



USAID
FROM THE AMERICAN PEOPLE

USAID-Funded Nepal Hydropower Development Project (NHDP)

ROLE AND IMPORTANCE OF NEPAL'S ELECTRICITY REGULATORY COMMISSION

Hari Prasad Subedi

Electricity Sector Financial Specialist

11 June 2019

This document was prepared for the United States Agency for International Development Nepal (USAID/Nepal) by Deloitte Consulting LLP on Contract No. AID-367-TO-15-00003. The contents are not the responsibility of USAID, and do not necessarily reflect the views of the United States Government.

Contents

- What is Regulation
- Why is Regulation a Better Idea? What Does a Regulator Do?
- Discuss Recent Events
- The Role of the Regulator in Nepal
- Overview of Nepal's Electricity Regulatory Commission
- Action Plan for the Commission
- Summary

What is Regulation?

What is regulation?

- In the context of electricity utilities, regulation refers to the supervision and oversight exercised on the utilities through a well defined regulatory framework, supported by legal powers, so as to ensure that interest of all relevant stakeholders are protected in an efficient and socially beneficial manner.
- Regulation is undertaken by institutions which may be named differently in different jurisdictions; such as electricity regulatory commissions (India, Bangladesh), regulatory authorities (Pakistan, Bhutan), public utility commissions (Sri Lanka) etc.
- Under regulation, utilities are given the opportunity to recover their costs and also earn a “fair and reasonable” return on their investments. In certain scenarios such as overachievement of targets, they may also be allowed to make additional profit.
- Apart from regulation of costs and tariffs, regulators serve as watchdogs to ensure that utilities are responsive to customers’ needs, and that their service is adequate and reliable.

Key players and their roles in regulatory framework

| Government | Regulator | Utility | Consumers |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Formulate policies, laws and guidelines | Issue regulations, guidelines, rulings / orders Undertake licensing, dispute resolution, market monitoring etc. | Comply with directives of regulator File tariff petition / rate case to regulator Provide updates / information required by the regulator | Participate in public hearings and respond to relevant public notices Present the case of consumers before the Commission directly or through associations |

Why is Regulation a Better Idea? What Does a Regulator Do?

Nepal's New Regulator

- In August 2017, after 20 years of effort, Nepal passed an act to establish the Electricity Regulation Commission of Nepal
- This establishment of a regulatory body marks the beginning of a new era in Nepal Hydropower and Electricity Sector Development

Why?

***Because Independent Regulation is
a Better Idea***

Why do we need a Regulator?

- **To limit monopoly power**

- Public utilities are natural monopolies

- Think infrastructure like roads, ports, airports, networks operating on wires and pipelines
- NEA is a natural monopoly

- Monopolies control

- market access
- prices
- service quality

- NEA, a government monopoly, has even more power

- When monopolies flourish, customers suffer—monopolies have no incentive to compete, to work hard, or to provide better services.

- Only competition on volume, price, and quality can improve the situation. But in natural monopolies, competition is limited.

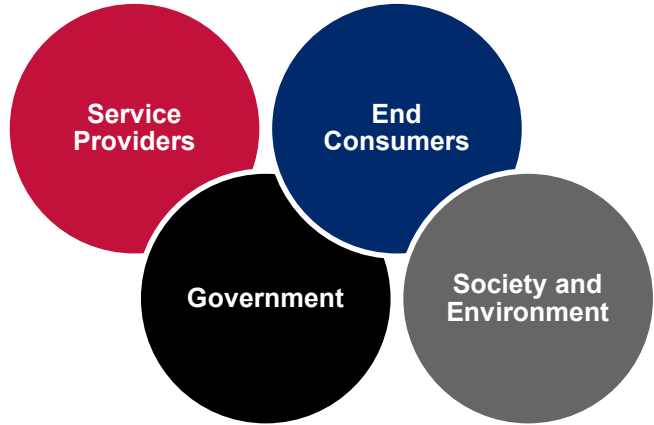
Why do we need a Regulator?

- To protect the interests of all Stakeholders, weak and strong
 - The government (the owner of state owned assets)
 - Private Investors in Independent Power Projects (IPPs)
 - Service providers (NEA and IPPs)
 - Customers
- Customers are the most vulnerable of all stakeholders. They cannot protect themselves from the much stronger government and state-owned utility
- Customers are principally interested in a sufficient supply of electricity at reasonable prices, and reasonable customer services (connections, recovery from outages, etc.)

Regulatory Tasks

- **Operate Transparently**
- **Protect Principal Stakeholders**
 - GoN
 - NEA
 - Consumers
 - Protect Environment
- **Promote competition**
- **Protect Environment**

Key stakeholders for a regulator

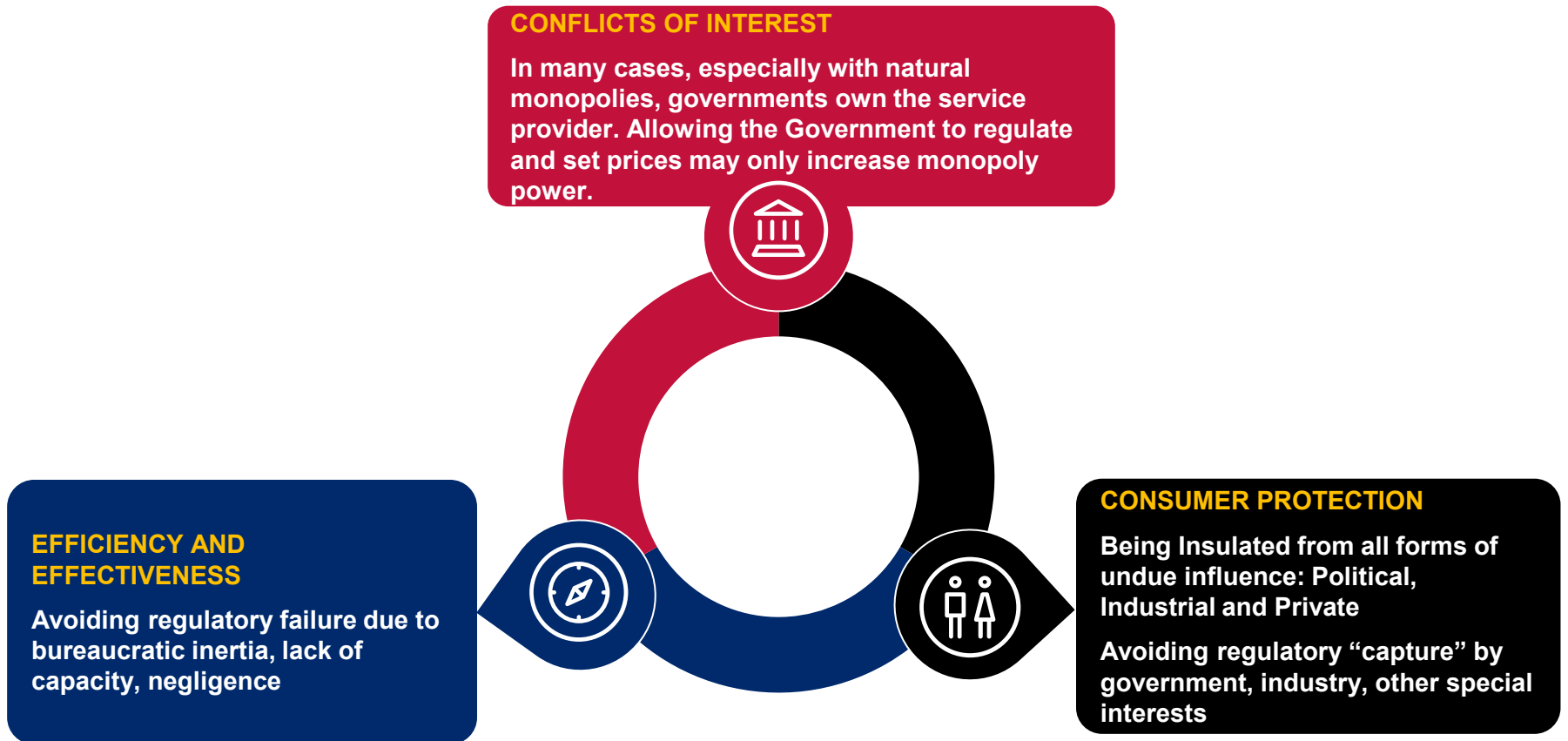


Principal activities of a regulator

-  Access to markets - Licensing
-  Pricing - Tariffs and fees
-  Prevent abuse of monopoly power – Service standards
-  Resolution of disputes and technical issues

Role of independent regulation

- Independent regulators as institutions are much better suited than the government to be the economic regulator of network infrastructure industries (think water utilities, telecoms, electricity).



Recent Events

Appointment of Chairperson and Members

- Government of Nepal appointed the Chairperson and Members of the Commission on 08 May 2019.
- **Chairperson**
 - **Dilli Bahadur Singh** *Former Director General of Department of Electricity Development*
- **Members**
 - **Dr. Ram Prasad Dhital** *Former Executive Director of Alternative Energy Promotion Centre*
 - **Rameshwor Prasad Kalwar** *Former executive director of Nepal Electricity Authority*
 - **Bhagirathi Gyawali** *Former Member, Water Tariff Fixation Commission*
 - **Ram Krishna Khatiwada** *Former Consultant at Investment Board of Nepal*
- Currently, the Commission is working from the office of Department of Electricity Development (DOED).

Division of Role of Members

erc.gov.np/np



विद्युत नियमन आयोग
Electricity Regulation Commission



गृह पृष्ठ आयोग कानून तथा नियम महसुल डाउनलोड सूचना पाटी ग्यालरी सम्पर्क

आयोगका पदाधिकारी

...



श्री दिल्ली बहादुर सिंह
अध्यक्ष



डा. राम प्रसाद थिताल
सदस्य - नियमन तथा बाह्य मामिला



श्री रामकृष्ण खतिवडा
सदस्य - आर्थिक तथा वित्तीय मामिला



श्री रामेश्वर प्रसाद कलवार
सदस्य - प्राविधिक तथा इन्जिनियरिंग मामिला



श्री भागिरथी ज्वाली
सदस्य - उपभोक्ता मामिला तथा प्रशासन

कार्यहरू

...

प्राविधिक व्यवस्थापन

विद्युतको उत्पादन, प्रसारण, वितरण वा व्यापार सम्बन्धमा नियमन गर्न आयोगले प्राविधिक व्यवस्थापन सम्बन्धी कार्यहरू गर्नेछ ।

विस्तृतमा >

महसुल निर्धारण तथा विद्युत खरिद बिक्रीको नियमन

आयोगले महसुल निर्धारण गर्ने तथा विद्युत खरिद बिक्रीको नियमन गर्ने कार्य गर्नेछ ।

विस्तृतमा >

प्रतिस्पर्धा कायम तथा उपभोक्ताको हित संरक्षण

आयोगले विद्युत बजारमा प्रतिस्पर्धा कायम गर्ने तथा उपभोक्ताको हित संरक्षण गर्ने कार्य गर्नेछ ।

विस्तृतमा >

सङ्गठनात्मक क्षमता अभिवृद्धि

आयोगले अनुमतिपत्र प्राप्त व्यक्तिको सङ्गठनात्मक क्षमता अभिवृद्धि गरी संस्थागत सुशासन कायम गराउने कार्य गर्नेछ ।

विस्तृतमा >

Functions of ERC

प्राविधिक व्यवस्थापन गर्ने

विद्युतको उत्पादन, प्रसारण, वितरण वा व्यापार सम्बन्धमा नियमन गर्न आयोगले प्राविधिक व्यवस्थापनको लागि देहायका कार्यहरू गर्नेछः

- » विद्युत सेवा सम्बन्धी ग्रिड संहिता र वितरण संहिता बनाई कार्यान्वयन तथा त्यसको अनुगमन गर्ने ।
- » विद्युत सेवाको सञ्चालन तथा मर्मत सम्भारको स्तर तथा कार्यविधि निर्धारण गरी कार्यान्वयन गर्ने ।
- » राष्ट्रिय विद्युत प्रणालीको गुणस्तर तथा सुरक्षास्तर कायम राख्न आवश्यक मापदण्ड बनाई लागू गर्ने ।
- » विद्युत प्रणाली सञ्चालकको दायित्व निर्धारण गरी कार्यान्वयनको अनुगमन गर्ने ।
- » विद्युत सेवा बन्द गर्न सक्ने अवस्था, त्यसको आधार र प्राथमिकता निर्धारण गर्ने ।
- » विद्युत सेवाको आन्तरिक माग तथा आपूर्तिको लागि न्यूनतम लागत विस्तार कार्य योजना बनाई कार्यान्वयन गर्ने वा गर्न लगाउने ।

प्रतिस्पर्धा कायम गर्ने तथा उपभोक्ताको हित संरक्षण गर्ने

आयोगले विद्युत बजारमा प्रतिस्पर्धा कायम गर्न तथा उपभोक्ताको हित संरक्षण गर्न देहायका कार्य गर्नेछः

- » उपभोक्ताको हित संरक्षणको लागि आवश्यक उपाय पहिचान गरी कार्यान्वयन गर्ने वा गराउने ।
- » विद्युत खरिद बिक्रीको दरमा प्रतिस्पर्धाको वातावरण कायम गराउने ।
- » अनुमतिपत्र प्राप्त व्यक्तिहरूबीच विद्युत महसुल दरमा प्रतिस्पर्धा गराउन आवश्यक उपायको पहिचान गरी लागू गराउने ।
- » विद्युत महसुल दरमा एकाधिकार (सिण्डिकेट) हुन नपाउने व्यवस्था गर्ने ।
- » विद्युतको थोक बजार स्थापना, सञ्चालन तथा खरिद बिक्री प्रक्रिया निर्धारण गर्ने ।
- » अनुमतिपत्र प्राप्त व्यक्तिहरू आपसमा गाभिन (मर्जर), आपसमा मिल्न, एकै वा आफ्नो सहायक कम्पनीसँग मिली त्यस्तो व्यक्ति रहेको कम्पनीको पचास प्रतिशत वा त्यसभन्दा बढी शेयर खरिद गर्न, संरचनाको खरिद बिक्री (सेल अफ प्लान्ट), प्राप्ति (एक्जीजिशन) वा ग्रहण (टेक ओभर) गर्नको लागि आवश्यक मापदण्ड बनाई कार्यान्वयन गर्ने वा गराउने ।
- » अनुमतिपत्र प्राप्त व्यक्तिहरू आपसमा गाभिन, संरचनाको खरिद बिक्री (सेल अफ प्लान्ट) तथा प्राप्ति (एक्जीजिशन) वा ग्रहण (टेक ओभर) गर्न सहमति दिने ।
- » विद्युतको व्यापार गर्दा पालना गर्नुपर्ने शर्तहरू तोक्ने तथा त्यसको नियमित रूपमा अनुगमन गर्ने ।
- » प्रसारण लाईनमा बहिरहेको विद्युतको गुणस्तर कायम गराउन समय समयमा जाँच परीक्षण गर्ने वा गराउने ।
- » विद्युतीय प्रणालीमा खुल्ला पहुँचको व्यवस्था गर्ने ।

महसुल निर्धारण गर्ने तथा विद्युत खरिद बिक्रीको नियमन गर्ने

आयोगले महसुल निर्धारण गर्ने तथा विद्युत खरिद बिक्रीको नियमन गर्ने सम्बन्धमा देहाय बमोजिमको कार्य गर्नेछः

- » सञ्चालन खर्च, हासकट्टी दर, सावै व्याजको भुक्तानी, मर्मत सम्भार खर्च, विद्युत संरचनाको निर्माण, पुनर्निर्माण, पुनःस्थापना तथा शेयर लगानी बापत वार्षिक रूपमा प्राप्त हुने प्रतिफल लगायत विद्युत खरिद सम्झौता समेतलाई विचार गरी विद्युत महसुल दर निर्धारणका शर्त तथा आधार निर्धारण गरी त्यसको आधारमा उपभोक्ताले बुझाउनु पर्ने महसुल निर्धारण गर्ने ।
- » विद्युत खरिद बिक्रीको थोक बजार स्थापना नभएसम्म वितरण अनुमतिपत्र प्राप्त व्यक्ति र उत्पादन अनुमतिपत्र प्राप्त व्यक्ति वा व्यापार अनुमतिपत्र प्राप्त व्यक्ति वा प्रचलित कानून बमोजिम नेपाल सरकारले स्थापना गरेको सङ्गठित संस्थाबीच हुने विद्युत खरिद बिक्री दर र प्रक्रिया निर्धारण गर्ने ।
- » उत्पादित विद्युत खरिद बिक्री गर्न अनुमतिपत्र प्राप्त व्यक्तिहरूबीच विद्युत खरिद सम्झौता गर्न सहमति दिने ।
- » विद्युत मूल्यको लागत न्यूनतम बनाउन आवश्यक उपायको पहिचान गरी लागू गराउने ।
- » प्रसारण तथा वितरण दस्तुर (क्विलिडि चार्ज) निर्धारण गर्ने ।
- » विशेष परिस्थितिमा विद्युत सेवासँग सम्बन्धित विषयमा निश्चित समयको लागि विद्युत महसुलमा अतिरिक्त महसुल (सरचार्ज) निर्धारण गर्ने ।

सङ्गठनात्मक क्षमता अभिवृद्धि गर्ने

आयोगले अनुमतिपत्र प्राप्त व्यक्तिको सङ्गठनात्मक क्षमता अभिवृद्धि गरी संस्थागत सुशासन कायम गराउन देहाय बमोजिमको कार्य गर्नेछः

- » अनुमतिपत्र प्राप्त व्यक्तिको कार्यक्षमता मूल्याङ्कनको स्तर तथा आधार निर्धारण गर्ने ।
- » अनुमतिपत्र प्राप्त व्यक्तिको काम कारबाहीलाई मर्यादित बनाउन आचारसंहिता तयार गरी लागू गर्ने ।
- » अनुमतिपत्र प्राप्त व्यक्तिलाई विद्युतको बजार प्रबर्द्धन, विस्तार तथा विविधीकरण गर्न उत्प्रेरित गर्ने ।
- » अनुमतिपत्र प्राप्त व्यक्तिको आन्तरिक नियन्त्रण, लेखा प्रणाली, लेखापरीक्षण विधिमा एकरूपता कायम गर्न मापदण्ड बनाई लागू गर्ने ।
- » अनुमतिपत्र प्राप्त सङ्गठित संस्थाको सञ्चालक समितिका पदाधिकारी तथा अन्य पदाधिकारीले त्यस्तो संस्थालाई जानकारी गराउनु पर्ने विषय निर्धारण गरी त्यसलाई पालना गर्न लगाउने ।
- » अनुमतिपत्र प्राप्त व्यक्तिको लेखा प्रणालीको आवश्यकता अनुसार आकस्मिक जाँच गर्ने ।
- » अनुमतिपत्र प्राप्त व्यक्तिको काम कारबाहीमा सुशासन कायम गराउन आवश्यक निर्देशन दिने तथा मापदण्ड जारी गर्ने ।

The Role of the Regulator in Nepal

Encourage Private Investment

KEY ISSUES / BOTTLENECKS

Prolonged negotiations for PPAs most of which are subject to Governmental discretion

Disputes / difference of perception between developers and utility over tariff offered by the Government

Regulatory / policy uncertainty

HOW A REGULATOR CAN IMPROVE THE SITUATION

Transparent process for approval of Power Purchase Agreement, including possibility of introduction of standard PPA templates

Regulator develops sub-legislation that can also consider any project specific issues and requirements

Regulators avoid retrospective actions and always strive to protect existing capital investments from getting stranded by regulatory changes

Improvement of Efficiency, Customer Service and Transparency

KEY ISSUES / BOTTLENECKS

No mechanism to penalize inefficient service providers, other than internal government level reviews

Inadequate channels / forums to address customer grievances

Inadequate level of transparency and stakeholder engagements

HOW A REGULATOR CAN IMPROVE THE SITUATION

Establishment of performance standards, including penalties

Prices (tariffs) performance based

Establishment of customer complaint procedures and disputes between regulated suppliers through the regulator
Possibility of Appeals

All records subject to public review
The Commission also initiates public hearings and invites comments from all stakeholders on key decisions in the sector

Overview of Nepal's Electricity Regulatory Commission

Electricity Regulatory Commission Act – Key Features

- The Electricity Regulatory Commission Act, 2017, which establishes an independent Regulator for Nepal's electricity sector entered into force on 04 December 2017
- The ERC Act is a self-governing regulatory commission headed by a Chairperson and four Members.

Key provisions* of ERC Act, 2017

Sec 3(1): Regulates the generation, transmission, distribution, and trade of electricity

Sec 4: ERC is a self-governing corporate body with perpetual duration

Sec 17(1): Ensure compliance of Licensees with the Act, sub – legislation (rules, orders etc) or other prevailing laws

Sec 37: Power to issue directions to licensees under the Act. Duty of all to comply with such directions

Sec 19(1): Power to fine licensees not complying with orders or directions...

Electricity
Regulatory
Commission of
Nepal

** Based on unofficial English translation of ERC Act, 2017*

Functions and duties of the Commission

COMPETITION AND CONSUMER INTEREST

Protection of consumers, ensure competition, provide for open access, etc.

TARIFF AND REGULATION OF POWER PURCHASE

Electricity tariff, transmission and distribution charges, PPA rate, PPA approval, surcharges etc.

DISPUTE RESOLUTION

Resolve disputes between [DOED] licensees, and consumers

IMPROVE CAPACITY OF [DOED] LICENSEES

Standards for evaluation of efficiency, code of conduct, uniformity in accounting, surprise examination etc.



COMPLIANCE/INSPECTIONS

Examine / inspect compliance of [DOED] licensees*, impose fines for non-compliance of [DOED] licensees

TECHNICAL MANAGEMENT

Grid code, distribution code, least cost expansion plan, quality and safety standards etc.

Despite lack of licensing powers, the ERC Act has entrusted the Commission with a substantial amount of functions and duties

* The licenses are issued by Government of Nepal through Department of Electricity Development (DOED). However the ERC Act has granted power to the Commission to conduct examination and inspection of compliance of the [DOED] licensees.



Electricity Regulatory Commission Rules – Key Features

- The ERC’s rules will clarify the key functions and duties of the Commission, and provide a more focused list of action points, mandatory requirements and guidance for the Commission.

KEY TASKS / FUNCTIONS ASSIGNED TO THE COMMISSION UNDER ERC RULES

CODES, STANDARDS AND APPROVALS

- Approve Grid Code (To be consistent with international grid)
- Approve Distribution Code
- Approve Least Cost Expansion Plan
- Approve/ set performance standards for licensees
- Approve quality and safety standards for national grid
- Define Obligations of system operators
- Issue Directives for electricity trade
- ERC must approve transfer of ownership (shares) more than 5% change in share structure

TARIFF AND COMPETITION

- Rules to develop tariff methodology and procedures to apply for a tariff
- Procedures for approval of PPA
- Power to set generation, transmission and distribution tariffs
- Must approve direct sales from generating licensees to industries / institutions
- Develop procedures to allow consumers to select their service provider
- Set/approves trading margin

CONSUMER PROTECTION

- Sets/approves standards for electricity quality (voltage, frequency, outage duration and regularity and duration, of electricity) supplied by distribution licensees, including compensation
- Customer complaints procedures and monitoring
- Other quality and performance standards as determined by regulator and licensee
- Process for the distribution licensee to make new connections

- The Rules also establish the process for selection of Chairperson and Members

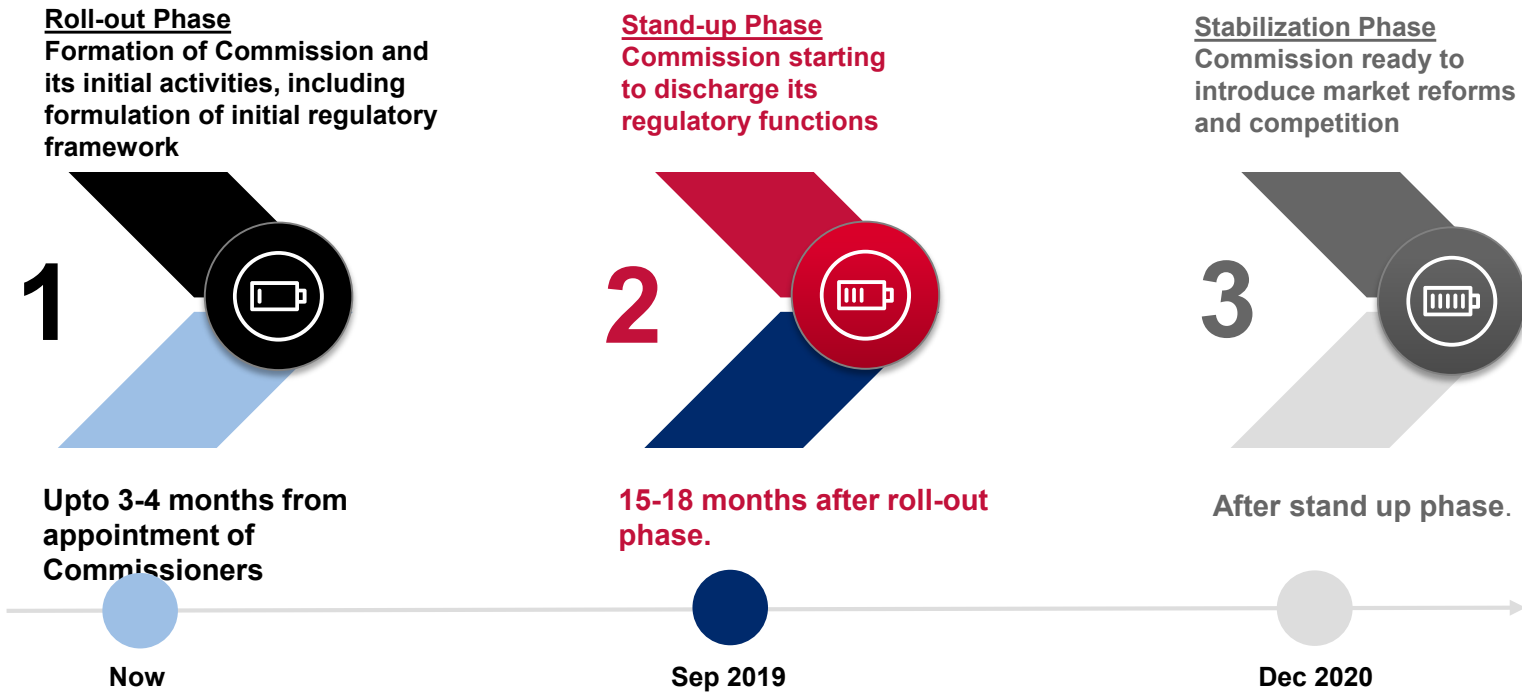
* Based on unofficial English translation of ERC Rules, 2018



Action Plan for the Commission

Evolution of Regulatory structure – Key Phases

The Commission is expected to evolve in three phases.



The Commission may be able to start playing a key role in sector regulation within 3-4 months of its commencement of operations.

Potential regulatory priorities for the Commission

Roll-out Phase

Put the basic regulatory framework in place, by issuing regulatory instruments such as:

- Byelaws on Conduct of Business and Rulemaking (including the process for public hearing);
- Byelaws on Dispute Resolution;
- Transitional Directives;
- Interim directive on tariff process;
- Issuance of interim orders / directives on shares issued by HPPs; and
- Issuance of interim order / approval on PPAs and tariffs for projects which has signed the PPA.

Stand-up Phase

Operationalize the regulatory activities in an effective manner, through activities such as:

- Directive and orders on PPA approval process and tariffs;
- Directives on tariff determination;
- Tariff orders;
- Directives and order on implementation of ERC Fund;
- Subject specific Directives (in line with phasing out of Transitional Directives);
- Grid code and distribution code;
- Least cost expansion plan;
- Directives on system operation function;
- Directives on transmission planning;
- Directives on open access to transmission network;
- Directives on protection of consumer interests; and
- Directives and orders on promotion of Renewable Energy.







Long term / stabilization phase

Initiate measures for sectoral reforms and competition, such as:

- Introduction of non-discriminatory open access to distribution network;
- Making competitive bidding mandatory for wholesale power procurement;
- Formulation of enabling regulatory framework for trading licensees;
- Promotion of cross border electricity trade; and
- Initiating studies on cost of service and cost reflective tariffs; and
- Providing necessary advice and suggestions related to policy reform to the Government of Nepal, as envisaged under section 16 of the Act.

Summary

Summary

- ERC, under its existing legal framework has the potential to drive and support the development of Nepal's power sector, through the following activities:
 -  Formalize stakeholder consultation and public hearings for all key decisions;
 -  Formalize process for the ERC's approval of Power Purchase Agreements
 -  Formalize processes for setting of generation, transmission and distribution tariffs under economic principle;
 -  Development of grid code, distribution code, safety standards, and standards of performance aimed at improving quality and reliability of electricity;
 -  Formalize procedures to resolve consumer complaints and disputes between service providers
 -  Facilitate the introduction of competition into the market.
- NOTE: the Commission's success will depend on a number of issues, including independence, competence of Commission Chairperson and Members, support from the GoN, and the assistance of development partners.

Thank You !

USAID's Nepal Hydropower Development Project

Baluwatar, Kathmandu, Nepal