



REFINARIA

ABREU E LIMA

The Choice of Pernambuco

Main reasons:

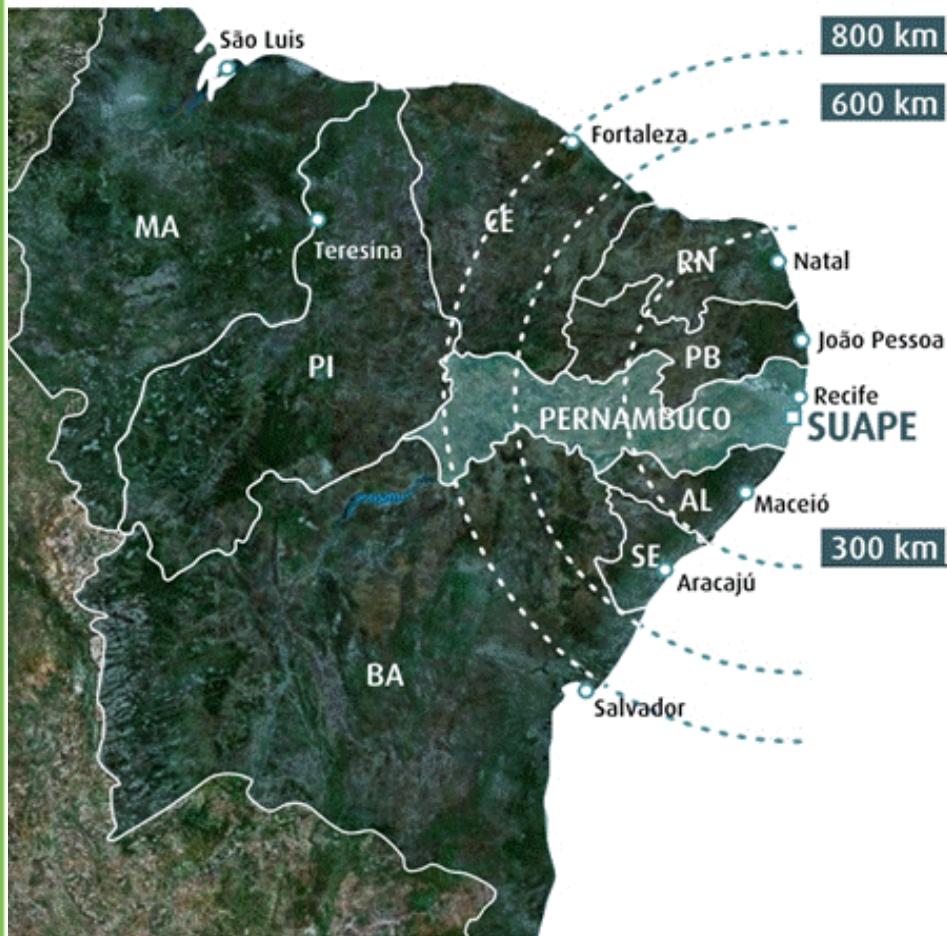
- **Suitable harbor infrastructure**
- **Structured industrial zone**
- **Second fuel market in NE Region**
- **Partnership with the state of Pernambuco to provide external infrastructure**

SUAPE Port accesses North America, Europe and Africa easily



SUAPE Port

It is located in the center of the growing Northeast region



7 Metropolis

7 international airports

8 international ports

1 river port

30 million of people

90% of GDP of northeast

4 Metropolis

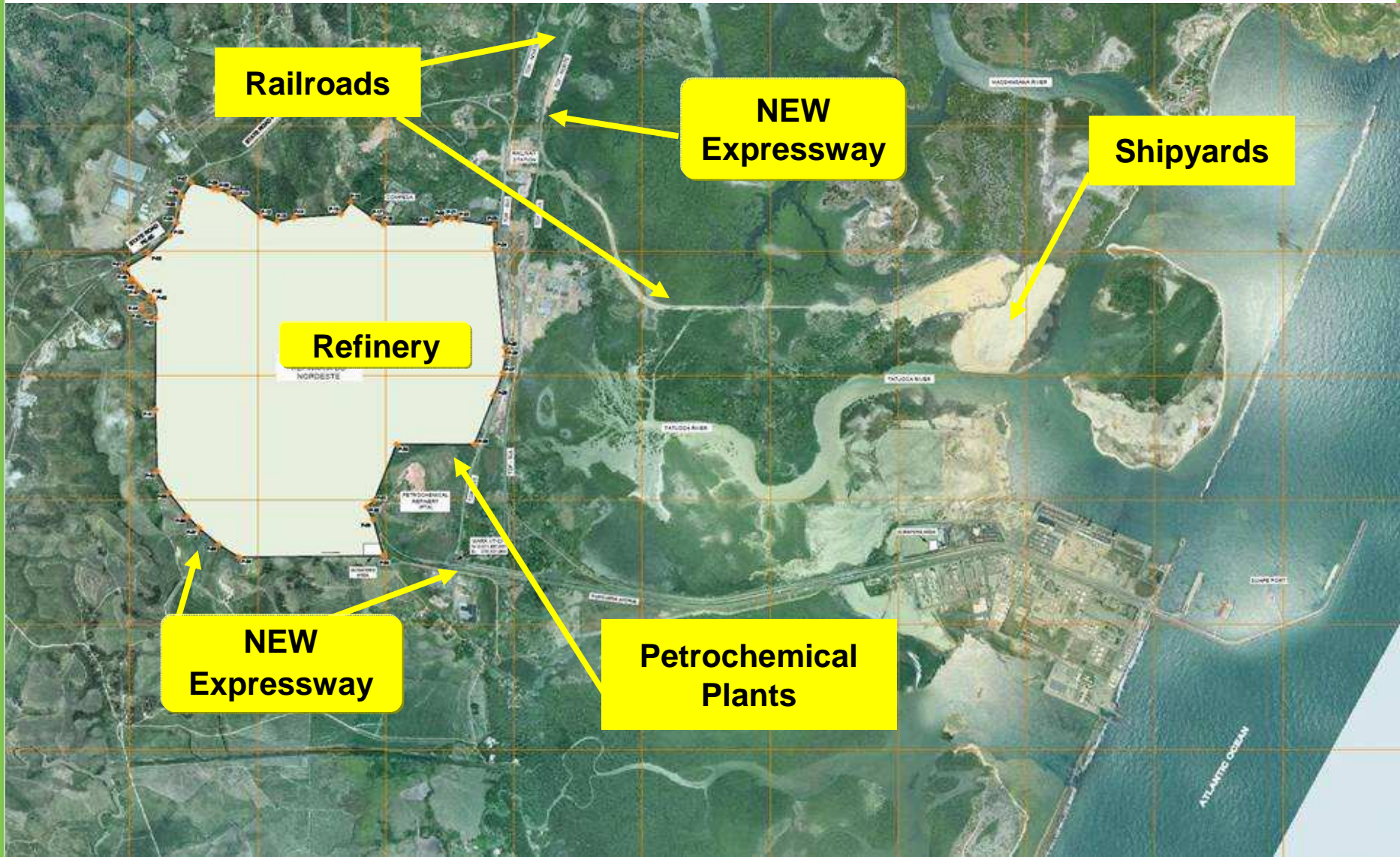
4 international airports

5 international ports

12 million of people

More than 35% of GDP of northeast

Infrastructure available (railroads / expressways)



Location

RNEST

PORTO DE GALINHAS



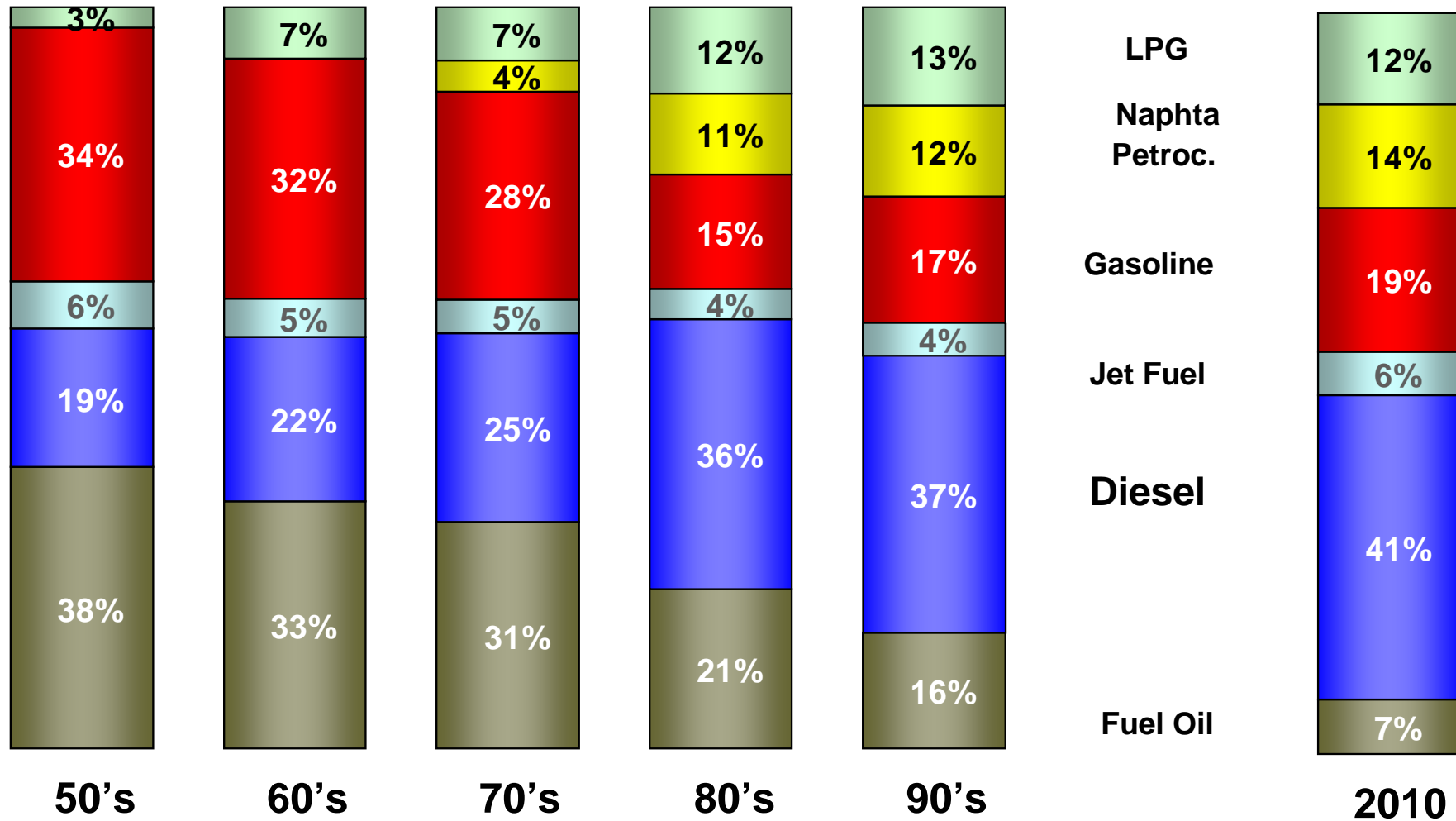
The Project

- **Total investment: R\$ 26 billion (including external infrastructure);**
- **Land Area: 630 ha (6.3 km²);**
- **Beginning of Operation: jun/2013;**
- **Financing: BNDES (R\$ 10 billion);**
- **Project Advance: 52% (jan/2012);**
- **Budget Execution: R\$ 11.9 billion (jan/2012).**

Demand Profile

Domestic Market Profile Evolution

Brasil 1950 - 2010



Refinery Profile

Capacity: 230.000 bpd (36.600 m³/d) of crude 16 API

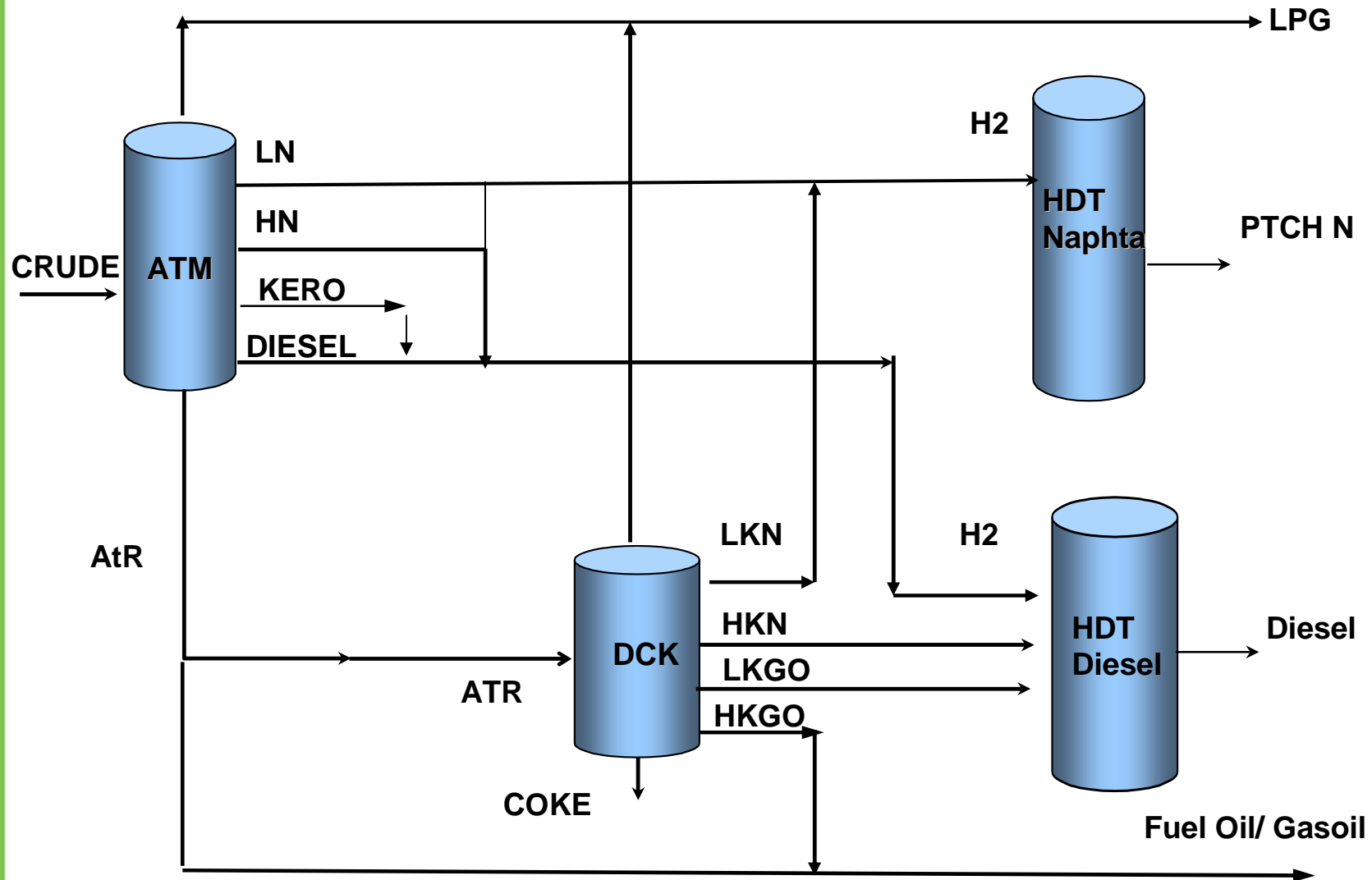
Production:

LPG	1.600 m ³ /d
Nafta for petrochemical	3.000 m ³ /d
Diesel (10ppm S)	26.000 m ³ /d (70%)
Coker Gasoil (Bunker)	2.000 ton/d
Coke	6.200 ton/d
Sulphuric Acid	770 ton/d

Target Market: Brazil North and Northeast Regions

The RNEST

Refining Scheme



Major Innovations

- **Raw Material – crude 16 API;**
- **Coking of atmospheric residue;**
- **Focus on diesel production;**
- **Simple and efficient Refining Scheme;**
- **Focus on environmental issues:**
 - **Water consumption optimized**
 - **Liquid and gaseous effluents treated**
 - **Elimination of odors from hydrocarbons**

- **Emissions of SO_x and NO_x – SNOX Units;**
- **Disposal of wastewater - Submarine Pipeline;**
- **Reduction of water consumption – Waste Treatment with water reuse;**
- **Capture of rain water in two lakes;**
- **Reduction of HC vapor emanations: floating roof tanks covered, oil and water separator covered; filters in fixed roof tanks**

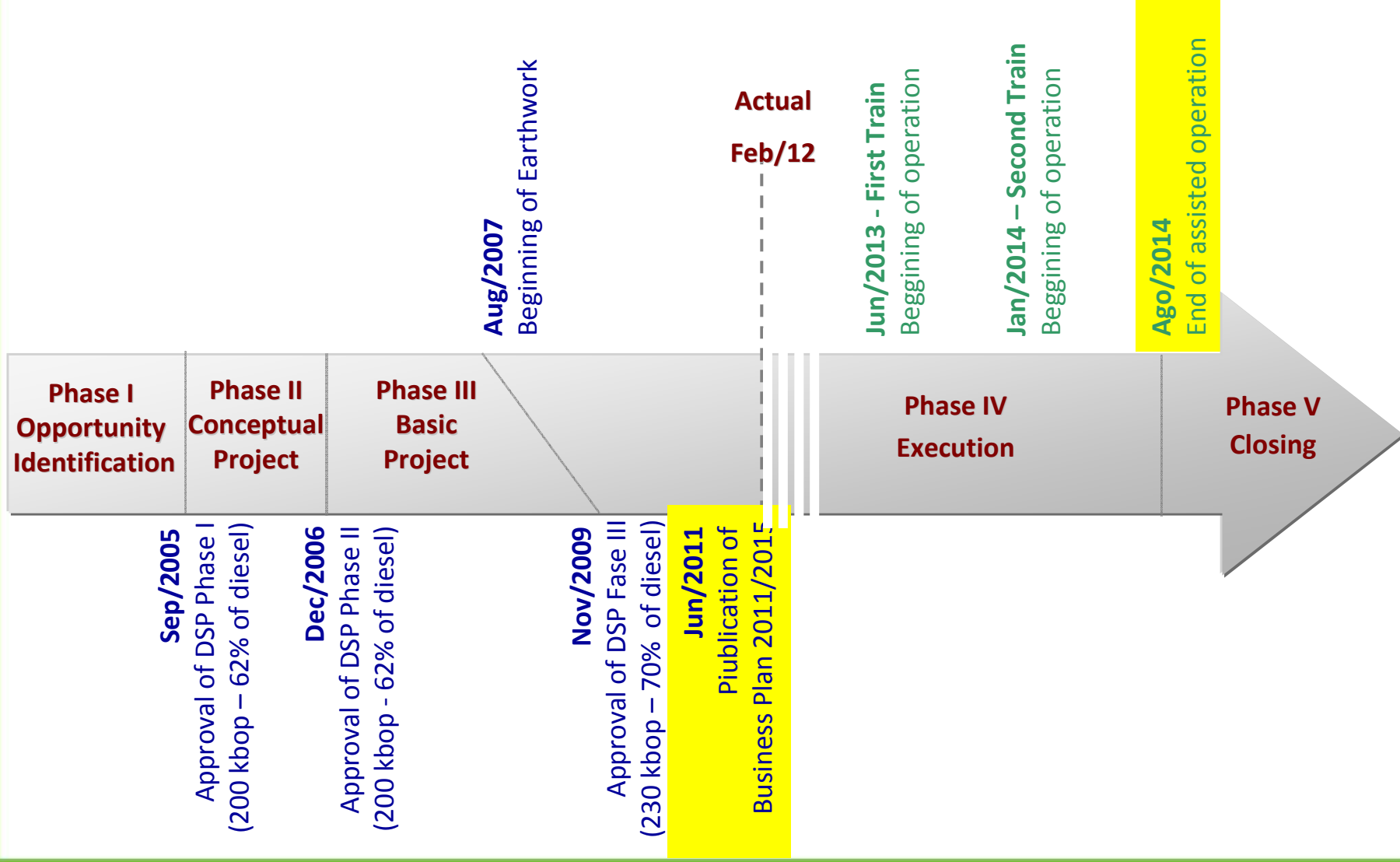
Main Technologies

Unit	Technology
Atmospheric Distillation	Petrobras
Delayed Coking	Petrobras
HDT diesel	Haldor Topsoe
HDT nafta	UOP
Hydrogen Generation	Haldor Topsoe
SNOX	Haldor Topsoe
Treatment of Gases	Worley Parsons

Refinery Profile

Utilities	Number	Capacity
Oil boilers	2	400 t/h
Coke boiler	1	700 t/h
Turbogenerators	3	50 MW

Timeline



Jan/2012

Abreu e Lima Refinery



Jan/2011

Pier for Suezmax Tankers



Jan/2011

Port Expansion



Feb/2011

Port Expansion



Economic Impacts

- **Investments of PETROBRAS in Pernambuco**
 - Refinaria Abreu e Lima: ~ US\$ 14 billions
 - Ships and Platforms: ~ US\$ 4 billions
 - Petroquímica Suape: ~ US\$ 2.5 billions



- Manpower Development

- Industrial Assembly Professionals: 6.430 trained until 2011. Around 5 thousands are being trained in 2012.
- Construction Professionals : 7.210 trained until 2011.
- Agreement with STQE (Employment, Qualification and Entrepreneurship Secretariat)
 - 200 professional instructors in 2012
 - 4.000 professionals until 2013





Thank you!

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