

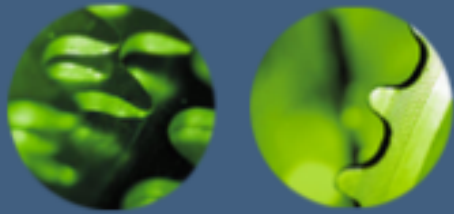


Panama: Opportunity for an Energy Hub

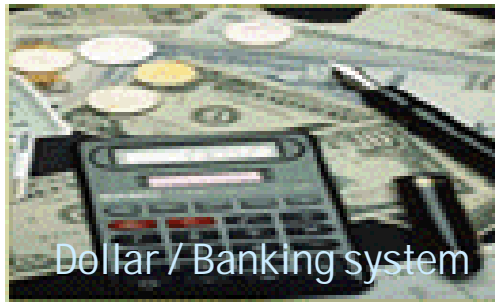


Government of Panama

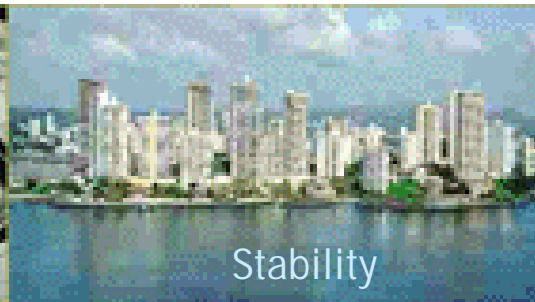




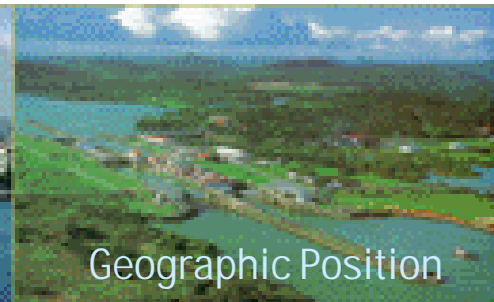
Why Panama?



Dollar / Banking system



Stability



Geographic Position



Incentives / Benefits



Comercial Exchange



Logistic Center



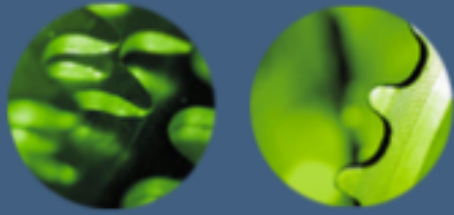
Connectivity



Human Resources



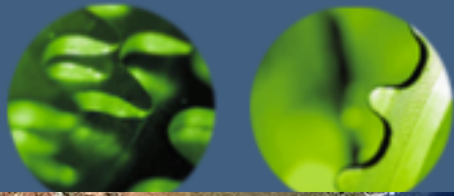
Business Opportunities



Solid Economic Growth

- **U.S. Dollar as our legal tender.**
- **Lowest inflation rate in the Continent.**
- **International Banking Center, with:**
 - **-Over 70 banks with assets over \$40.1 billion**
 - **-Strict international standards**
 - **-One of the most stable and modern system in Latin America**

GDP \$13,939.5 millions (PC \$ 4,318.00)
GDP Growth 6.4% (2005)
Investment Grade: S & P BB+ y Moody´s: Baa1
Average (5yr) Inflation: 1.1%
Growth Perspectives: 6.5%
Interest Rate: 8.3%



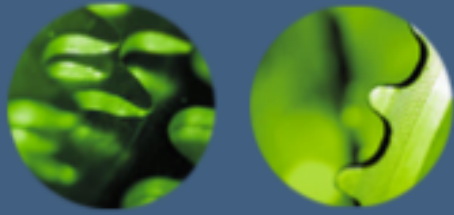
A Platform that provides connectivity



Panama is connected to the world through multiple fibre optic submarine cables

Provides access to 120 maritime routes





World Class Logistic Platform

Tocumen Airport

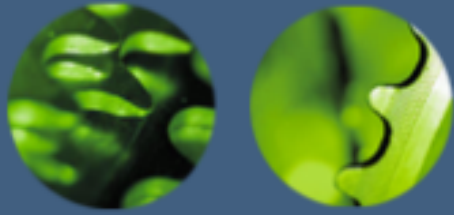
- COPA Airlines HUB of the Americas that transports cargo and passengers
- The newest and most modern Fleet in the American Continent

Currently finishing a \$70 MM project to modernize the airport's facilities.



Interoceanic Railroad

- Investment project of more than US\$50 million.
- Transports cargo and passengers daily.
- Container movement from the Atlantic to the Pacific as a dry canal.



Solid Commercial Activity



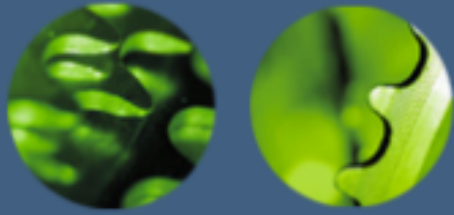
Colon Free Trade Zone

- 680 has/1680 acres
- 250,000 visitors annually
- 2,159 companies – 19,000 employees
- Annual trade: \$11 billion

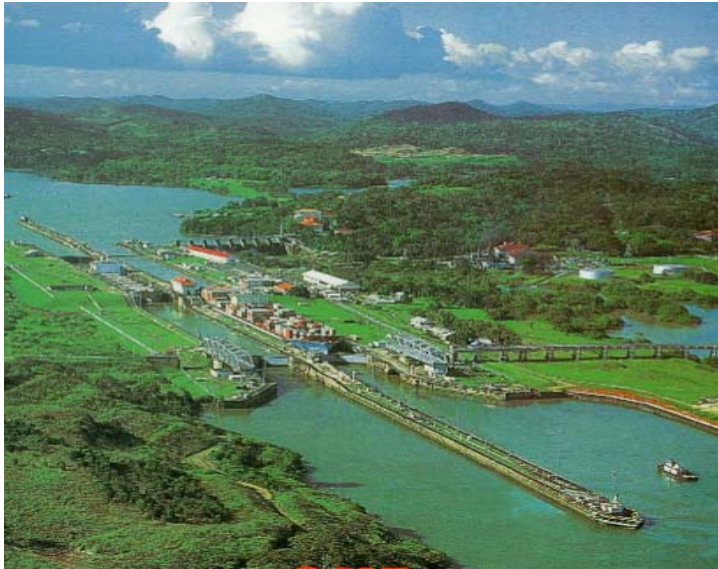
International Banking Center

- More than 70 banks with assets over \$40.1 billion dollars

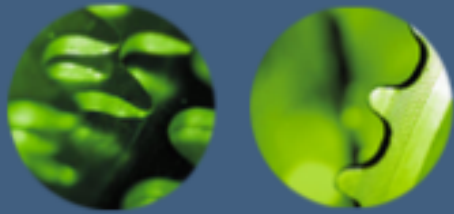




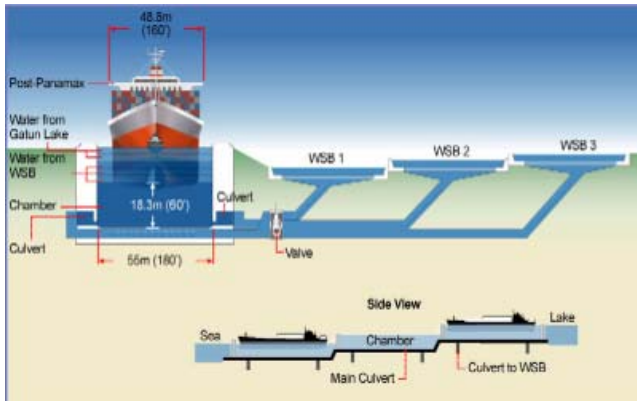
The Panama Canal



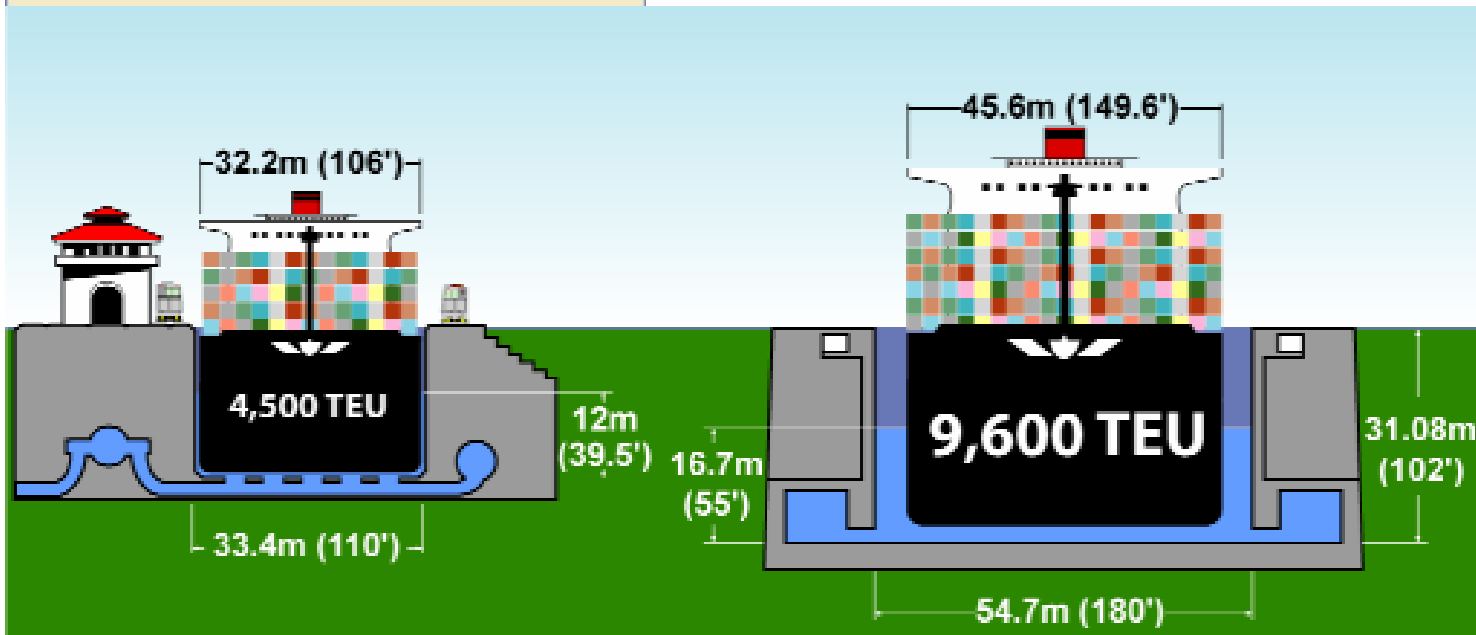
- Access to 120 maritime routes in 80 countries all over the world
- More than 14,000 vessels transit the canal
- Cargo movement of 300 MT-year

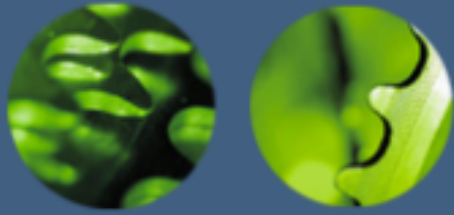


The Panama Canal Expansion



With an estimate cost of 5,200 million dollars, the project will ensure the long term Canal competitiveness consolidate Panamas position as a logistic hub





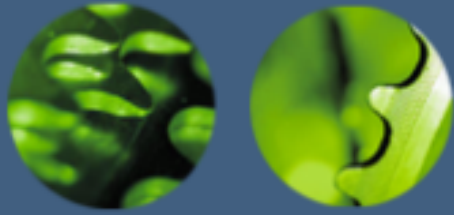
Port System

- **Manzanillo International Terminal – Caribbean: Busiest Port in Latin America**

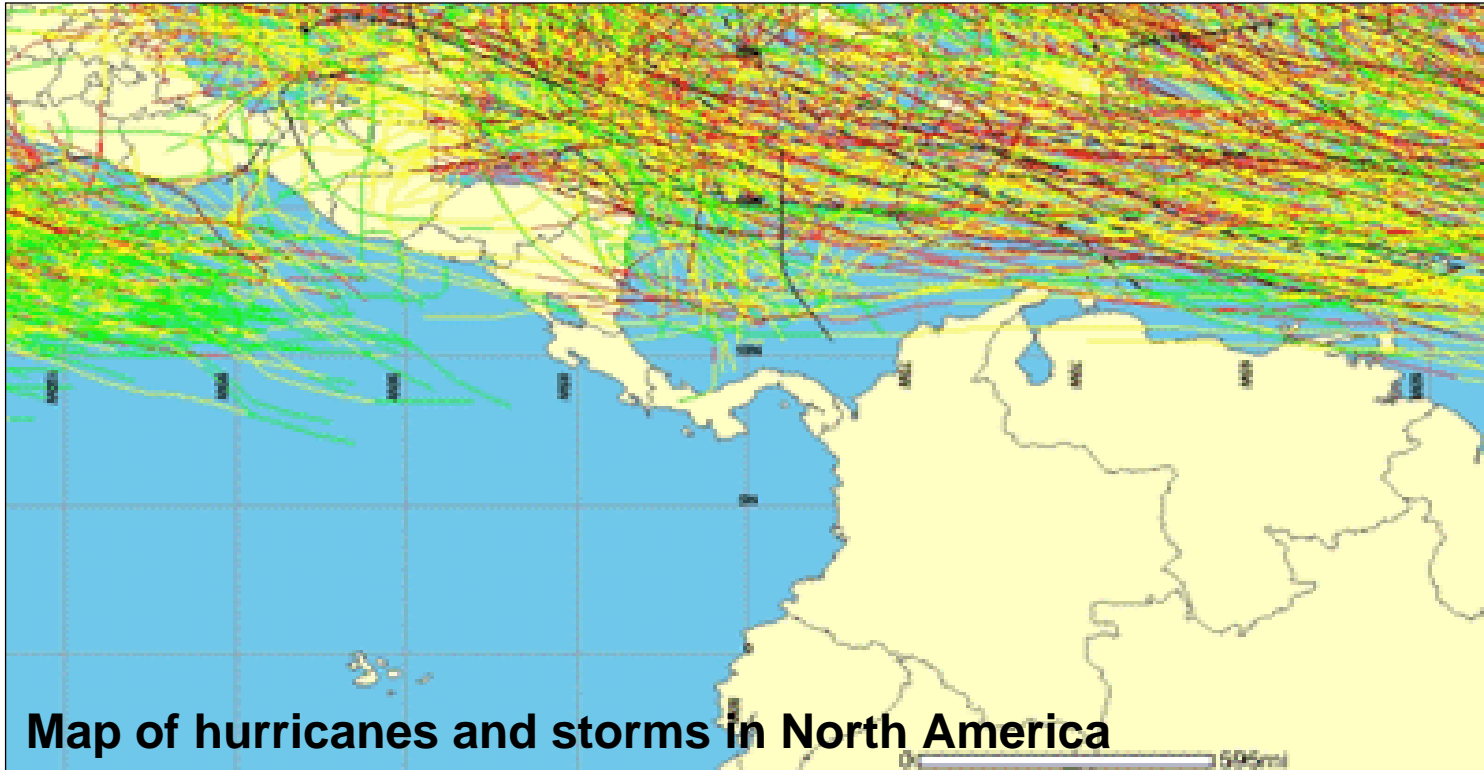


- **Hutchinson Wampoa's Balboa Terminal – The Port with largest movement of merchandise on the Pacific in Latin-America.**
- **Colon Container Terminal (CCT) – Subsidiary of Evergreen Company.**
- **Total annual movement of 2.75 million TEUs**

These ports have max out their capacity and have already started to develop infrastructure to double their capacity.

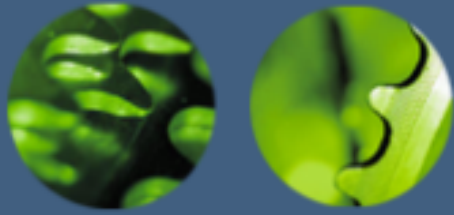


Area free of Natural Disasters



Map of hurricanes and storms in North America

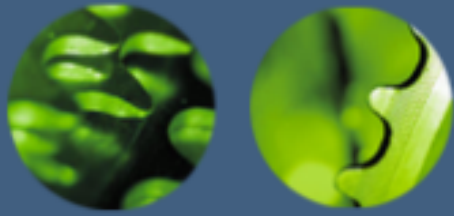
- Hurricane Free Area
- No major earthquakes
- No active Volcanos



Governments Initiative

- August, 2005 –
First National Energy Policy
- In the plan, it was proposed
the promotion of Panama as a
Regional Energy Hub.
- Efforts to identify potential sites and to attract investors
started immediately.

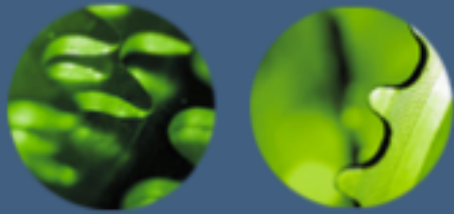




Existing Facilities

- Existing Transisthmian Pipeline -131 km
- Old pipeline next to the Canal. Existing Right of Ways
 - Panama is the only country that with only 75km a transoceanic pipeline can be build.

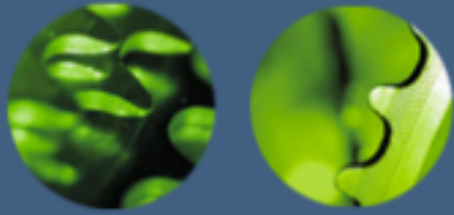




Existing Facilities



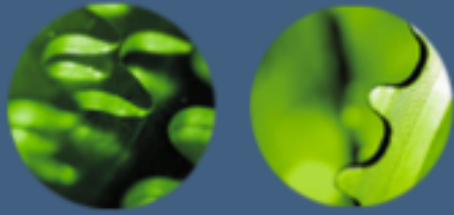
16.9 MMBB of Storage Capacity



Existing Facilities

Name	Principal Products	Storage Capacity (MMBarrels)	Storage Capacity (MM Galons)
Aeronáutica Civil	Aviation Fuels	0.02	0.7
Autoridad Marítima	Fuels	1.6	66.7
	Marine Fuels	1.8	74.0
Petroterminal de Panamá	Products	2.9	122.3
	Crude	2.9	121.3
Petroport	GLP	0.04	1.9
Refinería Panamá	Crude and Products	4.3	179.0
Atlantic Pacific	Marine Fuels	1.2	50.7
Pimpsa	Fuels and anviation	1.1	47.3
Decal Panama	Marine Fuels	1.1	46.2
Total		16.9	710.1

In addition, there is storage capacity (13.5MMgl)in the Howard Facilities which will be up for bid in the coming months.



Electric Energy Opportunity

Installed Capacity → 1,507.2 MW

- » 845 MW (56%) Hydropower
- » 662 MW (44%) Geothermal

Power Generation (gross) → 5,576.6 GWh

- » 2,823 (50%) Hydropower
- » 2,753 (49%) Geothermal
- » Bunker
- » Diesel
- » Diesel Marino

Maximum demand of the system (2004) → 924.96 MW

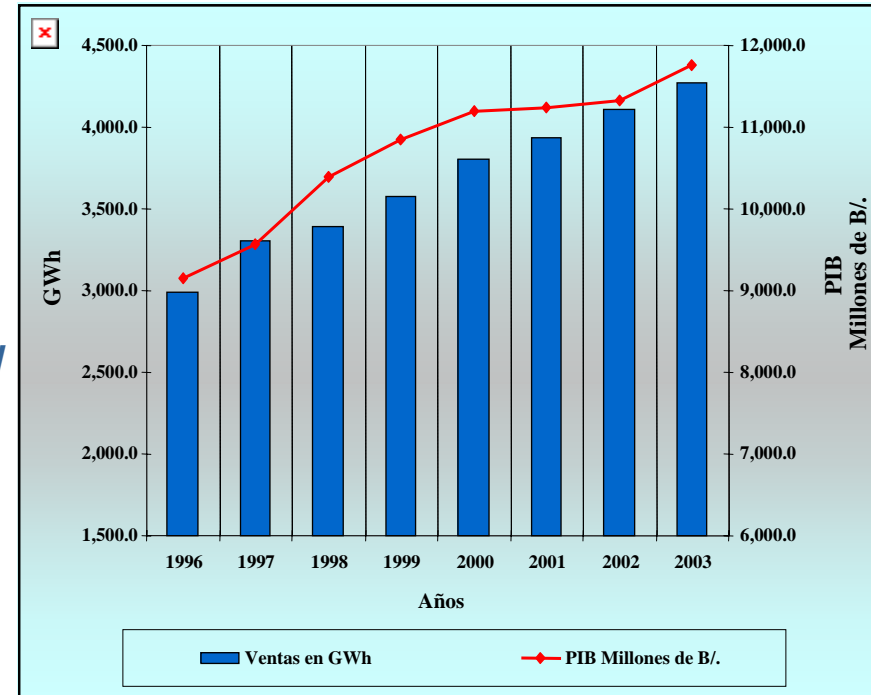
Exports to Central America → 178.94 GW (3.21%)

National Grid is connected to potential site

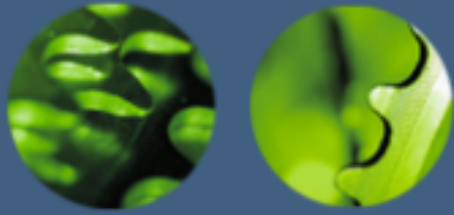
• There is need for at least 200 MW to supply local consumption by 2007

• In addition, several new megaprojects will be in need of power supply

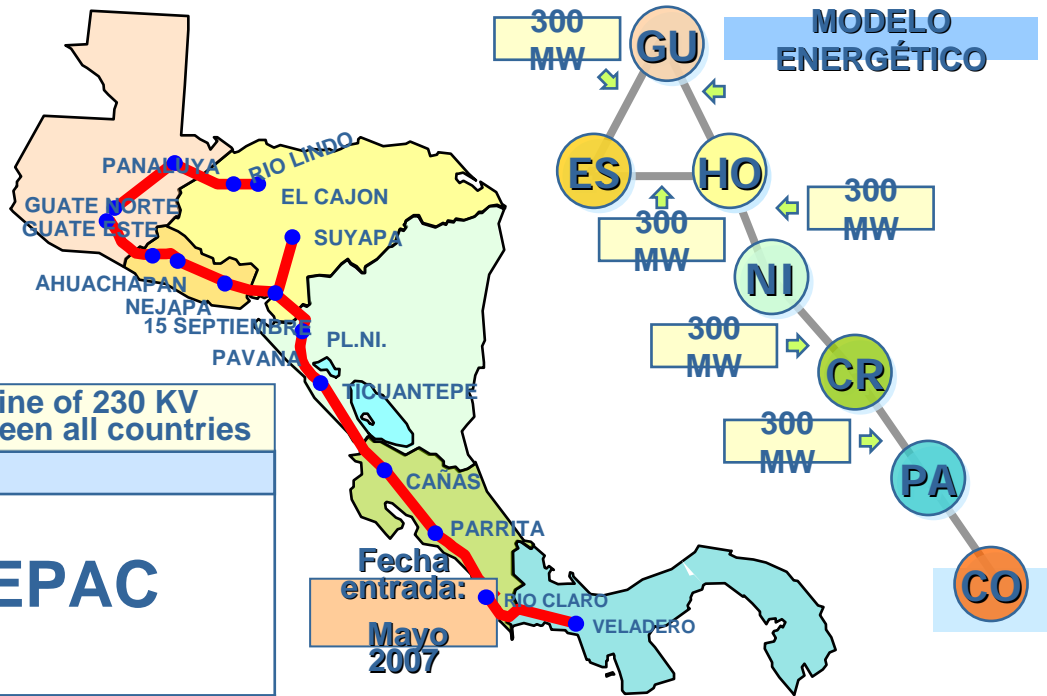
- Canal Expansion
- Mining Projects
- Port Development



As of today, energy is as high as 13ct kw in the spot market.



Electric Energy Opportunity



Line of 230 KV
between all countries
100.0

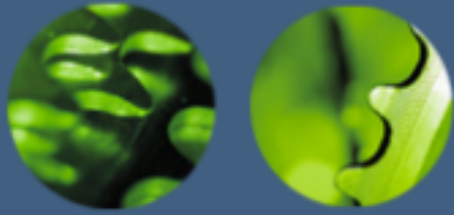
SIEPAC

- Through SIEPAC, Panama will have access to Guatemala, Honduras, El Salvador, Costa Rica and Nicaragua.

- An electric energy integration project that begins in June, 2006.

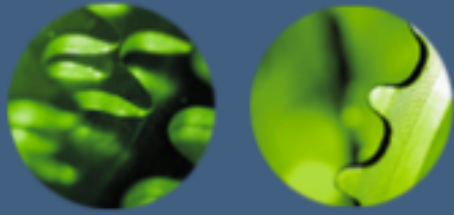
Possibility to export power to 5 countries.

*Operation of a wholesale power generation market.
Line of 1830km, with capacity for up to 300 MW*



Labor Force

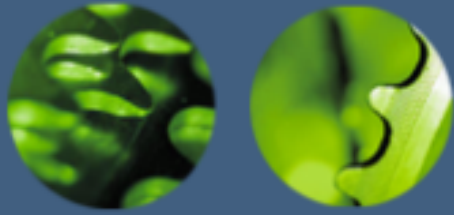
- Existing labor force that used to worked in the Chevron Texaco Refinery.
- A Training Program is being develop through the INADEH (Governmental Professional Training) to prepare new labor force in:
 - Pre operational activities
 - Technical Services, Operation and Projects
 - Laboratory Personnel
 - IT Personnel
 - Maintenance
 - Security.
- There will be provisions to ensure the ability to bring any technical foreign labor force required for the project



Local demand of products

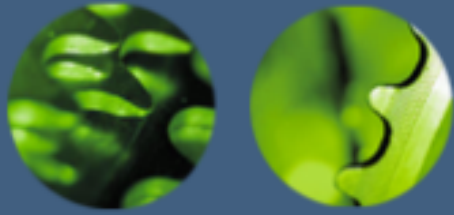
Total	Galones 621,165,297	Barriles 14,789,649
GASOLINA 95	52,013,163	1,238,408
GASOLINA 91	92,064,989	2,192,023
GASOLINA 87	27,171	646
KEROSENE	3,406,900	81,116
DIESEL LIVIANO	202,814,936	4,828,927
DIESEL MARINO	44,687,918	1,063,998
BUNKER C	114,644,077	2,729,620
LOW VISCOCITY	25,000	595
ASFALTOS	6,364,934	151,546
JET FUEL	56,813,044	1,352,691
AV-GAS	617,478	14,701
LPG	47,685,687	1,135,373

- Attractive local demand of 14MMBB
- There is also an interesting market in the bunkering sector of almost 30MMBB
- The average annual demand growth for oil products for 2000-2005 was 6.5%



Central America Demand

- The demand in the Central American Region is currently 370MMBB.
 - This demand is expected to double by 2020
 - Only $\frac{1}{4}$ of this demand is refined locally
- Without new added capacity, import of products will continue and grow beyond current levels
- Panama is working with the Central American region to work on a homogenization of product quality specifications following US standards.

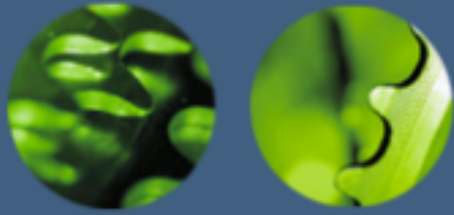


Strategic Location



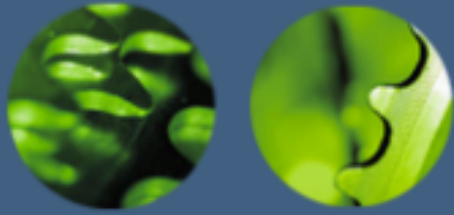
Pty - Ecuador:	2 days
Pty - Perú:	3 days
Pty - Chile:	6 days
Pty - Venezuela:	48 hours
Pty - Colombia (Cartagena):	30 hours
Pty - Guatemala (Quetzal):	2.5 days
Pty - México (Manzanillo):	4 days
Pty - Jamaica:	2 days
PTY- US	5 days
Pty- Brasil	15 days

Access to all the
Latinoamerican Market –
both, Pacific and Atlantic

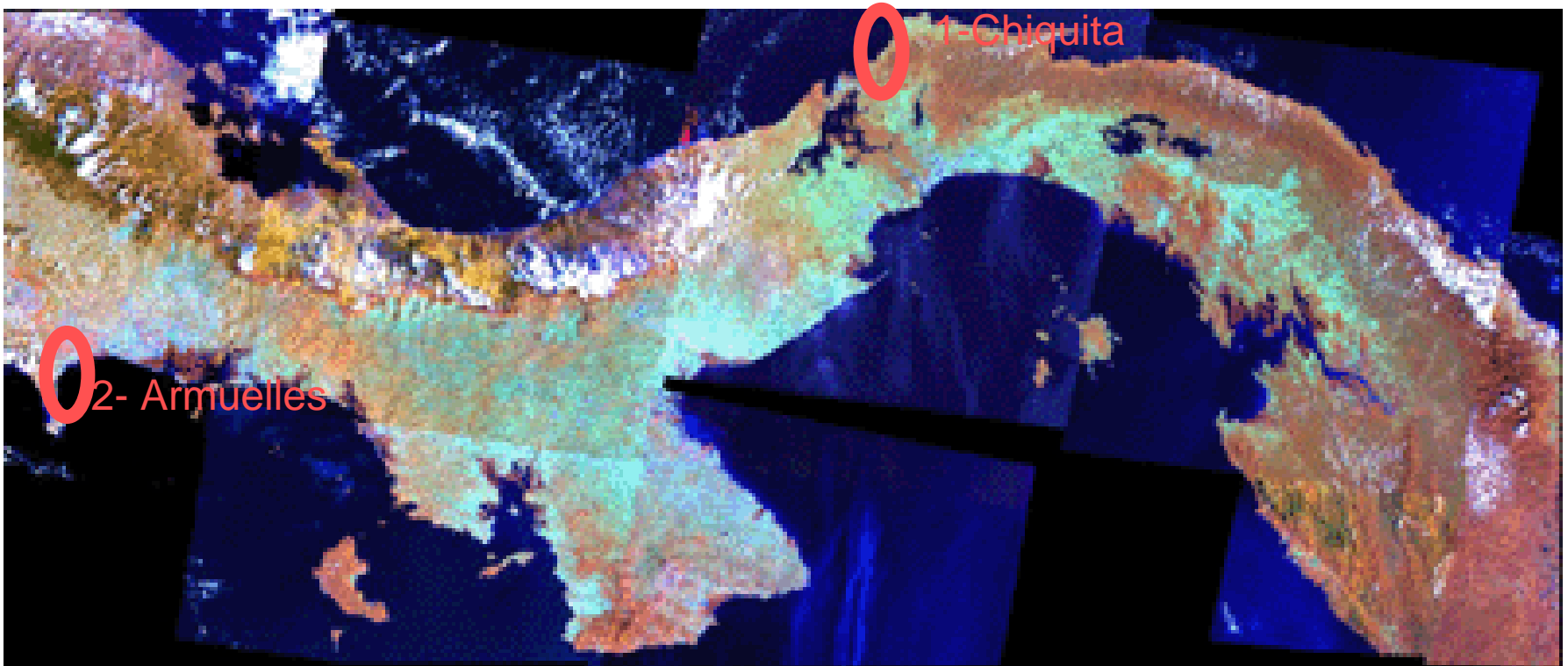


Legal Framework

- Law No.8 and Law Decree No.36 of 2003 establish incentives for refinery projects.
 - Declaration of Petroleum Free Zone
 - Permitted Activities: Introduce, store, refine, process, transport, export, reexport, and sale to the domestic market crude or any of its products.
 - All the crude and products that are destined for international markets are granted with a tax exemption.

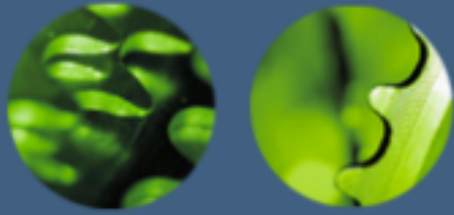


Refinery Projects



1- Location: Maria Chiquita - Developer Energias

2- Location: Puerto Armuelles – Developer ?

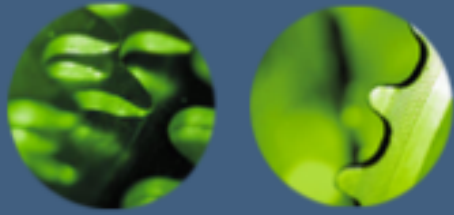


Energias Project – Atlantic



Crude refining capacity of up to 2 mmbpd
LNG regasification plant of up to 1.2 Bcf/d
Petrochemical & Chemicals
 Ethylene/Propylene plant
 Polymers
 Ammonia
Jetties, pipelines and storage
Utilities
Services

INDUSTRIAL PARK



Energias Project Atlantic

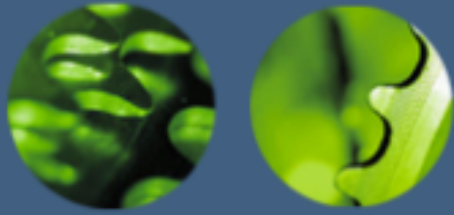
✓ Following a Successful Model



Industrial Park resembling the
Jurong Park Concept:

- Crude refining capacity of 1.3 billion b-d
- Distribution center for fuels and chemicals for Asia-Pacific
- More than 70 companies investing USD\$22 billion
- Shell, Chevron, BASF, Exxon Mobil, Cabot, DuPont, Etc

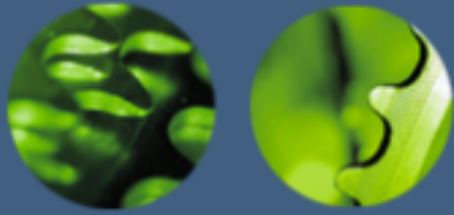
The Developers of Jurong Park are also part in the Energias Project in Panama.



Pto Armuelles Project- Pacific

- Site availability: 4034 hectares reserved by Law Decree No. 29 of 2006 to be used in Energy Projects
 - *Government Owned Land*
- Crude Oil Availability: If a new refinery is constructed in Panama, Mexico has committed 230 mmbbdd of maya crude oil to supply a new refinery located in Central America.
- *Fast Track* Process to obtain permits to Operate a Refinery





Pto. Armuelles Project – Pacific

- Environmental Preliminary Diagnosis (KBC):

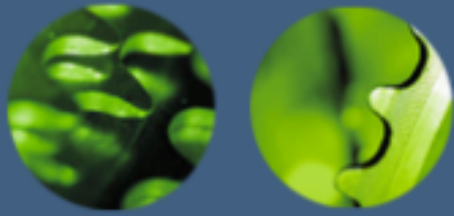
1. Site Characteristics:

- Climate and Meteorology: Humid Tropical Climate
- Superficial soil contamination: None detected
- Water availability: Rio Guanabano, Quebrada Melliza
- Air Quality: Acceptable. No complaints from neighbors
- Noise and vibrations: Low level, quiet place
- Seismic risks: No records of recent earthquakes
- Fire Risks: Low. No major vegetation concentration
- Flooding Risks: No records or flooding signs

The preliminary study concluded that there are no characteristics that would make the project non-viable based on intl. standards

2. Biological Considerations:

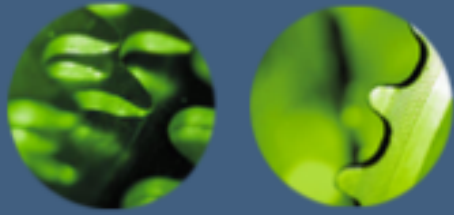
- No land or marine ecosystems important to biodiversity
- No protected coastal areas
- No swamps or corals
- No flora or fauna species under national or intl (UCIN) protection for extinction



Pto Armuelles Project – Pacific

- Existing Facilities: PTP Pipeline
 - Only transistmical pipeline in the area with an extension of 131km.
 - Throughput capacity of 800MBD
 - Storage capacity of 2.9MB in each side.
 - Berths with capacity of receiving VLCCs

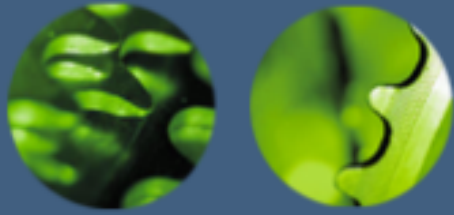




Related Opportunities

- LNG Regasification
 - Possibility to bring LNG (Trinidad & Tobago, Qatar, etc)
 - Power Generation
 - Residential Uses
 - Hydrogen Production
- Ethylene/Propylene
 - Local demand for industrial use
 - Ethylene: polyethylene, PVC, Polystyrene, alpha olefins, fatty alcohols, Ethyl benzene
 - Propylene: polypropylene, acrylonitrile, propylene oxide, cumene, phenol, etc
- Ammonia

Local and regional demand of basic raw material for the manufacture of fertilizers, explosives, livestock feed and other chemicals



Government Support

- The Government is fully supporting any initiatives to establish new refineries in the territory
 - Excellent opportunity to
 - New Power Generating Source
 - Develop infraestructure
 - Job Creation
 - Possibility of generating relating activities such as chemical and petrochemical
 - Possitive effects for local industry
 - Possibility of obtaining local source of gas
 - Residential, Industrial and car uses