EXECUTIVE LEADERSHIP TEAM
JUNE 3, 2010

MISO FOOTPRINT CHANGES
EFFECTS and ACTIONS

Ameren

Background

- First Energy withdrawal
- Duke – Ohio and Kentucky withdrawal
- Brattle Group Report on MISO Resource Adequacy Market construct
- MISO's openness to change/address certain issues
- Leaves Ameren and its companies largest MISO member
- Leaves IL as only active retail choice state (limited choice in Michigan)

Ameren Issues with MISO Construct

- Implementation of a mandatory forward capacity construct (similar to PJM)
  - 3 to 5 years, provides more favorable cost recovery for generation, provides long-term price signals, more conducive to retail choice
- Transmission Cost Allocation – RECB
  - MISO proposal to allocate 20% to existing generation via a capacity type charge
  - Potential MISO interpretation of exit fee calculation with forward looking overlay costs
- MISO voting structure
  - Ameren 20% of MISO yet has only 1 vote

Ameren

Financial Scope of Forward Capacity Construct

- Net Flows to Ameren of PJM Like Auction in MISO

	Ameren*	AIU Additional PER**
2010-2011	+$349 million	$297 million
2011-2012	+212 million	180 million
2012-2013	+5 to 29 million	4 - 23 million
2013-2014	+21 to 46 million	17 - 35 million

- PJM CE Zone capacity rate revenue less MISO capacity "market" revenues. 2012 - 2014 top end of range associated with RECB charges to existing generators beginning ($10.95/mw-day).

- Does not include potential regulatory risk to the AIU group. Amount assumed to be 100% recovered via AIU Purchased Electricity Recovery rider. There may be PER prudency questions raised during reconciliation.

Other issues

- With Ohio withdrawing; CinHub may change or go away
  - Need quick resolution as it may effect hedging effectiveness and liquidity
- Retail Choice in MISO
  - Switching, load forecasting, Aggregators of Retail Customers (ARCs)
- Current Ameren Transmission strategy better fits the MISO construct

Ameren

RESOURCE ADEQUACY CONSTRUCT

	ATTRIBUTE		MISO TODAY			PJM TODAY
1	TYPE OF MODEL		VOLUNTARY			MANDATORY
2	TIME PERIOD		1 YEAR WITH ONLY MONTHLY COMPLIANCE MONTHLY CAPACITY AUCTION; NO LOCATIONAL ZONAL PRICING; RESOURCE MUST OFFER REQUIRMENTS			BASE RESIDUAL AUCTION, 3 YEAR FORWARD WITH INCREMENTAL ANNUAL AUCTIONS; ZONAL PRICING, RESOURCE MUST OFFER REQUIRMENTS
3	CONE		ADMINISTRATIVELY SET; USED FOR NON COMPLIANCE PENALTIES			EMPERICAL/ADMINISTRATIVE DETERMINATION; USED FOR PENALTIES AND MAXIMUM PRICE SETTING OF Variable Resource Requirment
4	SCARCITY PRICING		CAPPED AT $3500/MwH			
5	RESERVE MARGINS	2011-2012	23.60%			24.60%
		2012-2013	24.00%			22.30%
		2013-2014	24.10%			21.60%
6	PLANNING RESERVE MARGIN					
		2011-2012	15.70%			15.50%
		2012-2013	16.00%			16.20%
		2013-2014	16.20%			15.30%
7	KNOWN CAPACITY PRICES		AIU RECENT RFP		CINHUB FORWARD CURVE	RPM BRA (CE ZONE)
		2010-2011	$1.82/MW-DAY		$1.32/MW-DAY	$174.29/MW-DAY
		2011-2012	$5.27		$4.28	$110
		2012-2013	$14.08		$12.17	$16.46
		2013-2014			$18.09	$27.73
8	Net Flows to Ameren of PJM Like Auction in MISO		Ameren*	AIU Additional PER**	Illinois (excluding CE)***	
		2010-2011	+$349 million	$297 million	$456 million	
		2011-2012	+212 million	180 million	277 million	
		2012-2013	+5 to 29 million	4 - 23 million	6 to 35 million	
		2013-2014	+21 to 46 million	17 - 35 million	25 to 54 million	

9 What Ameren Should Advocate For @MISO

A forward looking (3 - 5 years) mandatory capacity market.
Annual auctions with phased in level of needs as delivery year approaches.
Annual reconciliation auctions to allow for true-ups of LSE's needs.
Zonal pricing to facilitate location of new generation and transmission.
Elimination of the Voluntary Capacity Auction (would not be needed).
Allow Resource Adequacy commitments to follow the customers.
Centralized forecasting done at the LBA level.

* PJM CE Zone capacity rate revenue less MISO capacity "market" revenues. 2012 - 2014 top end of range associated with RECB charges to existing generators beginning ($10.95/mw-day). Does not include potential regulatory risk to the AIU group.

** Amount assumed to be 100% recovered via AIU Purchased Electricity Recovery rider.

***Potential increase to wholesale power costs in downstate IL to AIU and ARES (excludes CE, munis, coops, etc.)

Authors: Ryckman, Peters and Shipp. Additional input from Schukar, Arora and LaFrance.

	PROVISION	AMEREN	MISO
1	Term	3- 5 years	1 year
2	Auction	Dec clock/Sloping Dem curve	Trad Bid&Offer/Verti Dem curve
3	Zonal Signals	Yes	Yes
4	Must Offer	Yes	Yes
5	Credit	Yes	Yes
6	Forecast	Yes	Yes
7	Transition	Yes	Not Necessary
8	"Permanent"	Yes	No
9	Portability/Seams	Yes	Yes
10	Optionality	Self-Schedule/Self-Supply	Self-Schedule/Self-Supply & Opt Out

MISO Construct and Footprint Changes
Ameren Issues and Concerns
June 4, 2010

1. Capacity (Module E) issues
    a. Current MISO construct provides lower levels of capacity payments than PJM construct. In addition tenor of MISO construct (1 month) is much shorter than PJM construct, 1-year contract three years forward. The MISO construct is a disadvantage for both generation and demand response.
    b. MISO construct does not incorporate zonal price signals that promote efficient generation and transmission siting.
    c. Implementing a PJM style capacity market construct in MISO may be detrimental to IL load (increased costs) and creates potential for regulatory issues for AIU.
    d. Current MISO construct has limited ability to address load switching. Centralized capacity market would enhance this capability but would need to recognize market participants with existing capacity supply.
    e. Conclusion – Need to revise capacity construct to longer term period (minimum 3 years preferably 5 or more) providing generation assets improved price certainty and addressing retail choice switching. Otherwise need to evaluate movement of Illinois generation and/or load to more favorable market.

2. Transmission Issues/RECB
    a. Current RECB proposal to allocate new transmission cost to existing generators based on capacity disadvantages our merchant generation.
    b. Uncertain on impact to customers/loads – MISO versus PJM transmission expansion levels may increase transmission cost to customers in MISO while MISO capacity construct may lower cost to customer.
    c. PJM transmission construct, as currently in place, may limit transmission opportunities as a result of company specific rate of return, lack of Attachment O recovery mechanism, and stringent approval process for economic projects.
    d. Shifting transmission assets from MISO to PJM would require Ameren filing a new transmission recovery mechanism at FERC which could result in a lower approved ROE.
    e. Conclusion – Need to address competitive disadvantage to generation (specifically the merchant function) or evaluate moving merchant generation to more favorable market. Moving existing transmission assets out of MISO could place current cost recovery at risk and limit future transmission opportunities.

3. Potential changes to CinHub market.
    a. MISO continuing to study what the FE and Duke-OH withdrawals means to the pricing hub.
    b. Current market hedge position; very small issue (net position of 100mW).
    c. May change in the future which could impact hedge effectiveness and liquidity.
    d. This issue needs quick resolution because of impact to hedging activities.

4. Political/Regulatory
    a. Ameren has the ability to choose RTOs (MO has a state level approval process; IL does not).
        i. If Ameren were to decide to move Illinois operations to another RTO, there is potential risk to future recovery of power supply cost from prudence review
        ii. While not a requirement, it is recommended that any decision would be approved by ICC, including a cost benefit analysis from IL load perspective similar to what we have done in the past for MO.

b. Retail choice may become a non-issue within MISO footprint (Ohio is the only other state with active retail choice) while PJM has more than 50% of their load in deregulated constructs.
c. MISO should revisit voting structure. Ameren to become almost 20% of MISO, yet only has one vote. Additionally, we "lose" other like voting entities (FE and Duke-OH).

5. Exit fees/Administrative Costs
   a. Total exit fee for Ameren approximately $43 million ($26mm for AUE and $17mm for AIU) (plus MTEP responsibilities).
   b. RECB responsibility unknown though MISO is seeking to interpret potential exit cost recovery mechanism to where it would be financially difficult to withdraw from MISO (creates a "get out while the getting is good" perspective).
   c. Administrative costs are similar in MISO and PJM. Do not expect with reconfiguration that MISO admin charges will change significantly
   d. Ameren will become a larger component of MISO (in fact the largest) increasing our Load Ratio share of costs by approximately 3 to 4%.

6. Retail choice/AIU
   a. In addition to the retail switching, MISO should address the following retail choice issues :
      i. Load forecasting at LBA level.
      ii. Aggregator's of Retail Customers (ARCs) and their effect on LSEs.
      iii. Load switching during compliance period(s).

7. Renewables- Wind Integration
   a. PJM has been proactive in addressing integration of wind resources both operationally and from a markets perspective (e.g. wind must bid in on DA basis, negative pricing during MinGen events). Though MISO has substantially more wind (and adding more everyday), they continue to move slowly on such integration when it really should be a priority.

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Midwest Independent Transmission System Operator, Inc.	))	Docket No.ER08-394-028

COMMENTS OF AMEREN SERVICES COMPANY ON THE COMPLIANCE FILING OF THE MIDWEST INDEPENDENT SYSTEM OPERATOR, INC.

Pursuant to Rule 211 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission ("FERC" or "Commission"), 18 C.F.R. § 385.211 (2010), and the Notice of Filing issued December 9, 2010, Ameren Services Company ("Ameren") on behalf of the Ameren Companies[1] hereby files these comments on the compliance filing submitted by the Midwest Independent Transmission System Operator, Inc. ("Midwest ISO") on December 8, 2010 in the above-captioned proceeding (Compliance Filing). As described below, in this Compliance Filing directed by the Commission's June 8, 2010 order,[2] the Midwest ISO submits its plan to incorporate locational capacity market mechanisms into its Open Access Transmission, Energy, and Operating Reserve Markets Tariff ("Tariff"), including modification of its Resource Adequacy Requirements ("RAR") in Module E ("RAR Enhancements"). The Midwest ISO also submits a proposed timeline of activities associated with finalizing and filing the RAR Enhancements.

[1] For purposes of this filing, the Ameren Companies consist of Ameren Illinois Company d/b/a Ameren Illinois, Union Electric Company d/b/a Ameren Missouri, and Ameren Energy Marketing Company ("AEM").
[2] *Midwest Independent Transmission System Operator, Inc.* 131 FERC ¶ 61,228 (2010) ("June 8 Order").

I. BACKGROUND

The long and complicated procedural history of this proceeding is described in the Compliance Filing and will not be repeated here. As relevant here, the June 8 Order directed the Midwest ISO and its stakeholders to "develop a plan that details the steps that will be taken to incorporate [locational capacity] market mechanisms into the Resource Adequacy Plan,"[3] and to submit its plan and a discussion of stakeholder perspectives to the Commission. The June 8 Order also required the Midwest ISO to "develop a plan that allows auction planning credits and locational market mechanisms to coexist in the Resource Adequacy Plan."[4]

In the Compliance Filing, the Midwest ISO describes its efforts to modify Module E "to create a more effective and efficient RAR construct."[5] The Midwest ISO expects that the enhancements to Module E will address all issues associated with locational capacity market mechanisms, as directed by the Commission in the June 8 Order. The Midwest ISO states it will continue to work within its stakeholder process to further define its RAR Enhancements, but emphasizes it has not made final decisions regarding the contemplated June 2011 filing with the Commission.

The Midwest ISO has created eleven (11) key elements associated with the planned RAR Enhancements that it maintains "will establish locational capacity market mechanisms while respecting states' rights, facilitating state retail programs, enhancing the accuracy of load forecasting, improving the portability of capacity to/from other regions of the nation, and

[3] *Id.* at P 24.
[4] *Id.* at P 27.
[5] Compliance Filing at page 2.

maintaining the reliability of the Midwest ISO transmission system."[6] Generally, the key elements are:

1. Develop Local Resource Zones
2. Establish zonal requirements
3. Create market mechanisms to achieve zonal requirements
4. Respect states' rights relating to Resource Adequacy
5. Extend forward capacity procurement horizon and improve planning coordination
6. Enhance forward Load forecasting accuracy of Load Serving Entities ("LSE")
7. Improve Planning Resource qualification provisions
8. Enhance coordination with retail programs
9. Address the Independent Market Monitor's role with regard to RAR Enhancements
10. Enhance Capacity Portability/Cross Border Deliverability
11. Timing of RAR Enhancements[7]

The Midwest ISO's planned timeline indicates the stakeholder process will culminate in a June 2011 filing with the Commission. The proposal will incorporate a transition year for the new RAR (Planning Year 2012 – 2013), and full implementation of the RAR Enhancements for Planning Year 2013 – 2014.

II. COMMENTS

Ameren supports the Midwest ISO's proposal regarding the modification of its current RAR process. It is Ameren's belief that the current monthly RAR is not sufficient to provide

[6] Compliance Filing at page 3.
[7] Compliance Filing at page 3.

long-term Resource Adequacy in the Midwest ISO footprint. Additionally, the monthly Voluntary Capacity Auction does not provide the necessary long-term price signal to enhance future generation or transmission siting. Further, the bilateral marketplace currently utilized by many Load Serving Entities in the Midwest ISO footprint does not provide the level of transparency necessary to support long-term capital investment decisions.

Ameren believes the efforts the Midwest ISO has taken to date are a positive step toward enhancing the current construct. The Midwest ISO's Market Participants are a diverse group and incorporate numerous business strategies, often with competing goals and objectives. It is Ameren's hope that the Midwest ISO and its stakeholders will ultimately incorporate a forward looking capacity market into the Module E process that will include the key elements provided in the Compliance Filing.

Although the Midwest ISO attempts to include a discussion of all the issues surrounding the RAR Enhancements in its Compliance Filing, Ameren notes that there are a number of other considerations that must be addressed. Specifically, in addition to the many issues described in the Compliance Filing, Ameren believes the following issues are of particular importance:

1. The ability to hedge Locational Resource Zone basis risk that may arise when a Load Serving Entity owns a firm transmission path from a resource to its load within a constrained zone.
2. How the RAR will facilitate the participation of state approved Integrated Resource Plans into its rules and procedures.
3. The ability of vertically-integrated entities to both participate in the PRA (Planning Resource Auction) and to self-supply and/or self-schedule any or all of its load and generation requirements.

4. Assuring that any "true up" or "reconfiguration" auctions allow both load and resources to have the opportunity to make changes.
5. Allowing current long-term bilateral agreements that parties may have in place to transition into the final RAR.
6. Continue to assure the reliability of the system via, among other things, the utilization of must offer rules and processes currently in place.

III. CONCLUSION

For the reasons stated above, Ameren requests the Commission consider these comments in its evaluation of the Midwest ISO's Compliance Filing, and direct the Midwest ISO to address each of the concerns identified above in its next filing with the Commission (currently anticipated to be June 11, 2011).

Respectfully submitted,

/s/ Joseph M. Power

Joseph M. Power
Vice President, Federal Legislative
and Regulatory Affairs
Ameren Services Company
1331 Pennsylvania Avenue, N.W.
Suite 550S
Washington, D.C. 20004

December 29, 2010

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, D.C., this 29th day of December, 2010.

/s/ Joseph M. Power

December 22, 2010

Ameren comments re: MISO 12/9/2010 SAWG presentation ***Midwest ISO Resource Adequacy Enhancements Proposal*** by Mr. Todd Hillman

In general Ameren supports the MidwestISO's initiative to investigate the possibility of creating a long-term (3 – 5 year) Resource Adequacy Requirement within the MISO footprint. The Ameren comments herein are consistent with previous written comments which we have submitted as well as the verbal comments which Ameren representatives have shared via the stakeholder process.

Slide 2, Resource Adequacy Principals:

No substantive comments to add.

Ameren believes that Capacity Portability is a key to success in this endeavor, but that must go hand-in-hand with Deliverability; just making the capacity portable to a seam does not help.

Additionally, the term "Free Riders" is utilized as a Key Driver which Ameren does not necessarily agree with. Ameren believes that all of the MISO states, with and without official IRP processes, are focused on the reliability of its power systems and as such one would think that there is no indication that anyone is currently thinking of riding the system to meet its long-term RAR. Will a long-term RA construct eliminate some current loop holes inherently found in the current construct? Of course, but we do not believe the issue to be important enough to be classified as a Key Driver.

Slide 3, Capacity Portability:

See comment above. Also, as the PJM tariff seems to be the barrier to capacity portability, Ameren would strongly recommend that the Midwest ISO consider a filing directed at the PJM tariff to bring this issue before FERC for timely resolution. Additionally, we should not just be focused on PJM but all of MISO's neighbors.

Slide 4, Resource Adequacy Enhancements:

Ameren basically supports the items listed on this slide.

However, we are still reviewing the requirements associated with providing Annual Coincident Peak Demand Forecasts. Additionally, we believe that 100% compliance should not be

mandatory in the out years (e.g. years 4 and 5 of 5 year forward construct) to allow for forecast true-ups, DR/EE participation, etc.

Slide 5, Enhancements (cont.):

Clarification is needed regarding an LSE (especially a vertically-integrated one) self-scheduling resources; can they self-supply also? Or is that inclusive of the bullet point.

There must be "reconfiguration" or 'true-up" auctions, if not the LSE are more than likely procuring for an unacceptable Reserve Margin level. True-ups "just prior to Planning Year" are not enough.

Slide 6, Transitional Period – PY 2012 -2013:

Ameren supports a Transitional Period and we will continue to monitor the detail around that particular component of the proposal.

Slide 7, RA Enhancements Timeline:

Again, Ameren strongly suggests additional reconfiguration/true-up auctions should be part of the RA construct.

Slide 8, Phased Approach – Rational:

No comments at this time.

Slide 9, Next Steps:

No comments at this time.

Additional Ameren comments:

The group must focus on the rules associated with APRCs and PRCs and how such items will be incorporated (or not) within the RA construct. How are they utilized/confirmed/etc. during the transition year? What about trading of APRCs? How will future resources be verified in the forward years to allow LSE to use them to meet their RAR?

MISO and its stakeholders must focus on the transmission modeling (Powerflow models) and the effect on such modeling a LT forward capacity construct might have on the requirements of the transmission model. Are we looking at seasonal capacity? What about on/off peak scenarios?

Ameren recalls MISO indicating they need to "incorporate" state IRPs into the RA process. Ameren would suggest that what is needed is the ability of any RA process to allow for those approved state IRPs to be carried out within the MISO process.

The modified RA construct must continue to assure the reliability of the system via, among other things, the utilization of must offer rules and processes currently in place.

Ameren Resource Adequacy Construct

Guiding Principles

August 25, 2010

With MISO coming to the GOB to discuss Module E – Resource Adequacy redesign on Friday August 27th, the Ameren Module E Workgroup wanted to outline a list of Guiding Principles (for lack of a better term) which the group has agreed to during its sessions over the last year or so.

1. A 3 – 5 year procurement obligation seems to be reasonable. Such a time frame should allow the majority of resources (EE, DR, peaking units and to a certain extent base load generation and transmission options) to participate. We believe there is little to no incremental value – from a Resource Adequacy perspective – of moving to an annual construct from the current monthly construct.
2. One of the biggest issues associated with the 3 – 5 year construct is how price is set for capacity. We believe it should be market based.
3. The construct should address zonal pricing/cost differences. Zone definitions should not bifurcate an LBA.
4. Must offer rules, monitoring and compliance must remain in place.
5. The credit risk associated with implementing a long-term capacity market must be shared fairly by the market participants to assure that no sector or LSE is overly burdened by the additional risk.
6. The forecasting process must be re-visited. Forecasting at an LBA coincident peak level seems to make sense.
7. Whatever construct that is decided upon, there must be a transition period or mechanism for those who are transacting in the forward markets today.
8. What MISO files in December should meet both the short term and long term objectives for Resource Adequacy. Ameren believes that having a

Resource Adequacy construct that is constantly changing – or rumored to be changing – negatively affects the bilateral marketplace.

9. MISO should continue to explore capacity portability between markets (Not only PJM but SPP and other neighbors). Capacity portability would allow resources to have easier access to other adjoining markets reducing the current barriers that exist.

Impact of Capacity Market Constructs

Going Forward Under MISO Module E

Different approaches to Resource Adequacy

LEADING the way to a SECURE energy future.

Table 1
Spectrum of Approaches to Resource Adequacy[4]

		LSE RA Requirement *With Bilateral Capacity Market*		***Administrative*** *Capacity Payments for RA*	***No*** *RA Requirement (Energy-Only Market)*
		Forward *Requirement*	***Short-Term*** *Requirement*		
Type of Residual Capacity Market	*No Centralized Capacity Market*	CAISO	SPP	Chile, Spain, South Korea	ERCOT, AESO, Australia's NEM, NordPool, Great Britain
	"Voluntary" *Centralized Capacity Market*		MISO		
	"Mandatory" *Centralized Capacity Market*	PJM, ISO-NE, Brazil	NYISO		

[4] – *The Brattle Group "MISO's Resource Adequacy Construct" 01/19/2010 pg 8*

Ameren

Brattle Group's Evaluation of MISO's Module E RA Construct

- *"We recommend that MISO postpone consideration of transitioning to either a forward capacity market or an energy-only market."*
- *"..stakeholders are strongly divided about the future direction that the MISO RA construct should take. Some stakeholders support maintaining the current construct, others propose a(mandatory) forward capacity market, and others favor an energy-only market."*
- *"...locational scarcity pricing signals may not provide sufficient signals for locational adequacy for two reasons. First, the scarcity pricing construct is not sufficient to maintain resource adequacy overall, because the VOLL used in MISO is lower than the actual average value...the energy and ancillary services markets alone would maintain insufficient capacity."*
- *"From the market results to date, we cannot confirm that the current MISO construct will incent the next round of capital investments in retail choice states, because it has not yet been tested by foreseen shortages. Our expectation, however, is that needed investments will be made, although possibly at a greater cost, and possibly not where needed...The lack of long-term contracting under retail choice places investment risks on suppliers, who will therefore require a higher return on investment."*

Discussion Items/Objectives

- Objectives for today:
  - Understanding of RA market constructs
    - Answer/Discuss Module E White Paper
    - MISO/PJM/Others
  - Impacts of Operating in Current MISO RA Construct
    - On the markets
    - On reliability
    - On the customers
  - Identify Areas of Agreement
    - Why is now the right time to move forward?
  - Action Plan
    - Timing
    - Resources
    - Etc.

What others have to say…

FirstEnergy

Leaving MISO on 06/11/2011:

"Generation owners operating in retail choice states no longer have a traditional obligation to serve. Because of this, **without appropriate price signals** regarding available revenue streams, generation **can and will exit the market** and impair reliability. RPM addresses this problem and thus can provide long-term generation reliability benefits for customers in the ATSI footprint…" [1]

Duke Energy

"With respect to the PJM transfer, obviously, we are well aware of FirstEnergy's decision to move…and I'm confident that they will, we'll be the only utility in Ohio that's in MISO… There are some pros, there are cons, and we should be making a decision on it in the not-too-distant future." [2]

citi

PJM RPM Technical Conference 01/26/2010:

What **most** utility equity investors understand

- ❑ Capacity has value separate from energy production
- ❑ The value of capacity increases with scarcity or resources
- ❑ There is an auction that determines the price, **3 years in advance**
- ❑ Generation competes with non-traditional resources in the auction
- ❑ There are multiple auctions for different parts of PJM [3]

BARCLAYS CAPITAL

The next PJM capacity auction is for 2013/2014… …We believe that there could be a potential impact on the auction **given the potential shutdowns in 2014.** [4]

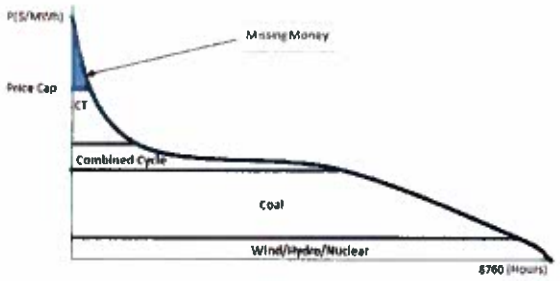
Ameren

[1] - *FirstEnergy (ATSI) - FERC Docket ER09-1589 filed 08/17/2009*
[2] - *Duke Analyst Meeting, Feb. 16th, 2010*
[3] - *Citi "PJM Long-Term Capacity Issues Symposium" presented by Brian Chin on 01/26/10*
[4] – *Barclays Capital "Equity Research – Power: The Next Big Thing" released Feb 01, 2010*

What problem requires a solution?

Is there enough revenue to keep existing generators or to build new generation?

Does the market attract capital investment?



MISO faces following challenges:

- Retirements due to carbon legislation
- Renewables interconnection impact congestion
- Demand Response growing
- Load reduction may not come back in the same areas that it left
- Membership diversity dropping mostly regulated
- Large transmission build planned

Locational needs for generation (existing or new)

Time needed to build a new generator (3-5 yrs)

MISO Capacity Construct does not provide efficient solutions:

1. MISO's Value of Loss Load, capped at $3500/mW, appears to be too low.
2. No locational requirement for import constrained areas (no price separation)
   - Congestion must be persistent and consistent to incent investment
   - MCC must be high enough to recover investment
   - Transmission solution weighed against demand response and generation solution
3. Monthly deficiency determination with penalty of Cost of New Entry ($90k)
4. Retail choice not well integrated (23% of the states are deregulated PJM is over 50% deregulated)
5. No forward market structure to handle potential shutdowns in the next 3 to 5 years
6. Load forecasting done at the LSE level (Resource Adequacy is RTO wide)

Reliability Concerns associated with Module E

- 30 day compliance
- Aggregate Deliverability
- No locational signals for resources (generation or transmission)
- Once PRC is granted, no tie to daily capacity obligations of resource
- Module E does not treat all local deliverable resources equally (LMRs in the VCA)
- Does not provide any incentive to procure capacity except on a month-ahead basis.

Negatives and Positives to Addressing RA Construct

- Political/Regulatory
  - Higher Rates (a deregulated state issue)
  - ICC position on Energy Only Construct
- Not a slam dunk with MISO market participants
- Provide LT Price Signal
- Provide better opportunity to earn return on assets
- Assure proper siting of new generation
- Provide DR/EE more opportunity in the marketplace
- Provide transparency to the bi-lateral capacity market
- Retail Choice
  - Addresses load migration
  - More accurate load forecast

Ameren

Decision; Do We attempt to modify/change the MISO RA Construct?

- Now may be the time – questions being asked by MISO, FE withdrawing, Duke questioning
- If yes, how do we get there.
  - An external communication strategy to both IL and MO commissions as not to jeopardize future regulatory proceedings.
  - An overall goal of what the final market design should include.
  - An execution strategy to achieve the goal (i.e., Chair Committees, FERC comments, press releases, identifying strategic partners).
  - A timeline for implementation as to coordinate and optimize other efforts (i.e., moving some Ameren generation to PJM in the interim, review EEI's MISO membership, generation retirement decisions, etc.)

Must Have Alignment Across Business Units

- ***Merchant Generation***
  - 3 year procurement provides stability to earnings
  - Better recovery for on-going costs
- ***Transmission***
  - Increase capability to other markets
- ***Regulatory/Stakeholder***
  - Communication with Regulators
  - Solution should be balanced - meeting the needs of the business units (IL, MO, AER, etc.)
- ***Renewable Energy***
  - Integrate Renewable Resources to enhance overall portfolio

Ameren

What do we need to implement and go forward

- Manpower
  - Team to flesh out the details
  - Management to guide with policy decisions
  - Dollars for modeling needs (effect of capacity market on LMPs and other market modeling)
  - Timeline established
  - Regulatory Plan
  - Others?

Ajay Arora	Mark Birk	Jim Blessing
Maureen Borkowski	Jaime Haro	Amy Jo Koval
Dennis Kramer	Andrew Meyer	Craig Nelson
Mark Peters	Ron Ryckman	Shawn Schukar
Andy Serri	Greg Weiss	Steve Wills

MIDWEST INDEPENDENT SYSTEM OPERATOR (MISO)
MODULE E – RESOURCE ADEQUACY
PONDERING THE FUTURE

On Monday May 17th, you have been invited to participate in a discussion regarding the current resource adequacy construct within MISO. To help facilitate our discussions on the 17th you are being provided this white paper.

Executive Summary

With this document we attempt to provide you a brief history of MISO's Module E – Resource Adequacy, i.e. "capacity requirements", how the module has evolved through MISO's short history and FERC rulings and the recent implementation of Module E in the MISO markets. Additionally, the paper provides a brief overview of the capacity market MISO's RTO competitor, PJM.

The overall purpose of this document is to provide you with some topical background necessary for the group to evaluate where Ameren's assets and its customers are best served within the context of Ameren's overall corporate agenda and the marketplace we operate and transact in.

MISO Module E

The current Module E, with planning year one starting June of 2009, is the result of numerous FERC filings and rulings and hundreds of stakeholder meetings. In August 2004 the FERC accepted MISO's plan to offer a permanent Resource Adequacy Requirements (RAR) plan for the entire MISO footprint by June of 2006. FERC approved that plan as the MISO stakeholders also supported the endeavor knowing the importance of ensuring reliability within the MISO operating footprint.

MISO's compliance filing in June of 2006 consisted of a two-phase approach to permanent RAR in MISO; Phase I being the integration of short-term Contingency Reserves and Regulation into MISO's Energy Markets, Phase II would entail incorporating shortage pricing with the Energy Market to reflect the capacity component of MISO resources.

MISO's Ancillary Services Market (ASM) was implemented on January 6, 2007 and as previously stated MISO's Module E (i.e., its shortage pricing resource adequacy initiative) was implemented in 2009.

MISO's December 28, 2007 filing initiating the proceeding beginning the approval of the currently implemented Module E.

MISO stated that for almost two years meetings had been held with two standing MISO groups (the Supply Adequacy Working Group (SAWG) and the Organization of Midwest States (OMS)) as well as the specifically created Resource Adequacy Working Group (RAWG). MISO indicated to FERC that its RAR filing contained "mandatory requirements for the MISO, Market Participants (MPs) serving load within the Midwest ISO region or serving load on behalf of an LSE and other Market Participants to ensure access to sufficient and reliable Planning Resources to meet load requirements within the Midwest ISO Transmission System. These Module E requirements are meant to complement and coincide with the reliability mechanisms of the states and the Regional Reliability Organizations (RROs) within the Midwest ISO Region."

This initial RAR filing highlighted several main components of Resource Adequacy including: determination of one or more Planning Resource Margins (i.e., reserve margins) on an annual basis; responsibilities of the LSE; the processes and circumstances regarding the qualification of resources to participate; must-offer requirements of approved planning resources; and, reporting requirements and mechanisms to the States.

One glaring topic that was not addressed in MISO's initial RRA filing was financial settlements language associated with a LSE being in non-compliance with the proposed Module E. MISO

indicated that such work was ongoing with stakeholders and would be filed separately before the end of any such transition period.

Though many of the proposed components contained within MISO's original RAR filing were positively supported by the MISO Stakeholders, there were several issues that many of the parties (including Ameren) choose to bring to FERC's attention. There were literally hundreds of protests, comments and requests for rehearing filed at FERC during the several year proceeding leading up to the implementation of MISO's RAR. In fact as of the date of this document the parties were waiting FERC direction on a couple of open issues. Additionally, the MISO was due to make some tariff "clean-up" filing associated with Module E in the very near future.

The Illinois Commerce Commission (ICC) was very active in this proceeding (as they are still today). The Illinois Commission's concerns have been somewhat typical of many state regulators. In their request for rehearing of FERC's initial order in MISO's Resource Adequacy construct the ICC asked questions and clarifications such as:

- Will Module E as proposed and accepted promote long-term adequacy?
- Will Module E as approved promote efficient markets?
- What is the states' ability to establish their own PRM?

The Missouri Public Service Commission (MPSC) was – and is - active in the OMS but their written and formal comments to FERC regarding the RAR issue were somewhat limited in nature.

In general Ameren has been supportive of MISO and its Stakeholders in the development and subsequent implementation of the Resource Adequacy Requirements. However, Ameren did comment and protest MISO's December 28, 2007 filing specifically concerning the following issues: MISO should coordinate and share its RAR with NERC's resource planners; any minimum reserve margins established via the PRM process should not be subject to being lowered by the individual States; and, FERC should not lose sight of the importance of the financial settlement provisions because as contemplated by the MISO's RAR filing will be the only "teeth" behind the entire process and the rules which will provide any type of long-term price signal associated with the need for new capacity in the MISO footprint.

FERC has, in almost all instances, in their orders been supportive and steadfast in their philosophy that not all RTOs have to be similar in structure but must only meet the minimum requirements as outlined in past FERC orders and guidelines relating to resource adequacy and assuring reliability of the system.

That is not saying the FERC has not ruled on many important aspects of MISO's RAR proposal:

- FERC has found, within the context of MISO's RAR, that annual planning and month-ahead compliance is sufficient to address long-term resource adequacy.
- FERC is supportive of MISO's position that long-term resource adequacy is addressed sufficiently by MISO's integration if scarcity pricing, the ancillary services market, and its financial settlement associated with non-compliance is properly administered.
- FERC has found that MISO's role in determining reserve margins is appropriate, contrary to some positions of the states. However, states do retain the right to set lower or higher reserve margins; though we have not seen such an instance within the MISO footprint to date.
- FERC indicates that it is reasonable for MISO to analyze the accuracy of both the load forecasts and resource plans of the LSEs. MISO will also perform an after-the-fact assessment of load forecasts and report under-forecasting by LSE to their respective states.
- Though MISO choose initially to utilize three separate zones for Planning Reserve Margin calculations, FERC left open MISO's ability to create and utilize additional zones pursuant to the zonal methodology included in the MISO tariff.

- Approved the utilization of annual Unforced Capacity as the metric for generation availability.
- Have found that the utilization of Load Modifying Resources (LMRs, e.g., Demand Resources including interruptible load, direct control load management and Behind-the-meter-Generation (BTMG)) to meet RAR is acceptable provided that proper testing of resources during emergencies (an Ameren specific concern; if LMRs are treated as capacity within the construct and can be utilized as PRCs, then they should be subject to similar testing requirements as deemed necessary for generation resources).
- FERC approved MISO's monthly Voluntary Capacity Auction (VCA) allowing LSEs to satisfy their RAR via an avenue other than the bilateral market. In conjunction with its VCA approval, financial assessments to deficient LSEs associated with scarcity pricing and penalties tied to the Cost of New Entry (CONE) were approved.

Ameren's only Request for Rehearing at FERC was filed in November of 2008 in response to the FERC October 20, 2008 order on Financial Settlements. Specifically, Ameren was of the opinion that FERC erred in its rejection of MISO's proposal to use financial settlement revenues to procure needed capacity from those market participants that do not clear in the MISO VCA. FERC would ultimately deny Ameren's rehearing request.

During this time period, Ameren's main focus, and justifiably so, was from the reliability side of the equation. After all, not only were the Day 2 markets approaching, but MISO was also becoming the Balancing Authority and thus the responsibility of assuring the proper levels of resources were available was now a "third-party" responsibility. A big change in the way things were historically done.

However, over the last 18 – 24 months our industry has seen fundamental and long-lasting change and with that we must evaluate the market constructs we wish to have our assets in, especially if there are choices available.

Module E Implementation June 2009

In implementing Module E in June of 2009, MISO stated in its Module E Resource Adequacy Business Practice Manual (BPM No. 11):

> Market economics and reliability are inextricably intertwined. Markets that are otherwise competitive and robust will nevertheless fail if they do not provide sufficient incentives to ensure reliability. One of the keys to reliable grid operations is to ensure that MPs provide and have

access to adequate Planning Resources (i.e., both Capacity Resources, such as Generation Resources and Demand Response Resources, and Load Modifying Resources, such as Demand Resources and Behind the Meter Generation).

Achieving reliability in the bulk electric systems requires, among other things, that the amount of Capacity Resources exceeds customer demand by an adequate margin. The margins necessary to promote Resource Adequacy need to be assessed on both a near-term operational basis and on a longer-term planning basis. The focus of this BPM is on the longer term planning margins that are used to provide sufficient resources to reliably serve Load on a forward-looking basis. In the real-time operational environment, it is the resources previously established by the Planning Reserve Margin requirement that can be used to meet real-time customer demand and contingencies. Therefore, Planning Reserve Margins (PRMs) must be sufficient to cover:

- Planned maintenance;
- Unplanned or forced outages of generating equipment;
- De-ratings in the capability of DRRs and Generation Resources;

- System effects due to reasonably anticipated variations in weather; and
- Variations in customer demands or forecast demand uncertainty.

In areas where the majority of Capacity Resources are energy-constrained or use-limited, achieving reliability may also require that the energy available to the area is, at least, equal to the customer demand and some reserve requirement during a certain critical design period for the constrained Resources.

Capacity Resources include those generating units that produce or supply electricity (e.g., Generation Resources) and also DRRs, Type I and Type II that can be dispatched to reduce demand. While ownership of Capacity Resources varies, sufficient Generation Resources in conjunction with DRRs, must be available, and under contractual arrangements with the electric system or its customers, to provide an adequate supply of Resources.

It is within the context of this description which MISO and its market participants have derived the rules and details surrounding MISO's long-term resource adequacy measurement. There are four major steps included in Module E compliance:

- Determining Planning Resource Margins (PRMs) and qualifying and quantifying Planning Resource Credits (PRCs);
- Determining LSE Requirements;
- Determining an LSEs Resource Plan Requirements including designating their PRCs utilized to serve load; and
- Validating and Settlement of the Voluntary Capacity Auction.

Of course this cannot be that simple, in fact the tariff language solely dedicated to Resource Adequacy totals more than 60 pages and the Module E BPM is almost 150 pages in length.

Determination of Planning Reserve Margins

The analysis to determine PRM for each LSE occurs annually with results published a minimum of seven months before the upcoming Planning Year. There are many factors taken into consideration including; forced outage rates of Capacity Resources, planned generator outages, LMR performance, forecasting uncertainty and operating reserve requirements (including any state-mandated reserve requirements). The PRM calculation is directly tied to the LOLE results (MISO plans for a 1

day out of 10 years loss of load occurrence) and thus the LOLE Working Group and stakeholders are very much involved in the completion of the annual LOLE study. As part of its PRM analysis MISO utilizes the GE MARS model to analyze zonal congestion to evaluate the need for different levels of PRM within a given zone. Currently, MISO has determined no need for zonal PRMs and utilizes one PRM for the MISO footprint.

Determination of LSE Requirements

An LSE must submit, on a timely basis, its forecasted weather normalized non-coincident peak demand for each Commercial Pricing Node (CPNode) by month for the next two Planning Years and for each summer period for an additional eight Planning Years. The LSEs are allowed to update its upcoming compliance month's demand needs by the first day of the month preceding the applicable compliance month. For example, assuming November 2009 is the next compliance month, the LSE has until October 1st at midnight to update its November demand numbers via the MISO portals. The LSE may reduce its forecasted demand needs by the amount of registered Load Modifying Resources (LMRs), for example, Demand Resources (DRs) or Behind The Meter Generation (BTMG). MISO's Module E provides no specific requirements/guidelines/rules associated with retail choice.

However, the LSE in a retail choice state must forecast and take into account the amount of load they expect to shift between the time they submit their demand numbers and the beginning of the Compliance Month. MISO does compare the total of LSE loads to the MISO expected peaks to insure all load is accounted for within the MISO footprint. Therefore the exercise of submitting LSE forecasts in the forward years does not yield anything of value from a planning perspective. Bottom line, the current Module E construct creates situations where an LSE, in a choice state, could be over-supplying or under-supplying its load obligations and in fact there is a possibility that a customer who has switched LSEs is not having its needs covered by anyone. The current MISO construct does not allow for the contractual obligations of the parties to be transferred.

Determining an LSE's Resource Plan Requirements

LSE's must demonstrate, on a monthly basis, that they have enough Planning Resource Credits available to meet its Resource Adequacy Requirement (RAR). An LSE's RAR is equal to its monthly forecasted peak demand less any registered LMRs plus it's required PRM.

PRCs are all Planning Resources – Generation Resources, DRR Type I and II , Power Purchase Agreements and LMRs (Demand Response and BTMG) – that have went through the Module E

process and through verification, testing and accreditation, have registered in the Module E Capacity Tool (MECT), converted the capacity into Unforced Capacity (UCAP) and become a Planning Resource Credit (PRC) thus eligible to meet the RAR of the Load Serving Entities. By definition a PRC is:

> A 1 mW/month unit of Unforced Capacity from a Planning Resource for a given month during a specific Planning Year, pursuant to the requirements set forth in Module E and the MISO Tariff.

An LSE, again through the MECT, must designate the appropriate level of PRCs to cover, at a minimum, its reported demand load forecast plus its PRM. Again, this is part of the process completed before the first day of the month preceding the Compliance Month.

As stated earlier, the LSE also has an Annual Resource Plan to submit but there is no penalty mechanism for non-compliance with the annual process. Due by March first of each Planning Year, the LSE must designate the PRCs expected to be utilized to meet its annual RAR. Like its load forecast, the LSE has the opportunity to update its annual plan on a monthly basis as the Planning Year goes forward. Unlike the annual compliance plan, the monthly plan does have a penalty mechanism for non-compliance.

Typical Module E Planning Year Timeline

Validating and Settlement of the Voluntary Capacity Auction

As part of Module E, MISO facilitates a monthly Voluntary Capacity Auction (VCA) allowing LSE's that may be deficient in PRCs for the upcoming compliance month, the ability to acquire additional PRCs. Sellers and buyers submit their bids and offers electronically to the MISO 5 business days prior to the Resource Plan Deadline each Month. The price for PRCs acquired via the VCA is set where the Demand and Supply curves cross. Should the curves not cross, the MISO has created a method to calculate a clearing price that is detailed in the RA BPM.

Some Ameren Issues with Module E

As mentioned previously, Ameren has provided written and oral comments throughout the informal and formal process creating and implementing the current MISO Module E RAR process. In brief, following are some specific issues that certain areas of the company think still exist in the Module E:

(1) Planning Reserve Margins: utilizing EFORD numbers which are based on three years of data for PRM which in Module E is

an annual number; generator testing standards (SERC versus new standards imposed by MISO); throughout the stakeholder process many Market Participants thought that MISO was taking a piece-meal approach when establishing and selecting certain numbers, in t instances such as utilizing EFORD and generator testing requirements the result was understating a generators valid capacity rating.

(2) Forecasted Demand Calculation; the MISO provides no direction regarding how LSE's located within a retail choice state should account for retail load shifting, utilization of one standard deviation as the check for under-forecasting. Though an LSE has an opportunity to explain away any instance of under-forecasting prior to being reported to its regulatory authority and retail load-shifting is a factor that is analyzed. Furthermore, Ameren (among others) has expressed a concern with the "unaccounted for load" issue – whereby a customer who is not under contract yet with either the host utility or an alternate electric supplier, will not have its load reported by anyone.

(3) Load Modifying Resources: we attempted to ensure that the Ameren LSE who may have BTMG received the most value for that particular resource (though these concerns apply equally well to entities with demand management resources); proposed that the measurement and verification rules for

LMRs were equal to those for all other resources; indicated that allowing the transfer of LMR rights utilized to meet an LSE's PRMR (Planning Reserve Margin Requirement) causes the LBA (Local Balancing Authority) issues such as verifying the availability of resources in the real-time.

(4) Planning Resource Credits: a concept not contemplated in the original RA construct or in the original Module E Tariff language that gives all resources the same capacity credit if registered; the process assumes the resource is available in the real-time if available at the time of monthly compliance; External Resources registered as EPRC (External Planning Resource Credits) as well as aggregate deliverability into congested zones are both issues that may result in compromising the reliability of the system; there is little verification in the MECT (Module E Capacity Tracking Tool) regarding the conversion of resources to PRCs and the Market Participant 's Must-Offer Requirement of the tariff. .

(5) Deficiency Procedures; MISO's CONE (Cost of New Entry) assessment associated with an LSE being deficient PRCs during a Compliance Month has taken on the feeling of a penalty rather than a price signal indicating the need for new Capacity Resources.

Though detailed in nature these comments and concerns all have some effect on one or more of the Ameren business units. Realistically, they are issues that will be accepted by the MP and/or will work themselves out over time as the Module E process matures.

However, there is an over riding issue that, in many MP opinion, including Ameren, has not adequately been addressed by MISO's Resource Adequacy process: providing the proper short and long-term price signals to incent the correct behaviors including the building of resources (generation and transmission) and the deployment of demand response where and when needed.

The Resource Adequacy Dilemma

MISO operates an "energy only" market that in their opinion meets the long-term resource adequacy requirements outlined by FERC (to date FERC has found Module E to be just and reasonable). Unlike some RTOs (PJM, ISO New England, NYISO) MISO does not operate a short or long-term capacity auction in which the LSE's are required to acquire a certain amount of their capacity needs via an auction or bilateral marketplace. In fact Ameren's opinion is that although MISO's RAR has an annual requirement, the only *real* assurance of resource adequacy from a capacity standpoint is on the date at which the LSE provides its

load and PRC data for the upcoming compliance month (i.e. end of the first day of the month preceding the Compliance Month).

Basically RA in the MISO footprint is met by three particular components:

- Strength and robustness of the transmission system;
- Long-term planning via MTEP, LOLE and Congestion Modeling; and,
- Invoking Scarcity Pricing.

So what seems to be lacking? There are several arguments that parties have made but the majority of them surround the following:

- MISO is running the market construct with the thought of producing a less controversial result rather than an efficient marketplace;
- There is no long-term look, Module E is submitted on annual basis but there are monthly updates and compliance;
- MISO operates conservatively (headroom, operating reserves) to the extent that it seems like they artificially suppress scarcity prices from occurring instead of creating market mechanisms to address the shortage event;
- The VCA, MISO's only market-based capacity price signal, results in volatile prices for the monthly capacity auction and does not reflect the true cost of acquiring new capacity resources. Part of the reason for the volatility is that the

VCA only clears approximately 1% of the total market each month;

Planning Year	Month	Auction Clearing Price ($/MW-MTH)	Total Amount of APRCs Bid into the Auction (MW)	Total Amount of APRCs Offered into the Auction (MW)	Total Amount of APRCs that Cleared Auction (MW)
PY 2009-2010	Jun	50	864	7525.3	864
PY 2009-2010	Jul	10015	1216.6	363.8	363.8
PY 2009-2010	Aug	1	110	3588	110
PY 2009-2010	Sep	0.01	300	13729.5	300
PY 2009-2010	Oct	0.05	614.9	22312.5	614.9
PY 2009-2010	Nov	0.5	1038.6	22424.9	1038.6
PY 2009-2010	Dec	0.75	1226	19688.3	1226
PY 2009-2010	Jan	0.25	1281.2	19982.2	1281.2
PY 2009-2010	Feb	0.25	1341.8	21548.7	1341.7
PY 2009-2010	Mar	0.5	1533	23985.9	1532.9
PY 2009-2010	Apr	0.35	1339.6	27683.4	1339.5
PY 2009-2010	May	0.35	1537.5	21609.9	1537.4

Lacking Scarcity Pricing, LMPs (Locational Marginal Price) that are driven by congestion and are not consistent or seasonally persistent, and deficiency penalties that are administratively muted does not provide a consistent price signal to the market participants regarding long term prices both from a total capacity viewpoint as well as a locational (where the capacity resource is needed) viewpoint. The MISO construct assumes aggregate deliverability across the footprint, when in fact there may be

times that areas can be congested to the point that the importing of generation cannot get into or out of a specific zone, thus creating reliability concerns. Similarly, Ameren is concerned with the concept that a load reduction via a DRR is universally deliverable. Presumably the argument is that the resources which would have otherwise served that load are universally deliverable; in which case the concern stated above applies.

Without some method to consistently provide these two signals the MISO footprint has a reasonable chance of finding itself at risk of not having the level of power and energy needed to reliably serve the load, especially at reasonable prices.

PJM Reliability Pricing Model (RPM) – the Shangri-la of Resource Adequacy?

In 2007 the PJM RTO implemented its current Resource Adequacy construct; it's Reliability Pricing Model (RPM). Simply speaking this model is based on making capacity commitments three years in advance and is designed to create long-term price signals to attract needed investments in reliability in the PJM footprint.

The PJM RPM has many similar processes to that of the MISO's Module E;

- Setting of reserve margins (Installed Reserve Margin (IRM) in PJM),

- LOLE studies (1 day in 10 years), and
- Establishing resource capability via forced outage rates, testing and available data.

However, PJM holds annual Reliability Pricing Model (RPM) Base Residual Auctions (BRA) on an annual basis where LSEs are expected to procure capacity resources for the three year period. PJM RPM does include incremental auctions to allow for true-ups if necessary as well as allowing Interruptible Load for Reliability (ILR) resources to participate. The LSE is allowed to procure their long-term capacity needs via the bilateral market; however those contracts must be submitted as "Capacity Seller" resources for verification.

PJM's RPM is a long-term reliability model designed to include incentives to stimulate investment in maintaining existing generation plus encouraging the development of new capacity in the PJM footprint, including demand resources and new transmission.

This mechanism, arguably unjust from some of the market participants' viewpoints, may provide sufficient monetary returns to the owners of generation resources to keep the plants running and investing in those assets to assure capacity needs are met in the PJM footprint. The latest PJM BRA (2012 – 2013) cleared the following prices:

PJM Area	Auction Clearing Price $/mW-mth
RTO MCP*	$ 500
MAAC	$ 4054
SWMAAC	$ 4054
PSN	$ 5624
EMAAC	$ 4248
PSEG	$ 4248
DPLS	$ 6758

*Exelon/CE area

In its simplest form, this is the long-term price signal (minus expected revenues from the energy and ancillary revenues received) that many MISO Market Participants are looking for; including our own regulated and non-regulated generating and marketing company. (For comparison purposes, the recently released AIU RFP results showed MISO annual capacity prices for 2012-13 planning year to be $428/mw-month and the most recent MISO Forward Capacity price curve indicates $370/mw-month).

Is the PJM Resource Adequacy model perfect? No and in fact you hear several comments from the PJM Market Participants' themselves such as prices are not reflective of the true market price and generators are being paid to perform and that does not seem to be the case at times, and more than 6000 mW of generation resources did not clear the BRA this last time. (Note;

First Energy is also long generation, incorporating them into the PJM footprint may increase the level of available generation that does not clear in the BRA.)

Outside of the argument that the PJM RPM is just "more money in the pockets of generators"; the PJM market construct has helped to attract almost 10,000 MW of new capacity and retain almost 4,600 MW of capacity. Additionally, the ISO/RTO Council concluded that the tripling of available demand response capacity resources within the ISO New England and PJM regions since 2006 is a direct result of more effective capacity markets within those particular regions.

We must remember it's not just PJM's RPM construct but many other design elements that seems to make the market more efficient. The utilization of a downward sloping demand curve, Locational Pricing and the use of Net Cone are all pieces of PJM's market construct that makes their market more efficient. Remember the MISO RPM was the result of a settlement at FERC and thus many market participants' concerns were addressed in the agreed upon final construct.

Viewpoints and What Do We Do From Here

Is the lack of a long-term price signal in MISO a deal breaker for the MISO participants/market? Is a RA model that provides

capacity payments to resource owners (both physical generation and demand response) a critical component to a successful long-term reliable market place? Of course the answer to these questions, and the several other questions that have been asked throughout the MISO Module E design and implementation, are greatly dependent on one's overall viewpoint of the market itself. But the importance of the issue itself cannot be discounted.

First Energy (FE) recently submitted a request to FERC to withdraw from MISO and shift its assets (transmission and generation) to the control of PJM. On an aggregate basis, First Energy is very similar to Ameren; they have distribution companies, generation subsidiaries, an unregulated marketing company and they operate in customer choice states, though they do not have a vertically integrated utility.

Why is First Energy asking FERC to allow them to move to PJM? A "choice friendly" market design is at the top of their list. Immediately following, and closely related, is PJM's RPM. While they detail a litany of attributes of the RPM model, they do not directly highlight that resources capable of providing capacity (generation, demand response and energy efficiency) are able to secure long term contracts. FE, like Ameren, is long generation and presumably also under-earning in a sector of their business which one would expect to be *adding* to the earnings growth of the corporate entity. Such a deficiency is due, in some part, to the

lack of an organized, long term capacity market in MISO and other aspects of their current Module E construct.
Additionally, recall that Duquesne also chose to join PJM over MISO though they initially stating a concern that the PJM capacity market was too generator friendly and expensive and that Duke Energy has indicated that they too are studying their choice of ISO/RTO membership.

Of course there are several other reasons that the market is not providing capacity returns or sufficient energy returns in today's market; the economic recession's effect on electric demand, large reserve margins in the footprints and the increased participation of wind resources, energy efficiency and demand response resources. However, it could be argued that at least 2 of the 3 are short term in nature and there should be some discounting of their specific effect on the market place.

The corporate issue needing to be addressed is; what market design provides the greatest aggregate benefit to the Ameren Companies and their customers? It must be recognized that maintaining a reliable system – and ensuring such reliability for the future – is paramount in this discussion, and that a reliable system rarely is the "cheapest". If capacity resources (generation and load modifiers) are not provided with proper price signals and opportunities to earn a return, such reliability will be jeopardized.

A corporate strategy to either influence change in the MISO design or to seek membership in a market which provides greater benefits to Ameren and its customers would require the following:

- An external communication strategy to both IL and MO commissions as not to jeopardize future regulatory proceedings.
- An overall goal of what the final market design should include.
- An execution strategy to achieve the goal (i.e., Chair Committees, FERC comments, press releases, identifying strategic partners).
- A timeline for implementation as to coordinate and optimize other efforts (i.e., moving some Ameren generation to PJM in the interim, review EEI's MISO membership, generation retirement decisions, etc.)

Any such strategy will require a coordinated effort amongst business lines and such effort will be significant. We can also expect that we would not have unanimity of thought between the Illinois and Missouri Commissions.

What Are We Asking For?

At the meeting on May 17th we will be discussing the following:

- The MISO market construct vs. PJM construct and financial realities.
- Attributes of a well designed capacity market.
- Positives and negatives for the Ameren business units.
- Reliability concerns associated with a short-term RA construct.
- Discussion of the contents of this paper.
- How do we go forward:
    - Additional information/more discussions/ more modeling (LMP prices, effect on DR/EE)
- Action plans and resources

References:

- FERC Docket ER08-394 order dated December, 28,2007
- Ameren Services Motion to Intervene and Protest in FERC Docket ER08-394 dated January 28, 2008
- FERC Docket ER08-394 order dated March 26, 2008
- MISO Business Practice Manual 011 Resource Adequacy
- PJM Manual 20 PJM Resource Adequacy Analysis
- PJM Website www.pjm.com/markets-and-operations/rpm.aspx

- Review of PJM's reliability Pricing Model – The Brattle Group July 2008.
- 2009 State of the Markets Report – ISO/RTO Council

MISO Module E – Resource Adequacy Construct

Over the past year a small internal team, made up of members from each of the Ameren business units, have been meeting to discuss the question – what changes would we want to see in MISO's Resource Adequacy (Module E) construct? The group formulated its opinions around four specific aspects of Resource Adequacy:

- The construct should satisfactorily accommodate retail load switching to assure sufficient capacity is available at all times for all loads.
- The construct should provide the necessary checks and balances to assure that the generation/resources shows up.
- The construct should be forward looking – 3 to 5 years – to allow all resources (DR, EE, Generation, etc.) to participate.
- The construct's forward market should provide (a) adequate cost recovery to generation resources, (b) a transparent and liquid capacity market and (c) pricing signals for locational capacity needs.

As you can imagine, with the corporate structure and business units which Ameren has, the group's discussions have been somewhat lively at times and non-productive in others.

Addressing conflicting internal concerns such as negative political and regulatory treatments, or the fact that net revenues provided via the MISO market is not providing efficient incentives for investment in or retirement of resources, seem to be the culprit(s) of the team's inability to agree to a final "Ameren" proposed Module E construct.

However, the recent announced movement of MISO members First Energy and Duke (Kentucky and Ohio utilities) to the PJM RTO has, indirectly, brought to the forefront the need for a long-term (i.e. something more than the monthly construct in place in MISO) resource adequacy construct in MISO.

Though Ameren alone probably couldn't convince MISO and the other stakeholders that the current Resource Adequacy construct needs modified; MISO has indicated that they plan on filing changes to the current construct by December of this year.

Thus, we have an opportunity to mold MISO's thinking. MISO management and staff will be in St. Louis on August 27th and MISO plans on unveiling their proposed Module E modifications in early September.

The team has agreed to put aside the conflicting business unit viewpoints (described herein and which we are asking you to resolve) and though we have only partially jumped into the details we have agreed on the main components of what we believe to be a module E construct which has benefits for each of Ameren's business units.

Future MISO Resource Adequacy Construct

- Rolling 5-year term with decreasing capacity commitments and annual adjustments in Prompt and Prompt +1 planning year periods.
    - Prompt PY 100% of LSE's capacity needs acquired
    - Prompt +1 95%
    - Prompt +2 90%
    - Prompt +3 60%
    - Prompt +4 30%
- Planning Resource Credits (PLCs) to be set for 5 years with the financial responsibility on the resource should the MW not be available for the specific operating PY.
- Modify the current monthly Voluntary Capacity Auction (VCA) to reflect the 5-year horizon, and using it to update for any changes (load or resource) during the first two years.

- Though vertically integrated utilities are allowed to self-supply, those choosing so will have to provide their portfolio price of their resources confidentially to the MISO (or IMM).
- LBAs responsible for forecast and assigning capacity requirements to LSEs.
- Locational adequacy enforced for import and export constrained zones (no smaller than the LBA).
- Must-offer provision enforced with penalties for non-compliance.
- Forward market assessments to be completed by MISO for the forward PYs 1 -5 and PYs 6 -10.

This is just a high-level description of the team's thoughts and we would be happy to share additional details.

What do we need? MISO management is going to propose changes to the current Resource Adequacy construct in the near future. Ameren has a relatively small window of opportunity to have input to the MISO proposal. To share our thoughts and wants to MISO management and stakeholders, the team must have Ameren management's approval of the Resource Adequacy framework outlined above (we only have one vote at MISO). The team's concern is not about the details of the proposal; but it is about the inherent conflict between the Illinois contingent (energy only construct and regulatory/political consequences) versus our generation operating units (a long-term, transparent, centrally cleared capacity market (think PJM) providing the proper price signal and cost recovery to resources).

The team is prepared to discuss the details and our thoughts on the benefits of our proposed framework at your convenience if you feel it necessary. MISO management will be at Ameren on August 27th at which time we have plans to share some of our thoughts on the Module E redesign with them.

If Ameren management believes that the team's concept is supportable, we will begin to share details with MISO stakeholders in September.

Thank You

Ron Ryckman and Amy Jo Koval	AEM
Jim Blessing and Greg Weiss	AIU
Andrew Meyer	AUE
Dennis Kramer	Ameren Transmission
Kevin Shipp	Ameren Services

MISO Resource Adequacy (RA) Discussion

Design Element: Forward Planning Period

MISO Facts:

- 3 – 5 years forward planning and procurement (100%)
- LSE's to demonstrate RA through Planning Resource Auctions (PRAs)
- Parties can self supply (owned generation or bilaterally)
- Utilization of Planning Resource Credits (PRCs) in out years
- Potential differentiation in seasonal requirements
- Implementation for 2012-2013 Planning Year

Ameren Principals/Details/Open Items:

- 3 -5 year period is reasonable
- 100% procured in Prompt Year
- Lesser % in out years at least 90% 3 years out.
- Support future PRC concept (5 years forward – risk on seller)
- Open to a seasonal component (LOLE study to manage this through annual PRM)
- If construct is 3 years would desire transparency in market data past 3 years (5 to 10 years)
    - Retirements
    - Transmission projects ISD
    - Reserve margins
    - UCAP expectations
    - Forward PRCs
    - Long-term forecasts
    - Constrained import/export zones

Design Element: Flexible Participation in Planning Resource Auctions (PRAs)

MISO Facts:

- All LSEs to supply information to the PRAs
- Goal is to provide transparent forward capacity price signals
- PRA to model and enforce zonal import and export constraints

Ameren Principals/Details/Open Items:

- Though we have discussed internally several possibilities regarding what type of auction should be utilized, other than the fact that we believe it should be market based and not rely on any administratively set prices, we have reached no conclusion. However, we believe this to be the real key in MISO's proposal (as well as how vertically integrated load and generation and bilateral transactions participate in any such auction process) and look forward to having further discussions on this topic.
- Credit issues surrounding the Long-term capacity market
    - Process should not include over-burdensome new credit requirement on market participants
    - Credit/default risk should not be solely assumed by any one class of Market Participants
    - Defining MISO's involvement in the capacity auctions (take title, clearinghouse, etc.)
- Years 2 and 3 (or more) have "true up" auctions associated with the minimum un-procured annual requirement
    - Forecast variances
    - EE/DR participation
    - Resource addition/subtraction (EFORd changes)
- Changes in constrained import/export zones during procurement period(s) is an issue
    - Also any constrained zone "should not be smaller in size than the LBA in which it resides nor should any constrained zone be defined whose boundaries reside in more than one LBA

Design Element: Load Forecasting

MISO Facts:

- MISO coincident peak forecast (eliminates/reduces diversity factor)
- LSEs in regulated states
- EDC (LBA) in retail choice states with input from the LSE
- MISO reviews and approves forecasts for consistency
    - Losses
    - Standard Deviation
    - Weather Normalization

Ameren Principals/Details/Open Items:

- LBA (EDC) responsible at coincidence peak level
- Support MISO outlined (and Ameren designed) plan regarding PLC (Peak Load Contribution) to facilitate retail choice and assign capacity (on annual basis) as currently being discussed in Rick Kim's retail choice "workgroup".
- Must investigate and decide financial responsibility for procuring capacity in forward years.
- Constrained zone should utilize constrained zone peak (non-coincident to MISO peak)
- Retail choice states – Determine if there is a continuing need for an under-forecast assessment.

Additional Ameren Principals/Details/Open Items:

- Must-offer rules, monitoring and compliance, for the prompt compliance period, must continue.
- Address a transition period for those entities already participating in the LT markets (Illinois).

- Address the conversion or grandfathering of existing contracts into proposed construct. Whatever, the outcome it is important to protect the value of any such contracts to the signatories.
- Need to get "drop dead date" (Details figured out, filing complete and FERC approval) for implementing for Planning Year 2012/2013 from MISO.
- Though MISO lists Capacity Portability as an important aspect of their RA model, there currently is little detail to provide us a basis of formulating a position at this time. Important aspects to a successful Capacity Portability product:
    - Not just for PJM but all MISO seams
    - JOA changes may be necessary (Both parties must agree)
    - Timing of competing auctions (RPM versus MISO's auction)
    - Without stated reciprocity from the other RTO/ISOs this attribute, though intriguing, is worthless.

- MISO has been silent on how to handle the fact that the vast majority of load in the footprint is served by vertically integrated entities and how to reflect that fact within the auction clearing mechanism. One would think that any such LSE should not be required to assume the risk of sub-optimal compliance (i.e. not clearing an equivalent amount of resources to meet one's obligations in the auction). More specifically MISO may want to study the effect on any auction clearing mechanism of excluding (a) those LSE's who self-schedule their generation to load and (b) those LSE's with bilateral contracts which can represent this as a self-schedule.

To: Tom Voss

Date: March 24, 2011
Re: **IPL Executive Summary and Ameren Comments**

Executive Summary of the IPL Capacity Whitepaper:

Indianapolis Power and Light Company (IPL), advised by Troutman Sanders LLP, proposes that stakeholders join together in a compliance filing to support a California ISO (CAISO) model with the claim that it is a superior approach to the Midwest ISO proposed Eastern-style capacity market construct. Under the CAISO model, the Regional Transmission Owner (RTO) identifies the locational capacity needs, but then the Load Serving Entities (LSEs), under the oversight of state commission, have the responsibility for meeting those needs, either from their own resources or through bilateral contracts as part of its integrated resource plan (IRP).

IPL indicates the primary issue identified by FERC is locational reliability – the need to ensure that resources are available where and when needed as part of the RTO's resource adequacy program. The whitepaper makes the point that FERC did not require MISO to consider a centralized capacity market.

IPL defines the problem as MISO continuing to move forward with a mandatory, forward, centralized capacity market which is unnecessary and inconsistent with the desire of regulators and the overwhelming sentiment of stakeholders. IPL supports this claim with comments before FERC and the MISO Advisory Committee from (a) the Organization of Midwest ISO States, (b) the Midwest Transmission Dependent Utilities, and (c) the End Use Customers'. IPL indicates that a non-sector weighted vote taken in October at the MISO Supply Adequacy Working Group provides additional support as 43 market participants of 67 were against developing a mandatory forward capacity market.

IPL proposes a solution based on a comparative review of two FERC approved models, the CAISO model and the Eastern RTO model. Per IPL, the CAISO model better meets the MISO's evaluation criteria and most importantly recognizes the existing integrated resource plan (IRP) processes and state control over resource adequacy. Furthermore IPL explains how seven specific approaches can be adopted from the CAISO model and integrated into the MISO approach:

(1) Identification of Load Zones and Load Serving Entities (LSE) Responsibilities,
(2) Load Forecast of the Expected Demand in the Zone
(3) Assignment f Capacity Responsibility To LSEs
(4) Identification of Generating Capacity
(5) Reporting of Resource Adequacy Plans
(6) Monitoring of LSEs and Suppliers
(7) Penalties for Non-Compliance

IPL points out that the CAISO approach permits states to continue their traditional oversight role of IRPs while the Eastern RTOs struggle on how to credit LSEs for renewable PPAs and coordinate demand side programs. Additionally Eastern RTOs are struggling with state initiatives to attract investment (NJ, MD) as those initiatives are viewed as a threat to the capacity markets. IPL specifically addresses perceived weaknesses in each of the Eastern RTOs (PJM, NYISO, ISO-NE).

In summary, the IPL states that their proposal is far less complicated, involves less change to existing structures, and is eminently better-suited to the Midwest region where a high percentage of the load exists in vertically integrated utilities.

Ameren's General Comments to IPL's Whitepaper:

IPL's whitepaper may be a little premature to label MISO's proposal as an Eastern-style capacity market construct since MISO is still in the process of developing an annual locational capacity construct. IPL also did not address the various regional differences between CAISO and MISO. For example, California is fully contained under one ISO with one state public utility commission while MISO spans 13 states with 13 different commissions coordinated through Organization of MISO States (OMS). Additionally, CAISO does not have one single interconnection with another ISO/RTO while MISO has multiple interconnections directly to both PJM and SPP as well MISO is impacted indirectly by the other north eastern RTOs as evident in the Technical Conferences held on Broader Regional Markets including NYISO, IESO, MISO, and PJM. Seams between RTOs cannot easily be dismissed as we have seen the impact of the M2M Settlement error between MISO and PJM as well as the numerous exits along the seam partially due to price divergence/access barriers between the RTOs.

IPL identifies the problem as MISO continuing to move forward with designing and implementing a mandatory, forward, centralized capacity market which is not the desire of regulators and stakeholders basing that on non-sector weighted votes and comments before the Advisory Committee. The non-sector weighted vote was taken in October 2010 was based on a strawman MISO proposal that is inherently different than what is being proposed today. IPL did not mention that the Transmission Owner sector, which IPL is a member of, indicated at the Advisory Committee that most TOs support a capacity procurement requirement for the next planning year with considerable less than 100% being procured in years 2 and 3. In fairness, the Transmission Owners were divided between a voluntary and a mandatory construct, as were the IPPs and Power Marketers which points to a very diverse view rather than an overwhelming sentiment that the MISO proposal is unnecessary and inconsistent. Ameren continues to believe that MISO should evolve their capacity construct into a longer term construct respecting state's rights, addressing load forecast and supply uncertainty, utilizing locational market mechanisms to provide incentives to ensure reliability, and better access for resources across markets. The CAISO approach may have some merits that should be explored as MISO and its Stakeholders continue to refine their approach. Each RTO has developed a unique design to address Resource Adequacy due to various reasons from regional differences to the various types of members that make up the RTO. CAISO may have some design elements worth imitating but to that degree so do some of the Eastern style markets. In conclusion, Ameren would be willing to provide more detailed comments to each of the points that IPL has presented in their whitepaper if so desired. At this time, Ameren would not sign on in support until MISO's design reaches a more developed state which we would expect to happen by the beginning of April.

Ameren's Response to IPL's Whitepaper:

- Ameren is concerned that IPL did not include in their whitepaper how MISO's proposal includes maintaining the bilateral market through their auctions by self-supply or self-schedule. Thus, this aspect of the design relieves Ameren's need to also perform bilateral transactions under the new MISO proposal.
- Ameren is concerned that IPL did not have a true problem statement with MISO's proposal. For example, IPL did not state a reason such as they are concerned for the lowest price to the consumer or how the MISO proposal auction would clear and that is why they favor their alternative proposal.
- Ameren would like to point out that CAISO only has one state jurisdiction and MISO has a larger challenge with coordinating with 11-13 states, of which some states do not have an official IRP process. The state may be split between zones within MISO, or even split between RTOs IPL does not address this.
- IPL states on page 13 how MISO could easily adopt forecasting to be done on a zonal basis or MISO may consider moving to a centralized forecasting methodology. Per discussions in the stakeholder process in recent months, Ameren questions IPL on these statements. A majority of stakeholders prefer LSEs or EDCs within retail choice states to perform the load forecasts. If CAISO approach is administered within MISO, Ameren requests a review of who should perform the load forecasting within an issues list. Ameren has not supported Midwest ISO to implement a centralized load forecast.
- Ameren is concerned with IPL's opinion of little stakeholder support to MISO's proposal. IPL stated on page 5 how "During the October 14, 2010 Supply Adequacy Work Group Meeting the vote was 43 to 24 against developing a mandatory forward capacity market." Thus this vote alone states 24 Market Participants in favor of a forward capacity market so the wording of IPL on page 2 to say "appears little if any stakeholder support" is exaggerated. It is also clear from exit filings that due to MISO's lack of forward capacity market that FE and Duke chose to remove themselves from the Midwest ISO footprint.

Ameren's Position on Midwest ISO Resource Adequacy:

- Ameren supports a 3-5 year mandatory procurement obligation based upon summer coincident peak. Ameren is reviewing various auction styles. Ameren supports MISO's June filing of an annual construct as a building block to a 3-5 year construct.
- Ameren supports MISO working through market based mechanisms to address congestion, differences in state RA processes, capacity coordination at seams (as well as determining rules for capacity portability, enhanced RA planning, transparent market based prices, incentives for resource investment when and where needed, and improved retail choice participation.

MISO
Module E – Resource Adequacy Enhancement Proposal

June 20, 2011

Today's Agenda and Purpose

- 1 Revisit Ameren's corporate principles regarding Module E
- 2 Discuss MISO's Most Recent (and final) proposal for the Module E Enhancements
- 3 Identify Differences
- 4 Identify and Discuss Major Concerns
- 5 Discuss and Decide on Ameren's litigation strategy

Ameren's Corporate Principles Regarding Module E Enhancements

1. 3 – 5 year procurement term.
2. Market based.
3. Zonal pricing/cost differences.
4. Must offer rules must remain in place.
5. The credit risk shared fairly by the market participants.
6. Forecasting done at an LBA coincident peak level.
7. Transition period.
8. What MISO files should be in place for the foreseeable (3 – 5 years) future.
9. MISO should continue to explore capacity portability between markets
10. Self-Supply/Self-Schedule option for vertically integrated entities.

What is MISO's Current Proposal

- 1 1 year forward construct.
- 2 Traditional bid/offer framework and incorporates a vertical demand curve.
- 3 Establishes Local Resource Zones.
- 4 Forecasting by LBA in partnership with LSE, utilizing Peak Load Contribution factors.
- 5 Creation of both Self-Supply/Self-Schedule and Opt-Out provisions.
- 6 Creation of Market Mitigation and Minimum Offer Pricing Rules

Comparison

	PROVISION	AMEREN	MISO
1	Term	3- 5 years	1 year
2	Auction	Sloping Demand Curve	Traditional Bid & Offer/Vertical Demand Curve
3	Zonal Signals	Yes	Yes
4	Must Offer	Yes	Yes
5	Credit	Yes	Yes
6	Forecast	Yes	Yes
7	Transition	Yes	Not Necessary
8	"Permanent"	Yes	No
9	Portability/Seams	Yes	Yes
10	Optionality	Self-Schedule/Self-Supply	Self-Schedule/Self-Supply & Opt Out

Major Concerns

- Though our workgroup continues to work with MISO and its stakeholders regarding details and tariff and Business Practice Manual language, our major concerns for discussion today surround:
  - Proposed Market Monitoring and Mitigation language.
  - The need for both a Self-Schedule/Self-supply Option and an Opt-out Option.

- The position of our regulators regarding the need for a forward capacity market in the MISO footprint.

Market Monitoring and Mitigation Proposals

- There are two proposals; the Independent Market Monitor's and MISO's.
- Though both parties continue to discuss compromises there continues to be large differences to the two proposals and Ameren has identified issues/concerns with both of them.
- Stakeholders (including the states) are concerned what FERC will do given the fact that there seems to be no agreement between not only the stakeholders but also MISO and its IMM on this issue.

The IMM's Proposal

- All new resources with a regulatory 'backstop" are subject to possible mitigation
- MOPR/Unit-Offer – 75% Net CONE
- Exemptions include:
  - Forecasted bi-lateral prices greater than MOPR/Unit-offer
  - Zonal excess capacity LT 5% (or 500 mw) of zone's capacity requirements
  - New resource is (a) needed to meet at least 50% of the LSE's capacity requirements or (b) the most economic resource to meet the LSE's needs
  - No regulated rate recovery
  - Owner is an IPP or PM
- A MP can request an exemption test from the IMM.

MISO's Proposal

- Will only mitigate offers associated with new Combustion Turbines or Combined Cycle Resources
- MOPR will be established at 75% of Net CONE for the default CT or CC resource.
- Exemptions:
  - All Planning Resources included in an LSE's "Fixed Resource Adequacy Plan" (FRAP)
  - All Zonal Resource Capacity (ZRC) Offers made by a MP to meet its PRMR or sold bilaterally to another LSE used to meet that LSE's PRMR
  - All ZRC offers from any Planning Resource that is not a CT or CC Planning Resource not powered by natural gas.
- MISO's proposal (in addition to the Opt-Out option) seems to be somewhat more agreeable to the OMS members.

Regulatory Concerns Regarding The Market Mitigation Proposals

- The Organization of MISO States (OMS) has identified many concerns
  - Interfering with states rights and their IRP processes
  - Harm to its native load customers via the inability to sell excess into the markets based on the offer being mitigated and thus not clearing (a benefit to belonging in MISO).
  - The IMM's implied "approval" authority.
- The Missouri PSC has been very vocal regarding this proposed language.
- The Illinois CC has been mostly silent on this particular issue.

Self-Schedule/Self-Supply vs. Opt-Out Options

- The Self-Scheduling/Self-Supply option basically allows vertically-integrated entities to be held indifferent from a financial settlement and regulatory perspective.
- With the Self-Scheduling/Self-Supply option and under the IMM's proposal MOPR mitigation may occur, since self-scheduling is an offer into the auction.
- Under MISO's MOPR mitigation proposal the States' concerns are mitigated (mostly) due to the expanded exemption clauses and focusing only on CT and CC.
- The Opt-Out proposal would allow those entities to not provide bids and offers for its load and generation and thus not be subject to any price mitigation.

What Next

- MISO plans on filing by July 15th
- The proposals on the table have again brought to our attention the different business needs of our operating companies, and the differing viewpoints of our regulators.
- As we enter the litigation stage of the process there are numerous strategies that Ameren may employ:
  - Support MISO's current proposal
  - Provide comments which are consistent with Ameren's original principles.
  - Publicly oppose the Opt-Out provision while providing additional support for MISO's original Self-Scheduling provision. Our message would also have to be sculpted to make sure our state regulators are educated on the subject and supportive of our position.
  - Allow AEM to publicly participate in comments which the IPP/PM sector will be authoring. We then must have an explanation to formulate for our regulators

What Next

- There are several ways to make our filings:
  - All Ameren companies stick to the Ameren position coupled with a strong filing to FERC in July detailing the reasons behind our position
  - All Ameren companies file jointly supporting certain parts of the Ameren position to FERC in July
  - Split filings – AMIL/AMO/AMS file jointly supporting certain parts of the Ameren position and AER files separately sticking to the complete Ameren position
  - Split filings – AMIL/AMO/AMS file jointly – AER files with other IPPs (message may be harder to control)

Recommendation

- We split up our business units when making our FERC filings
  - Ameren Services/Ameren Illinois/Ameren Missouri
    - FERC filing focuses on Ameren's principles and long-term vision of a capacity construct in MISO. Be supportive of MISO's proposal and their plans going forward.
    - Educate our regulators "what's in it for them"
      - ILL focus on the enhanced reliability
      - MO focus on benefits to native load customers
  - AER files separate comments (or with IPP/PM consortium).

MIDWEST ISO MODULE E CONSTRUCT INITIATIVE

What We Want To Accomplish:

Inform and educated the Ameren ELT regarding the Midwest ISO Resource Adequacy construct (Module E) allowing them to make a properly informed decision regarding Ameren's operating companies continued participation in MISO and its current form of Resource Adequacy.

What We Know:

From the Transmission Owner's perspective: current Module E provides little or no resource adequacy within the MISO's footprint outside the monthly compliance period; the Voluntary Capacity Auction (VCA) provides little or no value to resource adequacy in general.

From the Generator Owner's perspective: the current MISO construct (a) is providing returns which, in some case, do not cover the fixed costs of some units and (b) is not providing the proper medium of long-term price signals for the building or siting of generation.

From Load's perspective: viewpoints are vastly different: Module E construct sufficient especially for the next 5 years or so, the current construct has no long-term market which does not help to facilitate the bilateral marketplace, Module E creates administrative burdens and costs to consumers which an energy only market would not create (Illinois Commission viewpoint).

From Load's perspective in retail choice states: there are a variety of open items/issues in Module E, appropriate compliance periods, zonal vs. aggregate deliverability, load shifting/migrating, seasonal UCAPs, the VCA and how it interacts with bilateral markets (to name a few, MISO has initiated an investigation into retail choice issues).

From the Brattle Group's perspective (and their report to the MISO BODs): indicates that MISO "should postpone consideration of replacing the current construct with either a forward capacity market or a pure energy market" and instead should focus on;

- Locational resource adequacy
- Load forecasting
- Load tracking (retail choice)
- Reliability targets
- Investment/retirement of capacity

- State planning reserve margins
- VCA performance
- Long-term Planning Resource Credits

From the Financial Community: negative value given to unregulated generation in part due to operating in a market having no real forward capacity market.

What We Have:

AER/AEM study – An Impact Assessment on Merchant Generators

Draft White Paper – Module E Resource Adequacy Pondering the Future

Brattle Group Report – Midwest ISO's Resource Adequacy Construct

December 2009 MISO AC Hot Topic Papers on Resource Adequacy in MISO

- Public Consumers
- End Users
- TDU/COOP/TDU (Majority and Minority Opinions)
- OMS (Majority and Minority Opinions)
- TOs
- Coordinating Sector
- IPPs
- Power Marketers

Other Resource Adequacy models

- PJM – Reliability Pricing Model
- ISO New England – forward Capacity market
- NYISO – Installed Capacity market (though a short-term in nature, does operate 3 distinct capacity auctions

- CAISO – very similar model to MISO's, monthly and annual compliance, deficiencies are addressed and corrected (i.e. capacity procured) by CAISO.

How To Proceed:

Determine presentation protocol and timing

- Powerpoint presentations?
- Expanded white paper?
- Combination?
- Material to ELT before first presentation and between subsequent meetings?
- Do we schedule 2 or 3 meetings with the ELT?
    - Meeting 1: Status Today and Module E Deficiencies/Issues
    - Meeting 2: potential solutions
        - PJM –type of construct in MISO
        - Relocation of assets
        - Work with MISO to get "minor" changes to current Module E
    - Meeting 3: Decisions
- Do we need to do some modeling of potential solutions (e.g. can we show effect on MISO LMPs with the introduction of a forward capacity construct)
- Determine regulatory strategy
    - IL Commission on one side of argument (an energy only market) MO Commission probably somewhere in the middle (though as a vertically integrated state they will always tell you when to build)
- Involve other Ameren business units (e.g. the TO)
- Work with Vantrease to get on ELT schedule and help us with documents creation and back-up material
- Finalize a schedule, decision prior to 12/31/10?

Module E Construct

Term of Forward Construct – 3 or More Years

Discussion items July 6, 2010

When defining a long-term (i.e. more than 3 years forward) Resource Adequacy construct we must consider the following items by defining them and adding detail to help with understanding (in no particular order):

- Term
  - Addressing resource adequacy
    - Capacity portability
    - PRCs in forward years
    - Aggregate deliverability
  - Locational Constrained Areas
  - Missing money issue
  - What resources can be added when.
  - Other RTOs (consistency and ease)
  - Forecasting
    - Who
    - Uncertainty
    - True-ups
  - Percent of Obligations to be secured
- Type of forward market
  - Bilateral
  - Centrally cleared
    - Ran by MISO?
  - Combination
- How to accommodate EE and DR into forward construct.

Here are some potential issues to include in comments to FERC. Propose two lists: (a) Ameren corporate comments (consistent with Ameren's guiding principles and issues that all Ameren business units have agreed to and support) and (b) AER comments to be incorporated into their sector comments.

Additionally, as we review the MISO's filing package and tariffs, we may have specific comments to include.

A. Corporate Comments:

1. A 3 – 5 year procurement obligation seems to be reasonable. Such a time frame should allow the majority of resources (EE, DR, peaking units and to a certain extent base load generation and transmission options) to participate. We believe there is little to no incremental value – from a Resource Adequacy perspective – of moving to an annual construct from the current monthly construct.
    a. An adequate forward term helps to address the missing money problem that exists in MISO when resources are unable to recover enough revenues in the energy and ancillary markets to cover their go forward costs.
    b. An adequate term (again, 3 – 5 years) would help to attract capital for new investments in a diverse group of resources (DR, generation, EE), help make retirement decision and retain economic existing resources.
        i. Retirement : Attachment Y is 26 weeks and FERC Approval
        ii. DR : 12 – 18 months
        iii. Incremental generation: 2 – 3 years (queue delays)
        iv. Peaking generation: 3 years
        v. Baseload generation (non-nuclear): 5 – 7 years.
        vi. Transmission; 5 – 10 years via MTEP process
    c. The 1-year construct, like the current 1-month RA construct, provides no meaningful price signals to the marketplace regarding the building (or retiring) of resources.

2. One of the biggest issues associated with any forward RA construct is how price is set for capacity. Ameren has always supported the belief it should be market based. Does MISO's proposal meet this criterion?
    a. Support a combination model; bilateral trading with a backstop of a centrally cleared price through a MISO auction.
    b. Bilateral contracts important to help produce a price and to help facilitate self-scheduling.
    c. Facilitates longer term bilateral contracting for all resources, allowing load to reduce exposure to forward capacity prices.

3. The construct should address zonal pricing/cost differences. Zone definitions should not bifurcate an LBA.
    a. Constrained zone can be no smaller than an LBA
    b. External resources may be aggregate deliverable
    c. Non-coincident to MISO peak load as that location becomes import constrained at their peak and threatens the LOLE in that area
    d. Import/export constrained areas cleared with separate Auction / VCA / RFP for that localized area
    e. Constrained area must clear higher than non-constrained area but capped at some point (possibly Cost Of New Entry or net CONE)
    f. Constrained areas are only changed every 3 years to align with procurement objectives but can change between the 3 and 5 year window if forward period longer than 3 years
    g. MISO Transmission Expansion Planning studies will provide 5 – 10 year outlook for constrained areas (interim and permanent solutions) as well as an updated report on ISD for 0 to 5 years.
    h. Import/export constrained areas cleared with separate Auction / VCA / RFP for that localized area (see Locational Adequacy)
    i. FERC has denied MISO's previous compliance filing and agreed with Duke, FE, and Ameren that MISO's approach does not solve the issue.

j. Incentive for resources to construct in the constrained zone. Current Aggregate PRC and PRM calculation incents resources to construct in the cheapest location not the constrained location.
k. Allows all resources to compete to solve the constrained zone including transmission, generation, and demand response.
l. Between 3 year and 5 year procurement terms constrained zones can change to allow quick fixes like DR or interim transmission fixes
m. Lock in 3 year to retain pricing signal so that financing can be secured also prevents volatility of investment decisions.
n. Cheapest solution is available to load but would leave Integrated Resource Plans to the respective utilities and states.

4. Must offer rules, monitoring and compliance must remain in place.
    a. We must still have the ability to assure that capacity that has committed to being available meets its obligations in the appropriate time frames.
5. The credit risk associated with implementing a long-term capacity market must be shared fairly by the market participants to assure that no sector or LSE is overly burdened by the additional risk.\
    a. It appears this has been addressed.
6. The forecasting process must be re-visited. Forecasting at an LBA coincident peak level seems to make sense.
    a. MISO proposal meets the needs of this item (though we may have some specific comments on their proposal).
7. Whatever construct that is decided upon, there must be a transition period or mechanism for those who are transacting in the forward markets today.
    a. The MISO proposed 1-year construct does not raise such concerns.
    b. 3 or 5 year construct, which we support above, would have to incorporate any processes the states or market participants have to bilaterally acquire capacity.

8. What MISO files in December should meet both the short term and long term objectives for Resource Adequacy. Ameren believes that having a Resource Adequacy construct that is constantly changing – or rumored to be changing – negatively affects the bilateral marketplace.
    a. MISO has indicated that they have plans to continue to examine a longer procurement period; now is the time to do this not later.

AER Directed Comments

1. MISO should continue to explore capacity portability between markets (Not only PJM but SPP and other neighbors). Capacity portability would allow resources to have easier access to other adjoining markets reducing the current barriers that exist.

2. MISO's proposed auction process incorporates a vertical demand curve set at the total reliability target for the footprint.
    a. Will not provide the marginal capacity price.
3. Opt-out provision
    a. Will exempt the majority of MISO capacity (and load) from participating thus potentially effecting the auction outcome
    b. Self-supply option is sufficient to allow those vertically integrated companies to assure their load will be served by their generation

Specific Tariff Comments

1. PLC/Forecast issues (alternative vs. default?).
2. Timing of and creation of zones.
3.

AMEREN

QUESTIONS/CONCERNS/THOUGHTS

SAWG JUNE 17, 2010

"WHAT DOES AN ANNUAL CONSTRUCT LOOK LIKE?"

- Is MISO's plan to only implement an annual "compliance" check/period?
- If so what does that actually accomplish? Will it relieve the MPs of the costs associated with the monthly VCA? That is the only benefit we see.
- In our opinion compliance is not the issue. Long-term RA is the issue. Any RA construct needs to address:
    - Locational Price signal
    - Recovery of costs
    - Making sure adequate supply is available in the proper zone.
- Ameren believes the construct should look at a horizon, for resource adequacy, that is longer rather than shorter; 3 years minimum preferably 5 years.
- With the exception of having an administratively set forward capacity price, the PJM construct does a lot of things right, and MISO as it has done in the past for many other issues, should look at the components of PJM's capacity construct and incorporate them in theirs.
- Thoughts on details:
    - Assuming a 5 year RA construct.
    - MISO, with input from the LBAs, provides the capacity requirements to the market participants for each of the forward 5 annual periods.
    - For the prompt year, the MP must have 100% of their capacity needs secured.
    - The MP can self-supply or provide bi-lateral contracts to meet their requirements.

- For the remaining periods, beginning with prompt+1 the MP will need to have 80%, 70%, 60% and 50% of their capacity needs, respectively.
- To the extent the market place is "short" its required capacity needs for any given period, MISO will acquire the needed capacity in an open RFP process and charge those Market Participants that were short.
- MISO (or possibly the IMM) should be provided all prices associated with capacity acquired through the bilateral market and the RFP process to provide a market price signal for all 5 years.
- The process should incorporate a certain "hold back" of capacity needs for each period to allow for:
  - A certain number of incremental auctions within the prompt periods to let MP true-up their forecasts and needs (possibly monthly to begin with and then transition to annual) and
  - To allow for DR/EE programs to be included in the market place.
- Process to allow the capacity to follow the end-user to accommodate retail choice should be created.

- Any process established by MISO must allow state mandated procurement policies to be adhered to (e.g. the Illinois auction process).
- Tools must be in place to ensure the proper level of capacity is available in the operating horizon and to be able to address day-ahead scarcity.
  - Again look at PJM for such compliance and penalty structure.

Ameren responses to the five questions asked by MISO of the SAWG participants.

1. Are there things Midwest ISO is seeing that gives it concern with the current construct? If so, what are they?

   Ameren has some concerns within the MISO Module E construct. The current construct provides no long-term (however one defines that term) transparent price signal for capacity. In addition, the lack of locational pricing in Module E makes the identification of surpluses/shortages more difficult. Reliability concerns arise over issues such as; no check of resource availability in the real-time, and the potential need to capping the level of DR and BTMG (PJM is taking this issue on as we speak). Other miscellaneous concerns include; no standardization of LSE forecasting methodologies, VCA cleared values not aligned with actual capacity values due to the timing of when the VCA takes place, not allowing seasonal UCAPSs; under-forecasting assessment process seems overly burdensome (letting the LBA do forecast could help this), no assurance to investors/long term price signal to invest in new gen/environmental upgrades to current units or aid in the decision of retirements, and rules/processes associated with future PRCs (we do recognize that this issue is being discussed at the SAWG).

2. What elements of RA constructs are better to check after-the-fact and what items are better to check before?

   "Before" checks, should include; GADS reporting, unit testing, EFORd data, and some verification of capacity obligations and the actual resources capable of commitment. "After" checks, are sufficient for must-offer compliance and forecasting.

3. Does the current construct enable for investment recovery? If so, how?

   No, it does not appear too. By not having forward price signals, one would likely lead to the conclusion that a construct incorporating resource adequacy compliance in something longer than a monthly time frame is needed to assure long-term adequacy and reliability. Entities with units may have to make decisions such as those listed below; without a long-term price signal, making these decisions are increasingly challenging.

   1. Building a new unit
   2. Upgrading a unit to (a) produce more energy or (b) meet changing environmental impacts
   3. Retire a unit
   4. Putting the unit on a seasonal basis

4. Will Midwest ISO consider (1) forward capacity market (2) mandatory capacity market?

   Ameren believes there may be a need for a longer term (longer than current) forward capacity market to help provide needed price signals and transparency. We are open to discussion regarding just how long of a forward RA construct is appropriate.

5. Can Retail Choice state issues be handled within each state? What can Midwest ISO do to help solve Retail Choice state issues that the states cannot? What are the Retail Choice state issues?

   Not in Ameren's opinion. The issues associated with retail choice, that have been previously submitted by many parties, are issues at the MISO level not at the states'; the issues have arisen based on tariff and BPM language implemented by MISO. Additionally, the RTO should strive to have the same retail choice rules across their footprint to ensure consistency and a level playing field. MISO should design its rules to accommodate the different requirements from each state.

Ameren Comments on

June 22 MISO Draft of Module E Tariffs

July 11, 2011

1.234a: Fixed Resource Adequacy Plan (FRAP)

Point of clarification; is a MP who utilizes the Opt-Out option and thus submits a FRAP, allowed to only have resources in it's FRAP that total to its PRMR obligation?

1.569a Relevant Electric Retail Regulatory Authority (RERRA)

There are instances (i.e. Illinois ARES-alternative retail electric suppliers) where the RERRA (from past MISO discussions we believe the ICC- Illinois Commerce Commission is the RERRA for ARES in IL) has jurisdiction over policies for providers of retail electric service, but NOT over prices. We should re-word this definition to be reflective of such a relationship.

1.712a Zonal Resource Credit (ZRC)

Should this definition include the concept that the converted MW unit of Planning Resource is zonal or unit/plant specific? There is confusion over the fact that a ZRC is eligible to clear in the PRA for all zones that it is qualified to deliver to; if this is a true statement we may want to clarify it.

69.7.7.a Grandmother Agreements/ 69.7.7.b ZDC Hedge

We are still unsure of what really is necessary to qualify as a Grandmother Agreement: is having a NITS agreement equal to or sufficient enough to qualify as "having Firm Transmission service when the source and sink are in separate LRZs that result in required Network Upgrade"? Is it sufficient to annually update ones' eDNR in addition to having a NITS agreement? What is the process to update eDNR? We believe we need more understanding/clarification regarding these questions about transmission analysis as it relates to the MISO RA proposal.

69.5 Capacity Resource Must Offer

The first sentence in this section is very long and confusing. Is this language attempting to address the situation where a resource has been shut down and the MP must be made whole? The sentence needs to be more clear and concise.

69.9(a)

Please clarify the need/meaning of the language included in the next to last sentence that states " new resources, as defined in Section 65.7.1(a)(ii), will be considered last in determining whether ZRCs cover an LSE's PRMR."

69.9(b)(1)

Is this language implying that an LSE choosing to Opt Out of the PRA is still subject to having MWs or load subject to zonal differences charges; that is to participate in the PRA? Does a MP have to convert their UCAP to ZRCs to Opt Out via the FRAP?

Concerns/Open Issues with FRAP

a. It is not clear to us, how, with the utilization of FRAPs, that MISO will be able to differentiate local deliverability charges. If this is true, how is the ACP then a true market price signal?
b. The FRAP process allows resources not clearing in the PRA to be swapped out with MWs in a FRAP; what MISO process will be utilized to ensure accurate accounting of such MWs?
c. Is there, or does there need to be, a process to ensure FRAP MWs are not double counted?
d. The FRAP deadline and the start of the PRA is only a day apart, it seems like there should be some kind of verification/audit of the individual FRAPS, however one day does not seem like it would accommodate such a undertaking.
e. The FRAP definition is generic in nature, is that MISO's intent? For example, many states have an IRP process, but they are all different in detail; what type of submission is acceptable for the FRAP process? What does a FRAP look like? Are entities such as ARES able to create and utilize a FRAP? If so, what requirements would be utilized for such a FRAP?
f. Section C of the Conducting PRA within 69.7.1 PRA Procedures- The sentence "The PRA shall be designed to commit resources equal to one hundred percent of the

PRMR for each LSE, including resources in the FRAP, in each LRZ up to the total volume of available ZRCs." We interpret that FRAP MWs will be included in the auction. However, we understood the FRAP MWs were only going to be modeled as flows to perform the PRA. How is this a true transparent price signal if FRAP MWs and their respective prices can only be seen by MISO, then FRAP MWs in the PRA or FRAP flows modeled by PRA (we request clarification here), so then FRAP mws could have a bilateral price within FRAP then be within the PRA have ACP? How is this a true transparent price signal?

"New" Issues

a. We do not see the definition or description of the demand curve to be utilized in the PRA in the proposed tariff. Ameren believes such a description belongs in the tariff, NOT just in the BPM.
b. There seems to be a disconnect to the time frame (i.e. 1 year) of when zone configurations may change and the overall MTEP process. The MTEP covers both short and long term horizons and incorporates findings from the annual assessment of generator deliverability. How will the annual assessment findings be related to the constrained zones that are identified under this process? Once a constrained zone is identified how will it be decided if a remedy is needed and how would the project be paid for?
c. Is there any way to establish a forecast of when zones may become constrained so that MPs have an idea that zones could potentially change in the next year or two years? We ask this to help facilitate the longer term bilateral market. Parties wanting to (or having to) secure capacity more than one year out (we are thinking of IL) may find such information helpful. We recognize that generator retirements (and additions) would have large impacts on such forward data, however such information would benefit a longer term (i.e. more than 1 year) forward bilateral market.
d. How & when will market participants inform MISO of existing bilateral transactions that may qualify for the grandmothering provisions?

To: Steve Sullivan, Andy Serri, Michael Moehn, Shawn Schukar, Craig Nelson, Maureen Borkowski, Mike Mueller, Jaime Haro

From: Ameren Module E Work Group – Kevin Shipp, Ron Ryckman, Amy Jo Koval, Andrew Meyer, Kevin Christiansen, Jim Blessing, Greg Weiss, Dennis Kramer

Date: May 27, 2011

Issue

A MISO RA construct in its self should help account for reliability within the MISO footprint. Regulated states are struggling with identifying/proposing a mechanism where their processes can be compatible among the MISO footprint to account for reliability and develop a meaningful price signal.

Thus, MISO proposed an "Opt-Out provision" included in their current outline for the June Module E – Resource Adequacy enhancement filing may potentially hinder the creation of any meaningful price signal for capacity within the MISO footprint.

In addition to not having a meaningful price signal, MISO's current RA proposal contains room for error in double counting affecting reliability due to MISO's addition of this proposed Opt-Out as well as containing self-scheduling option. Identifying any potential free rider (muni/coop) could be even harder with the addition of opt out & self-supply proposals in addition to the auction. It seems MISO's proposal is a patchwork of fixes to accommodate potential concerns that does not account for reliability to be a priority within this MISO proposal.

History

In MISO's April 1 draft of proposed tariff changes, they included language providing for a "Self-Scheduling" option that basically was designed to allow vertically-integrated entities to be held indifferent from a financial settlement and regulatory perspective. This was accomplished via bidding in its load as a price taker and offering its generation in at zero (up to the amount needed for its load) thus assuring the utilization of its resources (current and future) to meet their Resource Adequacy requirements. The IMM would still be able to mitigate since self-scheduling is an offer into the auction. Regulated states were concerned with IMM mitigation since it is their believe RA is a state right/authority and not authority of IMM.

Ameren provided some comments to MISO in mid-April (mostly clarifying in nature), but supported the overall Self-Schedule option as sufficient to meet the needs of those vertically-integrated entities which were requesting such a guarantee.

MISO's Opt-Out Provision

At the May 19th Supply Adequacy Workgroup stakeholder meeting, MISO introduced an "Opt-Out Option" provision, as well as keeping the option of the Self-Scheduling as outlined above. The new Opt-Out provision allows an entity to file a Fixed Resource Adequacy Plan (FRAP) identifying its load (including its Planning Reserve Margin) and the resources (owned or having contractual rights to) which they rely upon to meet their Resource Adequacy Requirements. In reality the opt-Out provision does exactly what is implied by its name; it would allow those entities to not provide bids and offers for its load and generation, assures that the entities generation would not be subject to any price mitigation by the market monitor, nor would it allow the market monitor to have any authority over the entities resource additions (as currently proposed by the MISO's Independent Market Monitor). Each regulated state among the MISO footprint has their own process for IRP (timing, data required, standards met, format, etc). This causes hardship due to lack of similar process for accountability for verify RA across each state to ensure reliability of the grid. Especially since MISO has not clearly defined FRAP. It is possible for an entity to implement a new FRAP(s) to potentially avoid a true locational concern(s). FRAP could lead to entities avoiding mitigation or determining ways around following good based practices of resource adequacy within their state and/or MISO footprint.

Since MISO began the stakeholder process to design and implement a forward capacity construct, Ameren has been very vocal and straight forward; any forward capacity construct that MISO and its stakeholders decide upon must provide meaningful price signals to the marketplace. It is the Work Group's opinion that MISO's proposed design – with the Opt-Out Option – does not meet this all important metric. In fact, we believe the price signal established by this process will either be reflective of (a) those excess resources in the marketplace or (b) shortage situations when the price will be reflective of CONE. Also, due the three mechanisms of this proposal to opt out, self-schedule option, or participate within the auction, it is possible for double counting to take place, thus affecting reliability.

Further Detailed Concerns:

1. IMM believes all new resources should be subject to mitigation. MISO proposal only mitigates CTs and CCs.
2. FERC ordered MISO to evaluate a locational capacity approach to address deliverability
3. MISO working with PJM to develop capacity portability rules. With these 3 mechanisms, could cause complication to achieve capacity portability.

4. That still each state can set their own PRM, further complicating locational deliverability as well as all three mechanisms of the current MISO proposal.

Our Options

(1) Support MISO's current proposal that include the three mechanisms of opt out, self-schedule option, or participate within the auction.

(2) Provide comments to MISO and its stakeholders which are consistent with Ameren's corporate viewpoint on a MISO Forward Capacity Construct (attached is a copy of our corporate view which all of our business units have utilized since last fall, with commentary regarding how MISO's current proposal does or does not align with Ameren's guidelines).

(3) Publicly oppose the Opt-Out provision while providing additional support for MISO's original Self-Scheduling provision. Our message would also have to be sculpted to make sure our state regulators are educated on the subject and supportive of our position. We would have to be clear that states are within a capacity market and thus have to continue to think beyond their own states for reliability of the grid.

(4) Allow AEM to publicly participate in comments which the IPP/PM sector will be authoring. We then must have an explanation to formulate for our regulators.

To: Kevin Larson - MISO

From: Kevin Shipp – Ameren

Date: April 15, 2011

Re: Ameren comments on proposed RA enhancement tariff changes.

Module A – Definitions

1.67 Capacity Resource: EE is not listed as a capacity resource, however, under 69.4.4 EE Resources it states how an EE Resource could have unforced capacity. It is not clear in within this language how EE will be utilized by MP, etc. We do see how EE is a planning resource under 1.507.

1.164a Diversity Contract: We cannot recall, please explain the need for the term "external" within this definition?

1.365b Local Reliability Requirement: We understand that the "0.1 day per year" reference is supposed to relate to the 1 in 10 year LOLE requirement, however if you do the math here "0.1 day per year" actually means 2.4 hours per year; so is that what we mean here. We think it's just the way we read it grammatically. This "0.1 day per year" reference is used throughout the proposed documents so if we decide to change it, we must change it everywhere else.

1.365c Local Resource Zone: Under definition of LRZ, should it state when the zone will be developed by TP and identify how/when it could the zones change? We recognize it references section 68.5, however, from our reading, this section does not reflect when the zone will be developed by TP and identify how/when it could the zones change.

1.600 Self-Schedule: this definition utilizes the defined term "Price Taker", which is defined in Module A as "A Market Participant with an Energy and/or Operating Reserve Offer not capable of setting LMPs or MCPs", does that definition need to be expanded? Throughout the tariff/BPM it seems like we use the terms Self-Schedule and Self-Supply interchangeably on occasion when in reality the terms may be used in a context where they are not synonymous. Also should this definition be expanded to say offer in at zero price like it does under j. of 69.7.

1.705a- Should that definition of ZRC include the words unforced capacity?

Module D – IMM Provisions

We have no specific comments on this piece, our one real comment is a question; is it really necessary to include these proposed changes in the June filing? Doesn't the IMM have the tools and tariff language in place today to monitor market activities? We just do not see the value this brings to the process we are attempting to address by the June filing.

Module E – Resource Adequacy

64.1.4 e. Reference Levels: we believe that this section is fundamentally wrong; shouldn't the reference levels for MISO capacity resources be based on the "go-forward" costs for individual units? Additionally, when looking at data couldn't the resource owner provide "SSR quality" like information for the individual units?

65.7 PRA Offer Floor: Though we understand that the IMM's proposed Module B language is still up in the air, we do want to show some concern regarding the implied authority given to the IMM regarding the approval of new generation construction. We are not of the opinion that the IMM's role is such that it is seen as approving, or not approving, of resources; the IMM's role is to monitor the activities of the market participants, not their decisions.

Under 65.7.1 purpose- What does artificially mean? Should this be further defined?

68.2 Planning Reserve Margin: within this section the term "load forecast uncertainty" is used, is there a need to define this?

68.3 Establishment of Local Resource Zones: Please define and explain item (6) market seams compatibility, within the context of this section. Also, in our stakeholder meetings it seems like we agreed that these LRZ should not bifurcate LBAs, should that be mentioned here?

69.1 Load Serving Entity and EDC Responsibilities:

69.3.1.b Demand Response Resources: at the end of this section does this language "up to the following four (4) Planning Years" mean up to 5 years? Why don't we say it that way?

69.3.1.c External Resources: We do not believe RERRA is needed here.

69.3.1.h Mothballing, Decommissioning or Retirement of Resources: do we need an official definition of "mothballing"? Also we believe more clarification is needed regarding the process associated with ZRC conversion and retirement/decommissioning/mothballing. Example; if you had converted Planning Resources into ZRCs but did not sell them, can you "un-convert" and then retire, mothball, etc.? We believe it would be beneficial to include where externals can deliver too...is it only the LRZ located near the external resource? This comment also applies to section 69.3.1.c External resources

69.5 Capacity Resource Must Offer Requirement: in the last paragraph of this section, please describe or define "costs that were otherwise incurred".

69.7 Planning Resource Auction I Grandmother Agreements: If we must choose a date for Grandmothering, the filing date seems as good as any. When do MPs know the amounts under LCR, CEL, and CIL before PRA? Should that information be within this section?

Additionally, Ameren is having some issues regarding the process associated with reviewing Grandmothered transactions, how such transactions are "settled" should constraints arise, as well as a few other items. Additionally, the language in this section suggests that these agreements will be

evaluated annually and such determination (i.e. to be defined as a Grandmothered agreement) will be granted after the results of the auction are known. This language does not represent the permanence of some of these arrangements that Ameren was expecting.

Ameren is working with MISO staff on these issues, and expect such language to be BPM language and not tariff language.

To: Maureen Borkowski Dennis Kramer

From: Kevin Shipp

Date: May 11, 2011

Re: Some thoughts on OMS issues surrounding MISO's current Module E Enhancement proposal in preparation for the May 18th meeting at MOPSC.

Though there are some concerns regarding what having a capacity auction means to the possibility of bringing more costs to the end-user, I do not believe that really is the issue causing the most concern to the state regulatory contingent. After all, until the MISO footprint-wide reserve margin becomes tighter we should not expect capacity value to increase tremendously – especially in the context of a 1-year forward capacity market that is being contemplated in MISO's current Module E enhancement proposal. On the other hand, if MISO and its stakeholders were contemplating a 3 or 5 year forward construct, one would think in the outer years the market participants would be factoring in much more risk (plant closures, increasing demand, etc.) and thus providing upward pressure on the value of capacity in the MISO footprint.

What I believe to be the main driver of the OMS' concerns is their fear of losing regulatory control over issues such as Integrated Resource Planning, resource selection, reserve margin establishment, etc. However, it is my opinion that the current draft of MISO's proposed tariff language should help to address some of the state commissions' concerns (see detail below). Though I do understand the fact that anytime a request is made to FERC (in this instance within the context of MISO's expected June Module E filing) it truly is an unknown when it comes to what FERC will do and where the "slippery slope" may lead; for example will FERC start writing orders that expands their scope of control over the state's resource adequacy responsibilities?

That is the bigger question here and one that will ultimately get answered in the Federal courts. With the many things going on at PJM – states choosing to "subsidize" new generation, Minimum Offer Price requirements, market mitigation rules and expectation, etc. – we can expect this issue to rise in importance sooner rather than later.

That being said, though there may be some validity to OMS' concerns, I believe MISO has tried to address such concerns via proposed tariff language. Here are some specific examples where MISO has attempted to address states' rights issues.

1. Section 68.1 continues to provide the state's ability to establish its own Planning Resource Margin (PRM).

   68.1 Establishment of Planning Reserve Margins

   The Transmission Provider will determine a Planning Reserve Margin ("PRM") using analytical study methods provided in Section 68.2, provided that if a state regulatory body establishes a PRM that is higher or lower than the PRM determined by the Transmission Provider, then the state-established PRM will apply to the LSE's Demand under that state's jurisdiction.

2. The vertically-integrated entities have the right to opt out of the process via self-supplying/scheduling and utilization of "Grandmothered" agreements. This addresses the Ameren Missouri concern regarding resources (their Illinois sited generation) in one Local Resource Zone (LRZ) that have historically served its native load situated in a different LRZ, to the extent that there are no financial implications to load.

69.7 Planning Resource Auction

j. Opt-Out Option: *LSEs with sufficient ZRCs for an LRZ where the LSE has forecasted Demand will be able to avoid the financial impact of that LRZ's ACP by Self-Scheduling ZRCs into the PRA (i.e., by Offering ZRCs into the PRA at a zero price so that the ZRCs will likely clear). If the Planning Resource associated with a ZRC is located in the LRZ of the LSE, then the Opt-Out Option will result in the LSE being held financially neutral; however, if the Planning Resource associated with a ZRC is located externally, then the LSE must both Self-Schedule and have a grandmother agreement pursuant to Section 69.7(l) to ensure being financially neutral.*

Note: based on information received 5/11 from MISO, we understand that MISO may be revising this opt-out language to permit an entity to provide a plan to opt out completely, in other words not having to submit any bids/offers, no requirement to submit an offer, no reason for the IMM to mitigate. More to come.

3. The proposed changes to Module E - Market Monitoring and Mitigation Measures probably add more fuel to OMS' fear. Please note that there are currently two proposals for new Module E language; one from the IMM and one from MISO. When read, both provide a certain level of concern, not only to OMS, but also to Ameren. Ameren's internal SAWG workgroup continues to provide comments to MISO on this language (as well as the various other tariff changes). However, both versions contain language that would (we think) exempt the majority of resources that may be built by Ameren Missouri and approved by the MOPSC via the IRP process (note: we assume Ameren Illinois will not be building generation and AER/AEM is not affected because all IPP/PM generation is exempt). For example, IMM language exempts any new resource which is needed to meet at least 50% of the LSE's forecasted capacity requirement. MISO's proposal also includes exemption language that should facilitate the MOPSC's continued jurisdiction since their proposed language excludes all new resources other than a CT or CC resources. Attached is the IMM's proposed language (please note I could not cut and paste so I am attaching Dr. Patton's proposed language as a separate document) and the MISO's proposed language.

IMM

See attached file.

MISO

53 Monitoring Implementation and Responsibilities

53.1 Conditions, Functions or Actions Monitored

The IMM will achieve the purposes and objectives of this Plan through review and analysis of conditions, functions or actions affecting the competitiveness, economic efficiency and proper operation of the Markets and Services, including but not limited to, the following to the extent each may be deemed relevant to the purposes and objectives of this Plan by the IMM:

a. The schedules and Offers submitted for and actual dispatch of Generation Resources, Stored Energy Resources and Demand Response Resource-Type I and Demand Response Resource Type-II in or affecting any of the Markets and Services;

b. Conduct affecting the Planning Resource Auction, including, but not limited to, economic withholding of ZRC Offers and/or physical withholding of ZRC Offers, other than ZRC Offers for Demand Resources, into the PRA;

[NOTE: Wherever the phrase "voluntary capacity auction" is used in Module E of the Tariff, this phrase will be replaced with "PRA"; and wherever the phrase "Planning Resource Offers" or "Planning Reserve Offers" is used in the Tariff, these phrases will be replaced with "ZRC Offers";].

64.1.1 Thresholds for Identifying Physical Withholding

d. The following threshold will be employed by the IMM to identify physical withholding by a supplier of Planning Resources from the Planning Resource Auction: withholding of more than the Physical Withholding Threshold Quantity of resources under the supplier's ownership or control from the RAR voluntary capacity auction.

i. The Physical Withholding Threshold Quantity shall initially be set at fifty (50)0 MW.

ii. The IMM may modify the Physical Withholding Threshold Quantity if it determines that the current threshold is not effective in mitigating suppliers' ability to affect prices in the Planning Resource Auction, or that the current threshold is unreasonably restrictive.

iii. The IMM will seek comment from the Market Participants before altering the Physical Withholding Threshold Quantity. Subject to any applicable confidentiality requirements, the IMM will provide any interested Market Participants with a description of its supporting analysis to allow comment on proposed designation changes.

iv. The Transmission Provider shall obtain the prior approval of the Commission for any change to the Physical Withholding Threshold Quantity. The Transmission Provider shall submit to the Commission the analysis supporting any such change.

65.6 Duration of Mitigation Measures

Any Mitigation Measure i posed as specified above shall expire not later than six (6) onths after the occurrence of the conduct giving rise to the easure, or at such earlier ti e as ay be specified by the Trans ission Provider.

65.7 Mini u Offer Price

The purpose of Mini u Offer Price itigation easures is to preserve the integrity of the PRA by addressing concerns that a Market Participant ay atte pt to depress the ACP in an LRZ by aking ZRC Offers at less than a co petitive level. As described below, if a Market Participant that is not exe pt fro the Mini u Offer Price sub its a ZRC Offer that the IMM deter ines is less than a co petitive price, then the IMM will itigate such ZRC Offer by substituting a Mini u Offer Price.

65.7.1 Exe ptions fro Mini u Offer Pricing

(a) Section 65.7 shall not apply to a ZRC Offer ade:

(i) by a Market Participant that is only sub itting total ZRC Offers for an LRZ that are equal to or less than the Market Participant's Planning Reserve Margin Require ent for such LRZ;

(ii) fro any Planning Resource that first co ences service before May 1, 201 ;

(iii) fro any Planning Resource that is not a Co bustion Turbine ("CT") or a Co bined Cycle ("CC") Planning Resource;

(iv) fro any Planning Resource owned by a Market Participant that is unable to recover capacity costs for such Planning Resource through a regulated rate, charge, or other cost-recovery process;

(v) fro a CT or CC that has cleared ZRCs in the PRA for any prior two (2) consecutive Planning Years, or has been offered into the PRA for each of four (4) consecutive Planning Years; or

(vi) if the IMM projects that the forecasted price for capacity in the PRA or bilateral capacity arket one year after the entry of the non-exe pt Planning Resource will be higher (based upon predicted econo ic changes, such as expected retire ent of co peting Planning Resources in the LRZ, expected new additions of Planning Resources, and forecasted load changes by the Trans ission Provider) with the inclusion of the non-exe pt CC or CT than the applicable Mini u Offer Price established in Section 65.7. .

(b) Any ZRC Offers that exceed a Market Participant's PRMR are not exe pt fro Section 65.7, unless the ZRC Offers are otherwise exe pt pursuant to one of the other provisions in Section 65.7.1(a). After May 1, 201 , if the owner of a CT or CC Planning Resource i proves the physical plant or operations such that additional UCAP MWs can be converted into ZRCs fro such Resource, then the ZRC Offers resulting fro the additional UCAP MW ZRCs shall not be subject to the exe ption under Section 65.7.1(a).

65.7.2 IMM Deter ination of Co petitive ZRC Offer

The IMM will evaluate potential ZRC Offers from a CC or a CT that is not exempt pursuant to Section 65.7.1 to determine if the ZRC Offers are subject to the Minimum Offer Price in Section 65.7.3 by dividing the number of ZRCs from such Planning Resource by the total number of ZRCs in the LRZ where the non-exempt Planning Resource is located that are required to meet the LCR for such LRZ. If the quotient of such calculation is greater than or equal to 10%, then the IMM will deem the non-exempt Planning Resource as being capable of exercising market power in the PRA and the ZRC Offer from such Planning Resource will be subject to the Minimum Offer Price.

65.7.3 Minimum Offer Price

(a) If the IMM determines that a ZRC Offer from a CC or a CT that is not exempt pursuant to Section 65.7.1 is capable of exercising market power, then the IMM will mitigate such ZRC Offer by replacing it with a ZRC Offer price for the PRA that is set at the lower of: (i) 75% of the Net CONE for a default CC or CT that is located in the LRZ; or (ii) 75% of the Net CONE for the new resource.

(b) No later than February 1st prior to each Planning Year the Transmission Provider will calculate Net CONE for default CC and CT resources for each of the LRZs based upon the criteria established in Section 69.8(c) and the Transmission Provider will post such Net CONE values on its website.

4. *Throughout the Module E enhancement process, MISO has made it very clear that they continue to respect the rights and responsibilities of the states in the Resource Adequacy process. In fact proposed language for the filing introduction (as well as similar language found in MISO's draft Business Practice Manual) notes that fact very clearly.*

MISO Proposed Introduction Language

These requirements recognize and are complimentary to the reliability mechanisms of the states and the Regional Entities ("RE") within the Transmission Provider Region. Nothing in this Module E affects existing state jurisdiction over the construction of additional Capacity or the authority of states to set and enforce compliance with standards for adequacy. The Resource Adequacy Requirements ("RAR") in this Module E are not intended in any way to affect state actions over entities under the states' jurisdiction.

Hope this helps provide you with some background to utilize in your discussions at the May 18th MOPSC. I would think that the MISO staff would provide much of the same information should you have the opportunity to discuss with them.

Should you have any questions, or would like more information please call.

Kevin Shipp