GOBIERNO DEL ESTADO DE BAJA CALIFORNIA

SECRETARÍA DE DESARROLLO ECONÓMICO

Energy in Baja California

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Current situation in Baja California

- Baja California does not have its own Natural Gas Reserves Grid as well.
- Baja California is isolated from the National Pipeline System and the National Electrical Grid as well.
- Baja California has the second highest growth Nationwide, in terms.of power generation. And also has the highest demographic growth in Mexico (5.8%)
- Baja California LNG supply depends only on imports from the United States of America

Energy Infrastructure in Baja California

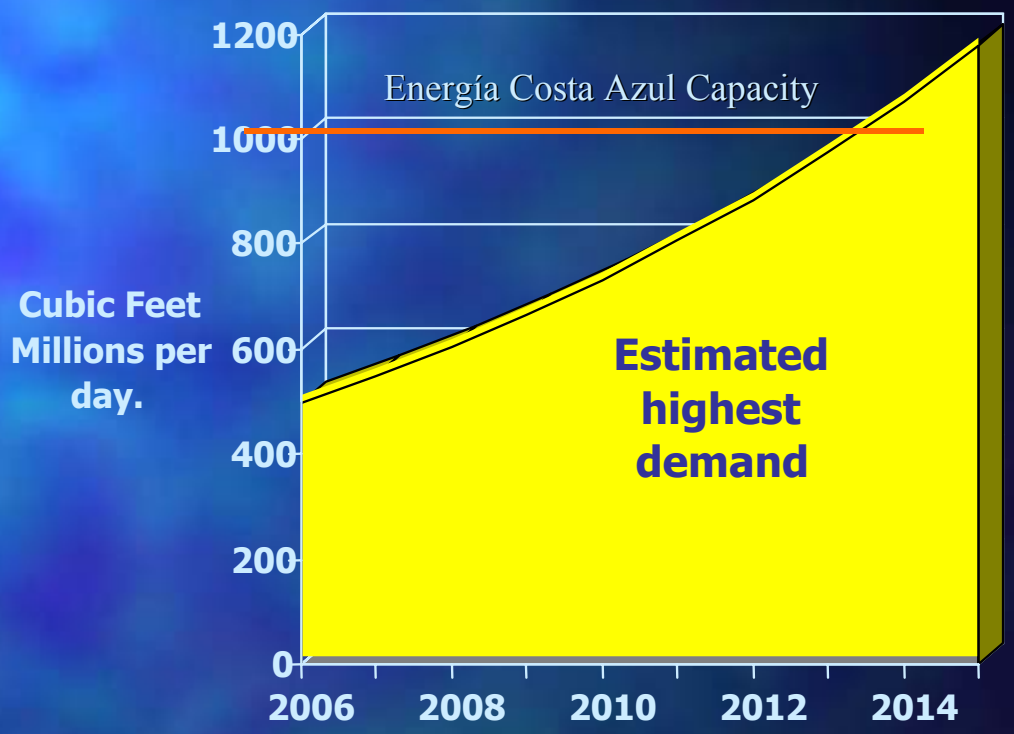
World Class Infrastructure

ELECTRICITY

- Baja California produces 2,285 MW in its two power facilities (14% of Mexico's energy production with only 2.8% of Mexico's population.)
- California's only overseas energy supplier
- Our State holds the largest geothermal electric plant in Latin America (720 MW)
- **Two major projects to export for the California Market**
  - INTERGEN producing **600 MW**
  - SEMPRA ENERGY producing 600 MW

Demand of Natural Gas in BC

- The demand of electrical energy has been growing 500 MW every 4 to 5 years, which means a new combined cycle plant in the same period of time.
- According to the Energy Secretariat, in the next 10 years the demand of energy in Baja California will grow up from 5% to 8% annually.



Source: Secretaria de Energia (SENER)

Comision Federal de Electricidad (CFE)

Solutions for Natural Gas needs in Baja California

- **Creation of a Natural Gas alternative source to the region by constructing an LNG regasification terminal plant.**

LNG Value Chain

1.- Gas Production

2.- Liquefaction Plant

3.- Regasification terminal plant

4.- Loading & Shipment

5.- Delivery by Pipelines

Benefits for Baja California

- Stability on reliable and competitive Natural Gas supply; sustaining the economic growth of the region.
- Energy Autonomy. Different supply origins, eliminating one source dependency.
- Mexican regulations and specs.
- Natural Gas supply source for the whole state of Baja California that will support its economic development and quality of life.

Economic Benefits from one LNG Station

- **Economic overflow during construction**
  - The total apportionment in Baja California will be $330 millions -$226 millions of dollars in Ensenada municipality only-*.
  - Jobs: During construction, 3,312 direct and indirect jobs will be generated.
- **Suppliers development program:**
  - Cooperation agreement with the whole state Business Associations to promote its participation.

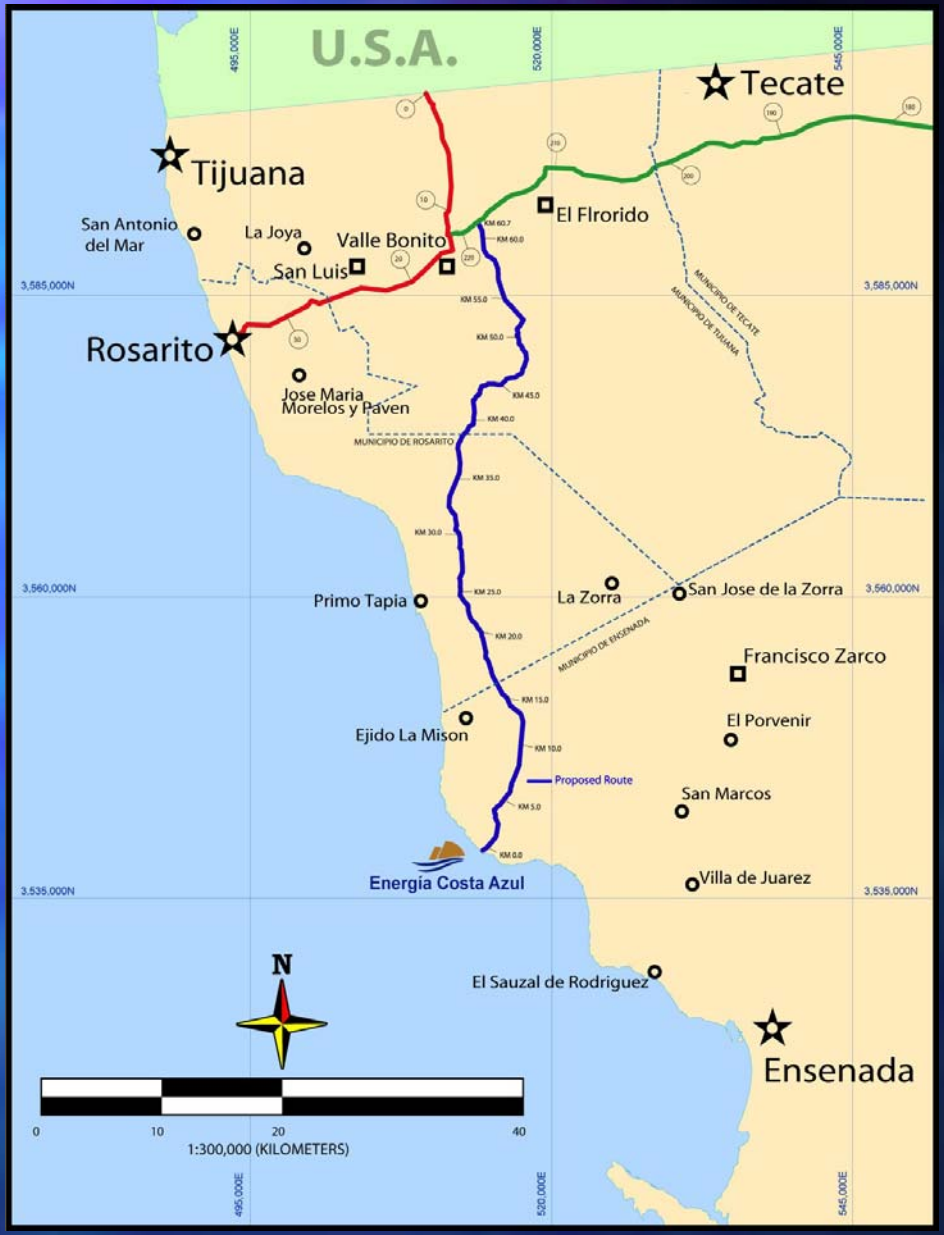
* Source: COLEF –Northern Border Research Intitute- Economic Impact Study

Site Selection

- **Selection Criteria**
  - Away from urban and industrial plant areas.
  - Sufficient land reserve for buffer zone's.
  - Closeness to the coast and nearness to deep sea.
  - Less visual impact.
  - Acomplishing local environmental protection regulations –Cocotren-
  - Acomplishing federal enviromental and ecological protection regulations SEMARNAT

Selected Location

Pipeline Route Costa- Azul Bajanorte



Open Access

- CRE* regulations for Natural Gas transportation:
  - CRE license only granted to permissioners for LNG storage and regasification.
  - The natural gas pipelines should be open access to any permitioner.
  - No exclusivity to any permitioner.
  - CRE rules tariffs and conditions for natural gas transport.
  - The transport permit only authorizes the permitioner to bill the service.

*Source: Natural Gas Normativities from the Regulatory Comission of Energy (CRE)

South-North View

West-East View

East-West View

•SEMPRA ENERGY INTERNATIONAL AND SHELL GAS AND POWER, GLOBAL SOLUTIONS, LTD JOINT VENTURE

License: C.R.E. Granted LNG storage and regasification license. Environmental Impact Statement approved by SEMARNAT.

Location: .Costa Azul seashore region, 15 milles north of Ensenada, secluded and away from any urban concentration

Use of Land: The "Use of Land" license has been granted by the Ensenada. City Government and in accordance with the State Government recommendation

Investment: $800 USA dlls

Employment: Temporary, during construction, 2200 to 2400 jobs. and 100 to 200 permanent jobs.

Current Status: Join venture negotiations. Access road to start third quarter 2004. Plant construction to start late 2004