SECRETARIA NACIONAL DE
TRANSIÇÃO ENERGÉTICA
E PLANEJAMENTO

MINISTÉRIO DE
MINAS E ENERGIA

MME · BRAZIL

Productive Uses of Energy in Isolated Systems

National approaches in the Brazilian Legal Amazon

General Coordination of Isolated Systems (CGSI) — Ministry of Mines and Energy

Knowledge Exchange on Productive Uses of Energy in Latin America

Cajamarca, Peru · 2026

A Just and Inclusive Energy Transition

promotion of **equity** and **social participation**

minimizing negative impacts for communities, workers, businesses and social segments vulnerable to the transformations in the energy system

maximizing the opportunities for socioeconomic development,

increased competitiveness of the productive sector and **the fight against inequality and poverty** at the international, regional and local levels.

(CNPE Resolution No. 5, of August 26, 2024)

What are Isolated Systems?!

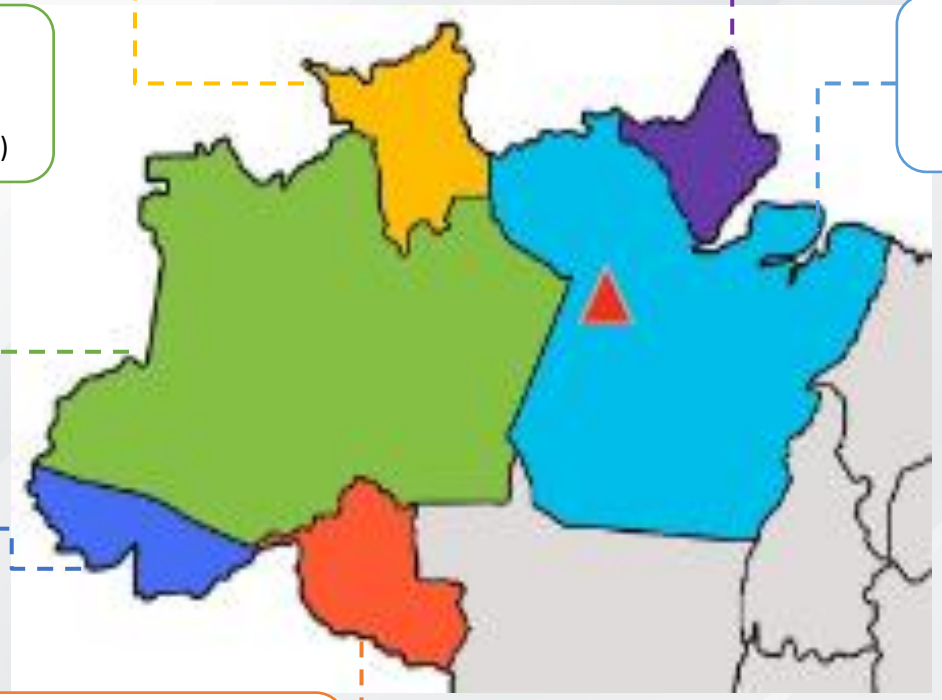
They supply electricity to people living in **localities that, for technical and/or economic reasons, are not integrated** into the National Interconnected System – **SIN**.

160

Isolated systems (2025)

~1.97M

People



Roraima Energia [1]
34 localities
57.7k people
5.362 MW demand (2030)

Equatorial Amapá
01 locality
30.5k people
10 MW demand (2030)

Amazonas Energia
92 localities
1.467M people
361 MW demand (2030)

Equatorial Pará
14 localities
352.7k people
6 MW demand (2030)

Energisa Acre
4 localities
43.8k people
5 MW demand (2030)

Energisa Rondônia
12 localities
9,368 people
3 MW demand (2030)

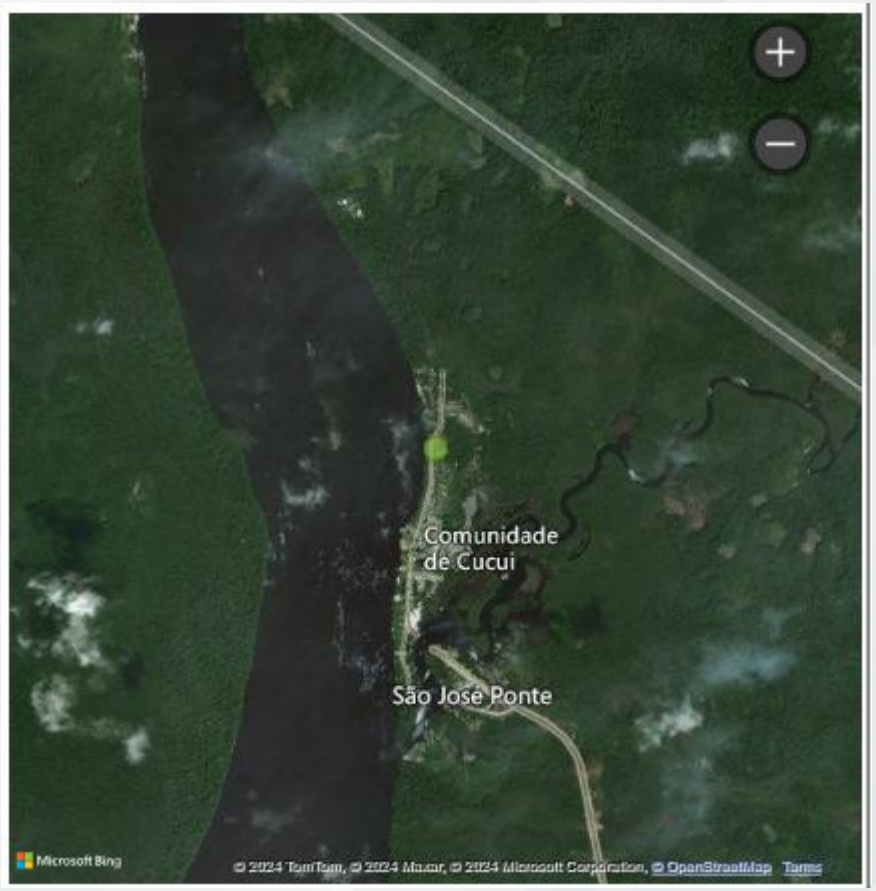
[1] Roraima's capital, Boa Vista, remained an isolated system (SISOL) until 2025 — the last state not yet connected to the SIN.

Examples of Isolated Systems

Porto Walter-AC: 11k inhabitants · 1.8 MW

Tefé-AM: 74k inhabitants · 22.9 MW

Cucuí-AM: 236 inhabitants · 165 kW



Energias da Amazônia Program

Instruments

1 Transmission auctions

Whenever technically, environmentally and economically viable, transmission solutions for interconnection will be tendered or authorized

2 Isolated-systems auctions

New MME guidelines require winners to make greater efforts to deploy alternatives to diesel generation

3 Sub-rogation of the CCC

Encourages investments that cut costs and emissions — through interconnections, diesel alternatives, storage or energy efficiency

4 Pró-Amazônia Legal Fund

Work and investment plan for a fund created to structurally reduce energy costs in isolated systems

5 Other instruments

Engagement with installed suppliers: identify barriers and foster deployment of alternatives to diesel

Cross-cutting action

Better data quality

PASI: Isolated Systems Monitoring Portal
Established by MME Ordinance No. 59/2022 and developed with support from EPE, ONS, CCEE and ANEEL

Access alone is not enough

Energy must become an instrument of economic transformation

1

Connection

grid arrives or local hybrid plant

2

Productive use

energy adds value

3

Income

local development

Irrigation · Refrigeration · Drying · Processing · Fish & fruit pulp · Vegetable oils

~74,000 rural establishments in the Amazon still without electricity (IEMA)

Partnerships and community work

Advancing with partners and with the communities

Global Energy Alliance (GEA)

Financing, convening and technical support for the energy transition.

Fundação Amazônia Sustentável (FAS)

Systems approach: from infrastructure to income generation and public policy.

FAS

Participatory diagnosis · local capacity and community agents · Manaus workshop (Feb 2026) with 160+ stakeholders

On the ground: Tamaniquá - Amazonas

Community profile

- ❑ Isolated riverine community — Tefé region
- ❑ Accessed mainly by river
- ❑ 138 inhabitants
- ❑ Diesel → renewable hybrid, with continuity

Productive uses

- ❑ Fish conservation
- ❑ Andiroba (extra-virgin) oil production – Energias da Floresta Project

An integrated framework: actions that add up

Four complementary fronts of the Energias da Amazônia Program — Decree No. 11,648/2023

1

Auctions and hybridization

contract cleaner supply

2

Interconnection and CCC

interconnect and cut fuel costs

3

Partnerships and program integration

Energias da Amazônia and Luz para Todos

4

Accessibility and innovation

Energias da Floresta — regulatory sandbox (ANEEL)

Front 1 — Auctions and hybridization

2025 SISOL auction + hybridization of existing plants

50 MW
contracted

1.870 MW
registered pipeline

R$ 312M
investment

Caiambé – AM
974 inhabitants

Hybridized plant in Caiambé – AM

6 localities
in Amazonas and Pará

Hybrid solar + storage
~80% renewable in one lot

By 2028
~180 MW solar · ~308 MWh storage

Front 2 — Interconnection and cost reduction

Interconnections to the SIN + Pró-Amazônia Legal

212 → 160
Isolated systems

15
interconnections in 2025

~800k
tCO2 avoided

Boa Vista connected
last capital to be connected

Pró-Amazônia Legal
14 projects · 35 isolated systems

Investment
R$ 829M · ~650k people

How the actions add up

Universalization
brings the connection

→

Modernization
cleaner, reliable, cheaper

→

Accessibility + use
energy → income

Access decoupled from productive use can underuse the investment

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Thank you

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National approaches to productive uses of energy

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National Secretariat for Energy Transition and Planning
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