Extending clean cooking services to unserved populations in Nepal

Presentation by:
Rana Bahadur Thapa, PhD
(Assistant Director, AEPC)
1. Background: Energy Scenario

- Energy consumption pattern: heavily dependent on traditional energy resources.
- Use of Traditional fuel: HAP - Health problems.
- Municipal and other waste management: not properly managed/ utilized.
- A significant growth in electricity supply and demand is expected in current decade.

- 2% Population: no electricity access.
- Disparity between Urban & Rural, Quality and reliability of service?
1. Background: Energy Scenario (Contd....)

Energy Consumption Pattern: HH Cooking

CBS, 2022: HHs No. ≈ 6.67 million

Technological Options:
(1) Tier 3+ ICS
(2) Biogas
(3) E-cookstove
2. GoN’s Policies and Commitments

• Constitution: Right to live in healthy environment

• SDG Roadmap 2016-2030

• SE4All (CCS4ALL): Solid fuel: from 50.4% (2020) to 10% (2030)

• 15th Periodic Plan

• White Paper (MoEWRI, 2018)

• Climate Change Policy, 2019

• Second NDC, 2020; LTS: Net Zero emission by 2045
3. Current Clean Cooking Initiatives

(3.1) **ICS and Biogas**: Demand based-Competent companies-financial incentives

(3.2) **ECS Demonstration Initiatives**: cost sharing

I. **Targeted Students**: demonstration effect to parents

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<thead>
<tr>
<th>Activity</th>
<th>Number</th>
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<tbody>
<tr>
<td>Activity : Remote</td>
<td>1st Phase: 2,865</td>
</tr>
<tr>
<td>Activity II: DAG</td>
<td>5,500 (Planned)</td>
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II. **ECS through LG Partnership**: Demonstration effect at local level

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<tr>
<td>Activity I: 80:20</td>
<td>22,375 + 20,000</td>
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<tr>
<td>Activity II: 70:20:10</td>
<td>17,500 (Planned)</td>
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III. **NREP: ECS Market model (FI/Cooperatives)**:
- Demonstration effect at local level.
- 60,000 ECS approved/under implementation.
GCF Supported CCS Program:

- **Period:** 5 Year
- **Technologies:**
  - ECS: 500,000; Biogas: 10,000; Tier 3+ ICS: 490,000
- **Project area:** 150 Municipalities of 22 Terai districts
- **Project Cost and Financing:** USD 49.2 Million
  - GCF: USD 21.12 million,
  - GoN: USD 20.95 million, and
  - Local Level: USD 7.06 million.
- **Executing Entity:** AEPC
- **Implementing Partners:** PG/LG, (I)NGOs, Private Sector

3. Current Clean Cooking Initiatives (Contd....)
4. Quality Assurance System and Testing

Monitoring
- Internal Quality Control Monitoring (ICQM),
- Third-party monitoring,
- Monitoring based on complaint,
- Penalty based on deviations,
- 100% monitoring for large systems

Standards and Testing
- NIBC 2016 (Nepal Interim Benchmark for solid Biomass Cookstoves)
- NBSM Standards
  - Induction Cookstove (NS 561, NS 562, NS 563 and NS 564).
- Testing: RETS
  - Production Introduction Test (PIT): for samples collected during bidding/entry,
  - Random Sample Test (RST): for samples collected during Lot supply.
- Provision of After Sales Services (ASS) including replacement facility.
## 5. Opportunities and Challenges for Clean cooking

### Opportunities for Clean cooking
- High political commitments,
- Domestic clean energy source,
- Availability and reliability of electricity supply,
- Fossil fuel (LPG) replacement possibility: high,
- Market readiness: available,
- Social acceptance: high.

### Challenges for Clean cooking
- Awareness level – low,
- Socio-economic situation,
- Peak load management-ECS,
- Infrastructure upgradation (T&D, Transformer, MCB/House wiring)-ECS,
- Local Level (LG) capacity – low,
- Limited supply chain actors,
- Financing – limited,
- Quality assurance: establishment/ownership/implementation.
Future Cooking Solutions

Thank You!!