

Drawing up a regulatory framework for renewable energy

New Markets in Latin America and
the MENA Region
September 2008



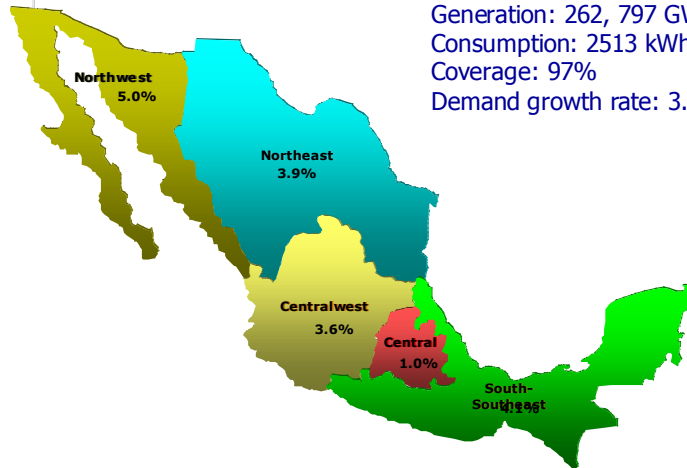
Private participation update. Mexico's electricity sector

- The legal framework allows for private participation in the generation of electricity but not in transmission nor distribution for public service purposes
- Private investment allowed in generation of electricity through: self supply, cogeneration, IPP's, small production, export and import of electricity
- Government Utilities provide wheeling and back up services as well as purchasing of excess electricity from permit holders, except for exp-imp projects which cannot get wheeling nor purchasing of excess electricity.

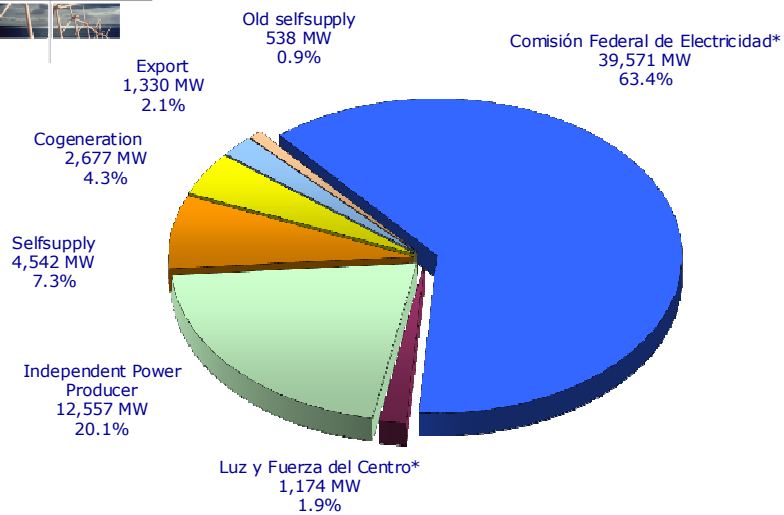
Electricity Facts, 2007



Capacity: 62,388 MW
 Generation: 262,797 GWh
 Consumption: 2513 kWh-year
 Coverage: 97%
 Demand growth rate: 3.7%



Capacity distribution

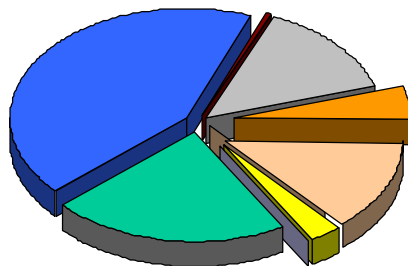


Capacity = 62,388 MW

*31/12/2007



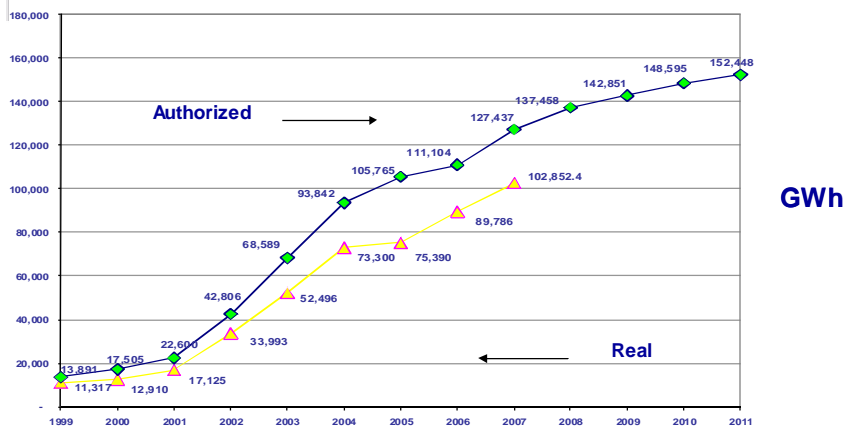
Generation Mix: 2007



Fuel Oil 6; 21.5%	Nuclear; 4.8%
Natural Gas; 42.6%	Hydro; 13.5%
Fuel Oil 2; 0.5%	Geothermal; 3.0%
Coal; 14%	Wind; 0.15%



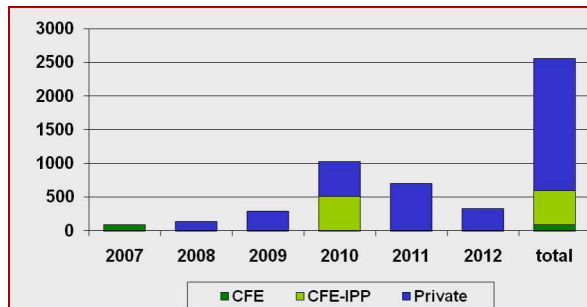
Private Generation





Wind projects

- In the following years CFE plans to bid five new IPP plants with a total capacity of 500 MW
- Private companies have announced plans to install almost 2,000 MW of wind capacity in Oaxaca during the next years



Wind regulation

Main Features:

- System operator should take renewable energy unless system is at stake
- Ancillary services charges (voltage and frequency regulation) multiply by plant factor
- Energy supplied to the system during emergencies paid at 1.5 times public service rates



Wind regulation

Wheeling

➤ Wheeling charges for renewables are calculated as in the case of firm capacity sources but multiply by plant factor

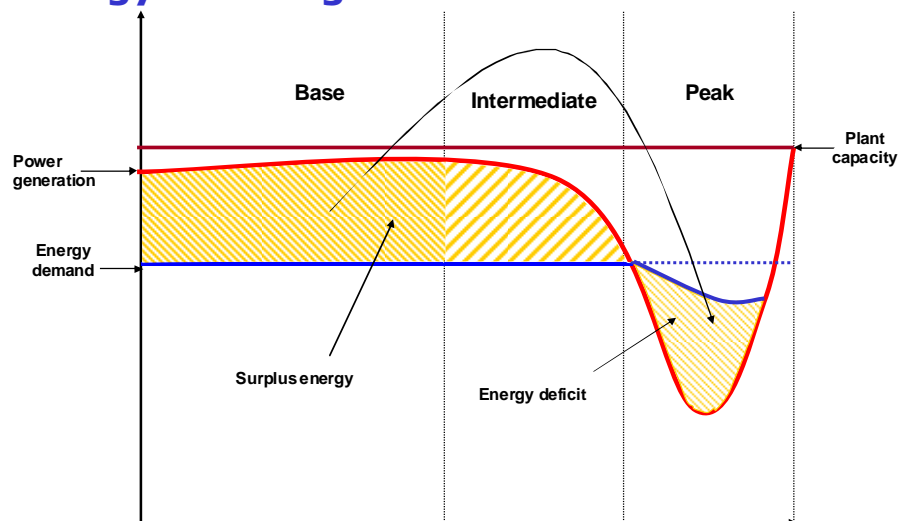
Capacity credit

➤ Intermittent renewables capacity contribution to the system is measured according to the monthly average of its power generation during peak hours on working days



Wind regulation

Energy exchange





Wind projects

- As a result of the open season, some 2400 MW of transmission capacity facilities will be built and enter commercial operation by mid 2010.
- Private participants have already submitted 100% guarantees for 1804 MW.
- On top of this capacity, the Government Utility is reserving transmission capacity for its own projects (585MW).
- In order to foster wind projects in the area of Oaxaca Open Season processes have been carried out to built transmission capacity in the area



New regulation

- Small power producers (up to 30 MW) all energy production to be supplied to Government Utility under a long term contract. Avoided cost based payment





Wind Energy

Barriers to the use of wind energy

- Regulatory and legal Framework
- Transmission infrastructure

National target – 2012-

- 2,400 MW

German wind energy contribution

- Training, information
- Wind forecasting softwares



Renewable legislation

Ministry of Energy must establish a Government Trust to manage several funds
"Renewable Energy General Fund" for the development of technologies other than the generation of electricity



Renewable legislation

- The Ministry of Energy shall publish an electricity generation project evaluation methodology that must include aspects such as the benefits of long term generating cost stability
- CRE would have legal powers to issue standards, methodologies, model contracts and any other administrative order for the generation of electricity with renewable energy
- The Economy Ministry shall issue policies to promote that local industry enter into the production of renewable energy equipment.
- The Finance Ministry shall provide fiscal incentives for renewable projects



www.cre.gob.mx

