

Nahualate Hydro Power Plant

Case History



Pelton runners

Nahualate Hydro Power Plant Santo Thomas La Union Guatemala

Project owner
Fuerza de Gravedad SA



Status:

- Conceptual design
- Local agreement negotiation
- Environmental study not sent

Key Figures:

- Head: 460 m
- Qm wet season 9,0 m³/s
- Qm dry season 4,6 m³/s
- Qt : 9,0 m³/s
- Waterway 4,5 km tunnel
Ø2,0m
- Turbine 30 MW (2 * 15 MW)
- Annual generation : 150 GWh
- Estimated cost – 42 mUSD
- Specific cost 0,28 USD/GWh

Construction time:

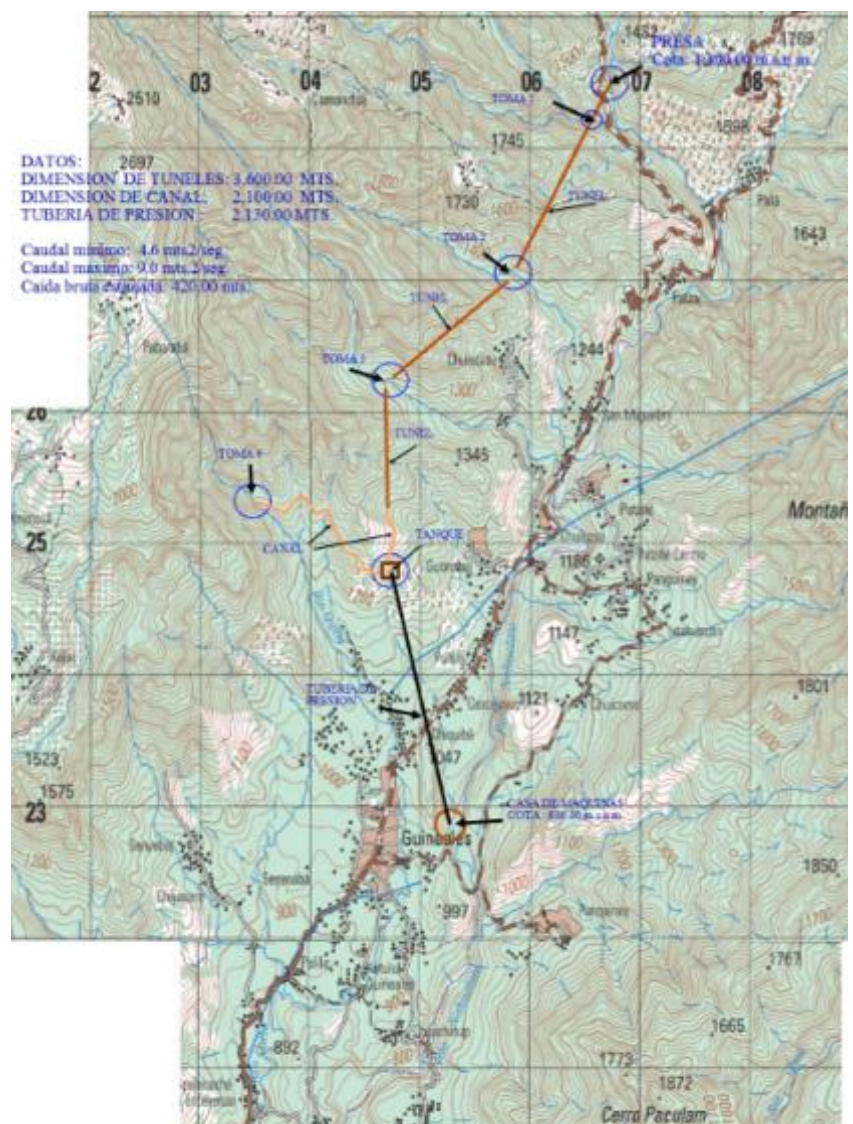
Abt. 30 months

Year :

2016 – 2018/12

Commissioning:

Dec. 2018



Nahualate Guineales, Santa Catarina Ixtahuacán, Rio Nahualate

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Brief project description

This project is currently under negotiations with the local villagers and communities and a final development agreement is expected to be signed quite soon as per August 2013.

Referred agreement implies an approval from the municipal authorities and the local community whom will benefit from the project through a direct contribution to several local public development projects both during the construction and further on during the operation period.

This is a Run-of-the River project which includes a combined intake and dam construction in concrete. The intake site has solid rock on both sides of the river. The gravity dam will be about 10-12 m high and 30 m long. There is a possibility for utilizing a day-pond regulation which is a great advantage in the region. There will be a diversion tunnel of about 4,5 km, meeting a 2,1 km canal feeding the 2,1 km penstock down to the power plant.

There are high voltage power lines two kilometers away but no details are planned here so far.

Most inhabitants belong to the Maya Quiché language group, and all land is divided in privately owned small plots. They have no title deeds to their property, but are willing to sell the plots required for this development in change for cash retribution, road improvement and a social fund for the benefit of the whole community. The Municipality will unify these properties and register a legal title deed in the name of the developer. Access roads are in a bad state, but there is an existing road all the way up to the planned dam area.



Location of Nahualate in Santa Catarina

Project team:

Project director
Civil Engineer
Mechanical engineer
Electrical engineer

Einar Sofienlund,
Alf V. Adeler
Bjorn Undrum,
Einar Sofienlund,

EPC contractor civil works:

Detail design and engineering
Project manager and Site engineer

Technohidros, Guatemala
Ricardo Bonilla, Guatemala

EPC contractor electro-mechanical works:

Detail design and manufacturing