

# Hydroelectric Energy



in Costa Rica

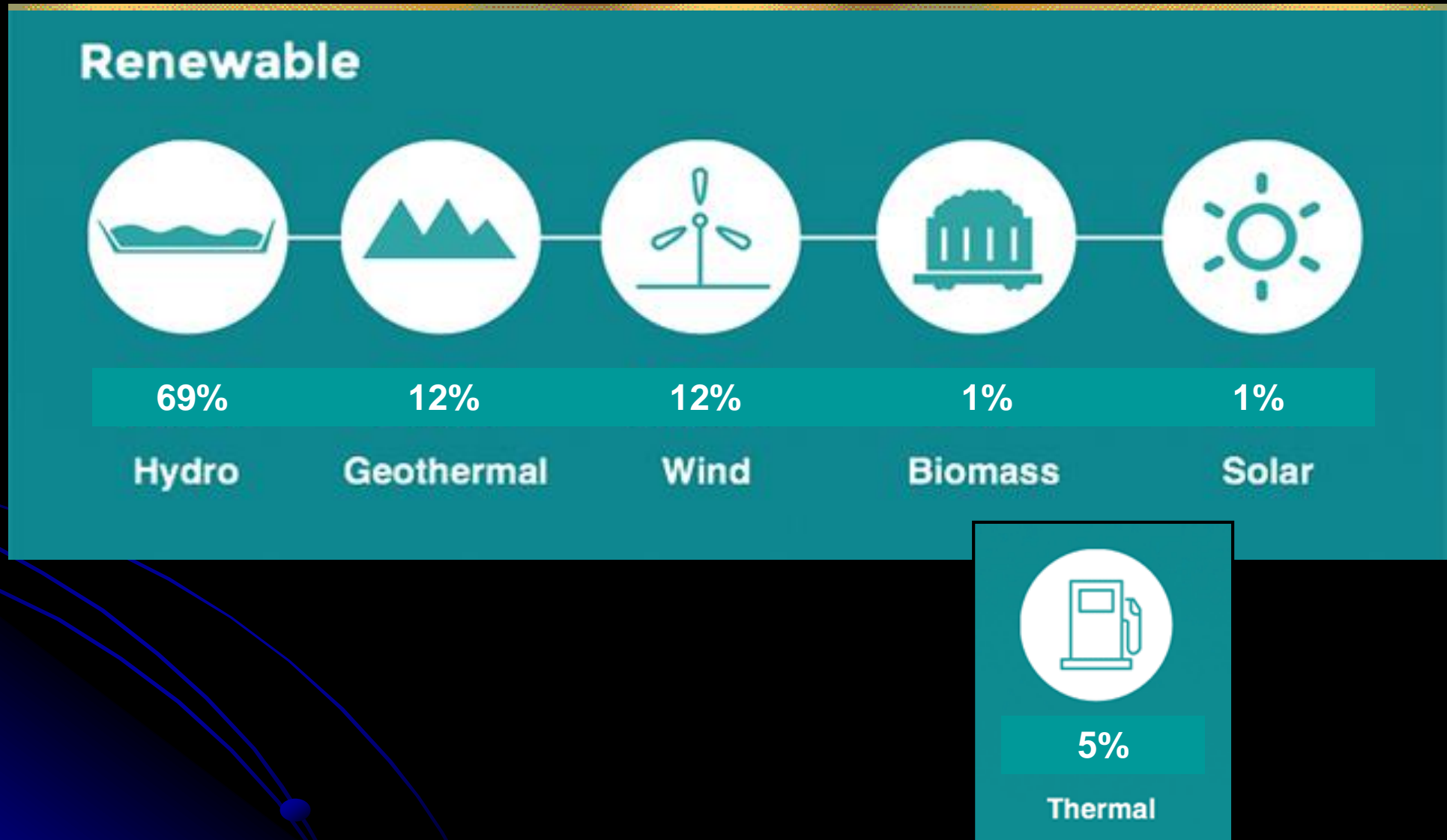
Dr. Miguel Karian

Earth Education International

Costa Rica



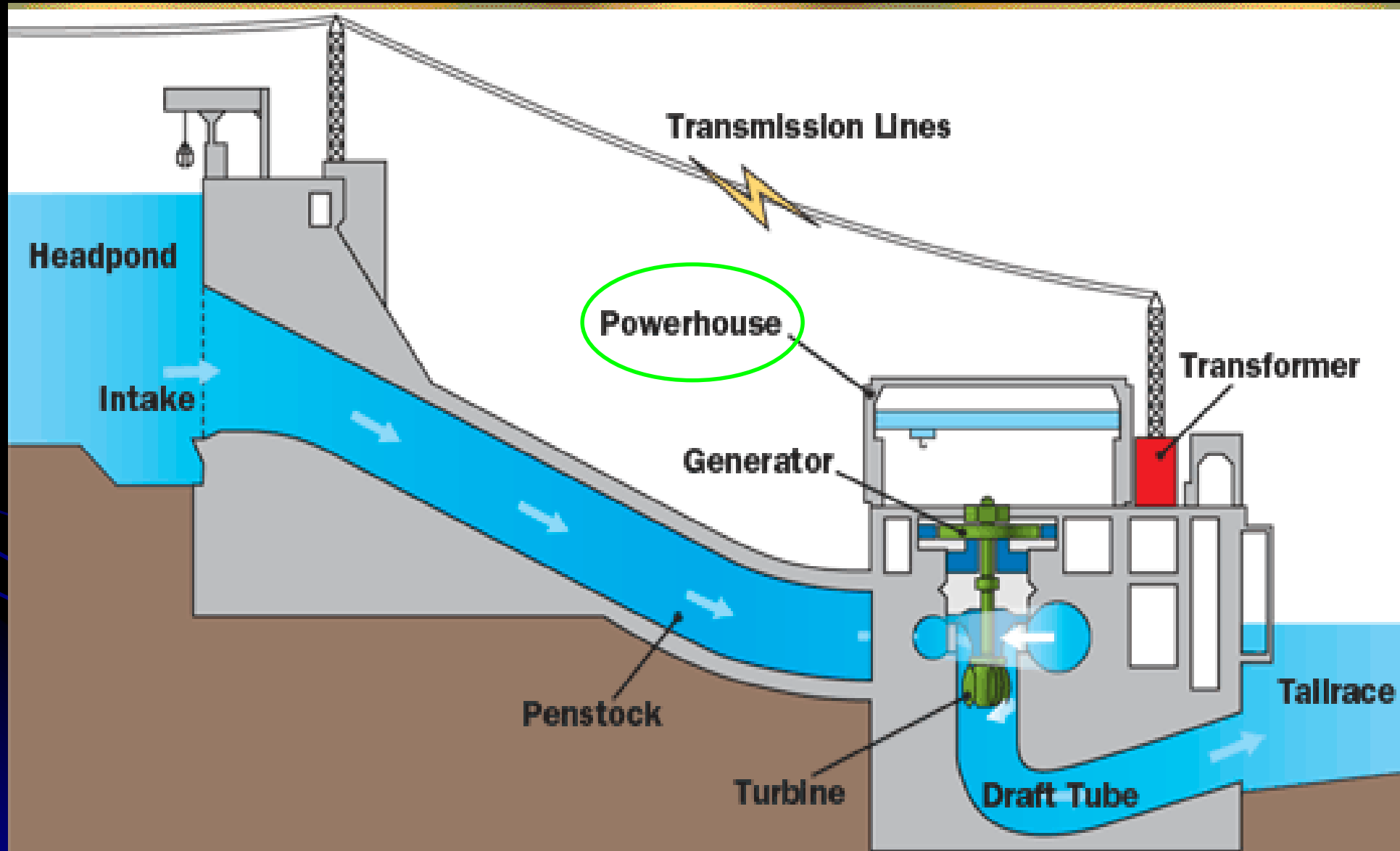
# Costa Rica Electricity Mix



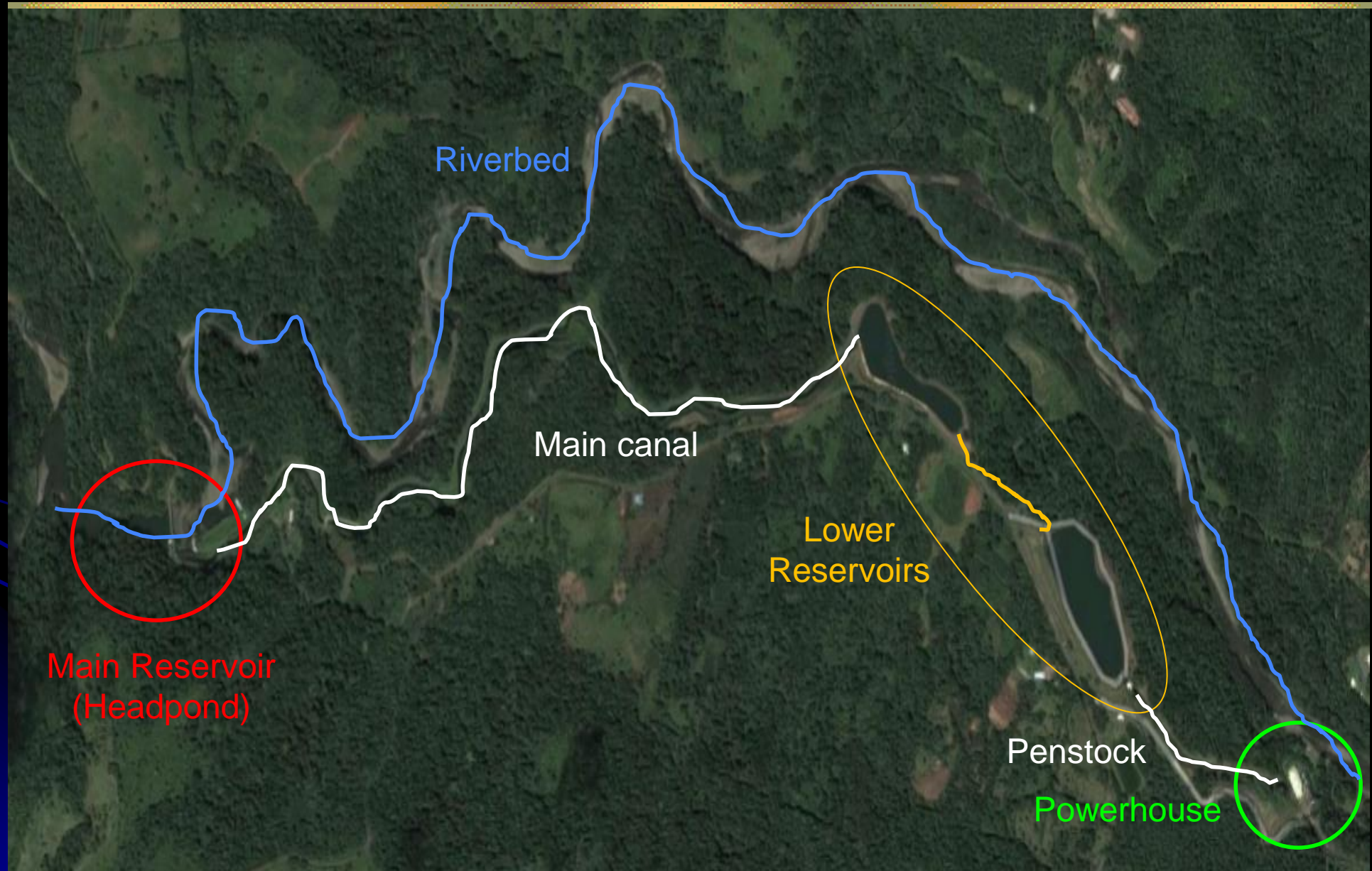
# Hydrospheric Energy in Costa Rica (18%)



# Hydroelectric Plant Operation



# San Lorenzo Medium-Scale Hydro

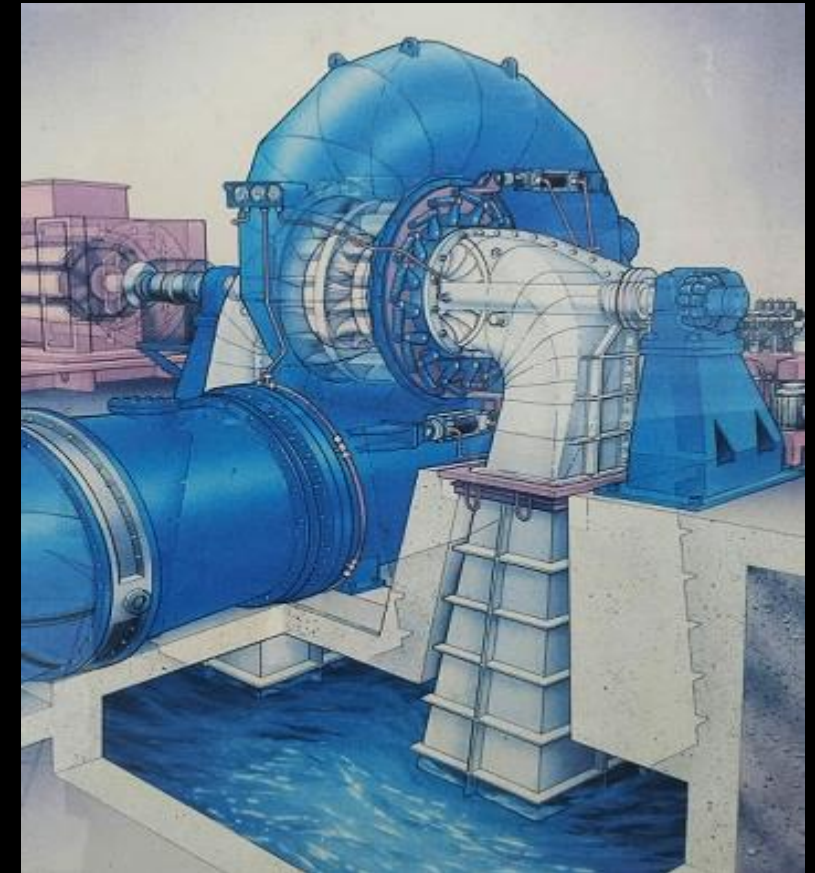


# San Lorenzo Medium-Scale Hydro



# San Lorenzo Medium-Scale Hydro

- Capacity: 17MW (29,000 homes/145,000 people)
- Turbine design: Francis turbine (2 x 8.5KW each)



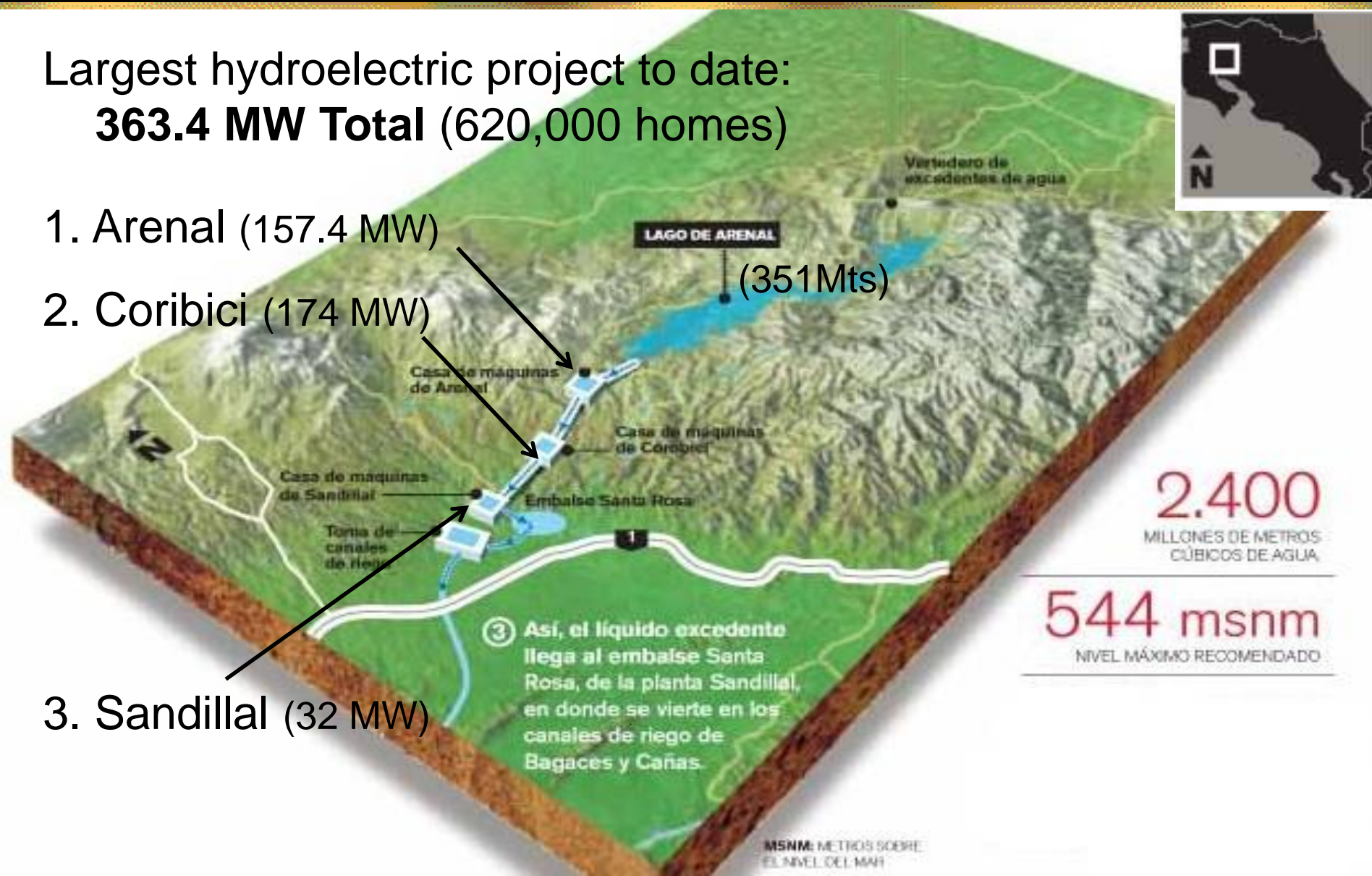
# Arenal Large-Scale Hydro

Largest hydroelectric project to date:  
**363.4 MW Total** (620,000 homes)

1. Arenal (157.4 MW)

2. Coribici (174 MW)

3. Sandillal (32 MW)



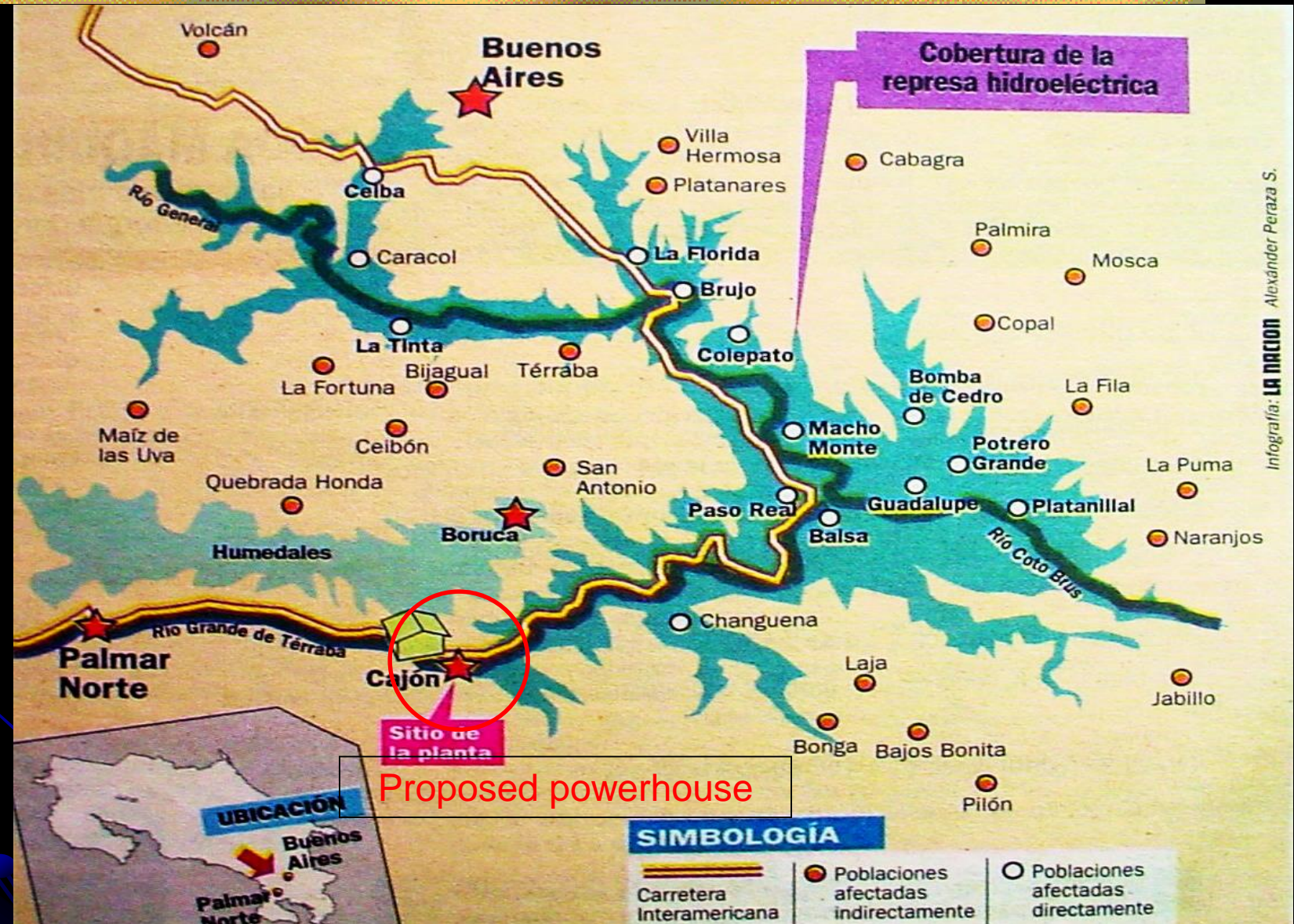
# Original Boruca Hydroelectric Project (1996)

**Energy Output:**  
832 MW

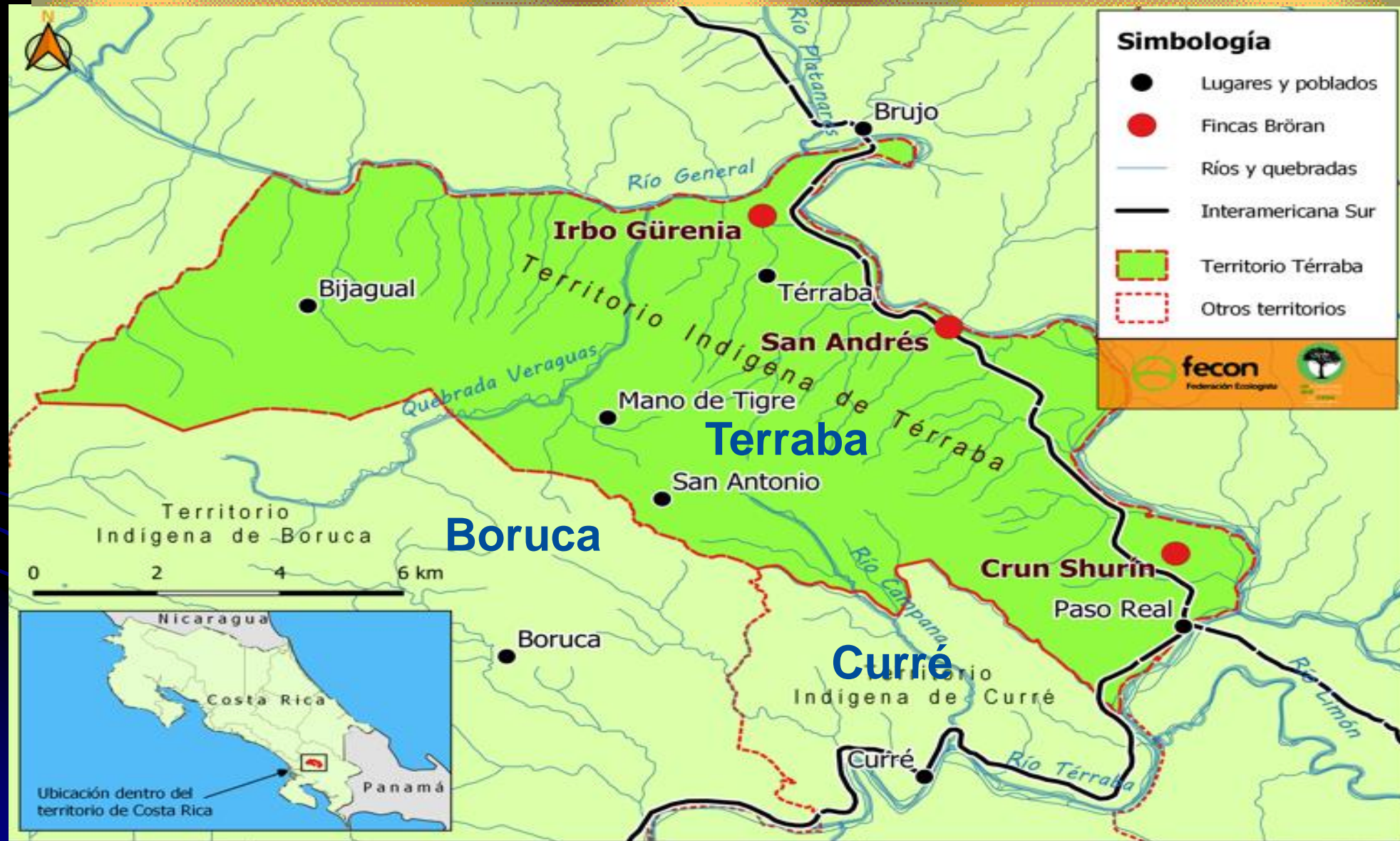
**Land Area:**  
25,000 Ha.  
(62,500 ac)

**Populations:**  
14 towns

**Other:**  
50 Km of Inter-American Hwy



# Southern Costa Rica Indigenous Lands



# Modified El Diquís Hydroelectric Project



# Modified El Diquís Hydroelectric Project

**Largest Planned Plant in Central America: 630MW**

**Area: 12,580 Ha (4,400 Ha indigenous lands)**

**Displacement: 1,547 people, 37Km of Inter-American Highway**

**Other: Proposed transmission line would transect the MesoAmerican Biological Corridor**

**Status: In 20 year land battles with Térraba & other indigenous groups**

# Costa Rica Indigenous Land Struggles

- 2% of the population (~100,000 people)
- 24 indigenous territories and 8 ethnic group
- **MAIN ISSUES:** Megaprojects such as hydroelectric dams and invasions of indigenous territories causing land loss

## Costa Rica: Jerhy Rivera Dies While Defending Indigenous Lands



Photograph of Jerhy Rivera in Puntarenas province, Costa Rica, 2019. | Photo: Twitter/  
@surcosdigital

Published 25 February 2020

**This crime "splashes with blood the hypocrisy of the Costa Rican State," the Federation of Ecologists said.**

# Costa Rica Indigenous Land Struggles

## Indigenous leader Sergio Rojas assassinated in Costa Rica

Sergio Rojas was fighting for the recovery of indigenous ancestral lands across Costa Rica

March 20, 2019 by Peoples Dispatch



# Proposed El Diquís Hydroelectric Plant

## Sala IV anula decreto de Conveniencia Nacional e Interés Público del Proyecto Hidroeléctrico El Diquis

Por Elpais.cr 19 Enero, 2022

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2008:  
presidential  
decree that  
project "in  
the national  
public  
interest"

2022:  
**ANULLED**  
by court order

# Proposed El Diquís Hydroelectric Plant

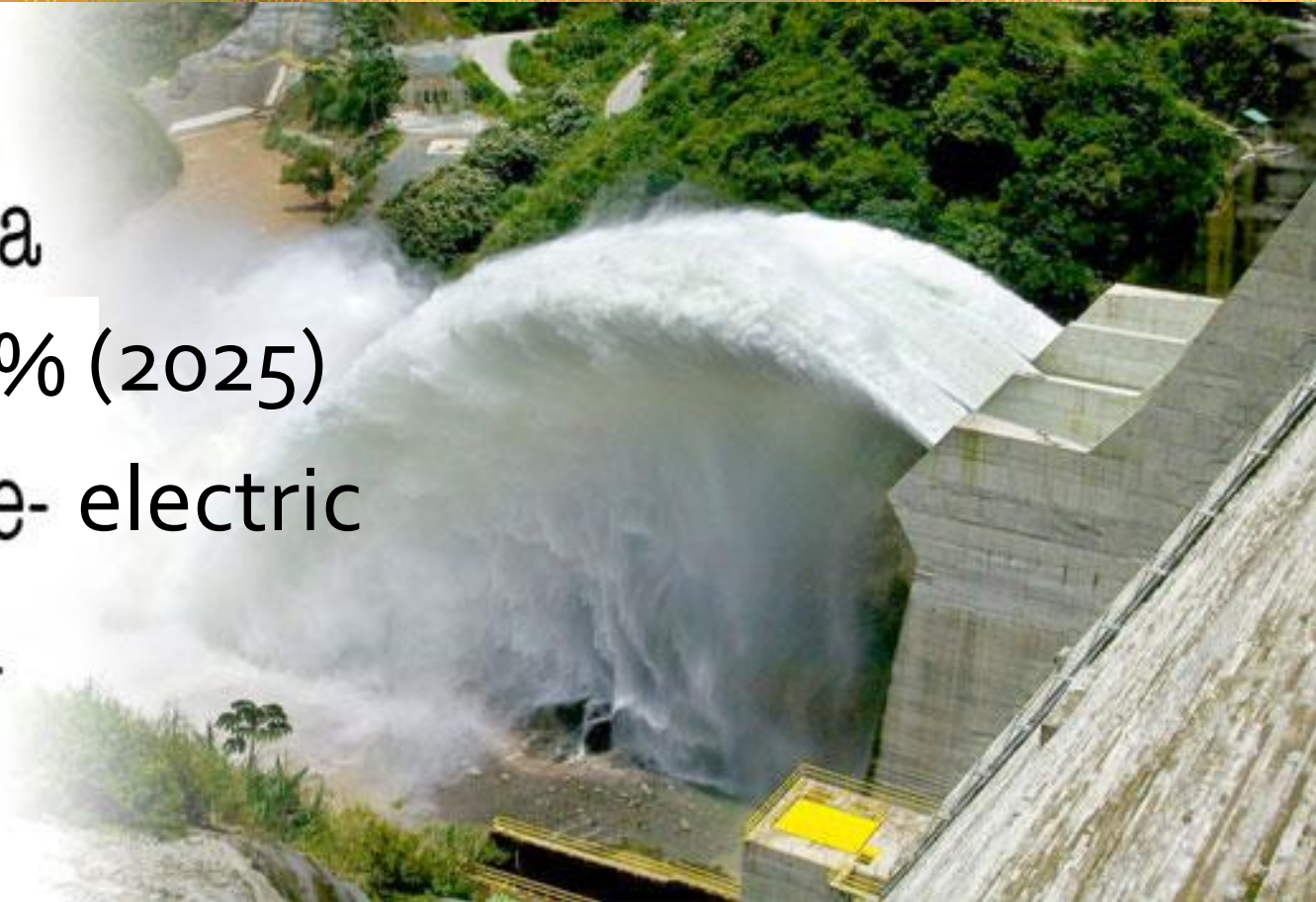
The Tico Times  
Since 1956



May 14, 2024  
"President Rodrigo Chaves announces intent to reactivate the Diquis hydroelectric project"

# Costa Rica Renewable Electricity Mix

Costa Rica  
is 98.6% (2025)  
renewable- electric  
powered



# Costa Rica Renewable Electricity Mix

