BEFORE THE

ILLINOIS COMMERCE COMMISSION

PLANNING FOR THE FUTURE POLICY SESSION

2015-2016 WINTER PREPAREDNESS &

RESOURCE ADEQUACY IN THE AMEREN

ILLINOIS FOOTPRINT

Thursday, November 19, 2015

Chicago, Illinois

Met, pursuant to notice, at 10:00 A.M.,
at 160 North La Salle Street, Chicago, Illinois.

PRESENT:

BRIEN J. SHEAHAN, Chairman

ANN MCCABE, Commissioner

SHERINA E. MAYE EDWARDS, Commissioner

MIGUEL DEL VALLE, Commissioner

JOHN R. ROSALES, Commissioner

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AGENDA

PART I. WINTER PREPAREDNESS

I. Welcome Remarks
   a. Chairman Brien Sheahan, Illinois Commerce Commission

II. Overview/Importance of Winter Preparedness
   a. Commissioner Sherina Maye Edwards, Illinois Commerce Commission

III. National Perspective
   a. Chris McGill, Vice President, Policy Analysis, American Gas Association

IV. RTO Perspective
   a. Todd Ramey, Vice President, System Operations & Market Services
      Midcontinent Independent Operator (MISO)
   b. Rich Mathias, Senior Consultant, PJM Interconnection

V. Illinois LDC Perspective
   b. Energy Efficiency: Tina Yoder, Director Energy Efficiency, Mid-American Energy Company
   c. Customer Service and Outreach: Michelle Rindt, Vice President, Customer Service, People's Gas/North Shore Gas
AGENDA (continued):

VI. Closing Remarks
   a. Commissioner Sherina Maye Edwards,
      Illinois Commerce Commission
CHAIRMAN SHEAHAN: Good morning. Welcome to the Illinois Commerce Commission's planning session for the future. This session is convened pursuant to the Illinois Open Meetings Act, and our guest and panelists should be aware that a court reporter is present. A transcript of this session, along with auto and video, will be posted on the Commission's website.

With us are Commissioners McCabe, del Valle, Edwards, and Rosales. We have a forum.

I would like to thank this morning's presenters for sharing their perspectives on winter preparedness, as well as this afternoon's panelists for their contributions to the discussion on resource adequacy in MISO's own forum.

Finally, I would like to offer a special thanks to my colleague, Commissioner Edwards, and her policy advisors for their efforts in organizing and posting today's session.

The purpose of Part I of today's session is to assure Illinois ratepayers that the
upcoming winter demand can adequately be handled by hearing from --

CHIEF CLERK: Are the microphones on at the bench? We are not hearing you in Springfield.

CHAIRMAN SHEAHAN: Sorry. Is that a little better?

CHIEF CLERK: That's much better. Thank you.

CHAIRMAN SHEAHAN: The purpose -- I'm sorry. The purpose of Part I of today's session is to assure Illinois ratepayers that the upcoming winter demand can be adequately handled by hearing from the gas industry, Regional Transmission Organizations and Illinois Local Distribution Companies.

Given that another Illinois winter is fast approaching, the Commission must ask how the U.S. natural gas market is positioned to meet this winter demand, whether there is adequate coordination between gas and electric markets, how RTOs anticipate overcoming challenges to ensure electric reliability, and how LCDs plan to refine gas for its facilities.

The purpose of this afternoon's
session is to address resource adequacy in the Ameren Illinois blueprint due to its energy-generating capacity in MISO's Zone 4 and the narrow timing of MISO's planned resource auction. The question remains whether MISO's market construct is appropriately designed to reliably meet demands in Illinois. The discussion is intended to explore the benefits of ensuring long-term adequacy -- resource adequacy in Ameren-Illinois's footprint and discern which entities are best positioned to serve reliably. The ability of MISO to ensure capacity during peak times and just and reasonable rates is critical and we look forward to hearing everyone's perspectives on that question.

This afternoon's session will be supplemented by a policy session on December 10th to specifically discuss potential solutions to resource adequacy. The conversation will also include representatives from MISO and the utilities, as well as other relevant stakeholders, and is intended to weigh the costs and benefits of proposed solutions.
We look forward to hearing from all perspectives today about both winter preparedness and resource adequacy. Thanks for your time and participation. Please join me in welcoming Commissioner Edwards.

(Applause.)

COMMISSIONER MAYE EDWARDS: Good morning, everyone. Thank you so very much, Chairman Sheahan, for that introduction. It is my absolute pleasure to conduct the policy session to address the issue of 2015-2016 preparedness and resource adequacy in MISO Zone 4 Region.

I must say I think the winter God knew we were having this policy forum today, because the weather is very much so appropriate. If you are not from this great City of Chicago, welcome to the city of wind.

In Part I of today's policy session we will look to representatives of the gas industry, Regional Transmission Organizations and Illinois Local Distribution Companies to assure Illinois consumers that the upcoming winter demand can be
met.

Having endured the coldest winter months in history just last year, the performance and capacity of natural gas and electricity system is more important now than ever before.

The coordination of supply, demand, storage, pricing, and various pipeline operations is vital to ensure winter readiness and I look forward to hearing from our panelists about the development and processes implemented after the Polar Vortex to meet the needs of the State of Illinois and our great consumers.

Now, as indicated in your agenda, hopefully you have before you, the Commission is asking the representatives to address a few issues for today's presentation, including how the U.S. natural gas markets is positioned to meet the 2015-16 winter demand, whether appropriate adjustments have been made to coordinate gas and electricity markets, challenges and trials faced by the RTOs with respect to assure electric reliability, assure access to gas supply, and how
transmission pipeline operating restrictions and similar issues have been addressed.

Please allow me to introduce our great panelists. Giving the natural perspective will be Chris McGill, Vice President of Policy Analysis at the American Gas Association.

Next we will hear the RTO perspective from Todd Ramey, Vice President of System Operations and Market Services at MISO, and Rich Mathias, Senior Consultant at PJM Interconnection.

Following the RTO perspective will be the Illinois LDC perspective on gas supply, energy efficiency, and customer service and outreach presented on behalf of Scott Glaeser, Vice President of Gas Operations and Development at Ameren Illinois; Tina Yoder, Director of Energy Efficiency at MidAmerican Energy Company; and Michelle Rindt, Vice President of Customer Service at Peoples Gas/North Shore Gas.

Please give a round of applause to our panelists as we look forward to today's session.

(Applause.)
MR. McGILL: Good morning, Mr. Chairman and Commissioners. I am Chris McGill. I am representing the American Gas Association, and today before Scott and others talk specifically about Illinois and about the Midwest, I was going to try to set the stage for where we are nationally with respect to natural gas supply in the marketplace and what expectations have been set up for this winter heating season.

I am going to go through a set of slides very, very quickly. It is this natural gas market in the United States and North America and more broadly a very big space ship. It's got a lot of buttons, and I'm going to just push a few of them today and try to give you a sense of where we find the marketplace and where we find the value really for consumers.

Domestic natural gas production is the biggest piece of gas for the supply to consumers in the United States. A little more than ten years ago the country produced about 50 billion cubic feet per day.
Today we produce over 70 billion cubic feet per day, to give you a sense of scale of how things have changed, and the production market, unlike the demand market that goes up and down, stays relatively the same day-to-day, so we are producing 70 billion, 71, 72 billion cubic feet per day in the United States every day, and gas goes -- historically goes obviously to consumption.

Finally, in 2015, as you can see by the curve that's represented here, the production in the country has flattened out a little bit.

We have been oversupplied for quite a bit of time. The market has responded to that, prices are down, producers are a little less active, and we have finally seen the production curve turn over and flattened out, and this is an indication of the ability to produce. It's a response to the marketplace, actually a very rational response.

The expectation -- in this case this is from Bloomberg Energy Finances -- we are going to continue to see gas production in the U.S. and North America in general increase as we go forward.
Perhaps by the mid-2020s we will see it flatten out in small ways actually, but the expectation is that natural gas supply, as well as demand, is going to grow, and we won't get this picture of growth going forward unless the market is demanding it.

The reason this has all come to fruition goes back to something I know you read about, heard about, or familiar with, and that is the production of unconventional resources in the United States based on various technologies that have been employed.

Essentially since 2006, about ten years ago, we have seen growth in natural gas shale production. Now that matters because that production is coming often from places not generally viewed as major producing areas in the country.

The Eastern United States, for example, the Marcellus and Utica shales, had a great impact on the infrastructure that moves natural gas around, but, as you can see, in very tangible terms what was virtually no production from these resources, essentially because it wasn't technically
recoverable, as it is today, has grown to be half of what the country produces.

Now the Energy Information Administration actually expects shale production in the United States to climb about one percent in December compared to November of this year. Again, this is the productive curve rolling over a little bit and reacting to the marketplace, but the growth we have seen in domestic natural gas production has been extraordinary, and I'm old enough to have seen gasoline lines back in the 1970s. Fossil fuel in the United States with this kind of growth has been an extraordinary story.

This is supported by what the industry views and others as a very, very strong resource potential here in the U.S. and in Canada. This happens to be just in the United States, technically recoverable resources from the potential Gas Committee from the Colorado School of Mines.

They have assessed the resource evaluation once every two years taking into effect the technology as well as the economics of producing
gas. And the important thing to look at at this
table or this graphic presentation is perhaps to
look at the 1990s and 2014, again, technically
recoverable resources. The shale resource indicated
by the PGC in 2014 by itself is larger than the
total estimated resource base back in 1990.

Again, that gives you some sense of
how the economics and the technology associated with
producing these resources has impacted the natural
gas industry. This is what we refer to as natural
gas abundance here in the United States.

Commissioners, when I first saw this
slide -- it came from Bloomberg -- it was written in
Japanese. It was for a presentation in Tokyo. I
didn't have to be able to read Japanese to get an
idea of what they were trying to show.

This goes back to what I mentioned
before. We are having extraordinary increases in
molecules in natural gas supply coming from
historically areas that have not necessarily
produced that much natural gas, specifically the
Marcellus and the Utica shales in the East.
The expectation going forward incrementally is that these are in DCF per day, that we expect to see more growth from those areas. That also ultimately impacts the Midwest.

Infrastructure has been developed and will continue to be developed really to the point where Illinois, which has traditionally received its gas supply from the west and the south, is also going to begin receiving its gas supply -- potential supply from the Eastern United States, and it's been an extraordinary turnaround.

Looking a little further ahead, 2020 to 2030, those increments are expected to continue. Those increases are expected to continue perhaps not quite that dramatic a scale, but perhaps most analysts think the next unconventional resource opportunity is going to be occurring in Western Canada and that we are going to see growth in natural gas there also which will be available not only for projects such as on the exports to the Pacific Rim but to particularly the Northwestern United States.
All of this has occurred -- if you look at this graphic -- in 2013, 14, 15, and natural gas prices, market clearing prices are relatively low compared to history, maybe even extraordinarily low compared to history.

Our general view is that we will continue to see relative price stability at whatever range you want to, but relative price stability going forward and that supplies will be met, that the market will demand natural gas, and that these relative costs -- these relatively stable costs will continue.

I'm asked often is a $2 gas price enough to sustain a producing segment, really even the whole value chain in the United States; probably not. Prices probably need to go up a little bit. Market is trying to adjust to this right now. We will see, but that stability within a range of pricing is what our expectation is, not just going forward for a year or two, but for many years to come.

I put on this slide very quickly
because we are all aware that oil prices have fallen, too, and we've had a domestic oil production renaissance in the United States, millions of barrels of oil, more we are producing now than we did ten years ago.

With that oil comes some gas production. If you slow down oil production, does that mean you slow down gas production from that associated relationship of oil? Yes, you do. But is it going to really hurt the gas market? In my analytical view, it's probably not going to. There are too many gas resources around the country that are accessible and relatively inexpensive.

I just had a recent discussion with a group from Wood MacKenzie who does analysis of gas supply in all basins around the country who do detailed analysis of those basins and looked at the cost of lithium gas. They saw, going forward, 900 trillion cubic feet of natural gas that could be developed in the United States for less than $4 per million BTUs, an extraordinary amount of gas at a
history of a very relatively low price.

So my expectation is that the oil market is not going to dramatically impact natural gas around the country. One of those reasons is if you can look at a place like Pennsylvania, and in early 2015 in Pennsylvania, there were still 2,400 natural gas wells that weren't hooked up. They stopped drilling in Pennsylvania and still have thousands of wells to hook up and be able to market the gas. Pennsylvania producers are hoping that that changes in time, but we still have that situation.

We know that pipeline projects are growing from some of these new productive areas. Some of those pipelines again turning gas from east towards west, and those pipeline projects are really imminent in terms of those things that are going to be -- have already and are going to be adding capacity to help move gas from these new growing market areas for production to consumers in the United States.

Part of the picture that we'll be
discussing today, again by Scott and others, is the storage picture around the country. I checked a number EIA this morning. For the first time in history, the working gas level in the United States was 4 trillion cubic feet at the end of last week. That's it. That's a lot of gas in storage.

ADA started this weekly storage reporting. In fact, I started to report myself back in December of 1993, and I could not have believed to have seen that volume of gas in storage beginning the winter heating season, so it is an extraordinary event, and I was alive to see it.

(Laughter.)

What are we going to have in expectations, and that will be discussed certainly for the coming winter heating season. To put some context in the numbers, I'm going to talk to you about from EIA. There's a very strong El Nino event going on in the Pacific right now, the Weather Service says as strong as in '97, '98 events. That generally means warmer temperatures in the Pacific Northwest and the Midwest on average for the winter
heating season, slightly below in the South. And if you look at it from a precipitation standpoint, generally more in the South and a little less in the North.

Now putting numbers to that then and looking at natural gas as far as opportunity for consumers and what expectations nationally are for bills, we will go through some numbers here very, very quickly.

We know that the demand for natural gas per household has dropped. In 1970 there were 38 million residential natural gas meters for customers in the United States. Today there are over 65 million. Those two groups of customers use the same aggregate volume of gas, that is, the 65 million customers here in the United States in 2015 used the same aggregate volume as only 38 million customers did in 1970.

Natural gas has been the poster child for efficiency, and customers are using less in an age of climate change, and so many other things that we hear around the energy industry we find natural
gas a great opportunity for Co2 emission savings, too.

We are expecting to see incremental growth in gas demand, as I showed you before on the supply picture, going forward. We at AGA try to look forward then at residential bills by surveying our customers.

When we surveyed our customers in September of 2015, 83 percent of our companies said they did not expect any increases in bills for the coming winter heating season. It's probably -- if we surveyed them again today, it would be even more dramatic than that.

As we looked at it in early October, we saw the potential for 5 to 7 percent reductions in bills nationally. We saw the opportunity for perhaps having the second lowest bills that we have seen in a decade, and we certainly saw a great value for customers.

The Energy Information Administration at the same time was looking at bills about 9 percent less than normal in early October. They
just revised their November short-term outlook and
they're talking about nationwide bills 13 percent
less than what we saw the previous year.

So, again, extraordinary value
proposition for natural gas for consumers going
forward. Part of those reductions in bills are
dependent upon the weather forecasts, of course, but
the other part of that goes back to this relatively
low-pricing situation that we have seen, not only
what we see today but think back -- perhaps Scott
will touch on this -- historic picture this summer
refilling storage, less cost than what we saw in
2014. So all of those things will help moderate
some of the consumer impact that we see for the
coming winter heating season.

Ladies and Gentlemen, those are my
remarks. If you have any questions, I will be happy
to answer them.

COMMISSIONER MAYE EDWARDS: Thank you so much,
Mr. McGill. I do have one question, and then I will
defer to my colleagues to see if they have anything.

MR. McGILL: Yes, ma'am.
COMMISSIONER MAYE EDWARDS: On the slide where you say you did the AGA survey, you remember 17 percent said no -- as of September 2015 -- I'm sorry -- 17 percent said yes and the group that said yes, were they kind of in one area of the country or do you not know the details?

MR. McGILL: I do not remember the details frankly. I'm sorry.

COMMISSIONER MAYE EDWARDS: Okay. No, that's okay. I was just curious.

Anybody?

COMMISSIONER ROSALES: Yes, I do.

In your last statement about the storage would be less expensive than it was the year before, why is that?

MR. McGILL: The average cost of gas -- again, I'm speaking nationally -- on average in 2014 was in the mid $3, looking at a long period during the storage refill season in 2014. This year it was under $3, so there's some difference between what it cost to put gas in storage this year compared to last year. Perhaps a comment from one of the other
COMMISSIONER ROSALES: No, I understand.

MR. McGILL: Okay. Thank you.

COMMISSIONER MAYE EDWARDS: With that, thank you very much.

We will now turn to our RTOs. Thank you.

MR. McGILL: Thank you.

(Slide presentation.)

COMMISSIONER MAYE EDWARDS: One more. If you keep going past, but you are going backwards though, and then another. Yes.

MR. RAMEY: Good morning, Mr. Chairman, Commissioners. My name is Todd Ramey. I'm currently responsible for control room operations, overseeing the reliability of the local energy system in the MISO footprint, and I want to thank you for the invitation to joining this discussion today.

Twice a year in MISO we engage our stakeholders in preparation for peak load operation conditions for both the summer and the winter peak
load operating seasons.

   We recently completed in October our
assessment of the upcoming 2015-2016 winter season.
Results of that review is stakeholders showed that
we are positioned well to serve load reliably this
upcoming winter.

   Looking at the generation side, we are
currently forecasting to have a 41 percent planning
reserve margin. That is a very healthy reserve
margin as compared to the minimum requirement we
have in MISO of just under 15 percent on a planning
reserve basis.

   The reason for that relatively large
reserve margin is it's not unusual for us to see
that in the winter conditions -- for the winter
season, because in the Midwest we're typically a
summer peaking system so we have a much higher load
to serve in the summer. The system is built out of
a planning basis to meet that higher load, so we
traditionally have higher margins for the
wintertime.

   In addition taking a look at the
supply side, we also do an analysis to the transmission system to ensure that we are aware of any challenges to having sufficient transmission capability and again ensure reliable operations over the peak conditions.

In addition, I will give some examples of the lessons we learned from the severe winter we had in 2013, 2014 Polar Vortex in January 2014, severe operating conditions present a lot of opportunities for review and made improvements to processes and procedures going forward. We were certainly able to do that over the last couple of years. As mentioned, a couple were previously put in place since that time.

What I am showing here are typical daily load shapes on the left for a typical peak summer day. On the right is the load shape for a typical winter day. Just the shape of the load throughout the day in the wintertime creates operating challenges that are unique to the winter.

It's not completely obvious, but if you notice in the wintertime, we actually have two
separate peaks that occur on the system. We have coming up in the daylight hours we have that first peak you see ramping up and levels off through midday, then we have a pretty significant evening. It's about generally a 10,000 megawatt pickup. When folks are leaving work and going home, I see a pretty significant pickup.

The operating challenge is presented by the steepness of the load pickups on those two curves. If you compare the steepness of the pickup of the summer curve to the left, you are going to -- in the summer you are going to start out in the morning with low loads and it will build gradually throughout the day and will lead to a higher peak late in the afternoon, but it's a relatively gradual pickup, and it's relatively predictable, and it's a little easier to manage from an operations perspective.

The steepness of those two pickups in the wintertime can create challenges, because the number of generators that have to be scheduled and planned to be staged and come on-line throughout
that four-or-five hour morning pickup period is critical to make sure that we have sufficient resources to keep up with that increase in demand.

We can see in the wintertime is that extreme cold weather can create challenges for maintaining high reliability and individual generating plants in the footprint.

The cold weather we saw in the Polar Vortex can lead to short notice forced outages of generators, generators becoming aware close to the morning pickup periods that they won't be able to come on-line due to some reasons associated with cold or even slow-to-start conditions will create challenges. This was an issue both in our footprint and I know in the PJM footprint during the Polar Vortex event.

So part of our focus for the last two years in preparing for the winter operation is to work with our asset owners in the footprint in advance of the winter to make sure you are ready to address the unique challenges that you are facing in the wintertime.
I mentioned we have reviewed, and
designed, and implemented several enhancements over
the system Polar Vortex two years ago. This
references both market enhancements that we designed
to put in place to make the improvements, but, in
addition to that, we spent a lot of time focusing on
improving control room to control room situational
awareness as we are planning the operating time
frame to meet those high-load days during the winter
period, so a lot of focus has been placed on
improving in the area of gas/electric coordination.

We have developed strong relationships
with pipe operators in MISO's footprint. It's been
beneficial certainly to my control room, and I
believe it's beneficial from a situational awareness
perspective in terms of pipe operation in the
footprint, so we spent quite a bit of time building
those relationships and improving our communication
with the gas pipe operators.

One of the other things that we found
during the Polar Vortex is that the drivers of
slow-start events or even late notice forced-outage
events it was difficult to analyze and understand fairly well what those drivers were, so we've also spent a lot of time working with our asset owners in developing new cause codes, rapid effective analysis of less driving challenges, again, in support of situational awareness both for MISO concurring with staff, as well as supporting information to help us plan better for the upcoming winter.

In terms of specific market enhancements that have been placed over the last couple of years, we have implemented and improved a price formation algorithm that improves the transparency of price information which is useful for supporting decision-making of individual asset owners as they prepare for and implement operations during the winter season.

We have implemented a new coordination procedure with the RTO to our south and west, the south power pool. That helps certainly in coordinating the reliable operations of facilities along that the same SVP where both our crews have an impact and coordination with.
Other market enhancements that we are working on to help delivery for future winter periods include along there a ramp product. A ramp product is a market-based mechanism on an operating time frame basis 15, 20 minutes ahead specifically reserving enough rampable capacity on the system to help us manage better the availability capacity for the need to grant two pickups during the winter days.

As I mentioned, our primary focus has been on improving information exchange in support of situational awareness for control room operators. We greatly expanded the list of pipelines operating in the MISO footprint we have relationships with. We have implemented a fuel survey of the asset owners of the MISO footprint. We did that for the first time prior to last winter. We are currently underway with the second fuel survey of our asset owners, and, again, it's something MISO built a better awareness of the potential implications of fuel reliability for the individual generators in the footprint. This is very
beneficial to have that information as my staff is preparing for operations all along an operating day. Combining that information with information we are getting from the pipeline operators is very helpful and allowing us to make sure we have a reliable plan the day before operations to meet the operating challenges intra-day the following day.

We have, as I mentioned, increased our information sharing with pipelines, even automated communication systems that we have traditionally had to communicate with our asset -- generation assets operators in our footprint. We have included some of the pipeline operators on that automated communications as well. Pipeline operators have visibility of what's going on in the system as well as, as I mentioned, communication in the other direction.

We have recently added two personnel to the MISO control room staff who have a deep history of operations of the gas pipeline industry, so we are finding that as we learn more and more
about the challenges and details of operating both pipeline systems, again, that's very supported for
my control room operators and their ability to have information that helps them analyze from a situational awareness perspective, and so we added one member to our team last year and this year we have another person on board to help us with that information.

So the bottom line is we're looking forward to this winter. We are confident that we have sufficient generation resources and marketing needs to operate the system reliably. We have not identified any serious transmission issues to give us concern, certainly nothing around the Illinois area that we thought would cause concern in regard for Illinois. We've completed our transmission analysis and our generation analysis as part of the winter readiness assessment to stakeholders.

The other areas of focus, as I mentioned, we have been working with our asset owners in the footprint as we consider and talk about winter readiness and winterization to make
sure the fleet is ready to operate during those
coldest days of the winter where we certainly saw
that in the Polar Vortex.

Last winter we had several days that
were extremely cold as well. Having those
conversations in advance of last winter, we didn't
see much improved performance that we have to
provide a new perspective.

So that concludes the remarks I was
going to make, and I'll be happy to answer any
questions.

CHAIRMAN SHEAHAN: Mr. Ramey, can you speak to
the impact of planned or announced -- planned or
retirements on readiness for this winter in Zone 4?

MR. RAMEY: For Zone 4 for this winter, we think
again we have sufficient generation to meet the
requirements for Zone 4. No concerns are there for
this winter.

We have seen across the footprint
11,000 megawatts of generation retired in response
to environmental regulations that have gone into
effect in recent years. That is coming from a
position -- first of all, it's a very healthy planning reserve margin for the footprint, so we still have reserve margins, especially in the wintertime, well in excess of minimum requirements. Again, looking forward -- looking back a little bit to senior retirements, looking forward we have seen potential pressure for additional retirements, so for this winter we don't have any concerns. We will continue to engage our strategy for next year. We understand the process is about ensuring reliability in the future.

CHAIRMAN SHEAHAN: Thank you.

COMMISSIONER MAYE EDWARDS: Mr. Ramey, what is your determination or MISO's determination that there is sufficient generation based on? Is it MISO's surveys? Is that how you generally determine that there's sufficient generation?

MR. RAMEY: Yes. We do conduct surveys of our assets and our load servers on their plans for procuring firm resources to meet their obligations on a going-forward basis. That's typically looked out several years, but what we are doing to the
winter assessment for the upcoming season, we
certainly know what generation is available on the
system today, and combining that information with
our understanding of retirements, and/or additions,
we are able to forecast an expectation of resources
for the upcoming winter season.

COMMISSIONER EDWARDS: Okay. The reason I asked
is because my concern is always with the MISO
surveys and that is as far as it comes.
I don't want to crossover into this
afternoon's conversation, but, as far as the State
of Illinois is concerned, there are many entities
that we don't necessarily have jurisdiction over.
We have a lot of alternative suppliers that don't
necessarily respond or have an accurate response.
You know, day-to-day they
didn't -- that changes for them and then there's
also municipalities.
So how are you -- and I think for the
past year I was kind of informed that they didn't
respond to the survey, so how are you --

MR. RAMEY: I think from our perspective we were
satisfied with the response that we received on our surveys and, as I mentioned, so we are saying in October our forecasting expectations for just a few months out we have a very good feel for what's on the system today, and we've worked with all of those asset owners to make sure, as best we can, which we're -- I'm saying we are satisfied that we have a good handle on what's going to be available when it comes to winter. With our relationship with the asset owners and MISO and our understanding of their plan over that near term, we feel very confident that we have a good view of what's going to be available this winter.

COMMISSIONER EDWARDS: Thank you.

Any other questions?

COMMISSIONER ROSALES: Yes. How does the market in Southern Illinois in MISO's Zone compare to Northern Illinois PJM, including with respect to new building in terms of energy capacity?

MR. RAMEY: To answer your question, first from the energy market perspective to the process that is used in Southern Illinois and Northern Illinois are
very similar in design. So the decisions and
processes that are used to make decisions of which
generators to ask to be on-line the following day
with a commitment decision and inter-day which units
are dispatched to meet the requirements of the
system are very similar.

I mentioned the coordination process
that's relatively new in MISO with our RTO neighbor
to the southwest SVP. MISO and PJM have had a very
similar pretty sophisticated coordination process in
place since 2004. Part of that coordination process
also allows the fact that there are different
markets that you will get generally similar outcomes
processing across that state, so it's a pretty
robust, effective coordination process we have at
PJM.

In terms of market-based processes to
provide for a larger resource planning process,
there are differences in those designs, and that's
part of the subject matter for the afternoon
session, but there are significant differences there
that's worthy of taking a look at and discussing
with stakeholders in Illinois about implications of those differences and what we might want to do to address that.

COMMISSIONER ROSALES: So what entity has the responsibility for resource adequacy in Southern Illinois?

MR. RAMEY: Well, I could tell you that MISO has resource adequacy obligations across -- MISO serves all parts of 15 states and we have a single tariff that provides for those processes across those 15 states. For the bulk of the footprint, I would describe the partnership or the responsibility as a partnership between MISO, and the states, and the utilities within those states.

Again, the question is for Southern Illinois, given Southern Illinois has a competitive retail construct, is the balance different enough between that partnership to suggest that we may need to make modifications on how we approach resource adequacy in Illinois.

COMMISSIONER MAYE EDWARDS: And I think that, too, a lot of that will be kind of addressed this
afternoon as well, so we will have further
discussion about that.

MR. RAMEY: I look forward to that.

COMMISSIONER MAYE EDWARDS: Next and last, but
certainly not the least from the RTOs, we have
Mr. Rich Mathias who also is the former chairman of
this great Commission.

MR. MATHIAS: Good morning, Chairman and
Commissioners. My name is Richard Mathias. I
represent PJM Interconnection, which is a Regional
Transmission Organization, which operates in parts
of all the 13 states and District of Columbia. We
manage the transmission assets which are owned by
Commonwealth Edison.

PJM has been asked today to comment on
PJM's ability to keep the lights on in the 2015-2016
winter season, to address our winter preparedness,
the ability to meet winter demand.

I would like to cover three things
today, three matters in addition. The first one, of
course, one must consider is the common sense
indicators of what everyone in the room can
understand and transmission managers are challenged in the transmission system and the RTOs are challenged to keep the lights on.

Secondly, I'll address the resources that are available in the PJM footprint to meet the winter demand, and the third I will comment on some of the changes that we see and the resources that are available and will become available to PJM in the coming years.

I note that many of the comments that I will make will be a mirror of what Todd Ramey just said. We have a very similar perspective, a very similar experience, and I know that there's -- sometimes there's a discussion about what's going on with PJM and what's going on in MISO and whether they're similar.

I would always say that from control room to control room there's never a question as to what the obligations and responsibilities, and that's to keep the lights on.

And so I think we do a very good job in cooperating together to keep the lights on in the
Midwest and mid-American area. So I echo what Todd just said, the coordination between PJM and MISO is on a day-to-day operating basis.

Let me comment and go back to what I covered in May of this year when we talked about summer preparedness and just cover briefly some of the common sense indicia that everyone in this room can understand, and why and how RTOs, such as PJM and MISO, can be challenging those various times of the year.

I mentioned in May at the other meeting that obviously the season of the year is a determining factor in how RTOs operate. Obviously in the summer -- as Todd mentioned earlier -- can have very high load factors, and we must keep the lights on at that time as well as the winter has double peak, two peaks, similar challenges between PJM and MISO, and, of course, we have the shoulder months which are usually the September, October, April and May when we have a lower load, but frequently the transmission owners and the generators -- generation owners will take their
assets out of the operation and do maintenance and
winter maintenance, and so we have to make certain
as an RTO that we don't take off the wrong generator
or the wrong transmission line for those shoulder
months as well.

I mentioned in May the day of the week
makes a difference as to how the transmission system
is operating. If you have a very, very hot wave of
heat coming in on a Thursday night and ends on
Monday, it's much different than having that heat
wave start on Monday and end on Thursday, much
different.

The loads on the weekends are much
lower. Usually people go home in hot weather on
Friday afternoons early so it's much less stressful
on the grid operator if you have that hot weather or
cold weather getting -- or cold weather going
through a weekend rather than through weekdays.

The duration of the heat wave or cold
wave also makes a difference. The longer that heat
wave or cold wave continues the more of a challenge
it is. Things break, and that certainly can happen
when you have a long running challenge.

There's also noted the damage to the transmission system, the distribution system from ice storms or tornadoes include real problems for grid operators and the transmission owners.

I know one time in Southern Illinois there was a very, very severe ice storm, and I think in the tree-cutting business, because it just couldn't get to the facilities, that many of the tree services had a field day, I'm sure, on both PJM service territory and MISO.

I also mentioned some of the operating challenges, and Todd mentioned these earlier, and that is summer and winter presents different challenges, challenges nonetheless.

Summer obviously usually is very hot weather with a single peak. Interestingly enough, generation assets usually operate quite well in the summer. They're not a problem, but transmission assets can sag and a transmission line can sag due to overheating. You can have -- you have greater congestion in the summertime as well, as against
wintertime challenges with different challenges.

Transition system usually operates very well in the wintertime. Cold weather they don't necessarily overheat. Generation assets can have a tremendously difficult time coming on-line starting -- operating with frequently can be and have been in the past.

Natural gas availability challenges from coal-fired generators to coal piles can freeze, conveyor belts can freeze, so, whereas in the summer, generation assets frequently operate very well and in the wintertime generation assets can have real problems.

I would like to cover just the second item, which I mentioned, and that is the forecast for the winter months from the PJM perspective and when we would be able to meet the winter demand.

I believe Christopher McGill mentioned that some people are advocating that this will be an El Nino-type of winter where it could be warmer, and we see the same thing. We also have some reflects the Great Lakes States could be a very cold winter, so take your pick, El-Nino or a very cold weather in the coming months.
The fact of the matter is PJM has to prepare for both, just as an independent ISO for warm weather as it does for cold weather. Here's what we show with our so-called 50/50 forecast. This is a forecast that we believe is most likely to occur, and that is we will have an unrestrictive forecast and that's defined in the bottom of 132,000 megawatts, and we'll address that with a total of what we saw in the past year about 177,000 megawatts.

And just as Todd mentioned, frequently we would have greater surplus, greater accesss, so to speak, in the wintertime than we will see in the summer because summer peaks are usually much more severe.

I should note that in 2014 our unrestricted actual high-load compressors were 4,000 megawatts, so pretty close to what we anticipate this year.

Just as Todd mentioned, with PJM and MISO these are the number of entities, the number and so forth, PJM meets with equally number of
outside interests to go to our load forecasts.

You look at what the challenges might be for the winter, you can see the summer as well. You can see the PJM study and daily requests which are internal to PJM and its members.

We have reliability coordinating the winter preparation meetings, and these are with a human person. Notes are taken, and sometimes there is an actual transcript of these meetings when there are serious concerns. And then I'll look at the very next topic, which is the gas/electric coordination, and I'll come back to this.

I would note that the Chairman asked at the beginning of this meeting if the coordination between the gas and electric industry is adequate. I don't know that I would put a value judgment on it, but I would say it's much better than it was two years ago.

I see a lot of people in this room who are with gas companies who I and others who PJM have dealt with over the past several months to make that coordination much better and both are more than
adequate, but I will come back to this.

Just as Todd mentioned, just as MISO has generation retirements, PJM also has. This indicates this occurred within PJM over the past year. We have had almost 11,000 megawatts of generation that retired. Much of this has nothing to do with the so-called green power. It really is mercury air toxic standards that go into effect over this past year, and we see a number of coal-fired generation facilities in the PJM footprint retiring due to the concerns about the cost related to complying with clean air toxic regulations.

We also note that in addition to the retirements that coal-fired plants are primarily, we have seen this year that the cold resources amount of supply -- generation supply that is provided by coal-fired generators is down about 8 percent, whereas, gas-fired generators have -- supply provided on gas-fired generation significantly increased.

This slide shows the new generation which has come into operation within the
PJM calendar year. We note that there's been a net
decrease of 8,000 megawatts. Overall, however, for
the last few years, we expect this to have a slight
increase in the amount of new generation in the PJM
account.

This has to do with a discussion
concerning gas and electric coordination as well as
requested in the meeting notice. We note this type
of coordination didn't exist two years ago.

We really have made progress I think,
well, at least adequate. We would like to do better
than adequate, and we note that these are ongoing
discussions that occur weekly, daily, and ongoing
within PJM and natural gas pipelines and the
load-serving LDCs in Illinois and throughout the
United States.

As you see an increase occurring in
the amount of natural gas generation, it is
absolutely critical that PJM and other RTOs
understand the natural gas business and it's also
incumbent on the natural gas business to understand
the generation business. They are quite different
business models.

And if you really look at how natural gas pipeline operators interested in having the natural gas grow 15 to 20 miles an hour through the natural gas pipeline 24/7, 365, the local distribution company wants to accept that natural gas, put it in its reservoirs to provide natural gas to their customers for heating reserves.

Many of the natural gas generators want to buy as much of natural gas tomorrow as they possibly can and they want to pay for it on a work basis, so two very different businesses, two very different business models, and they obviously clash, but there are ways and we have seen the ways that they can be well coordinated.

And the final two slides have to do with generating capacity within PJM. This is installing capacity as of the end of 2014, coming out of natural gas producers and natural gas generators that have been significantly reduced -- excuse me -- significantly increased out of coal generation would be significantly reduced and
expected to go down with the implementation of the coal-fired plant.

And, of course, in Illinois, you can see that in Illinois the PJM footprint has a third of the loops in PJM. Natural gas has 8,000, 9,000 megawatts and 57,000 for the PJM footprint, and that number 57,000 megawatts in the PJM footprint is expected to increase significantly in the next few years.

So what I suggested is this, that we all observe the common sense indicators that PJM has easily determined whether it's a challenge on the transmission system from the Transmission System Operator, the Regional Transmission Organization and managing in terms of operating systems depending on hot weather/cold weather season, and we think that PJM would be able to meet the winter challenges that are coming this winter.

We have more than enough generation resources and we also note that we see a continuing change in the type of transmission generation resources that are available, and each one of those
changes from gas, or nuclear, or coal we are monitoring and evaluating how this change will affect the transmission system.

COMMISSIONER del VALLE: You had the Polar Vortex pipeline challenges within PJM. What has changed since then?

MR. MATHIAS: As far as pipeline challenges, I think that, number one, I see, as I mentioned, friendly faces and familiar faces in the audience here, number one, natural gas pipelines and the LDCs and distribution companies of natural gas certainly understand PJM and generators much better and what their operating characteristics, as well as PJM and generators in the footprint certainly understand what the challenges are of the pipelines and the LDCs.

So I think, number one, there's much more of an acknowledgement and understanding of the business models and their practices of the different industries.

PJM also preserves a much longer -- from a discussion, PJM has a new reliability pricing
model proposal where the generators who will be
termed capacity resources for PJM have no excuses
for their capacity resources. They must be able to
perform, and that was not the case two years ago
during the Polar Vortex. When capacity resources
less performed and generators had to perform, there
was basically an excuse that they had for
nonperformance which was their inability to obtain
natural gas. Now capacity resources do not have
that excuse. They must perform, and if they don't,
there's significant financial penalties and
corresponding financial incentives to be able to
perform.

COMMISSIONER MAYE EDWARDS: Thank you very much,
Mr. Mathias. Thank you, Mr. Mathias.

With that aside, we will hear from our
LDCs.

MR. GLAESER: Good morning, Chairman and good
morning, Commissioners. My name is Scott Glaeser.
I'm Vice President of Gas Operations and Development
for Ameren Illinois, and I'll be here representing
all the gas utilities in the State of Illinois, so I
will be presenting our gas supply resources, our
capacity resources, our storage inventory, all the
preparations to meet this winter's demand.

I see the Commission's time is
impeccable. This Saturday will be snow, I believe,
the first time this season, so the timing for the
presentation is right on the button.

First, I wanted to cover two of our
core strategies and finding objectives for the LDCs
in the state. Our core mission, and the most
important thing to do, is safely and reliably
deliver natural gas to our customers at an economic
price throughout the year, especially during extreme
winter weather conditions associated with conditions
experienced here in Illinois and Chicago.

Some of the methods we used to ensure
that reliability include having intrastate pipeline
transportation capacity under firm contracts that
have production basins in the United States, having
both on-system storage resources and lease storage
resources of pipelines, and also balancing the peak
resources all designed to meet these peak demand
days, but also be able to ramp down to normal operating days and be able to meet those warm winter days that we experience each winter.

Another critical point and part of our strategy is diversity. We are very lucky in Illinois. We are literally the crossroads between pipelines in the U. S. Many of the major pipelines across Illinois are delivered to the Chicago area.

All of the LDCs in Illinois are able to take advantage of this and have multiple interstate pipelines connected to the system, multiple capacity resources, lease storage resources, access to multiple production basins. It's an important part of our alternatives.

At the same time during winter operations, we work very hard on a day-to-day basis and a monthly basis to optimize those resources. So once we have all this infrastructure, all this capacity resource, supply resource in place for winter, daily we're optimizing this optimal supply solution versus cheaper production basin that day, that week. We are investing in storage, keeping
that PGA cost -- that PGA-related cost for our
customers safe.

Finally, as Chris mentioned, gas
supply resources in the country are plentiful. The
shale gas evolution has been a huge boom to energy
in this country. We have less low gas prices, but
that does not mean that we should stop hedging. It
does not mean to stop price hedging. As a matter of
fact, it's actually a signal to put on more price
hedging to lock in those low prices for the longer
term.

Chris didn't mention these prices may
be too low for a lot of gas producers because they
cause some disruptions in production for some
companies prior to be bankrupt. So locking these
low gas prices now, they probably will move up in
the forward term, but right now the forward market
-- I checked this morning -- over the next three to
four years they're trading below $3 the next three
or four years. That's an amazing low price gas
environment.

Just taking a quick review of the last
winter's operations, as you recall, the Polar Vortex occurred in the winter of 2013-2014, specifically in January and February, where we also set new record peak systems on demands.

Last winter less cold. It was about 8 percent colder than normal, but we didn't have an extreme peak experience in the Polar Vortex. The overall peak day for last winter was on January 7th for all the Illinois utilities. We hit about 7,550,000 MMMBU, which is 7.5 BCF.

The low today was about 8 or 1.840 BTUs, and I believe this was pointed out here, because one of the key operational aspects of what we see is I don't think that peak design day or else we will ramp down our resources to meet that lower demand which could literally occur within days of having a peak design day, so a lot of effort and energy goes to designer resources, our off-systems storage, lease storage, our gas supply resources, and ramp up and down to meet these warm days and meet the peak design days on a monthly basis.

Looking forward to this coming winter,
we have listed here the projected peak design days for all of the Illinois LDCs. They total about 9.893 billion cubic feet, and to kind of frame that in context, Chris mentioned our production of natural gas in the U. S. in total is about 72 billion cubic feet. So Illinois being almost 10 BCF out of 72 production, we have a major load center of natural gas remaining here in the State of Illinois, so an interesting fact.

The next columns are the capacity resources used to meet those peak design days this coming winter, and you'll see for our interstate pipeline capacity, that firm transportation capacity, in our lease storage we're building we're about 4.426 billion cubic feet this coming winter, and then our on-system storage resources are 4.178 BTU.

This is an important point. Not only is Illinois blessed with being a crossroad to pipeline operations, but we are also blessed with tremendous storage resources, tremendous storage reservoirs. Ameren Illinois has 12 reservoirs
alone. Nicor has huge facilities. These are
tremendous storage resources, and, as you see on a
peak design day, the average temperature is
15 to 20 degrees below zero. Half of our gas supply
resources coming not only from within the state but
on each utility's system that's directly controlled.
That's a huge advantage for LDLs. That's a huge
advantage for the state as well.

The last resource, which is just as
important, is what we call our third-party
deliveries. These are really our industrial
customers or our third-party commercial customers
that transport their own natural gas. They buy
their own natural gas. They deliver it to their
system or to the market for the system, and that
goes into our system as part of the resource to meet
the overall system needs. That's up 1.288 BCF.

Why that's important is that those
markets -- those transformers needs for serious
operational technical problem, so that's why we
count that as a resource.

In terms of our four gas supply
strategies, all of the LDCs in Illinois during the winter period, November to March, and especially during the colder winter of December through February, and all of their gas supply resources are firm contracts. A lot of those gas supply resources are coming from all the different production basins in the U.S., primarily from producers and some of the larger marketers. They're all looking for a current base of suppliers that have supply, physical assets, and credit worthiness, and financial strength to go through any type of future winter situation, high price environment, low price environment, for Illinois gas. That is part of our overall forward planning and procurement cycle as well.

We are looking at usually two, three, four years in the future for natural gas supply resources and price hedges to help supply each winter.

On the gas supply resource base, the first part of our strategy, as I mentioned before, is to have that firm transportation capacity back to
each of the major production basins and large market centers in the U. S.

Again, we are well positioned. We have many, many pipelines across Illinois and it gives us access to all the major production basins and into Canada.

If you look at that map on the upper right-hand side, those red dots are producing fields in all major basins. So in Pennsylvania and Ohio all that red are gas production fields and, as Chris mentioned, six, seven, eight years ago it wasn't totally anything being produced there, now it's not only one of the biggest producing basins in the U.S., it's one of the biggest fields in the world.

So one of the things that we have been working on as an LDC in Illinois is getting access to that new supply from the Marcellus and Utica basins. We also have access to production basins in gulf states, Texas, Louisiana, Gulf of Mexico offshore, the Permian Basin in West Texas, the Bakken Basin, Rock and Shale in the Dakotas. So you can see Illinois is sitting dead smack in the middle
with access to all of these gas suppliers that use production basins.

This is a better graphic of how that gas goes in the state. These are all the major pipelines that cross Illinois, including some to Chicago.

We start in the upper left-hand corner. We are getting direct access to Western Canada supply and Bakken shale. We have pipelines at the border. They're getting direct access to Lockheed Gas, Eagle Rock Pipeline. They're getting direct access to Permian, from pipelines from Permian and Eastern, Gulf of Mexico supplies from Trunkline, and finally coming from the East, and it starts east is Marcellus gas, Utica gas coming in from Rocks and Crest. Rocks and Crest just basically came on the system just this summer. That pipeline was originally built for Rocky Mountain Gas to the Rockies all the way to the east coast, and now because of Marcellus Shale and Utica, they basically reversed it in a bidirectional flow as a competitive system flow in both directions. And
guess what? That Rocks and Crest and Marcellus gas is coming right to us in each direction.

COMMISSIONER McCabe: That's a lot of new supply coming to Illinois. How much of that has increased the demand? We don't have a lot of natural gas generation. How much is that for storage? How much for just access?

Mr. Glaeser: It's a combination of it all. Some of it is new generation resource in a key way. Some of it's for storage injections. Some of it's traveling through us to Indiana or to Missouri north.

So basically we are sitting kind of on the hub of the grid. The grid is like a hub. We are kind of sitting at the hub of the operation, so gas comes to us, but it's also traveling through us as well.

On the next slide, as Chris mentioned this, there is quite a few pipeline expansion projects, and all of these projects listed here will directly impact Illinois.

ANR has a major expansion during
almost half of the UCF per day, Marcellus gas is in the Midwest. I mentioned Rocky Express has a bidirectional flow of 1.8 million cubic feet on the system and has a high demand for bidirectional flow. There's really no expansion project on the east to the Midwest. Now for another .8 BCF. That will be in operation in October of next year.

NGPL's license expansion coming from the Rockies, all of that new supply coming there north to Chicago is 4 BCF.

Finally, one of the monster projects, Energy Transfer Partners, the Rover Project 3.25 BCF new gas supplies from Marcellus, Utica, coming both west to Ohio, Indiana, Illinois, and also upper Michigan, so these are just some of the major construction projects going around the country. These four in particular will directly impact Illinois.

The impact of both the gas supply resources and the shale and all pipeline structure you can see here on NYMEX futures this graph dates back to the 2002 time frame. As you can see
historically before we had the shale gas revolution any major events in gas history caused significant price spikes whether it be late season cold or hurricane, low price spikes, recission, all that created a great level of Co2 in the natural gas history.

Once the shale gas revolution started in about 2009-2010 time frame, this stabilized gas prices significantly, and even with the Polar Vortex back in 2013-2014, which is one of the significant winter events in decades, prices didn't even hit $6. In the futures market, you see in red, it doesn't even get above $4 for the futures, a tremendous price difference for the long term.

As I mentioned, this doesn't mean we should stop price hedging or stop trying to work to have a stable PJM for our customers. We still -- and so on behalf of all the other LDCs in Illinois, all this started from 50 to 75 percent of our normal demand to be hedged in some form or another of price volatility and price spikes. There's a combination of tools. Storage is the
largest ones. Almost half of our gas supply resources for the entire winter comes from storage that's fixed in the price of gas in the ground.

And, as Chris mentioned, the gas prices that summer were very low throughout the summer injection season. Our storage and content were quite low and mostly been in years. Our customers recommended absolute withdrawals.

We also use other methods to control price volatility both in the NYMEX futures market and also financial marketers.

Turning to our current preparations for the upcoming winter, storage inventory levels both our E-storage and on-system storage fields will be on target and filled within five -- the majority of our fields are already full, actually drawing away on some to somewhat smaller fields turnaround to forward download in December.

All our gas supplier sources are potentially completed, and I think one or two of the LDCs have one or two small patches maybe for January, February, March completed, but essentially
99 percent are under contract and the same for the pricing hedging.

As I mentioned before, our high-capacity resources are all under contract and all contract peak design days. Mostly the pipeline capacity resources we have is under contract for three to six years or even longer.

This storage graph is just for Ameren Illinois storage entry levels. The green is the storage we have for the pipelines. The yellow is our on-system storage resources. This gives you a good feel for how we started last winter and how we depleted every winter, includes the peak design day, January 7th, almost completed fields by April, and beginning of April robust injection plan all the way up to this week. Our facilities are basically full. We are fully ready for this winter, and actually have extra for cold weather.

I did want to make a few points about the gas/electric coordination. The LDCs have been participating in FERC's docket, that's RM 14-2, which is the coordination combining the gas
industries. We do work very closely with the AGA. In fact, the AGA represents us before FERC in our positions that we support.

We didn't potentially make one key point and some of us have generation on our system. We do not have very much generation like Peoples and Nicor do, but there's a common theme and that some of the power generators that operate in Illinois do not have firm capacity resources or storage to ensure firm delivery during the wintertime.

And so when the interstate pipeline becomes restrained, in other words, when LDCs themselves utilize capacity and lose capacity, there's no interruptible capacity available for those generators to utilize and that's caused some problems in the past with gas generation in the wintertime.

So we firmly believe that these generators -- not all of them -- there's some that do overcapacity, but the ones that do not intend to run in the wintertime the RTOs need to count on for generation for the winter do need to have firm gas.
supply resources and past resources lined up to ensure operation in the wintertime, some do not, and because there are constraints, some on the LDCs, some on the pipelines, there might have to be some expansion projects to see how this works for all generations out there, but the pipelines will not stay in the system without long-term contracts, so this is an issue that we want to bring forward in this forum.

And, again, one other point is many of our LDCs they were designed with the theme of a residential/commercial heating load and they were not designed to have generation facilities operate during the wintertime, so that same impact of that demand during wintertime as generators on the LDCs' system may need or require expansion projects to be able to handle this load as well.

Finally, to summarize, again, natural gas prices are expected to be relatively stable and flat for the foreseeable time frame up to the 2020 time frame. Our gas supply position, our hedging are basically complete for our very first winter.
Our storage injections are on schedule and full due to a Leap Year.

Based upon current market conditions and current storage and our price hedging, we expect our PGA rates for this winter to be 10 to 20 percent lower to our customers.

Again, our customers' bills are dependent upon the extreme cold. The overall bill will be higher with the PGA rate lower than normal.

That concludes my forward remarks.

I'll defer to any questions.

COMMISSIONER MAYE EDWARDS: I think you did a great job. Looks like there's no questions.

MR. GLAESER: No questions.

COMMISSIONER MAYE EDWARDS: With that, we will move on to Tina Yoder.

MS. YODER: Thank you. Good morning, Mr. Chairman and Commissioners. I am Tina Yoder, Director of Energy Efficiency at MidAmerican Energy, and I'm here today -- sorry. I'm here today on behalf of the Illinois Utility to Share Energy Efficiency presentation related to winter
During our presentation, we are going to focus on the communication channels used to share information about energy efficiency programs and other initiatives we have underway that will help customers save energy and reduce their bills.

We also are going to discuss the actions that utilities take within our programs to ensure consumer protection when using the programs and how the utilities' energy efficiency outreach and education efforts help customers prepare for the winter and higher winter bills.

So although energy efficiency programs have only been in Illinois for around five years, Illinois' energy efficiency programs are being recognized as the leaders in industry across the country.

The 2015 AAA score card actually ranked Illinois in the top 10 and gave kudos for being seen as the leaders in pushing the boundaries in regards to energy efficiency and how our efforts can be enhanced through policy and regulations.
Illinois was actually only one of two states to receive a perfect score for its efforts around building energy codes and compliance, and, as a result of these efforts, energy savings in new buildings and existing buildings continue to increase and result in overall energy savings to all customers.

As you can see on the slide, throughout the year, Illinois utilities use multiple channels to deliver our energy efficiency messages to our customers, our trade ally partners and other stakeholder. Each utility has a mass media campaign that helps to increase overall recognition and awareness about available programs. We all use programs specific campaigns to further reach specific segments or niche markets and we continue to use a variety of other customer communication and community events to reach customers directly and then Byron said they either participate in or live upon.

But the important part I think to remember here is that no matter what the channel of
communications that we use, our message is
continuing to always focus on the ease of
participation, the actual rebate bill savings that
customers will achieve by participating and what
add-on values their actual equipment improvements
will bring to their homes and businesses across this
state, and it's really important that all of our
customers understand the things they do today will
not only save energy for this winter but for winters
to come.

All of us strive to bring
best-in-class programs to our customers that will
maximum our energy savings, realize in our homes and
businesses in the state. The safety of our
customers in delivering sound and quality --
high-quality programs are our priority. To ensure
that we do this, we use things like upfront
screening and have a very sound planning process
that will help maximize the value of individual
measures actually bring to our customers.

We also require that our products that
are being rebated are Energy Star labeled. This
helps to ensure quality and energy savings being recognized. By completing training and certifying contractors and completing post implementation and third-party EM&E, we help to ensure that we have quality services, proper installation and sound energy calculations all of which are items that help protect the customers while using our programs and to ensure that we are good stewards of ratepayers' money.

Additionally, customers' testimony, public recognition and support from elected officials help to build customer confidence, awareness and trust in the programs.

The utilities continue to work together to deliver joint programs to common customers. By partnering with each other, we lower the cost of programs and in essence help lower the cost of all of our customers in our service territory.

Obviously, the winter is the right time to have the energy efficiency message out in front of our customers. It's when the gas usage is
the highest and it's at the forefront of your mind
the perfect time for customers to hear all of the
energy messages on how and what actions they should
take now to help themselves in the future.

As we discussed earlier, we have a
variety of avenues that we use to reach the customer
groups throughout the year and using all of those
channels become really important during the winter
and when consumption climbs and the higher bills are
landing in our customers' mailboxes.

We use additional efforts in the
winter, such as targeting campaigns to school-aged
children. There are utility kid programs like
SuperSaver, Kids Action, and E-Smart Kids to help
kids understand what they can do to help manage
their families' energy consumption during the
winter.

Like any big business, the utility
wants to talk to the customer at the right time with
the right message, and we believe all of the things
that you see on the screen are ways that we help to
demonstrate that we are helping our customers
prepare for the winter season before it arrives.

Let's face it, we know that winter can be harsh for many of our customers, therefore, utilities work together to deliver best-in-class energy programs throughout the year and to communicate with customers on how these programs can help them minimize the winter impact before it's upon them.

Sharing information frequently and through multiple channels helps to educate our customers. It helps to also educate family members and the communities that they live in to further understand the programs and services that we have available to save energy and reduce their bills in the winter months.

Our programs bring highly-skilled and well-trained work forces to their doorsteps to assist them in making the necessary improvements in their homes and businesses that will not only save them dollars this winter but for winters to come and also helps them maintain low energy costs.

Customers don't necessarily want to
think about winter, nor do they want to think about our programs at all times, but the programs are there and our continuous communication efforts through education helps these customers that really want to manage their costs and that want to look at ways of improving efficiency in their homes and businesses to know who to go to and how to make the most effective improvements to their homes.

We offer opportunities through low-cost and no-cost opportunities, as well as providing capital investment directions, and the large presence that we provide through our trade ally network also gives them a direct link to those people that can help them and also understand how to use the programs effectively to minimize the cost to customers.

So that is the end of our presentation, but we are here to answer any questions that you might have.

COMMISSIONER del VALLE: You indicated that the programs are there, but, as we talk about winter preparedness, one program that's not there is the
Supplemental Low Energy Assistance Program the state supplements. Do you know when the federal dollars are going to run out and when the customer --

MS. YODER: I know that much of that is going to be covered in the next presentation.

COMMISSIONER del VALLE: Okay. Then I'll wait.

MS. YODER: It's going to be covered there, and think we were trying to keep from overlapping, but I do know that many of us are going to be impacted with that and what funding is available, so I think I'm going to leave most of that to come with the next conversation.

COMMISSIONER del VALLE: Thank you.

COMMISSIONER McCabe: You discussed a variety of programs, devices and networks, and I realize this is increasing over time, but do you have any sense of the impact it's having in terms of research?

MS. YODER: Well, we have a large -- we have looked at making that -- the Illinois utilities have put together as part of the same team a document regarding savings. I think we have statements there that like time savings are well over 7.2 billion kwh
at this point in time that we feel like we have a large impact to the economy.

I don't have all of those numbers directly in front of me, but I do believe we could share the SAG documents as well along with -- sharing the same documents with the Commissioners as well.

COMMISSIONER MAYE EDWARDS: Thank you, Ms. Yoder.

Moving on to Michelle Rindt.

MS. RINDT: Good morning. Good morning, Chairman and Commissioners. I am Michelle Rindt, Vice President of Customer Service for PGL and North Shore, and I'm here this morning on behalf of all the LDCs in Illinois to address customer service and outreach.

Some of the key topics I'd like to discuss this morning are financial assistance and support for our low-income customers, customer experience, looking at how we deal with our customers, our challenges, of course, safety and certainly energy efficiency, as we heard from Tina, is certainly a cornerstone of our communications and
outreach, and thank you for including that in your presentation this morning.

So financial assistance in 2016 the federal LIHEAP funding for Illinois will be $149 million. That compares to 151 million last year. In proportion to that, Illinois ranks fourth in general fund levels, and that certainly doesn't come without the efforts of many of the Illinois LDCs as far as engaging with the National Energy Utility Affordability Coalition, the American Gas Association and other trade utility organizations to really raise awareness around our low-income needs for our customers and our households.

LIHEAP advocacy is a year-around event certainly but really culminates on March 2nd when there's a LIHEAP action date, and advocates are there working with the congressional process to make sure that the funding is there.

In August we also have a LIHEAP action month and that supports our efforts to keep the LIHEAP topic in mind, so, again, that's really important for our customers to make sure we get that
funding. Approximately 300,000 customers in Illinois receive a LIHEAP.

Financial assistance in addition to LIHEAP --

COMMISSIONER del VALLE: So I can get the answer to my question, you didn't mention the state supplemental amount.

MS. RINDT: Right. So this --

COMMISSIONER del VALLE: What's that amount normally?

MS. RINDT: Normally that amount would be -- I believe that's $75 million, and then 7 million in addition for weatherization.

COMMISSIONER del VALLE: Seventy-five million?

MS. RINDT: Seven million.

COMMISSIONER del VALLE: I'm sorry. Seven million for weatherization?

MS. RINDT: Yes, so the total would be $82 million.

COMMISSIONER del VALLE: How much fewer individuals will you be able to assist as a result --
MS. RINDT: Right. I'm not sure that there will be --

COMMISSIONER del VALLE: -- of the state's share?

MS. RINDT: I'm not sure there will be fewer individuals. I think there will be less money given. I mean, I don't know what the ultimate -- I guess depending upon how many customers apply, but the customers that are applying for LIHEAP right now do receive a reduced amount due to the state -- some of the state's challenges, so I think we are going to continue to monitor that. I don't know if the other utilities have any other specific information or plans with regards to that.

So, in addition to LIHEAP, we also have -- each of the utilities have financial assistance programs, and these are very important to our customers as well. Up on the screen you can see each one has a different name to the program, but really serve our customers that in the same way and is providing additional funding on top of the LIHEAP, and the guidelines for LIHEAP is at or below 150 percent of the federal poverty level. These
programs are at or below 200 percent of the property level.

We are pleased to say that so far in 2015 the utilities is first at $1.87 million, even better I think is that there's still $1.5 million remaining. So to the extent our customers don't need those dollars for assistance, that money is available, and we expect the same level of funding for next year from various utilities.

Certainly having the money there is key but making sure our customers understand that those dollars are available so we put a lot of emphasis on outreach and making sure customers understand where to go versus how to do that. We make sure that we offer information through various sources, whether it's printed information, events, partnering. We have some attachments and presentations that actually highlights some of the specific events, and I can touch on a few of those later, but, again, making sure that we use all different types of media to communicate to our customers and give some examples out there.
We also look from a customer experience standpoint to make sure, again, we are reaching customers through various channels. We know all customers don't hear information the same and don't have the same access to all information, so, again, you know, some prefer the website, some IVR, some like phone calls, so again using those various sources that we can reach all of our customers.

Kind of the message through all of this is really, you know, start early with us, call us, contact us. We can't work with you unless you reach out to us, and, again, we are trying to reach out to them as much as possible but work with us early on. That's when the funds are available and that's why we can help them the most in the sense of really getting on the right track for the winter months, you know, giving our call centers, for example, refresher training so when they are talking to a customer they are really probing as to whether they need assistance, do they need help managing the bills, getting to the billing programs, all types of
things, before our customers start to experience financial challenges.

Another area, and certainly safety is a year-around activity and a focus for all of the utilities, but one of the things we want to make sure is that this time of year we really call attention to some of the key challenges or concerns you have during the winter months. I think we can all become complaisant sometimes, but the risk of the carbon monoxide build up, ice and snow removal and fire prevention is extremely important, so we want to again emphasize these on whether it's through print ads, radio, different events, again, some of the things are highlighted on the screen.

Again, some of the efforts are listed in the appendix, and I will speak to that as well.

And although this is not a winter issue, we also want to take time to address the possibility for scams. I think investment in the natural news is certainly no different for our customers in Illinois, so highlighting that to make sure that as far as being safe, that's another concern that we
need to be aware of and raise that awareness and customers can be very trusting. We want to make sure that they are safe at all times.

So, again, here are some examples of another selection of outreach messages. So, again, we want to make sure we're focusing on bilingual, again, different ways for customers to obtain information around financial assistance, weatherization, various programs that we offer. So some of the winter programs, and you can read all those, and I will highlight just a couple of them.

The fourth bullet talks about Nicor Gas reached more than 16,000 customers through 32 community events to educate them on ways to control costs before the heating season. Nearly 1500 free energy saving kits were distributed through the energy efficiency program at the start of the heating season.

The sixth bullet down talks about in October MidAmerican Energy produced a home check program video. It was via U-Tube, Facebook and Twitter, and it's also a monthly residential
newsletter. A video will remain on the U-Tube and promote throughout the winter a customer newsletter and social media.

On the next slide, on the third bullet, Peoples Gas along with Congressman Danny Davis, the Community and Economic Development Association of Cook County, on December 5th are partnering a utility source fair to provide financial assistance, billing support, and energy efficiency advice at Mark T. Skinner Classical School, and Ameren Illinois will reach out to more than 12,000 teachers through Kids Act on an energy program with information about electric and gas safety.

Our teachers have the opportunity to order materials and access lesson plans which is regarding energy safety, and more than 50,000 students will receive this information this year, so, again, some great examples and more highlights up there as well.

So with that, any questions regarding customer service outreach?
COMMISSIONER MAYE EDWARDS: I think that is it.

Thank you very much. Can we have a round of applause for our panelists.

(Applause)

On behalf of the Illinois Commerce Commission, I would like to thank you all for a very great Part 1 of today's Policy Session on Winter Preparedness. Thank you for your participation and your traveling for those of you who have come from out of town.

It is absolutely comforting to know that a great effort has been put into ensuring winter readiness, especially this season. Again, it is very timely.

Now we will break for lunch a little bit earlier and we have a treat, but we will resume at 1 p.m. for Part 2 of today's Policy Session on Resource Adequacy in MISO's own footprint, so we look forward to seeing you back here, and we'll start promptly at 1. Thank you.

(Whereupon, a luncheon break was taken.)
(Whereupon, the proceedings commenced as follows:)

Good afternoon, everyone. I want to make sure I deliver on my promise to start promptly at 1:03, just like I said. So good afternoon.

Hopefully everyone had a good lunch, and is stuffed, and is warm all over again.

So welcome to Part 2 of the Planning for the Future Policy Session. In this portion of the policy session stakeholders will discuss issues surrounding resource adequacy in the Ameren Illinois footprint.

I would like to begin by thanking all of our panelists for their participation in what I'm sure will be an engaging and informative discussion.

When it comes to a discussion of resource adequacy, Illinois is unique in a few ways. First, while most of other MISO states are vertically integrated, Illinois is a restructured state which can make price signals and long-term planning processes less difficult.

Additionally, Illinois is a donut hole
state as some of us like to call it. We are part of both PJM and MISO, which each have their own price forecasting and capacity auction mechanisms.

One also could not overlook the unprecedented changes in the electric industry nationwide. Such a shift in generation and the introduction of renewable resources and how such changes can impact capacity markets and price signals. These factors, and many others, make the resource adequacy topic more than ripe for discussion.

The purpose of today's session is to bring relevant stakeholders to the table to discuss and identify potential resource adequacy issues that should be addressed in Illinois so all of us can continue to work together to best serve the consumers in our state.

We will begin this afternoon's session with some brief background comments from MISO, which each panelist is invited to respond. We will then move into a roundtable discussion of the following questions, which will remain displayed on the screen.
throughout.

Those questions are, "Is long-term Resource Adequacy being adequately addressed in the Ameren Illinois footprint? What are the benefits of ensuring long-term resource adequacy in the Ameren Illinois footprint? Which entity or entities by design or default should be responsible for ensuring that long-term resource adequacy? Assuming MISO is the responsible party, what improvements or changes should they be making to that construct? And what are the primary concerns stakeholders have with long-term resource adequacy? Please join me in welcoming our seven panelists, Jim Blessing, Senior Director of Power Supply and Infrastructure Development at Ameren Illinois; Dean Ellis, Vice President of Regulatory Affairs at Dynegy; Bill Berg, Vice President of Wholesale Market Development at Exelon; Susan Satter, Public Utilities Council at the
Illinois Attorney General's Office; Anthony Star, Director of the Illinois Power Agency; Todd Ramey, Vice President of System Operations and Market Services at MISO; and Jim Dauphinais, Managing Principal at Brubaker & Associates, Inc., here on behalf of Illinois Industrial Energy Consumers.

And, as you see, we have a dynamic panel here that is probably ready and waiting for all of the questions that we will be throwing at them, so thank you. And if you could give them a round of applause for me, we will get this going.

MR. RAMEY: Thank you, Commissioner, Chairman and Commissioners. Good afternoon, and hello, again. I will be, as mentioned, going through some brief comments just to kick off our conversation.

I will start by giving an overview of what resource adequacy is and the important role it plays in supporting the RTOs' mission of ensuring the delivery of reliable and efficient energy in all points of operations.

I will then go into a discussion or a brief description about MISO's resource adequacy
construct to-date, how it's designed, what the underlying premises are, and that will lead into a discussion about potential or rather if MISO's current construct is sufficient to meet the needs of the Ameren Illinois footprint.

So with that, again, the core mission of any RTO is to oversee the bulk electric system, manage the assets, both generation transmission, to ensure the delivery of reliable and efficient energy to all the members of the RTO.

Sounds easy enough, but in the operating time frame fortunately for those states, it is a pretty straight-forward process. There's an operational planning period where the RTO works with the asset owners through a market-based mechanism to make selections about which generating resources could be instructed to bring their units on-line primarily in the next operating day, and the energy schedules from those committed units would be sufficient to meet that requirement of the delivering reliable, efficient energy.

So what's resource adequacy and how
does it play a role in that process?

We all understand the concept of reliability. In reality, reliability is delivered to loads in the RTO footprint every day in real-time. Resource adequacy refers to the processes, the systems that are in place before the operating time frames leads a party or parties that have a responsibility to analyze and make important investment decisions about those generating resources that will be in place in future time periods to make sure we have a reliable electric supply.

Why is it important? Those investment decisions include both investments in existing assets that need to be made to ensure that those resources are available to meet future delivery obligations. It can include retirement decisions before making the decision not to make those investments in existing resources for future availability.

It includes decisions on procurement so contracting to receive additional firm generation
resources to meet load obligations, and it includes
the decision to make investments in new generating
resource, decisions made today for future delivery
and assurance of that reliable systems operation in
the operating time frame.

It’s important for customers for a
couple of reasons. One, if we get the balance
incorrect and we make insufficient investments in
resources needed to reliably meet load obligations
in future time periods, we could have reliability
problems in the future.

The second area of why it is so
important is that the investment decisions that I
was just describing involve large amounts of
dollars. These are huge capital investment
decisions undertaken by large companies that
unnecessarily are large given their requirement to
be able to finance these investment decisions.

So inefficiencies and information that
causes poor decision-making in the investment time
frame could have a potential large dollar impact on
customers.
CHAIRMAN SHEAHAN: Todd, can I ask you a question real quick. You discuss the what and why, but the important threshold question for us here is one that I think Commissioner Rosales touched on, what is the who? Who ultimately is responsible for determining resource adequacy?

MR. RAMEY: I'll speak to that on the slides and see if I get you the answer to that question.

Balancing act -- I talk a little bit about the day-to-day process of ensuring reliability in an operating time frame. At that point decisions on investments have been made in the past and the operator is left with the outcomes of those decisions which are arrived on an operating time frame.

Long-term reliability is a process that MISO administrers under its tariff. MISO's design premise for ensuring resource adequacy in a planning time frame is premised on the notion that it is a shared responsibility between MISO and the states and utilities in the RTO footprint.

Now it is premised on the notion that
it's shared with deference to individual states on their preference for the level of participation they would like to engage in in resource adequacy.

So I mentioned earlier today MISO serves all or parts of 15 states. The majority of our footprint exist in states that have traditionally utility regulations, fourteen states that's largely true, exception being Illinois.

The answer I get from those 14 states or MISO gets on their preferred level of participation, the acceptance of accountability for the resource adequacy process, is they want to be heavily involved with that and they would prefer that MISO make up the difference which is mostly limited to being a vehicle for providing information and transparency.

The reason that MISO -- one of the reasons MISO's recently analyzing producer-issued statements related to the process for Ameren Illinois is that if the expectation is that MISO should play a much larger role in that responsibility, MISO has concerns that the current
resource adequacy constructs that we directly
administer may not be sufficient. It may not have
the attributes that you would expect to be in place
if you really wanted to rely on MISO's mechanism to
ensure resource adequacy for Ameren Illinois.

CHAIRMAN SHEAHAN: That's kind of the crux of the
problem, right, going forward is unusual to make,
presents some challenges? Illinois is restructured.
It's not the ICC's job to identify and, you know,
determine this question.

So given that, ultimately who signs
off? MISO with FERC's kind of approval?

MR. RAMEY: Yes.

CHAIRMAN SHEAHAN: Thank you.

MR. RAMEY: Caveat, yes, with the understanding
MISO needs to have the understanding of Illinois'
preference for their level of participation in that
process. It could be zero. MISO stands ready to
take care of the balance.

MR. BLESSING: Jim Blessing with Ameren Illinois.

I want to thank the Commission for taking on this
issue, because this is a very important issue for us
and our customers who are concerned with long-term.

The thing that I just want to add, too, that is I agree with what you were saying that it's a shared responsibility, and I think a utility's role and a state's role, given that we are a choice state, is we need to be very diligent in looking at the markets that are in place today and the policies that are in place today to make sure that they work for our customers on a long-term basis to ensure resource adequacy.

If the markets don't work, we need to be advocating for the right market designs. If we cannot achieve those market designs, we need to take it back internally and look to internal state policies for their legislative changes or some other solution would get us there.

I think we have -- all of us in the room have a significant role in making sure that the Illinois policy is correct for our customers.

MR. RAMEY: So the question comes up of why now? Resource adequacy construct has been in place. MISO is not different or materially different from the
construct that has been in place for a number of years now.

What's changing? Well, the environment in which we are thinking about resource adequacy in the near term is changing. I mentioned earlier that the result of recently enacted environmental regulations, primarily the match rule, resulted in about 11,000 megawatts of coal retirements over the last few years in the MISO footprint, and we look forward in analyzing pitch limitations of the clean power plant as an example. We think that another 10 to 15,000 megawatts of generation of footprints could be distressed as well.

So in MISO we're asking ourselves what are the processes in place to make sure that we shrink from what had been actual reserve margins in the footprint that had substantially exceeded minimum requirements. They're starting to see that pull back already where the actual is coming back towards the minimum requirements.

As you approach minimum, the
importance of the information that these parties rely on to make those investment decisions becomes more and more critical. That's the environment that we believe that we are looking forward to.

So we have got retirements, and another reality that affects resource adequacy in MISO is internal generation of the MISO footprint is seeking to sell their capacity to load outside of the MISO footprint essentially removing them from being a potential capacity resource to meet those future obligations within the MISO footprint, so it's not just a concern with retirements. You have choices that are being made by a set of owners on which loads they would like to serve which some of their decisions being made to serve load outside the MISO footprint.

So, as I mentioned earlier, MISO has kicked off conversation internally with our larger stakeholder group. We have developed an issue paper trying to raise and highlight this issue. Are the resource adequacy constructs available in the MISO tariff MISO processes today sufficient to meet the
needs of proper information and incentives to lead to good investment decision-making in the Ameren Illinois?

As I mentioned earlier, we do provide and give deference to states on their preference. Part of what we are listening for here is to make sure that MISO doesn't make any assumptions about the preferences of how these processes are handled in Illinois.

We think we have a good understanding, but we are certainly looking forward to the discussion today to make sure we are on the right track what we think those preferences are.

COMMISSIONER MAYE EDWARDS: When you say "the state," do you mean all of the relevant parties or relevant stakeholders in the state? Do you mean the Commission when you say the "state's preference?"

MR. RAMEY: All of the above. So state policy in total adds up to define the preferences of individual states on how they would like to engage in this, so you think of a traditionally-regulated retail state, you have state jurisdictional
utilities that own generation load. The states
themselves certainly regulate those utilities and
traditionally have been involved in the investment
decisions that those utilities make.

Those utilities have long-term
planning departments. They're engaged in
implementing their process, how they administer
resource adequacy through those planning processes,
processes through state legislation or regulation in
place where those utilities are in advance seeking
an opportunity to recommend their investment
preferences with their regulators with some feedback
and prior approval, including an agreement for
recovery of those capital investments assume that
they're deemed to be prudent.

So a state may not have explicitly
said I want to take this on myself with those
regulations and statutes were put in place, but the
end result is that the state is very involved at
that level in making those decisions.

So a state like that would look to
MISO and say I don't know that my state has an issue
that I need you to solve, MISO. So in that case we will say, okay, we will provide information that's supportive to you or your utilities in making those decisions, but we won't presume that we need to deliver solutions for problems your state doesn't have.

CHAIRMAN SHEAHAN: So how do you balance those interests? How, on the one hand, do you sort of respect the other states' authority to make those decisions in kind of the unique circumstances that we have in Zone 4?

MR. RAMEY: You want to try that one?

MR. BERG: I'll try this. I'm Bill Berg.

As I think about this, I think about the analog. When I look at Southern Illinois, I think it looks a lot more like Northern Illinois in terms of market construction. There's retail choice; there's competitive markets; there's reliance on wholesale prices, both in energy and capacity market, to support resource adequacy.

So if you believe that premise and you look at the state's role with respect to PJM, the
state's role with PJM was one of -- and it was in Exelon's interest. I think we met with all -- about capacity market performance that was going on with PJM, because we wanted you to have awareness of problems we were trying to solve to take any feedback that you had on that, and hopefully when the filing was made at FERC, in that case by PJM, and hopefully in the next case by MISO, there's an awareness, and an understanding, and ideally support for the objectives that the market design is trying to create. That's how I kind of view that balance.

The guiding light post for what constitutes success, in my opinion, is are you producing -- in Southern Illinois as in PJM, are you producing competitive, just and reasonable rates that support the efficient exit of generation resources and retention of existing resources that are economical, and competitive, and attracting new resources. That should be our guide post when we are trying to design a competitive wholesale market to support resources adequacy.

MR. RAMEY: To answer your question,
Mr. Chairman, I think MISO is in the business of trying to make sure we understand the critical issues that the membership faces and exploring -- once there's an agreement that there are issues that MISO is in a position to help address exploring solutions that could meet or mitigate those issues once they're identified.

MS. SATTER: If I may --

COMMISSIONER MAYE EDWARDS: Of course. Actually, Sue, excuse me. Actually we are kind of definitely in the discussion phase, so if you wouldn't mind --

MR. RAMEY: Thank you.

COMMISSIONER MAYE EDWARDS: So go ahead.

MR. RAMEY: To sufficiently kick it off and bring it to a close, I mentioned the issue statement that we released for review by the larger stakeholder group. That was last month. We followed up discussion items.

Again, I think the risk of the footprint and the feedback we are receiving understands that the concerns and issues in Ameren Illinois are unique and were being discussed
potentially and addressed, so let the discussion begin.

COMMISSIONER MAYE EDWARDS: Sue.

COMMISSIONER ROSALES: Well, actually, Commissioner, I have one question for clarification. Under the footprint, as of June 6th, 2300 megawatts MISO committed to PJM. I'm kind of -- help me here. Does capacity move when it wants to move?

MR. RAMEY: Yes, under certain rules. So PJM, neighboring RTO runs a market-based auction process to procure in advance capacity that they need to meet their resources adequacy requirements. A generating unit outside of the PJM footprint is eligible physically and commercially to provide that service to the load within PJM. That's what this is referring to. PJM runs an auction process to procure capacity three years in advance and 2,000 megawatts of generation owned by independent power producers in Illinois offered their capacity in 2013 into the PJM Resource Adequacy Planning Auction and cleared three years in
advance their obligation to delivery beginning on June 1st of 2016.

Capacity can only serve one load, so those 2300 megawatts for this time period, at least for that year, is probably longer, is not eligible to be capacity resources to serve MISO.

MR. BERG: Commissioner, just to add real quickly, I have a slide at my desk that I would like to walk through and kind of why now a supply and demand, and you will see how those exports impact the overall exports to PJM and impact reliability timing.

MS. SATTER: Thank you, Commissioners. I just wanted to comment briefly on the Chairman's question, given that Illinois is different from the other MISO states, how should we approach that, and, just in a general way, without getting into specifics, yes, we have chosen as a state to rely on markets, and I think the first step is to look at those markets and say are they working, do we have sufficient resources today, have we had sufficient resources since the inception of the market, and how
were we doing.

There are different levers when you have a market situation than when you have a vertically-integrated state, and there are several of them. One of them is certainly what goes on in MISO, but the other ones are quite simply the bilateral contract that makes up the vast majority of the energy supply in this state. Those contracts, which can go two, three, five years, provide signals to generators, provide assurance to consumers that electricity and power is available to them.

We do have a different structure, and I think that we have to be careful not to say, well, if it's an either/or, it's a PJM model or it's a vertically-integrated model.

Southern Illinois is a little bit different. MISO has a different structure for its capacity market. They have different prices. The power that's available to Southern Illinois from the MISO pool is different than the power that's available in other PJMs.
PJM looks east where there are resource adequacy problems. MISO is more central where we -- I think it was commented this morning for MISO as a whole there are not resource adequacy problems as we are sitting here today.

As far as the Commission is concerned, this Commission, the state decided that you would not be responsible for generation, but there are other important policies that you are responsible for, such as encouraging demand response programs, encouraging energy efficiency, things like that, that would then also provide resources to the state and have a side benefit of having a price-to-pricing effect.

So I just wanted to set that kind of state so that we don't look at it as an either/or or a binary choice. There are a lot of options for us.

And, finally, the federal government through FERC, but also through the energy policy, as of 2005 has placed responsibility for resource adequacy nationally with the NERC, National Electricity Reliability Council, and they issue
reports. They issue standards. They have the authority to impose penalties, so there are all these different avenues available to examine this issue.

Thank you very much.

CHAIRMAN SHEAHAN: Thank you, Sue.

I don't know if there is or isn't, but is it your office's position that there is not a resource adequacy problem in Zone 4?

MS. SATTER: Today we do not believe there is a resource adequacy problem today. What we have found through our analysis is that there is sufficient capacity.

CHAIRMAN SHEAHAN: By "today," you mean in the foreseeable future?

MS. SATTER: Yes. Yes. And, in fact, the NERC report, which is from MISO as a whole, and not just for Zone 4, does not see a resource adequacy problem in their analysis, and it goes out to 2004. Now this is a year old.

At the same time, we recognize power plants out there. We recognize that there are
changes in the market as a result of the low natural
gas prices and availability of natural gas, but
changes that are happening are happening
incrementally, and we certainly can and should
respond to those changes as they manifest.

I think the changes right now are just
to equate to where we would really be able to make a
policy, particularly when we are sitting in a
situation with 20 percent reserve. So Illinois is
actually in pretty good shape.

I think our problem is more of a
problem of market design, whether it's the MISO
market design, and I think everybody knows we have
complaints before FERC on that and that we have
cconcerns about the existence of a pivotal supplier
in that zone, but what we don't have concerns
sitting here today is about lights going out.

CHAIRMAN SHEAHAN: I wonder if any of the other
panelists would kind of take on that question. Are
there current market signals adequate for
maintaining capacity?

MR. BERG: No, they're not. We have been in
industry. We have been through capacity market debates for 10 or 15 years, 10 in MISO and the rest in the balance of the country.

We know we have developed what a functioning capacity market looks like and the prices and revenues that it should generate. We have learned as an industry the hard way on what not to do when designing capacity markets, and MISO's capacity market currently has many of the flaws that all the other RTOs have already been through, suffered the consequences of, and fixed, so that is where we are at.

If I can, I would like to talk about resource adequacy in Zone 4. I think it is possible I can walk you through that.

MR. DAUPHINAIS: And I could respond to this as well.

MR. BERG: I look forward to it.

MR. DAUPHINAIS: If I could respond to what was just offered.

CHAIRMAN SHEAHAN: Please.

MR. BERG: And I want to go back to this notion
that there's a bilateral market out there which would solve all the world's problems in a deregulated resource choice state. That's factually incorrect.

What we have seen historically is the bilateral market uses as its reference point clearing prices from capacity markets.

Why would I pay bilaterally a just and reasonable rate of a hundred dollars a megawatt day when I can just buy it from MISO for 1.50 a megawatt.

So unless you have a well-functioning wholesale market that is producing prices that are just and reasonable and support resource adequacy, you will never get a bilateral market, and the resource adequacy problem will just occur.

All of a sudden there would be no more bilaterals. There would be not enough supply in the capacity market and then it's too late.

COMMISSIONER MAYE EDWARDS: Sue, it sounds like you are saying that market design issue and ultimately reliability, which actually are two
separate issues, but eventually doesn't that -- right?

You are saying that, for example, the part that you reference, which was a year ago, you think it would still have the same results even though this year's capacity auction resulted in --

MS. SATTER: Yes. I don't think that the capacity auction drives the NERC's analysis.

COMMISSIONER MAYE EDWARDS: Okay.

MS. SATTER: If the price is so much higher in Illinois in the last auction that it -- if anything, it would imply that there would be more capacity available, right?

MR. BERG: In Zone 4? Who's building in Zone 4? All I see in Zone 4 are retirements.

MS. SATTER: I standby what I said.

MR. DAUPHINAIS: There's 2000 megawatts in the MISO-generation interconnection queue that has proposed in certain cases 2020 our generation is considering building in Illinois.

MR. BERG: In Zone 4?

MR. DAUPHINAIS: In Zone 4.
MR. BERG: I have seen generation queues. I mean, there's probably 50,000 megawatts of generation in the MISO-generation queue, probably just as much in the PJM queue, and only a fraction of it gets built. There's plenty of evidence to highlight that generation queues are not a good indicator of future resource adequacy.

MR. DAUPHINAIS: They're indication there is interest in investing in an area, and that's what they do indicate. I think it's important -- first of all, I want to thank the Commission for providing an opportunity for Industrial Energy Consumers today. Illinois Industrial Energy Consumers consider reliability under resource adequacy a very important issue, but there's another side of this and that is cost, and that has to be balanced.

Within the past nine years we have had differences in how capacity resource adequacy is addressed in PJM versus MISO. In PJM we view it -- I would view it as high-belt suspenders, a lot of rules. You have to do a lot of things well in advance, and there's various mechanisms to help prop
up the prices.

If we compare what customers in Illinois and Southern Illinois pay for resource adequacy versus Northern Illinois in the past nine years -- and I have been through those numbers -- for a 50 megawatt large industrial customer, it would cost a million dollars more a year in order to pay in the south if they had to pay for capacity the way it's paid in the north.

For a residential customer with say a 3 kilowatt equal contribution at $61 a year capacity nine years, they would have paid more.

So it's very important to look at resource adequacy to see what we are really getting, if we had additional rules, what does it do besides raising the price? Do you actually get a benefit that's worth the price?

I would also note that it's not a foregone conclusion that PJM is the only way to get at resource adequacy.

I would note in the State of Texas, the independent system operator has been operating
with no capacity requirement whatsoever during this entire period. They had debated the possibility of a capacity market, and the Commission has consistently down there determined they don't need a capacity market and that market -- it cannot be said that PJM's outperformed their top market in terms of resource adequacy as studies showing that. I think that's what I wanted to get on the table.

Along with it, I did provide a handout from Burbaker Associates, and on the bottom that does layout the facts regarding where we have been the past 13 years in resource adequacy in Illinois, and where we are now, and what the projections are through 2020.

And, yes, the clean power plants come in 2022, the clean power plants carefully studied, the limitation plans have moved forward. Unless we understand that, there are likely market change rules, not just resource adequacy but in all aspects of market design for MISO and PJM.

COMMISSIONER MAYE EDWARDS: Thank you.

Dean.
MR. ELLIS: Commissioners and Chairman, thank you very much again for having the meeting today. I think it is very important to have these discussions for a variety of reasons. One is that there just seems to be so much confusion over as documented patently the market monitor for MISO.

No one has ever really identified what the objective function is of a MISO capacity market and that's leading to a lot of these issues, against the different constructs between the states, and we in Zone 4 we don't want to intrude on the other 14 out of 15 MISO states' right to oversee resource adequacy in their vertically-integrated construct, but we have to get the design here correct.

Just to respond to a couple of points that were made, it is true that Air (phonetic) Pericot did not have a capacity market. Air Pericot also has much higher energy price caps, and that's the energy price going much much higher, upwards of $10,000.

We don't have operations in Air Pericot. I can't speak directly to it, but we rely
-- as an independent power producer, we have no cap with customers. We have no cap. We have no rate base. We have no customers that we can pass these costs on to. That leaves us two sources of revenue, and that's energy or capacity, and we do have different channels to those two markets.

We can sell out bilaterally, and we do. We have retail business. We sell to that retail business and, equally as important, we rely on the market, and we also rely on the market to send the appropriate price signal to key off the bad bilateral market, so it is true that (sic) Air Pericot does not have a capacity market.

I don't think the ratepayers, beginning with the industrials, would have tolerance for $10,000 prices in Southern Illinois, energy prices that is, and that's one reason we have the construct that we do, the combination of capacity market and energy market working together, and just one more point, then I will turn my time over.

This has a very similar construct.

They went through seven years of its capacity
market. It has a vertical demand curve for its
capacity market and it had excess supply, and excess
supply masks the real problem, and all of a sudden
when the floor came up, the administrative floor
came up, the generators were forced to potentially
clearing zero dollars for their capacity, there was
a wave of retirements. That pushed demand
fundamentally on the other side of this curve and
all of a sudden now there's a shortage of SME never
having to catch up.

So all we ask is to -- there's a
constructive design in MISO's own floor, and I
think, as folks have said today, Zone 4 is different
and we do encourage the Commission here to instruct
stakeholders to find solutions.

Now we have passed the incident, I
think the next question is the when. A lot of these
issues have been pending for upwards of five to six
years. The market has been working in different
forms and fashions for upwards of nine years, but I
think a lot of these issues have been festering for
a long time, and under the guise of the complaints
that have been filed at FERC, I think now is really
the time to act and we like to see something done by
the 17th, 18th of the year.

COMMISSIONER MAYE EDWARDS: That's actually a
good point, Dean.

So, Todd, how much of a priority is
this Ameren Illinois Zone 4 for this issue to MISO
and what's the time frame look like as far as when
it would be addressed?

MR. RAMEY: We understand that's a high-priority
issue for stakeholders in the Ameren Illinois zone.
We are currently working through the stakeholder
process on resource adequacy improving opportunities
generally.

We have currently identified four
issues that we are working with stakeholders right
now to move forward. There are identified issues
that were greater than four. Three were initially
selected, and this is the fourth issue around
resource adequacy with MISO working with
stakeholders to move forward in an expedient manner.

I don't know exactly what the time
frame is, but I think it's fair to say that MISO has, through the publication of our issue paper, articulated our concern that there may be issues around supporting efficient retirement investment decisions in Ameren Illinois are critical, so we do think it's a high priority. This is part of the conversation moving this issue forward.

COMMISSIONER MAYE EDWARDS: I definitely think that time is of the essence. That seems to be my phrase of the week, but I definitely think that efficiency is extremely important, and I know being the Illinois representative on OMS and dialoguing with some of my colleagues around the other states who are members of the MISO region, obviously, they're concerned that whatever happens in Illinois maybe remedy our issue and will have a negative impact on them, so that, obviously, becomes, you know, some political ramifications.

Is that perhaps a reason why MISO's not moving along?

MR. RAMEY: Well, I would characterize it as we are moving along. That is certainly a concern that
we are looking, and there's a large stakeholder process where we have different concerns, and I would say first, and foremost, MISO is not in the business of delivering solutions that members don't have. Some members will have issues that other members do not.

Most of the time there are rules that are established through our tariff and business practices that apply broadly across the footprint. It doesn't have to be, so you are right. There are many members of the MISO footprint today that have concerns that MISO is attempting to deliver solutions to problems they don't have.

It's not our objective to do that. In fact, we want to be very careful, and diligent, and transparent to give assurance that we are not delivering solutions to problems that members don't have.

COMMISSIONER MAYE EDWARDS: Actually I recognized I believe Jim first, and then Bill, and then Todd.

MR. BLESSING: I just want to circle back to the Chairman's question. He asked the panelists whether
they thought the current markets properly address the issue, and Ameren Illinois' concern is that the current market is being in balance.

A lot of what we are concerned with is price stability issues that the current MISO markets are very short term in nature, and we are concerned that these very low prices could explode through extremely high prices at some point in time to finally consent construction of new generation.

So will these markets eventually construct and set that construction? I think they will. I think you can look back to the late 90s where there were no capacity markets at that time. There were only energy markets before MISO had their energy markets, and at that time we saw energy prices spike to 3 to $6,000 a megawatt-hour in the Midwest and we saw much higher forward-looking prices that spurred a significant amount of generation build-out in the Midwest, including in downstate Illinois.

Fortunately, for our customers at that time it was when we were in the midst of a
transition period with retail choice. They were largely shielded from those prices. That's not the case today. The nature of the way we procure for our customers is very short-term to where we are only procuring a hundred percent of the need in a matter of months before the operating period.

Today our customers would be subject to those volatile prices, and we're concerned just sitting and waiting. I'm very hopeful that the next report is right.

The problem is 2024 we have a lot of time. What if that report's wrong? Do we want to wait until the last minute and fix a problem that is out there? I don't think the current markets will address resource adequacy.

MR. BERG: And just picking up on what Jim said about if MISO's report is -- the next report is correct, in all of the well-designed capacity markets, if there is, in fact, a 24 percent reserve margin, prices are very low, and it is -- and so if that does come true, you would expect capacity, even in New England PJM, one of the more functioning
capacity markets, capacity prices will approach zero.

If you are wrong, if we wait, if that aggregate capacity in MISO, which I agree in aggregate in MISO, it will be there simply because of the fact that 14 of the 15 states are vertically integrated. They will build power plants. They will charge their customers. Resource adequacy will be remained.

The question is will that occur in Zone 4, and there are physical import limits into Zone 4 that need to be considered.

In terms of timing that Dean hit on, we believe this issue has been around for awhile and that time is of the essence.

From Exelon's perspective, we recently deferred a decision on one of our nuclear plants located in Southern Illinois for one year and that was done in part because of some of the prices we saw in the last auction and the fact that the ICC and MISO have begun to engage in this discussion and recognize there's a problem.
Implementation in 17, 18 really gives us stakeholders six or seven months to talk about this issue and develop a design that works. For that to happen, there would be a filing needed at FERC in the summer of 16 that would give FERC six months or so to debate and take comments and make a decision to launch in May of 17. That's the process we envision.

CHAIRMAN SHEAHAN: Let's assume that there is a need for this at some period, you know, whether it's short run or medium run. What's the lead time for resolving and how long does it take to cite or permit and build a capacity that would respond to the problem whenever it occurs?

MR. BERG: So if you need new generation, there is a -- it depends on how far along, but I would assume three years or so, but I don't think anyone imagines it's good for customers to replace the entire fleet that's already there.

So the question is are you providing enough money so that efficient generators that are currently located in the zone continue to invest in
facilities versus shutting them down?

So over the next three-to-five years we think reliability can be maintained if the prices are there to support it.

There was approximately 3,000 megawatts or so that did not clear the last PRA in MISO 15 and 16, and those are priced at $150, so you can -- even to Jim's point about there's 2,000 megawatts in generation, is it going to come in for less than $150? There's a price associated with retaining existing generation and incenting, and I think with what we saw from the last auction in 15, 16 is that price is higher than 150.

COMMISSIONER MAYE EDWARDS: And ultimately if the market price signals are not adequate to maintain the generation to lead to retirement, then we'll have major issues.

MR. BERG: Six-month retirements in MISO, yes.

COMMISSIONER MAYE EDWARDS: Thank you.

Anthony. Oh, sorry.

COMMISSIONER ROSALES: Pricing is it constructive if you have an apple-to-apple comparison to compare
prices in Zone 4 to prices in most other MISO states that rely on rate-based revenue to maintain resources?

MR. RAMEY: As part of the concern that we have with the current market construct MISO administers, whether it is designed and facilitates appropriate price formation for Southern Illinois. I say that because it's a single market that generates prices by zone. We have seen zone prices can be different within the MISO footprint, but to have a state that relies on regulated planning processes to make decisions on retirement and investment in cost recovery competing, that entity doesn't need to rely as heavily on efficient pricing for market-based mechanisms to ensure resource adequacy.

An area that doesn't rely on traditional or historic regulated mechanisms to ensure resource adequacy is in a position of being reliant from megawatt zero all the way to their peak or market-based mechanisms to provide information to support investment retirement decisions.

It's critical for that entity to have
processes producing prices that are efficient,
efficiently represent the incremental reliability
value, additional capacity or incremental reductions
in capacity.

It is the primary mechanism that those
parties rely on to make those decisions. If that's
all you have, if that price outcome is inefficient,
then necessarily the concern is you have got
inefficient investment retirement decisions to
occur.

If that's happening, Commissioner Maye
mentioned, you get reliability issues, you get
inefficient capacity, or you could end up with
costly mitigation schemes, or you recognize it late
and you scramble to correct that reliability
situation or inefficiency, or it could be very
costly at that point.

MR. BERG: If I understood your question,
Commissioner properly, what is the cost of capacity
in a regulated state versus a deregulated state and
how do they compare? Did I get that right?

COMMISSIONER ROSALES: Yes.
MR. BERG: One of the challenges you have with that is there's not a lot of transparency into exactly what customers are paying for capacity in a regulated state, but there have been several studies out there, and the bargain in a regulated state is customers pay 100 percent of the capacity cost which in a market analogue is gross cone, but they receive all the energy from those plants at full cost, and the market construct begins with gross cone number that subtracts out the energy margin the plant receives.

So in a regulated state, and it does vary around the country, we have seen studies on a net basis of apples to apples anywhere from $250 to $400 a megawatt day net in a regulated state compared to what we have seen in PJM and MISO, which is lower than that, but that's the apples to apples, so that's what customers are paying for capacity in regulated states.

MR. DAUPHINAIS: Talking about new capacity?

MR. BERG: That's average embedded.

MR. DAUPHINAIS: Added embedded in some cases
they're being pursued for energy cost purposes, not just resources adequacy purposes.

MR. BERG: I did deduct energy. I can provide you some information on that to supplement that. There's plenty of data out there.

MR. DAUPHINAIS: One thing it would be good for the Commission to understand how the customers in the market now react to prices for capacity and what their behavior is. There's not so much discussion about that. One is Air Pericot (sic) allows spot market prices in their energy market of $9,000 per megawatt-hour. With MISO actually you go up to $3500 per megawatt-hour, and, in fact, they have a mechanism that when operators are purchasing they'll actually artificially induce that price.

There's another piece to this and that is the risk that the auction for capacity will clear $250 per megawatt-hour a day gross cone. That's a very significant risk in many ways. That's more of a price risk that even exist in Air Pericot (sic).

So what you have is large customers out there that are out there right now and they're
having to weigh whether to lock into a price or not in the auction, and the auction can be attractive at times, but you'll always have to have in the back of your mind is something unexpected going to happen, so they are actually managing that.

I can tell you that the numbers that I see are actively soliciting from bilateral contracts to fix the price capacity out four years, and they weight that versus the risk that they see in the auction and they make decisions for purchases that way.

The most recent auction I have actually put a number on the bilateral capacity in Illinois. If you look on zero price swap, which is a good proxy of the likely bilateral contract, 70 percent of the capacity meet the Illinois zone and MISO was met by bilateral contract not by the auction, so there are people bilateral contracting.

It's true it is important that we have good information going out to the market so that we have the right price signals, and that's not just what happens in the PRA. It's also about what the
projections are showing.

There are things that MISO could do right now that they're not doing that would really help on this and improve the situation, which isn't a serious problem right now, but it certainly can be improved. One way would be to send its own MISO survey.

Illinois and Missouri are the only two zones in MISO that are not reported separately by MISO in regard to projections of resource adequacy through 2016 and 2020.

Why do we have to mask what's going on in Illinois? We want a full market to see what's going on in those projections, so that's the important thing that could change.

Another thing is that we found out information today about capacity exporting into PJM in 2016-2017. Well, a lot of that information is known in advance, because of clearing into auction or incremental auctions at PJM, and that information could be put out and made available by MISO for 2020 so that we have a capacity situation of a
supply-and-demand basis seen out of bilateral markets better than it is now. It is seen but it could be seen better.

So there are things that could improve, but in this bilateral market all the need prior to having a planned resource auctions started up about three years ago, before that it was a hundred percent bilateral market capacity in the southern part of Illinois.

It can work, and we give better information, so we shouldn't jump to the conclusion that we need to make significant changes to the MISO planning resource auction to make it a lot like what PJM has now.

MR. STAR: I think I would like to follow up on this issue of information. I think one of our challenges is very limited information. There's also the auctions once a year. You have to have a few datapoints.

I think what's interesting here though is sort of a contrast between discussion about Texas where you don't have capacity pricing and
energy-only markets more violative and we have places where full pricing capacity is built into a regular construct, so two different end points in the middle.

There's a lot of correlation somehow perfect that, obviously, if you have less price embedded in the cost of the price of capacity you would begin to affect the price of electricity and vice-versa.

As capacity prices go up, you tend to see at least some reduction in electricity prices, so think about from a consumer point of view and what auctions you might have to manage these costs, but, ultimately, I think that's a very important issue. Obviously, we need to ensure generators are operable, but the other thing we need to make sure electricity is supportable.

One of the things that's interesting about like in the Texas market where you have energy only these auctions are available to customers responding to pricing signals is going to be much greater if much more limited opportunities to do
that as more and more costs of equity and capacity coming out in these various lumpy once-a-year results, and we only have very little information on it. You mentioned your members are doing bilateral procurements and those prices usually are not public.

So the information we have about what capacity going forward in Zone 4 is limited, so there's also PRA, PIP. We did hedge half of the expected capacity needed for the ultimate retail customers for next year. Again, these are very, very limited datapoints, so the ability for consumers to make choices and to direct pricing capacities and, you know, you want to buy it now, you want to wait for PRA, we just don't have the information, too, as well.

MR. DAUPHINAIS: One of the things that we had brought up on MISO Zone 4 in the past that didn't seem to get very far is the idea of trying to explore bilateral trade exchanges developed for long-term bilateral contracts and capacity.

What we seem to be missing is that we
should have energy is that frack is the trade practice forced indices as surveys of energy trades. What we really need to do is find a way to try to extend that similar type of survey publishing the results to help bring greater transparencies to long-term forward markets. The long-term forward market is the key to resource adequacy as well as having very efficient results in regard to energy markets as well, because all of what resource adequacies is doing is making sure we have effectively power in the ground, and that's going to be the key to demand response. That's not going to be necessarily based on generation, so you need good price signals both in longer markets or capacity for energy as well.

MR. BLESSING: I wanted to add one thing on the discussion around bilateral markets using that as part of the solution.

In retail choice it's very difficult to rely on bilateral contracts simply for the reason for Ameren Illinois we really don't know what it is going to be a week from now or three weeks from now,
because of retail choice, or five years from now, so we supported the ITA process for many years maintaining a robust portfolio of long-term capacity contracts, but we understand and agree with a lot of the methodology that was put forward with very limited amounts of bilateral capacity contracting just because there's not so much risk around how much load we'll serve, you know, three years from now. So I agree to be part of the solution. Retail choice limits that as a solution.

MR. BERG: I just wanted to pick up on something Jim said about resource adequacy being a peak product and demand response peakers.

What we have seen and bring in energy.

If you look at a customer's bill, probably 80 percent of the competitive side, probably 70 to 80 percent of their bill is energy costs with the balance being capacity and some other services.

What we have seen since 2008, and I have this material in there, is the energy prices, which are the largest component of a customer's bill, have fallen dramatically, and that is why you
see a nuclear plant up here saying it's very important we get capacity markets right today because it's the only lifeline we have. That's why you are seeing coal plants in jeopardy.

The people who are not complaining are the peakers, because their capacity -- you know, they're not as dependent on energy revenues as they have fallen, and we shouldn't be picking winners and losers; nuclear plants win, coal plants lose; demand response wins, vice-versa.

What we should be doing is accurately defining what we need, what constitutes success, and ensuring that there are comprehensive outcomes which support the efficient exit and entry of -- and retention of needed investments. That's what we should be doing.

MS. SATTER: I would like to make a few comments kind of starting from the top. I think the first question that you, as the Commission, and all of us have to ask is what is the problem, and when I heard the problem being from that end of the table is that the prices aren't high enough, and, you know, we
have gone to a market system, a market system
meaning that prices can go up, but it can also mean
that prices can go down, and where we are today,
because of I think the unexpected success of
fracking is that prices are very low now for energy,
and that is benefiting our state tremendously.
As a restructured state, we have embraced the
effects of -- sometimes the unexpected effects of a
market, and we're benefiting.

Now if the problem is that the
generators don't think they have enough money, I
think you have to step back and say is that a
legitimate problem for you to address.

If the problem is we don't have enough
electricity to serve our load, your lights are going
to dim, we are going to have rolling blackouts, we
are going to have brownouts, we are going to have
problems, there's truly not enough juice, if you
will, let's address that. But sitting here today,
that's not the problem. Sitting here today in
Illinois, whether it's because of our market
structure or whether it's because of MISO, whether
it's because of demand response, I can't say, but
sitting here today in Illinois, we have sufficient
capacity at a 23 percent level, which is quite, quite high.

At the same time, as a clean power plant is taking effect and is being considered and being analyzed, we, as a state, will be looking at things to stretch our capacity, such as demand response, which will, you know, mean that if we are not stressed today for resource adequacy and we are doing energy efficiency to control our demand, we are doing demand response to control our peak, we need to be very careful defining a problem before we rush to a solution because we need to define the problem very quickly.

The problem is the generators don't think they have enough money to build more. Let's discuss that. Is that a legitimate question? If the question is -- if the problem is we don't have enough electricity, let's discuss that, but there are a lot of levers that you, as a Commission, have and that other entities in the State of Illinois,
whether it's the ITA, whether it's the Illinois EPA in developing a standard implementation plan for which one key component is reliability, whether it's the load-serving entities, whether it's the Attorney General filing an action at FERC because we see some error in a construct.

I mean, there's no one single actor in Illinois, and maybe all of those actors working together is a good thing and is getting to where we need to be which is sufficient power at a reasonable price.

CHAIRMAN SHEAHAN: Sue, in your opinion, what leverage does the ICC have?

MS. SATTER: I would say the ICC has several. One is promoting policies that promote demand responses.

CHAIRMAN SHEAHAN: Which is not available in Zone 4.

MS. SATTER: Demand response is available for consumers in Zone 4. Now whether it's reflected in the capacity market is another question, and that's a design issue that may have to be brought up at the
FERC, but you, as a Commission, have participated at the FERC.

So, for example, in 2011 when the MISO capacity auction was first being discussed, the Commission filed comments saying specifically that said that MISO fails to provide any meaningful evidence that its capacity market is necessary or superior to the existing circumstances. So the notion of a capacity market in 2011 was something that you questioned.

But the point is that you make your opinion known at FERC.

CHAIRMAN SHEAHAN: Well, that's not a tool the ICC has. That's not a tool FERC has.

MS. SATTER: But I'm saying you can encourage demand response available to consumers and that will shape you. Whether it's reflected in the capacity market, the capacity construct, you have to go through FERC, because in Illinois the ICC's responsibility for generation has been essentially removed.

CHAIRMAN SHEAHAN: I totally agree.
MS. SATTER: It's a restructured state, and states that have tried to reclaim that role -- rightly or wrongly, I'm not saying -- have been preempted by the federal courts.

Now there are two cases. Those cases are currently before the U. S. Supreme Court, but in New Jersey and Maryland when in one case it was the PC state and then the other case it was by statute, the state tried to incent and mandate additional generation. These are the states that have much higher prices than we have, and states that have capacity problems that were driving prices too low that the public felt were unjust and unreasonable, notwithstanding the court said those wholesale markets are federal, wholesale markets are subject to FERC, and you, whether it's the General Assembly, or the legislature of New Jersey, or the PEC in Maryland, you are preempted. You can't do it.

So I question whether we are in any different position than Maryland or New Jersey before the Supreme Court. We will see what the Supreme Court does.
So I don't want to give you the impression that it's a particularly settled issue, but there are -- you are somewhat, but at the same time I think that you can participate at the federal level. You can participate in the development of the state implementation plan with the Illinois EPA to make sure that reliability is not compromised.

There are -- you know, there's market information, like Mr. Dauphinais passed out, making that more available would be good in general, although I don't know if there's legal impediments to that or not, but I think those are the kind of levers you have, but to say we need -- our goal should be to increase capacity charges so that there's more generation, I think it's the wrong question and it's the wrong --

COMMISSIONER MAYE EDWARDS: I want to be clear, but the ICC has not made that statement.

MS. SATTER: Thank you.

CHAIRMAN SHEAHAN: I would like to ponder.

MR. ELLIS: I am glad Susan brought up the 2011 OMS filing. I'm sure Susan has that OMS Advisory
Resource Adequacy Principles for the 2010 year before.

So under that document, it says "OMS principle number four revenue generation for cost recovery recruiting investment prospect and research should be a byproduct of efficient market design, not a specific goal of resource adequacy."

There's a footnote at the bottom that goes on here, and it says, "The ICC does not support this principle. The ICC supports the principles provided as follows, quote, "sufficient resources must be maintained to meet resource adequacy standards."

MR. BERG: Just picking up on that, it's not raising price to incent more generation. It's raising price to secure enough generation to meet reliability. That's the objective, and I don't know if it's the right time. We've heard a lot about there's a problem. There's no problem.

On Slide 2 of my --

MR. BLESSING: Before you get into that, I have one thing I want to make. I agree with Susan that
the Commission should not, as their concern, have do
the generators have enough money. That's not a
valid concern the Commission should be considering,
but what they should be considering is if that lack
of money does not enable those resources to continue
to operate and they begin to be removed from the
market, whether it's through retirement or through
finding ways to get to other markets, then you end
up with that reliability issue that the Commission
should be concerned with.

So we need to make sure that the
market is structured such that the generation that
is needed in the future will be there whether that
be the existing generation or another generation in
the market. I'll stop with that. Thank you.

MR. BERG: I would like to continue with that.

COMMISSIONER MAYE EDWARDS: Yes. Yes.

MR. BERG: So the way we look at this is it's a
supply-and-demand question, and the green bar on the
left is MISO's Zone 4 demand, and this information
was taken from MISO's 2016 Loss of Load Study, so
this is MISO's data, and it says this is 2021, and I
checked, and you can see the demand in 2021 is 12.2
gigawatts. That's how much Zone 4 needs to be
reliable, and I would note that even though this is
2021, that's only 200 megawatts higher than the
demand we just saw in 15, 16.

So, for all practical purposes, the
demand you see here for 2021 is roughly equivalent
to the demand that you saw in 15, 16. There's not a
lot of peak load, so don't take comfort that we have
got lots of time, because the demand is here, and
maybe you move over to the supply side.

And I want to start at the bottom.

You see there that's the zone for capacity. So the
Ameren Zone 4 is part of MISO and absolutely they
should receive the benefits of being part of the big
power plant, both in terms of energy, as well as
capacity. So the number that you see here is Zone 4
can physically import 4.2 gigawatts of 12.2.

MR. DAUPHINAIS: Question. Is that the 2016
number, right?

MR. BERG: No. Actually I gave the benefit
probably to you. This is the 2021 number. It's
gone up 1200 megawatts from the last.

MR. DAUPHINAIS: 4200 megawatts you are saying is the capacity in Portland and MISO estimated for 2020?

MR. BERG: Right.

MR. DAUPHINAIS: No, that's not. It's 6,000 megawatts is posted in the most recent Illinois working group presentation.

MR. BERG: Well, fair enough. I stand corrected. It is 1.2 gigawatts higher than what we saw in 15, 16. That much I know.

MR. DAUPHINAIS: For 16, that's correct.

MR. BERG: And so the next blue segment there is -- this is the capacity that cleared $150 a megawatt day, so I assume if prices continue to remain, that generation is not at risk, then you move into the orange section in Exelon. There's no science to this. We looked at all coal plants that were less than 500 megawatts in size.

If you look across the country, if you will look at what didn't clear the last PRA, I think you will find that it is small coal plants that are
the most economically challenged, and those are the
ones that are retiring, so we label those as at
risk.

You can see the great uncertainty with
what will those resources do. They were not
retained at $150 a megawatt day, and then we have
added our Clinton generation station, which we have
said we deferred the retirement decision for one
year. That gets us into 17, 18, and without a path
to profitability, which does not currently exist in
MISO, the plant would be retired, so there's a
gigawatt.

You have Dynegy's recent announcement
for the River Plant of 500 megawatts and you have
the exports to PJM, which again we have
conservatively estimated at 2 megawatts. By 2021
without there being a price signal to stay in MISO,
you can expect generation owners to continue to
build and invest in transmission to get out of MISO
into PJM and support that.

So we think there is a fairly
compelling case that there is a need, the need is
here, and that we should work towards solving this problem before the 17, 18.

MR. DAUPHINAIS: There's two things that are disputable --

COMMISSIONER MAYE EDWARDS: Excuse me. I apologize. We have a lot of on-line listeners, which is a good thing, and they're trying to follow along, so if you could just state your name before you --

MR. DAUPHINAIS: Oh, I'm sorry. I'm Jim Dauphinais from IIEC.

There's two issues that we have, one we already covered, which is it's missing 1.8 gigawatts of 2020-2021 capacity import limit that would be present is coming from MISO, hopefully the project will be at your service before 2020 goes into transmission projects, and that will increase the import capability into the zone, so there is ONE gigawatt missing.

In addition, the market -- MISO hit a market monitor, as well as Illinois Industrial Energy Consumers, and there are other parties as
well have raised the issue of exports at PJM and
counting them towards the import limit into the
Illinois zone, and that's actually being litigated
before FERC, and it may very well be that we'll be
able to count the exports. They're still physically
in Illinois. They're still providing power
physically from a business perspective in Illinois.

So as far as meeting the local
requirement, you can count towards meeting that
local requirement and reach the import limit on how
much we import from the rest of MISO. So there are
things that -- this looks weaker than it is, at
least from my perspective. It's not missing -- it's
missing a couple of factors.

MR. BERG: Just briefly, the export units will be
under PJM's dispatch control. That is the
requirement. Let's just play it out. I do have my
footnotes here. The 4.2 gigawatts did come from
26-27, so I'll take it that it will go up. Now,
you're still short, and let's just play it out to
its extreme.

Let's say the import capability was
12.2 gigawatts. Is that good for Illinois to have power plants that create a lot of jobs, a lot of tax base, and the position is that to benefit to do well in a clean power plant environment.

So raising the import limits is kind of a mix sort. It gives back. On the one hand, you might get access to lower prices and, on the other hand, you are impacting the State of Illinois and its customers in a meaningful way.

That being said, as all the other states in MISO they are regulated states, I can assure you they will not be building power plants to meet Illinois need and charging customers to support that need, so that's just a --

COMMISSIONER MAYE EDWARDS: So you are kind of wrapping up at this point?

MR. BERG: Yes. Thank you.

COMMISSIONER MAYE EDWARDS: So I guess the next question might be directed toward MISO or maybe anybody, but next steps. We have the parties here. You talked about the issue. We talked about who is the relevant party, right, that needs to address the
issue, but what should we -- what are our next steps?

MR. DAUPHINAIS: What I would offer is if the Commission wants to explore this further, I think it just needs to carefully consider and not jump to conclusion that a solution that has been offered. Is this a solution to plunge into it right away? They should better understand how the market currently works and explore that.

For example, there seems to be some misunderstanding. Unfortunately, the Chairman stepped out, but you mentioned there was no demand response. Well, there is a demand response, and, in fact, IFC members participated as interruptible load and take credit for the interruptibility in the existing MISO environment, so it does exist, however, I'm sure --

COMMISSIONER MAYE EDWARDS: He may have been speaking of commercial, and I'm not speaking for him, but he may be speaking of commercial. I believe that's what it was.

MR. DAUPHINAIS: Actually, I'm getting to that.
What I think there is, and your account service providers I'm sure will love to speak about this, is they have barriers in trying to do that and the MISO market aggregates smaller customers. I think that's a worthy discussion to have, and this is another area to explore, so the more -- the more demand response we can find, certainly that would help improve the situation further as well, and we don't think there's a problem right now. We don't think there's a problem in the future in 2020.

Clean power plants create complications. They may do that in the area, but certainly there's room for improvement even though there's not a problem now.

We're all in favor of talking about things that we've done for improvement. We just don't want to see moving or jumping into what I would call "radical changes" to make us look a lot more like PJM, which from a perspective IIEC member doesn't look like a good bargain. It doesn't necessarily improve reliability or maintain reliability better than what we have
COMMISSIONER MAYE EDWARDS: And we actually will have someone in the last part of the session discussing demand response and could that be a potential solution and how, so we will kind of get into that as well.

Did you want to --

MR. ELLIS: Sure. Thank you, Commissioner.

So, as far as the next steps go, the one question that we asked is timing. A lot of these issues we said were, in fact, denied, and I think there's a number of things that have been around the table today that are masking some of the underlying problems, so I don't think it's an adequate strategy for us to just keep kicking the can down the street.

I think, again, it's kind of a fool's game to just think some of these issues are out there and potentially cause a problem well before 2020.

We have been talking about these issues, for, again, somebody said, goes back to
2010-2011. The low gas environment I think masks some of these issues, somebody asked excess supplies masks the issues.

I think one MISO stakeholder going back two weeks ago, one of the vertically-integrated states or vertically-integrated utilities in one of those states, said it best. I have seen MISO markets broken. When prices are low, you have resource adequacy shortages; and when they're high, you have excess capacity so that the market's completely upside down and that's not good for consumers and suppliers alike.

COMMISSIONER MAYE EDWARDS: Sue.

MS. SATTER: As far as the next step, I think it's important to continue to monitor the auctions as they proceed, monitor the information that's available and NERC reports, be involved in the development of the clean power plant SIP, and an eye towards protecting the reliability, and basically just, you know, continue to promote policy, such as demand response available to consumers.

And, finally, the Commission has
historically participated at the FERC and I think
has been an important an active participant and you
have been responsible for various decisions in the
7th Circuit Court of Appeals as a possible location
among the RTOS.

That is a very important role that
you, as a Commission, play, and you have got great
resources here, and we -- although we, the Attorney
General, do get involved to a great extent, we are
very happy to see you taking the lead, and you have
historically, so that would be just one other avenue
of activity that I think would enable you to
continue to be informed and enable you to
participate on the federal level where these issues
are discussed.

So thank you very much for the
opportunity to participate today.

MR. BERG: Just one more thing on Illinois --

COMMISSIONER del VALLE: Could you elaborate a
little bit. There's been discussions about the role
of the ICC in terms of clean power plants. Could
you elaborate a little more on that. I know you
focused on reliability, but can you say more.

MS. SATTER: The clean power plant focuses on emissions, so, in that respect, it's outside your immediate responsibility, but because it's the electricity system and you are responsible for aspects of the electricity system, technically the delivery side, energy efficiency programs, development of demand response programs, those sorts of policies, use of Smart Meters, for example, how can that technology be used to reduce emissions, to reduce demand, to reduce emissions, how should the allowances be allocated, should there be allowances, should there be trading, if there are trading allowances, what policies should they be using to support -- to protect the consumer and to promote energy efficiency and demand response, so those are things -- once the stakeholder process gets started in Illinois, which it hasn't, but once that process gets started, it seems that those would be the kinds of things that you are expert in and that you could use and really make an important contribution, because remember the state implementation program is
for the entire state, so it's reliability for the entire state, investment for the entire state, and emissions for the entire state, so it's really going to be a pretty major planning process, and it seems like it would be an opportunity.

MR. STAR: With regard to that, I see Illinois ITA is the primary interest in developing that, for whatever it's worth.

One way the Commission can play a key role is go beyond renewables and manifestation of a renewable portfolio center in Illinois. Largely, and I'm not entirely sure how they come to the Commission, so depending on how Illinois EPA chooses to put that together and how it all plays out, that's probably one place where the ICC has the most leverage.

MR. ELLIS: Commissioner del Valle, if I could broaden the question a little more, one of the arguments go beyond the clean power plant. We are facing a number of other environmental regulations right now, both federal and state, so in the federal level facing equitable guidelines, revenue issues
and those type of compliance timelines effectively beginning now, we need those investment decisions. We can't keep delaying those any longer, but we also have real estate obligations right now.

As most of you are aware, we have an obligation to finish a sulfur dioxide scrubber. It's upwards of a 4 to $5 million project that we're about halfway into, so the balance of the project is about $200 million. We are obligated to finish that by 2019. We need to make those investment decisions now, even though the completion of the project isn't scheduled until 2019.

MR. BLESSING: To the question of next steps, in thinking through that, I'm trying to think of what we all agreed to on this panel, and I think the only thing that I could point to that we agreed to is that we are relying on wholesale markets for resource adequacy. Is that a fair assessment? You all agree with that?

So, in my mind, the next step is that we need, as the State of Illinois and policymakers, to decide whether we're comfortable, for example,
with the current market resource adequacy, and the
question can be kind of two-fold, the mechanics of
the market addresses and, two, does the supply and
demand to give us the ability to do something later
or earlier. In my mind, the next step is we need to
figure out whether there's a problem here or not.

I look at the stakeholders of Illinois
as a utility who my customers are going to be
looking to me if the system's not reliable, and I
cannot think of one thing that I can do as a company
to ensure that the resources will be there long
term.

The ITA appears on our behalf.
There's very little they can do to do that. The
Commission generally like in a regulated integrated
state, usually the utility propose the plan, and the
Commission approving and providing feedback for the
plan.

In a choice state, you guys don't have
anything to do about it. We are kind of at the
mercy of the market as it exist today. We need to
decide does this market work for the long-term
I think the next steps would be for it to take place. If the entire answer is, yes, it's more comfortable with risk of extremely high prices down the road some day or resources not being available, then we are done.

If we are not comfortable with living with that risk, we then need to move and look forward to solutions. Thank you.

COMMISSIONER MAYE EDWARDS: Oh, thank you. My apologies. Did you want to add something?

MR. BERG: I really like what you said and how you framed it. I go back to where we started this conversation, and resource adequacy responsibility falls to MISO.

I appreciate you engaging in this debate, because, as Jim said, this is our state. These are the realities that our state is facing and we need to address them, and so I think the Illinois Commerce Commission has taken the right first step which is you scheduled this forum. You scheduled the next forum, and we still have time and we should
all be working with MISO working together to
overcome our differences, and I think we should
answer Jim's question, is there a problem or not,
and if there is, we need to fix it soon. Thank you.

MR. DAUPHINAIS: This is Jim Dauphinais, Illinois
Industrial Energy Consumers.

I think what Jim Blessing is proposing
is a reasonable approach. The key is not to jump
into conclusions that there is a problem but rather
take a careful look at it before making that
decision, because going in with an open mind,
because you are hearing conflicting information, so
there's a lot more information to look at as we sit
here before jumping into something.

MR. RAMEY: This is Todd Ramey from MISO.

So the question's next step I would
throw out is we are in the middle of one of those
steps, so this process is being administered subject
to the generation management process we have with
MISO and begins with articulation of an issue.

With that issue statement comes the
presumption that since this issue statement came
from MISO, MISO is also saying that based on our current analysis and thinking that the issue, if it's real, is of sufficient priority that we need to move forward expeditiously to address solutions and mitigate the issues that have been identified.

First step is really defining what we believe to be the issue, and we are listening and engaging stakeholders so we can make an informed decision ultimately whether we think our issue will be stated as valid.

Clearly we are very interested in the feedback and comments from Illinois stakeholders, given the issue is primarily focused on results of the loads. This is part of that discussion, so to me this is a MISO stakeholder discussion I'm looking forward to. It's very valuable to get input from stakeholders. Those questions -- should we reach the conclusion that the issue is valid, there's a general agreement or understanding that there is an issue, then we start to exploring solution pathways.

For what it's worth, I would
characterize MISO's current position as one where we believe that ARES that are highly dependent upon market-based processes to provide for resource adequacy investment retirement decision-making is critical, if that market price be economically efficient.

There are lots of items there to be discussed, but the nature of the issue statement that we developed and published gets to questions on whether the current market process MISO administers are planning resource options has the construction elements that you would expect or need to be in place to reliably produce efficient pricing through this market-based process.

We have raised issue with where we think it has challenges in doing that, so that is the issue we have before stakeholders, and we're discussing now, and ultimately we will need to make a decision as a stakeholder community with MISO, and whether that issue is legitimate, and whether we need to move forward and explore the mitigation options.
MR. STAR: I think one voice that we maybe bring into the future also is the alternative supplier, and Ameren, the commercial and the industrial load, and the commercial and industrial load-serving alternate supplier is probably 80 percent, roughly speaking, of the load and, you know, the competitive market is working, and I can see the prices are low, so the ability for them to participate in these markets, what solutions might they have how to load research adequacy and how they can fill that into the offer they offer consumers or what happens in Northern Illinois, maybe they're okay with that, we don't know. I think some of it would be best voiced with fully seeing how a competitive market will interact with each of the long-term planning decisions.

COMMISSIONER MAYE EDWARDS: Thank you.

Commissioner McCabe.

COMMISSIONER McCABE: That was Anthony Star for those of you who were listening.

Todd, just to follow up on that, what's the process and will at some point is there going to be -- in addition to our December 10th meeting, will there be a host of options and a problem statement presented to stakeholders to review?

MR. RAMEY: There's a problem statement that we already presented to stakeholders. It was reviewed -- introduced previously at our last Supply Adequacy Meeting, which is the working group mainly includes all of MISO's stakeholders and discussions around resource adequacy processes. That was introduced last month.

We will engage in another discussion upcoming supply adequacy working group meeting here in December to further explore and answer questions stakeholders have around MISO's view of the issues we try to describe.

And, again, the goal is to engage in that conversation to get a sense of how close we are with stakeholders in coming to agreement on the definition of the issue and whether or not
stakeholders agree it's a priority issue that we need to move forward with the next step, again, which is exploring mitigation and solution pathways.

COMMISSIONER MAYE EDWARDS: Thank you.

Any other Commissioners?

(No response.)

Mr. Chairman, any questions or comments?

(No response.)

Thank you again all of our panelists for that lively discussion. I thought it was vital, vitalizing, invigorating, and I think we discussed a lot and hopefully this is a start to really getting the ball rolling, and I am excited that we were -- the Illinois Commerce Commission was able to hold this today.

I am certain that if we continue to work together and explore these issues strategically, we can make the best decisions for the State of Illinois and its consumers.

Now as Chairman Sheahan mentioned in his remarks this morning, there will be a follow-up
session on December 10th in which possible resource adequacy solutions will be addressed.

To set that stage for that discussion, we have invited Greg Poulos, Manager of Regulatory Affairs at EnerNOC, to present on whether and how demand response can play a major role in the MISO market.

Greg and his team at EnerNoc are extremely knowledgeable, and I'm so happy he could be with us today. Please join me in welcoming Greg. (Applause.)

You guys can actually stay. He's going to come up to the podium.

MR. POULOS: Thank you very much for that warm introduction. I appreciate the Commission having us and that was a great discussion. I really appreciate the dialogue and hearing the different ideas.

I hope to follow that a little bit with just by starting by saying from a demand response perspective that we look at this and say, yes, there is a market issue, and specifically the
market for demand response there is not a price visibility that would have provided the opportunity for demand response to concur this issue, and that's really an indication, and I will show some slides on that as well, going forward. I thought at least to start with that to keep it moving a little bit.

Just to give you an idea of where I'm coming from from the demand response perspective, EnerNOC is a publicly-traded company, about 1300 employees. We are a global company. We are a Cloud-based software company that focuses on commercial, industrial, institutional customers, and demand response is where we started.

Demand response is in the East Coast and very strong in PJM, very strong, our second strongest market, and that is Australia. So this is certainly an area that we know very strongly and follow all the different markets and the different opportunities.

I think one of the keys for getting customers involved, and customers should always be one of the focuses in these discussions, is first
making sure you understand what the customers' needs are, what they're looking for, and then finding ways to engage them. When engaged, they can help with a situation like this when prices are high or even reliability-wise when showing improvements in a resource, and demand response is a great example of that, but it can show from the savings, which we can get from those customers reductions to demand reductions themselves and customer engagement.

Once you have that customer engagement, you have customer satisfaction. I think that will also play a key part in making sure that customers -- the whole state are satisfied going forward.

Demand response -- demand response-wise there are really two core, three or four different ways you can do demand response. You can do it through the utility; you can have customers participating through a wholesale market on their own or into a state market or you can do it in an aggregated demand response.

EnerNOC does it in all different
shapes and sizes. It's certainly one of the areas I think that is not as well-known as the aggregated model, aggregating meaning that we take a bunch of customers to meet a specific goal. We call it a portfolio effect, and this example you see on the screen right now, which you are looking at, is a number of different entities, grocery stores, hospitals, schools, all come into what we call our "aggregation model" and help to provide our demand response that we're expecting that to curtail with.

You notice this is in the middle of the city. That's where your load is. That's where we get our demand response from, a very strong resource, and because it is at the number of customers, and a good example like this, it's much more reliable because it's not minor. It's not on and off. One customer can't participate, we still have other customers.

This is another slide which I think shows a bit of a difference and why it really works through an aggregator to have a strong different type resource, and this is about the risk. You
don't think about the risk when it comes to
customers in their response, but the risk -- if you
go up to a customer and ask a customer to
participate in a program so they can make money, the
first thing they are going to want to know is can I
lose money and what do I have to do to make sure I
make that money and don't get penalized.

EnerNOC, and others like us, come in
and we take the risk, so the customer will get --
we will know the customer going forward, say grocery
store, no, how they can participate more than
others, how they would participate, show them how
that happens, and we get them in this portfolio
effect to minimize the risk for us because we
typically take the risk.

That's a significant difference from
what many utilities can do, because many utilities
couldn't take that risk on. They're not in a
position to do that. Whether it's regulatory,
statutory, or simply the business model, it's not
their business function to do that.

So this is a strong characteristic for
retail service providers, demand response providers
that are managing the resources. This certainly
helps to really make this resource much stronger.

In the PJM part -- PJM market
obviously the demand response is a very strong
resource in Illinois, and in Illinois itself it's
significantly strong. Right now in the Illinois --
the PJM part of Illinois, there are approximately
2400 sites participating in that response. That's
about 15 to 20 percent in that range. All the sites
in the entire PJM region are in Illinois, just the
PJM part of the state. It's about 2400 sites --
locations that are participating right now in the
capacity program, not the energy or economic program
but just the capacity market. There's 2400 sites in
the Illinois -- PJM part of Illinois. There's about
1600 megawatts which is again about 15 percent of
PJM's overall PR, significant, significant
participation by customers, commercial, industrial,
institutional and residential customers in the
PJM part of the state.

The economic guide to that is
incredible, too. We estimate it's about $78 million this year payments alone to customers who are participating, and, of course, those customers who are participating there's a benefit to them in reduced costs because of reduced capacity of acquisition, and that we estimate about $2.1 billion, and that number -- I'm using 2.1 billion because in 2013-14 phases into auction year, and the market monitor of PJM looked at what would happen if DR wasn't part of the equation.

If you took DR out of the PJM market, it would have been $11.8 billion or more cost to customers. If there's no DR, it would cost $11.8 billion more to customers.

We took that as a big number and said, okay, what if we separate that by state, by region to PJM, and in Illinois we looked at Illinois separately. It's a little bit easier to separate it. It's about $2.1 billion in savings for that 13, 14 year, because demand response was the resource. There is some demand response in the MISO part, but very little in the Illinois state, and I'll go over
that in a second.

Now this is just a map of the auction fair price over 2015-16, and the significant prices in Zone 4. The one thing I didn't really come up -- started to be discussed, but when MISO was creating their auction -- their capacity market, the two-month forward annual product, they actually started with a PJM wholesale market. They were looking at creating a PJM-style market that would be integrated pretty easily with the PJM market, and that idea is something that was PJM -- MISO's approach to the market, and that idea was shut down by the stakeholders, and the stakeholders as a group collectively said we'd rather have a different approach, one that was more focused on the states and one that was more focused on letting the states make those decisions.

I think that's a key difference here, and that was one -- the two-month forward annual market really does not create the visibility for a resource. That's just a demand response to participate at the wholesale level.
One difference that was discussed is New Jersey, Maryland. There's a key difference that separate those from what we're referring to here and what the differences and problems are in this market from a wholesale perspective.

One of them would be that in those other states what they're actually doing, if they're not participating in the wholesale market, they're what you call fracking, fixed resource adequacy plans, so they are kind of opting out and doing their own proposal. You can do that at PJM, too. That's called a Fixed Source Requirement Plan and it's kind of based on that.

What's happening in New Jersey and Maryland is not a fixed source requirement. Those are entities -- those are resources being thrown into the wholesale market but then subsidized, which is completely different than these fracks, which is happening in all the other states.

So getting back to demand response, certainly if there are retirements, PJM has shown -- PJM markets have been shown that demand response can
certainly help address retirements and be a resource there that can provide strong support when those situations happen.

But what I want to kind of focus a little bit on is this next slide. This is from the Applied Energy Group, and there's no way to get those numbers on this photocopy, but you may like the colors. The colors on this one are indications of -- in the far left is demand response resources in the different zones in MISO. The ones in the middle are energy efficiency, and I think those are the two to focus on, and really just demand response.

The one thing on demand response you won't see is demand response for Zone 4, so small. There is some, but they're so small that you can barely see it, and you'll notice that the other states, which may come as a surprise, they do have a lot of demand response. They do it through their fracks.

So what is happening is through their interruptible programs, their utilities are
offering demand response as a load-modifying resource into the MISO market as probably the wholesale procurement, and that is the big difference. It's not happening in Illinois.

One, we are not having DR in the wholesale market here, unlike in the other part of the state, because the price visibility is not there, so it makes it hard for demand response to know what the prices will be for this year.

Next year there's talk of strong prices. There may be some demand responses showing up next year, but the problem is we are about two years now.

As demand response resource, I'm going to prepare a customer through my portfolio plan. I'm looking at -- I'm going to cover the cost. I'm going to cover the risk of one year, of a one-year option, and I'm guessing next year prices will be higher, because I've heard that from many analysts. One-year option is what I'm looking at.

Am I looking at two years the price will be high, I don't know that. That really
becomes a part where demand response has to decide what resources you do want, so I do think there will be some because prices will be high next year, as people are suggesting, but overall I don't think there's going to be as much as there could be because of that pricing is not there for the long -- the two-to-three-year term that we are looking for, in particular when you are looking at the portfolio effect.

Now on this slide when you see like the yellow, which is Zone 1, and the purple, which is Zone 2, that's where you have state programs where those utilities and the commissions have had states that the utilities in the state create a demand response program with some price visibility for a number of years, and what that resource will get, and then they require that resource to be offered into the MISO market. That's load-modifying resources, and we have worked with utilities on these types of programs.

Consumers Energy and Michelin, are the ones we are working with right on this and working
with MISO to make sure our resources are something they can use, and it's actually a very strong resource and one that we think will work well, because they are working together with MISO on it, and we'll get price viability for a number of years.

So then the question is is there enough opportunity in the MISO part of Illinois, the Southern part of Illinois, to be attractive for further demand response for even a state program, and there is. Absolutely there is enough -- there's enough opportunity for customers to participate, if the opportunity is there. And this AEP study that came out recently discussed some of the issues and discussed the money that could be potential benefits for more DR in Illinois, the number of participants that potentially could be able -- that would want to participate.

The one thing that this study got wrong is they significantly undervalue the benefit to the customer and to the state, because it was using 2014 MISO capacity prices which were significantly lower than this year.
So I do think this study and I think the next panel in December will be here to discuss it further, and I won't go too far into it.

I got these last two slides just to mention that as I kind of alluded to. Clearly I think the solution here will be a state program. I think it needs to be something that goes through the utilities in this state, Ameren in this case, because it gives more price visibility, and that's not to say that I think that MISO's trying to look at more demand response, trying to get more opportunity, but I think that's the best approach and the fastest approach if you are looking at it.

The one hurdle I think makes demand response unique for resources in the MISO market is that in most of MISO, the vertically-integrated states may have said no to demand response going into the wholesale market on its own.

My response through ARES like myself would have to go through a utility, and that's how it's done. In Illinois there is no open market. The market doesn't produce the right visibility for
demand response, so it is a unique situation, and
that complicates things for us.

And then, finally, I just gave a
picture of a number of different markets that
Enernoc is in, just an indicator of how broad a
spectrum the markets are, RTOs from California, to
Texas, to PJM, to New England ISO, to state programs
throughout the country, throughout the world,
certainly can be done in a way -- I certainly think
it should be considered, and right now it's not
nearly as effective as it can be.

With that, I will conclude.

COMMISSIONER MAYE EDWARDS: Thank you so much for
that presentation.

Do you have any questions,
Commissioners?

(No response.)

Do any of the panels have any
questions?

(No response.)

Fantastic.

Well, thank you very much.
MR. Poulos: Thank you.

Commissioner Maye Edwards: We look forward to hearing from you on December 10th.

MR. Poulos: Thank you.

(Applause)

Commissioner Maye Edwards: So, as you heard today, we are just at the start of addressing these resource adequacy concerns. The ICC felt it timely to bring the relevant stakeholders together to participate in this vibrant important discussion; however, the ICC is in no way taking a stance on this issue. We really do want to, you know, kind of make it a point to say that we appreciate everyone's perspective.

We know that there are many different perspectives, and I actually am extremely excited that although there were many different views and perspectives, the one view at the culmination of the day and a discussion was that we are going to get together and relevant stakeholders are going to discuss this further to determine is there an issue, and, if so, how can we address it.
I think that this is a great start, and truly is what the ICC wants to do by providing this forum for such a discussion. I feel like we have accomplished a good deal today, and I'm excited about it.

Definitely a number of thanks to all of our panelists from both the morning and this afternoon. I think today's Planning for the Future Policy Session went extremely well overall, and I know that you have been sitting in these chairs most of the day. We are ever so grateful on your participation today. It's always appreciated as your continuing efforts to ensure winter readiness and resource adequacy in the great State of Illinois.

I definitely would like to thank my colleague, Mr. Sheahan, as well as my fellow Commissioners. I hope that everyone in this room will be back for what I think will be a fantastic discussion on December 10th as a follow-up to today on Potential Solutions to Resource Adequacy issues will be addressed.
And, again, I would like to thank quite a few of you in the room, specifically my legal and policy advisors, Ann McKeon and Nakhia Crossley, who are moving this diligently along. I got married and left and came back and this was still moving along and they are just phenomenal to make sure that nothing stopped while I was away, so I truly am thankful to the both of them.

I would like to just give a little shout out to the Chairman's advisors, Elizabeth and Anastasia, because they developed this great setup for the policy session, which you stole. I would like to give credit where credit is due. I think it is fantastic, and it's so nice, I'm sure, for the audience not to be looking in the back for our speakers all day, so I wanted to give a little shout out to them.

So thank you, everyone. We hope that you had a great day and it was as thought provoking as it was for us, and have a wonderful Thanksgiving.

(Appplause.)
(Whereupon, the above matter was adjourned.)