



Amare Assefa provides training for Manchewe waterfall technicians and young community members in Livingstonia, Malawi



CESET
Community Energy and the
Sustainable Energy Transition
in Ethiopia, Malawi and Mozambique

Introduction

CESET team member Amare Assefa from Addis Ababa University conducted a two-day practical and theoretical training on 16-17 September 2024 for Chipopoma small-scale hydropower plants technicians and local young community members aimed to equip them with the knowledge and skills necessary for the successful operation, and maintenance of chipopoma mini hydropower. The training objectives were:

- **Knowledge:** Provide participants with a comprehensive understanding of microhydropower technology, its components, and its environmental and socio-economic benefits.
- **Skills:** Equip participants with practical skills for conducting site assessments, operation of microhydropower systems, and carrying out preventive maintenance tasks.
- **Capacity Building:** Enhance the capacity of technicians and local community technicians specially females to independently plan, implement, and manage microhydropower projects.

The Training Curriculum

DAY-1 – Morning [09:00-13:00] – Lecture

- Minigrid basics and technologies
- Operation and Maintenance of Minigrid
- Safety and Protection of Minigrid



DAY-1 – Afternoon [14:00-18:00] – Practical

- Practical understanding minigrid materials and components
- Inspection of bulk energy meter and Minigrid components
- Transformer monitoring and Control



DAY-2 – Morning [09:00-13:00] – Lecture

- Introduction of Small-scale Hydropower (SSHP)
- Operation and Maintenance of SSHP electromechanical components
- Health, safety and environment [HSE) - Plant safety

DAY-2 – Afternoon [14:00-18:00] – Practical

- Technical Visit and Site inspection of Chipopoma Power SSHP
- Practical measurement of electrical components in Chipopoma Power SSHP



Training Methodology

The training program employed a combination of theoretical lectures, hands-on practical sessions, and field visits. Field visits to on minigrid and a powerhouse of Chipopoma micro hydropower plant provided participants with real-world exposure and insights.

Training Outcomes and Impact

The training program achieved the following outcomes:

- increased awareness
- enhanced skills
- empowered local communities, especially young females and
- environmental benefits.

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