

Capacity Markets and Other Means of Assuring Adequate Generating Capacity:

How do alternative proposals for
ensuring adequate generation supply stack
up?

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Overview: Constellation Energy

- FORTUNE 200 competitive energy company headquartered in Baltimore
- North America's No. 1 supplier of energy to wholesale and to retail commercial and industrial customers in competitive markets
- A major generator of electricity with a diversified fleet of power plants located throughout the U.S.
- **A regulated distributor of electricity and natural gas in Central Maryland**
Vision: To be the first-choice provider for customers seeking energy solutions in the complex and changing marketplace

We Know Energy

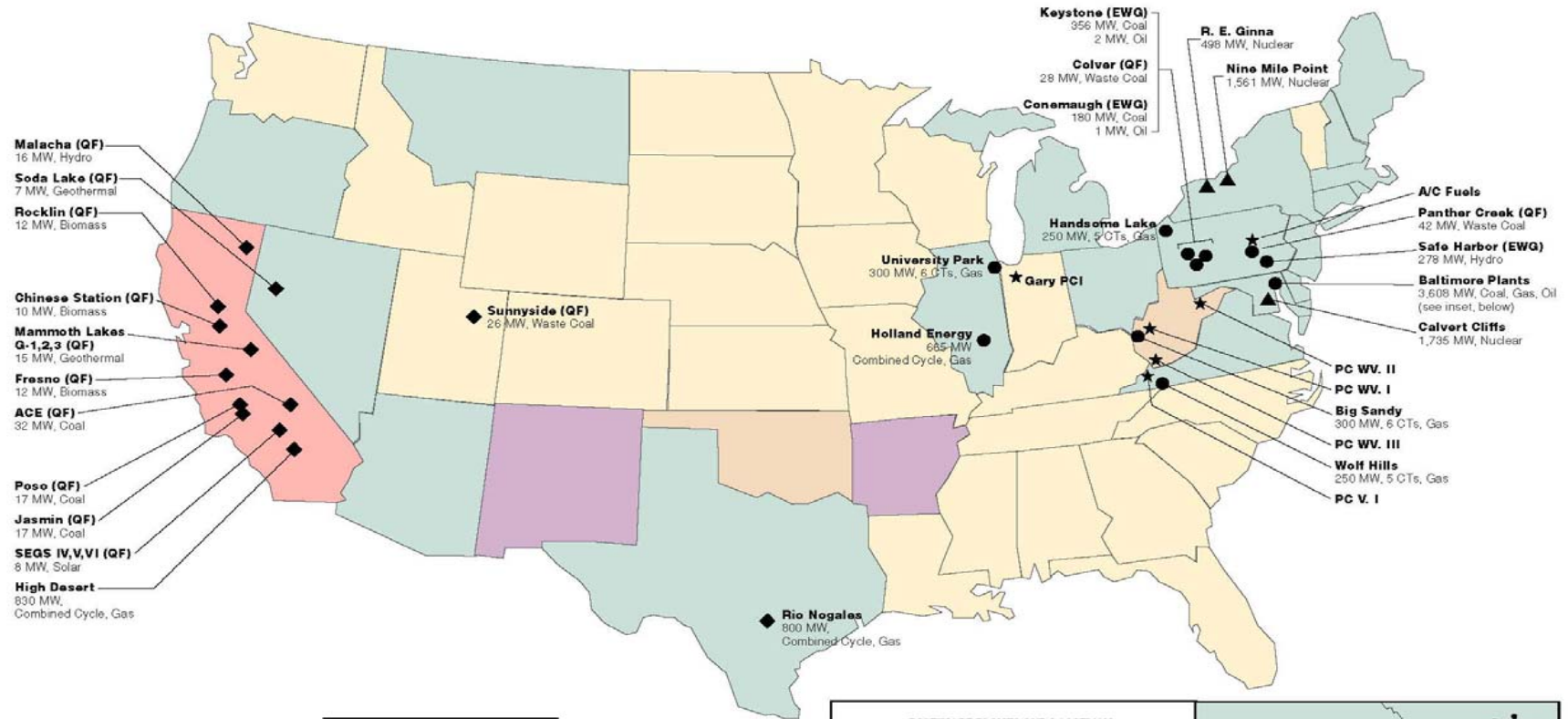


We serve customers across the energy value chain



Constellation Energy

Asset Portfolio (11,856 MW as of December 2005)



Updated January 2006 by CCG's Competitive Intelligence and Strategy Unit

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Electric Retail Access Restructuring Status

- Active
- Delayed
- Suspended
- Not Active
- Repealed

Facilities

- Eastern Plant
- Western Plant
- Nuclear Plant
- Fuel Processing Plant

BALTIMORE PLANTS AND LOCATIONS

Brandon Shores 1, 2	1,290 MW	Coal
Wagner 1-4, CT	459 MW	Coal (2, 3)
	131 MW	Gas/Oil (1)
	397 MW	Oil (4)
	14 MW	Oil CT
C.P. Crane 1, 2, CT	395 MW	Coal (1, 2)
	14 MW	Oil CT
Riverside 4, 6, 7, 8	78 MW	Gas Steam (4)
	127 MW	Gas/Oil CT (8)
	44 MW	Oil CT (7, 9)
Westport 5	121 MW	Gas CT
Philadelphia Road 1-4	64 MW	Oil CT
Notch Cliff 1-8	126 MW	Gas CT
Perryman 1-4, 51	208 MW	Oil CT (1-4)
	152 MW	Gas/Oil CT (51)



Source: EEI Website

Benefits of Competition

- GED/EPISA study: customers saw **\$15.1 billion** in value from wholesale electric competition in Eastern Interconnection (1999-2003)
- CERA study: US residential customers paid **\$34 billion** less for electricity over the last seven years than they would have under a traditional regulatory model
- ISO/RTO Council: ISOs/RTOs improve grid reliability, improve operating efficiencies, promote regional planning, and lower consumer energy costs by providing transparency, liquidity, facilitating risk management and providing market monitoring
- Competition better allocates risks, disciplines

“A nickel ain’t worth a dime anymore.”

- Need to assure adequate generation, without creating stranded costs
- Need to value capacity



*“It is very difficult to make predictions,
especially about the future.”*

Most regions of the country have adequate
generation for the near term

2006 Forecasted Reserve Margins*

WECC	32 percent
SPP	31 percent
MAIN	28 percent
New England	28 percent
ECAR	27 percent
SERC	27 percent
New York	25 percent
MRO	22 percent
MAAC	20 percent

* CERA North American Electric Power Watch, Winter 2005/06

“Baseball is 90% mental. The other half is physical.”

Well-designed competitive markets:

■ Value reliability

- Capacity is part of the “energy commodity”
- Markets make the dollar value more transparent

■ Send accurate price signals

- Forward price signals incent forward contracting

■ Differentiate scarcity pricing from market power

■ Impose mitigation narrowly to address market power

- Mitigation creates a “free” regulatory hedge

*“When you come to a fork in the road,
take it.”*

- Energy-only is an end-state vision
- If we are serious about providing better price signals, capacity market constructs should continually transition to energy-only
 - Modifying mitigation measures to better reflect scarcity pricing and incent demand response
 - Reduce capacity payment over time as mitigation is modified and energy prices provide an adequate revenue stream for investment

“You don’t want to make the wrong mistake...”

- Price signals are interrupted by excess mitigation
 - \$1000 bid cap
 - Must run contracts
 - Conduct and impact test
 - Local market power mitigation
 - Imports and reserves that do not set price
- Mitigated energy market price signals are insufficient to incent:
 - Development of new generation when and where needed
 - Economically efficient retirement decisions
 - Forward contracting by load and generation

“In theory, there is no difference between theory and practice. In practice, there is.”

Well-designed capacity markets:

- Replace the “missing money” caused by mitigation
- Encourage load and generators to sign forward contracts
- Value location
 - Adequate generation in the market-wide footprint does not necessarily mean adequate capacity in specific locations
- Balance transmission, generation and demand response
- Value desired planning reserve levels (Demand Curve)
 - Cannot require a 15% reserve margin and not pay for it
 - Smooth boom and bust cycle
- Include an adequate planning horizon
 - It takes years to build a power plant
 - Timing drives fuel source

“You can observe a lot just by watching.”

- All markets have demand curves:
 - If the demand curve is sloped, not vertical:
 - Value reliability beyond the required reserve margin
 - Help manage boom and bust cycle
- Accurate price signals are the best “guarantee” of needed investment

Questions?

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