



# Government of Nepal's Policies and Priorities on Biomass Energy

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Review on Policies and Practices for Promotion of Biomass Energy

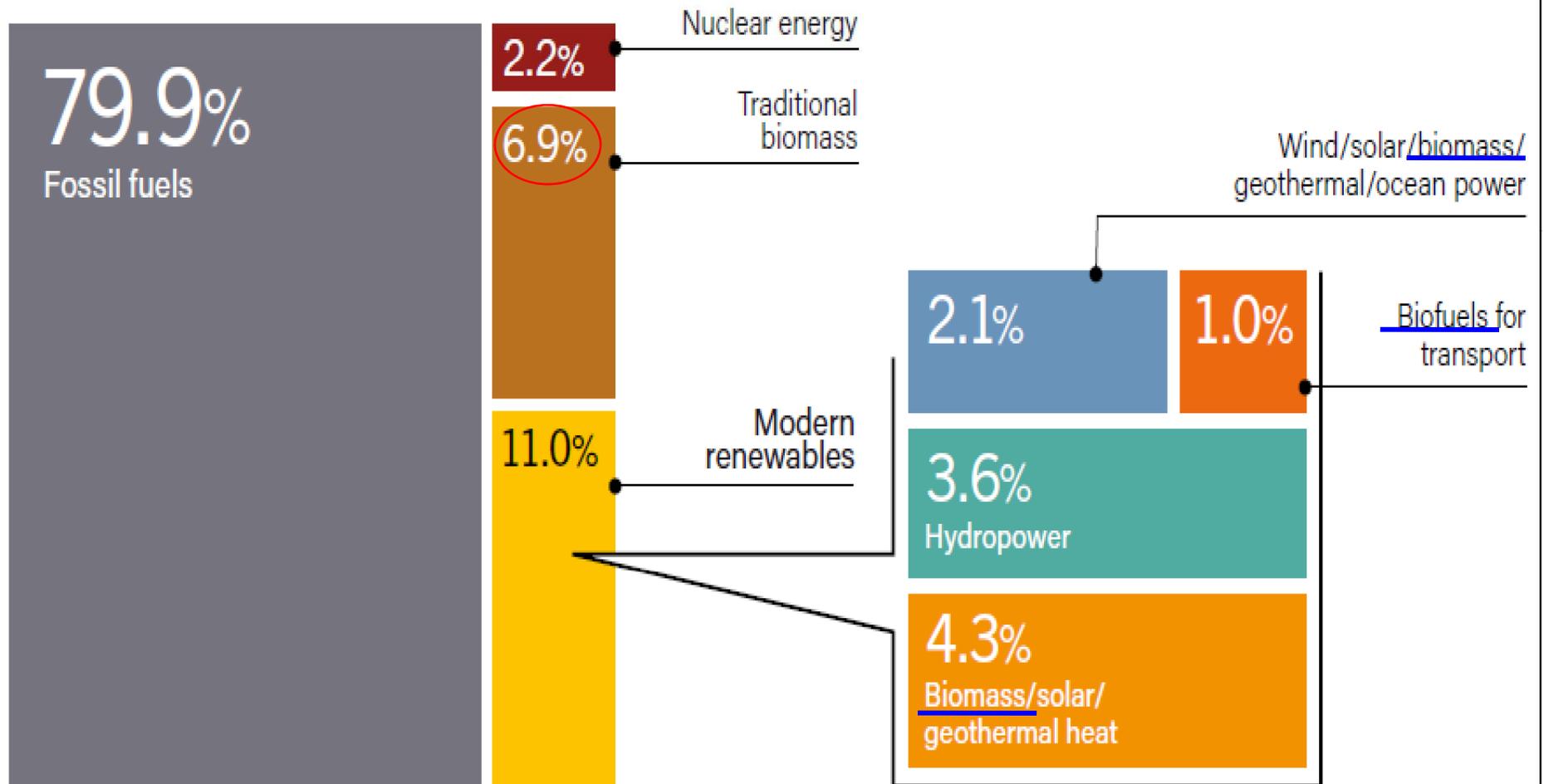
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## Presentation Outline

- Global Energy Mix
- Nepal's Energy Situation and Energy Agenda
- Bioenergy Use: heating, cooking & other applications
- Relevant Policies and Strategies
- Biomass Energy Strategy: VMGO & Strategic areas
- Key priorities of 15<sup>th</sup> Plan on Biomass Energy
- AEPC's Ongoing/Upcoming initiatives on BE
- Way Forward

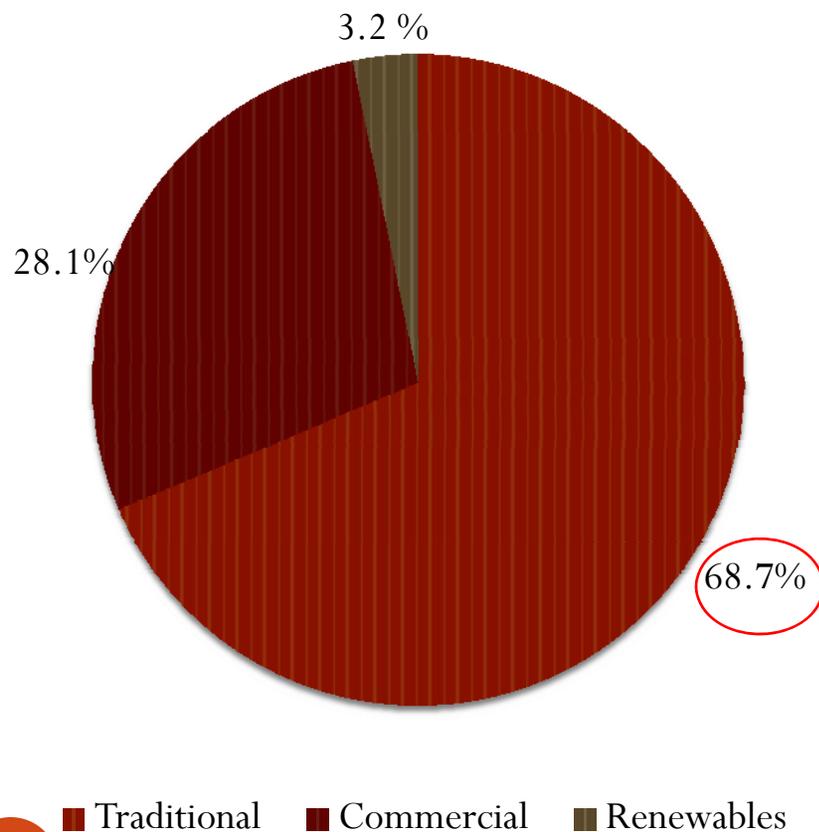
# Global Energy Mix

Estimated share of renewables and other sources in Total Final Energy Consumption, 2018



# Nepal's Energy Situation

## Nepal's Energy Consumption by Fuel type, 2018/19



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Source: MoF, 2020

## Nepal's Energy Agenda: SDG 7

Energy Indicators	Status 2019	Target by 2030
Electricity Access (HH)	87.5%	99%
Firewood use (HH)	62.5%	30%
LPG use (HH)	22.5%	39%
Energy Efficiency (2001-2015)	0.84%	1.68%

### National Goals:

- **Electricity for All by 2022**
- **Clean Cooking Solutions for All by 2030**

Source: NPC, 2016; BEST, 2017; NEES 2018; MoF, 2019

# Status of Electricity Access & Clean Cooking

## Electrification

### National

- Installed capacity: 1,355 MW  
(1,233 hydro, 68 renewables, 54 thermal)
- Total Electrification: 90%
  - Grid: 80%; Off grid: 10%
- Electricity consumption: 245 kWh/capita

### Provincial

- Highest Electrification: Bagmati (95.83%)
- Lowest Electrification: Karnali (27.74%)

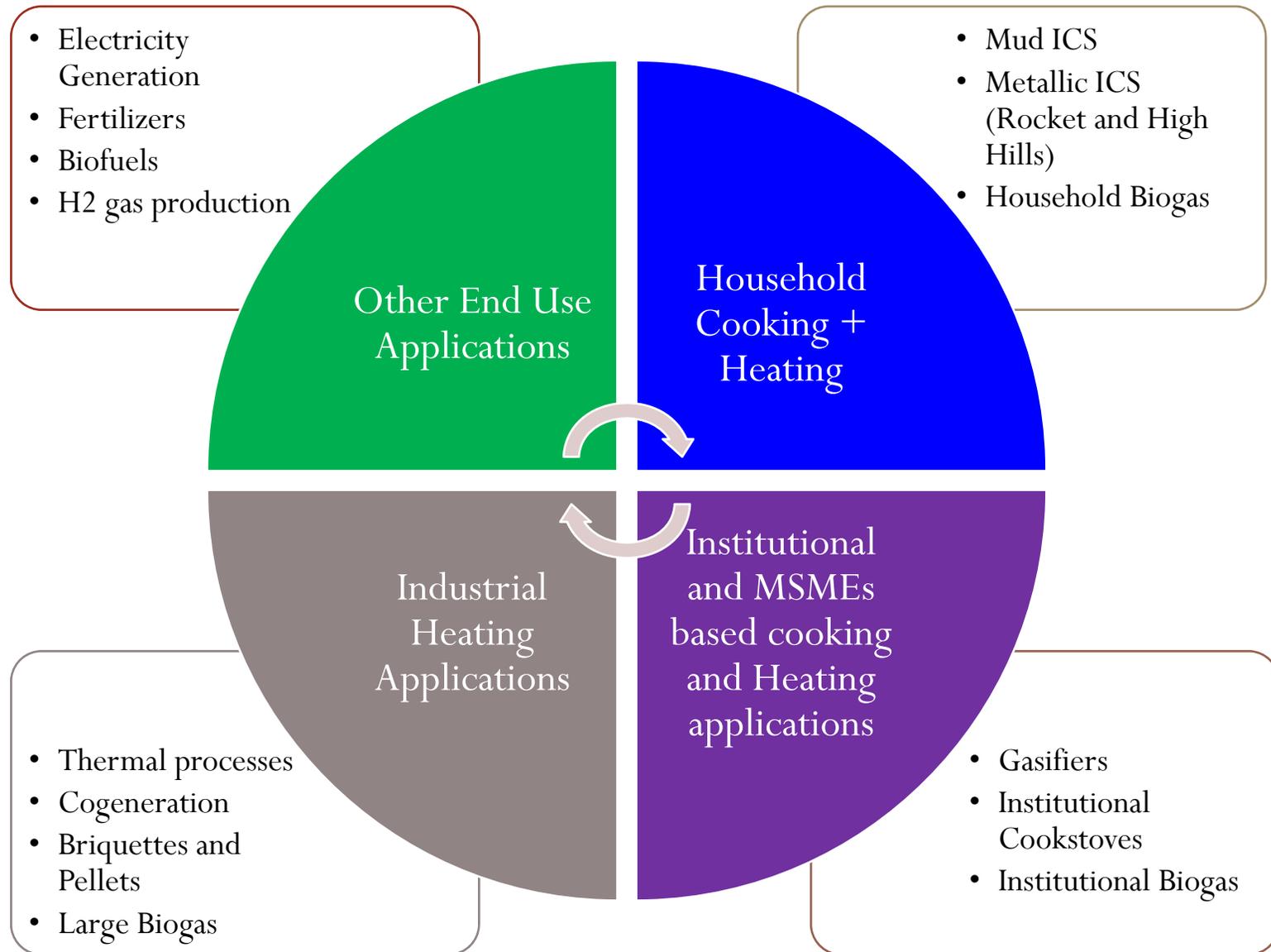
### Local

- Fully Electrified LGs: 146
- Partially Electrified LGs: 490
- Fully Unelectrified LGs: 117 (97)

## Cooking

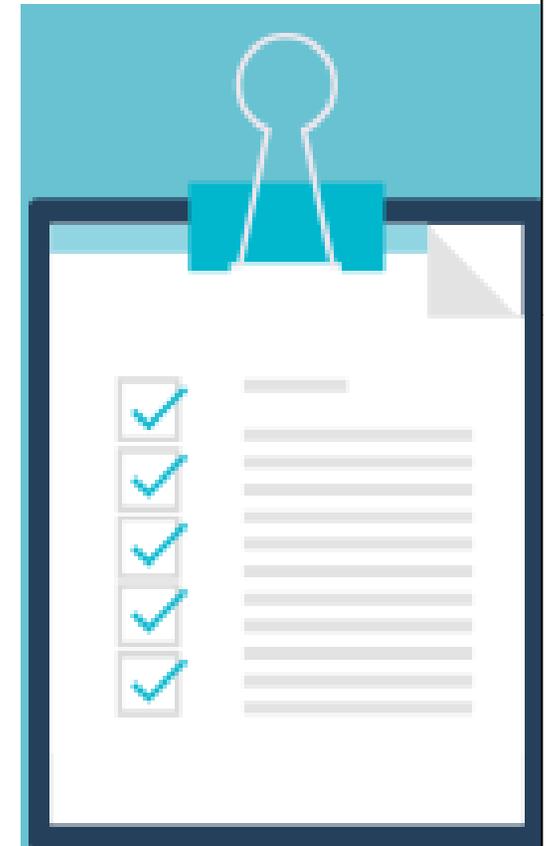
- 1.5 Million+ households using improved cookstoves
- ~0.5 Million households using biogas
- 22.5% of households using LPG
- **Still >68% of HHs using traditional biomass (firewood, agriculture residue, & dried dung)**

# Bioenergy Use: heating, cooking and other applications



# Relevant Policies & Strategies

- **Nepal's Constitution 2015:** Right to clean environment (Cl.30); Production and use of renewable energy {Cl. 51 (Chha) (3)}
- Rural Energy Policy, 2006
- Renewable Energy Subsidy Policy, 2016
- Nationally Determined Contributions, 2016
- SDGs Status & Roadmap (2016-2030)
- **Biomass Energy Strategy, 2017**
- MoEWRI's White Paper, 2018
- National Energy Efficiency Strategy, 2018
- National Climate Change Policy, 2019
- **15<sup>th</sup> Plan (2019/20 - 2023/24)**
- GoN Policy, Program & Budget for 2020/21
- Policy, Program & Budget of PGs and LGs
- Financial Act, 2020: VAT & tax exemption for RE systems
- **7** Guidelines for standardization, quality assurance & monitoring  
(e.g., Nepal Interim Benchmark for solid biomass Cookstoves, 2016)



# Biomass Energy Strategy 2017 (BEST)

## **Vision:**

To promote the biomass energy as reliable, affordable and sustainable energy resource to address the increasing energy demand of Nepal

## **Mission:**

To enhance the living standards of people by modernizing the use of biomass energy through research and studies on biomass energy; through creating public awareness; through market development, technology transfer and capacity development in biomass energy; as well as through efficient use of biomass energy

## **Goal:**

To increase the access to biomass energy and hence contributing to the environment conservation by transforming traditional biomass energy use into modern, sustainable and clean energy

# Biomass Energy Strategy 2017 (BEST)

## Objectives:

1. To contribute to energy supply and energy security by generating energy through management of agriculture, forest residues and organic wastes from municipal urban and industrial areas
2. To support the employment and income generation through the entrepreneurship development in biomass energy; and to reduce the existing dependency on imported energy through effective, efficient production and utilization of biomass energy

## Strategies:

1. To increase production of sustainable biomass energy by utilizing agriculture, forest residues and organic wastes.
2. To contribute to increased access to clean cooking technologies to all Nepalese households through the means of modern biomass energy.
3. To increase effectiveness and efficiency in the utilization and production of biomass energy.
4. To partially substitute the utilization of diesel and petrol by bio-diesel and bio-ethanol.

## Key priorities of 15<sup>th</sup> Plan on Biomass Energy

- Promotion and deployment of clean cooking solutions including electric cooking, biogas, ICS, briquetting, and biomass gasifiers
- Developing technology and working modality in coordination with with Local Levels and private sector for optimum use of biomass resources
- Partnering with agro-farms, enterprises and local governments for promoting waste-to-energy large biogas plants
- **Expected outputs:**
  - Domestic biogas: 200,000
  - Large biogas: 500
  - Improved cookstoves (including electric): 500,000
  - Briquettes/pellets: 20,000 metric tonnes/year

# AEPC's Major Ongoing/Upcoming Initiatives on BE

## **Initiative 1: GoN's Clean Cooking Program**

Starting year: Fy 2076/77

Duration: Multiyear program

Target: Terai and other areas

Scope: electric cooking, biogas, ICS, fuel processing

Supporting Agency: GoN

Implementation Modality: Partnering with Local Levels

## **Initiative 2: Proposed project on “Accelerating cooking solutions through Modern and climate friendly efficient clean cooking solution”**

Total Budget: 49.15 MUS\$

Duration: 5 Years

Target: 1 Million Households (with 0.49 Million Tier 3+ biomass based stoves and supply chain support for briquettes and pellets)

Development Partner: **Green Climate Fund (GCF)**

## Way Forward

- Updating of Biomass Energy Strategy and Investment Prospectus on Clean Cooking in changed context
- Fruitful partnership in implementation of ongoing programs and plans: federal provincial and local level government agencies, private sector, financing institutions, civil society organizations and research & academic institutions
- Development, standardization, adoption and contextualization of the technology – primarily from research and academic institutions
- Capacity building of partners and stakeholders, particularly local governments and private sector on biomass energy

# Thank you!

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