

Balancing the North America Gas Market

CFE
from Market Taker
to Market Maker

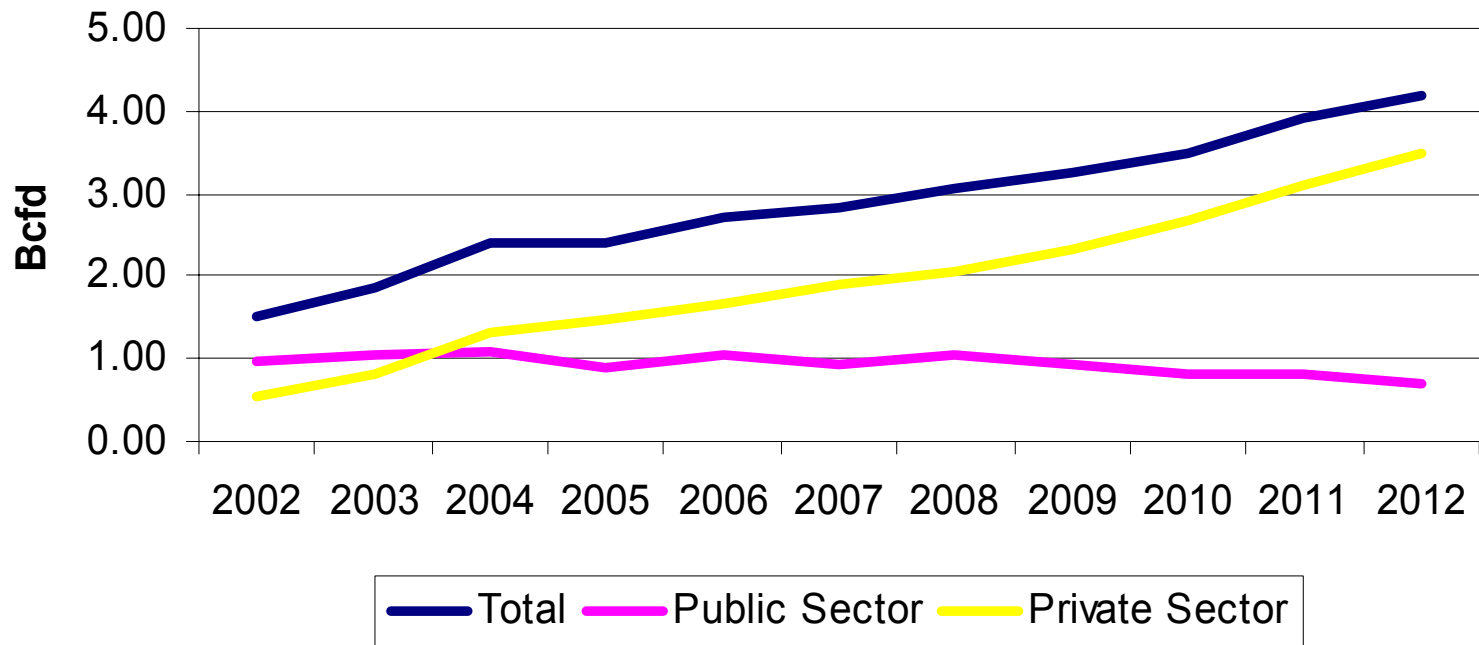
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Management Consulting

- In its latest natural gas prospective (2003 – 2012), the Ministry of Energy estimates a net importer position for Mexico
- The prospective presents two scenarios:
 - The high supply with domestic production of 8.4 Bcfd
 - The low supply with 6.8 Bcfd of domestic production
- Both scenarios consider production from the MSC contracts for 1 Bcfd and the high supply scenario is contingent to Pemex's fiscal reform
- In the high supply scenario Mexico is a net importer of 1.1 Bcfd while in the low supply scenario net imports are 2.6 Bcfd
- In both scenarios Mexico imports 0.5 MMcfd of LNG from the Altamira project already in construction

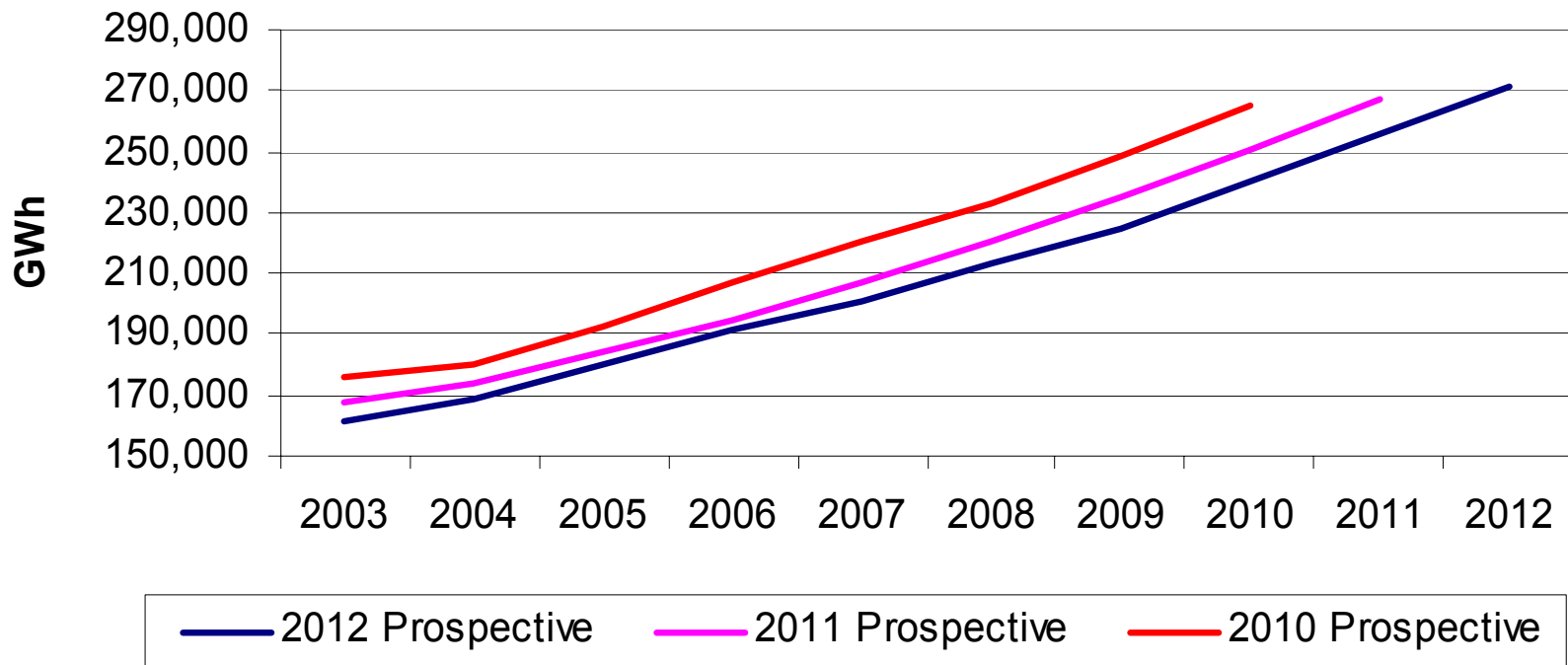
- Main consumer of natural gas is the power sector with a growing share of private IPP projects

Mexico's power sector natural gas demand

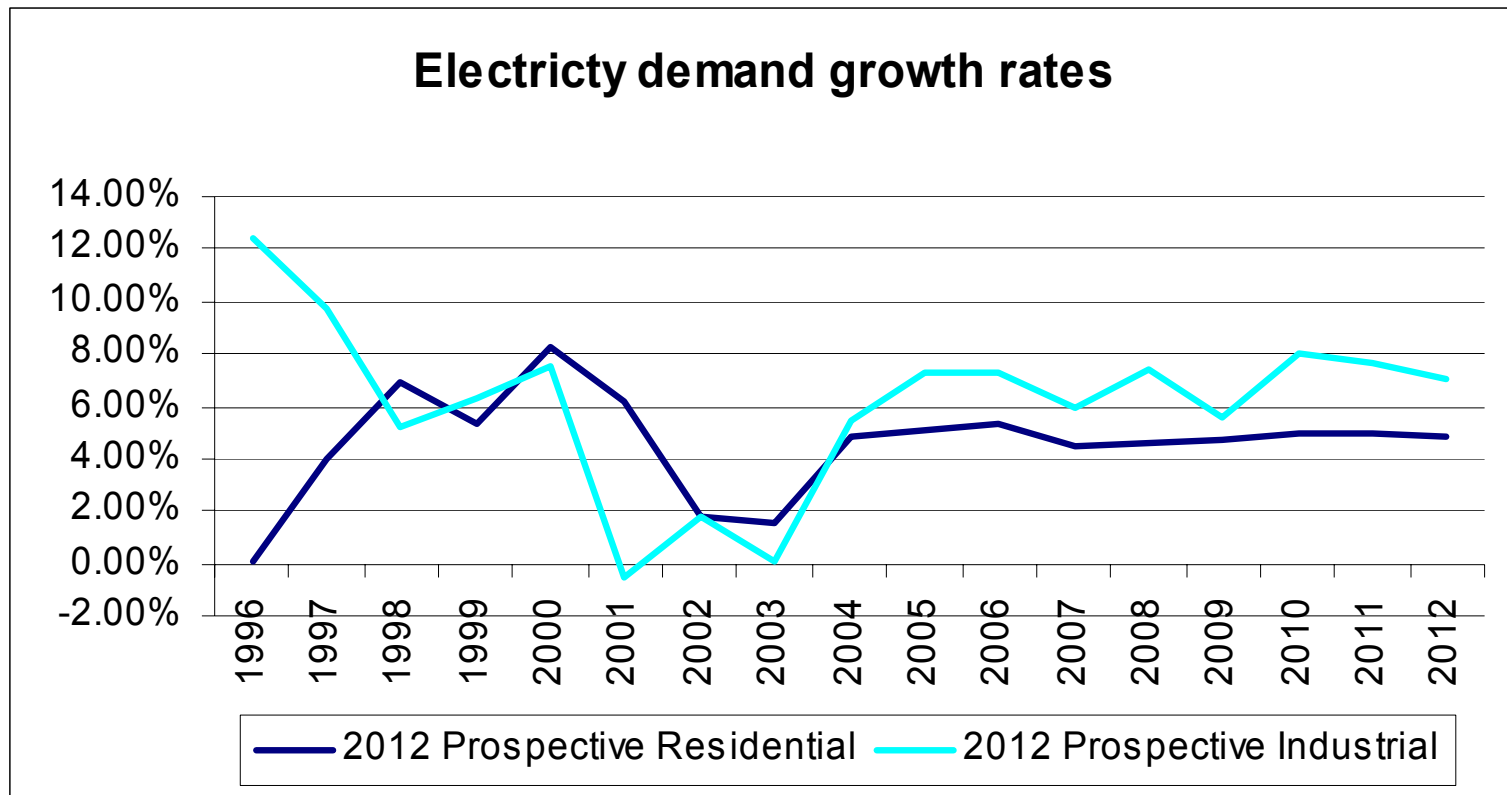


- Prospectives have reach the same level of electricity consumption but one year later every year

Total sales of electricity



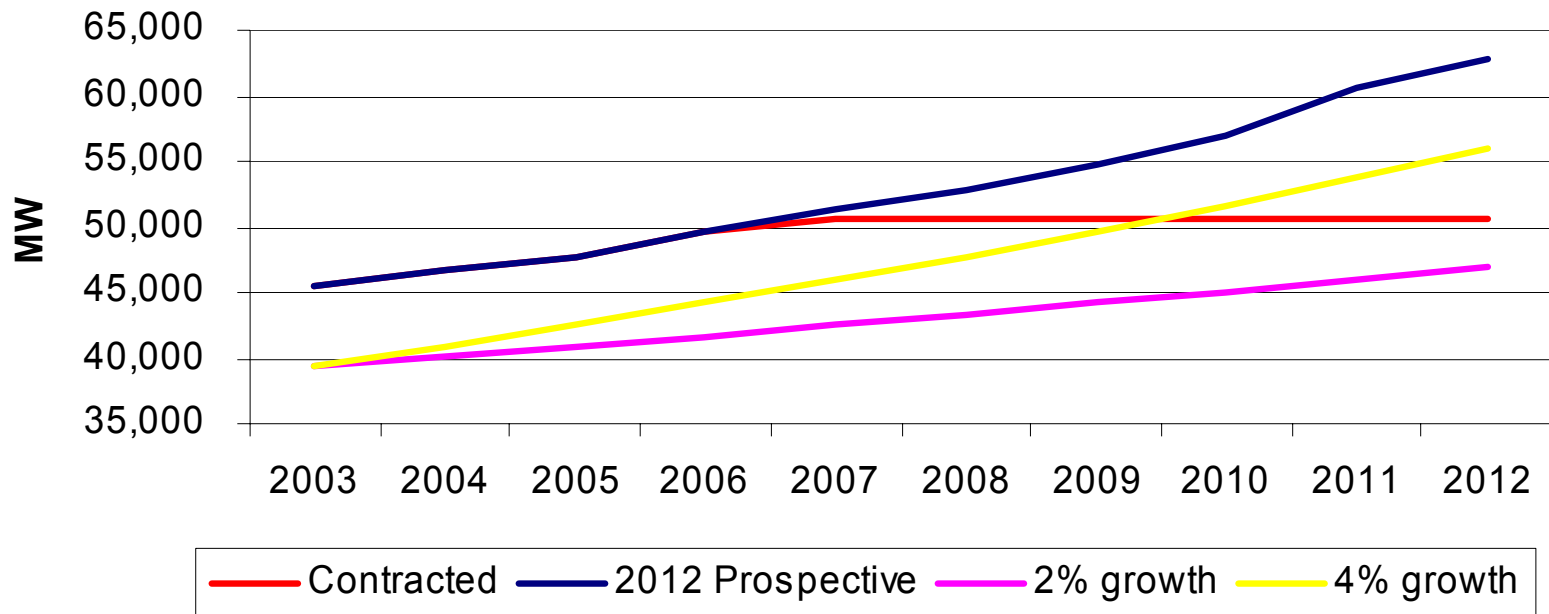
- Future annual growth rates used in the prospective seem high compare to historical data



Installed capacity may not grow as expected

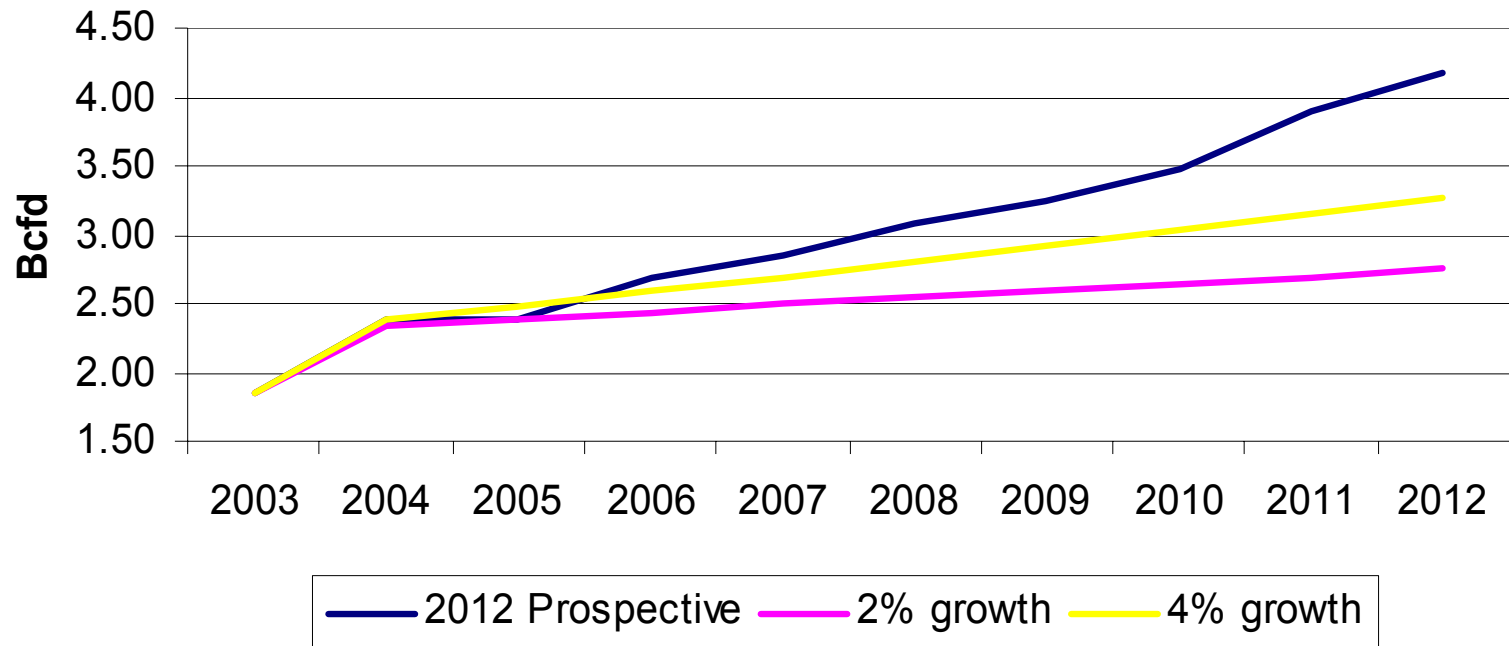
- Moderate growth rates influence significantly the need of power generation installed capacity

Power generation installed capacity



- Moderate growth rates have a strong impact on the need of natural gas by the power sector

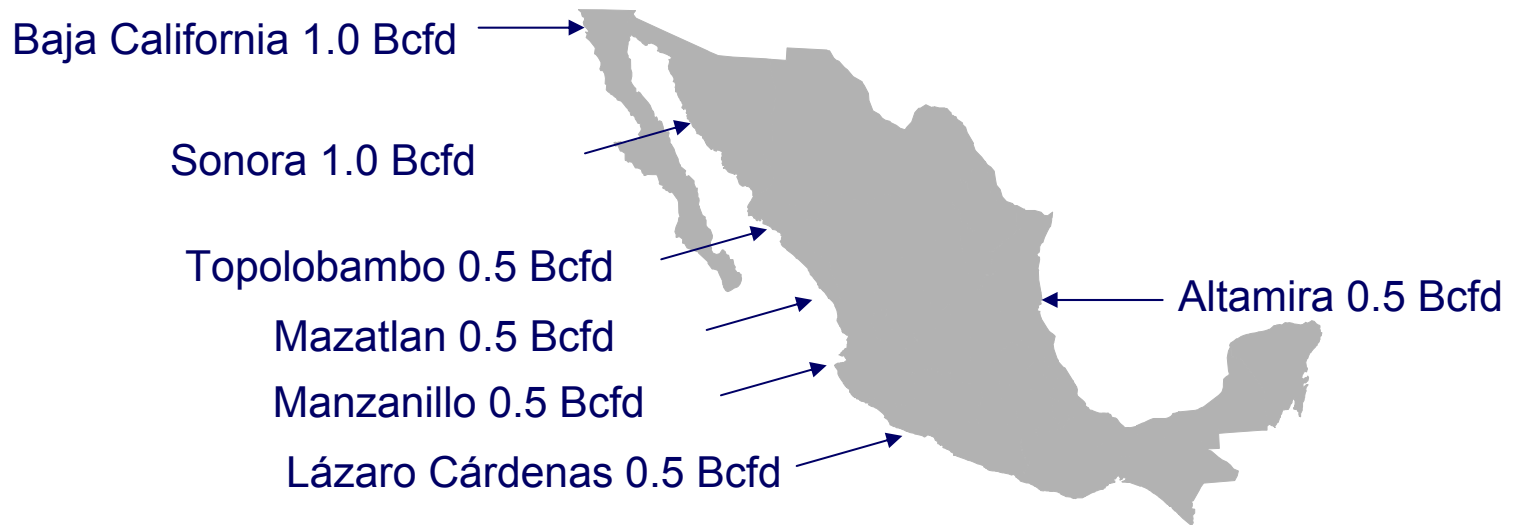
Natural gas demand by the power sector



- 4% growth in electricity demand:
 - Contracted IPP projects are sufficient to cover demand up to 2010
 - CFE has some time flexibility in its IPP program
 - Power sector will demand 1 Bcfd less than the estimates of the 2012 prospective
- 2% growth in electricity demand:
 - Contracted IPP projects are sufficient to cover demand up to 2013
 - CFE can delay its IPP program for the medium term
 - Power sector will demand 1.5 Bcfd less than the estimates of the 2012 prospective
- CFE will not plan with a 2% growth rate. Recent delays in the IPP program are in line with a 4% growth rate

- CFE will import most of its natural gas needs to avoid depending on Pemex's budget and/or exploration and production success rates
- New natural gas demand of power generation projects, either CFE owned or IPPs, will be covered by CFE
- CFE will call for bids for the acquisition of LNG with the specific objective of converting power generation facilities in the Pacific
- CFE will evaluate the cost advantage of LNG supply versus US supply for their power generation clusters in northern Mexico (Agua Prieta, Chihuahua and La Laguna)

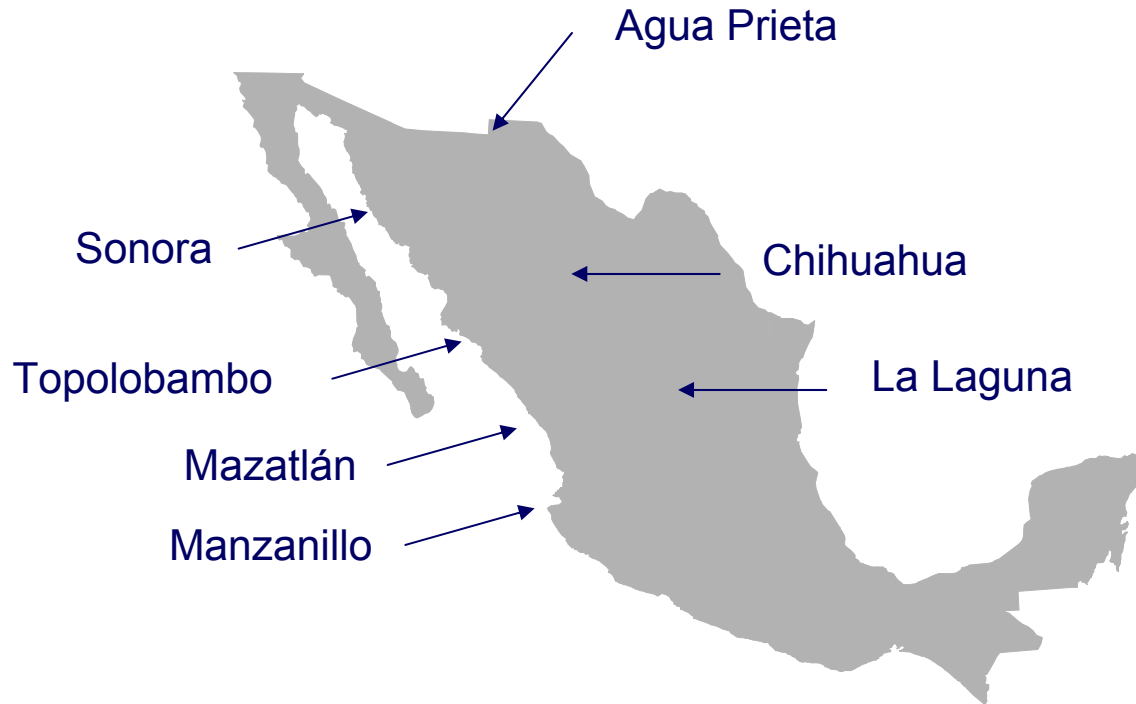
- Many LNG projects have been mentioned as possible in Mexico



- Altamira project is already under construction and competition in Baja projects will result in at least one project

- Two types of LNG projects in Mexico:
 - US driven (Baja, Sonora)
 - CFE driven (Altamira, Topolobampo, Manzanillo, Lazaro Cárdenas)
- US driven projects will help North America natural gas balance but do not have any impact in Mexico's natural gas imbalance
- CFE driven projects have the advantage of supply assurance and better basis for CFE acquisitions
- CFE will have to develop a trading company to manage their imbalances and consumption peaks by supplying LDCs and industrial users

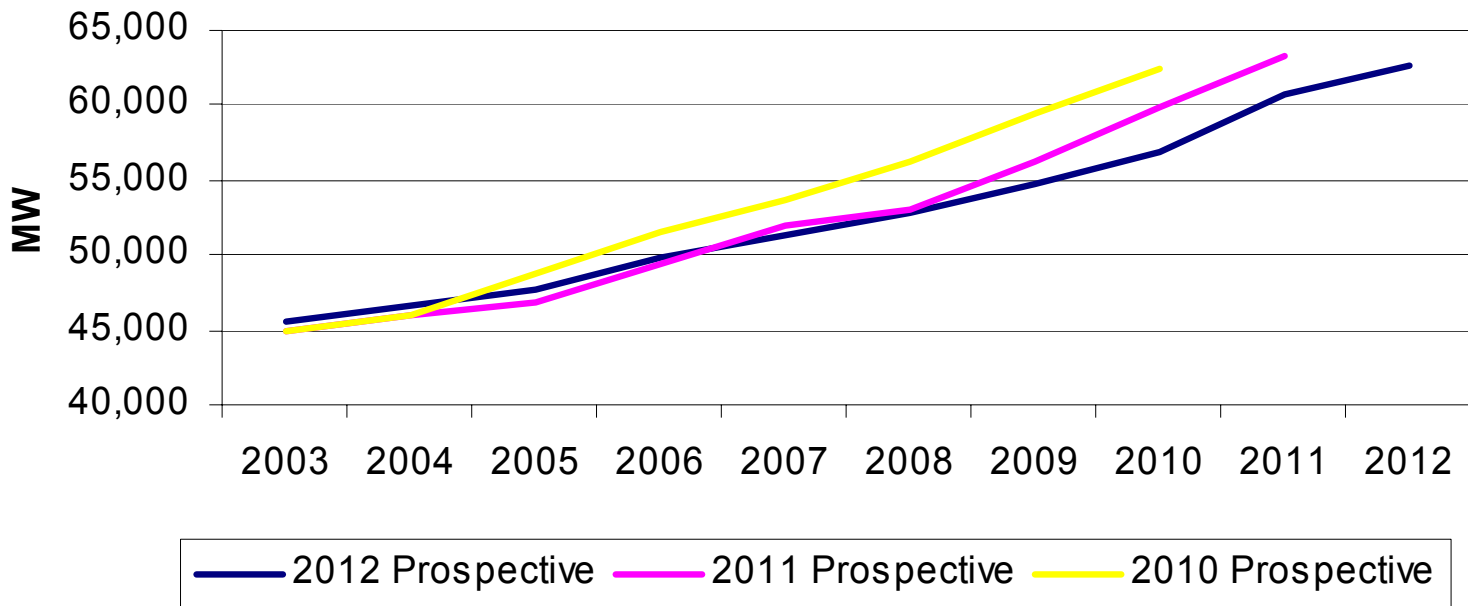
- CFE is considering many sites, possibilities and combinations



- Manzanillo should be their next bid (0.5 Bcfd) with documents to be issued by the end of the year

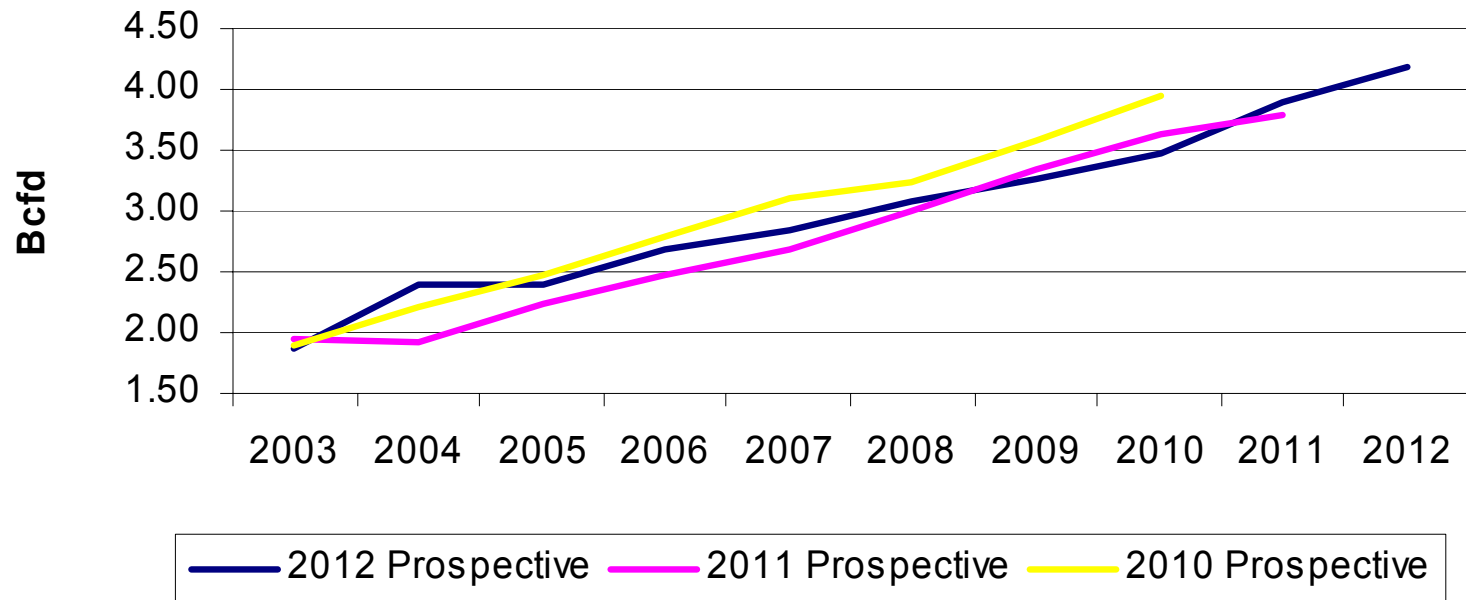
- Additions to installed capacity present the same one year lag for the later years but reflect CFE's IPP bids in the early years

Power generation installed capacity



- The same pattern is observed in natural gas demand by the power sector between prospectives

Natural gas demand by the power sector



- Moderate growth rates have a strong impact on the expected total sales of electricity

Total sales of electricity

