

Digitalization of Electricity Utility in South Asia: Regulator's Perspective



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Why Digitalization of Utilities?



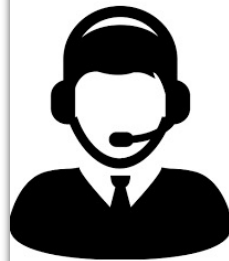
Predictability in management of electrical networks



Reduction of operational expenses



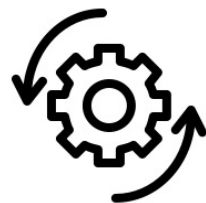
Make decision making process more informed



Improve customer service experience and self-service



Survive resulting competition because of Distributed Energy Resources dependent changing pricing scenario

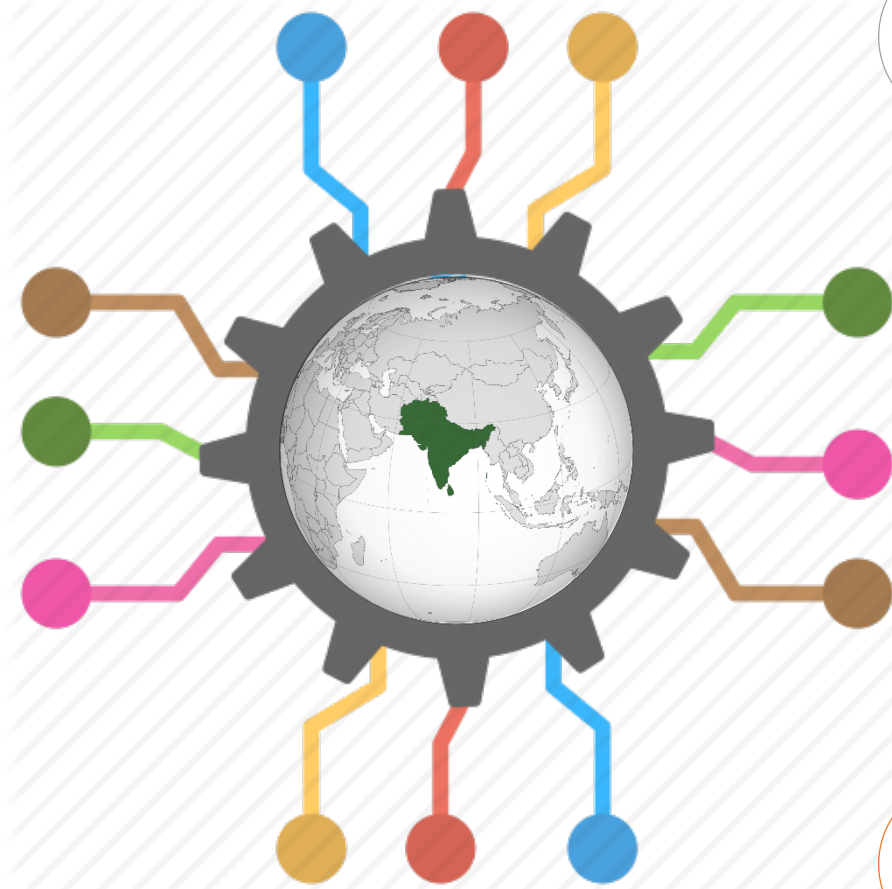


Increase operational efficiency and reduce energy theft

Conservative estimates supported by analysis of real-life cases suggest that digital optimization can boost profitability by 20 to 30 percent¹

¹ Booth, A., Mohr, N. and Peters, P. (2016). The digital utility: New opportunities and challenges.
<https://www.mckinsey.com/industries/electric-power-and-natural-gas/our-insights/the-digital-utility-new-opportunities-and-challenges#>

Benefits of a Digitalized Regulator



Effective mechanism for consumer grievances handling and ensuring regulatory compliance, dispute settlement with the help of e-Court



Misplacement and mis-filing of documents is prevented



Lower human resource requirement and related expenses



Greater understanding of the application process for the applicant



Faster service delivery and increased transparency



Efficiency in space, cost and resource in comparison to traditional filing



Motivation for the Utilities to embrace the digital – “Leading by Example”

Digital Regulator to Regulate Digital Electricity Utilities



Rationale

- Digital Utilities must be regulated by a capable and “digital” regulator
- Utilities’ shift towards the digital impacts the consumer, and thus, is of concern to the regulator

Features

- In Nepal, large number of generation licensees exist, whose regulation is made difficult by paper-based system
- The sector has gained a certain level of maturity in the absence of a digitalized regulator

Challenges

- To scrutinize, manage and archive the volume of petitions
- To ascertain that the sector is educated about the role of regulator

Solutions

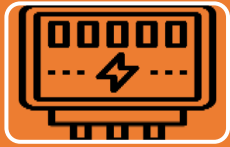
- Digital operation of systems
- A web-based regulatory information management system
- E-Court/grievance handling mechanism
- Digital strategy and IT roadmap
- E-Hearings
- Communication strategies

What utility should do? Regulator's Expectation



Activities	Regulator's Perspective
LDC shares live generation data of power plants	Good Governance
Power producer uses SCADA to monitor power plant generation process	Least-cost Planning/ Economic and Technical Regulation
Nepal Electricity Authority (DISCOM) installs smart meters	
Automation of Grid substations	
Central Data Storage and Online Monitoring System in Substations	
Establishment of Distribution Command and Control Center and Data Center	
Implementation of AMR (Automatic Meter Reading) and ERP	Enhancement of Organizational Capacity and Governance
Online conference/meeting for connection of all power houses and branch offices of DISCOM via intranet system	
Various software applications for account inventory system, payroll, pension, asset management, consumption analysis system, etc.	Consumer Rights Protection
Scheduled interruption and shutdown notice dissipation via Website and e media	
Online Bill Payment System through M-Power Billing and digital banking system	
Digital Strategy and Implementation Road Map of ERC and DISCOM	Transparency and cost saving
Regulatory Information Management System	
Dispute Resolution through e-Court	Effective Dispute Resolution

Digitalization of Electricity Sector- ERC's Perspective



Continuation towards establishment of necessary digital infrastructure



Develop web platforms for enhancing consumer service and experience



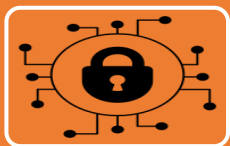
Development of necessary regulatory instruments and principles



Enable Utilities to rethink the business model by keeping consumers in the center



Rethink the organizational structure and human resource management



Focus on resilience and cybersecurity of the digital infrastructure



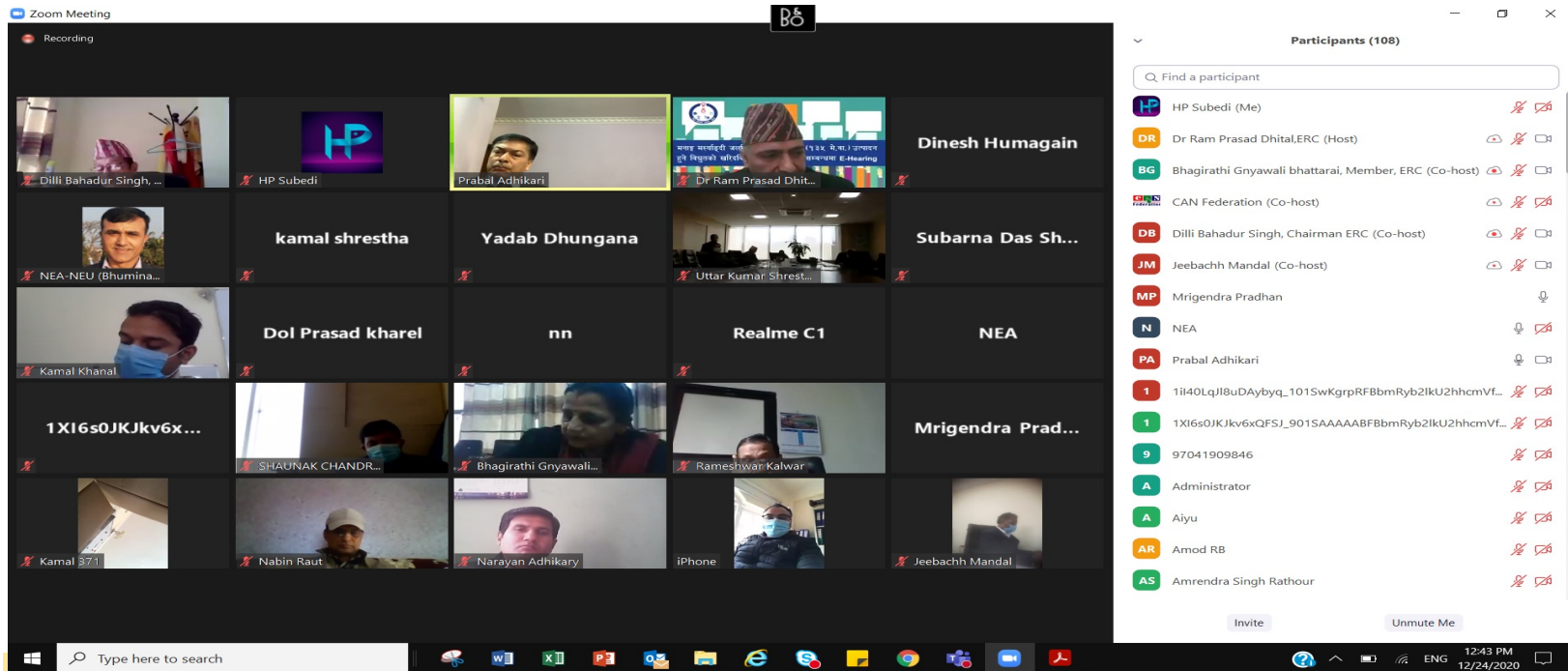
Allow appropriate time for transition and avoid shock



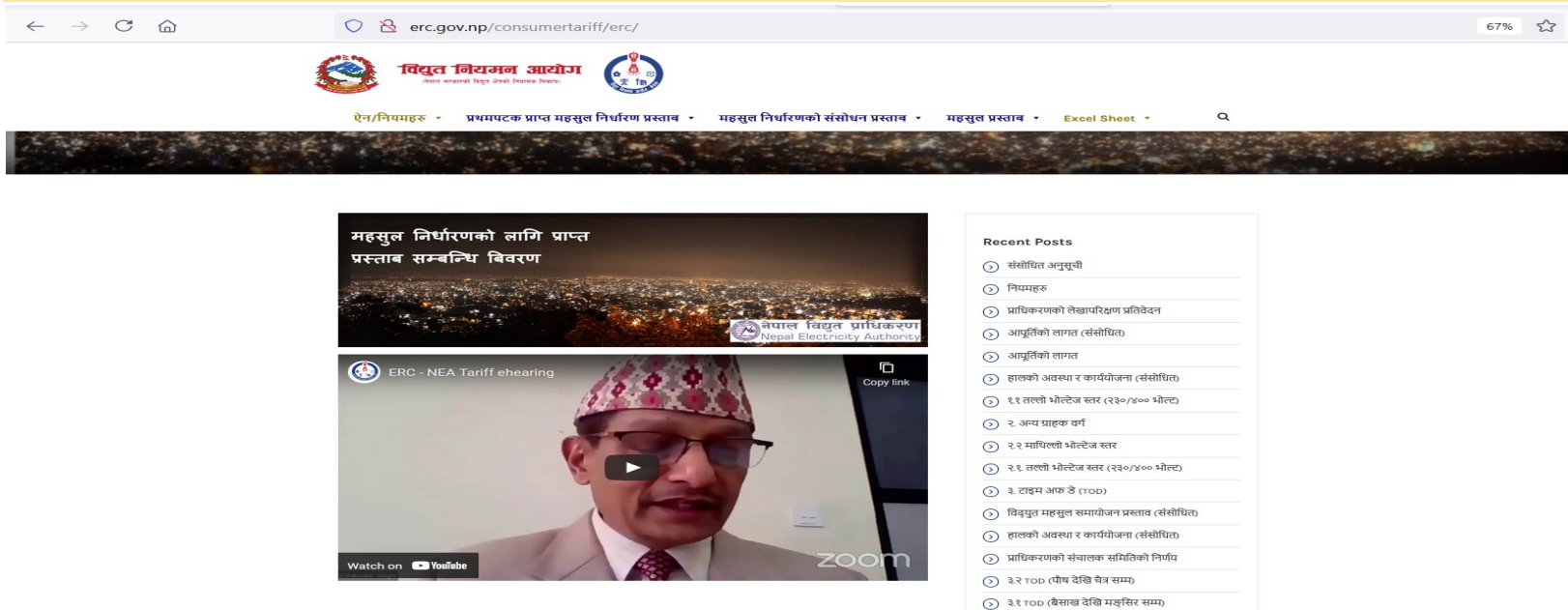
Control tendency to overinvest by utilities

**Perceive
digitalization as
means and not
the goal**

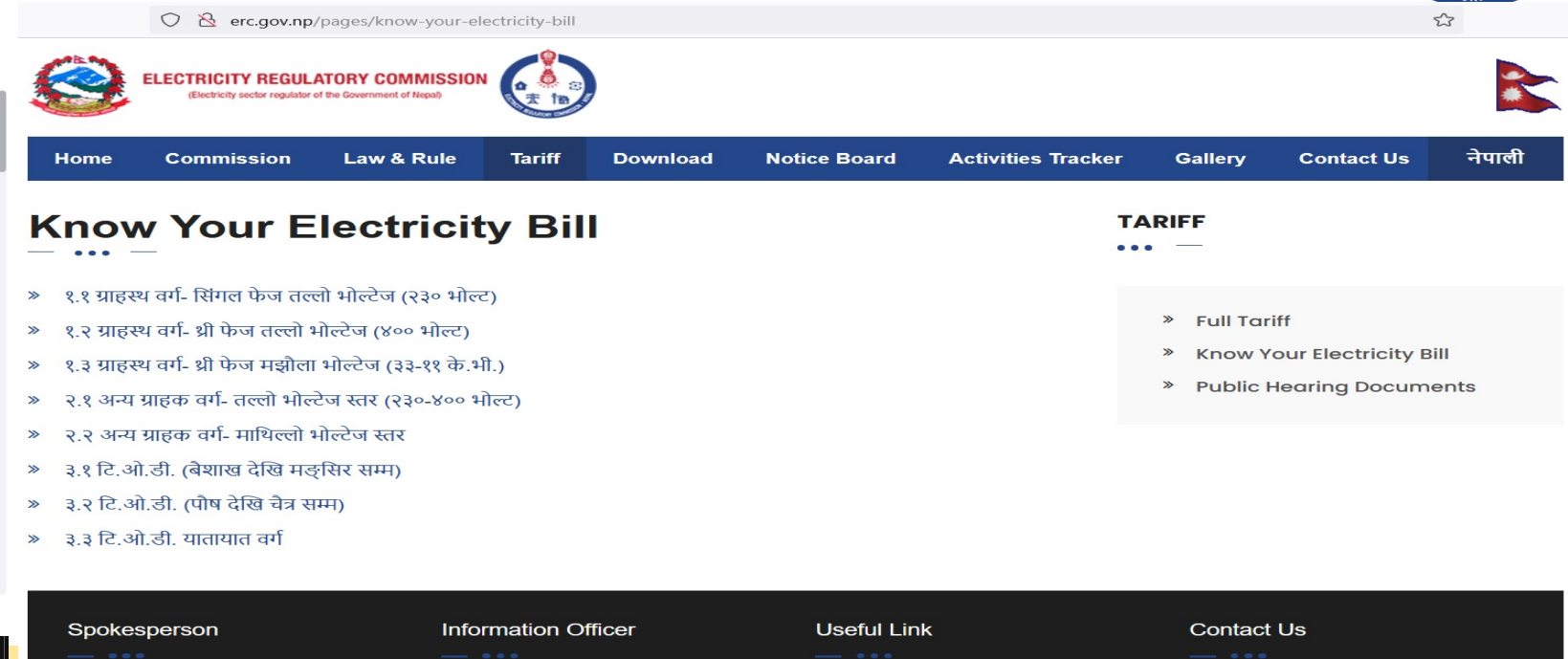
Digitalization: ERC's Success Story During COVID



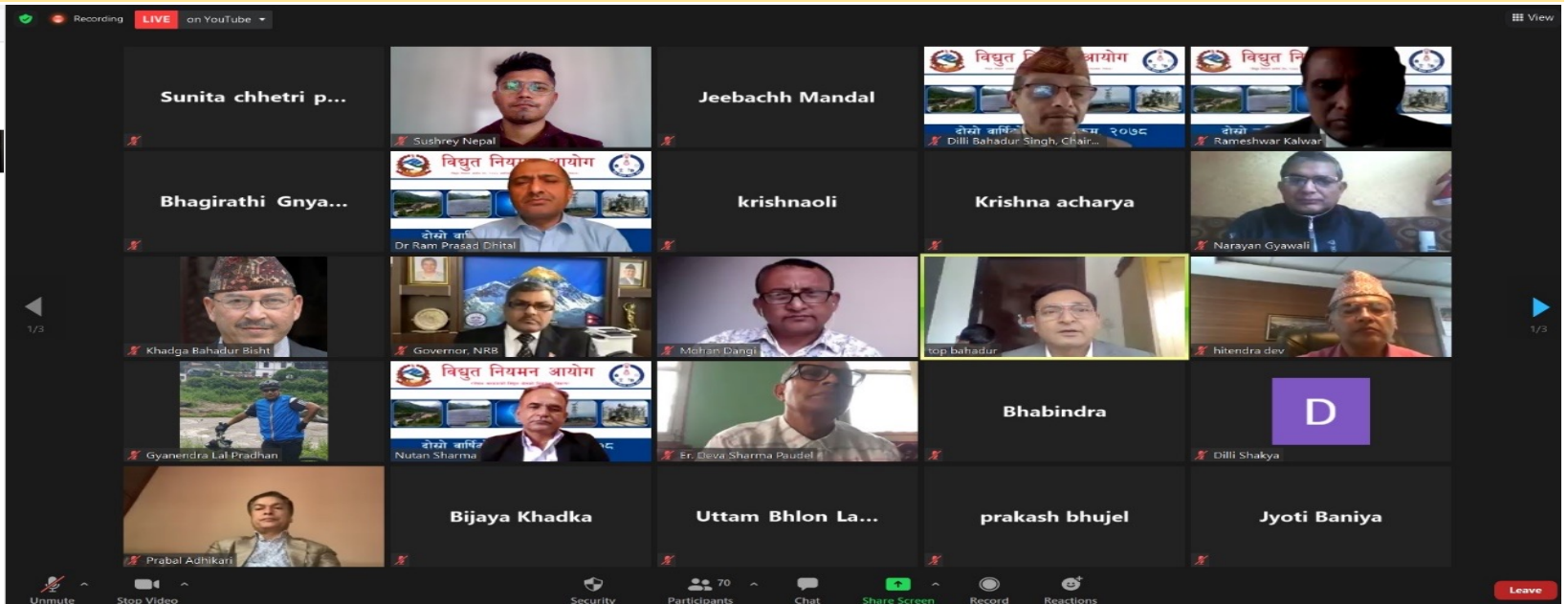
Organized public hearing through e-platform



Dedicated web portal for Retail Tariff Petition



Calculation of Retail Tariff at ERC's Website



Remotely celebrated Second Annual Day of ERC

Thank you very much for listening to me !

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