



# Existing Policy, Legal and Regulatory Framework in Nepal

1<sup>st</sup> Meeting of Task Force  
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USAID SARI/EI

Raju Maharjan  
Government of Nepal



# Presentation Outline



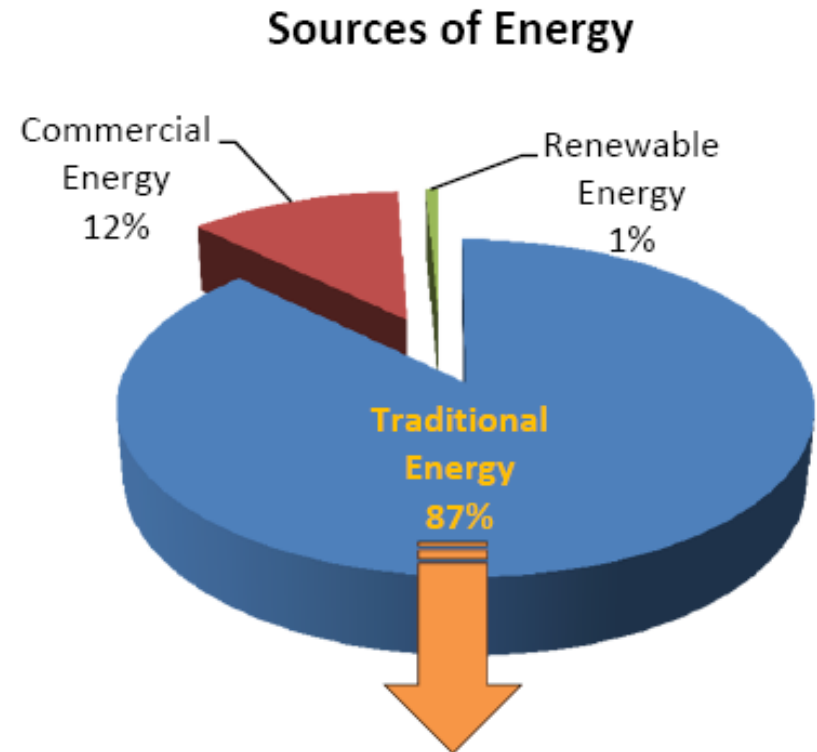
- General Information
- Existing Policy and Plan
- Acts and Rules
- Energy Resources
- Present Status
- Current Trading Arrangements
- Cross Border Interconnections
- Institutional Arrangements
- Issues



# General Information



- Landlocked Himalayan country, one of LDCs with diverse climate situation.
- Population 26.6 million, Per capita income US\$ 642 and GDP growth rate is 5%.
- 85% population live in rural areas and agriculture is main occupation.

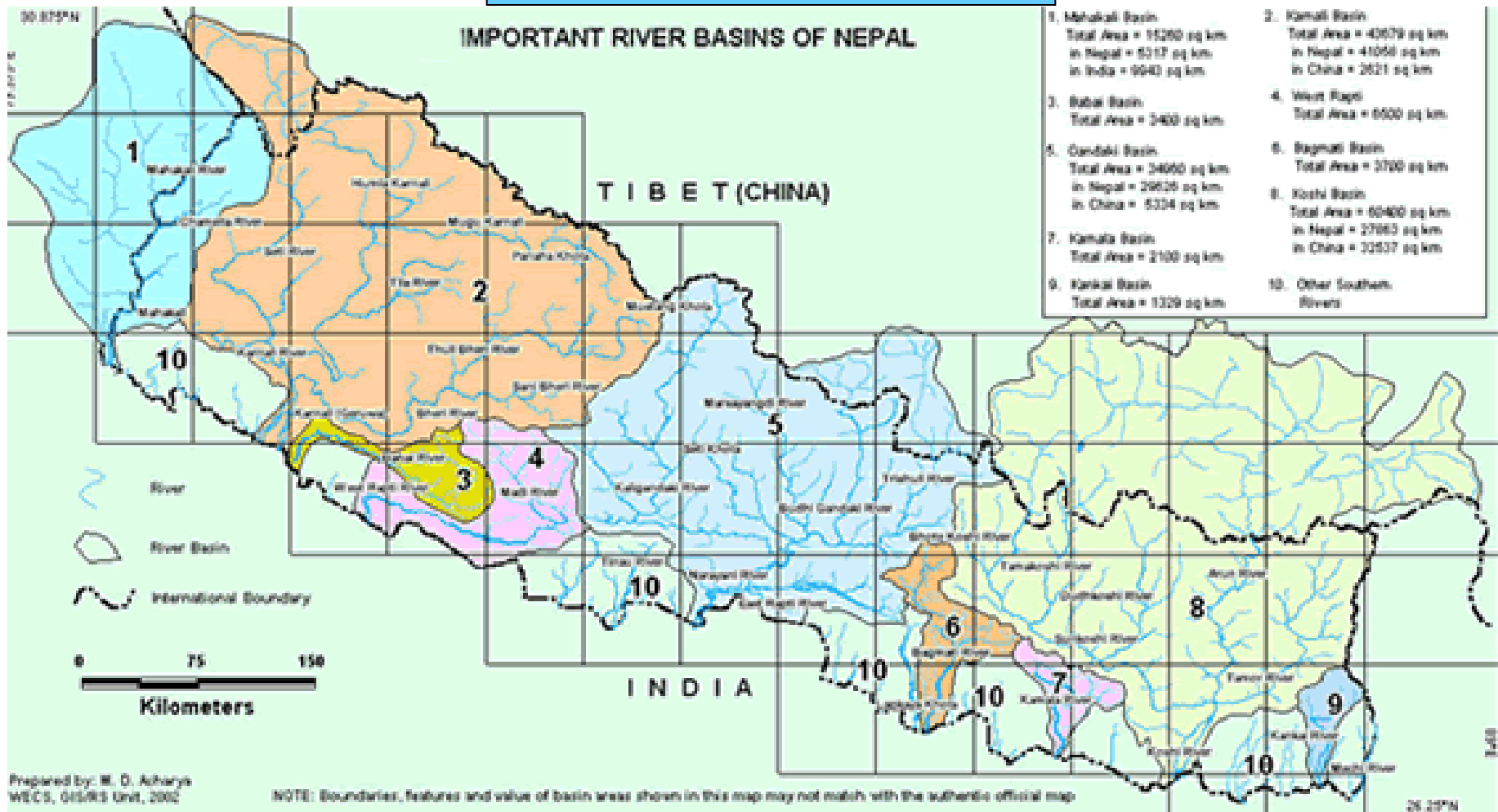




# General Information



## Rivers of Nepal



**Area: 147,181 Sq.Km**



# Existing Policy and Plan



- **Hydropower Development Policy, 2001**
- **National Water Plan 2005**
- **Ten Years Hydropower Development Plan 2009**



# Existing Policy and Plan



## Hydropower Development Policy, 2001

- ❖ to develop hydropower in a sustainable manner to meet the domestic demand.
- ❖ to develop hydropower as an exportable commodity.
- ❖ to attract the foreign investment in the sector.
- ❖ Provision for rural electrification
- ❖ Provisions for environment protection



# Existing Policy and Plan



## Hydropower Development Policy, 2001

- ❖ Provision for rational and transparent electricity tariff fixation
- ❖ Provision for Licenses
- ❖ Maximum period of generation license is 35 years for domestic supply and 30 years for export oriented projects
- ❖ License to export electricity for projects of capacity more than 100 MW
- ❖ Foreign Currency Exchange facility and repatriation



# Existing Policy and Plan



## Hydropower Development Policy, 2001

### Institutional Arrangements

- ❖ Electricity Tariff Fixation Commission to be replaced by Nepal Electricity Regulation Commission (NERC) as a regulator body.
- ❖ DOED to act as a study and promotion body.
- ❖ WECS to conduct load forecast and policy research works.
- ❖ Electric Energy Management Research institute to be established to carry out study and research
- ❖ Unbundling of NEA





# Existing Policy and Plan



## National Water Plan, 2005

	by 2017	by 2027
• Domestic demand to be met	2035 MW	4000 MW
• Electrification		
Grid connected	50%	75%
Isolated (Micro & Small hydro)	12%	20%
Alternative Energy	3%	5%
• Per capita consumption	160 kWh	400 kWh
• Export		Extensive



# Existing Policy and Plan



## Three Year Plan

- By year 2016 to add Hydropower 2500 MW
- Per capita consumption 140 kWh
- Electrification
  - Grid connected 80%
  - Off Grid 7%

## Renewable Energy

Mini & Micro Hydro	15 MW
Solar	6 MW
Wind	1 MW

## Visions of governments

- Within 10 Years 10000 MW



# Acts and Rules



## Existing

- **Electricity Act, 1992**
- **Electricity Regulation, 1993**
- **Electricity Tariff Fixation Rules, 1994**
- **Electricity Theft Control Act, 2002**



# Acts and Rules



## New Acts to come

- **Electricity Act (New)**
- **Nepal Electricity Regulator Commission Act**



# Acts and Rules



## **New Electricity Act; (presently under consideration of the parliament)**

- **Time bound and transparent license procedure**
- **Clear financial incentives**
- **Exemption of corporate tax for 7 years and 50 % for next 3 years (for 10 years)**
- **Exemption of VAT on machines, equipments + 1% import tax+(1million/MW refund for construction materials)**
- **Clear provisions of royalty provisions**
- **High level "one window" service committee (and task force)**



# Acts and Rules



## **New Electricity Act; (presently under consideration of the parliament)**

- **Rights and privileges of the local people**
- **upto 10 % equity share for local people**
- **electrification in the area of 1/2 km radius of headworks and powerhouse**
- **free 20 units of electricity**
- **52 % of the royalty goes to the local government**
- **Additional 1 % to VDC from free energy**



# Acts and Rules



## **Nepal Electricity Regulatory Commission Act; (presently under consideration of the parliament)**

- **Will be an independent commission**
- **Will create level playing field for all players**
- **will create Investment friendly environment**
- **Will protect the consumers (and other stakeholders) interest**
- **Will monitor, regulate the sector**
- **Will fix the tariff at various stages of transaction**



# Energy Resources



- **Hydropower** **42000 MW**
  
- **Renewable (Alternative) Energy**
  - **Mini & Micro** **100 MW**
  - **Biomass** **243 Million GJ**
  - **Solar** **4.5 kWh/m<sup>2</sup>/day**
  - **Wind** **3000 MW**
  
- **Fossil Fuel**
  - **Coal**
  - **Petroleum and Natural Gas**





# Present Status



## Hydropower

❖ Hydro Generation Capacity	700 MW
❖ Under construction projects	1250 MW
❖ Ready to go hydro projects (domestic)	1500 MW
❖ Ready to go hydro projects (Export)	4000 MW
❖ Others (at various stage of development)	10000 MW



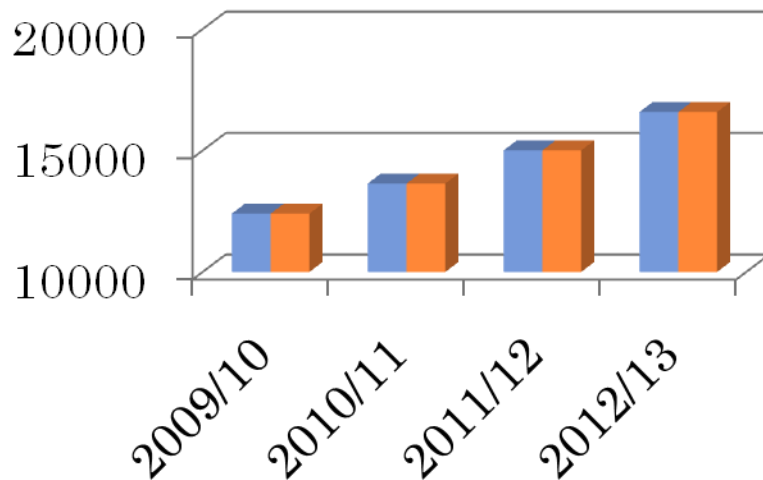
# Present Status



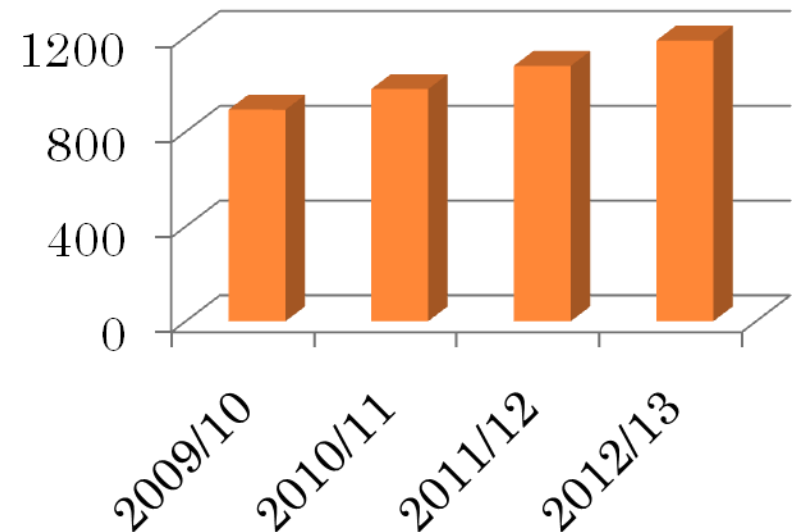
Year	2009/10	10/11	11/12	12/13
Capacity demand (MW)	893	980	1078	1185
Energy demand/day (dry) MWh	12400	13640	15004	16504

## Electricity Demand in Nepal

**Energy Demand/day  
(MWh)**



**Capacity demand**





# Current Trading Arrangement



- ❖ Net importer of Electricity
- ❖ Receives power in three modes
  - Under River Treaty - Koshi, Gandak and Mahakali
- ❖ Cross Border Town exchange program
  - Based on Radial system at different point of 11 kV and 33 kV
  - Nepal also supplies at some points
- ❖ Commercial Trading Arrangement – for short term PPA with PTC India (Driest Season)

Current level of import is around 145 MW



# Cross Border Interconnections



## Existing Links

- ❖ Three 132 kV level links between India and Nepal
  - Duhabi – Kataiya
  - Gandak – Ramnagar
  - Mahendranagar - Tanakpur
  
- ❖ 14 numbers of interconnections along the border sides

Existing Transmission links are inadequate to support the higher quantum of Power/Power Trade



# Cross Border Interconnections



## Planned

- ❖ 400 kV D/C TL from Dhalkebar (Nepal) to Mujaffarpur (India)
- ❖ Developing under commercial mode
- ❖ The commissioning date is expected on June, 2015

## Proposed

- ❖ Second 400 kV Cross Border TL from Bardighat (Nepal) to Gorakhpur (India)
- ❖ Many other interconnections at 400 kV have been proposed.



# Institutional Arrangement



## Power Exchange Committee (PEC)

- ❖ Constituted in 1992 – oversees the exchange and other issues
- ❖ Supposed to meet once a year by rotation in India and Nepal

## Joint Committee on Water Resources (JCWR)

- ❖ Constituted as per agreement of August 3, 2000 during the visit of Nepalese prime minister
- ❖ Headed by the secretaries of ministries of both the country
- ❖ Supposed to meet every six months



# Institutional Arrangement



- ❖ NEA exhibits short term trading with PTC India during the dry months
- ❖ No Power Trading Companies and Energy Exchange Market at all in Nepal – NEA is doing all the functions
- ❖ On December 12, 2011, NEA executed Power Sale Agreement with PTC India on long term basis for purchase of 150 MW Power



# Issues of Power Trade



- Poor financial health of NEA
- Lack of adequate transmission lines and insufficient capacity of existing interconnections
- Inadequacy of existing legal and regulatory system for enhancing power trade
- Absence of cross border power trade agreement which governs all the policy aspects of trade including market access.





Thank You !!!