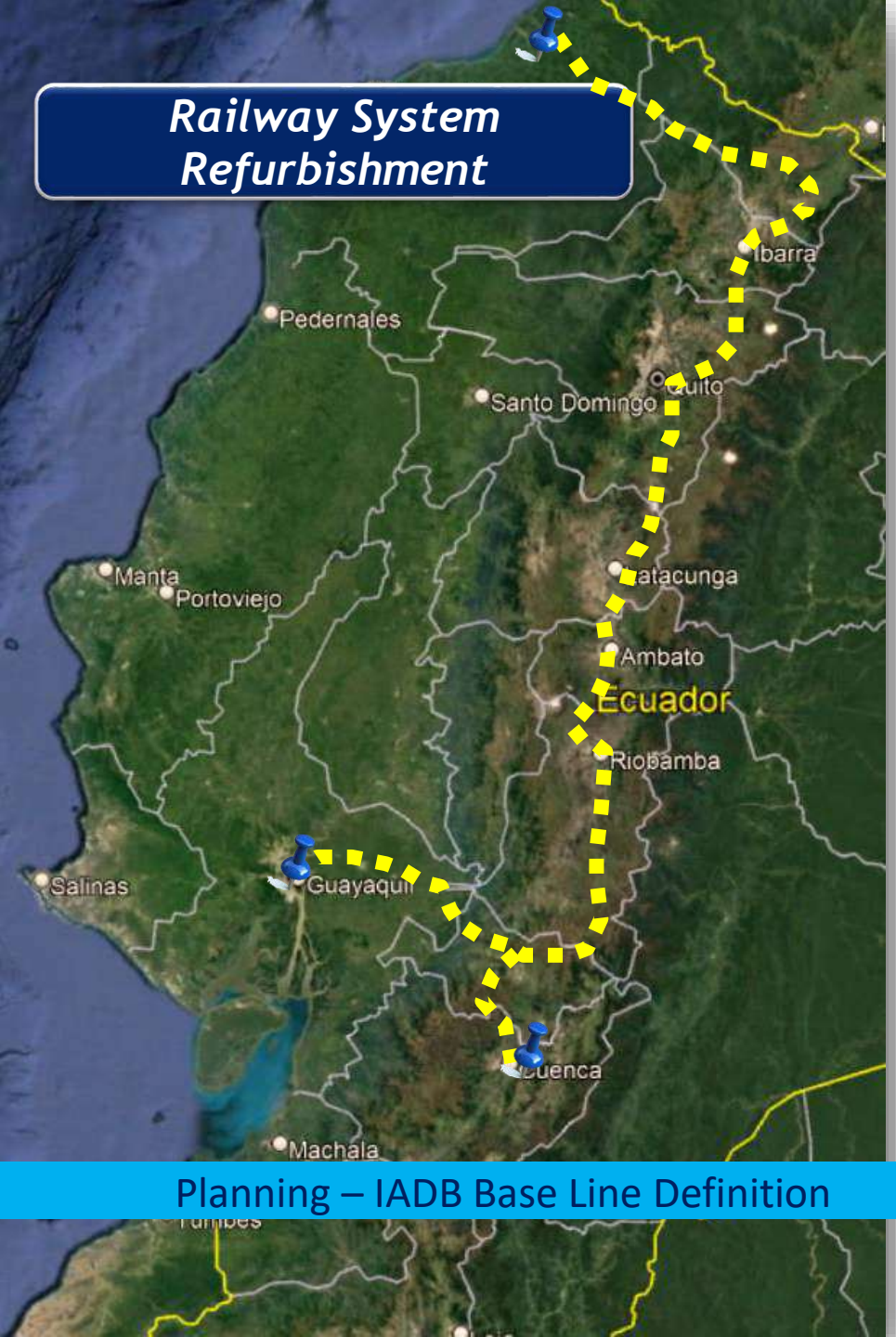
RAILWAY SYSTEM



Project:

- Boosting and repowering of the railway through a multi-purpose approach:
  - Tourism
  - Passengers
  - Freight

- Refurbishment and extension of 965.6 km from the existing railway.

Railway System Status:

- 118,92 km - Operational
- 387,28 km – Non-operational
- 459,60 km – Out of service

- **Locomotive and towed equipment:**
  81 towed (carriages)
  30 locomotive (vapor, electrodiesel and railway cars)

- 35 refurbished stations
- 60 non-refurbished stations

Estimated CAPEX:
$ 2.5 billion

Reponsible Entity:
Ministry of Transport and Public Works

República del Ecuador
Gobierno del Encuentro
Juntos lo logramos


ENERGY

500 Mw Non-conventional Renewable Energy Block

The project aims to reach an accumulated potency of 500 Mw through the concession of several non-conventional renewable energy projects, including small hydroelectric plants, and photovoltaic, aeolic and biomass generators.

Considered sub-blocks and potency required:

- **Hydroelectric**: 150 Mw (30 years)
- **Aeolic:** 200 Mw (25 years)
- **Photovoltaic:** 120 Mw (25 years)
- **Biomass, Biogas:** 30 Mw (20 years)

Estimated Production: **2,119.3 GWh/year**

CAPEX: **$875 million**

Scope of the Project:

- ✓ Design
- ✓ Construction
- ✓ Operation and maintenance
- ✓ Financing

Compensation model: **Variating costs according to the energy effectively produced**

Responsible Entity: **Ministry of Energy and Mines**

Public Bid

Gobierno del Encuentro

GUILLERMO LASSO
PRESIDENTE

North-Eastern Transmission System

The North-Eastern Transmission System Project encompasses three (3) transmission sub-systems, with the Interconnected National System (SNI) as a connection point to the 230 and 138 kW Shushufindi subsystems; and the 69 kV Loreto subsystem. The project contemplates the construction of six new subsystems and 290 km of transmission lines with tension levels of 69, 138, and 230 kW.

The three subsystems are:

- Subsystem: Shushufindi – Edén Yuturi (EPF) – Tiputini (CPT) by 230 kV levels.
- Subsystem 2: Shushufindi – Tarapoa by 138 kV levels, Tarapoa – Cuyabeno by 69 kV levels and Shushufindi (SNI)- Shushufindi (SEIP) by 138 kV levels.
- Subsystem 3: Loreto – Oso by 69 kV levels

Scope of the Project:

- ✓ Design
- ✓ Construction
- ✓ Operation and maintenance
- ✓ Financing

Compensation model: Variating costs according to the energy effectively produced

Responsible Entity: Ministry of Energy and Mines

Estimated time of construction: 3 years

CAPEX: $386 million

OPEX: annual average of $ 17.5 million

Concession Period: 30 years

Public Bid

Gobierno del Encuentro

GUILLERMO LASSO
PRESIDENTE

Cardenillo Hydroelectric

Installed potency of 596.5 MW
Ecological flow of 10 m^3/s, leveraged by the construction of a small generator plant

The components of the project are:
- The dam and its annexed sites
- Underground machinery house

Scope of the Project:

✓ **Design**
✓ **Construction**
✓ **Operation and maintenance**
✓ **Financing**

Compensation model: **Fee for service**

Responsible Entity: **Ministry of Energy and Mines**

Estimated time of construction: **6 years**

CAPEX: **$1.3 billion** **OPEX:** **annual average of $9 million**

Concession period: **30 years**

Structuring – Culmination of the project structuring process

Gobierno del Encuentro

GUILLERMO LASSO
PRESIDENTE

GAS

Associated Gas Acquisition

The objective of this Project is to acquire associated gas to use it as Liquified Petroleum Gas (LPG), natural gasoline, and residual dry gas. The industrialization of these components implies that the State will save approximately USD 400 million per year, due to a decrease in LPG and Diesel imports to generate energy. Additionally, it complies with the Resolution emmitted by the Provincial Court of Sucumbios, as it determines the elimination of burners, based on environmental criteria.

In each cluster, investors have the possibility to propose investment plans that allow the incorporation of technology that focuses on the acquisition of gas in pursuit of increasing production.

Scope of the Project:

- ✓ Design
- ✓ Refurbishment/ Repowering
- ✓ Operation and maintenance
- ✓ Financing

Responsible Entity: PETROECUADOR

Public Bid – Submission of Offers
September 2022

CAPEX: $500 million

Term: 10 años

Gobierno del Encuentro

GUILLERMO LASSO

Combined Cycle Thermoelectric Block

The Natural Gas Combined Cycle Block includes the development of a **400 (+/- 10%) MW generation plant** and its corresponding associated transmission system to the National Transmission System.
The generation plant will utilize **units of thermoelectricity-to-gas generators**, based on conventional combined cycles with gas turbines or internal combustion engines.

Estimated Production: **3000 GWh/year**

Scope of the Project:

- ✓ **Design**
- ✓ **Refurbishment/ Repowering**
- ✓ **Operation and maintenance**
- ✓ **Financing**

Compensation model: **Variating costs according to the energy effectively produced, and a fixed cost por the plant's availability**

Responsible Entity: **Ministry of Energy and Mines**

Estimated construction time: **24 months**

CAPEX: **$600 million** **OPEX:** **annual average of $74,1 million**

Term: **25 años**

Public Bid

Gobierno del Encuentro

GUILLERMO LASSO
PRESIDENTE


PETROLEUM

Intracampos II Round

This Project has the objective to replenish the reserves that are annually consumed in the country (approximately 190 million barrels).
Six blocks were appointed for tendering: 11, 93, 94, 95, 96, and 97)
The areas have subsoil data on two (2) of the blocks; additionally, there is also data on the surface.

Total prospective resources: 107 million barrels
Average daily production: 18,000 to 22.000 barrels/day.

Scope of the Project:

- ✓Exploration
- ✓Explotation
- ✓Transfer to the State

Responsible Entity: **Ministry of Energy and Mines**

CAPEX: **$731 million**

OPEX: **$ 1.32 billion**

Structuring – Culmination of the project structuring process

Term: **24 years**

Gobierno del Encuentro

GUILLERMO LASSO
PRESIDENTE

Block 60 - Sacha

Located in the Orellana province – area of 355 km²

Approximate figures:

POES: 5.228 billion barrels.
Proven, probable and posible reserves: 367 million barrels.
Average daily production: 69,825 barrels/day
Facilities: secondary pipelines to the TransEcuadorian Pipeline System (SOTE) and Heavy Crude Pipeline (OCP)
Crude quality: 26º API on average

Scope of the Project:

- ✓Exploration
- ✓Explotation
- ✓Transfer to the State

Responsible Entity: **PETROECUADOR**

CAPEX: **$2.887 billion**

Term: **24 years**

Structuring – Culmination of the project structuring process

Gobierno del Encuentro

GUILLERMO LASSO

Esmeraldas Refinery

- Quality improvement of fuels and reduction of emissions, through the implementation of a high-conversion train.
- It produces 39% of residues.
- With investments, the degree of complexity of the refinery will increase, obtaining higher-quality derivatives with a higher market value, while the amount of redisues will decrease.

Current refining capacity: 110,000 barrels/day.

Scope of the Project:

- ✓ Design
- ✓ Refurbishment/ Repowering
- ✓ Operation and maintenance
- ✓ Financing

Responsible Entity: PETROECUADOR

CAPEX: $2.887 billion

Term: 24 years

Structuring of the Project

Gobierno del Encuentro

GUILLERMO LASSO


The development of a country is portrayed through
the quality of its infrastructure, the efficiency
of public services and
the generation of employment