुई जब नववर्ष 2024 के आते ही अध्यक्ष-सह-प्रबंध निदेशक के द्वारा शुभकामनाओं से भरा सुखद संदेश वाला "आकर्षक टेबल कैलेंडर-सह-सचिव स्टैण्ड होल्डर" के रूप में मुझे नववर्ष का उपहार प्राप्त हुआ।

अपनी कंपनी की यह वाकई एक अच्छी शुरुआत है।

विनोद प्रसाद

उप महाप्रबंधक (कार्मिक) नॉ.बि.पा.डि.कं.लि., पटना



Received an unexpected and heartwarming gift from our CMD sir ! The table-top photo frame is not just a decoration but a reminder of the company's acknowledgement of our efforts. Feeling appreciated ! As always its good to have some surprises on a happier note to start a year !!

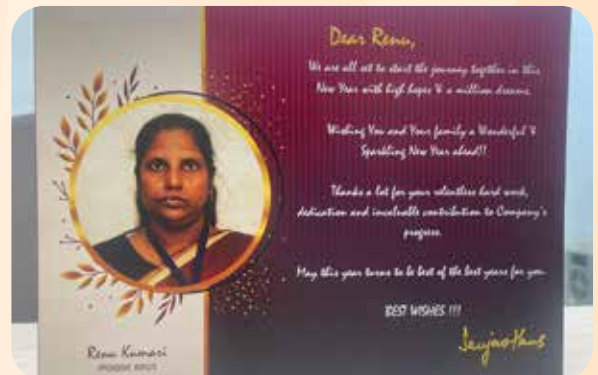
Vineet Kumar,

EEE, Metering, SBPDCL

अध्यक्ष सह प्रबंध निदेशक महोदय के शुभकामना संदेश के साथ इस बार नववर्ष के अवसर पर बहुत आकर्षक कैलेंडर जिसमे मेरी तस्वीर भी थी को प्राप्त कर मैं काफी खुश हूँ।

रेणु कुमारी,

परिचर, बि. स्टे. पा. हो. कं. लि.



The gift from CMD sir bestowed upon all employees evoked a sense of unity and belongingness. It was a gesture that illuminated the spirit of inclusivity and appreciation within our workplace, resonating with gratitude for being part of such a thoughtful organisation.



Preeti

IT Manager, BSPTCL

B.O.L.D

एक कदम क्षमता वृद्धि की ओर

B.O.L.D. एक प्रशिक्षण कार्यक्रम है, जो NBPDCCL एवं SBPDCL के सभी कनीय विद्युत अभियंता एवं सहायक विद्युत अभियंता Supply एवं STF के साथ Revenue Officers के लिये तकनीकी तरीके से प्रत्येक अंचल में जाकर BSPHCL की पहल पर Energy Accounting एवं Audit Team के द्वारा जनवरी-2024 में प्रारंभ किया गया है एवं फरवरी के अंत तक इसे पूर्ण कर लेने की कार्ययोजना पर BSPHCL संकल्पित है। अब तक पूरे SBPDCL सहित NBPDCCL के पूर्णिया एवं किशनगंज अंचलों में प्रशिक्षण पूरा किया जा चुका है।

इस पूरे प्रशिक्षण का लक्ष्य प्रत्येक अभियंता को विधिक कार्य करते हुए एवं सशक्त (Bold) बनाना है, ताकि जन-व्यवहार के दौरान वे अपने व्यवहार में सौम्यता, निर्णय में दृढ़ता, कानून की विशद् जानकारी, मूल्यांकन की महत्ता, ऊर्जा चोरी की कार्य शैलियों का ज्ञान, व्यवहार की प्रक्रिया, गठन करते हुए टीम को जिम्मेवारी का ज्ञान, निर्णय की प्रक्रिया एवं अंतिम रूप से निर्णय की पहल को वे सफलतापूर्वक पूरा कर सके। यह भी प्रयास है कि अभियंताओं एवं मूल्यांकनकर्ताओं को इतना सशक्त किया जाय कि उनके विरुद्ध विद्वेषवश अवैध उपभोक्ताओं द्वारा दर्ज कराये जाने वाले वादों से वे बच सके एवं बचने के लिए पूर्व तैयारी भी कर सकें। इस प्रशिक्षण का उद्देश्य उपभोक्ताओं के अवैध एवं सदोष लाभ की दुष्प्रवृत्ति पर नियंत्रण किया जा सके एवं अवैध उपयोगकर्ताओं द्वारा विद्युत ऊर्जा चोरी पर व्यापक नियंत्रण तो करें ही साथ में अगर सामूहिक रूप से वे अपने क्षेत्र में ऐसा नियंत्रण कर पाते है तो उस क्षेत्र को "No Theft Zone" बनाने पर उपभोक्ताओं को सम्मानित भी किया जा सके। इसीलिये प्रशिक्षण में यह लक्ष्य रखा गया है कि जहाँ बिहार विद्युत कोड, 2007 या भारतीय विद्युत अधिनियम, 2003 के प्रावधान सुस्पष्ट न हो और मूल्यांकनकर्ता भी निर्णयात्मक स्थिति में ना हो तो संदेह का लाभ नियमित उपभोक्ता के पक्ष में दिया जाय।

इस कार्यक्रम को तकनीक के माध्यम से सशक्त बनाया गया है। श्री संजीव हंस, अध्यक्ष सह प्रबंध निदेशक ने कंपनी का लक्ष्य एवं प्राथमिकता "कंपनियों की ऊर्जा हानि को न्यूनतम स्तर पर ले जाना" निर्धारित किया है। इसी प्रयोजन से उन्होंने प्राथमिकी की प्रक्रिया को बेहतर रूप से समझने एवं क्षेत्र में कार्यकुशलता तथा जन व्यवहार में गुणात्मक सुधार लाने के उद्देश्य से संबंधित विषयों पर एक लघु कार्यक्रम आयोजित करने की आवश्यकता बतायी है। तदनुसार 'BOLD (Behavioral, Organized, Lawful, Decision-making) का प्रशिक्षण मैनुअल बना है और इस प्रस्तुती को सजीव एवं सुधारात्मक रखने के लिये एक संपादन मंडल निरंतर प्रयासरत है।

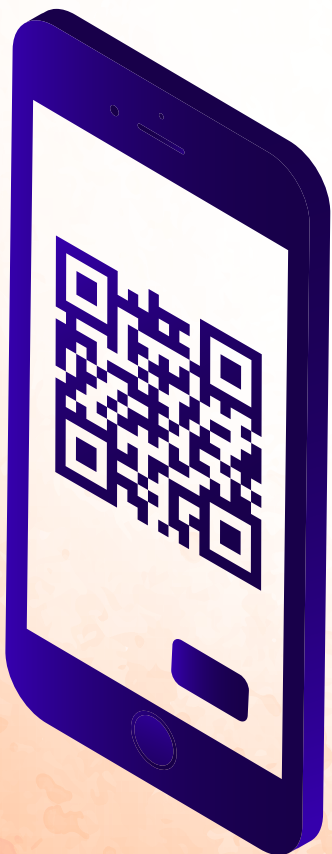


B.O.L.D. प्रशिक्षण एवं गोष्ठी

स्थान : DCR बिल्डिंग, बिहारशरीफ
दिनांक : 0... 2024



SCAN ME :



B.O.L.D Training Inauguration
Speech by CMD BSPHCL



B.O.L.D Training Manual
Editorial Board



B.O.L.D Training Manual



Contact Department of
Police Department

Raid & FIR Management System (RFMS)

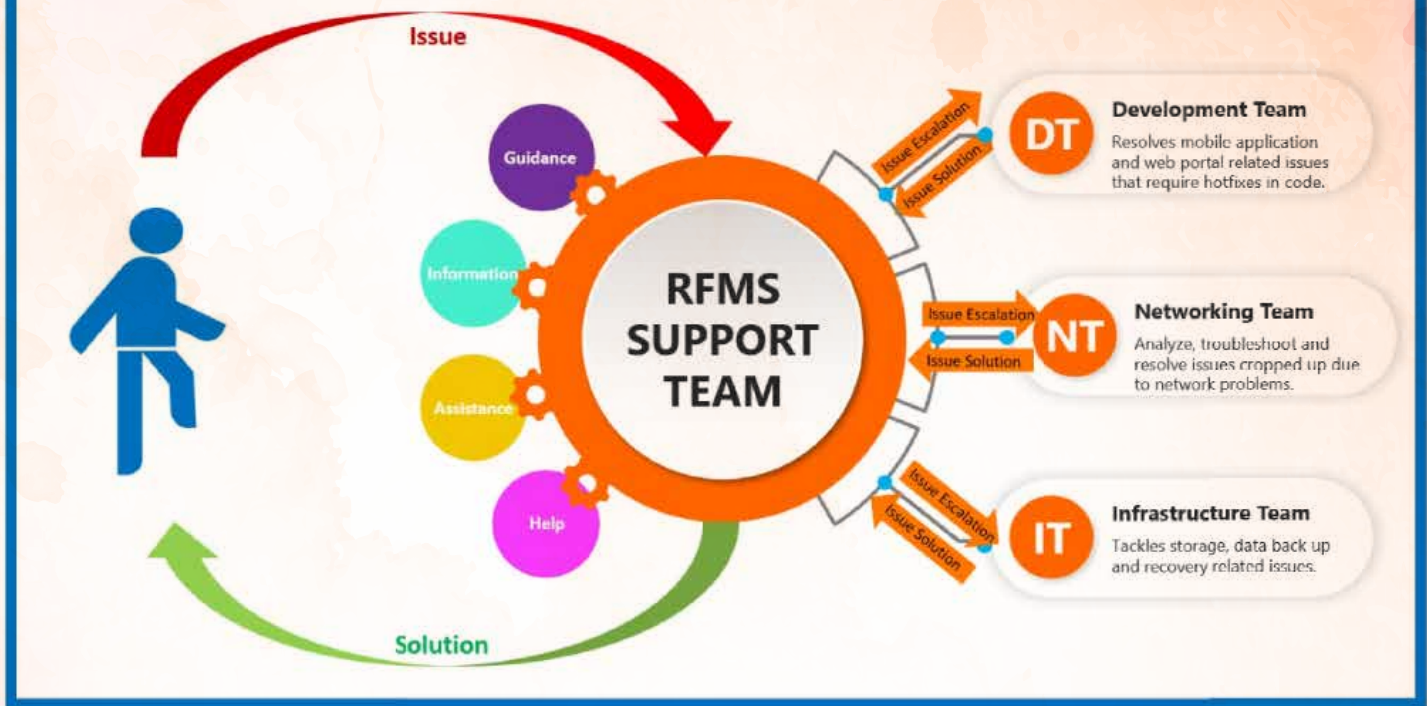
All supply officers of DISCOMs are entrusted with powers of inspections, raids, subsequent FIR against unlawful usage of electricity and final recovery in their jurisdiction. Not just record keeping of all FIRs but (more than 62,253 in 2023 itself) updating them in billing systems for standard performance analysis is a challenge in itself, also handling counter allegations from consumers against officers while performing their company duties is a serious issue. Energy accounting & auditing team of BSPHCL closely studied the entire end to end process and identified bottlenecks which laid the foundation for the need of a standardized IT solution with utmost transparency and focuses on improving recovery percentage.

Raid & FIR Management System (RFMS) is an integrated online solution which is set to replace all manual and fragmented processes from inspection to payment. Inspections at consumer premises are initiated through STF Application and redirected to RFMS portal in case of theft being recorded. Necessary evidences (Audio / Video / Documents) and FIR details are uploaded on this portal against individual consumers. Archiving & data repository is designed for easy search, accessing all relevant data & documentation for long legal processes with support from empanelled legal support. Prompt information through SMS for inspection, theft penalty assessment to occupant as well as registered mobile number ensures transparency and helps officers on duty to get away from unnecessary allegations. Payment against penalty imposed along with units charged is now linked directly to the billing servers and is updated suitably for monthly performance analysis.



This system is also linked with GIS application to effectively monitor and analyse energy theft levels in different regions and hence allow energy accounting & auditing team of BSPHCL to devise efficient measures to curb such thefts at grassroot level. The GIS mapping is integrated up to Thana level to successfully track more theft prone areas where most RAID/FIRs have been registered. To ensure its efficacious success, a dedicated "War-Room for RFMS has also been created where a group of skilled specialists is assigned to collaborate on project's complexity, specific requirements and deadlines. The team is dedicated to timely identify any potential issue, understand its impact on the system and take action to work toward a resolution.

RFMS TECHNICAL SUPPORT SYSTEM



This innovative administrative tool also enhances consumer liberty. Now, the fine amount may be deposited sitting anywhere round the world through online modes available separately on company's website. Arrear, compounding & punitive amount is visible to consumers for transparency and hassle-free access of information. SMS of receipt is promptly shared with the concerned. These features of digital transformation to improve ease of living & imbibe trust among the consumers, is inspired by one of the "T's in the Triple T Mantra of sustainability of DISCOMs preached by Sri Sanjeev Hans, CMD BSPHCL.



One of its kind e-governance tool leveraging digital transformation, developed indigenously by the internal IT Team of DISCOMs, with handy & elaborate features of archival Effective monitoring and transparency under RFMS has been appreciated by neighbouring state Jharkhand and they have expressed keen interest in adopting the same for their state as well.



Box Cricket

“An Unleashing Team Spirit”

> *Introduction:*

In a bid to foster camaraderie, teamwork, and a healthy dose of competition, our organization recently organized a Box Cricket Tournament that brought employees together from various departments for an exhilarating sporting experience. The tournament not only provided a platform for employees to showcase their cricketing skills but also served as a refreshing break from the routine work environment.

> *Setting the Stage:*

The idea of organizing a box cricket tournament stemmed from the desire to promote a sense of unity and team spirit among employees. The excitement in the air was palpable at Urja Turf as teams eagerly awaited the commencement of the tournament.

> *Team Formation:*

To encourage cross - departmental interaction, teams were formed with members from different departments, ensuring a diverse mix of skills and expertise. This not only provided an opportunity for employees to collaborate outside of their usual work settings but also facilitated the creation of stronger professional bonds.

> *Rules and Regulations:*

The Box Cricket Tournament followed a modified set of rules to suit the confined space and ensure fast-paced, entertaining matches. Each team consisted of 8 players in which two women members must be included in each team and matches were played in a 10-over format. The tournament adopted a round-robin structure, followed by knockout rounds leading to the grand finale. This format allowed for maximum participation and kept the competition intense.

> *Excitement and Enthusiasm:*

The tournament generated a remarkable level of enthusiasm among participants, with catchy team names like

1. Terrific Transformers	9. Leading Ledgers
2. Blasting Breakers	10. Cool Computers
3. File Flyers	11. Roaring Relays
4. Wild wires	12. Towering Towers
5. Jumping Jumpers	13. Gaint Generators
6. Powers Loaders	14. Twinkling Tallies
7. Intelligent Isolaters	15. Lighting Arrestors
8. Mega Monitors	16. Cracking Conductors

The matches were fiercely contested, showcasing not only cricketing talent but also the strategic prowess of the players. Spectators, including non-participating colleagues, cheered enthusiastically from the sidelines, adding to the electric atmosphere.

The thrilling finale match was won by Intelligent Isolaters defeating Blasting Breakers.





The Bihar Solar Show

“ A step to promote Renewable Energy ”

Bihar has huge investment potential in the Renewable Energy sector, promising a bright future for investors in the state. With a view to promote investment opportunities and explore the possibilities that is aligned with India's commitment to achieve net zero carbon emissions by 2070 and generate 50% of its electricity from renewable sources by 2030, Bihar Solar Show (BSS) was organised on 10th February 2024 in Vidyut Bhawan - III, Patna.

The Solar Show was organised by the Indian Chamber of Commerce (ICC) in association with Energy Department, GoB and Bihar Renewable Energy Development Agency (BREDA). The meet saw convergence of senior Bihar government officials, solar energy investors, industry experts and other stakeholders. While welcoming the participants, Hon'ble Energy Minister of Bihar Shri Bijendra Prasad Yadav stated that, “the state is bifurcated by the river Ganga into north and south parts. While North Bihar has abundant water resources, South Bihar has huge scope for solar energy and our enabling policies and single-window clearance system encourage the investors to invest in Bihar.”

There are three basic requirements for setting up the industries – land, water and electricity – are available in plenty in Bihar. The state has 3000 acres of industrial land bank; 24 lakh square feet of plug and play facility on low monthly rental; 75 Industrial Areas with good water and power supply and 1,176 functional units on BIADA land.

Moreover, Bihar is witnessing huge transformation with third highest GSDP growth rate during the fiscal year 2021-2022 and is recording growth of 10.9% as against the national growth of 8.75%. Detailing the key benefits of investment in the State. Bihar offers 2% price preference for medium and large units, besides 7% price preference to small and micro units registered in Bihar. Serving a consumer base of 190 lakh, Bihar offers sunshine opportunities to investors, which is sized at Rs 23,886 crores. The break-up of investments that the state offers is approx Rs.10,558 crores investment in Solar Modules; Rs 4,040 crores investment in Inverter; Rs.2,313 crores in Electric Cables; Rs.1,200 crores Li-Battery and Rs.5,775 crores for essential accessories. Bihar's energy requirement is 38,053 MU. We should aim at maximising sourcing the energy from renewable sources. The second RE Policy is in the pipeline which will further open the avenues for investment related to Renewable Energy.





The state offers Industry-friendly Tariff Policy in the state, Our Time of Day (ToD) tariff structure; Load Factor (LF) incentives for HT Industries on Energy Charges for total consumption; Gross and Net Metering policy and Demand-based tariff, are pro industry that promote the investment.



Bihar is creating an enabling ecosystem for RE investments in the State. Our policies are investor-friendly and also we are exploring new destinations where solar installations could be made. Bihar's govt has set a target to have renewable energy account of 40% of the total power consumption by 2030-31. In the show, four rounds of technical sessions were also held in which industry experts deliberated on challenges and opportunities in Bihar while inviting the investors to put investment in the State. The show concluded with a hope that investors will make Bihar a manufacturing hub for solar industry inputs that has a promising future.



Grievance Redressal through Social Media

● BSPHCL harnesses digital platforms for resolving grievances of consumers :-

In the digital era, social media has emerged as a powerful tool for communication and connectivity. Among its many applications, its role in Grievance Redressal has become a game-changer, providing consumers with a dynamic platform to voice their concerns and seek resolutions.

The Bihar State Power Holding Company Limited (BSPHCL) has leveraged digital media, utilising social media to enhance its Grievance Redressal system and foster a two-way communication channel.

➤ *Two-ways interaction with consumers:-*

Under the visionary leadership of Chairman-cum-Managing Director Shri Sanjeev Hans, BSPHCL has institutionalised Grievance Redressal. According to him, "The Grievance Redressal has not only scaled up services but has also bridged communication gaps. "The Grievance Redressal is managed by a dedicated team.

➤ *Categorisation of complaints:-*


Complaints land on our social media handles like @BiharEnergy, @SEVA_NBPDCL, and @SEVA_SBPDCCL. The complaints span a range of issues such as timely connections and billing discrepancies, fuse calls, pole-wire problems, and repair or replacement of transformers. In supervision of HQ Officials, the team after receiving complaints, meticulously categorises them based on urgency and promptly engages with the engineers concerned. This proactive approach ensures that consumer grievances are addressed at the earliest.



Acknowledgment and transparency

Expressing gratitude for swift resolutions, consumers often flood social media with 'Thank You' messages, reflecting the success of BSPHCL's Grievance Redressal system. A uniform hashtag, #BSPHCL_Cares, is used to respond to all grievances, creating a consistent and easily identifiable platform. By leveraging the power of social media, BSPHCL has transformed the management of grievances into a seamless and transparent process.

The digital age demands adaptability, and BSPHCL has demonstrated its commitment to customer satisfaction by embracing social media for Grievance Redressal. This approach not only addresses consumer's concerns efficiently but also enhances transparency, turning complaints into opportunities for positive interaction.



South Bihar Power Distributi... · 6d

Replying to @elegiantshashi

Spot bill generated on actual reading. However consumer can use Suvidha App for self billing in case reading not taken by Meter reader during spot billing.

#BSPHCL_Cares

BSPHCL		बिहार बिजल वितरण निगम लिमिटेड	
Spot Bill			
Customer No.	123456789	Consumer No.	987654321
Area	Patna	Block	Shadei
Subdivision	Mahnar	Phase	Phase 1
Bill No.	123456789	Bill Date	15-06-2022
Reading	12345	Rate	10.00
Amount	12345.00	Due Date	20-06-2022

raushan sahu @raushansah... · 16 Jun

Replying to @BiharEnergy @EnergyBihar and 7 others

District-Vaishali
Block-shadei
Subdivision-Mahnar
Fault at pole, current not coming at meter end.
Complain no-001008291245



North Bihar Power Distribu... · 21 Jun

Replying to @raushansahu12 @BiharEnergy and 7 others

Your concern is being looked into. We appreciate your patience.

#BSPHCL_Cares



raushan sahu @raushansahu12

Follow

Replying to @SEVA_NBPDC @BiharEnergy and 7 others

Thanks for your corporation and solving my issue.


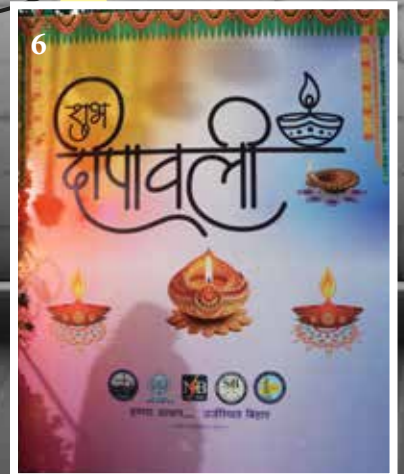


Photo Gallery



>> 1, 2, 3. Foundation Day Celebration 2023
>> 4, 5, 6. Diwali 2023





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>> 7, 8, 9. Urja Carnival 2023
>> 10, 11, 12. Site Inspections, Field Visits & Meetings



12



13



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>> 13, 14, 15. BSPHCL Eye Check-Up Camp at Board Colony

>> 16, 17, 18. Training at Art Gallery



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>> 19, 20. Jal Jeevan Hariyali Diwas 2024

>> 21, 22, 23. Pension Camp 2024



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>> 24, 25. Mural Paintings at Vidut Bhawan

>> 26, 27, 28, 29, 30. Amenities at Vidut Bhawan



>> 31, 32, 33. BSPHCL Participation at Bihar Business Connect 2023

>> 34. SBPDCL Stall at Sonpur Mela 2023

>> 35. Visit of Nepal Delegates to office

>> 36. Consumer Complaints Disposal Unit





37



38



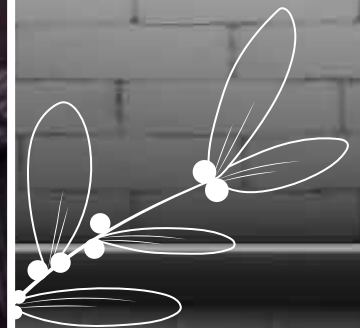
39

>> 37, 38. Visit of Delegates from LOS Angeles



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>> 39, 40. DISCOMs Participation at Prakash Parv





41

>> 41. Visit of Chairman & Ex- officio Secretary , Govt. of India, CEA



42

>> 42. Team Urjasvini

BID ADIEU



Rajesh Kumar
P.P.S, GM(Rev. Cell)
NBPDCCL



Radha Ramana Kamat
Faras, BSPHCL



Radhe Shyam Prasad
PPS, BSPHCL



Kashi Nath Verma
Attendant, BSPHCL



Jay Shankar Prasad,
Under Secretary, NBPDCCL



Mohan Kumar Srivastava
Under Secretary, SBPDCL



Mithilesh Kumar Sinha
Under Secretary, SBPDCL



Ram Awadh Prasad
Security Hawaldar,
BSPHCL



Arun Kumar Verma
S.O, SBPDCL



SATISH KUMAR JHA
OS, BSPGCL

Media Clips

BSLDC gets 'LDC Excellence Award'

Madan.Kumar@timesgroup.com

Patna: The Bihar State Load Dispatch Centre (BSLDC) on Monday clinched the prestigious 'LDC Excellence Award' in a national competition. The award was instituted in 2020 by Grid India and Load Despatcher Forum.

Grid India's CMD S R Narsimhan, IIT-Delhi director Ranjan Banerjee, and Central Electricity Authority's member A K Rajput jointly gave away the 'LDC Excellence Award' to the managing director (MD) of North Bihar Power Distribution Company Limited Aditya Prakash at the third LDC Excellence Award-2023 ceremony held at IIT-Delhi on Monday.

The BSLDC was given the award for its excellence in providing reliable and efficient power supply to the state.



BSLDC members receive the award

"The BSPHCL is adopting new-age and state-of-the-art technologies that give an edge in quality power supply

SANJEEV HANS
BSPHCL's chairman-cum-MD

agement," he said.

Bihar SLDC is amongst the first SLDCs to establish a state-of-the-art Next-Gen Cyber Security Operation Centre. "Bihar has deployed more than 4,100 ABT (availability based tariff) meters integrated with SAM-AST (Scheduling Accounting Metering And Settlement of Transaction)

निर्बाध बिजली मिलने में कोई समस्या नहीं

राज्य ब्यूरो, पटना: बिहार स्टेट पावर होल्डिंग कंपनी में शुक्रवार को दीपोत्सव मनाया गया। इस मौके पर बिजली कंपनी के सीएमडी संजीव हंस ने कहा कि निर्बाध बिजली मिलने में कोई समस्या नहीं। इसके लिए सभी विद्युत उपकेंद्रों के मॉटेनेंस का काम पूरा कर लिया गया है। संजीव हंस ने कहा कि उपभोक्ताओं से वह यह अपील करते हैं कि बिजली का दुरुपयोग न करें।



Bihar Roundtable sparks investor's interest in power, Renewable Energy sectors

Patna: A roundtable discussion on the power and renewable energy sectors in Bihar, organized by the Bihar State Power Corporation Limited (BSPHCL) and the Bihar State Investment Promotion Board (BSIPB), was held on Monday. The event was attended by several investors and officials from the government and private sectors.



ऊर्जा और उद्योग विभाग की 70 इंटरनैट्रिक के साथ ग्लोबलमेज वर्कअपले पांच साल में ₹49 हजार करोड़ निवेश करेगा ऊर्जा विभाग

आपूर्तिकर्ता बिहार में ही उपकरण बनाएंगे

राज्य में अक्षय ऊर्जा को बढ़ावा देने के लिए एंड्रियुम चेंबर ऑफ कॉमर्स (एईसीसी) और ऊर्जा विभाग की ओर से शनिवार को विस्तृत भवन मुद्रास्थलप में बिहार सोलर शो-पटना का आयोजन किया गया। ऊर्जा मंत्री विवेक प्रसाद ने कहा कि बिहार में ऊर्जा के क्षेत्र में अग्रिम स्तम्भना है। इसके बिना बिहार की कल्पना नहीं की जा सकती।

ऊर्जा मंत्री ने कहा- निवेशकों की हर तरह से मदद के लिए सरकार तैयार राज्य में अक्षय ऊर्जा के क्षेत्र में 23 हजार करोड़ के निवेश का अवसर

राज्य में अक्षय ऊर्जा को बढ़ावा देने के लिए एंड्रियुम चेंबर ऑफ कॉमर्स (एईसीसी) और ऊर्जा विभाग की ओर से शनिवार को विस्तृत भवन मुद्रास्थलप में बिहार सोलर शो-पटना का आयोजन किया गया। ऊर्जा मंत्री विवेक प्रसाद ने कहा कि बिहार में ऊर्जा के क्षेत्र में अग्रिम स्तम्भना है। इसके बिना बिहार की कल्पना नहीं की जा सकती।

दिसंबर से दक्षिण बिहार में लगेगा प्रीपेड मीटर

राज्य ब्यूरो, पटना: दक्षिण बिहार के प्रमुख शहरों में नवंबर 30 से प्रीपेड मीटर लगाने के कार्य में अग्रिम प्रगति देखी जा रही है। 35.10 लाख प्रीपेड मीटर दक्षिण बिहार में लगाने की योजना है। इसका अर्थ है कि दिसंबर से दक्षिण बिहार में प्रीपेड मीटर लगाने का काम शुरू होगा।

सीएम के निर्देश पर एक्शन में आया ऊर्जा विभाग

राज्य ब्यूरो, पटना: ऊर्जा विभाग के अध्यक्ष विवेक प्रसाद ने कहा कि बिहार में ऊर्जा के क्षेत्र में अग्रिम स्तम्भना है। इसके बिना बिहार की कल्पना नहीं की जा सकती।

Bihar State Power Holding Company Limited @BiharEnergy

A good news to share as 2023 draws to a close.

Bihar State Load Dispatch Centre has clinched 'LDC Excellence Award'.

The award recognises Bihar SLDC's excellence in ensuring integrated operation of power system in #Bihar through adoption of new technologies.



Energy Department Govt. of Bihar and 6 others

7:43 PM · Dec 18, 2023 · 1,159 Views

2 19 31

Bihar State Power Holding Company Limited @BiharEnergy

We have robust power infrastructure to support industrial investments in #Bihar. This year, we supplied over 7500 MW to our consumers, and we are poised to enhance transmission capacity further – Shri Bijendra Prasad Yadav, Energy Minister, Bihar

#BiharBusinessConnect



Energy Department Govt. of Bihar and 6 others

6:32 PM · Dec 13, 2023 · 2,248 Views

2 26 47

Bihar State Power Holding Company Limited @BiharEnergy

बिहार स्टेट लोड डिस्पैच सेंटर को नई दिल्ली में 3rd LDC Excellence Award 2023 में मिले पुरस्कार के उपलक्ष्य में बिहार एसएलडीसी की टीम को CMD श्री @sanjeev_hans97, IAS द्वारा विद्युत भवन, पटना में आयोजित एक कार्यक्रम में प्रशस्ति पत्र दे कर सम्मानित किया गया।

इस दौरान @SEVA_NBPDCL के MD श्री डॉ. आदित्य प्रकाश भी मौजूद थे।

तस्वीरें
Translate post



Energy Department Govt. of Bihar and 6 others

7:08 PM · Dec 20, 2023 · 1,254 Views

2 17 50

Bihar State Power Holding Company Limited @BiharEnergy

Electricity powers machines that propel growth!

We are delighted to be present at #BiharBusinessConnect2023 to guide participating investors on ease of getting High Tension (HT) connections.

Our Team is guiding visitors on ways of getting connection & different Govt schemes.



Energy Department Govt. of Bihar and 6 others

8:05 PM · Dec 13, 2023 · 590 Views

1 9 22

Social Media Corner

Bihar State Power Holding Company Limited @BiharEnergy

Taking forward the virtual dialogue with Los Angeles Department of Water & Power (LADWP), experts from Center For Strategic & International Studies (CSIS), including Shri @akshatco & Shri @RichardRossow, held deliberations chaired by CMD Shri @sanjeev_hans97, IAS.

@LADWP @CSIS

Energy Department Govt. of Bihar and 6 others

7:28 PM · Jan 25, 2024 · 1,787 Views

Bihar State Power Holding Company Limited @BiharEnergy

ज्ञान भवन, घटना में आयोजित दो दिवसीय 'बिहार बिजनेस कनेक्ट 2023' के दूसरे दिन माननीय मुख्यमंत्री श्री @NitishKumar जी ने आज #BSPHCL द्वारा लगाए गए स्टॉल का निरीक्षण किया।

@IndustriesBihar

#BiharBusinessConnect #InvestBihar

Translate post

Energy Department Govt. of Bihar and 7 others

5:22 PM · Dec 14, 2023 · 1,980 Views

Bihar State Power Holding Company Limited @BiharEnergy

Glimpses of BOLD (Behavioural Organised Lawful Decision Making) training held at DCR Building, Purnia, on January 9, 2024.

The session was conducted under the leadership of Shri PN Mishra, Advisor, Energy Accounting & Audit, #BSPHCL.

ESE Supply, ESE (STF), and all EEes, AEEs and JEEs from Purnia and Kishanganj circles participated in the program that aimed at empowering the team with ethical practices.

Energy Department Govt. of Bihar and 6 others

12:00 PM · Jan 13, 2024 · 1,492 Views

Bihar State Power Transmission Company Ltd @BSPHCL

Happy to share that our Project BMS&T (Scheduling, Accounting, Billing & Settlement of Transactions in Excel/SQL) has made it to the Voting Round of the prestigious SKOCH Award by @skochgroup.

Go to <https://www.skochgroup.com/india/Sections/17.html>

Voting Phases

Energy Department Govt. of Bihar and 6 others

10:58 PM · Dec 29, 2023 · 1,079 Views

Bihar State Power Transmission Company Ltd @BSPHCL

बिहार बिजनेस कनेक्ट 2023 का दूसरा दिन, बिहार में आयोजित 200 क्विंटल बिजनेस कनेक्ट कार्यक्रम का सफल समापन हुआ। बिहार बिजनेस कनेक्ट 2023 का दूसरा दिन, बिहार में आयोजित 200 क्विंटल बिजनेस कनेक्ट कार्यक्रम का सफल समापन हुआ। बिहार बिजनेस कनेक्ट 2023 का दूसरा दिन, बिहार में आयोजित 200 क्विंटल बिजनेस कनेक्ट कार्यक्रम का सफल समापन हुआ।

Energy Department Govt. of Bihar and 6 others

7:53 AM · Jan 15, 2024 · 479 Views



हमारा आधार, ऊर्जास्वित बिहार