BEFORE THE

ILLINOIS COMMERCE COMMISSION

ELECTRIC POLICY SESSION

2018 SUMMER PREPAREDNESS

Thursday, May 10, 2018

Chicago, Illinois

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

PRESENT:

BRIEN J. SHEAHAN, Chairman

SADZI M. OLIVA, Commissioner

JOHN R. ROSALES, Commissioner

D. ETHAN KIMBREL, Acting Commissioner

ANASTASIA PALIVOS, Acting Commissioner

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UTILITY SUMMER ELECTRICITY PANEL I
PRESENTATION BY:

MR. TERRY R. DONNELLY, Executive VP and Chief Operating Officer, Commonwealth Edison Company

MS. MICHELLE BLAISE, Senior VP, Technical Services, Commonwealth Edison Company

MR. NEIL HAMMER, Deputy of Market Assessment, MidAmerican Energy Company

MR. BRIAN RYBARIK, DEPUTY GENERAL COUNSEL, MidAmerican Energy Company

MR. RON PATE, Senior VP, Operations & Technical Services, Ameren Illinois Company

MR. BRICE SHERIFF, Director, Regulatory Affairs, Ameren Illinois Company

MS. SUSAN L. SATTER, Public Utilities Counsel

MODERATOR:

MR. TOMÁS RODRIGUEZ, Legal and Policy Advisor to Commissioner Rosales
RTO SUMMER PREPAREDNESS PANEL II
PRESENTATION BY:

MR. ROBERT BENBOW, Executive Director of Energy, Market Process, Midcontinent Independent System Operator

MR. PAUL McGLYNN, Senior Director of System Operations, PJM Interconnection

MS. EVELYN ROBINSON, Managing Partner of State Gov't Affairs, PJM Interconnection

MS. KRISTIN MUNSCH, Deputy Director/Consumer Advocate for PJM States/Citizens Utility Board

MODERATOR:

MS. TANYA GUTIERREZ, Legal and Policy Advisor to Commissioner Rosales
COMMISSIONER ROSALES: Good morning and welcome.

Pursuant to the Illinois Open Meetings Act, I now call to order the Illinois Commerce Commission's 2018 Summer Preparedness Policy Session.

With me here in Chicago are Chairman Sheahan, Commissioner Oliva, Acting Commissioners Kimbrel and Pavilos. We have a quorum.

Our guests and panelists should be aware that a court reporter is present, and that the transcript of this session will be posted on the Commission's website following this session.

As we rapidly approach the summer heat and weather, it is incredibly important to examine the readiness of our public utilities and to do it on a contingent basis. Today, we'll discuss the issues of summer preparedness with two panels. The first will focus on the utilities, and the second, the RTOs. The Attorney General's Office and the Citizens Utility Board will also be joining our panels this morning.

On behalf of the Commission, I would
like to thank today's presenters for the effort that they put into these presentations and all the work that they do. I look forward to some valuable discussion.

Finally, I would like to thank my legal and policy advisors, Tomás Rodríguez and Tanya Gutierrez, for doing the honor of moderating our panels this morning.

Welcome, again, to the ICC's 2018 Summer Preparedness Policy Session, and, Tomás, please begin with your first panel.

MR. RODRIGUEZ: Thank you, Commissioner, and thank you to everyone for joining us this morning for our first panel on Utility Electricity Summer Preparedness.

We have a full panel from three of Illinois' electricity utilities as well as the Attorney General's Office, and we may even have some others joining us later, depending on where the conversation leads.

The conversation for this panel will focus on the operations, demand, and weather
considerations that the utilities must take into account to ensure enough reliable power and the ability to deliver it to customers throughout the summer. In addition, we will explore a consumer-focused perspective on those same issues, and more such as cost impacts and savings-based programs.

In order to provide ample time for that conversation, I will get right into the introductions. Please note that we are going to go out of order from what's listed on your agenda. And starting us off today is going to be Susan Satter from the Illinois Attorney General's Office, where she acts as public utilities policy counsel.

Seated next to her, and in order of the presenters, are Terry Donnelly and Michelle Blaise of ComEd. Terry is the executive vice president and chief operating officer, and Michelle is their senior vice president of technical services.

Next to Michelle are Neil Hammer and Brian Rybarik. Neil is the director of market assessment at MidAmerican Energy Company, and Brian
is deputy general counsel at MidAmerican.

And then rounding out the panel are Ameren's Ron Pate and Brice Sheriff. Ron acts as senior vice president of operations and technical services, and Brice is director of regulatory affairs.

We ask Sue and each of the companies to keep their remarks under 15 minutes, and I'll hold up some time cards for you toward the end, and -- so that we can include at least 15 minutes of discussion and questions and answers at the end.

With that, Sue, please feel free to begin. I think that you have the clicker, and you may need to turn it on, on the left-hand side.

MS. SATTER: Okay. Do you have my slides?

MR. RODRIGUEZ: Yes, if you advance, there they are.

MS. SATTER: Very good. Thank you very much.

First, thank you for having me. As Tomás noted, I believe this is the first time that consumers have been on this panel and have been part of this annual policy session. I think consumers do
see things differently from their side of the meters. And so I'm happy to have the opportunity to present that today.

Okay. Generally, what are the summer consumer utility issues? While there's relief from high heating bills, often times, consumers have residual debt or budget billing from the gas side. So budgets can be stressed even though the winter heating bills are past.

As I think we all know, cooling drives up usage and bills. Another concern that is very prominent for consumers is storm outages. And finally, I want to just touch on the role of suppliers and door-to-door marketing during the summer months.

Okay. So while there is relief from high heating bills in the summertime, many consumers continue to pay off their winter obligations. So while they have lower day-to-day heating obligations, they're paying, either on a budget-billing basis or otherwise. So the summer obligations are on top of that.
Because some people can't afford budget heating or summer cooling, you've got a situation where you've got consumers looking at debt and ways to manage that debt. And just kind of as an aside, the Illinois Attorney General's Office is now seeking an initiative in Springfield to make it a little easier, particularly for low income customers, to pay off their debts to the utilities so that they can remain connected to the system.

Today, about 30,000 customers statewide -- very, very rough number -- are disconnected at the end of the winter disconnection moratorium, simply because the costs are just too high, and they cannot get back on the system without assistance.

Okay. So how weather drives up electricity usage: Air conditioning is the single largest user of electricity for most consumers. The other high-users of electricity are water space heaters. Most people in our state use gas, but water space heating is also a very, very big demand. Clothes dryers, electric clothes dryers, also very --
everything that's heat and cool, it uses a lot of electricity.

I did a very rough estimate, air conditioning uses -- it increases usage by 350 to 950 kilowatt hours per month. Of course, this varies. It depends on how weather sensitive the customer is, how cost sensitive the customer is. Of course, customer charges vary depending on those factors.

So just looking at the actual out-of-pocket amount, using -- assuming just the kilowatt hour change, because all of these charges are already there, an $0.11 a kilowatt hour, which is kind of a rough, all-in Commonwealth Edison kilowatt-hour charge, including delivery and supply, you're looking at increases from about -- I calculated a simple $30.50, but up to $104, up to an extra hundred dollars, if you're a big user of air conditioning.

And now I just want to contrast that to a situation where a customer might be on a supplier. And maybe the customer came in on a rate that was close to the utility rate and got pushed to a variable rate. And just this month, I looked at a
utility bill that had a supplier cost and it just had
a dollar amount, not backed up with -- the
kilowatt-hour charge was at $0.16 a kilowatt hour.
Now that $0.16 does not include the delivery portion,
the kilowatt-hour delivery portion. So for those
people, they're paying significantly more. So you
can see how the higher supplier charges really
magnify the effect of the increased demand in the
summertime. Supply charges matter.

We do understand with the longer days,
particularly door-to-door sales can happen more
frequently. It's more attractive to suppliers to
send people out, and residents are outside and
they're more available, it's light out, it's warm.
So it's critically important to understand that
customers don't necessarily see the difference
between a supply charge and a non-- and the other
charges on their bill.

They don't really know what they're
comparing. They might not know, certainly, that
there's a variable rate, how that's even calculated.
Now, there are -- the charges that were displayed on
the Plug In Illinois site, I did a just kind of quick analysis of that. These are voluntarily reported prices, so these prices do not necessarily reflect the true market of what people are paying on a day-to-day basis, especially with the variable rates. But just using those charges, those self-reported charges, we have 78 of 88 offers higher than the utility rate in ComEd's own. And 18 percent are 30 percent higher. And that doesn't even include these $0.16 rates that we've seen, $12- -- or $0.12 and -- 12.5-cent rates that we've also seen.

So again, given the attention that we expect suppliers to give to residential consumers in the coming season, the need for supply price disclosures is critical if consumers are going to protect their pocketbooks, number one. And number two, if the competitive market is going to do its job, which is to drive prices closer to cost.

And again, we have some initiatives in Springfield now that would make this information more readily available to consumers. And this is good for consumers, but it's good for the market, and it
advances the state public policy to rely on competition to restrain prices. Customers don't know what the scale is. If they don't know what the price is, they're not going to make cost-effective decisions; nobody will.

So we know that there are more -- there's more usage in the summertime. And the utilities have offered summer energy management tools, which we appreciate. I only looked at the most generally known ones from ComEd and Ameren. I think a lot of people see hourly pricing as a demand response tool, because people who are engaged in that process of understanding what the hourly price is -- so it's people -- when I say "engaged," I mean they -- they really have to be more engaged. The have to have it on their phone, you know, what's the hourly price. They have to like that kind of thing. I do; you know, I like to see what it is every day. But people who are outside this room, you might find some. But these numbers show that there are not many people on -- I mean, out of 3. -- what -- 7, 8 million ComEd customers, only 17,000, 18,000 are
reportedly on the hourly pricing; Ameren, out of a million, 13,600. So it's a good program for those who are on it.

Peak Time Savings, though, the ComEd program has attracted a fair number of people. I figure that's about five percent of the eligible population, Ameren, 40,000. In the companies' AMI reports, they talk about how often the peak time savings days are called. And, you know, it depends on the summer. Last year, it was a relatively cool summer, and they had one call. So it wasn't really used.

One of my favorite programs is the Air Conditioning Cycling program, and Commonwealth Edison reports 16,000—about 500 customers on that program. Again, a relatively small percentage, about 0.4 percent, but there's a planned expansion through 2021. And that program is really invisible to the consumer, there's a switch on your air conditioner, or if you have a special thermostat, it's appropriately programed. And on the hottest days, you get turned off for 15 minutes. If you
happen to be on, you're turned off, and then, come
back on when that 15 minutes is over. And because
it's spread out over so many customers, that 15
minutes actually does, affec-- can affect the peak
demand.

It's a good program. I guess I would
like to see it expanded. I'm hoping that later in
the program, the utilities will talk about other
demand response programs that they have. And I think
it's important not only they have these programs, but
for people to understand them, for them to be easy,
and to somehow get them out there so that people
understand this will save you money.

Okay. So another thing about this
summer that we sometimes forget, and certainly coming
from the consumer-side of the meter, is this: Summer
heat can be deadly. I don't know how many of us
remember 1995, with the 739 deaths in Chicago over a
week period. It was an absolute public disaster. In
addition to the morgue having to handle this
disaster, it was just the day-to-day life of the city
when temperatures were 90 and above.
There were scattered outages reported throughout the region due to the heat. There was a major outage on the northwest side of Chicago, with some 49,000 residents without electricity for up to 2 days in the midst of the heat wave. So there was no air conditioning, no refrigeration, no elevator usage for these areas. The summer heat can actually be more deadly than the winter cold.

There's a -- for those who want to dive into this a little deeper, and if you have a strong constitution, you can read this book, "Heat Wave: A Social Autopsy" -- I think that word was selected intentionally -- "of Disaster in Chicago."
It's a great book, and it really talks about the effect of heat, mostly in cities, but on human beings.

So related to -- you've got your excessive heat in the summer, and your storms in the summer. And sometimes there're problems of -- problems of weather times, potentially. And we don't know, while sitting here today, what the summer will be. Will we have a deadly hot summer? Will have
storms like 2011? So in 2011, more than two million customers -- there were more than two million customer outages over, I think it was only two summer months. Six major storms, and two of them resulted in huge numbers of people without power, for 160,000 in one storm, almost a million in the second storm, and that storm came and went in a flash.

We looked at the consequences of that storm pretty closely, and there were people without power for a week. There were people without power for several days more than once. This is what consumers are afraid of so to speak. This is what they dread, not just the excessive heat, but these outages.

I don't think I need to go through what happens when there is an outage, I think everybody knows. There are public safety issues, traffic lights, downed power lines. I think we do need to recognize that things like hospitals, police stations do have obligations to have back-up power, and those obligations are important. And in addition, I know at least Commonwealth Edison -- and
maybe the other utilities can address this -- did put
together a program to work with municipalities in
these extreme situations so that they could help
identify priority restorations, for example, a
nursing home or senior housing.

So what is the outage performance?

It's part of the smart grid law. The performance
element of the law requires reporting for outages.
And it requires improved performance. And that's
good. And on -- I have the SAIFI and the CAIDI
measurements that are reported. And just as a
summary, SAIFI is the average number of outages per
customer on the system, and CAIDI is the average
duration -- right, "d," duration -- per customer that
experiences an outage, so 81 minutes is a little over
an hour, hour and 20 minutes.

Now, the law, though, does exclude
nine weather-related outages from the calculation.
So while these numbers are great, and they're meeting
the performance measures, from the consumer point,
they're experiencing those outages that are excluded.
So in 2017, 617,000 outages were excluded. Those
were experienced by the public. In 2016, 500,000; 2015, 585,000; 2014, there were even more, 858,000. And these are all reported. ComEd reports them in their own reliability reports and also in the performance reports. So I think the point that I want to make is that while performance is better on the blue-sky days, the storm days continue to be a problem.

Ameren, similar situation, we don't have the 2017 yet; Ameren files on June 1st. But the number of outages, it's ver- -- the number of excluded outages are experienced by consumers, but are not reported.

So just the conclusion to that is that storm outages remain a significant summer threat to millions of residents throughout Illinois, and that the metrics primarily measure blue-sky outages, in other words, those not caused by storms. Although, on a particularly stormy summer, and you have more storms than nine, there will be some effect.

And that's it. I thank you for your time.
MR. RODRIGUEZ: Great. Thank you very much, Sue, for those thoughts, and a lot of good stats and commentary on that.

So moving right along, we have ComEd next, and so whenever Terry and Michelle are ready, please, proceed.

MR. DONNELLY: Thank you, Tomás and Staff for your remarks and comments. And thank you to the Commission for conducting these hearings, which clearly show the criticality of the grid and criticality, especially during summer which are periods of stress, and we appreciate the Commission showing that importance by conducting these hearings today. And also thank the colleagues for joining me and -- and the audience as well.

So if we could -- I have -- I'll cover a couple of slides in introduction, then I'll turn it over to Michelle Blaise. Michelle Blaise is our chief engineer and runs technical services and all of project management and smart grid development. So you can find a lot more about details.

If you look at 2017, we see a lot of
positive performance on our system, our best summer
reliability rates. If you look at things like
frequency of outages, as Sue mentioned, and duration
of outages, they are down just under 50 percent --
46, 47, 48 percent -- from pre-EIMA, for both
duration and for both frequency.

And while EIMA does provide exclusions
on that, these numbers are all-in numbers. So we do
tend -- we do absolutely agree that storm outages
need to be included in looking at our reliability and
the impact of that reliability. There are exclusions
in the EIMA law, but the way we -- I would say
Michelle and I and our team manage or lead is by
looking at all-in outages. So these statistics
are -- the all-in outages on what we've -- and they
can be volatile, but what we've been able to achieve
and include all storms.

Additional highlights: Our safety
performance continues to be strong. Storm outages,
we're really making progress here, I think. The
storm outages have decreased 58 percent compared to
pre-EIMA. Now, pre-EIMA, I define as the mean
between 2007 and 2011. And when I say "storm
outages," it's the number of customers impacted by
each outage.

So we're trying to get to a smaller and
smaller customer count for that, because we're
going to get more progress on the big outages and
preventing them more, and a lot of smart switches is
restoring them in storms. So we're driving that
outage count for the -- for the storm outages to
smaller customer counts, which is very positive.

Our -- you know, we've avoided lots of interruptions
due to our investments in our smart meters. A lot of
truck rolls are avoided. There are some stats there:
867,000 avoided truck rolls by -- because of mainly
the switch and the smart meter. Of that total, about
95- -- or just under 100,000 of our avoided truck
rolls were for outages. So we'd know that the power
is either on or off at the residence; we can avoid a
truck roll.

We -- looking to the future, we're
wrapping up in our EIMA investments. We will
continue that. We'll wrap up smart meters
predominantly this year. We'll continue to invest in digital substations through 2021. Our focus turns onto the Future Energy Jobs Act, which we're pretty excited about.

And a couple of summary comments there, we've launched a portfolio of energy efficiency programs that are pretty aggressive, and we're making good progress there. We've started our voltage optimization plan, which improves losses in the system and improves efficiency. And on the solar front, we're really seeing a rapid intake of solar connection applications. And the featured bill commits 750 million for low-income assistance through energy efficiency, solar funding, and the ComEd CARE program through 2030, so we're pretty excited about that.

We continue to focus our innovation through the Bronzeville microgrid, and we work very collaboratively with the ICC and others and the community on getting approval to build that microgrid and how we use smart grid technologies like smart street lights to improve service. Not only in
resiliency, but also quality of life in the community is what we’re really focused on delivering in the Bronzeville area. And of course, we’re focused on the next grid proceedings that are underway at the ICC.

I would add that the smart meter investments, we were able to make 75,000 electrician repairs to customer -- customer meter equipment, which can be quite old and antiquated. And we were able to make those repairs, and I appreciate the support of the Commission on how to handle those costs. And many of those repairs are to residents that are low income because that equipment is very old, and we were able to make those repairs. That was one of the collateral benefits of our smart meter program.

I won't dwell on each one of these charts on the next slide on our reliability trend. The one that we're really the most proud of is the bottom right. This is an EIMA metric, which we call the Customer Target program. These are chronic outages. These are customers that experience
outages, either frequent outages or predominantly long-duration outages every year. All right? This is a metric implemented some time ago from the ICC to measure our performance on that.

This is a EIMA metrics, and I will report we did not make this metric and received penalties the last -- first four years of EIMA. Last year was the first year we finally met that goal, and as you can see on the far right, the big reduction in chronic outages. I think we can all agree, it's when those outages are affecting small pockets of customers frequently, or a long duration every year, that has had significant impact, and we're pretty pleased with that one.

On the preparedness for summer, we're in pretty good shape here. The PJM peak, 24,292, that's at 90 percent; you know, that would be more severe weather. The fi-- we call it the 50/50, which is maybe average weather, 22,121 megawatts.

A lot of our investments are on track, demand response, spare equipment. Michelle will go over some details of that: The storm task force,
customer channels, and improvements in that area. Our load performance, we're in good shape there. Our loadings of substations, feeders, and equipment are in good shape. And as Susan mentioned, the weather -- there are predictions for the weather, but we kind of have to know what we're in there when it actually hits. So there're some predictions of above-average temperatures, probably not a surprise to most people, and probably normal partic- -- participation [sic]. But we know how volatile that is.

If you look at Transmission and Substation Adequacy on the next slide, a couple of things: Demand response, we can call on, we think, with a fair amount of confidence, about 1,000 megawatts of curtailment if we had to in the peak. And that is a fairly significant amount. A lot of that is voluntary programs, incentive programs. And as mentioned in Ms. Satter's remark, we do have the smart thermostat program. We had 9,328 in 2017. That's up to 19,000 in this year, which is pretty exciting.
That's now a permanent program, the smart thermostat, and you get a rebate as well, and you have that AC Cycling. That's what's matching. There's two versions of that: One where you're cycled three hours; one where you're cycled a little less than that. And we see those programs.

And the Peak Time Savings program has rapidly grown. You need a smart meter for that, so that's grown significantly to over 250,000 customers, and we're getting some good savings there and some demand response with that as well.

So with that, I will turn it over to Michelle Blaise to continue the presentation.

Michelle?

MS. BLAISE: Thank you, Terry, and good morning. And thank you, Chairman and Commissioners for the opportunity for us to share with you the work that we're doing to improve -- continue to improve the system performance, but also make sure that we're ready for the summer.

The work that we've done is really -- I want to put it into three categories. It's work
that we're doing on the system to shore up the system, to make sure it's performing not only on blue-sky days, but during the extreme weather that we see in the summer.

The second part is around the customer care. How we-- improvements in how we're taking care of customers if and when they experience these outages. And also our preparedness, being prepared for these extreme conditions in the summer.

As far as system investments, we usually look at -- first look at our load projections, and we do work to make sure that our system is ready to take on additional load, especially in the summer. We identified about 237-some projects that were needed. Based on those load projections for this summer, we expect to have pretty much all of them done before June 1st.

And we're on track to complete other programs of work that we focus on before the summer season comes. We have the Lightning Enhancement program, where we address areas where we've seen a lot of lightening-related damage. We have the
one-percent-worst-performing feeders that is part of the regulatory requirement. We focus on getting all that work done before the end of June. And as well, there's our vegetation, load transmission and distribution vegetation trimming is on track. Additional work that we're doing is we're also reinforcing communication systems, converting to digital communications and fiber in our transmission -- for our transmission. Substations, we are focused on some really targeted work that Terry mentioned around the customer-target work. One program that we ke- -- kept as far as EIMA was Storm Hardening. That's work related -- where we focus on areas -- pocket areas in the system where customers are seeing local outages, especially during weather events.

Part of the work, the solutions that we've come up with are underground- -- undergrounding as well as enhanced tree trimming. This -- depending on what the issues are during extreme weather. We've installed about 200 miles of Spacer Cable in heavy re-treed [sic] areas to address the impact of outages
during those extreme weathers. So we continue to look at new solutions.

We've also done quite a bit of work on our transmission system. Since 2014, we've replaced about 1,300 transmission wood structures on our transmission system, from wood to steel. Again, shoring up, really reinforcing our system.

We've also -- as far as emergency preparedness, I talked about preparedness, so we continue to drill and reinforce our response. Just about every employee in the company is part of our emergency response process. And we do drills pretty much all year long, summer drills, and as well as spring drills to get everyone ready for their roles.

Mutual assistance is really important to us. It's our ability to -- we are part of three mutual assistance groups, where utilities agree to support each other in case of significant catastrophic events.

We've participated in at least three events that we want to highlight. We supported the restoration efforts in Florida during Hurricane Irma.
We deployed over 760 ComEd and contractor employees to support that restoration effort. We also deployed about 145 ComEd employees to help restore Puerto Rico. A lot of work -- the -- these employees volunteered to go to Puerto Rico for a month at a time to help restore customers in that -- that were still not restored around -- in March and April. In March, we also -- our east utilities were experiencing -- experienced three significant winter storms in a row, over a three-week period, and we sent about 1,300 employees there to help.

The operational exercises that we do, I talked about the drills that we do internal. But also, as we've improved in that process, we've included external entities in our drills as well, emergency response entities from the communities that we serve. We've led workshops with municipalities around load shedding, explaining to them what that is, what potential situations we might face, and also ensuring that we got communication systems in place with them during -- if an emergency like that were to happen.
We also have joint Illinois partnership with Ameren and MidAmerican where we continue to discuss best practices and emergency preparedness. We also have contingency planning as part of our preparedness. We have emergency systems in place, generators, spare transformers. We all ensure that we've got the right amount ready to go.

Our supply readiness, ensuring that all mobile storm trailers are stocked and ready to go. Another key highlight that -- we took on a program to look at some substations that we had in our service sector that were prone to mitig- -- flooding. We've been working on that program for about three or four years now. We've done five such flood mitigation efforts at our five substations that were most prone to flooding and we're -- we've got a sixth one going, and those are the worst ones in the area. And we've seen the results of that during some major rain storms.

Customer communication is important to us -- we've got a minute. Call center outreach, we train our CSRs to make sure that they know -- they
have access to be able to help customers when they call. Our energy efficiency programs that we've had in place that Terry talked about, we've increased significantly to help customers reduce energy use and costs, and that's ongoing and it's accelerating as well.

We talked a little bit about the Future Energy Jobs Act that was -- we are implementing the programs that are related to that around energy efficiency, voltage optimization. Solar's going to be a significant change for us. We have about 1,600 megawatts of solar developers in our cue. A significant component of that is Community Solar. And we're continuing to work with workforce development, looking at how we develop workforce -- the workforce and the skill sets in our communities that we serve.

So overall -- almost time? We're prepared to provide reliable electric service. Our transmission distribution facilities are ready to meet our 2018 forecasted loads. Our storm response improvements, preparedness drills and exercises are
ensuring that we're ready to handle the summer. And our customer service channels are ready to address customer concerns.

Thank you.

MR. DONNELLY: Quickly showing -- I'm sorry -- a couple of pictures from Puerto Rico. These are fantastic. You know, the community actually fed the crews every day. This is an incredible deployment. This was a once-in-a-lifetime, and we have our line mechanics, which are going to be some -- some pretty, you know, tough guys, you know, breaking down crying on this deployment.

And so we have -- you know, the residents were feeding us each day. We had -- the community helped clear the brush for our crews to restore power. We had -- this particular picture is -- alerted us to a real bad bee problem and helped our crews get into an outfit to restore power and avoid injuries. We donated to families in need, schools in need, and fixed baseball fields. Deployed a solar suitcase from a school here in Chicago that developed, and had Easter baskets and -- you know, I
know it's quick, but it was just a -- it was just a
fabulous deployment. And, you know, we hope nothing
like that happens again, but it was a
once-in-a-lifetime experience for our crews.

MR. RODRIGUEZ: Thank you, Terry, very much,
and Michelle. And I believe we have some other
panelists who have similar experience with Puerto
Rico and after the tragedy that hit. So hopefully we
can get into that more later, but I would like to
pause briefly to see if the commissioners or the
chairman wanted to ask any -- any questions before we
move on.

COMMISSIONER ROSALES: Yeah. Thank you, Tomás.

Is -- is there an actual ranking of
what you do from a national perspective? I'm just
asking this. It seems like it goes so well and we
appreciate the extras that you have accomplished in
the last year with, you know, your work in Puerto
Rico. So...

But is there a national ranking of how
this goes, or do you just look at other organizations
and see how you compare?
MR. DONNELLY: Yeah. A ranking of, say, difference performance across utilities?

COMMISSIONER ROSALES: Correct.

MR. DONNELLY: Yeah. We do a pretty significant benchmarking of all the major utilities in the U.S. on various attributes of performance, customer performance, reliability performance. The last benchmark study, we were the best in class of that group in reliability, frequency of outages, so we're pretty proud of that, so about a 24-company group. It's all the big companies, you know, California companies, Florida, big -- large -- large utilities. And we -- we've been improving each year, and our reliability was top in that our customer operation performance also tends to be near the top as well.

COMMISSIONER ROSALES: But is that an apples-to-apples comparison, because this has -- you've done very well. But are you comparing the same things that they're comparing?

MR. DONNELLY: Yeah. We do -- it takes a lot to make sure it's benchmarked with metrics that the
industry abides by. So some of the reliability metrics are an IEEE standard of reliability that everybody kind of abides by in reporting. A lot of customer operations metrics, speed to answer and things like that, are pretty universally measured across the board, and the customer service satisfaction.

Like, thinks like looking at the J.D. Power's survey, those types of things, are like an independent third party that we measure. And we've been climb-- -- we're one of the most improved utility over the last five years in J.D. Power's. We still have places to go; we still have utilities on top of us. We still have room to go to keep improving in that particular department.

COMMISSIONER ROSALES: Thank you.

MS. SATTER: I think it's the I-- -- it's an IEEE report?

MR. DONNELLY: Yeah.

MS. SATTER: And I think it's generally available --

MR. DONNELLY: Yes.
MS. SATTER: -- without a subscription or login, so if you Google the IEEE reliability metrics, you have an annual report. So, you know, you can look at it anytime.

MR. DONNELLY: And that does -- that does, we call it a two-and-a-half beta. That does -- just to -- that does tend to normalize for extreme weather events that Sue mentioned for the IEMA bill. Now, the way we kind of manage is the all-in, as I reported in our statistics, includes all storms. But the benchmark, IEEE, has some normalizations for big weather. Because, you know, if an east coast utility's hit with a hurricane, or Florida's hit with a hurricane, it can really skew their metrics, so there's some adjustment for that.

COMMISSIONER ROSALES: Fair.

MR. RODRIGUEZ: All right. Well, thank you for that, and thank you, Commissioner Rosales, for the question.

Let's move right along to MidAmerican Energy Company. Brian Rybarik and Neil Hammer, take it away, please.
MR. RYBARIK: All right. Thank you, Tomás.

I've had, like, seven cups of coffee, so I'm going to warn the court reporter that I might talk really, really fast. If you see smoke coming out of that machine, just raise your hands and I'll slow down.

I'm Brian Rybarik; I'm the deputy general counsel. I focus a lot on our regulatory policy and our regulatory filings throughout our four-state region. And with me here is Neil Hammer who -- I'll let Neil describe his role as the director of market assessments.

MR. HAMMER: Yeah. Our market assessment group monitors RTO activities for changes in markets, and we're looking at long-term generation, finance, and forecasting of market prices.

MR. RYBARIK: So I feel like if -- I'm probably dating myself with this reference, but if you remember the Macintosh ads that had John Hodgman in them, it was, like, "I'm a Mac" and "I'm a PC." Neil and I are going to be -- I'm going to be the Mac, so I'm going to focus on more of the talks and stuff. And when we have numbers on slides, Neil's going to
take over and take over the PC role.

So a real quick overview of what we're going to go over today, a reminder and overview of who we are. We'll focus a lot on our demand capability as we have in the past. Our transmission system, some education management work, our storm preparedness work, and some other work we're doing internally and externally to focus much more on a customer-first approach to our interactions with our customers. And then some changes on energy efficiency, largely focused on some policy changes that have happened in Iowa, but as you can see from our next slide here, Iowa is our predominant jurisdiction.

So we are headquartered in Des Moines, Iowa. We have about 3,300 employees. Neil and I hope we do a good enough job describing our efforts here, so that's not 3,298 by the end of the day. About 1.6 million electric and natural gas customers in four midwestern states, Illinois; Iowa is our predominant jurisdiction, as I said; a little bit in South Dakota; and then two municipalities in Nebraska
that we serve with gas.

Our Illinois presence, relatively small compared to the other utilities that you have here before you today. 85- -- about 85,000 electric and 66,000 natural gas customers, all in the Quad Cities area.

As Neil will go over, we have about 387 megawatts of power of our owned capacity are allocated to our Illinois customers. The remainder comes through the Illinois Power Authority. That's something we dabbled early on, and it's -- and in its tenure, we've certainly come used to that process, and have found that very valuable to us and good for our customers.

So because this slide has a lot of numbers on it, I'll turn it over to the PC.

MR. HAMMER: Yeah. So this is a slide of MidAmerican's forecast of load capability for the summer of '18. And on that first slide, you will see MidAmerican's forecast peak load is at 4,873 megawatts at peak load, which results in about 16 percent excess reserves on an installed p-- -- on an
installed-capacity basis, or 5,677 megawatts of
generation resources. That amounts to about 500
megawatts in excess of MISO resource adequacy targets
for the 2018-2019 planning year.

Our Illinois load is a smaller portion
of that load as shown on the third line there. And
that has a forecasted peak load for the summer of 458
megawatts. As Brian mentioned, we allocate a portion
of our own generation to that of load through the
assorted resources that serve that load. And that
amounts to 387 megawatts of generation and 9
megawatts behind-the-meter generation MidAmerican
stocks.

The small shortfall in Illinois is
procured through the Illinois Power Agency's
recommendations. This year, it has procured at the
MISO capacity auction.

Our all-time peak occurred last
summer, and that was 4,850 megawatts. And that's
just a -- it's, slightly less than our forecast for
the summer of '18. Our capacity at MidAmerican
continues to grow as we're adding limited, and all of
that is coupled use.

On the transmission side, there are no facilities expected to exceed ratings for the summer and load conditions. And of course, for at all conditions, we look to operate in an ISN MISO market assistance to manage in mitigating any risk of congestion.

We're installing new 345 kV in and around Iowa, which enables more import and export capability within a state and to other states, which improves reliability. Some of those projects are now completed through the MISO Multi-Value Project. On this slide, I show the graphic that shows the ones that are remaining to be completed in 2018 and 2019, and eventually, final completion of the projects in 2023.

As to vegetation management, we preform tree trimming on a regular cycle, and that maintains our system performance for outages and capacity measure. We've seen a good response of how to maintain the focus on those program goals for tree health. And just through minimizing tree-related
events and it also has an impact on major events.

With that, I will let Brian cover the rest of the slides.

MR. RYBARIK: All right, moving on.

One thing I do want to point out here on this slide is -- and this is just a great benefit of having more and more customer interaction, you'll see one of the buttons we have on our website is to submit tree trimming requests, right? So we have all of these citizen customers out there that see stuff every day. And the more interaction we have with them, the more they can say, Hey, there's this tree that looks really close to my power lines. If we make that really easy for them to communicate with us, we've just increased our resiliency and our -- and our reliability just by getting that information that we otherwise wouldn't have had.

So the customer interactions are a big focus of what we're working on. I'll talk about it a little bit here, but one thing we are doing in -- and as we prep for storm preparedness, we are really focused on the facilities that we have. We've done a
lot of construction for new operation centers and new storm centers, and just opened a new incident command center in Des Moines, near our control center there, to allow us to engage in just really good opportunities for exercise, and of course, that's where we're going to go in the event there is an incident.

As I think everybody can appreciate, the number of threats and the types of threats to the grid are increasing daily, and it's something that we need to be prepared for. As ComEd said, and I'm sure as Ameren does, we're trying to figure out better ways to prepare for those and engage in scenarios and work with other agencies outside of our own teams to make sure that we are going to be ready for any of those potential scenarios.

As was also discussed, mutual assistance continues to be a big part of what we do. In fact, just last week, there were some major storms in Michigan. We rolled about 33 employees -- well, not about 33 employees, 33 employees -- over and a handful of trucks to help there.
And the nature of mutual assistance is we know that that's probably going to come back to us, right? That at some point we're going to have a storm in Iowa that's going to take out a significant amount of our infrastructure, or a storm in the Quad Cities area that's going to require some help. And that's what's great about our engagement. Despite the fact that we may feel like competitors sometimes, getting people back online is job number one.

In our role through Berkshire Hathaway Energy, we do some mutual assistance with our affiliates as well, and then we are also engaged in Grid Assurance. We have a filing before the Commission, so I'll avoid the most public ex parte communication in the history of the ICC by not talking about that too much.

But moving more and more to computer-aided dispatching, and you'll see some of our outage maps, similar to what Ameren has in their presentation. But I think a really important thing here, on this slide, to point to is when we ask our customers, Hey, do you want to get notifications
either by e-mail, or by text, we have a pretty good subscriber rate. I think 75 percent of customers are getting proactive updates via some form of electronic communication.

So, this is our map. Again, I think it's similar to what Ameren has. I think it's really cool to go out and kind of see the state of our system, and if you're a customer, you know, pop open your laptop and you can see kind of what's going on. Weather overlays, I took this last week and you can see a little bit of weather in the bottom right-hand corner. I should have picked a day where it was raining everywhere so you can see, but that weather had just moved through. There were some outages in the Quad Cities area.

What I think is important here is as you scroll over, not only does it tell you that you have an outage -- if you're a customer that's in an outage, you know you have an outage -- what's more important here is it gives you information as far as the time of restoration, our estimated time of restoration, and that is something that we are very
focused on. We're calling it in drilling, our customers-first initiative. And we're really trying to focus on removing barriers to allowing our customers to get really what they want.

And it doesn't necessarily come down to outages, but we're really trying to change the philosophy of all of our customer interactions. And where it started is really from a scheduling perspective. Like, oftentimes the utility says, "Oh. Hey, you need some services done at your house; we'll be there between 10:00 and 2:00 tomorrow," right? And people's lives are pretty busy, so what we're trying to turn that around to is why don't you tell us when you're available for us to be there. And then we're going to remove all the barriers of our internal systems, and say we'll be there when you want us to be there.

So that's our goal from a scheduling perspective, but that mentality is going everywhere throughout our company. We've done a ton of the internal training working with universities to sort of figure out ways that we can adjust our own
internal structures to move towards that customer-first mentality.

Finally, for us, and just a quick heads-up, energy efficiency is something we've been focused on, and the all-in bill that our customers pay is something that, you know, we can look at the kilowatt-hour charge, but what they really care about is the number at the bottom. And in Iowa, particularly, our energy efficiency costs have been going up considerably, and that's been increasing customer cost.

We filed a plan to realign those energy efficiency costs. They were about 7.5 percent of our revenues in Iowa, which was one of the highest in the country. We were looking to reduce that by -- the legislature actually just passed a bill to reduce the size of the programs in Iowa and cap the amount of spending that will be required.

I give that to you because we have largely used our Iowa plan and a lot of the efficiencies that we gained to sort of base our Illinois plan on. So we may have some changes coming
forward in our Illinois plan, and I think we talked
to Staff about continuing our current program for
another year. Give us some opportunity to get some
work done on the new Iowa law, and then figure out a
new Illinois plan. So I just wanted to give you a
heads-up that that is coming from our perspective.

And that is the end of our remarks.

And I will note that we did that very efficiently.

MR. RODRIGUEZ: Thank you, Brian and Neil. And
I -- you know, obviously we have FEJA, Future Energy
Jobs Act, here, which did affect that energy
efficiency plans for our utilities, and I don't know
if they're going to go into that or not, but the
percent-spend is a part of the effect of FEJA, so
thank you for that insight there.

MR. RYBARIK: Yep.

MR. RODRIGUEZ: Quick pause for any questions
from the bench here, the side bench.

(No response.)

MR. RODRIGUEZ: All right. So moving right
along to Ameren: Ron Pate, Brice Sheriff. Brice, I
hope I'm not blocking you too much, but take it away.
MR. SHERIFF: How we doing on time? We've got a lot of time?

MR. RODRIGUEZ: Yeah. You should still be able to go 15 if you have to.

MR. SHERIFF: We've got several slides here, but we're going to go kind of quick here to make up some time, but I don't want to stress anyone out more than we have to.

MR. RODRIGUEZ: Appreciate it.

MR. SHERIFF: The first slide here is a -- just a brief outline of what we're going to discuss today, Transmission and Resource Adequacy: Summer peak loads, Ameren Illinois supply portfolio, the RES supplier load, as well as demand response and other operating reserve resources. We're going to talk about our readiness on the transmission distribution facilities, our emergency preparedness, and of course, contact centers and how we communicate with our customers.

COMMISSIONER ROSALES: Hey Brice, you can take your time.

MR. SHERIFF: Too fast? I'll slow down.
(Laughter.)

COMMISSIONER ROSALES: You sound like a disclaimer on the radio, you know? So, yeah. Take -- take your full 15 minutes.

MR. SHERIFF: All right. So a quick preview of Ameren Illinois and the company. We have 1.2 million electric customers; 813,000 natural gas customers; service territory covering roughly 46,000 miles of distribution lines; obviously, you know, power plants; and we purchase all of our electricity.

So this slide, Slide 4, is essentially, I think, the heart of the discussion today, that Ameren Illinois has verified that sufficient generation of resources are committed to serve the Illinois load. In addition, transmission and distribution capability is adequate to provide reliable electric service for our Illinois customer during 2018.

So what does that equivalent look like? For 2018, our expectation is 7,315 megawatts; although, the worst case scenario load is 7,754 megawatts.
The next slide is a breakdown of what this summer peak load looks like as far as between Ameren Illinois and our retail electric supplier load. As you can see, a lot of our customers are supplied by a retail electric supplier, close to 5,400 megawatts of that. And of course, we've got the breakdown from Ameren Illinois between our fixed-price and -- versus our real-time price load.

So the next slide just simply highlights what our supply portfolio looks like. It takes into account, obviously, the 8.4-percent reserve margin required by MISO. As you can see, this is from 1,939 to 2,102 megawatts.

The demand response, interruptible load, currently we have 440 megawatts of interruptible RES and behind-the-meter load. We offer real-time pricing for both residential, small commercial and industrial, as well as larger customers greater than 150 megawatts. This is Hourly Day Ahead prices, posted by MISO.

You can see down below, our projected summer participation as far as large customers, small
commercial and industrial, and of course, our real-time pricing and power-smart pricing. I will note that we inadvertently omitted our peak-time rewards program, which we have currently around 70,000 customers -- a very popular program -- have signed up for that. So that will be added next year, for sure.

So let's discuss the transmission and resource adequacy from a RES standpoint. You can see in these two slides, we do not anticipate any transmission constraints on Ameren Illinois that would inhibit adequate supply to the RES customer load in Ameren territory. As we know, RES has designated their supply and resources to MISO and make transmission arrangements for thereof.

I'm going to turn it over to Ron Pate now; let him go over a few slides.

MR. PATE: Thank you, Brice. Thank you, Chairman and Commissioners for the opportunity for Ameren Illinois to come before you and talk about our summer preparedness.

I apologize for the voice. I love the
warm weather, but with that comes allergies. If I take the medication, I tend to doze off, and I did not take it this morning. Please bear with me here.

Okay. I'll summarize these slides, and I certainly will not go word for word over those today. Actually, on Slide 10 here, we conducted a summer operating study and test the system and provide direction to our operators. We also participated in a MISO-wide assessment. We found no issues with the system and verified that no Ameren Illinois transmission facilities are anticipated to be lower than 100 percent the expected loads.

Going on to the next slide -- have you --

MR. SHERIFF: No, I got it.

MR. PATE: You got it? Okay.

We are compliant with NERC standards on vegetation management. And we also have an effort underway to expand for further clearance to mitigate the future risk of as far as trees getting in the lines there, so asking for a successful, even longer as well. We have to realize here the wider the
right-of-way, the more clearance we have, the less likely we're going to have any tree issues.

I'm very happy with the next slide. We have the fourth -- this is the third year in a row that both our subtransmission and distribution feeders as well as our substations are expected to be loaded within the applicable ratings even at worst case summer peak scenarios. So I'm happy to report that because that has not always been the case. So I have this -- we've talked about issues we've had with either our transformers.

With the investments we've made, we've been able to reduce that, and, again, happy to report that we are with that couple of ratings there.

Slide 13, you can see some of the work on this slide as well as the next slide, obviously, we've been working on the Energy Infrastructure and Modernization Act. The result of this work, as Terry stated with some of his stats, we did the same thing. The SAIFI, the frequency values, we were able to reduce 19 percent, and the duration of CAIDI is 17 percent.
So that shows you some of the more -- some of the projects working on -- a couple of them where we really look at that, is the distribution allocation projects, reduce the number of customers out there that do have an issue. And certainly, the Viper, the recloser service to do the same thing. So that's going to have an impact -- a positive impact on a customer -- not experiencing outage as we have in the past.

Slide 14, basically again, with the -- what I want to point out here -- if you go a little bit down, there's a good reason for that, we provide upgrades in our system to make sure we can -- we have the capacity to serve our customers. So that's a key on Slide 14.

On Slide 15, our Distribution Vegetation Management program is compliant with our one-year cycle. We have resulted in a reduction of tree outages since 2009 through our program. We also do a lot of education with the communities on this with “my safe trees,” and, you know, that's important. We go through, along side of the ROW trees. We even trim
down and cut them back, and then, you know, find out the community's had a beautification project and want us to send them trees that are going to cause us issues in the future.

So we get a lot of values through that. And also, just personal ties with the communities, stay in touch. Try to learn about programs like that, and getting involved, Right Tree Right Place. That does make a difference in that.

On the next slide, that's just an example of our ongoing reliability improvement improvement initiatives including comprehensive and device inspections; early identification of our worst performing circuits and making repairs on those; pole inspections. And then we have installed about 3,000 composite poles. That's important because as part of our storm-hardening process.

Our new projects will install these composite poles every fifth pole, and that helps us eliminate that cascade or domino effect when we have one pole go down and they just keep going. These composite poles, the storm structure we put in with
the replacement, will limit that damage.
So we did that on infrastructure, and then as well, identified some of the circuits that have had issues in the cascading in the past, and come back and install those composite poles or storm-hardening structures there as well. And that's had a very positive impact.

For our system operations and control, we anticipate we participate monthly in Load Shed Drill with Transmission Operations and MISO. We continually review and enhance our operating guidelines with all personnel in our dispatch offices. And we also make sure all of our system improvement projects are completed before summer's peak -- before summer peak so there aren't issues. We'll operating in normal operating conditions during those periods of peak heat. That would mean getting all of the construction lined up, getting it out of the way so we won't have outages where we're actually adding load to the system operations, where we could have a bigger impact. If we did have an issue, customers would have a few days to get requests.
The next slide, as you can see this slide, we activated our emergency response center nine times in 2017 for electric outages. We did have to activate it one time for a gas outage we had in Pike County, as well.

We also supported the events, the hurricane events of Harvey and Irma. And so far this year, knock on wood, we have not had to activate our emergency center. But we did support the Puerto Rico restoration through our EOC even though it wasn't a formal activation.

I appreciated Terry's comments and slides he put there -- Puerto Rico -- because it truly was a -- a -- life changing for some of our people. I was fortunate enough, I did spend three days in the -- up in the jungle, and I was with these folks and it just -- just the way they welcomed us -- they didn't have power for six months when we got there. Even before that, I mean, the system was not issue before that. We talked to people who didn't have power two to three weeks before storms ever hit.

And those are the kind of people we
met there, and I'd be glad to talk a little more on that. But just firsthand experience that was just -- it was really -- it was really good for me. And I can tell you, I was reluctant at first to send the people, simply because of -- I was worried about safety and how that was going to be handled. Just takes more of a -- just an enormous task and we were going to go handle that. And in hindsight, I'm very, very happy that we were able to participate, and I was able to be part of that.

So, Brice, I'll turn it over to you to wrap it up.

MR. SHERIFF: Just a couple more slides to go through here.

Ron mentioned our emergency activation center. When that's activated, obviously, you know, we need contact centers, communications with our customers. We have an integrated call center. We have a large service territory, call centers throughout that service territory.

We're also able to activate home agents, available for additional support. We have
community relations -- or we have community relations coordinators that are strategically located throughout our service territory. These folks, this is their full-time job, as, obviously, they interact with local officials, mayors, what have you, and develop that line of communication. In the event that we have natural disasters or outages or things, they have a direct line to communicate with our company and be able to try and meet their needs. The media relations, obviously, we do the social media, the Twitter and so forth. We have digital customers -- customer service reps that respond to through social channels as we're a -- as well as a 24-hour media hotline. We continue to work with safety training to prepare first responders for disaster and safety or recovery.

The next slide is, as Brian mentioned earlier, is our map. We activated this in 2017. If you saw our map before, it was, for lack of a better word, old. It didn't really have a lot of features. This one is state of the art, and allows customers -- as you can see, we actually had a better weather day
when we took this photo. You can see how the weather interacts with the service territory.

The neat thing I like about this, personally, was this allows us to send direct messages to customers that are having outages. So if it's in the middle of the summer, it's hot, tornado comes through, we can put a message out there where maybe a cooling center is located or where people can go to get water or things of that nature. So it really allows us to communicate directly with our customers.

We always try to encourage folks to download the app. I mean, we all know that's the easiest way to communicate with them. We continue to do more traditional things such as the budget billing inserts to remind customers of those options that are available. We have summer media, multi-media campaign, both digital broadcast, social media. We continue to look at ways to communicate with customers. Talk about projects in their area, and assuring them we've got -- we're going to be delivering energy through the extreme temperatures
and through the weather -- summer weather conditions.

Lastly, our window air conditioner donation, we started this in 2003. This has been a great project. You know, to see the looks on folks' faces when they receive these. As we all know, summer's heat can be, you know, a lot to deal with. These are LIHEAP agencies we work through for LIHEAP-eligible customers. So it's a great program that we offer.

In summary, just to recap, Ameren Illinois has acquired generation capacity and has transmission and distribution capability for 2018. We're working to complete maintenance and system upgrades to reduce customer interruptions. We continue to work -- monitor weather, and deal with those types of situations when they should arise. And we're always looking for ways to improve our customer service and our performance.

Thank you, Tomás.

MR. RODRIGUEZ: Great. Thanks, Brice and Ron. Really appreciate the comments.

And just one note about, Ron, your
experience in Puerto Rico and when Terry was addressing that. These slides will be online; they are online. And so some of those went through real quickly, so, please, feel free to visit those and study further.

So at this point, we do want to take some time for Q&A. So, Commissioners, Chairman, do you have anything to start us out with?

COMMISSIONER ROSALES: Absolutely. Thank you, Tomás.

Brice, will you go back to page 6, please?

MR. SHERIFF: 6?

COMMISSIONER ROSALES: 6.

MR. SHERIFF: Yeah. I can't read the slides. I can't read what that is.

MR. RODRIGUEZ: That's 8. There you go, right there.

MR. SHERIFF: Okay.

COMMISSIONER ROSALES: So -- and I know this is a forecast, so your areas you expect the summer peak at over 5,000 megawatts, and what you're delivering
from your side, from Ameren, is 1,666 megawatts, correct?

MR. SHERIFF: Well, it's both the fixed-time and real-time prices. So 1,666 megawatts --

COMMISSIONER ROSALES: Okay. I understand. I see.

But you still almost -- it looks like you have a five-to-one ratio between the area and what you supply, right? So it's a five-to-one ratio.

Sue, where -- what -- whose responsibility is it when you say, you know, you have -- the days are longer and you have these folks going and knocking on the doors; people don't understand about, you know, electricity and how it works and who supplies. Yet, there's a five-to-one ratio in the Ameren territory, saying that -- does it all -- is it Ameren territory that understands about, you know, how this -- how this works, and we don't in Chicago, or what's the -- tell me.

MS. SATTER: Okay. So what you're looking at are the usage numbers that I can't see it, so I assume this is megawatt hours or kilowatt hours.
MR. SHERIFF: Megawatt hours.

MR. PATE: Yeah.

MS. SATTER: So that includes industrial --

COMMISSIONER ROSALES: Okay.

MS. SATTER: -- commercial --

COMMISSIONER ROSALES: Yeah.

MS. SATTER: -- and municipal aggregation.


MS. SATTER: So in the residential class, 90 percent of the residential class is served through municipal aggregation.

COMMISSIONER ROSALES: Got it.

MS. SATTER: So that means only 10 percent of that group is subject to the door-to-door. So --

COMMISSIONER ROSALES: Very good.

MS. SATTER: And also, Ameren, I believe has a larger industrial and commercial load than a residential load, so it's skewed that way.

COMMISSIONER ROSALES: Very good. Very good.

Very good.

So let me ask you from -- a larger question. Whose responsibility is it for customers
to understand their electric bills? Who is -- where does this start?

This is not something we had in fifth grade, sixth grade, but --

MS. SATTER: No.

COMMISSIONER ROSALES: You know -- you know, it -- I mean, you put fillers in and we send the bills, but where's -- how do we get these -- how do we get customers to understand a little bit more, so it's not a surprise when they come in?

MS. SATTER: Well, I think the first thing is we have to know where we're starting from. And although there's been -- we -- this restructuring took place 20 years ago, really, the change to retail availability is maybe 10 years, where people are really seeing that because 2006 was when the big change happened, and then there were -- there was a period where the IPA price was a little high, because that big drop in prices that happened, coincidentally, with the fracking. So I think the main thing is that people don't nec- -- they look at their bill, and it's got 20 lines, different things,
full disclosure, but sometimes it's kind of overwhelming.

Even though most bills are broken out by supply, a delivery, taxes and fees, people don't necessarily think electricity delivery supply. I don't know that they necessarily understand that. So that's just an education thing that's just going to take time.

But as far as the prices go, we think that it's critical that the prices be available to people on -- that -- the apples-to-apples prices be available to people at the time a sale is being made. Because people look at their bills, they look at the bottom line, my electric bill is this. They don't think of it, except for those who have looked at pricing and those people who really have an interest. And there're some of those, maybe 10 percent of the population. It's not insignificant. You know, people who really like this stuff, they might know, they might follow. But the other people, they look at the bottom line. And the problem is that because most people aren't experts, and most people want to
save money, they are vulnerable to a presentation, “I will save you money,” and when the devil's in the details, they miss the details.

So we're convinced that when the numbers are side by side, for example, on your bill, one of our proposals in General Assembly right now, is that when there's a supplier, the utility includes what its price would be for supply. That way, every day, some people can -- every month -- if they look at their bill; you can't force them to look at their bill -- we've got that, but it's available to them, and they might see how -- what is this difference.

COMMISSIONER ROSALES: I see.

MS. SATTER: So it's really information because a market requires symmetrical information, and we don't have it. And particularly, variable rates when the suggestion is, Well, look at the index -- I'm sorry. It's just I can't see. You look at an index -- interpret the index supply compared to the appropriate thing, it's education.

COMMISSIONER ROSALES: Okay. Thank you.

MR. RODRIGUEZ: I'll look to the panel for any
follow-up, and if not, back to the commissioners and the chairman for any questions.

COMMISSIONER ROSALES: We're good.

MR. RODRIGUEZ: Okay. And so what I'm wondering is, you know, off of this conversation, and I know we have a couple of other people, if necessary, but what -- you know, what kind of a programs and educational opportunities are the utilities offering or may have out there already about, you know, supply charges, and this topic, or I would say related programs that -- that may be available?

MR. DONNELLY: I would add that, you know, I -- you know, for ComEd and probably all of us, we're all for transparency in the best ways we can do that. I think what we see is some improving year-over-year numbers of customers taking some advantage of the smart meter data. This is a year-over-year educational challenge.

So for things like, you don't look at your bill until, you know, it comes in. We do have 183,000 customers, now, signed up for high-bill usage
alerts. So that kind of gives them, you know, some you know, you kind of set it, you go in there and, you know, kind of gives, like, some early warnings, especially in that air-conditioning period, of what your bill's going to be.

And, you know, when you look at four million customers, okay, but the number keeps increasing. Like the peak-time savings, the high-us--we have weekly usage reports through the smart meters.

That's about--just under 50,000 now have subscribed to that. You know, of course, there's the whole suite of energy efficiency programs.

But I think as we see smart technologies continue to get more and more prominent and information to consumers through education, when we see some more tools that kind of have earlier awareness, you know, of your bill like the high-usage alerts, so I'm just--that's what I'm looking at.

MR. RODRIGUEZ: Anyone else?

MR. RYBARIK: Well, this may be not as much of
a pure customer-focused issue, but as I talked about, we're looking at, you know, some more customer-oriented viewpoints, and that's certainly helping us figure out more and more what customers actually are using as far as information. And we've talked to some, like, energy management entities, and I think that those are really going to help drive customers into being able to state preferences of what they want and be able to sort of manage their energy systems a little bit -- a little bit more. We don't have a deployment of smart meters in our Illinois service territory, as we're a relatively small utility here, but that's something that we're also investigating now, whether or not that's going to help.

But from our generation side, and I think this is sort of stuff, for us, that trickles down, we're looking at, like, different sensing devices and different analytics to make sure we're continually operating our generation units as optimally as we can. We have a lot of wind units. When those run, they help us, with among other
things, production tax credits. So we have this massive incentive to make sure those are operating as efficiently as they possibly can.

And we're looking at different ways of analyzing data from those. And I think what's going to trickle down into our distribution systems, and look and see are we operating those facilities as maximally efficiently as we possibly can. And get more and more data points for us to operate that system better for customers.

MR. RODRIGUEZ: Thanks. And I think that's really important. Data is, you know, so usable and prominent right now. So...

We are -- we're running a little over, but I had one more question I wanted to throw out, unless the chairman or commissioners have anything.

So, really, kind of generally, I -- we're now into the FEJA era, for lack of a better term, and we've heard about some of the changes that EIMA brought, the positive things that it has helped with. For instance, the 800,000-plus truck rolls avoided at ComEd, you know, the related ability to
ping, you know, the outages remotely.

So what -- can we articulate how FEJA is going to help with summer operations or how the data from EIMA will continue that trajectory?

MS. BLAISE: Yeah. I mean, we talked a little bit about our energy efficiency programs, which should help customers reduce usage, especially summer usage, but we have $351 million, roughly, of annual spend. And we've got a significant number of programs that are in place. We've created new programs -- and Amalia's (phonetic) here from our energy efficiency organization -- we can add some more. But we're -- but right now, have achieved about 266 megawatt hours of savings just through this year, going to a goal of about 1.7 million megawatt hours, and we're on track to get that. And that's a significant component of FEJA that -- should it reduce load and enable customers to save money.

That's one example.

COMMISSIONER ROSALES: I see.

MR. RODRIGUEZ: Absolutely. And that's exactly what I was getting at. Thank you very much.
Any other thoughts?

MR. SHERIFF: Just to add to that, from an energy efficiency standpoint, as many of you know, we have an energy efficiency docket that was up some time ago, and then approved.

You know, we took a new -- our CEO, Richard, took a new philosophy on a lot of the new energy efficiency programs we're doing, and earmarking those towards low-and moderate-income customers.

I think he has a firm belief that, you know, these residential customers, that the cost of these programs were spread across our entire customer base, yet, not everybody can take advantage of them for obvious reasons. That does us no good to go to someone's home and fix a -- give them a more efficient furnace, but they've got holes in the roof; I mean, it completely defeats the purpose.

So, you know, we've had a strong emphasis on both minority participation in our energy efficiency programs as well as focused on low-and moderate-income.
So, you know, in our mind at least, it's kind of changed the whole way we think about energy efficiency. While goals are important and we need to be -- hit those goals and do everything we can to get the goals, not at the cost that not all -- all of our customers get to participate in the programs. So it's a little bit of a philosophical, I think, change that we're seeing, at least from Ameren's camp.

MR. RODRIGUEZ: Great.

Neil, did you have something?

MR. HAMMER: Yeah. I would just say from MidAmerican impact, it was also significant of FEJA. A little different than Ameren and ComEd, you know, we are a participant in the Illinois Power Agency procurement for a small portion of our energy needs as well. So those procurements, except the solar and the wind, the rest is helping our Illinois customers get access to sources of clean energy. Also the zero-emission credits for that corner of Quad Cities which was a beneficiary of that program and -- so that not only helps us obtain more of the resources
we need for resource advocacy both in Iowa and in Illinois, and also South Dakota. But they're also in the Quad Cities area there.

MR. RODRIGUEZ: Great.

Well, unless there was any other thoughts, I think that's about all the time we have, so we will wrap this up and take a 5-minute break. So please return in about 5 minutes or so for our next panel.

(After a short recess, the session resumed with the second panel as follows:)
MS. GUTIERREZ: Good morning, everyone. I am Tanya Gutierrez, legal and policy advisor to Commissioner John Rosales, and welcome back to the second panel for Summer Preparedness Policy Session. During this panel, we will hear from MISO and PJM on how they are preparing to meet the distribution- and weather-related challenges during the upcoming summer months. We will also be hearing from Citizens Utility Board, who will address how consumer advocates address the question of summer preparedness.

The panel format will be as follows: Each organization will provide a 10- to 15-minute presentation, followed by a discussion and Q&A. As always, the chairman and commissioners are welcome to ask questions at any time.

Our panelists this morning are Robert Benbow from executive -- I'm sorry. He's the executive director of energy market process at MISO. Paul McGlynn, senior director of system operations at PJM. Evelyn Robinson, managing partner of state government affairs at PJM. And Kristin Munsch,
president of CAPS, the consumer advocate of the PJM states, and deputy director of Citizens Utility Board.

Robert, if you could, please get us started.

MR. BENBOW: All right. Thank you and good morning, everyone.

All right. Good morning. We'll start off with MISO, just a little bit of background. They operate out of three regions for MISO. We have an extremely large footprint geographically. So when we talk about summer readiness or just readiness in general, to me, being what we call resilient or reliable, you have to prepare for events. And our footprint gives us lots of opportunities to be prepared if you think about our geographic location.

So not only do we have to talk about summer readiness from a heat perspective, and make sure we have enough capacity, we need to operate through those kind of conditions. We have storms that go through our footprint. We also are exposed to hurricanes now, and we had several opportunities
last year to go through our readiness programs for hurricane readiness as well, in our south region.

So all that begins with event management, so it's all about planning: Having a plan going into an event, how well you are prepared, how well you manage that event, and then how fast do you recover. That's kind of the definition of resilient operations. This is nothing new. I think we've been doing this for a long time. I think it's just a new buzzword, if you want to put it that way. A lot of what counts around reliability.

So we're going to talk about what we're ready for for this summer. Three things I want to leave you with to make sure you -- as a takeaway. We have adequate supply for this summer, to meet our demand and operating reserve compliance. We also have studied the transmission system, and we do not see any transmission issues for this summer that would impact operations, And we are prepared. We even went through a lot of readiness training for our operators, and I'll share some details on that here in this presentation.
So looking out for this summer -- looking out for this summer, we project to have about 17 percent as a planning reserve margin target. We're about 2 percent above that. So we have adequate supply in the near operating requirements. The forecast for this summer, warmer temperatures than normal for the southern part of our footprint, where we are expecting.

Look at some trends here over the last couple of years, just to show you our -- how demand has actually -- our forecasted demand has been trending down over the last three years. Not significantly, but there was a slight trend down. Our reserve margins have went up as far as a requirement. And on our reserve beyond that, are slightly down from last year.

So in order to have adequate supply to meet our obligations, there's a lot of work that has to be done by load-serving entities, by states, local jurisdictions, to make sure that we have adequate resources to meet our obligations. And MISO engages with those folks, and we appreciate all of the work
that is done to ensure that we have adequate resources for the summer.

I'll walk you through the emergency procedures that we get into when we actually get into an event or arrangement having to step through our process.

One thing to note when you look at our forecasted reserves for the summer, we are seeing more demand response as a part of our resource mix. With the increase in demand response, under our probable scenario, we will most likely have to be into emergency procedures in order to get access to that, those resources. And that's just how our procedures are defined, that we have to go into emergency to access the demand response. So those are your load-modifying resources that you have out there, behind-the-meter generation and demand and response that make up about 11 percent of our total capacity.

So that reserve margin that we have, after you take all the outages out of there from forced -- planned maintenance that's going on, it
leaves you with about 11 percent, and most of that is served by demand response or behind-the-meter generation.

So if we get into a high-level scenario with probable normal outages, we will have to be into our emergency procedures to gain access to that. So don't -- I guess I would like to share with you, but don't be shocked when we go into our emergency procedures. It's part of the process to get access to those resources, and clear our market at our available true all-time and operations to commit to meet your demand.

So what you will see from a procedure, if you kind of walk into a scenario, we do a lot of planning from an operations perspective. So there's -- there's a lot of planning from an annual perspective that leads up to this. There's your monthly planning, and then operations starts picking them up seven days out. We start looking at our resource mix, our congestion, and identify if we have any transmission issues. Identify if we have any capacity issues. And then we talk about his every
day, early in the morning, as far as here is what our plan is for today, here's what happened yesterday, here is what's coming up for the next five days.

And what we'll do is, if we see something where we're going to be short, we'll implement our procedures. So that's not uncommon to see conservative operations for hot weather come out several days in advance. When you see that, we are concerned about our position for those upcoming days.

A hot weather alert indicates that we see temperatures that indicate high-load days, and we have a concern for capacity. We're not in a max-gen alert at this point. We're not meeting that criteria, but there are concerns that system conditions can change and we can easily be into a max-gen alert.

Those are our procedures that we have to give our members, indication that we're seeing issues. We share this with them. We communicate this with them. We have conference calls with all our members and our neighboring reliability coordinators as well.
Once you get into the operating day, you've got your walk-through, the max-gen procedure, we make sure all the available resources of MISO are utilized and meet our obligations. And we start with making sure all of our resources are committed to meet those obligations, and we walk right through this process here even up to purchasing emergency purchases from our neighbors if we have to, to ensure we have adequate resources. And that can go all the way from load shed, as well, to protect the integrity of the ultrametric system.

This slide here walks us through how we get there. So a lot of things that we focused on here in the last several years was gas-electric coordination, it was a big initiative. In the summer it's not a big deal as we have adequate supply for gas and fired generation in our fleet. This becomes more of a concern when we get into winter operations. But we do have coordination, so if there is an extreme condition in the gas industry, we have that relationship established with them, and can pick up the phone call -- or the phone and talk with them,
and have -- get an operating plan for the day, including them in that process.

Emergency preparedness, there's a lot going on here as far as being prepared. We have workshops for summer readiness. We have emergency workshops with our neighboring reliability coordinators and our members. We also do drills with our system operators.

Currently, right now, we have a six-week program going on where we do capacity shortage condition training. This is with our members, so our balancing authority -- local balancing authority members, transmission operators, end-market participants participate in this. We also included are neighboring reliability coordinators to participate in this drill as well.

So we walked through these capacity-producing procedures. We don't use them often, but if you don't train, don't drill on it, you will not execute on it when you need to in an emergency. So you have to do training with the operators.
We have monthly drills as well that we do on certain protocols to ensure a good response. So we walk through what we call bug modifying resource drills with our members. So every month we'll go through an exercise to make sure they know how to get into the application. Give us an indication of what's available, and gives our operators an opportunity to look at what's available, and then actually be able to pull the trigger on that if they need to. So that gives us a good response for our -- our protocols.

We also do firm load shed drills and -- with our operators as well. So walk through if we have to do a capacity emergency load shed, where you've got to do it across the entire footprint. Our process is to do it firm wide. And that is distributed amongst all of the local balancing authorities within the footprint. And that would be for the defined subarea.

But if you have to deal with 36 members, you have to have some kind of electronic process that makes sure that is done reliably,
because it has to be done quickly. So we practice and we drill on that.

Other things that we participate in are GridEx. So we participated in GridEx every other year. And we take lessons learned from that and apply that to our operations.

Another place where we locate industry best practices are The Margin Revenue Transmission Forum. So this is a forum that we can have peer reviews for operations. So the group will come in and do a peer review of your operations. We can also participate in other ISO or another member peer reviews.

So you can get the evaluation; it is not an audit. It gives you an opportunity to share best practices, identify where you might have gaps, and then you can actually put mitigation plans in around that, and improve your operations going forward. So that is a great opportunity to improve overall.

Our generation portfolio, a lot of people talk about resilience in this area. To us,
that's flexibility, to make sure that we have flexibility with our resources. Gas resources provide a lot of flexibility to respond to events that happen with the system -- with a lot of renewables in the footprint.

Operational readiness, we talked a lot about communications coordination. We have daily calls with our members and our neighbors. And then when we're in an emergency, those increase as well.

Process, the way you ensure that you have a good outcome is to make sure you have good processes in place and you train your operators. We have six different teams in the control room, and we monitor to make sure they all perform the same way. You've got to have a good process and you have to train them for what they'll do -- training program.

Okay. Stakeholder awareness and communications, again, here it's all about being transparent, understanding what our position is and sharing that with our members to make sure we operate reliable end of that.

We have different communication
protocols for capacity emergencies, which we went over; transmission system emergencies and forced outages, all that is shared.

We use our own internal communication application. We also have a reliability coordination information system that we use amongst our peers as sort of reliability coordinator to share information. This goes anything from abnormal events for communication: hot weather; high-load days; capacity shortages; adverse weather; severe weather that might be applicable to your footprint, so hurricanes, tornados, ice storms. It's not even uncommon here, just recently we had a snow storm, and that was in the northern part of our footprint. And we had tornados and thunderstorms down in the southern part of our footprint.

Part of that risk is having multiple events going on at the same time, and we do that to mitigate that, make sure we have adequate and trained staffing.

So just in -- just what I want to leave you with, basically, for 2018, 2019, we have
adequate resources to meet our obligations for the
summer. We have 19.1 percent for our margin, for the
requirement, a little over -- just that 17 percent,
to meet our forecasted peak this year of 124.7
gigawatts.

Transmission system, as our studies
indicate no issues for the summer, and we are engaged
with state officials, stakeholders to maximize
preparation for summer during an emergency. So we
are ready to live through this summer.

And that's all I have.

MS. GUTIERREZ: Okay. Thank you, Robert.

Did the commissioners have any
questions at this time?

(No response.)

MS. GUTIERREZ: Okay. Then we will move on to
Paul.

MS. ROBINSON: Thank you so very much.

MS. GUTIERREZ: And Evelyn.

MS. ROBINSON: Yes. Thank you so very much.

PJM is pleased to be here today to
share information regarding how prepare- --
COMMISSIONER ROSALES: Evelyn, is your microphone on?

Okay.

MS. ROBINSON: Let me start over.

PJM is very pleased to be here today to share information about how prepared we are for the summer operation. Paul McGlynn will go through our slide presentation, and both of us will be here and happy to answer any questions you may have.

Paul?

MR. McGLYNN: Good morning. Again, my name is Paul McGlynn, and I appreciate the opportunity to be here with you today to talk about our preparedness for this summer.

I won't dwell on this slide for long. It's a long-range prediction of climate prediction for what we may expect to see from temperatures this summer. There are -- the NOAA is predicting higher than normal temperatures, really across a significant portion of RTO with a higher chance of high temperatures in the eastern part. And why that's significant for PJM in particular is, you know, much
of our load is along the eastern seaboard, and higher
temperatures in the east, obviously, will drive
higher demand on the system.

COMMISSIONER ROSALES: Just a clarification, if
you can go back.

MR. McGlynn: Sure.

COMMISSIONER ROSALES: So that map is different
than the last one that we saw, I believe from MISO or
Ameren. Which forecast are you using here? Because
the last -- I believe on the last one we saw most of
Illinois was considered in the orange area. And in
your -- in this one, Illinois is not even involved in
the orange area.

So I'm just trying to figure the --

MR. McGlynn: Difference, sure.

The source is the same. I think the
difference just may be this is slightly updated. The
MISO map may have been based on a March update; this
is the latest available, anyhow, as of April.

COMMISSIONER ROSALES: Okay.

MR. McGlynn: Just quickly, kind of a
year-over-year comparison of the load generation on
the system. And you can see the PJM has a rate
that's only about half of a -- half of a percent.
And the expected forecast peak load for the overall
RTO is just over 152,000 megawatts for this year.
Our generation profile is very similar with -- it's
similar with having installed capacity, 184,000
megawatts of generation, and just over 9,000
megawatts of demand resources.

Our required reserve margin is
actually lower this year, though. And the reason why
our reserve margin is lower is that the required
reserve margin is 16.1 percent. You know, the
generation fleet within PJM has been -- has been, and
I'll say, turning over. We have a lot of new
entrants, a lot of new generation coming online, and
as well, older plants going -- retiring and
deactivating. And then, basically, the difference in
the reserve requirements year over year is due to the
better generation performance, primarily.

This slide just for a point of
reference, you know, so of that 152,000 megawatts,
ComEd is on the order of about 22,000 megawatts --
just over 22,000 megawatts for normal peak load contribution, anyhow.

Just a quick picture of our -- our generation picture. This is -- the map depicts new resources on our system that we have for this summer that we did not have last summer. So -- I mean, it's over 5,000 megawatts of new generation within the PJM footprint. The majority of those megawatts come from new combined-cycle, gas-fired resources. But there is still, in terms of the numbers of new installations, there's a lot of solar activity. As you can see some of the smaller dots towards the eastern part of the RTO are primarily solar -- solar installations, and as well, continued interest in wind projects as well.

From a transmission perspective, this is just, again, some new transmission. Some of the more significant upgrades that we've done to the system since summer of 2017. One of them I'm going to highlight in the ComEd zone is an upgrade to an existing 345 kV line, actually imbedded at The Logan Center.
It was an upgrade that was completed sometime in the December time frame. It was originally put into the regional transmission expansion plan to improve the efficiency market, efficiency of the system. And we had seen congestion in real time on that particular facility, as well as it was limiting us in some of our higher-capacity markets as well. So with that upgrade, that will largely address that limitation, anyhow.

So in addition to the changes to the system, the increased load that we expect, the new generation, new transmission, we obviously also go through and do a lot of analytical work: analyzing the system, assessing the system to see how it will perform against all of our different reliability criteria. We did what we call -- it's our operation analysis task force, OATF study, and we used the peak load forecast of just over 158,000 megawatts. And you may recall that number's slightly -- did I mention 152,000 earlier for the overall RTO expected peak load.

We took a very conservative approach
to this study that we did. We took the individual peak loads of each of the different zones within PJM and added them up. And that, if you add them all up, it comes up to 158,000 megawatts. So obviously, across the RTO on any day, there's a -- you know, ComEd, for example, peaks later than a lot of our eastern RTOs. So the overall RTO peak is going to -- expected to be about 152,000 megawatts, but if you added up each individual transmission zone within the RTO, it would add up to about 158,000 megawatts of load.

So that's the value that we studied the system at, with a power-flow modeling. We put the imports that the interchange is what we would expect based on commitments that have been made in our capacity market. We have installed capacity. We simulate, if you will, a number of discrete generation outages. That 12,000-megawatt number is consistent with what we would expect to see for a forced outage rate of generation somewhere around the order of around six percent forced outage rate.

But to make a long story short, ran
through all of the analyses, and we don't expect to
see any problems from a transmission loading
perspective. With -- you know, with all of the
different scenarios and things like that that we
studied, there may be the need for some off-cost
generation to manage specific thermal issues or
voltage issues, but that's -- you know, that's always
fairly routine. And you know, we really don't expect
this to -- need to implement any emergency procedures
or anything like that based on the analyses that
we've run to date.

So just in general and in closing, you
know, we've completed this summer seasonal
assessment, and you know, aren't expecting any
significant issues. We do conduct emergency drills.
There are -- will actually be a RTO-wide emergency
drill on the 14th, next week, that all of our members
will be participating in.

System operator training: We train our
dispatchers all year long. Actually, they have a
training cycle built into their shift schedules. So
every several weeks, they're at a -- in training
specifically on the system. We have a dispatcher training simulator, where it looks just like a control room where we can, you know, throw at them lots of what-if scenarios to test how they would respond to that.

We drill and test for these capacity type of situations that we may see in the -- you know, during the peak seasons. We also have a dispatcher seminar where we -- it goes over a 10-week period, where we invite all of the dispatchers, all of the operators from all of our member companies as well, to go through -- we have a training session with all of them this week. It's the last week of the overall PJM dispatcher training seminar.

Assess the weather outlook on a daily basis: We have meteorologists on staff that support the control room with developing load forecasts, helping out with timing of severe weather and things like that. They provide input on expected temperatures and humidity's, things like that which largely drives our load forecast. They also support the -- our folks who do solar forecasting and wind
forecasting as well.

Looking at projected loads and capacity, that's an ongoing thing that we do every single day. But obviously, as the loads increase during the peak summer season, it's -- it takes on a little bit more emphasis, and that happens day in, day out.

And then, lastly, we coordinate with our neighbors and have discussions -- have had discussions with MISO and all of our neighbors around what they're expecting summer conditions to look like, and whether they're expecting any issues on their system or things like that. So to make a long story short, I think we're in good shape for this coming summer.

I did also include a slide just -- this is just for reference, and it's not unlike the slide that MISO has. It's kind of as we step through our emergency procedures, it talks about the things that you do. We talk alerts, warnings, and actions. And alerts are generally issued more than 24 hours in advance if we're expecting hot weather -- hot-weather
alerts, things like that, max-gen alerts and things.

Warnings would be implemented or issued -- that's when we get into the actual operating day. And then, obviously, actions are things that would be -- you know, would be expected to be implemented upon word from dispatch staff.

So that's all I have, and I look forward to your questions.

MS. GUTIERREZ: Thank you.

Does the chairman or the commissioners have any questions at this time?

(No response.)

MS. GUTIERREZ: Thank you, Paul and Evelyn.

And Kristin, you can begin your presentation.

MS. MUNSCH: Thank you.

And two things: First, thank you for including a consumer advocate. As Sue noted, I think this is the first time that you've had customers in this panel and we appreciate the opportunity to give a customer's look at things.

Secondly, I'm remiss I never did get
to doing a PowerPoint despite the best efforts of
Commissioner Rosales's staff and trying to get me to
do one. So it's my fault, not theirs.

In the interest of time, I think I'll
summarize a little bit of what I'm going to say.
First and foremost, for consumers and, I guess, in
speaking of RTOs, consumer advocates, we're
approaching in many of the same conversations we have
with our distribution utilities. It's a question
about cost and it's an expectation of reliable
service.

I think that translates in an RTO the
same, and sort of has three roles they can play.
They have a role in planning for the system. They
have a role in responding to the system. And I think
they have a role in providing a platform for specific
types of resources that we think are valuable.

So with respect to planning, you'll
hear a lot of conversation from consumer advocates
that we are wanting to make sure that words like
"resilience" and "response" are not, in fact, code
for other efforts that might be underway. In other
words, that the ability of the system to plan and incorporate events is being done with an eye towards least-cost solutions, to the probability of events, and to making data available to all the stakeholders, both at MISO and PJM, that's relied on.

One thing we know that RTOs struggle with, and we struggle with it as well, is the confidential nature of some of this data, particularly when you start talking about potential for disruptions that are not weather related, but might be security related. And we encourage the RTOs to work with us. A lot of our consumer advocate offices are used to handling confidential information, and can be, I think, trusted to do so. There's ways to have that discussion, I think to benefit all the stakeholders.

One of the other concerns I think we have is with paying twice, frankly, for something that duplicates efforts already being done in the distribution system bubble. To me, this gets to, from a planning perspective, looking at how frequently the RTOs update their planning
assumptions. We obviously don't expect them to know everything real time, but for example, some of the transmission planning processes, you'll hear consumers often ask, Well, that was a project that was put in in 2014. We're now in 2018; are the same assumptions still there? Have things changed on the ground with the distribution system in a way that might render that project less necessary, might change its scope, might change its impact?

With respect to response, I think the RTOs make a lot of information available. I think we get, as members, hot wired to both MISO and PJM. One thing I think we're planning in response for is we always want the RTOs to help us do so all customers understand how -- what the peaks at PJM, MISO translate to on their bills.

So we know as practitioners that there's forecasting, that you're looking at your capacity charges being set on these peak days. I think some of our industrial customers and others have modeled, and they can help them predict. Where I think we're seeking some additional information is
to help residential customers, now, similar to the conversations had about usage data, be able to understand what that looks like and anticipate in planning. So, yes, CUB and other consumer advocates within PJM and MISO get out weather alert. How does that translate to a residential customer having an expectation that they should be prepared that if they are on real-time pricing, will understand what it means if I am not using as much, how does that translate from the RTO down to their bills, I think is very important.

Last, but probably not least, is this discussion of the RTOs as a platform for services -- or for resources and services that can help us respond. One of the things a lot of consumer advocates have focused on is -- and the other members -- is the maintenance of demand response is an essential tool within both RTOs for responding to system events.

I think that you will see a lot of conversation about whether or not that is totally as valued as we would like it to be. There's concerns
that demand response in some respects may be left stranded, and may not be able to be incorporated into the market. And that is frustrating for us in a couple of counts. One, because we know that investments have been made over the years by customers and utilities -- distribution utilities in setting up those systems. So there's an expectation of we have now invested in a resource that we may not be able to get as much benefit from.

   And secondly, when it comes to weather events, demand response, I think, to us is critical, and hopefully, helping PJM and MISO balance where they can move things on the system, and respond in a way that's helpful. It's a least-cost resource, it's a resource that's performed well, and a resource you will continuity to hear us talking about needs to be better incorporated and valued.

   I think there's another aspect, though, to that sort of platform idea. And I'm realizing I'm using the word "platform," which is now a cuss work, so I'll step back and say that's a dumb word.
To the markets and setting attributes, when you think about the work that's being done on distributed energy resources, smart and Burger's, for example, and that includes not just solar installations, but batteries. PJM, in particular -- I'm sure MISO as well, but I jump to PJM -- their markets have played a very big role in actually getting some of that battery development, at least here, off the ground. Some of those projects were funded with market revenues.

And I think we want to make sure the RTOs are thinking in this context of how are we going to respond to more frequent events, dual events, other events. That ability to sense certain types of resources and certain attributes is a really important part of the market that I think we want to make -- I'm sure is so incorporated going forward.

That does, though, I guess, take me to kind of a closing point, which is we see this as going to be a role where the RTOs and the load-serving entities or distribution operators are getting cornered a lot more. Customers who have
experienced reliability and frequency events are
taking actions into their own hands, either at the
community level or, as was noted before, hospitals,
other infrastructure that we already asked and have
requirements on the back-up generation
responsiveness. I think both ComEd and Ameren have
microgrid projects that have already been
benefits-tested and were discussed.

The RTOs, I think, are going to be
confronted with -- probably there might be better
word -- a lot of data that's moving on their system
very, very quickly. And from a consumer perspective,
we want to make sure that the actions the RTO is
taking incorporates that to the best of the RTO's
ability to make sure that we are not duplicating or
unnecessarily raising costs without a good point.
But also realizing that the RTOs don't have
transparency into everything that is going on
necessarily, and it is going to be a challenge for
all of us in terms of how we balance that
information.

I do want to be honest that I think
it's very -- PJM and MISO both have done a lot of work on opening up, to stakeholders, processes to discuss these issues.

On sort of transmission and operational issues, particularly for summer preparedness and resiliency and reliability, sometimes I think we get very distracted by the market side of the equation, and focus more on what the markets are doing. And it's always good to hear the RTOs remember they have an operational side as well, where they can instruct and test and prepare resources.

I think that that is a crucial part, and sometimes one that gets overlooked. I flash to the polar vortex as an example where it was -- I would say for a lot of consumer advocates, this was an operational issue. Whether it was having resources that weren't tested to perform, having different expectations of performance, we support those efforts. We just want to make sure those efforts are not going to counter the wave of DER that's coming from states, and not going to force out
or undervalue those resources that have already, plus, the customers like, respond to, that we know work, and we know will be essential going forward.

MS. GUTIERREZ: Thank you, Kristin.

Do the chairman and commissioners have any questions?

(No response.)

MS. GUTIERREZ: The panelists, is it there anything that was said that you would like to respond amongst each other?

MR. McGlynn: I guess I would just say that at PJM, I appreciate your comments. I think many of them are spot on. I know reliability at PJM is job-one, and our markets and our planning processes are basically there to support the reliable operation of the system, and as -- as there are -- as new technologies develop, new storage, and new distributed resources, and things like that, we'll continue to look for opportunities to work with our state culvers to see how we can incorporate that into the overall operation of the system.

MR. BENBOW: MISO would echo the same comments.
I mean, reliability is number one as part of our mission, and also to be efficient, and we use partners to be efficient, ensure reliability and integrity of the system.

So thank you.

MS. MUNSCH: I feel like I already got to have the last word, so I'm good.

(Laughter.)

MS. GUTIERREZ: Okay. I have a couple of questions. Both MISO and PJM mentioned that there are emergency drills that you carry out within your RTO, but also with your neighboring RTO and ISOs.

How often do those drills take place, and could you give us a little bit more detail on what goes on during those drills?

MR. BENBOW: Yes. So right now, we do drills annually with our operators. So right now we have a six-week program that looks at drills with all of our members and our neighbors for summer readiness, so that's one drill that we execute. And we also do hurricane readiness drills, as well, with our operators, folks from -- mostly in the south region,
but everybody gets to participate in that.

We also do what we call business continuity drills. So if we have to evacuate a control center, how do we do that? So we test that twice a year. During our six-week training program, we'll do an exercise where we actually do an evacuation of every control center, so we operate out of four control centers.

We test our business continuity program, and we also do an annual drill that is more realistic, where we not only transfer operations, but we also transfer all of our infrastructure. So in order for the operators to do what they need to do, they have a lot of critical applications that support that. So we actually test our business continuity around our infrastructure between our two data centers that we operate out of.

There are monthly drills around firm loadship, load-modifying resources, and implementation for your capacity shortage commissions. We also do something for what we call the drill communication protocols, how we send
dispatch signals out. So if we lost all of our ICC communicative ability, which is a protocol where we exchange information, we go to a backup. We test that every month, and make sure that our members can transfer over to the backup and make sure that we can still dispatch and operate the system.

So operators, again, JPM [sic] touched upon a simulator; we have a simulator, and that's part of our testing for our operators. We actually use that. Also to be -- we make sure that they're certified, so we'll run them through an exper- -- or a drill, and they have to pass that simulation test in order to operate on the desk.

So we use our dispatch training center. That's probably going to be more and more important as we move forward as the markets that we operate and all products and services that we provide get more and more complex. So if you really want to understand how all the different products work together, you have to train the operators on it.

We're also going to incorporate that into actually the testing phase. Typically we -- if
you put a new product into production, it gets put right into production. We want to know before -- look at through the simulator with the operators, and let them test it, and then put it into production so that they're not seeing it for the first time when out there on the operating floor. And I got the PowerPoint training on that, but that doesn't really work when you actually see it in real time.

So there's a lot of products and services coming down the line. We can talk about the DERs. We're doing a lot of workshops around that. What is the impact to our business model to -- that we talked about, but it's something we're not really going to focus on. We actually -- I focused the whole group just to -- kind of disrupters for our business model and how we incorporate that into our operations and into our training programs.

MR. McGLYNN: I would say that I have a similar response for PJM and how we also have a full set of different drills that we run through, from the emergency communication drills on a weekly basis, using -- utilizing satellite phones and things like
that to move schedules and do it on a monthly basis. There are the -- prior to the -- each peak season we do these capacity-related emergency procedures as well. And also, system restoration drills is another thing that we do twice a year, where we do varying scopes, whether it's -- we focus on a localized area, and we'll do overall RTO-wide restoration drills. And those are just the drills that I say that we would do with -- you know, with our members actively participating.

I mentioned the dispatching staff has built in to their shift schedule is a -- you know, a -- one full week of training is part of each rotation through their shift schedule, where they're, you know, trained on different new procedures, and as well, they spent certain amount of time in our simulator, running through different kinds of drills and scenarios and what-if type of things.

MS. GUTIERREZ: Thank you.

Kristin, you mentioned that you're working on doing some consumer education for the charges, the RTO/ISO charges that appear on the bill.
What does that education look like?

MS. MUNSCHE: Maybe the better to say it is we want to do consumer education on it.

I think it's, for one thing, Illinois -- I've come to realize in working with CAPS, Illinois is somewhat unique in that probably because it has been such a big deal, and as Sue said, it's been a -- we've had a sort of deregulated experience that has seen attention on a capacity side, supply side; it's become well known that's the more volatile element here of rates. That we have had some attention put to it.

When we do -- I guess I'd say when we do our bill clinics and go out to our outreach events, I think we get a lot of questions on what am I paying, why is it coming from where, what's the price. But there is a lot of question around the capacity. It's a line item on the bill that people don't understand. It's a word that doesn't translate to them, I think, in terms of what that means. Because I think their very sense of capacity is now -- I mean, like, in the immediate in the future,
not something a year off.

And when it comes to how their personal charges are calculated, it is a big driver in the bill. Capacity prices are becoming more and more, at least PJM -- I shouldn't -- thinking -- putting the PJM hat on now -- are becoming a key driver of what that total supply-side of that bill costs. And when, I think, customers -- when you have conversations and people start to realize that it's based off of, you know, five days that's translated down from PJM, is a sense of can you tell me when those five days would be. But, you know, what is -- what does that mean?

Industrial customers, I noticed a few who have had the experience of modeling, you know, more sophisticated and actually kind of predict, Okay, we think these will be the peak days because it's a retrospective look. It's not something we're going to have in advance.

But it is something that I think we struggle with as being one of the -- you know, that peak demand is a big driver of costs; it's a big
driver of, I would think -- it's a big driver of a
lot of things. And if we can help manage that, and
help customers understand that, I think that would be
good.

I do struggle with that, on how
exactly to do that. Partly because the words we use
here, I think don't resonate to what customers -- you
know, residential customers actually think about and
need to do. But I think we've talked increasingly,
even at CAPS, that this is -- translating this RTO
word down to residential customers is going to be
increasingly important. I guess maybe the better
thing is capacity. One of the first things that came
to my mind is that's one of the first examples we're
going to start with because customers don't,
necessarily, see a distinction. We see the
distinction, but actions they take there can really
affect their bills. And while we are hopeful that
the distributes -- and the whole other side is what
the distribution company ultimately is passed down.

But first and foremost is, systemwide,
helping people understand we can bring that down.
For ComEd and Ameren that has more savings to them.

If anyone has suggestions of how to do that, we're happy to take it. Take it.

MS. GUTIERREZ: Thank you. I believe that's all the time we have for today. So before I hand it over to Commissioner Rosales, if you would please help me in thanking our panelists.

(Applause.)

COMMISSIONER ROSALES: Thank you, Tanya, and thank you Tomás for an excellent job today.

You know, I started here in 2015, and in 2015, I heard from all of you, you had enough load and enough power for residence of Illinois. 2016, you said you had enough load you had enough power. 2017, you had enough load, enough power. So, I kind of caught on that you had enough load and enough power in going into 2018.

And you see how we're making some changes. I appreciate Kristin and Sue being here. We took a more holistic approach this year, and having, you know, more stakeholders involved. And moving the needle in terms of responsibilities that
we are holding you accountable for.

I know you have enough power; I know you have enough load. But as Kristin mentioned, and how we -- all that my colleagues deal with, and the reliability aspect, the resiliency aspect. That's where we're looking at very closely.

The amount of time to resolve an outage, and how quickly that's done and how efficiently that's done, that's what we're holding you accountable to. So I want you to all know that. And that's -- as we move forward, that's what we're looking at.

That said, you did really well in 2017. And our metric, from our Commission, you did very well. So when you do well, you know, we want to thank you. But we also want to let you know, again, we hold you accountable. And we thank you for being here.

On behalf of my colleagues, and I really want to thank them because they have made their time to be here; I want to thank them. And at this point, I'd like to tell you that the meeting is
adjourned. However, my chairman does have an announcement to make, so would you give him 30 seconds.

Thank you.

CHAIRMAN SHEAHAN: This is Danisha Hall's last day, and so at our public meeting, we just wanted to thank her. She's really exemplified hard work and passion and dedication during her time at the ICC. Throughout her five years here at the Commission, Danisha's worn many hats and took on a variety of different roles.

She began her time with us as a legal and policy advisor. Then became our first director of the office of diversity and community affairs. And ultimately, became our bureau chief for external affairs.

Danisha's professionalism embodies the ICC's philosophy, and her success and hard work are prime examples of how talented individuals can further their careers and grow and flourish in our organization.

Danisha, on behalf of the ICC and the
commissioners of the ICC, it was a pleasure to work with you. Thank you for your time and your leadership and dedication. We wish you the best. And I'm sure that it's not farewell, but until we see each other again. Thank you.

(Applause.)

COMMISSIONER ROSALES: And with that, we are adjourned.

Thank you.

(Whereupon the above matter was adjourned.)