

Why Modernize the Grid?

***Modernizing the Grid Midwest
Regional Summit
November 15-16, 2006***

Embrace MGI's "System View"

- Focus on 2 of the principal characteristics of the "Modern Grid":
 - 1) accomodates all generation options; and,
 - 2) enables markets.
- Latter point should be viewed as applying to both wholesale and retail markets.

“Enabled markets”

- Reduce congestion costs and reduce peak demand through:
 - 1) increased integration of DG and higher capacity utilization; and,
 - 2) empowering customers.

Empowering customers

- Economically sound but a large shift from how we do business today.
- Fundamental element of competitive marketplace.
- Imperative retail customer sees wholesale price signal.

“Seeing” the wholesale price

- Does not mean that every residential customer requires a “smart” meter tomorrow.
- Does not mean every residential customer should be placed on, or would choose to be on, a RTP tariff.
- Customer on “old” meter/fixed price (for expanded number of pricing periods) but sees higher wholesale prices may still be responsive to those higher prices.

Today in Ohio

- Even with the advent of Electric Restructuring (ER) in the state, residential consumers still buy electricity as they always have – under a rate design with few time variations utilizing prices set in the early to mid-1990s.
- Fully insulated from the wholesale market.

Status of ER or “What we are doing”

- Halting progress of wholesale and retail market development.
- Wholesale – continuing debate over organized regional markets vs. *status quo*; incentives galore;.
- Retail (in Ohio) – Rate Stabilization Plans; Remands; legacy DR and EE; few RTO DR programs available to Ohio load.

Galvin framework

- Employ framework utilized by Galvin Electricity Initiative to view “shape” of American society (over the next few decades) in which the debate and implementation of the Modern Grid must occur

How future consumer needs/expectations can be met

- Two key considerations:
 - 1) How unified/fragmented American society will be; and,
 - 2) Extent to which society embraces mass-market vs. customized solutions.

Four basic scenarios

- Wal-Mart World – social fragmentation and mass-market solutions;
- Wild Party – social fragmentation and customized solutions;
- Unity in Diversity – social unity and customized solutions; and,
- Pleasantville – social unity and mass-market solutions.

Three key drivers for the evolution of the Modern Grid

- These drivers cut across all these scenarios:
 - 1) intensified focus on energy efficiency;
 - 2) increased requirements for enhanced power quality and reliability; and,
 - 3) additional upward pressure on prices and generation sources.

“What we should be doing in Ohio”
– enhance markets through
innovative regulation

- Further ***promote wholesale market development at FERC.***
- Resolve the ***PUCO 05-1500-COI docket.***
- Investigation initiated by the PUCO relating to the Energy Policy Act of 2005 and its specific provisions.

OCC's Initial Comments

- *Concerns* - no direct or timely connection between rates paid and wholesale prices; the need to effectively study and move towards dynamic pricing options.
- *General goals* – increase system efficiency through a broader generation portfolio; implement dynamic pricing; further develop a fair/efficient market; and, modernize the electric infrastructure and regulatory environment.

OCC's Initial Comments

- *Net Metering* – DG in Ohio lags other states;
- *Smart metering and DR* – OCC support for cost-effective adoption of “...dynamic pricing structures enabled by modern metering, computation, and communication capabilities...”.

OCC's Initial Comments

- *Self-generation* – need for standardized, modern standby tariffs;
- *Interconnection* – need for simplified interconnection procedures.

OCC's Post-Tech Comments focused on systemic problems

- ***No meaningful DR and dynamic rates*** – require EDUs to provide cost-effective optional dynamic rates supported by smart, upgradeable meters.
- ***Barriers to modern DG technologies*** – standby rates based on actual costs; new processes to establish viable net metering and interconnection standards.

OCC's Post-Tech Comments focused on systemic problems

- ***Need for renewable energy portfolio standards*** – requested that such standards be adopted in this proceeding. *Pursued separately through IPM initiative.*
- ***ASIDE – appreciative of PUCO Staff Report in this docket.***
- Waiting on action by PUCO.

“What we should be doing in Ohio”

- ***Support and actively participate in the embryonic Midwest Demand Response Initiative.***
- Seeks to replicate efforts of MADRI in Midwest.
- OCC is actively seeking participation on this organization’s Steering Committee.

“What we should be doing in Ohio”

- ***Support Integrated Portfolio Management (IPM) as the means to acquire the Standard Service Offer (SSO) after the end of the RSP period.***
- May become a legislative initiative by OCC in early 2007.
- Revitalizes load forecasting.
- Uses on-going series of competitive auctions to acquire short-, and long-term contracts to serve the SSO.

IPM

- Incorporates DR and energy efficiency in the portfolio.
- Incorporates renewables into the portfolio as well.

Cost/benefit imperative

- Recall use of “cost-effective” programs/processes in moving to Modern Grid.
- Ohio’s residential consumers face substantial price increases in all the components of electric service after the RSP period.

Price Risks

- Post-2008 generation prices – extended RSP with enhanced cost recovery; new generation construction; or SSO procurement through short-term auctions only.
- Latter process has produced 70% increases in MD and 22-56% increases for residential consumers in IL.

Price Risks

- Transmission rates – new construction with enhanced incentives.
- Distribution rates – no rate case for distribution component since early- to mid-1990s; enhanced reliability needs; and, need for rebuilt infrastructure.

Price Risks

- Imperative
customers receive
“value” they pay
for.