

ELECTRIC CORPORATION OF ECUADOR



Mazar Flotante Photovoltaic Project



Futuro Energético

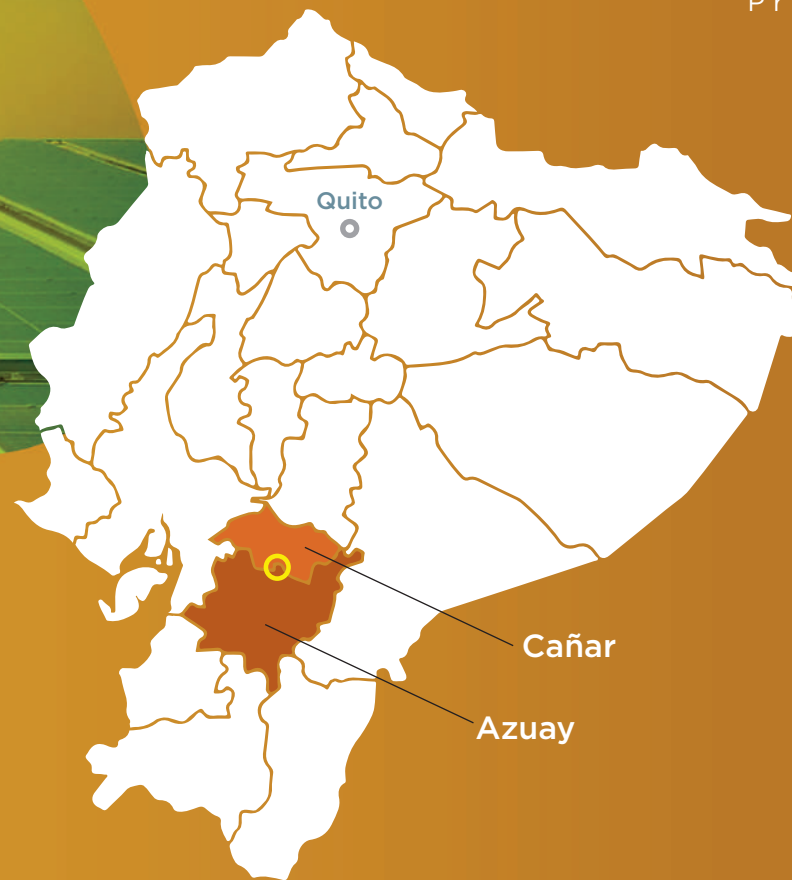


LOCATION

Ecuador
Galápagos



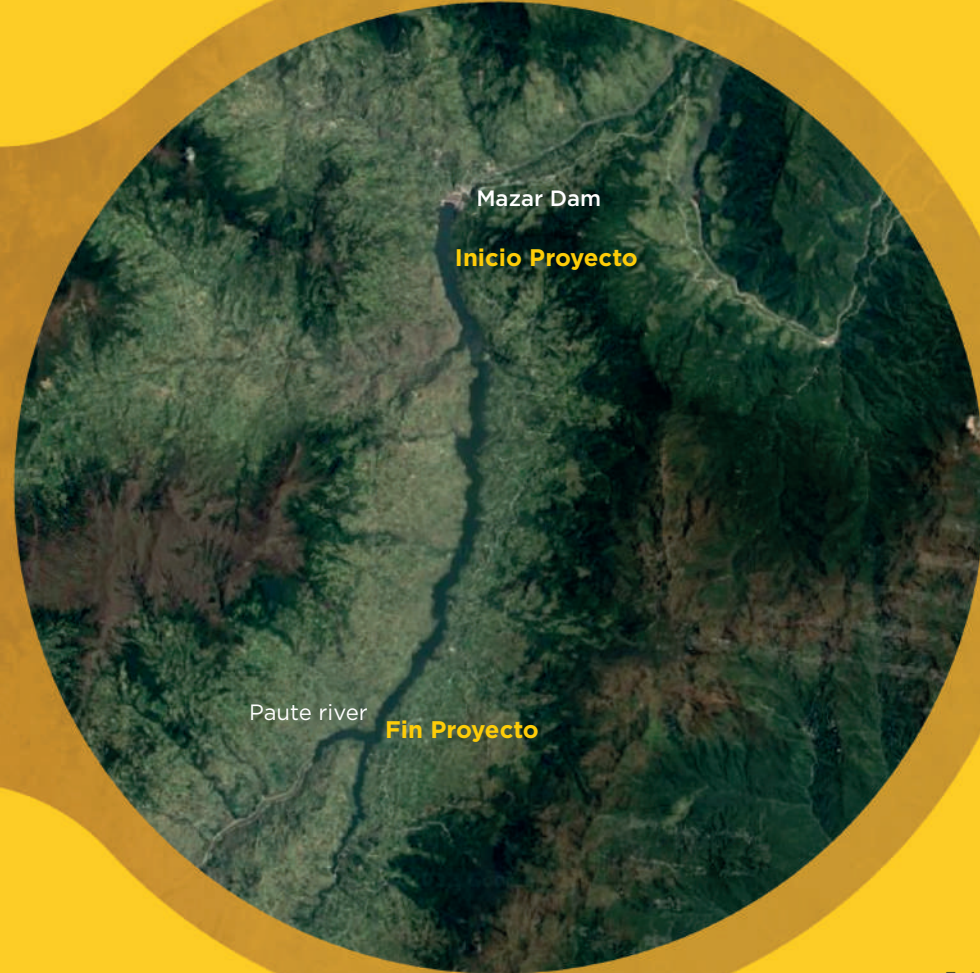
The project is located on the reservoir of the Mazar Hydroelectric Power Plant, located in the Cuenca and Azogues cantons, provinces of Azuay and Cañar, respectively, south of Ecuador, in South America.

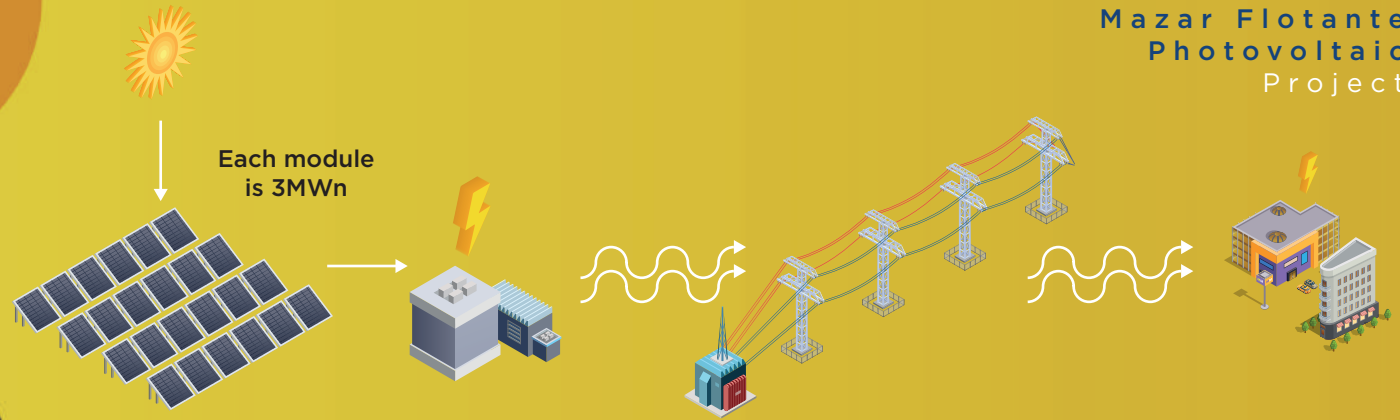


The length used on the water mirror is 15 km with an area of 264 hectares occupied from the crest of the dam to the confluence of the Paute and Collay rivers. The defined area is outside of National Parks and Protected Areas.

The Mazar reservoir is part of the Mazar Hydroelectric Power Plant, owned by CELEC EP, which regulates the water supply for power generation for the Mazar, Molino and Sopladora power plants.

The reservoir is accessed by the Paute-Guarumales-Méndez interstate road and there is also dirt roads leading to the water mirror.





The prefeasibility study used data by SolarGis, which provided the monthly average values of irradiation and temperature in the long term. For the project location, SolarGIS estimates an average annual horizontal global irradiation value equal to 1,77 kWh/m². A shadow study was carried out considering the topography of the site and it was established that the loss due to this criterion is 2.1%.

Interconnection



In the prefeasibility design several options were analyzed, among which the closest substations are Zhoray and Today.



	Level of study	Prefeasibility		
	Existing studies	<ul style="list-style-type: none"> • Technical • Economical • Administrative • Financial • Socio-environmental • Legal 		
	Power (MW)	201 MWp 159 MW nominal	Energy (GWh/year)	292
	Estimated plant factor (%) and performance	16,6%	Date of approval of design/studies	July/2019
	Estimated construction time	24 months		
	Estimated construction budget	160 (MM USD)		





The Mazar reservoir is part of the hydroelectric Power Plant that goes by the same name. It has an environmental license issued in 2007 and periodic environmental audit processes, the photovoltaic project will be installed on its water mirror. The prefeasibility study, included an evaluation of the social and environmental aspects and impacts, considering that it is located within an area dedicated to electricity generation.

ESTATES

According to the prefeasibility design for this project, only the properties for the elevator substation must be managed, since the entire plant is made up of chains and modules.





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