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Sustainable Renewable Energy Model in Nepal

June 15, 2023, Asia Clean Energy Forum



Outline of presentation

- Historical Background
- Evolution of a Company (SCECO)
- The Local Operation and Management (SCECO)
- Connection with the GRID
- Sustainability of SCECO

Story line – What made this small isolated ‘off-grid’ renewable energy system a self sustainable model in over 30 years and still running efficiently



History of SCECO

- Clean electricity to Tobetan refugees and local people in Solukhumbu (base of EVEREST) in 1982, upgraded in 1991, expanded in 2013
- Saves trees/forests, environment and health
- Stand-alone off-grid micro-hydropower (670 KW) from local run-off river





Intake, Sand trap, Canal and Fore bay



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Power Houses and Electro-mechanical components inside



HT Indoor
 Switchgear
 Panel



Sub-Distribution
 Box for
 underground
 service cable



Power Transformer (380V/11000V)



H-Pole/Transformer/11kV Line



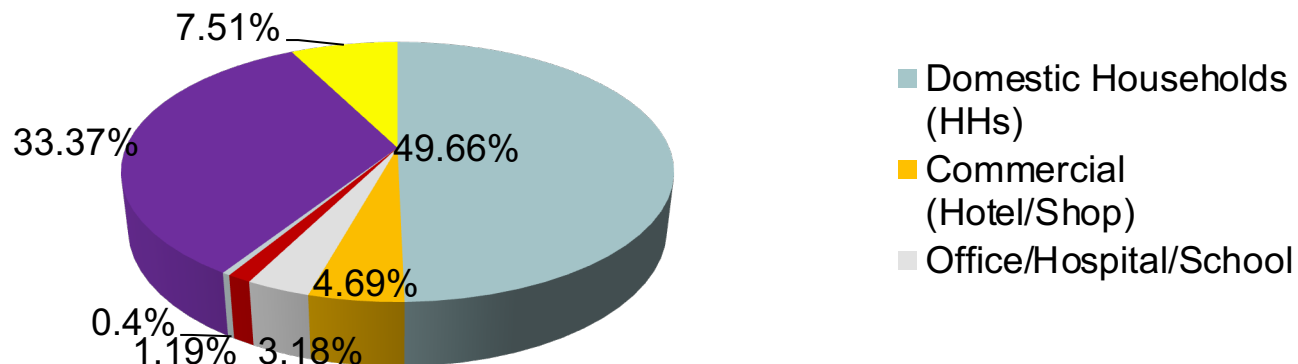
Evolution of Salleri-Chailsa Electricity Company (SCECO)

- Established as a public company in **1991**
- Shareholding of Nepal Electricity Authority (NEA) of the Government of Nepal – 33%, SDC of Swiss Government - 33% and **Local consumers (34%)**
- **Transfer of Swiss Knowhow to local engineers, managers and operators**
- **Local ownership, profit-making but not distributing**
- Profits accumulated as **reserves for major maintenance and further expansion**



Connection with the Grid

- SCECO System was connected to the national grid on **February 26, 2021** through **Net** metering system on an agreed rate
- SCECO sells spill energy during off peak hour and night time to national grid
- SCECO buys electricity from the national grid to meet the consumer demand during peak hours

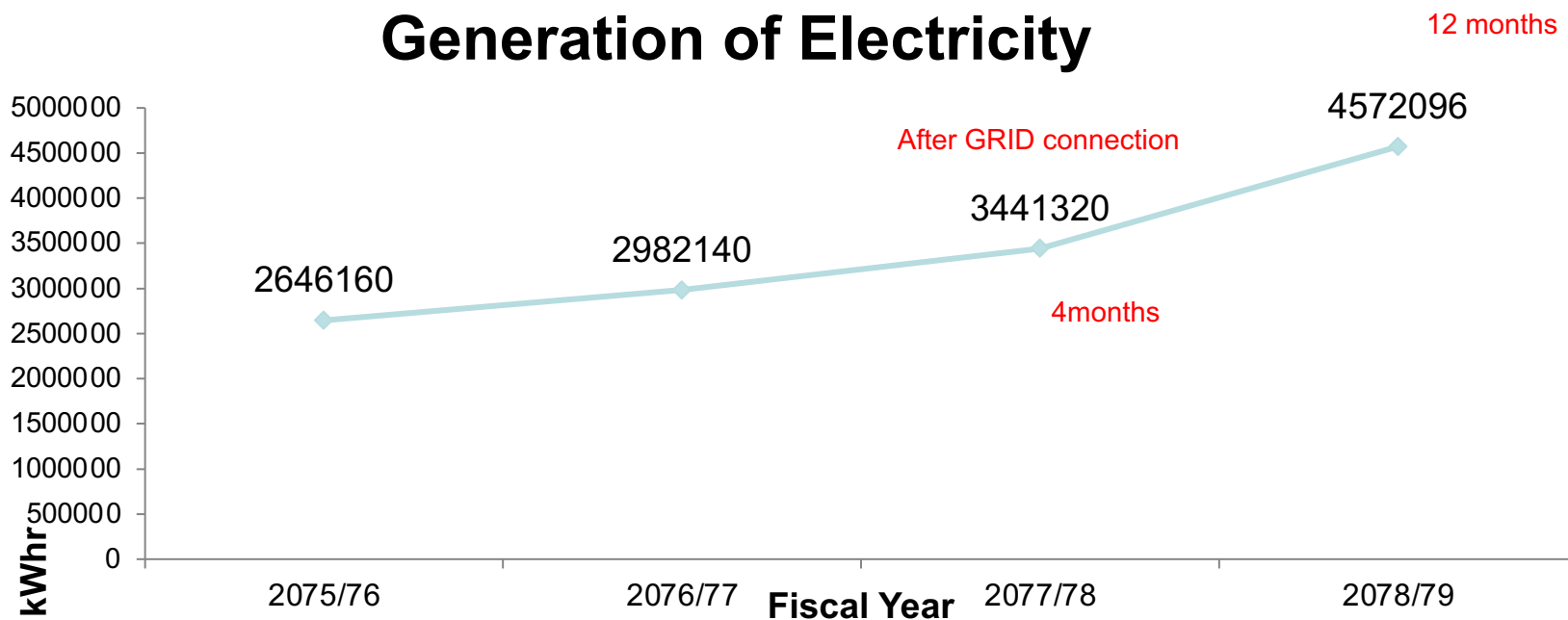


SCECO's consumers (over 2000)



Connection with the Grid (Cont'd)

Generation of Electricity



After grid connection, electricity generation increased by maximum of 32% due to operation of plants during off-peak hours at night time



Local Operation and Management

- Nine Board of Directors – SDC- 3, NEA -3, and 3 from Local
- Board of Directors guides local management, Board meetings and Annual General Meeting
- Operation is done by 17 staff headed by General Manager – 12 local staff (13% female)





Sustainable Model

- Strong local ownership
- Effective and capable local operation and management
- The company is running on profit and is financially sustainable.
- The retained earnings till date is over 1.0 Mio CHF



Thank you