

Energy Scenario: Nepal

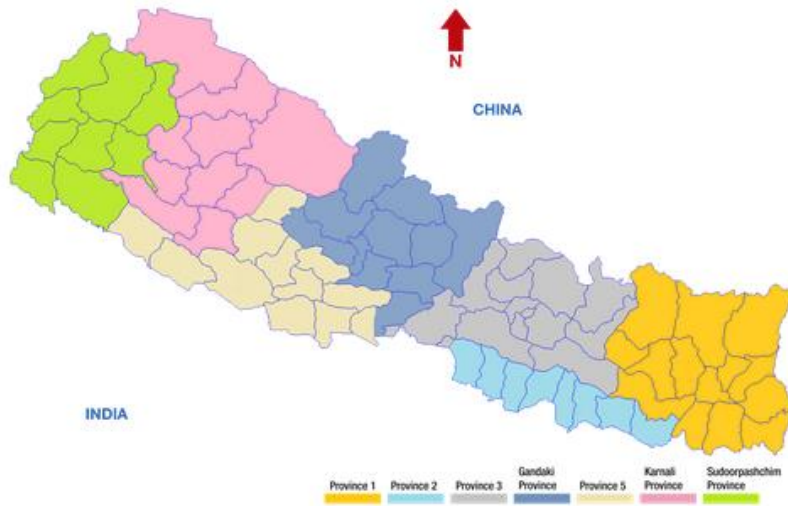
SAARC Workshop

Techniques on Energy Conservation & Efficiency in Buildings

26-28 Aug, 2019
Dambulla, Sri Lanka

Suresh Shrestha
MOICS
Government of Nepal

Re-Introduction



Official Country Name:

Federal Democratic Republic of Nepal

Area: 147,181 km²

Altitude: 59 to 8,848 metres (Mt Everest)

Population: 29.1 million

Federalism: Seven Provinces

Geography: Mountain, Hills and Terai

Religion: Secular

Currency: 1 USD=112.48 NPR

Form of Government: Elected prime minister as executive head & President the Head of State

River Systems: More than 6000 rivers

Mahakali Basin: Western border

Karnali Basin: Mid Western

Gandaki Basin: Central & Western

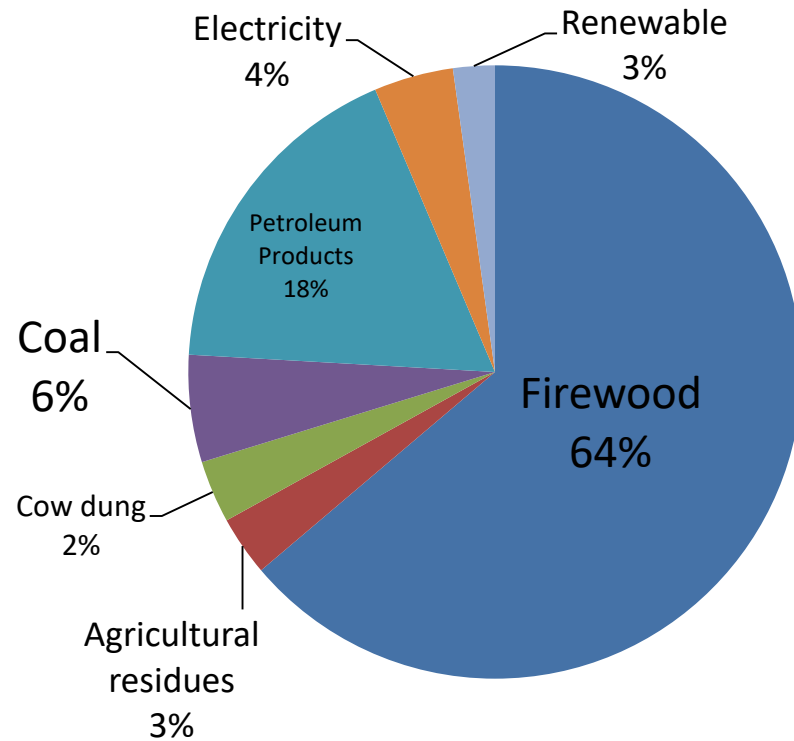
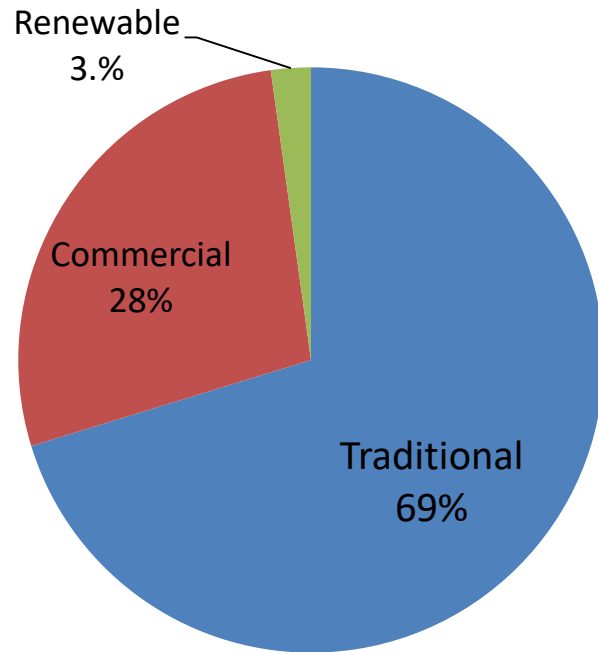
Koshi Basin: Central & Eastern

Hydropower Potential

83,290 MW (Theoretical)

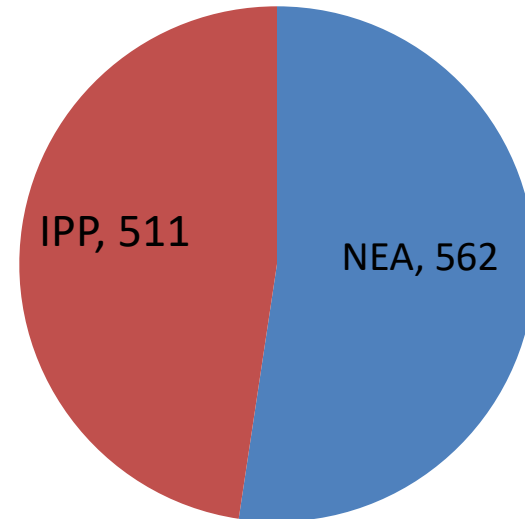
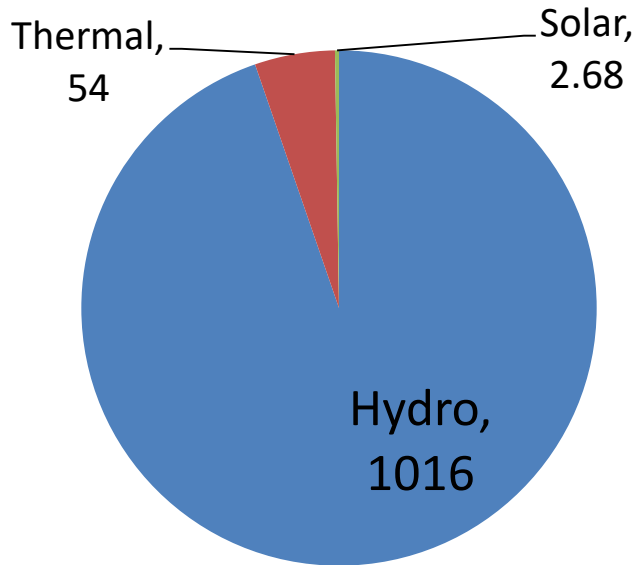
42,130 MW (Practical)

Energy Consumption



13484 Ktoe
(2017/18)

Present Status of Power

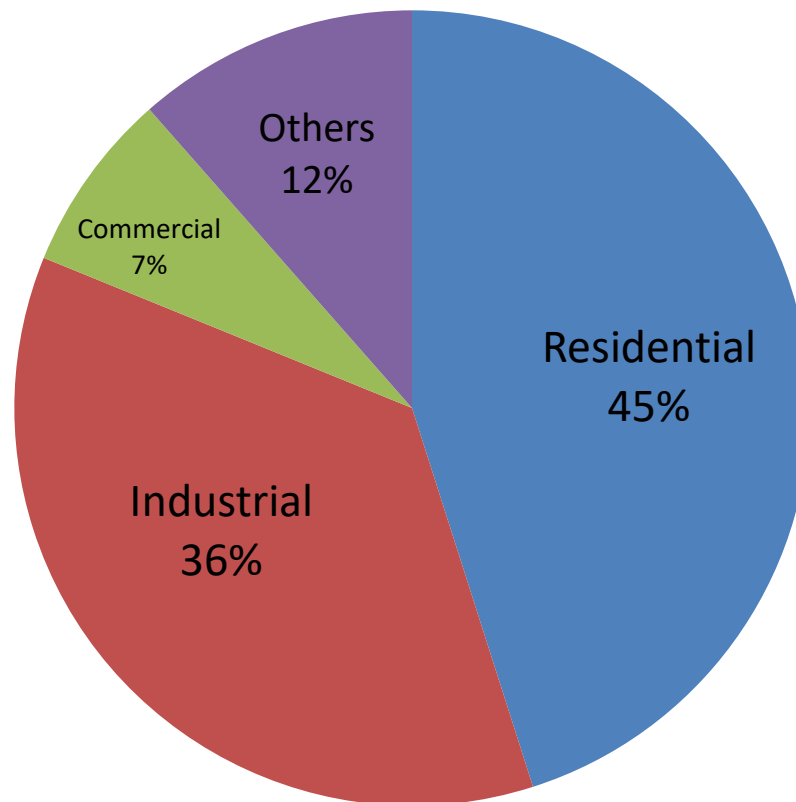


Installed capacity: 1073 MW

Peak Demand: 1300 MW

Import from India (Max): 450 MW

Sector-wise Electricity Consumption



Year 2016/17
4764.7 GWh

Source: Nepal Electricity Authority

Nepalese Energy Situation at a glance

- Huge potential of hydropower, very little harnessed
- Low level of per capita energy consumption (15 GJ/cap)
- Heavy dependence on biomass resources specially forests and tree resources (69%)
- Heavy use of energy resources in residential sector (90%)
- Cooking as a largest energy consumption end use (>50%)
- Burden in national economy from imported fossil fuel
- Limited contribution of renewable energy (3%)
- Access to electricity: 77.82%
- Insufficient, electricity supply (190Kwh/cap)
- Limited security of all energy resources
- No load shedding

Organizations for Energy Policy and Development in Nepal

- 1. Nepal Investment Board (>500 MW)**
- 2. Water and Energy Commission Secretariat**
- 3. Ministry of Water Resources, Energy and Irrigation**
 - Department of Electricity Development (DoED)**
 - Nepal Electricity Authority (NEA)**
 - Hydropower Investment and Development Company**
 - Alternative Energy Promotional Center (AEPC)**
 - Electricity Regulatory Commission**

Need of Energy Efficiency in Nepal

- Energy supply unable to chase the pace of fast growing energy supply
- Energy intensity is almost twice the South Asian average (1.19 toe/\$1000)
- Efficiency level lower particularly in biomass energy and unsustainable use
- Huge potential of energy conservation
- Every drop of petroleum product is imported
- Insufficient petroleum storage facilities

Opportunities for EE

- EE is relatively cheaper than energy generation (Reduced investments in energy infrastructure)
- Energy import will be reduced and hence the trade balance
- Creation of jobs
- Increase in energy access
- Enhance energy security
- Improvement in health and environment

Past Initiatives

1995--

- DNIDA, ESPS, World Bank
- Energy audits of industries
- Training in cleaner production
- Awareness campaigns on EC
- IEMP

2006--

- Demand side management of electricity
- Energy audit
- Policy suggestions for energy efficiency
- Replacement of traditional bulbs with EE bulbs

2010--

- REEP: EE in brick, cogeneration
NEEP: (Nepal- Germany)
- Policy Advice
 - Standards and labeling of appliances
 - Energy audit, energy auditor training
 - Biomass EE Strategy, EE Strategy

**The greenest watt
is the one that
doesn't have to
be produced**



Thank you!!!