Empowering local governments through digital innovation

Advancing Municipal Energy Plans for Just Energy Transitions

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Bikash Uprety
bikash.uprety@giz.de
Energy Specialist, GIZ Nepal

जर्मन सहयोग
DEUTSCHE ZUSAMMENARBEIT

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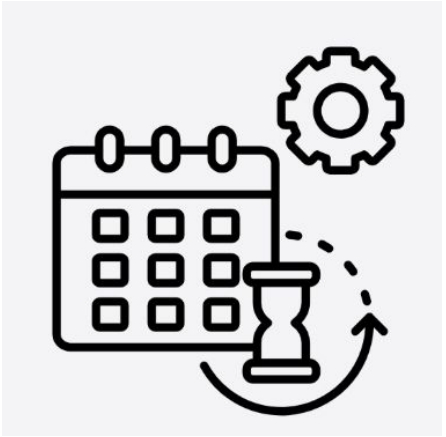
Trilok's Energy Dilemma : Dreams vs. Decisions

- Trilok Municipality envisions expanding access to modern energy.
- Mayor makes bold promises, but without proper planning and community engagement.

The Chaos of Poor Planning



Funds scattered across wards—no feasibility, no focus.

Projects ignore community voices—needs unmet, systems unused.

No technical staff—poor design, delays, lack of after-sale-services.

Project delayed, poor quality installation, and frustrated communities.

Sindhuli‘s shift: A Bottom-Up Inclusive Energy Revolution

🔍 Understanding the Energy Situation

🧭 Participatory Planning

📍 **Informed, Inclusive and Transparent Decisions**

🗓️ Integration into Annual Programmes

🧑‍💼 Institutional Support: Dedicated Sub-Committee

MEP in Action: Powering Progress at the Sindhuli

Wider Energy Access
Underserved areas get connected.

Powering Local Enterprises
Energy drives jobs & businesses.

Energy in Annual Plans
Access becomes a budgeted priority.

Local Capacity Built
Trained teams for maintenance & support.

Lesson from the two tales

⚖️ **Equity First:** MEP tackles energy poverty by ensuring no one is left behind.

🧭 **Periodic Planning:** Provides a road-map for budgeting and implementing

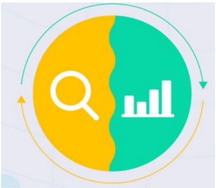
👫 **Inclusive and Praticipatory:** Women and marginalized groups shape local energy priorities.

💻 **Digital Tools:** Map needs, match resources, make informed decisions.

🛠️ **Local Skills, Local Jobs:** Trained technicians ensure lasting change

What is MEP?

The Municipal Energy Plan is a five-year periodic plan that enables the local governments to



Municipality Energy Plan 2019 -2023

This report can be cited as:

Gaurigant Rural Municipality, 2019. Gaurigant Rural Municipality Municipal Energy Plan 2019 - 2023.

This MEP is prepared by Gaurigant RM

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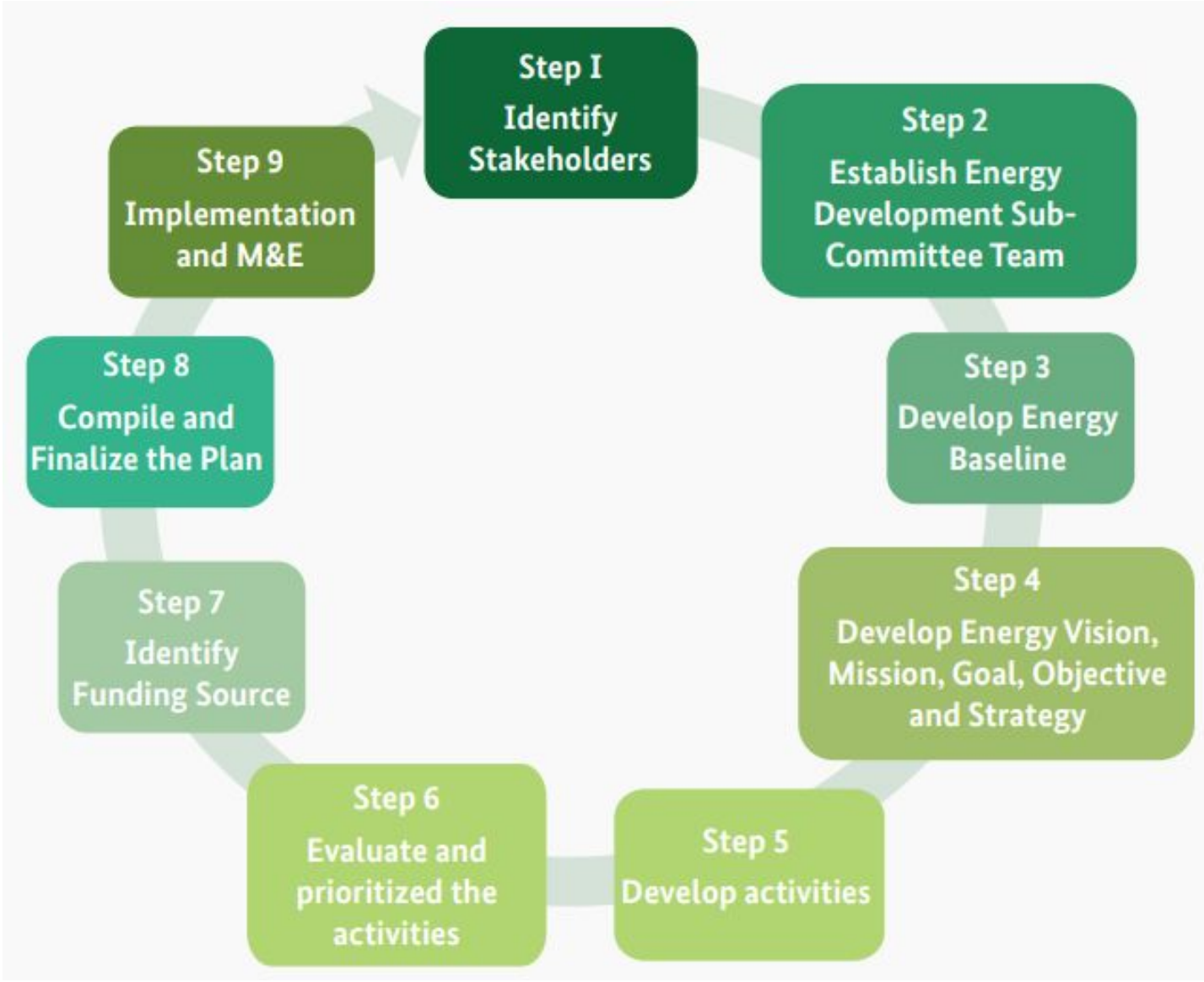
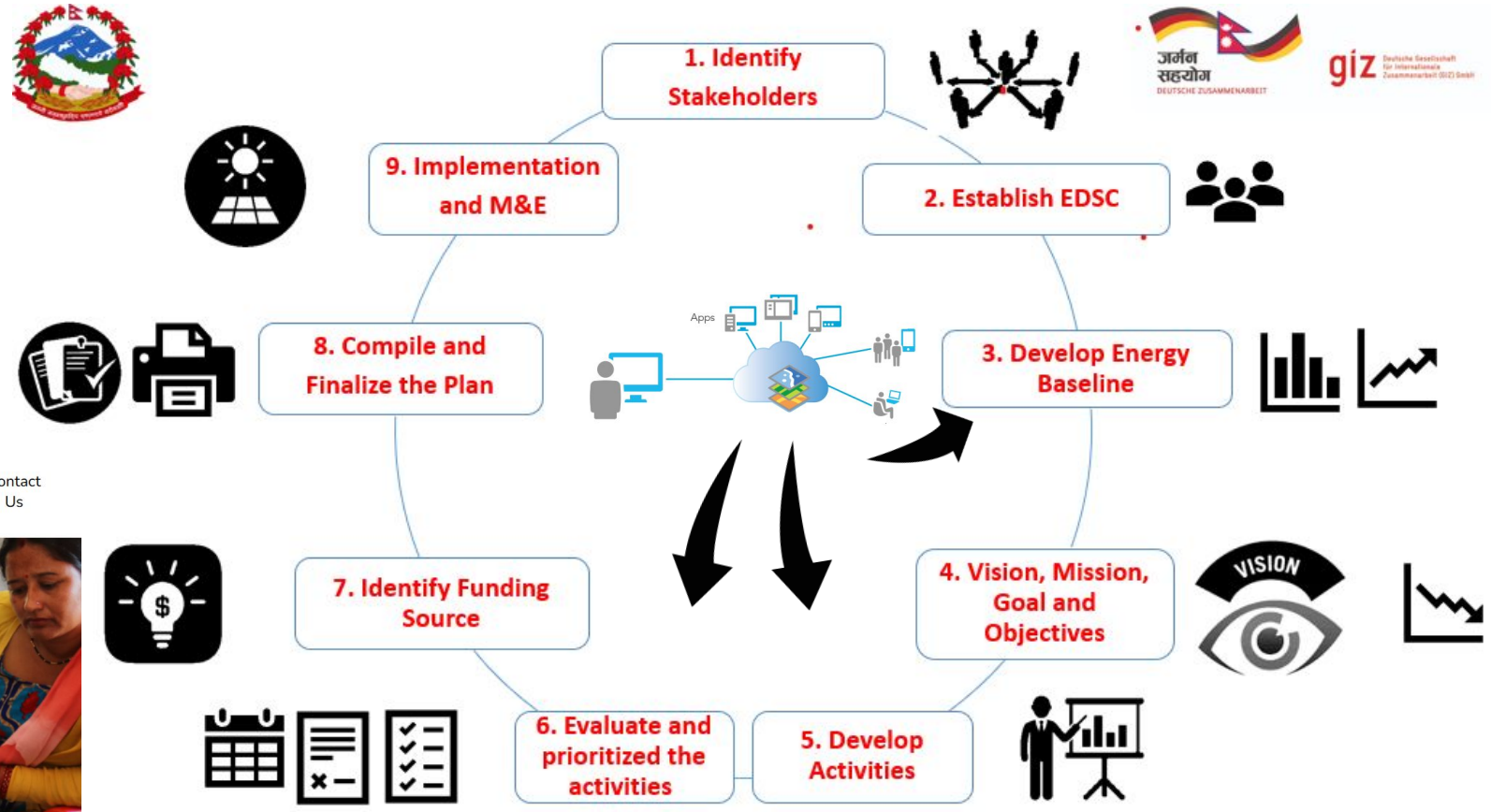
Nine-Steps Planning Process

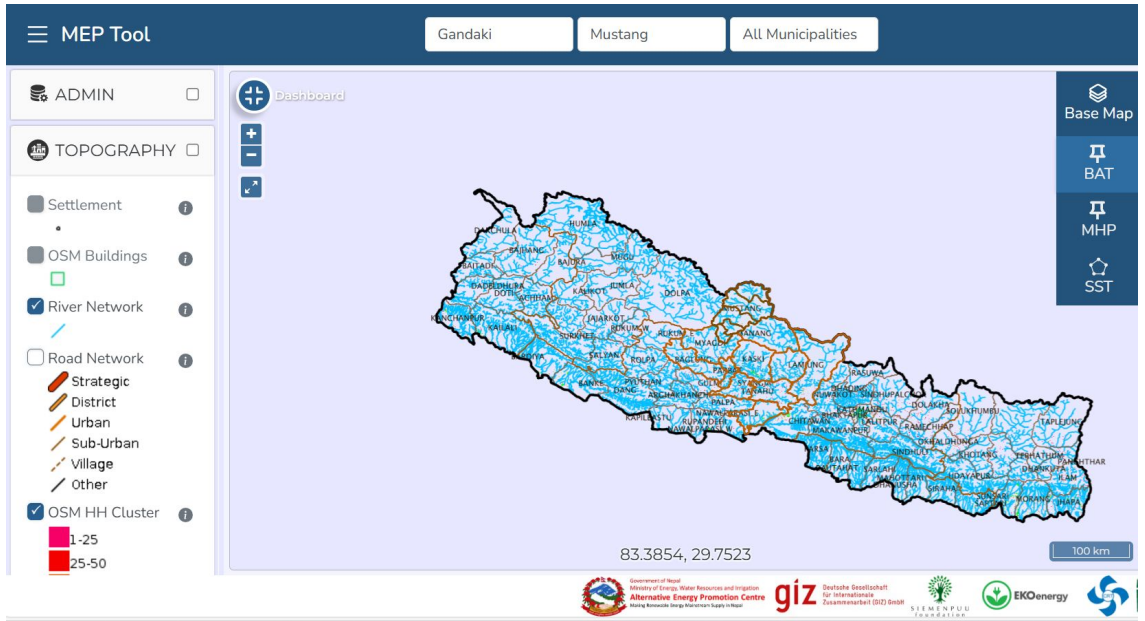


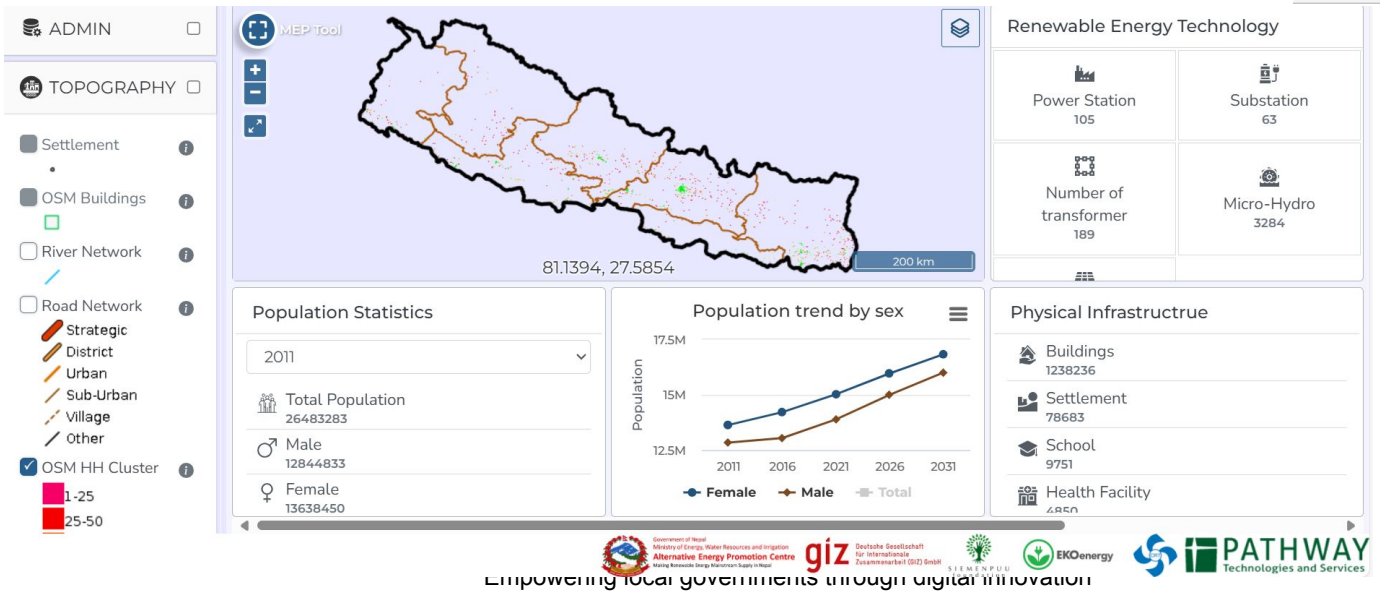
The GIS-based planning tool



Features of the Planning tool

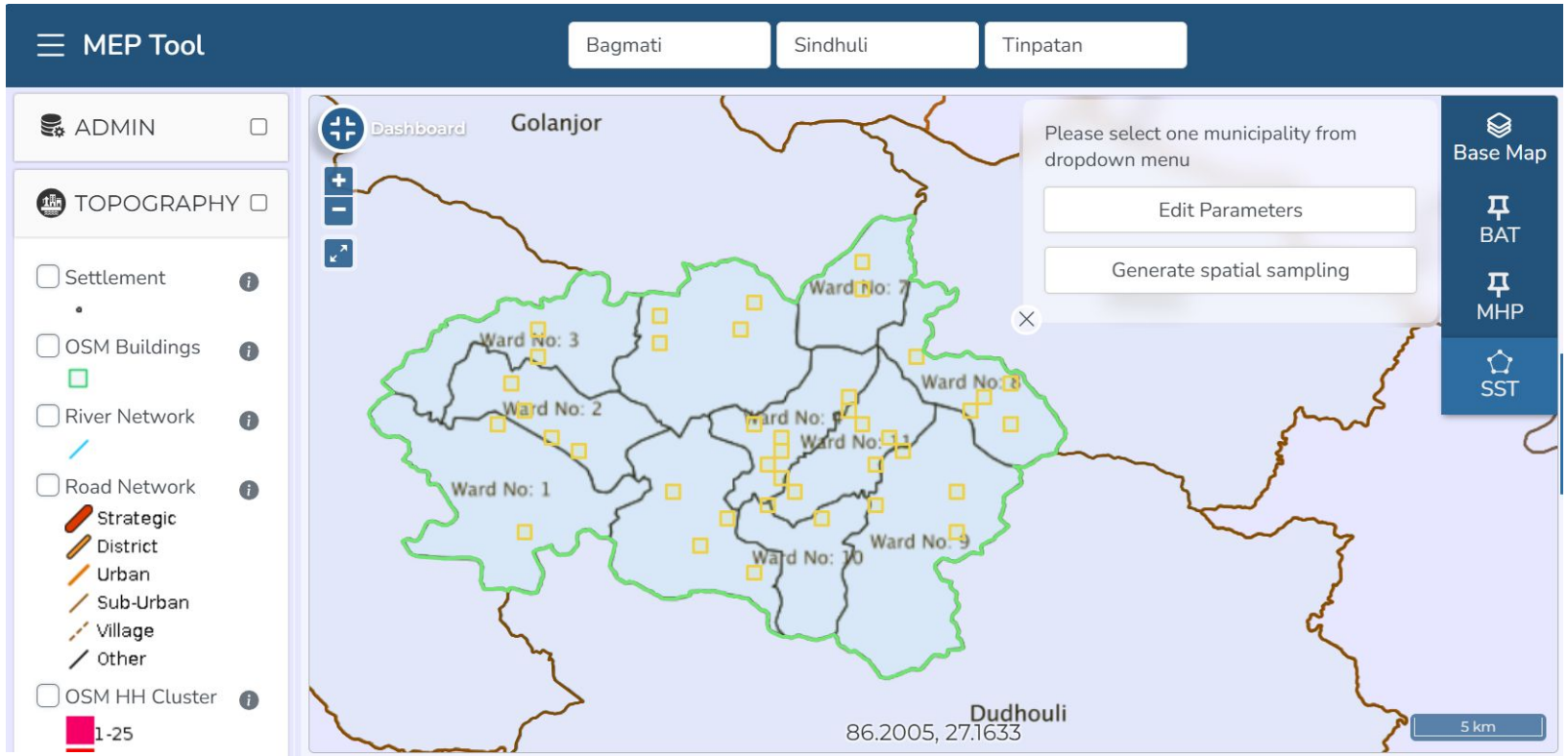
01 Dashboard





Features of the MEP tool

02 Spatial Sampling and Survey Toolkit

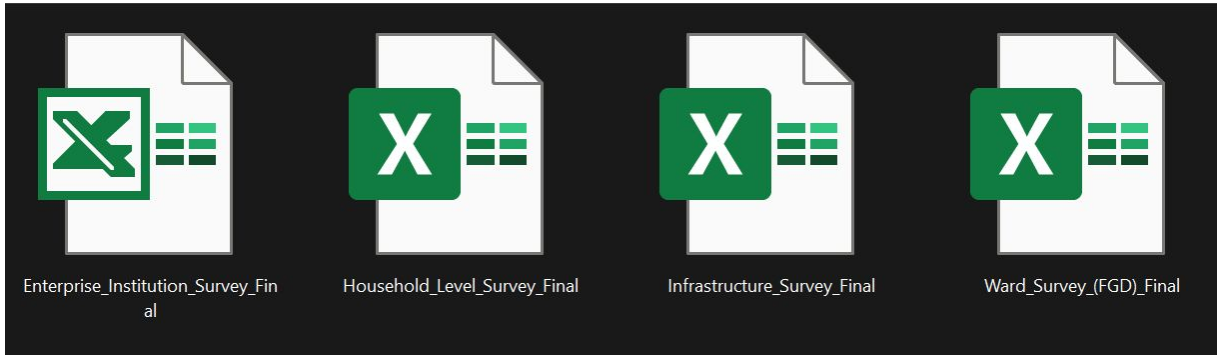


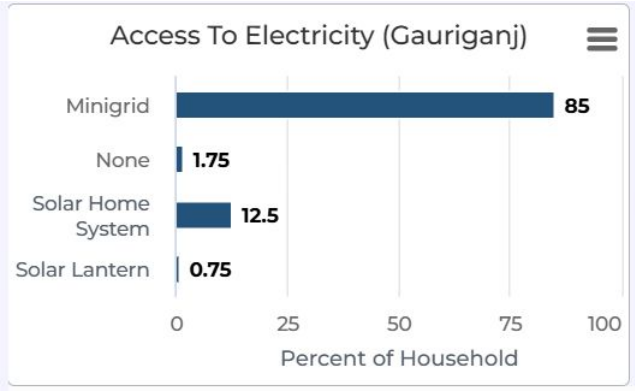
List of SST Clusters

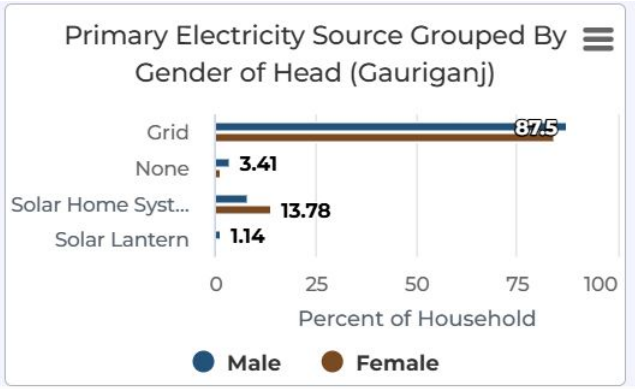
PSU ID	Longitude	Latitude
1	86.185962°	27.111161°
2	86.055968°	27.101161°
3	86.105966°	27.181158°
4	86.235960°	27.156159°
5	86.185962°	27.126160°
6	86.190962°	27.136160°
7	86.215961°	27.101161°
8	86.220961°	27.146159°
9	86.060967°	27.166159°
10	86.140964°	27.141160°

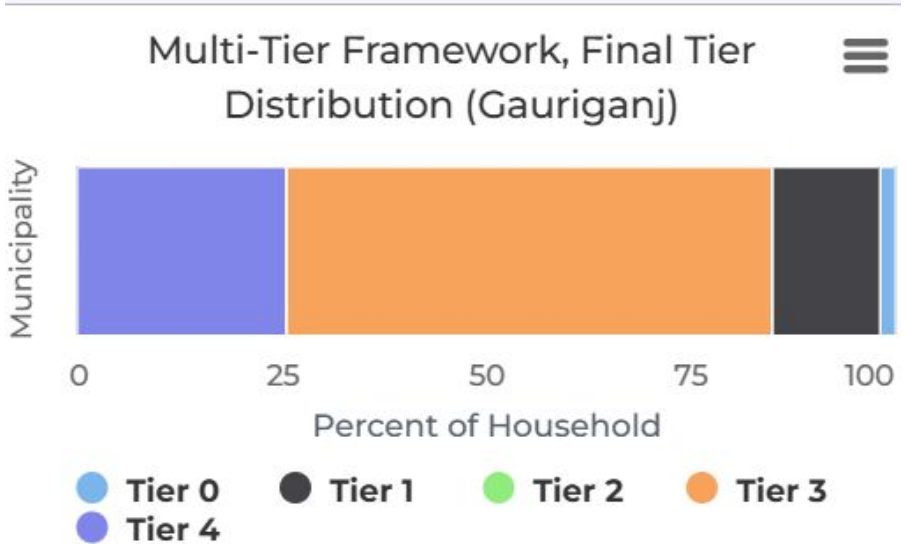
Features of the MEP tool

03 Mobile Survey Toolkit



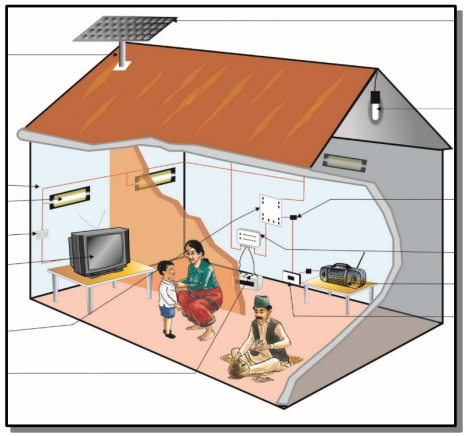


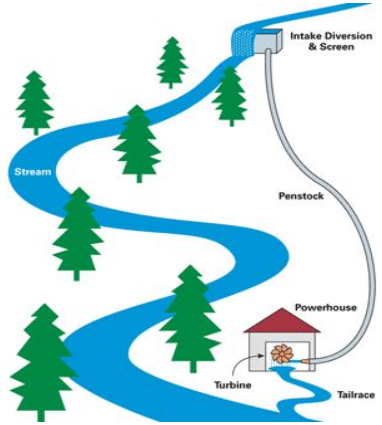


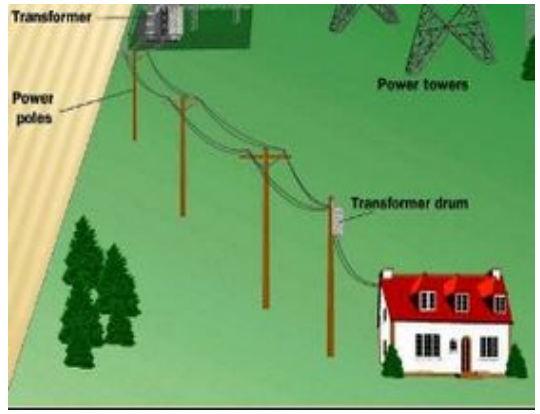


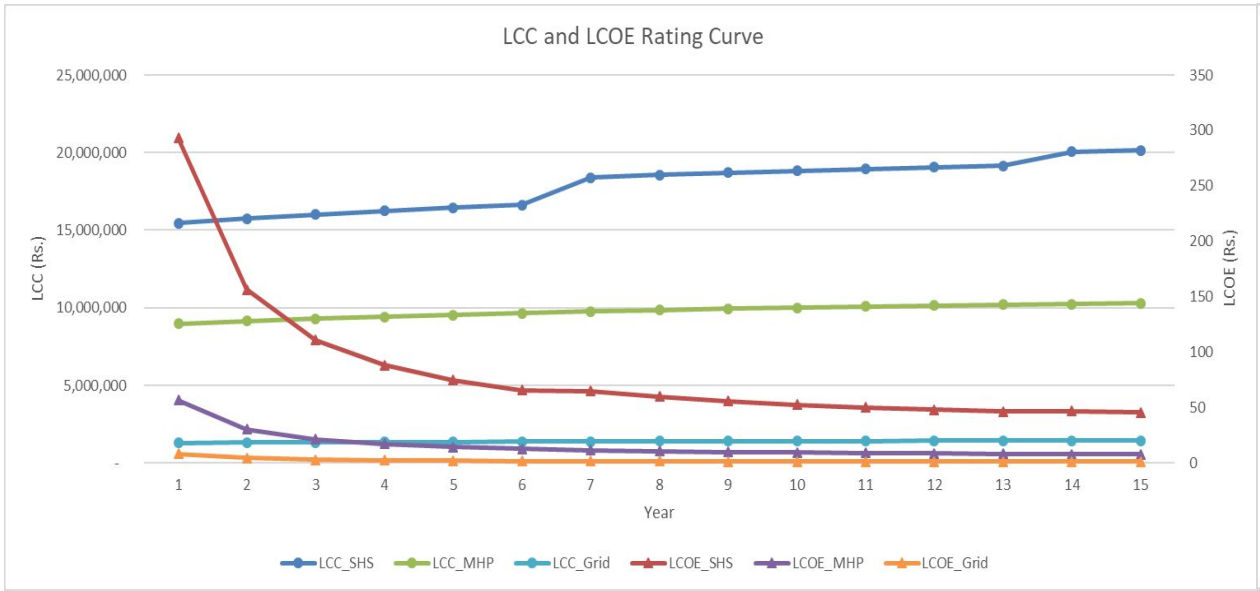
Features of the MEP tool (cont.)

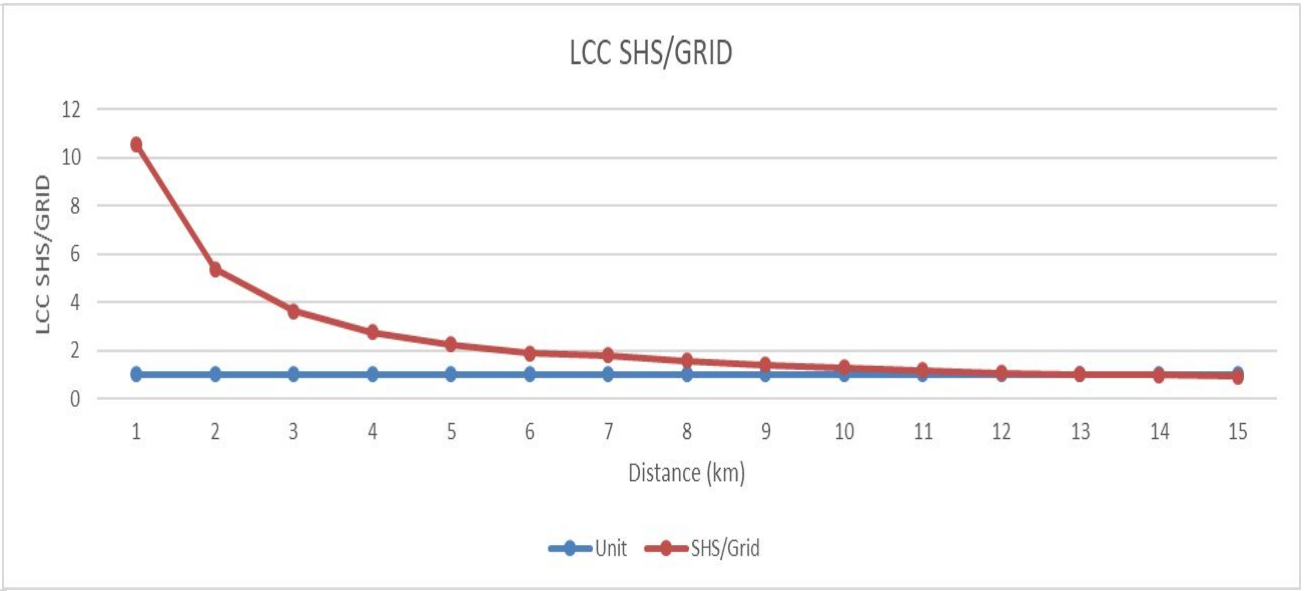
04 Best Available Technologies











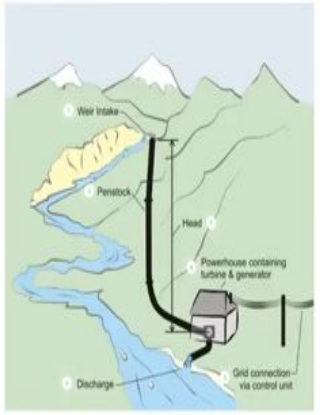
Features of the MEP tool (cont..)

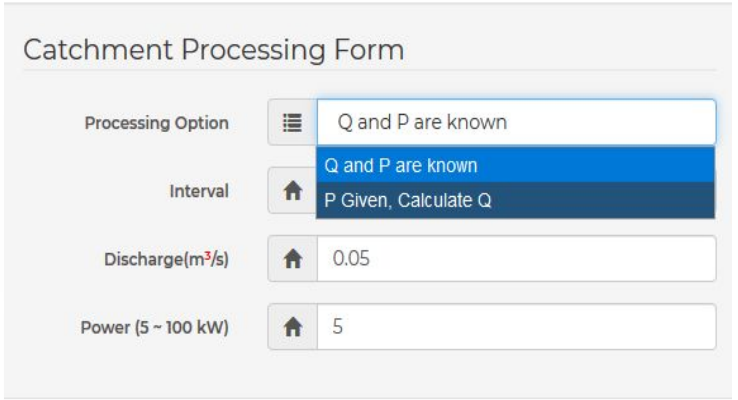
05 MHP Search Engine

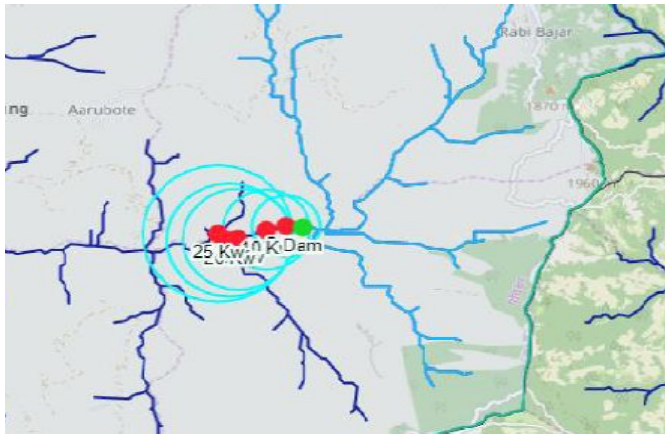
Power = head x flow x gravity x efficiency

P = h x Q X g x η ("eta")

P = power in Watts
h = height (m)
Q = flow (discharge) (l/s)
g = earth's gravitational constant (9.8 m/s²)
η = efficiency of the system (a decimal)*







Features of the MEP tool (cont..)

06 Clean Cooking Tool

Overall Cooking Improvement Scenario

Primary Stove	Scenario: Baseline	Scenario: Partial	Scenario: Intermediate
Advanced	0.0% (0)	0.0% (0)	0.0% (0)
Modern	2.9% (0)	2.9% (0)	2.9% (0)
Intermediate	19.5% (0)	19.5% (0)	97.1% (0)
Partial	0.0% (0)	77.6% (0)	0.0%
Low	77.6% (0)	0.0%	0.0%

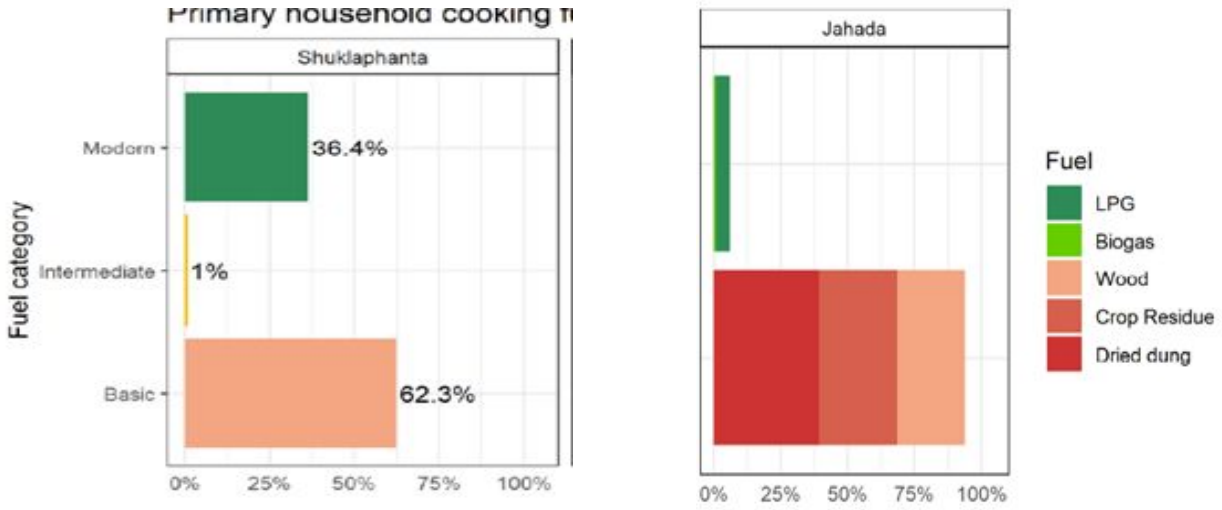
No of households: 0

Cost per HH(Partial Scenario): 0

Cost per HH(Intermediate Scenario): 0

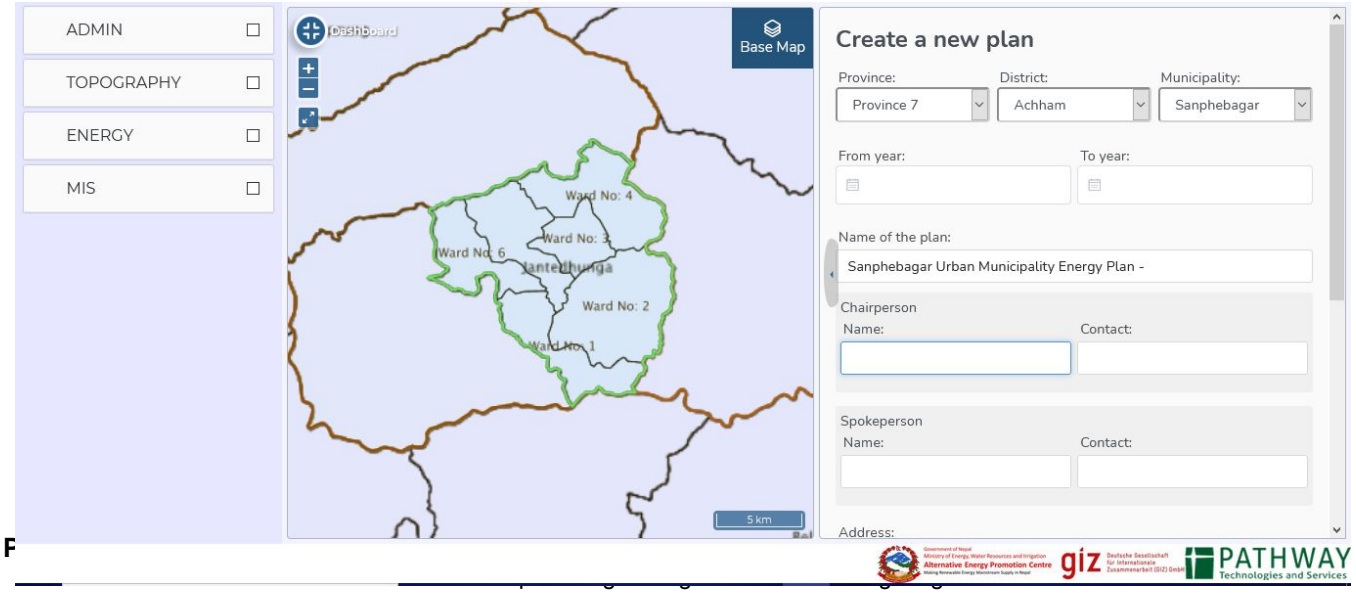
Total cost for partial scenario: NPR 0.00

Total cost for intermediate scenario: NPR 0.00



Features of the MEP tool (cont..)

07 Plan Generation Module



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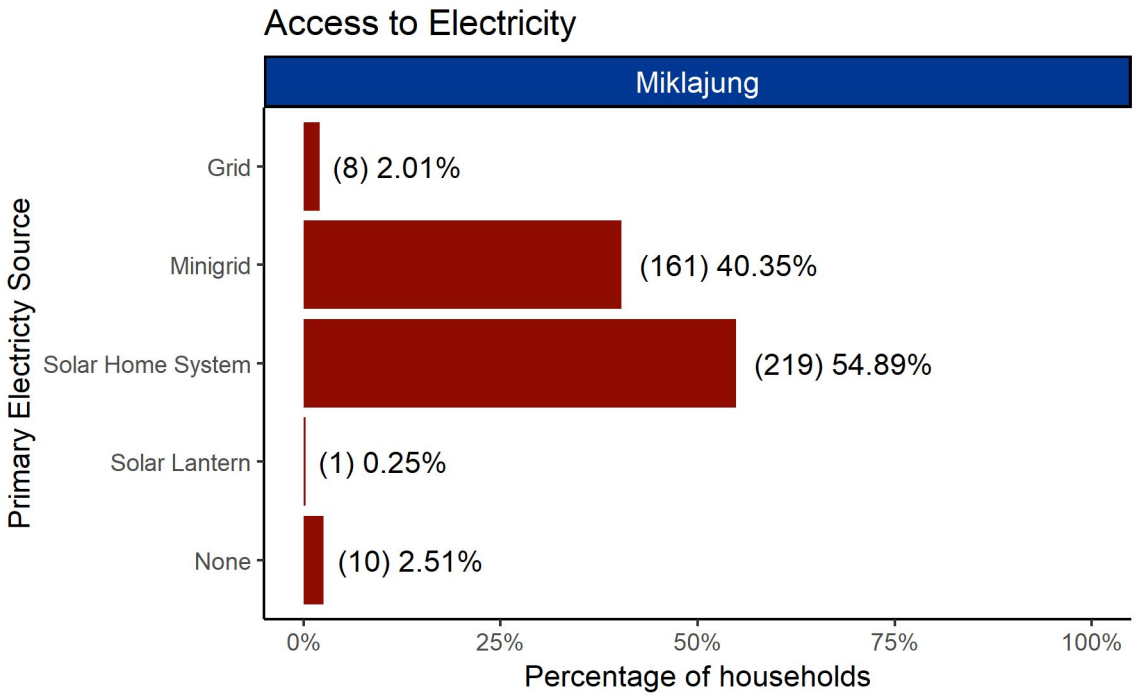
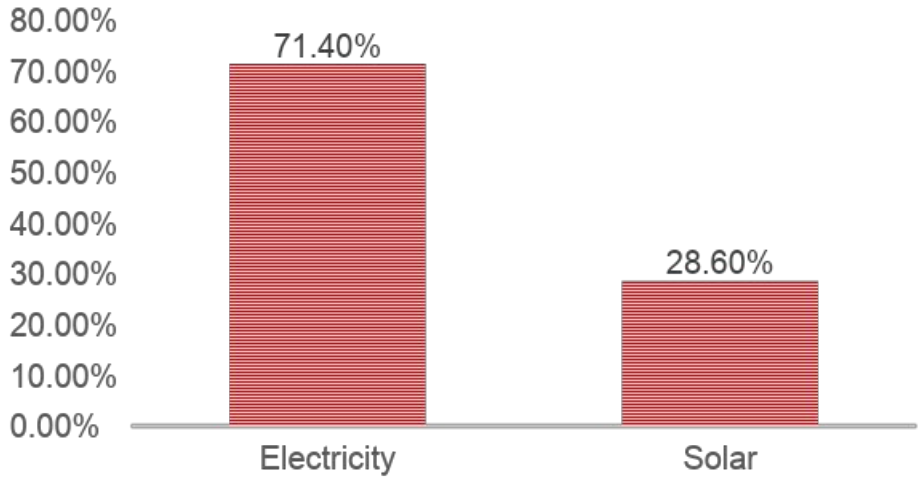
Translation: <<Organization_NAME>> or <<Personal_Name>>

Reaching the Unreached

Digital planning bridges the energy divide in hard-to-reach and underserved settlements of Miklajung Rural Municipality of Nepal.





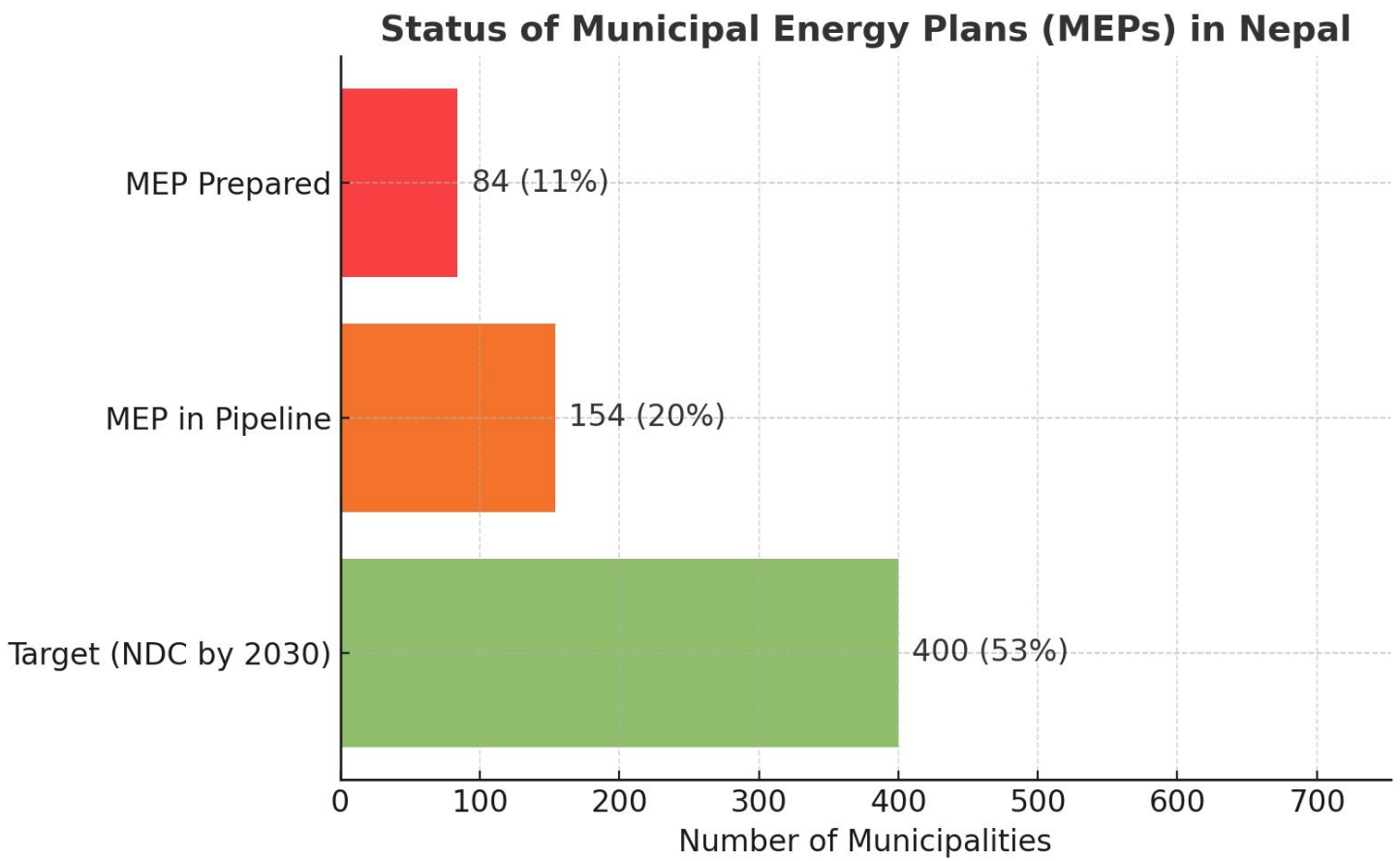
Empowering Through Energy

Socio-economic uplift through energy: Clean power access is creating jobs, boosting enterprises, and enabling education and healthcare

What makes it Innovative

- 👥 → Inclusive participation
- 🗺️ → Use of digital tool for data collection and analysis
- 📊 → Data-driven decision-making and planning
- 🌱 → Sustainable development

Status



- **84 MEPs Prepared** (11%) (Since 2019)
- **154 MEPs in the Pipeline** (20%)
- **Target of 400 MEPs** under Nepal's NDC3.0 (53%)