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RURAL ENERGY PROJECT IN ISOLATED AREAS OF GUATEMALA USING SMALL HYDROPOWER PLANTS

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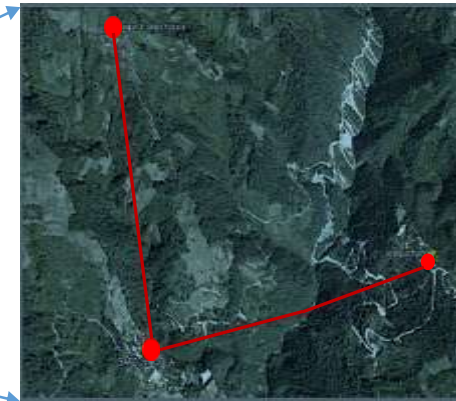
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GENERAL OBJECTIVE

Through the partnership with the private sector, its financial contribution through the application of Corporate Social Responsibility, improve the living conditions of the population in communities far from the distribution network, stimulate the generation of productive projects that help the sustainable development of these communities and, finally, reduce poverty in the communities.

Guatemala

Communities:
Visiquichum,
Batzchocolá and
Laguna Batzchocolá



Micro-hydropower plant and 4 production projects

- Cardamom dryer,
- Carpentry,
- Intercultural Technology Center and
- Creation of a Revolving Fund to finance private productive projects



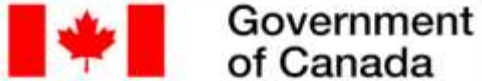
Guatemala

- 3 Beneficiary communities
- 804 inhabitants
- 90 kW installed power
- 183.60 MWh of generation per year
- 141 houses with electricity improving their income and living conditions
- 6,693 tCO₂ avoided in 25 years
- 251,324 hectares of protected forests



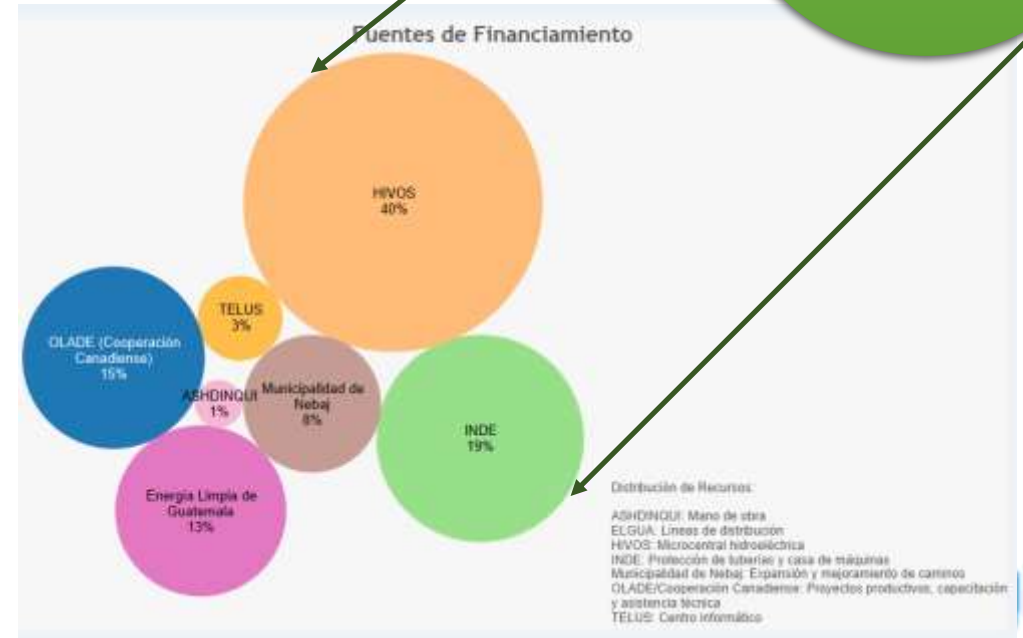
Support and funding from various institutions

Sponsoring companies



Contribution of resources

Total
US\$
780,000



PHASE	CONCEPT	FINANCING
GENERATION	Civil works and hydraulics	HIVOS
	Powerhouse and electromechanical equipment	HIVOS
	Power substation	HIVOS
	Habilitation and protection of hydraulic circuit	CLEAN ENERGY
	Pipe protection	CLEAN ENERGY
	Improvement of security and protection of the powerhouse	CLEAN ENERGY
DISTRIBUTION	Design, construction and supply of distribution networks of the Batzchocolá, Laguna de Batzchocolá de Nebaj and Visiquichum de Chajul communities	INDE
TESTS AND START-UP	Construction of 3 transversal drains in access road	CLEAN ENERGY
	Gabion protection on access roads	CLEAN ENERGY
	Start-up tests of the micro plant	CLEAN ENERGY
	Equipment for linemen	CLEAN ENERGY
	Technical assistance for administrative start-up	MEM/OLADE
POST-INVESTMENT	Protection works (re-conformation of the slope in the intake area, reforestation with native plants and construction of a path and orchids).	ASHDINQUI
	Installation of a Bilingual Intercultural Educational Technology Center IXOJ CETEBI, as part of the energy uses.	TELUS
	Widening and improvement of access road to the community	MUNI NEBAJ
	Revolving Fund for productive uses by women	MEM/OLADE

Micro-hydropower plant and productive projects

Micro-hydropower plant



90 kW installed power
183.60 MWh of generation per year
140 electrified households, benefiting 141 families, 75% of the families belonging to the Ixil ethnic group.

Micro-hydropower plant



Electricity Generation



Utilization for productive uses

Cardamom dryer,



Carpentry Centre



Revolving Fund

BENEFICIARIES		
MALE	FEMALE	TOTAL
24	17	41
59%	41%	100%

Technology Centre



Establishment of a gender committee for the administration and management of productive projects to empower women in the community.

- Cost of energy:
- Fixed Fee: Q 40.00 -> US\$ 5.25
- Tariff: 1.25 Q/kWh -> 0.164 US\$/kWh
- Higher productivity.
- Acquisition of appliances.
- Considerable improvements in health.
- Access to technology such as computers and internet.



- The project has been an example of how SHP energy can be used for productive purposes in a sustainable manner in isolated rural areas.
- In general terms, the project has been successfully developed and is an interesting rural development project, which using the concept of "Corporate Social Responsibility," has allowed the community to work in an organized, participatory way, in partnership with different stakeholders, achieving fairly notorious levels of well-being.
- Recognitions have been received at the international level of the implemented methodology, winning awards such as the National Energy Globe Award Guatemala 2018 and the "Best initiative for the community of the Region-2017" awarded by RECAM (Clean Energy Central America & Caribbean).
- The involvement of international organizations and private companies has been instrumental in supporting communities.
- The empowerment of women in the management of productive projects is an important advance in gender equality and a replicable example.



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Thank you

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