STATE OF MISSOURI

PUBLIC SERVICE COMMISSION

TRANSCRIPT OF PROCEEDINGS

Evidentiary Hearing

May 9, 2018

Jefferson City, Missouri

Volume 3

In the Matter of the)
Application of the Empire)
District Electric Company) File No. EO-2018-0092
For Approval of its)
Customer Savings Plan)

MICHAEL BUSHMANN, Presiding,
REGULATORY LAW JUDGE.

DANIEL Y HALL, Chairman
WILLIAM KENNEY,
SCOTT T. RUPP,
RYAN SILVEY,
COMMISSIONERS.

REPORTED BY:

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P R O C E E D I N G S

(WHEREUPON, the hearing began at 9:02 a.m.)

JUDGE BUSHMANN: Good morning. Today is May 9th, 2018. The Commission has set this time for an evidentiary hearing in the matter of the application of the Empire District Electric Company for approval of its customer savings plan filed under E0-2018-0092.

My name is Michael Bushmann. I'm the Regulatory Law Judge that's been assigned to this hearing. Let's have counsel for the parties make their entries of appearance. For the Empire District Electric Company.

MR. COOPER: Thank you, your Honor. Dean Cooper and Diana Carter of law firm of Brydon, Swearengen & England, and Sarah Knowlton from Liberty Utilities on behalf of the Empire District Electric Company.

JUDGE BUSHMANN: Commission Staff.

MS. FORCK: For the Staff of the Missouri Public Service Commission, I'm Marcella Forck, and I have with me Nicole Mers, and our information has been provided to the court reporter.

JUDGE BUSHMANN: Office of the Public Counsel.

MR. HAMPTON WILLIAMS: Thank you, Judge. For the Office of the Public Counsel, Hampton Williams and Nathan Williams. Our information has been provided to the court reporter.

JUDGE BUSHMANN: Missouri Division of Energy.

MR. POSTON: Thank you. Marc Poston appearing for the Missouri Division of Energy.

JUDGE BUSHMANN: Missouri Energy Consumers Group.

MR. WOODSMALL: David Woodsmall on behalf of MECG.

JUDGE BUSHMANN: Renew Missouri.

MR. LINHARES: Thank you, Judge. Appearing for Renew Missouri, Andrew Linhares, and the court reporter has our information.

JUDGE BUSHMANN: Sierra Club.

MR. ROBERTSON: Henry Robertson, Great Rivers Environmental Law Center, and my information has been provided to the court reporter.

JUDGE BUSHMANN: And City of Joplin.

MS. BELL: Stephanie Bell with he Ellinger & Associates, LLC, for the City of Joplin, and my information has also been provided to the court reporter.

JUDGE BUSHMANN: Thank you. Ameren Missouri and Dogwood Energy have both been excused from appearing at the hearing.

I'd like to advise anybody in the audience to please make sure that you silenced any mobile devices or cell phones.

Do the parties have any preliminary matters that they need to take up at this time? I don't hear any.

I would like to notify the parties that I'm going to take official notice of two things that were filed in the case: The Nonunanimous Stipulation & Agreement that was filed on April 24th, 2018, and the addendum to that agreement that was filed on May 7th, 2018. I'll take official notice of those two.

As far as the order of witnesses, we'll go over or use the order filed by the parties that was revised and just filed recently. I would like to go ahead, since the parties have agreed to waive cross-examination and appearance of five witnesses, while we're at it, before I forget about it later, we might as well go ahead and get that taken care of. I believe for Empire there were three witnesses.

MR. COOPER: That's correct, your Honor. We would offer the direct testimony of Greg Macias, which I believe has been identified as Exhibit No. 5. We would offer the affidavit of Charlotte North, which has been marked as or identified as Exhibit No. 13. And we would offer the direct testimony of Dane Watson, which has been identified as Exhibit 18.

JUDGE BUSHMANN: Are there any objections to the receipt of those exhibits?

(No response.)

JUDGE BUSHMANN: Hearing none, they are received into the record.

(EMPIRE EXHIBITS 5, 13 AND 18 WERE RECEIVED INTO EVIDENCE.)

JUDGE BUSHMANN: And for Renew Missouri there was one exhibit, I believe.

MR. LINHARES: Yes, Judge. We would offer the exhibit of rebuttal testimony of James Owen, which will be marked as Exhibit 400, I believe.

JUDGE BUSHMANN: That's what I have. Are there any objections to the receipt of that exhibit?

(No response.)

JUDGE BUSHMANN: Hearing none, it's admitted into the record.

(RENEW MISSOURI EXHIBIT 400 WAS RECEIVED INTO EVIDENCE.)

JUDGE BUSHMANN: And then the last one is for Division of Energy.

MR. POSTON: Yes, Judge. We have Exhibit 300, the rebuttal testimony of Martin Hyman.

JUDGE BUSHMANN: Any objections?

(No response.)

JUDGE BUSHMANN: Hearing none, it's admitted.

(DIVISION OF ENERGY EXHIBIT 300 WAS RECEIVED INTO EVIDENCE.)

JUDGE BUSHMANN: As far as scheduling today, there's one thing that's a little bit out of the ordinary of our usual hearing process is that the Commissioners, to accommodate schedules, have an agenda meeting today at two o'clock. So my thought was to try and not have such a long break to wait till then is to take maybe a short early lunch, maybe around 11:30 for 45 minutes or so, and then come back and then break again for a short period of time around 2 o'clock. That way we can try and keep going as much as possible. If that presents a hardship for any of the parties, just let me know at a break.

Anything else that needs to be brought up before we go to opening statements? In that case, the first opening statement would be by Empire District Electric Company.

MR. COOPER: good morning. I'm here today to represent the Empire District Electric Company. I apologize on the front side. My opening today will be a little longer than you're probably used to from me. There's several things to be pulled together in this case, and so we'll try to work through those.

I would like to introduce, we mentioned earlier that Ms. Sarah Knowlton will be representing the company this week as well. Ms. Knowlton is at counsel table. She is a regulatory counsel for Liberty Utilities. She's admitted to practice law before the New Hampshire Bar, has been admitted for purposes of this case and will be actively participating this week.

We're here today to present what we think is a very exciting project for Empire, for its customers, for the state of Missouri. The company's proposal is found in the Nonunanimous Stipulation & Agreement that was filed with the Commission on April 24th, as amended by the addendum filed on May 7th that the Judge took administrative notice of earlier.

Empire was joined in the stipulation by the Staff of the Commission, Missouri Energy Consumers Group, the Division of Energy and Renew Missouri advocates. Although it's been objected to, it remains the position of Empire in this case.

The stipulation was an attempt by the signatories to come together in a way that would try to find the sweet spot for a meaningful project that would provide near-term benefits, future benefits and protections for Empire's customers. Empire believes that the provisions of the stipulation have accomplished these goals and identified a revised strategy for Empire's generation fleet that will bring customers significant savings for years to come as opposed to merely continuing with the status quo.

Simply put, the stipulation is expected to bring $169 million in present value savings to customers over the next 20 years and reduce Empire's portfolio risk significantly. The substantial savings result from Empire's ability to take advantage of expiring production tax credits and tax equity financing, which cuts the capital cost of the wind in approximately half.

Risk is reduced as a result of the shift from a portfolio that is dominated by resources with substantial ongoing fuel costs to a portfolio with fewer ongoing fuel costs.

Moreover, as you will hear from Empire, MECG and Staff, the stipulation contains important provisions to protect customers against down-side market risk, which was extensively analyzed by Empire in the docket.

The stipulation calls for up to 600 megawatts of wind projects that are located within the Southwest Power Pool footprint with energy and capacity deliverable to the Empire service territory. There's also an additional requirement that I will discuss later in my opening. Near the end I'll want to go in camera for a few minutes.

But additionally the stipulation confirms that the Commission would see any Missouri projects in a specific CCN application and could see any non-Missouri projects as well in CCN applications.

The stipulation requires tax equity financing within certain parameters in order to take advantage of existing federal production tax credits for the great benefit of Empire's customers.

Because of the concerns stated by the parties related to the previously proposed immediate closure of Empire's Asbury coal generation facility, Empire agreed to proceed only with approval of the wind acquisition and leave Asbury's future operations within the discretion of management to pursue in future electric utility resource planning filings.

So long as Empire's acquisition of the wind projects meet the criteria of the stipulation, the signatories agree Empire should be authorized to record its capital investment to acquire the wind projects as utility plant in service subject to audit in Empire's next general rate case.

Associated with that accounting direction, the signatories also agree on the following: The signatories agree not to contest and recommend that the Commission find that given the information presented in EO-2018-0092, and considering that Empire must make decisions prospectively rather than in reliance on hindsight, the decision to acquire up to 600 megawatts of wind projects under the terms of the stipulation is reasonable. Similarly --

CHAIRMAN HALL: Let me stop you there for a second.

MR. COOPER: Yes, sir.

CHAIRMAN HALL: So is that decisional prudence? Is that what is being requested here?

MR. COOPER: It certainly is -- we would like a fact finding that directionally the company is moving the right direction. I think it -- the question of prudence involves more things. It involves a review of the costs ultimately. It involves a review of the execution of the projects, both of which the stipulation specifically calls out and confirms are questions for future rate cases and not something that the company's trying to -- trying to get here.

CHAIRMAN HALL: I've been confused about this from the outset, and I continue to be confused. You're asking, the parties are asking this Commission to make a decision that acquiring the 600 megawatts of wind is reasonable now based upon the information at your disposal, correct?

MR. COOPER: Correct. Well, at the Commission's disposal as well, yes.

CHAIRMAN HALL: What does that mean legally three years from now, two years from now, with a new Commission in place? What does it mean?

MR. COOPER: Well, I think it's a factual finding that certainly the company would cite in that context and say that if someone's arguing you shouldn't have built the wind projects at all, if you -- if someone is saying, you know, it should have been 200 megawatts instead of 600 megawatts, certainly the company is going to have a factual finding that it will refer to and say, look, at the time the decision was made, here's what was known and here was -- here was the finding.

It's not greatly unlike -- I was involved many years ago in a case for Missouri American where they were seeking a certificate for their St. Joe treatment plant, and in that case the Commission made a distinction between those two things, said they will make no finding regarding the prudence of the actual costs incurred and the management of construction; however, based upon the evidence presented, the extensive evidence presented, the Commission finds that the proposed project consisting of the facilities for a new groundwater source of supply and treatment at a remote site is a reasonable alternative.

I mean, that's the sort of thing we're looking for here. It's a very large project. It's a very large project for this company, and it is hard for the company to take those steps without at least some indication from the Commission that directionally it's headed in the right direction.

CHAIRMAN HALL: But you do not view that as decisional prudence?

MR. COOPER: Well --

CHAIRMAN HALL: I mean, the distinction between the decision to go forward with the project and whether the costs incurred in the process, those are two different things, and I understand that distinction and I want to -- I'm trying to understand whether that is the

distinction that's relevant here or if it's
something else.
MR. COOPER: I think it is. The
mention of the word prudence is what's causing me
hesitation, because most of the time prudence
incorporates all those things, right? It's the
decision. It's the -- it's the cost. It's the
execution. It's the -- it's the finding that
ultimately allows those costs to show up in the
company's rates, and certainly we're not trying to
deal with all three of those. We're only trying to
deal with the first step of that process.
CHAIRMAN HALL: Okay. Thank you.
MR. COOPER: Now, similar really to
our discussion we just had, and this is a little
less specific, though, as to the Commission,
because keeping Asbury operating may give rise to
approximately $20 million in investment to comply
with the EPA's coal combustion residuals rules and
effluent limitation guidelines, the signatories
have agreed that in future rate cases they shall
not object to Empire's recovery of and return on
the net CCR investment at Empire's weighted average
cost of capital if the investment is needed.
The question becomes what do the

customers get in this proposal? I think first they get low-cost renewable generation assets that, unlike other sources of generation, have no cost of fuel, and under this plan have a substantial portion of their costs paid for by tax equity partners.

CHAIRMAN HALL: I'm sorry, and I'll try to refrain from constant interruption because that is not conducive to a good opening. So concerning the CCR investment, are -- you don't need anything from this Commission related to that. The stipulation is an agreement amongst the parties, and the Commission can essentially ignore that with regards to what you're asking us to do; is that correct?

MR. COOPER: Can ignore that? I certainly think you should be aware of it, but yes, the language is specific to the agreement of the signatories.

CHAIRMAN HALL: Okay. Thank you.

MR. COOPER: The second item in terms of customer benefit that I would point to is the market price protection provision that mitigates down-side risk up to $35 million and ensures that customers get 100 percent of all upside benefits from the project.

Third, a rate case moratorium that will ensure that Empire's base rates will not have changed for a minimum of three and a half years by the time the next rate case is conducted. And a known date for rate reductions related to the Federal Tax Cuts and Jobs Acts that eliminates any questions about legislation, process or legal issues and provides nearly $18 million of immediate benefits to customers.

Now, the original subject of this application is what Empire called the customer savings plan. Customer savings plan resulted from Empire's analysis of whether it could be bring savings to its customers by taking advantage of the historically low cost of acquiring new wind generation using tax equity financing to maximize the use of federal tax incentives and perhaps retiring its vintage 1970s power plant that does not get dispatched as frequently as it used to and likely needs another $20 million invested to meet environmental regulations.

In order to determine what course of action would be most advantageous for customers, the company conducted an analysis, and that and analysis is called the generation fleet savings analysis, or GFSA. The GFSA updated Empire's 2016 IRP plan, which embodies what I refer to quite often as the status quo, with the most current information on wind construction costs, the potential benefits of tax equity financing, and forecast market conditions to see if savings could be achieved for customers.

The company then hired Charles River Associates to review its analysis and recommend an approach to building business case with scenarios and sensitivities.

Empire's witness Jim McMahon, who's from CRA and has substantial expertise in resource planning for vertically integrated utilities in the United States like Empire, will explain that after all of the analysis, including numerous scenarios and sensitivities proposed by stakeholders, including OPC, the customer savings plan was compelling. It showed significant customer savings and risk reductions for Empire's customers.

The GFSA results originally showed that $325 million -- or showed $325 million in 20-year present value savings would result if Empire were to acquire up to 800 megawatts of wind generation located in or near its service territory through a tax equity partnership and retired the Asbury generation unit in 2019.

In regard to the tax equity partnership, Empire's witness Todd Mooney will explain that because of the federal tax credits, we are at a point in time when the company has the ability to have someone else pay a substantial amount of the cost to acquire wind. In other words, we would say wind is on sale.

In order of magnitude, this means that Empire will be able to buy wind at a substantial discount, approximately $711 per kilowatt versus $1,587 per kilowatt. This is a fantastic opportunity for a customer benefit that exists today. We won't have this situation in the future as the full PTCs will expire if wind projects are not in service by December of 2020.

And again, just to reiterate, with the tax equity customers will pay approximately $711 per kilowatt versus 1,587, a tremendous difference.

Given that situation, I would like to respond briefly to the allegation that Empire's purpose in proposing to build wind is exclusively motivated by a desire to build its rate base. If that were the case, Empire certainly would not be working this hard to utilize tax equity financing and put something less than half of the total cost of the total project into rate base.

Now, I mentioned previously that the wind must be in or near Empire's service territory. Why is that important? As you know, building multi-state transmission lines can be a long, drawn-out and costly affair. Empire was strategic about this in its plan to develop cost-saving wind generation for its customers.

Empire's service territory, which is shown on the handout that we gave you before my opening started, on the second page, and if you look at that it's the area in yellow is the electric service territory. That service territory includes southwest Missouri, Kansas, Oklahoma and Arkansas.

Empire has access to two sites here in Missouri that are close to its system and can deliver low-cost wind. This Missouri wind, as well as wind located in Kansas and Oklahoma, is near its transmission system. In fact, one site would interconnect very near Asbury. And those options are available in a way that does not require the same scale of transmission lines or upgrades required by other projects. This has a very positive effect not only on the cost of developing the project but lowers the risk of any negative prices that might impact the economic performance of these wind farms.

Further, Empire witness Blake Mertens can explain why adding this wind to the company's portfolio or its generation fleet will not harm reliability and is a good long-term strategy.

Back to the tax equity for a minute. As I mentioned before, a significant advantage for this project comes from the use of a tax equity financing structure, something Empire's ultimate parent, Algonquin Power and Utilities Corp, has lots of experience using for both wind and solar projects.

A tax equity structure is a method of financing renewable energy projects using federal PTCs. In a tax equity structure, large tax-paying corporations, typically large banks such as Wells Fargo or Bank of America or Merrill Lynch, become equity partners in a wind project.

In this case, a tax equity partner

would provide a substantial amount of the capital for Empire to acquire the wind farms and in exchange would receive the tax incentives such as the PTCs generated from the wind project during the first ten years of the project's life.

In addition, the tax equity partner receives cash distributions in the latter years of this ten-year period, typically year six to ten, as part of its return and recovery of the capital invested.

On or before the end of the first ten years when the tax equity partner has received its return on and recovery of its investment, the ownership structure flips and the majority of the ongoing financial benefits of the wind project transfers over to Empire, with the tax equity partner retaining a nominal residual stake in the partnership, typically around 5 percent. At this point Empire would have an option to purchase the tax equity investor's 5 percent in the partnership.

As Empire's witness Todd Mooney explains, using this partnership will result in between 4 and $7 per megawatt hour savings for Empire's customers for the generation that is acquired.

This is not the first time that the Liberty family of companies has utilized such a process. Empire's electric distribution utility affiliate in California, which is Liberty Calpeco, has proven that the tax equity partnership structure can provide real savings to customers, in case $5 per megawatt hour compared to existing supply sources. The company wants to do the same here in Missouri.

Again, Empire witness Todd Mooney can address any questions you might have about tax equity financing as it relates to this project.

In order to determine whether its assumptions in the GFSA regarding the cost of wind generation were indicative of market prices to acquire wind generation, Empire issued a notice of intent to potential bidders in October of 2017, and thereafter issued a competitive request for proposal to identify potential wind projects, up to 800 megawatts of nameplate capacity to be constructed and sold to Empire through a build to own and transfer transaction.

The RFP required that this capacity could be satisfied through one project or multiple projects with each project having a minimum nameplate capacity of 100 megawatts, where each project must achieve commercial operation in time to qualify for the maximum amount of PTCs, and each project, as I stated before, had to be located within the SPP footprint with energy and capacity deliverable to Empire's service territory.

Empire received a significant number of bids and, after evaluating them, has determined that it could acquire up to the 600 megawatts of wind generation called for by the stipulation in or near its service territory at prices that beat the initial GFSA assumptions. That means that the actual wind projects that Empire could buy cost less than what the company assumed in the original analysis.

After receiving these bids, Empire updated its GFSA analysis with the bid results and, not surprisingly, determined that the projected savings would be higher than originally modeled. These actual projects for which negotiations remained underway were also used in the modeling of the stipulation plan as it appears in Mr. McMahon's affidavit in support of the Nonunanimous Stipulation & Agreement.

Empire's analysis of the stipulation

plan indicates that up to 600 megawatts of wind will generate the customer net present value savings that are reflected on page 3 of the handout I gave you previously as relative to the 2016 IRP preferred plan; so 169 million in 20-year savings, 295 million in 30-year savings.

Again, the 600 megawatt wind portfolio analyzed is based on short-listed bids received in response to Empire's request for proposal. The projects comprising the 600 megawatts that were modeled are located on three different sites in or near Empire's service territory.

Empire witness Tim Wilson can address questions related to the results of the RFP, the status of the contract negotiations, and Empire witness Jim McMahon can address questions as to the additional modeling that has been performed in response to those RFP results and why concerns that have been raised by non-signatories are misplaced.

So what's not to like? As we know from the testimony and affidavits, the objections of the parties have centered around certain concerns: First, perceived risk related to market prices and production of the wind farms or how often the wind is going to blow; second, savings in the first ten years after construction; third, unknowns associated with closing Asbury; and fourth, potential rate impacts. We think that the Nonunanimous Stipulation & Agreement addresses each of these items.

In regard to perceived risk, OPC has described its concerns about risks of unknowns associated with the project and argues that, as a result, essentially Empire should do nothing in the face of this available low-cost wind.

However, what they don't say is that doing nothing also has a risk. Mr. McMahon will tell you that under the status quo, customers are exposed to more risk in the market over the long term and the long run than under the stipulation plan because customers will be more exposed given the cost of buying fuel for traditional generation plants.

Mr. McMahon oversaw extensive modeling, including model runs that OPC requested, that demonstrated that even if market prices are low and there is a 50 percent increase of wind generation in SPP, Empire's customers will still save money over the current course of action or the status quo.

Wind generation adds a low-cost energy source. Almost all the costs of wind generation are up front to build the projects. Once built, there are no ongoing fuel costs like with coal or gas. And in the case of wind, again, because of the federal tax policy, someone else will pay for a substantial portion of the cost to build the wind projects. It's hard to ignore this fact.

Again, I think it bears reminding everyone that there is a risk in whatever avenue is pursued, and that very much includes Empire's existing preferred plan from the 2016 IRP. In other words, even the status quo has risk. Doing nothing ignores the availability and value of the PTCs and forces Empire to remain exposed to the market with a coal-heavy portfolio for many years.

The analysis performed in this case indicates that -- well, there are two analyses. First indicated that the customer savings plan as well as the stipulation plan come with less risk than the status quo.

Charles River Associates compared the 2016 preferred plan to the customer savings plan under the base market price, low market price and high market price scenarios, all using ABB price forecasts, which are forecasts this Commission has relied upon for years.

I think it's page 4 in the handout that I gave you is a table summarizing the comparison for the customer savings plan that's found in the surrebuttal testimony of Mr. McMahon. In this table you'll see a series of prices on the left side over the designation 2016 preferred plan, and then there's a set of essentially net present values on the right side under the -- or over the CSP or customer savings plan. Those are the results of the runs again for the high market, the mid and the low for each of those plans.

Mr. McMahon reran the same analysis for the stipulation plan using 600 megawatts and leaving Asbury on, which is shown in his affidavit, and it shows similar results. That would be the following page in our handout. Again, on the left side are a series of dots there that are associated with the 2016 IRP plan under the high, base and low. On the right we have what's called here the settlement plan or the stipulation plan showing the results for the stipulation plan in those three situations.

Not only does the stipulation plan provide the lower cost in all three scenarios, but the spread between the costs in the three scenarios is much less for the stipulation plan, therefore indicating less risk for customers. Again, that makes sense because of the lack of market or the certainty of wind's costs over time.

Fossil fuel plants, on the other hand, tend to have significant fuel costs that are a major expense throughout the plant's life. It's for this reason that the stipulation plan does not create a greater risk for Empire's customers. The greater risk for Empire's customers come from maintaining the status quo.

Another criticism heard is that the GFSA failed to adequately consider the possibility of negative prices in the market. Yet as Mr. McMahon can explain, the possibility of negative pricing events was explicitly modeled in the GFSA analysis, including the risk of more frequent and extreme events. Again, the modeling showed that Empire's customers were significantly better off with the addition of wind in the portfolio.

Also, negative pricing is more likely to occur in regions with high levels of transmission congestion. The RFP responses resulted in, again, short list of wind projects that are all close to Empire's load, reducing the risk of negative pricing. This is a very important point that you certainly need to consider in your deliberations.

A related criticism is the view that, with the addition of wind generation, Empire will be long on capacity. That is, that its owned capacity will exceed the needs of its customers.

First, just because Empire has capacity doesn't make that capacity the most advantageous mix for its customers. By taking advantage of the wind prices now, Empire can start to transform its portfolio to a better mix for the future.

The company will shift from a heavily fossil portfolio with emission, fuel and capital cost risk to a portfolio with strong environmental attributes and much lower fuel and ongoing capital costs. Again, based on the modeling, this can be done while providing savings to the customers.

Second, it is known that two of

Empire's existing purchased power agreements for wind will go away after the 600 megawatts would come online in December of 2020, expiration of Elk River Wind Farm in 2025 and the Meridian Way Wind Farm in 2028.

These expiring contracts represent more than 40 percent of the new capacity that will be added under the stipulation.

Additionally, while the status quo called for Asbury to potentially be in service until 2035, its future remains very much in doubt given that it gets dispatched by SPP less often today than it used to.

The market price provision is another portion of the stipulation that should provide comfort for you and for customers. Before we start to describe that provision, though, it bears to mention that the stipulation plan is again projected to bring benefits to the customers under low, mid and high price scenarios.

However, to further address the concerns of the parties, the company has agreed to add the market price protection provision which provides up to 35 million in protection for customers if a worse case than what is projected by the modeling is experienced. This provision was developed with significant input from the Staff and from the Missouri Energy Consumers Group.

Protection provision operates by comparing the cost to acquire and operate wind farms to the amount of revenue they generate each year. Mr. Holmes can walk through the details of the calculation.

Generally, a positive number will indicate customer benefits. Customers will receive the benefit of these revenues through either the base fuel numbers in its rates or twice a year adjustments to the fuel adjustment clause. Customers receive the benefit of the protection against negative values through a credit to Empire's revenue requirement in subsequent rate cases.

The treatment of Asbury in the stipulation was a difficult -- was a difficult issue for the company. The company had modeled significant customer savings associated with the retirement of Asbury. Asbury, in spite of its various upgrades over the years, is still a relatively small vintage 1970s power plant. As I said, it gets dispatched less and less into the market, yet customers are paying for all the costs to operate it, which means maintaining and staffing the plant. It is also possible, maybe even likely, that it will need another 20 million in -- $20 million invested now to meet environmental regulations as of April of 2019. Additional projected future investments are identified in the GFSA.

However, Empire listened to the concerns and reasoning of the parties, which includes OPC and Joplin, and in the stipulation has agreed to not retire Asbury immediately and will relook at Asbury's status as we move forward and more is known.

Lastly, there's been concern raised about rate impacts of the stipulation. It's true that in the first rate case after Empire acquires the wind farms there will be a rate increase. It is estimated that this will be a 12 percent increase above current rates.

However, focusing on just this fact ignores a couple of points. First, that percentage is a comparison to today's rates only and does not consider the portion of the 12 percent increase that would be predicted to take place in that time frame without the stipulation plan or, in other words, utilizing the status quo. Thus, to the extent anyone believes rates would be 12 percent lower in the absence of the stipulation plan, they are mistaken. The company calculates the difference associated with the stipulation plan to be approximately 3.4 percent.

Second, the situation turns around very quickly. By 2024 there is no projected difference in rates when comparing the status quo and the stipulation plan.

Now, I know this differs from allegations found in the OPC affidavits. However, I would very much invite you to ask our witnesses, Mr. McMahon, Mr. Holmes, Mr. Mooney, to comment on those rate impacts in order to get a fuller picture of this issue.

Empire's original concerns about timing of the Commission's decision were driven by two major factors: First, the federal tax law that ramps down production tax credits on wind generation; and two, the federal environmental law related to the disposal of coal combustion residuals.

The stipulation's approach of not

immediately retiring Asbury lessens the timing concerns related to the second issue. However, the federal production tax credits concern still exists. In order to gain the full value of the tax incentives, the wind generation must have completed construction by the end of 202o.

Thus, Empire must continue to move quickly to take full advantage of the PTCs and ask that you would help us do the same. A Commission decision by around June 30, 2018 would provide sufficient lead time for Empire to meet this deadline.

As I mentioned before, Judge, I'd like go in camera just for a couple minutes, if we could.

(REPORTER'S NOTE: At this point an in-camera session was held, which is contained in Volume 4, pages 48 through 52 of the transcript.)

JUDGE BUSHMANN: Back in public session.

MR. COOPER: To close, we certainly believe that positive Commission action is warranted in this case because the plan set forth in the Nonunanimous Stipulation will produce significant benefit to customers. Empire's proposal to acquire wind generation at a significant discount using the tax equity partnership structure proposed in the plan will benefit customers through lower future energy costs without any negative Empire's -- any negative impact on Empire's ability to provide these customers reliable service.

The primary attacks of the Public Counsel about their fears and unknowns will exist in any wind project. That's why we model outcomes and scenarios. Mr. McMahon, an experienced expert on resource planning, has done extensive analysis of the proposed acquisition of wind, including running scenarios requested by Staff, MECG and OPC. Based on that analysis, we're confident that the approach taken in the stipulation actually reduces exposure to market price risk for Empire's customers.

The bottom line question I think is whether you want resource -- wind resources available and do you want wind resources in Missouri? The answer is yes. This plan presents a way forward that is well-reasoned and provides real opportunity of significant upside benefits for customers while mitigating downside risk.

Your decision we believe should adopt the package of items presented in the Nonunanimous Stipulation & Agreement, and I would thank you for your time and consideration.

CHAIRMAN HALL: I am really struggling to understand exactly what the company is asking the Commission to do. Can you lay out for me the specific findings that the company and I guess the parties to the stipulation are asking the Commission to find, or is that set forth somewhere?

MR. COOPER: Well, yes. There's a couple of things. I think the first is, and I mentioned it earlier, we would like -- and this is really an accounting related, not really a finding but conclusion. But we certainly want to be able to record the capital investment to acquire the wind projects as utility plant in service.

CHAIRMAN HALL: And let me stop you

there. So is that like a PSA mechanism? Is that -- so the depreciation between the time that the project is used and useful, between that point in time and the date of new rates, the company will be accumulating depreciation; is that correct?

MR. COOPER: Yes. So there's two things. There's the first step, which is because with the tax equity financing arrangement, there's actually a wind project company that's the, sort of the ground level owner, and a holding company, of which Empire is the controlling member, that really owns the projects.

So because of that situation, we're looking for direction, first step just basically to be able to put that on our books as utility plant in service.

CHAIRMAN HALL: So that one I understand. So PSA accounting for the acquisition costs.

MR. COOPER: And you mentioned depreciation. Yes, there's no wind depreciation rate for the company today. So we've asked that the Commission order a depreciation rate for that to be utilized, I think as you mentioned, from the time the projects go in service until such time as some other depreciation rate might be set in a future rate case. So those are there.

There are also some affiliate transaction variances that are mentioned in the stipulation as well.

CHAIRMAN HALL: Okay. I understand those.

MR. COOPER: So those are sort of the ask on the conclusion on the ordered side of things.

The factual finding, I guess what I would view to be a factual finding that you and I discussed earlier I would view as an underlying fact that we are requesting as a part of the Commission ruling on those accounting decisions, on the affiliate transaction decision.

CHAIRMAN HALL: The fourth issue that you just mentioned, so you're asking the Commission to make a determination, a factual determination that it is reasonable for the company to acquire and operate these -- these wind facilities?

MR. COOPER: Yes.

CHAIRMAN HALL: Okay. So that's it? Those four things, that's all you're asking the Commission to do?

MR. COOPER: Yes. Certainly in conjunction with that, I mean, we have agreed to and would want the Commission to adopt the other provisions in the Stipulation & Agreement.

CHAIRMAN HALL: Adopt the other provisions. Explain that to me.

MR. COOPER: Well, for example, we would want the -- we talked about the market price protection. We would want that to be a part of the Commission's order. We would --

CHAIRMAN HALL: And the order would say what?

MR. COOPER: I think the order could say, could direct the company to adopt that. I mean, it could be in a tariff, it could be however someone wanted it to do, but certainly would adopt the stipulation to that effect and make it a part of the Commission's order that the company comply with that provision.

CHAIRMAN HALL: Okay. Anything else?

MR. COOPER: Well, certainly the moratorium. There's a variety of things in there that I think fit in the same category as what we just discussed with the market price protection.

CHAIRMAN HALL: So you're asking us

to order everything that's in the stipulation?
MR. COOPER: We are, yes, certainly.
CHAIRMAN HALL: Okay. If the Commission were to disagree or find one of the -- one or more of these terms unreasonable, what does that do to the agreement amongst the parties?
MR. COOPER: Well, certainly at this point, because it's been objected to, it's a joint position statement. So I don't know that it does anything to the agreement itself necessarily, but --
CHAIRMAN HALL: So the provision, for example, where the -- where the parties agree to not contest the need for the -- for these wind projects or to not contest the --
MR. COOPER: Recovery of the investment on Asbury?
CHAIRMAN HALL: Right. So is that agreement still binding on the parties if -- is it binding right now since it's been objected to? Will it be binding --
MR. COOPER: I think the rule specifically says it's not binding. Certainly I think all the parties are continuing to utilize that as their statement of position in the case.

I think it depends on whether the project goes forward or not, Chairman. I think that if the order were such that it allowed the project to go forward, even if the Commission didn't adopt the entire Stipulation & Agreement, I think that those parties' agreements would still be those parties' agreements, in my opinion.

CHAIRMAN HALL: Does the company have a position on whether or not a CCN is required for projects outside the state of Missouri but paid for by Missouri ratepayers?

MR. COOPER: That's a big question. We argued about that a few years ago the first time that I guess post South Harper the electric CCN rule was considered for amendment. I -- I haven't -- I don't know what my client's position is at this point in time.

I think there are good arguments that the Missouri statutes may be different from some other states' statutes; that even looking back at the South Harper decision, the focus there is on a geographic sort of question with CCNs siting, where should it be sited, as opposed to an economic, even though there's one sentence that I think refers to an economic question.

But I think most of those decisions focus on, again, geographic siting, which would lead me to believe, well, maybe the Missouri Commission is only interested by the terms of that statute in projects located within the borders. On the other hand, I guess if one interprets them to be an economic, the CCN statute to be an economic statute, then certainly I can see why it could extend to projects in other states.

CHAIRMAN HALL: So is that why the stipulation, which includes a provision that a CCN will be required, to the extent it's required, which I don't even -- so that --

MR. COOPER: Yeah.

CHAIRMAN HALL: Was that a way to address that legal issue?

MR. COOPER: To some extent. It's also the fact that the parties are aware of the fact that there is an ongoing rulemaking that at some point the -- I believe the current rule that's being circulated would call for CCN applications for projects outside the state of Missouri.

CHAIRMAN HALL: That is correct.

MR. COOPER: And certainly as a practical matter, if that's the rule, this company needs -- my opinion again, this company probably needs to file an application because the timing is such that they need to move forward and they need the Commission's approval.

CHAIRMAN HALL: And that actually segues right into my next question. Why isn't this a CCN proceeding? Why wouldn't that have been the most simple way to address this, just file for a CCN, and then we could have made a decisional prudence decision and you guys could be off and running? Why -- this seems unduly complicated.

MR. COOPER: Well, it's timing. You know, I talked about the timing and the timing of the PTCs and the fact that the company's still negotiating with the short list bidders. And so certainly at the time this was filed, I could not draw a line on a map to indicate where my certificate should be. And it really is.

It's resulted from the need to move forward on some parallel paths because of the PTC timing initially because of the Asbury investment timing and try to get some indications from the Commission where they want to be in a way that would allow us to move forward and complete these projects to the greatest advantage for the customers.

CHAIRMAN HALL: Let me just ask, and maybe this is my last question, but the stipulated rate moratorium until April 1st of '19, is April 1st of '19 the early -- under the stipulation the earliest that Empire can file tariffs or is that the earliest that new rates can be in effect?

MR. COOPER: The former. It's the earliest that they could file tariffs. It could be at least 11 months after that before rates would go into effect.

CHAIRMAN HALL: Okay. I thought of another question. Do you have a witness who can discuss the stipulation that was entered into in Oklahoma and what bearing that might have on the proceeding here?

MR. COOPER: That's -- yeah. That's probably Mr. Krygier.

CHAIRMAN HALL: Okay. Thank you.

COMMISSIONER RUPP: Good morning.

MR. COOPER: Good morning.

COMMISSIONER RUPP: What is the dollar amount difference of the decision to agree to not close Asbury versus your original position to close it?

MR. COOPER: The dollar amount difference? I guess I'm going to pass on that to Mr. McMahon, who will actually be our first witness.

COMMISSIONER RUPP: Very good. Secondly, your agreement to not close Asbury is only good until when? The next rate case? The next resource planning? How long is your commitment to OPC and Joplin not to close it?

MR. COOPER: The commitment really is to not close it today, and that doesn't mean that it's -- tomorrow it could be. Certainly what the company has said is it will relook at it in future resource planning exercises, which do come up next year. We do something every year, but come up next year, but certainly would be a part of a future process.

So I can't tell you that there is a, oh, yes, it's going to stay on until X day, but certainly it's not something that's happening now and is something that will be looked at in resource planning.

COMMISSIONER RUPP: Besides OPC and Joplin, was there anyone else that in your negotiations wanted --

MR. COOPER: Asbury left open? Staff and MECG, both of which can probably discuss that issue as well, but yes, there were others.

COMMISSIONER RUPP: How key was that piece of the stipulation to the agreement being hatched?

MR. COOPER: Really wanting to peel back the curtain on the stipulation.

COMMISSIONER RUPP: I'm just really curious why Asbury is being advocated to stay open.

MR. COOPER: Well, I think -- let me answer it this way, going back to my prior answer. There were several parties that were interested in it staying open.

COMMISSIONER RUPP: So I can just ask every party their own position rather that asking you to speculate on their --

MR. COOPER: I probably shouldn't -- yeah, I probably shouldn't speak for any of the --

COMMISSIONER RUPP: I will ask that of all the other parties.

JUDGE BUSHMANN: Mr. Cooper, I have a question.

MR. COOPER: Yes, sir.

JUDGE BUSHMANN: In your opinion,

what do you think the appropriate legal standard is that the Commission should use in evaluating the plan and the settlement plan?

MR. COOPER: Well, I think it's public interest. Is it in the public interest?

JUDGE BUSHMANN: Is there anything in the statutes that you're aware of that would provide that support?

MR. COOPER: I can't cite to it standing here, but we will certainly make that a part of our brief.

JUDGE BUSHMANN: That would be a good idea, and I would encourage other parties to do that also. Thank you.

MR. COOPER: Thank you.

JUDGE BUSHMANN: Next opening would be by Renew Missouri.

MR. LINHARES: Thank you. Good morning. May it please the Commission? My name is Andrew Linhares. I'm representing Renew Missouri Advocates in this case, and I'm pinch hitting for our attorney Tim Opitz, who is returning from Hawaii today. He'll be back for the hearing tomorrow.

So Renew Missouri was a proponent of

the Empire District's savings plan as originally proposed in this case. We supported that plan because it would bring online substantial new wind generation and result in very significant customer benefits while retiring Asbury, a coal plant that is no longer economical under many analyses, and in a way that would not harm ratepayers. And we reflect that support in the rebuttal testimony of James Owen and our statement of position filed on April 4th.

Now, that being said, Renew Missouri is a signatory to the Nonunanimous Stipulation & Agreement filed on April 24th. So our joining in that stipulation supersedes our previous position statement. And while we didn't file an affidavit in support as many other parties did, as many other signatories did to that stipulation, I thought it prudent to indicate our strong support for that stipulation here today.

So Renew Missouri encourages the Commission to approve these plant investments reflected in the stipulation by issuing an order according to the parameters in that stipulation and as counsel for Empire just outlined. Also instructive are the attachments and affidavits filed by Empire, MECG and the Commission Staff.

So the negotiated terms in that stipulation we believe represent incremental change in the right direction, and they serve to address the objections of some of the parties to that original plan.

So the stipulation would bring online 600 megawatts of new, cheap wind generation, some of which is guaranteed to be located in Missouri, with all the associated local jobs and other economic benefits.

It provides a path for some customers to meet their renewable energy goals. Paragraph 20 of that stipulation commits the company to implementing a program allowing nonresidential customers to receive renewable energy credits from wind projects. And we know that more and more of Empire's business customers are demanding access to renewable energy every single day.

Furthermore, this stipulation will still result in substantial customer benefits for Empire's ratepayers. As James McMahon, his affidavit in support of the stipulation notes, the wind projects will result in customer savings relative to Empire's 2016 IRP preferred plan. This is because the levelized cost of new wind is lower than the forecasted price paid for energy in Southwest Power Pool.

Finally, this stipulation will result in returning money back to ratepayers due to the federal Tax Cut and Jobs Act. So while the stipulation is a compromise, benefits are still very real and they represent progress.

We urge the Commission to approve the Nonunanimous Stipulation & Agreement and to allow Empire to invest in this growing resource in order to take advantage of this unique tax equity opportunity which we believe can save customers money, create jobs, to grow local economy and move toward a cleaner and more diverse resource mix.

Now, the parties have waived cross-examination for Mr. Owen, and the Commission indicated that they had no question for him, so he's not present today. However, I am happy to answer any of your questions for Renew Missouri here today.

CHAIRMAN HALL: No questions. Thank you.

COMMISSIONER KENNEY: No questions.

COMMISSIONER RUPP: Good morning.

MR. LINHARES: Good morning.

COMMISSIONER RUPP: So does Renew support keeping the Asbury coal plant open and operating?

MR. LINHARES: Certainly we would prefer to see that plant close, but we believe that this stipulation, as I said, it represents progress, and I think the -- you know, as a part of a negotiated stipulation, sometimes that's the way things work. I mean, although Empire may not be retiring that plant today as a result of an order in this case, there are going to be opportunities in future rate cases, in future IRP cases to weigh whether to close that plant.

I think the long and short is that, as counsel for Empire pointed out, Asbury's future is very much in doubt because it's simply not being dispatched as much as it used to be, and that's certainly not going to change. We don't see any reason to see why that would change. So I think as a -- as a compromise, we are signatories to this stipulation. We support the terms in it.

COMMISSIONER RUPP: So if Asbury needs an additional $20 million of upgrades to meet certain requirements, do you think that is a prudent use of ratepayer money?

MR. LINHARES: I think the Commission and parties should look very carefully at that.

COMMISSIONER RUPP: Is there something in this stipulation that the parties would not challenge any upgrades to Asbury if there is a requirement?

MR. LINHARES: Given that there's -- so there's an objection to this stipulation and it does represent a joint position statement of the parties, and certainly if the Commission were to approve this position, this stipulation with modifications, then there's specific verbiage in here that essentially lets the parties off the hook and allows them to take whatever position they'd like.

But the terms in the stip do bind the parties to support the stipulation unless there's a modification by the Commission.

COMMISSIONER RUPP: So no modification by the Commission, you guys wouldn't object to the spending of $20 million to upgrade Asbury to meet certain regulations?

MR. LINHARES: Well, that's certainly what we signed on to in this stipulation. I may be wrong about how a nonunanimous stipulation functions given objections, but I believe that's what we signed on to.

COMMISSIONER RUPP: Great. Thank you.

JUDGE BUSHMANN: Thank you. Division of Energy.

MR. POSTON: Good morning. May it please the Commission? I'm Marc Poston. I represent Missouri Division of Energy.

The Division of Energy is a signatory to the stipulation because we consider the 600 megawatt plan to be a step forward for Empire and for the state of Missouri. It will help Empire transition to a cleaner, more diverse generation portfolio. It will also help support business expansion, retention and attraction in Missouri due to the increasing demand by corporate energy consumers for renewable energy.

And residential customers also see value in Empire's plan. I'd like to quote from a comment filed on EFIS on February 9th by a residential Empire customer, Ms. Sarah Oliver. She says, I feel it is important for the Commission to know that while probably everyone serviced by

Empire is concerned with our rates and where funding will come from for the proposed wind farm, there are also many of us that are very concerned with ensuring our long-term environmental sustainability. Wind being a renewable non-polluting energy source is a major and important change. We wholeheartedly support this.

The stipulation that's been filed is the result of extensive negotiations by a number of experienced energy professionals that relied heavily upon modeling worst case scenarios and including protections that address those risks.

The 600 megawatt plan takes into account the varied interests of the signatories, including the company, regulators, customers and environmentalists. And while the exact locations of the wind farms have not been determined, to the extent this plan results in a new Missouri wind farm, it will help the Missouri and local economies through jobs, land lease payments, county permit payments, property taxes and through reliance upon local businesses for everyday support.

You'll hear concerns today that this plan is risky, but please keep in mind there are also risks in keeping the status quo, which we consider to be a riskier path forward than the proposal before you today.

The Division of Energy supports the 600 megawatt plan, and we hope you'll agree the plan is reasonable and approve the stipulation. Thank you.

CHAIRMAN HALL: No questions. Thank you.

COMMISSIONER KENNEY: No questions.

JUDGE BUSHMANN: Thank you. Commission Staff.

MS. FORCK: Good morning. May it please the Commission?

The case before you today is complex and unique with what seems like many issues and positions. It began with an application filing in which Empire requested approval of its customer savings plan. The plan was generally to build up to 800 megawatts of wind projects and to early retire its Asbury coal facility.

Through three rounds of testimony, various parties weighed in from all sides of the issues expressing concerns with approval of the CSP and expressing concerns with maintaining the status quo. Five parties to this case were able to work through negotiations to reach resolution on all the issues to the case in a way that reasonably addresses concerns for the utility, concerns for consumer groups, concerns for renewable energy advocates, and concerns for Missouri economic development.

The stipulation upon which these parties agreed is designed to address concerns raised by all parties to the case, including those that oppose it, and accordingly contain several commitments. Generally, the stipulation provides for building wind projects but lowering the threshold from the original 800 megawatts to up to 600 megawatts, including a specific build commitment for Missouri. It also provides for keeping Asbury open and adds some terms related to the federal Tax Cuts and Jobs Act of 2017.

Staff asks that the Commission accept the Stipulation & Agreement in its entirety as a resolution to all of the issues of the case. The Commission should not make a prudency determination in this case, but rather should agree that Empire's decision to acquire up to 600 megawatts of wind projects and to keep Asbury open under the terms of the stipulation is reasonable. Following a determination of reasonableness in this case, Empire will proceed as contemplated in the stipulation.

The stipulation -- the stipulated agreement importantly includes numerous customer protections, including first a process for the signatories and Empire to agree on in-service criteria for wind projects which are under construction, under contract for construction; second, agreement that any offset received by Empire due to a decreased purchase price for the new wind projects will flow back to customers; third, agreement that Empire will not file its next general rate case until on or after April 1st, 2019, and that the true-up period end no later than five months prior to the operation of law date in that case to help ensure sufficient time to verify the in-service status of the wind projects prior to reflection of those projects' costs in rates.

This section of the agreement also requires that the capital structure and debt rate values be used in the -- to be used in the next general rate case proceeding must remain within reasonable parameters. This helps ensure that customers do not bear the burden in rates at any negative financial impacts potentially resulting from the CSP.

This section also requires that capital provided by tax equity partners in relation to the CSP will not be imputed into Empire's debt or equity capital structure components for purposes of setting customer rates.

The fourth customer protection is a market price protection mechanism which is designed to address the risk to customer savings during the first ten years of the CSP. In general terms, the market price protection mechanism provides that if there's a financial detriment to the customers that results from the plan, the shareholders will bear a portion of that detriment up to a maximum exposure of $35 million in the Missouri jurisdiction. If there's a financial benefit resulting from the plan, customers get to keep that in its entirety.

Staff witness John Rogers can answer any questions you may have about the details of this mechanism.

And the fifth customer protection is a most favored nations clause providing additional customer protections should Arkansas, Kansas or Oklahoma order additional conditions or concessions that would be favorable to Missouri customers.

As part of this stipulation, Empire agrees to submit an application for a certificate of convenience and necessity consistent with applicable Commission CCN rules.

The signatories agree not to contest the need for the wind projects and to make a good-faith effort to process the application expeditiously and to request a Commission order within 120 days of filing.

Similarly, if Empire uses financing related to the acquisition of wind projects that would encumber its franchise works or system as described by Section 393.190, RSMo., Empire agrees to request Commission authorization for that financing, and signatories agree to make a good-faith effort to process the application expeditiously and request a Commission order within 120 days of filing.

Staff witness John Rogers can answer any questions you may have as to the acquisition of wind projects and why the Stipulation & Agreement is reasonable.

In short, the analyses provided by Empire related to various amounts of wind acquisition proposed by wind developers in response to Empire's RFP make it reasonable to conclude that the 600 megawatts of new wind provided for in the stipulation will have a ten-year present value revenue requirement very close to that of a plan involving 800 megawatts of new wind as originally requested in Empire's application.

However, the all-in capital cost is significantly lower for 600 megawatts than it is for 800 megawatts of wind, which reduces customer risks that the CSP won't perform as expected.

Staff supports the proposed depreciation rate and use of plant in service accounts recommended in Empire witness Dane Watson's direct testimony for the reasons stated therein. The depreciation rate is intended to be applied to the wind projects from the point they are found to be in service until Empire's next general rate proceeding, at which point the rate will be subject to further review.

Staff supports keeping the Asbury coal plant in service until an appropriate retirement date as indicated through the Chapter 22 analysis. This will require additional capital investments to ensure continued compliance with the coal combustion residual rule and the effluent limitation guidelines, which will cause an increase in annual revenue requirement for two to three years.

However, keeping Asbury open is expected to have value in the Southwest Power Pool and to result in a lower annual revenue requirement in every year from 2026 to 2047. Keeping Asbury in service will result in an additional 186 megawatts of reliable and dispatchable generating resource as a hedge against the uncertain performance of the 600 megawatts of new wind resources provided for in the stipulation and will avoid creating a stranded asset by retiring Asbury 15 years earlier than its current planned retirement.

Staff witness John Rogers is available to answer any questions you may have related to this issue.

The stipulation requires both Empire and its non-regulated affiliates to open their books and records to the signatories as necessary to ensure compliance with the applicable Commission rules and the stipulation.

Staff supports granting the variances from the Commission affiliated transaction rule recommended in the stipulation, and Staff witness Mark Oligschlaeger can answer any questions you may have related to that issue.

Finally, the stipulation requires Empire to reduce its base electric rates by approximately $17.8 million effective October 1st, 2018. This amount represents Empire's current quantification of electric cost of service reduction associated with the lowered Tax Cuts and Jobs Act federal tax rate.

Signatories have agreed that Empire will defer on its books and records an estimation of the amount of EADIT flow-back starting January 1st, 2018, with such deferral to be included in Empire's base rates at the time of its next general rate case.

Staff supports all of the provisions of the stipulation as being reasonable and affording appropriate protections to Missouri ratepayers while balancing the needs of Empire and its equity partners.

Staff asks that the Commission accept the Stipulation & Agreement in its entirety as a resolution to all the issues to the case. The Commission should not make a prudency determination in this case, but rather should agree that Empire's decision to acquire up to 600 megawatts of wind projects and to keep Asbury open under the terms of the stipulation is reasonable.

Thank you.

CHAIRMAN HALL: So is Staff asking the Commission to make a decisional prudence determination on the wind projects?

MS. FORCK: So I think similar to Mr. Cooper's hesitation on using the word prudence, I hesitate to call it decisional prudence. But the distinction that he made is what Staff is also requesting, that the Commission find the decision itself to enter into these agreements and to build the wind projects is reasonable and that -- set aside for future cases the determination of the prudence of costs of all the -- all the things associated with building, aside from the actual decision.

CHAIRMAN HALL: So Staff believes it would be appropriate for the Commission to make a finding that the decision was reasonable?

MS. FORCK: Yes.

CHAIRMAN HALL: Turning to page 7 of the stipulation.

MS. FORCK: Sorry. Do you mind if I grab it real quick?

CHAIRMAN HALL: That might be helpful.

MS. FORCK: Thank you. Sorry. Thank you. Page 7?

CHAIRMAN HALL: Correct. I believe it's the first full sentence where it says, the signatories agree to not contest the need for the wind projects. Is need, is that the same need that is a factor in the Tartan test?

MS. FORCK: Yes.

CHAIRMAN HALL: What about the other factors?

MS. FORCK: They would still be up for parties to potentially contest if they thought that would be appropriate.

CHAIRMAN HALL: So the public interest determination, that is -- the signatories have not come to any agreement as to that factor?

MS. FORCK: That is not specifically laid out in the stipulation. I think that -- and I'm not going to speak for all parties on this, but I think that it would be a tough argument for a signatory to have agreed to these projects in this case and then to come back during a certificate filing and say that this is not in the public interest or -- need is one of the items, too, but I think there are certain criteria that possibly could be contested. But I think that, being a signatory to this agreement, it would be a tough argument to make that the CCN should not be granted.

CHAIRMAN HALL: Does Staff believe that it is necessary for the Commission to make a determination on the reasonableness of keeping Asbury open or the reasonableness of the CCR investment? Is that necessary for the customer savings plan to go forward in Staff's view?

MS. FORCK: So you're asking specifically Asbury and not the wind projects themselves?

CHAIRMAN HALL: Right. Two components. One, Asbury staying open, because I think in your opening you specifically said that you're asking us to make a determination that keeping it open is reasonable. You didn't mention the CCR investment, though, that is in the stipulation. So I'm wondering, from your perspective, how important it is that the

Commission make a determination on those two issues as it relates to the customer savings plan going forward.

MS. FORCK: I think that in order for Empire to proceed with this project with confidence that they will be able to recover the costs associated with it, I think that a decision from the Commission on the reasonableness of keeping Asbury open as well as the costs associated with those CCR investments would be necessary.

I think from Staff's perspective, those determinations aren't necessary for Empire to be able to legally proceed, but I think that it would give them comfort -- I don't know if that's the right word -- but in order to move forward with this project and give them a little bit more assurance that they'd be able to recover their expenses associated with it.

CHAIRMAN HALL: And does Staff have a witness that can respond to the Oklahoma stipulation or should I ask you questions about that?

MS. FORCK: Please don't ask me questions about that. You know, honestly, Chairman --

CHAIRMAN HALL: I'll go ahead and ask you the question so that your witnesses can be prepared for it. But I'm trying to understand where -- and my understanding of the stipulation is that the signatories expressly agree that the retirement of Asbury is reasonable. And I'm trying to understand, and maybe my information is wrong, but if that is correct, I don't understand how to reconcile that stipulation with what's going on in this proceeding.

MS. FORCK: So you're saying the Oklahoma stipulation, the signatories agreed that the retirement is reasonable?

CHAIRMAN HALL: Right.

MS. FORCK: Well, I'm not sure what all went into the discussions for that. I can tell you that there were a lot of pieces that go into the decision to keep Asbury open. I think that Staff as a party could have gotten on board with a stipulation that either retired Asbury or kept it open depending on what the other conditions were.

So given that, I don't think it's unreasonable for a party to have come to that conclusion. I don't know what else I can -- what more specifics I can give you. I know John Rogers has done the analyses of the financial impacts of both keeping Asbury open and closing, so he may be one to talk about that.

CHAIRMAN HALL: Okay. And then switching gears, does Staff believe that it would be first legal and then second appropriate to determine in this proceeding that the tax cut should be made retroactive to January 1 as opposed to taking it as of October 1?

MS. FORCK: I think -- those are two different questions. You know, I'd have to -- I'd have to go back. I know that I'd hesitate to say that it's legal to bring it back, but I would have to do a little bit further research on that to know what my position or what Staff's position would be on that, and I can certainly provide that in the brief.

As far as reasonableness, I think that Natelle Dietrich would probably be the appropriate witness to answer what Staff's position would be on that.

CHAIRMAN HALL: Thank you.

COMMISSIONER KENNEY: No questions.

COMMISSIONER RUPP: So what I heard you say was that Staff would have been okay with closing Asbury with some -- with maybe a caveat of something or other. What was the caveat of something or other that would have gotten you there?

MS. FORCK: Well, I'm not going to go quite so far as to say would have. I'll redirect that to say could have. And like I mentioned, Staff witness John Rogers had done a lot of analyses looking at the financial impacts, and offhand I know that there were some comparisons that showed keeping Asbury open didn't make a huge impact either way financially as far as customer savings. It didn't yield some exorbitant amount of customer savings, nor did it significantly bring them down.

So given what, I mean, I don't know that Asbury was a very strong sticking point one way or the other for Staff.

COMMISSIONER RUPP: Okay. Thank you. You also mentioned, you know, not having a stranded cost. Tell me why that is important if I have something that's very inefficient and, yeah, maybe I haven't extracted all the dollars out of it, but why is it important in Staff's position to avoid having a stranded asset?

MS. FORCK: I think generally Staff doesn't like causing ratepayers to pay for something that is no longer providing any service. So what the original ask was from Empire was to allow continued recovery of and on the Asbury facility despite its closing, so I think particularly the return on piece of that.

But I think if possible Staff likes to try and allocate those costs up until the actual retirement date and not continue, if possible, not continuing having ratepayers who aren't receiving any benefits of an asset paying for that asset.

COMMISSIONER RUPP: Okay. I'll save the rest for Mr. Rogers. Thank you.

MS. FORCK: Thank you.

JUDGE BUSHMANN: Thank you.

MS. FORCK: Thank you.

JUDGE BUSHMANN: MECG.

MR. WOODSMALL: Good morning. David Woodsmall appearing on behalf of the Midwest Energy Consumers Group.

As an initial matter, I noted the Chairman said that he didn't like interrupting opening statements, but I would invite you to do it here. I really would. Rather than me try to tell you the things that I think you want to hear, I'd rather have you tell me the concerns you have and I address the things that you actually want to hear. So please interrupt me.

Again, David Woodsmall on behalf of the Midwest Energy Consumers Group. By now you've probably noticed that MECG is a signatory to the Nonunanimous Stipulation. Recognizing that two other customer groups in this case, OPC and the City of Joplin, are opposing the settlement and in light of the fact that MECG initially filed testimony in opposition to Empire's application, I feel the need to explain the sudden change in MECG's agreement.

First I want to point out the diversity of the interests that support the stipulation. First you have utilities. You have Empire supporting it, but you also have Ameren who is not opposing it. You have customers, MECG. You have Staff, who is supposed to be objective, and they support it. You have environmental interests, Division of Energy. You have economic interests. I'm sorry. Economic interests being the Division of Energy. Environmental interests being Renew Missouri. Heck, you even have Sierra Club who's not opposing it. So every interest across the spectrum has either supported this or not opposing it. So please keep that in mind.

You mentioned the standard that should be assessed. Looking at the Commission's IRP rules, now, this isn't an IRP case, but it's most analogous to the IRP. That uses the public interest standard. So certainly the broad nature of the interests represented as either supporting or not opposing tends to lean towards a finding that this is in the public interest. I'll address the appropriate standard when we get to the briefs.

As I said, you may have noticed the significant change in direction that MECG is taking in this case. As reflected on this slide, MECG initially opposed the Empire application. This is a statement from MECG's position statement filed on April 4th, and in this we stated that one of our concerns was lack of tangible benefits to the customers.

So this was April 4th. By April 24th, less than three weeks later, we were on board. We now support the stipulation. And here's a statement from the stipulation which now represents MECG's joint position.

So why the sudden change? First it's important to recognize the difference in what was being requested. Primarily what Empire was asking for, in its initial application Empire's application focused on prudency, and that suddenly changed. Empire is no longer focusing on getting a prudency decision from the Commission but rather a reasonableness decision.

And I'm going to divert from my prepared opening statement and try to address some of the concerns I've heard. It's important to recognize what that difference is. Prudency, decisional pre-approval slams the door. You have made a decision. No one can come back later and challenge it. That is what pre-approval does. That is what your finding of prudency does. It basically says no one can come along later and do anything on this.

That's not what we're doing here. I could not agree to that. That is not the law as I view it. What we're asking for is reasonableness. An important part of that, the distinction is Public Counsel, Joplin, other parties can come forward later and challenge the prudency. You haven't slammed the door shut on that.

So we're asking you to simply make a finding of reasonableness, but we do not go as far as prudency because you have to maintain your role as the decision-maker in a prudency challenge. So keep that in mind. That's how I view the distinction, and that's why we were willing to get on board because it is simply a reasonableness decision and not a prudency decision.

And where does that come from? That comes -- Mr. Cooper talked about a Missouri American case, and initially -- and I'm on I guess slide No. 5 here. Slide No. 6. In that Missouri American case from 1997, Missouri American asked for a prudency decision as well.

The Commission, based upon objections from certain parties, would not go so far. In fact, it said it did not do decisional pre-approval. But the Commission made certain findings that gave a comfort level, and it said that the decision is a reasonable alternative. But prudency could be challenged later.

So that's what we're asking for here. You've done it in a Missouri American case, and I'd ask you to do it here.

I want to be very clear about MECG's

willingness to take these steps in this case. Unlike Ameren and KCP&L, Empire faces some challenge simply by way of its small size. Risks that may be easily assumed by Ameren and KCP&L and large utilities cannot be so easily assumed by a company the size of Empire. So MECG is more willing to work to help a company the size of Empire to solve these challenges.

Bottom line, I hope you realize that despite assertions by others in the Capitol primarily, industrial customers are willing to work with the utilities when we have a clear explanation of what the problems are and what the potential benefits are. We sat down with Empire. Those were all explained. We worked through them, and MECG was willing to help solve those problems. So that is what we did here.

Slide 7. So what are the benefits to the customers? I talked about we were willing to get on board because there were benefits explained and we were able to get reduced to writing. So what are those benefits?

In light of some concerns about future wholesale energy prices, the settlement provides for the implementation of a market price protection mechanism. That mechanism seeks to provide a sharing of risk between shareholders and customers associated with reduced market prices and wind production.

Based upon analysis conducted by the signatories, and Greg Meyer was very involved in this, we view the worst case scenario would subject customers to a downside risk of $32 million over ten years.

What does the market price protection mechanism do? What it does is it compares the revenues generated by dispatching energy into the SPP, what are the revenues generated and what is the revenue requirement. And if that's positive, we know the revenues are covering the costs. If it's negative, then we know revenues aren't covering cost.

And again, we viewed that the worst case scenario over ten years was $32 million of downside to customers. The market price protection mechanism provides $35 million worth of coverage. So in our view, that was a significant mechanism to cover risk for customers.

And again, several witnesses can talk about this. Mr. Holmes for Empire was very involved, John Rogers on behalf of Staff and Greg Meyer were all involved and can answer any questions about how the market price protection mechanism works and how it covers the risk going forward.

Next, the settlement contains a provision that ensures that the benefits of federal corporate tax reduction are flowed back to customers. Specifically, Empire will reduce rates by over $17.8 million effective October 1, 2018. This removes a large uncertainty for Empire customers.

There's been a fight going on. You've noticed it. You've noticed a hearing up for later in May to talk about whether an AAO would be appropriate. This takes care of the concern that customers are going to get these tax benefits effective October 1.

It leaves open the question of what happens pre October 1. This was a question from the Chairman. That decision -- or that issue I think may be addressed in some fashion depending on legislation. If legislation is passed, I think that question is answered. If legislation isn't passed, I'm sure there's going to be another fight with other utilities. But that issue remains open.

Slide 9. The settlement provides for a rate case moratorium, and Mr. Cooper talked about this. It basically says that Empire will not file tariffs to increase rates before April 1, 2019. So that means under an 11-month timeline rates will not change until March 2020.

Since Empire's last rates went into effect in September of 2016, rates will not have increased for over three and a half years. Now, I say will not have increased. We have the tax reduction. So for three and a half years customers will see stability in rates.

Additionally, there are certain protections that are built in regarding the rate cases when these wind assets are put into rates. First it says that the case has to be timed so that there are five months in order -- between the true-up date and the operation of law date so the parties can do a true-up and make sure that these assets are actually in service. We wanted to make sure that it wasn't squeezed too tight. This was a provision that was in the Empire and KCP&L Iatan 2 regulatory plans, and we adopted it here.

Next there are provisions regarding

capital structure and cost of debt. The concern being in my mind that if Empire went out and financed this all with debt, would their debt -- would their credit rating go down and debt costs go up?

So this is a protection for customers that the asset portion -- or the investment portion made by Empire is done in a fashion that it's not detrimental to customers.

Slide 11. There is a provision that calls for Empire to propose a program in the future for nonresidential customers to access renewable energy and the associated renewable energy credits.

I want you to understand what's going on here. Just because Empire and other utilities use wind energy, they get the renewable energy credits. So customers can't say that we're served by renewable energy. You can only make that statement if you have the RECs in hand.

So because Empire is served by wind energy doesn't mean the customers can make that statement. The only way a customers can make that statement is if there is a program by which they can access and get the renewable energy credits.

What this provision says is that

Empire in a future case will propose a program that will make that happen. It will propose a program, and questions regarding the costs for getting those RECs are all left to the future case, but it will allow a potential mechanism so customers can make that statement.

And you might have seen when Amazon put out its RFP for a second world headquarters, one of the things they had in that RFP was for parties to address sustainability of energy. Amazon, Facebook, Google, Wal-Mart, companies of this nature all have made commitments to being more green, to sustainability. So these companies want, they mandate that they have a program that allows them to say that.

So the Empire provision will hopefully allow a mechanism by which these companies can say, we are being served by renewable energy and we're meeting our sustainability commitments.

I'll note that this is somewhat a takeoff of what's being done with other utilities. Ameren has its green tariff program currently before you. That is a similar mechanism that allows nonresidential customers to make this statement. KCP&L and GMO in the context of their current rate cases have a similar proposal. So this is something on Empire's part to allow us to move that way.

Slide No. 12. As mentioned by Staff, the settlement provides a customer benefit in terms of a most favored nation provision. Empire's served by four ut-- by four commissions: Kansas, Oklahoma, Missouri and Arkansas.

We didn't want a situation in which simply because Missouri was one of the first movers we got a worse deal than the others. I fully expect the other states to jump onboard, piggyback on what we've done and possibly extract other benefits, and we didn't want to be shut out from that.

So all this does is it says if another state places a condition on this that is beneficial to customers, we will append it to this stipulation so we get those benefits. I think that's a good deal. Otherwise, I would want to be the last state moving.

And this might be a good --

CHAIRMAN HALL: Let me ask you a question about that. My reading of the most favored nation provision is that it only is applicable if all the parties agree. So if one party disagrees, and perhaps that would be Empire, then you have to apply to the Commission to make a determination as to whether or not the MFN applies.

MR. WOODSMALL: You're right. That's correct.

CHAIRMAN HALL: So what would the standard be for the Commission to apply in that proceeding?

MR. WOODSMALL: I would think the standard is simply whether it falls within this language. If the Commission finds that it is a customer benefit, then that's the standard.

CHAIRMAN HALL: And if Empire disagreed with that interpretation, then that could be appealed?

MR. WOODSMALL: Certainly.

CHAIRMAN HALL: But if this Commission made a determination that it was a benefit, you believe that that would essentially modify whatever order comes out of this proceeding?

MR. WOODSMALL: That was my intent by this provision.

CHAIRMAN HALL: Thank you.

MR. WOODSMALL: So slide 13. This is the time to do something. MECG has stated in previous rate cases that Empire's industrial electric rates are not competitive with the national average. In fact, based upon a recent EEI report, Empire's industrial rates are now almost 19 percent above the national average.

And I want to say first off, that's not Empire's fault. Empire has small size. They do not have the economies of scale. They can't go out and on their own simply build an Iatan 2. They don't have that scale. So there are certain problems that cause their rates to be higher than the natural average.

But simply maintaining the status quo doesn't fix anything. So we looked at this as an opportunity. To use a term that's repeatedly thrown around the Capitol, MECG and its members view this as an opportunity to truly bend the cost curve. While some may simply want to sit back and wait and acquire facilities once they are absolutely necessary, MECG believes that we should not waste the current opportunity.

The production tax credits provided by the federal government are about to start phasing out. They're not going to be at the current level forever. They're $24 and now is the time to avail yourself of those tax credits. Others are. If we don't do it, we're going to get left behind.

While these tax credits are of little value to Empire, or there's some value, they provide a great deal of value to third parties. And you see two things going on. You see the production tax credits that I mentioned are at $24, but there's also accelerated depreciation. That means that while a plant or these wind facilities may have a 30-year life, and therefore you're depreciating 3.3 percent a year, for tax purposes the federal government allows you to depreciate over five years. So you have accelerated depreciation.

Well, what is depreciation? Depreciation is an expense that allows you to have less taxable income, so you pay less taxes. Production tax credits do the same thing. So the PTC, you see accelerated depreciation, allow you to pay less in taxes.

Well, that's a big value to certain parties out there, enough so that these parties, in order to get these PTCs and the accelerated depreciation, will pay to help build the wind. They will pay to get the investment that drives the PTCs and the accelerated depreciation.

So that is what drives the tax equity partners. As mentioned in Mr. Mooney's testimony, the PTCs and depreciation expense, quote, can be used by owners to offset other sources of taxable income realizing income tax savings.

And here you see that chart from Mr. Mooney's testimony which shows what's happening. The tax equity investors are going to contribute 60 percent of the cost of the investment. And what are they going to get out of it? As mentioned, they get the PTCs, they get the accelerated depreciation, and they get some of the cash.

What does Empire get? They get the remainder of the cash, they get all the capacity, and they get the RECs. So now is the time. When those PTCs go down in value, the tax equity partner is not going to be willing to pay as much. So that means customers are going to have to pick up more of the investment. Now is the time to maximize the benefit of using a production tax credit.

Given this opportunity and the review that was conducted in this case, MECG is willing to forego the opportunity to raise future prudency challenge. In conduction with the other provisions in the settlement, MECG believes that this project should go forward. Therefore, MECG asks the Commission to find that the agreement reached by the five parties is reasonable.

Now I'm going to raise -- I'm going to address some of the questions that were asked earlier. Might not have wanted to hear my opinion, but I'll throw it out there.

What are we asking for? Be very clear about what the stipulation does. The stipulation is really focused on two things. In large part the stipulation is a private agreement. It's an agreement between the five parties that says certain parties will do certain things. And as it applies to those five parties, the only thing we're looking for from you is enforcement.

So when we say the parties find or the parties agree to do certain things, you don't have to -- you don't have to so much adopt those. You just have to enforce it. It's like the KCP&L and Empire regulatory plans. It's like any other settlement that has life outside of a particular case.

You can't bind future commissions, so how do we get to make long-term commitments if you can't bind future commissions? So what we're saying is the parties agree to certain things here, but the settlement is very clear when it says the parties agree or the Commission finds. So focus on the provisions and say, what is being agreed to hear, things between the parties or things that involve the Commission.

So there are certain aspects here that are private agreements, but then there are aspects that involve the Commission. And getting to the Chairman's question from earlier, what are those things? What findings are we needing here?

Well, one of them -- some of the easy ones, a depreciation rate. Section 393.240 gives you the authority to set a depreciation rate, and in this agreement we're asking you to use that authority and set a depreciate rate of 3.33 percent. That can be changed in the future like any other depreciation rate. When we do a depreciation study, that may change. But those assets will start depreciating, and we need a depreciation rate, so we ask you to set that depreciation rate.

There are certain affiliate transactions that are going to be involved here, and I think Mr. Mooney, certainly Empire witnesses can talk about what are those affiliate transactions. We ask you to use your power under 4 CSR 240-20.015 to waive those affiliate transaction rules.

But the other one is, we ask for a finding that the direction we're going is reasonable. As I said, not prudent. You get to keep that authority for later. You have to. Parties, Public Counsel can raise that later. So all we're asking is kind of a nod to say, based upon what we know now, you guys are headed in a reasonable direction, but prudency is saved for later.

CHAIRMAN HALL: Let me stop you there because I'm still struggling, and I appreciate your effort to address my struggle. The direction we are going is reasonable.

MR. WOODSMALL: The direction we are going.

CHAIRMAN HALL: The direction. I

mean, you're being very specific and helpful, and then you go to the direction and I'm lost again.

MR. WOODSMALL: Okay. The direction meaning the resource planning decisions that the signatories are making. That is, the addition of 600 megawatts of wind, keeping Asbury open at this time. We are being reasonable. You see nothing at this point in time that causes you concern, but prudency of those decisions can be made at a future point in time.

CHAIRMAN HALL: So you mentioned two things: One, keeping Asbury open; and then second, the acquisition of the 600 megawatts. That's the direction?

MR. WOODSMALL: Right.

CHAIRMAN HALL: So you're asking that the Commission determine that those two items are reasonable?

MR. WOODSMALL: Correct. And again, going back to my previous statement that this has private agreements and also agreements that involve the Commission. Look on page 5, provision 14E. The signatories agree not to contest and recommend that the Commission find. This is one where it involves the Commission. Provision -- on page 12, provision 19B, same thing. The signatories agree not to contest and recommend the Commission find reasonable.

So those are agreements that involve the Commission saying we find the direction you're headed to be reasonable. So those are some of the provisions that I talk about that involve the Commission.

CHAIRMAN HALL: So the -- so there's a third one that you mentioned, and that's the CCR investment. So you've got the 600 megawatts, you've got keeping Asbury open, and you've the got the CCR investment?

MR. WOODSMALL: Right.

CHAIRMAN HALL: So those are the three things that you believe that the parties are asking the Commission to do?

MR. WOODSMALL: When I say to do, to make a finding that, based upon what you know, we're headed in a reasonable direction. Prudency can be raised later. We're not taking away that right of Public Counsel or the City of Joplin.

CHAIRMAN HALL: Anything else?

MR. WOODSMALL: Those are the three -- I mentioned depreciation and affiliate transactions, but those are the three that fall within the reasonableness request that we're asking for.

CHAIRMAN HALL: And so let's assume that the Commission takes issue with one or more of the terms in this Stipulation & Agreement and then issues an order indicating that there's something in here that it doesn't like, but it does say depreciation rate 3.33, fine, affiliate transaction variance, fine, reasonable on the three items that you mentioned, but there's something else in here that we don't like. Is this still an agreement amongst the parties?

MR. WOODSMALL: Yeah. The stipulation contains the standard language that it's all interdependent, and if you make a change, all bets are off.

CHAIRMAN HALL: So in other words, we have to take this in toto?

MR. WOODSMALL: I wouldn't -- we will take whatever you say and we will consider it. This isn't a rate case. Be very careful. And I'm not trying to take away your authority. You're the policy makers. But this is one of -- in 25 years, one of the toughest cases I've ever done. And if you make a change, it is likely to open Pandora's Box. It took a lot of work to get to this careful settlement.

I'll mention the Asbury because Commissioner Rupp has focused in on that. You make changes on Asbury, let's think of what the Pandora's Box is. The Pandora's Box then becomes how do we quantify the regulatory asset associated with that? That was a big issue. By keeping Asbury open, we don't have to address that.

Another issue that was raised was how do we take care of the employees down there? It was raised by Division of Energy. If you say Asbury needs to close, first off being, you have the power to tell them Asbury needs to close. That's a management decision. But if you say Asbury needs to close, then we have an issue of what happens with the employees. We were able to avoid that issue. If you say Asbury should close, we have an issue regarding the local property taxes. We were able to avoid that.

So by leaving Asbury open for now, we've been able to avoid some issues, and if you make a pronouncement that Asbury has to close, it really does open Pandora's Box. I will tell you as others have --

CHAIRMAN HALL: Let me ask you this: I'm going to use Commissioner Rupp's scenario that he used a moment ago with a different attorney. So let's say we approve this or we issue an order consistent with this stipulation, and three months from now Empire comes back and wants to close Asbury and wants the undepreciated amount as a regulatory asset. What are you going to do?

MR. WOODSMALL: Based upon the information that I know now, I will oppose that. It's a prudency decision that will have to be made later. But Empire, as all utilities do, always has the management discretion to retire units and add generation. That is their discretion.

CHAIRMAN HALL: So then same scenario, let's say three years from now, after spending $20 million for the CCR investment, then Empire wants to close it and wants to recoup that investment. What do you do then?

MR. WOODSMALL: There's two parts of the question. First being will I oppose their decision to close it? I don't know. We'll look at what's --

CHAIRMAN HALL: That's not my

question, because I don't really care if you oppose that. What I care is whether or not you're going to oppose the company's effort to put in rates the undepreciated amount.

MR. WOODSMALL: And that is one of the things that I will talk about is one of the private agreements. The signatories have agreed that they will not oppose Empire's recovery of that $20 million. So when we get to that, if MRI's made the investment in this $20 million to meet CCR compliance, I won't -- I can't oppose that.

CHAIRMAN HALL: And you can't oppose it even if we -- okay. Can you oppose it if we don't take the stipulation in toto, if we take parts and view parts as unreasonable, or do you think that the agreement amongst the parties is still binding upon the parties?

MR. WOODSMALL: The agreement amongst the parties is only binding to the extent that you adopt everything we've asked for. If you make changes, then all bets are off and I could make challenges in the future.

CHAIRMAN HALL: Okay.

MR. WOODSMALL: And on the CCR compliance, I want to be very clear. Simply because we leave -- if Empire decided to close Asbury tomorrow, there is still going to be certain costs that they have to incur, and I'm sure an Empire witness can talk about this, but there are environmental costs they're going to have to incur down there whether Asbury stays open or not. There are incremental costs over and above that that they will incur because Asbury is staying open.

So just if we closed Asbury tomorrow, we're not avoiding all of these costs, is what I'm saying.

CHAIRMAN HALL: Okay.

MR. WOODSMALL: So talking about Asbury, that was a critical part of our agreement here. And why was that? First off, it provides fuel diversity. Do you really want to get to the point where you're all coal, you're all wind, you're all whatever? Asbury provides some fuel diversity.

Asbury provide capacity value. Parties are always out there looking to engage bilateral contracts by which they can purchase from each other capacity. So there may be opportunities in the immediate future to engage in these bilateral contracts. And then if SPP ever goes to a capacity market, Asbury has value.

Long and short, Empire was initially asking for customers to pick up all the costs of Asbury. If we're going to be asked to pay those costs anyway, it was our view that we ought to just leave it open and get the potential value of it.

It is still in our view, and I think in Staff's view and others, it was still an economic plant. So just because it's generating less doesn't mean it is completely uneconomic at this point. So if it's economic and we are being asked to pay for it anyway, let's leave it open for now. We can always address that in IRPs. But don't -- don't decide that it should be closed without looking at all the potential benefits of it.

The other thing I want you to recognize with Asbury, this case is not simply about Missouri. As I said, Empire serves in four different jurisdictions. So any decision that's made here may complicate things in other states. And I mention that simply because the Kansas commission staff also came out and said that Asbury should stay open.

So if you come out with a

pronouncement that Asbury should close, are you putting Empire in an impossible situation if Kansas says Asbury should stay open?

So we basically just punted that down the street a little bit and say, like any other decision, we say -- like any other decision, it will be treated at a future point in time. But associated with that, I won't and the signatories won't oppose recovery of the CRR investment.

The last thing I wanted to address was some discussion about the CCN. You mentioned, the Chairman talked about the certificate of convenience and necessity. That is not -- and it came about in context of whether Empire should have just done this in the context of a CCN case.

First Empire, the timing wasn't right because they haven't finished all the RFPs to do that, but also a CCN isn't a prudency finding. CCN is convenience and necessity, which to my knowledge it doesn't involve you looking at all other options. It just says convenient and necessary, but it doesn't say were there other options you should have done. So that prudency is done later.

So simply because there could have been a CCN case doesn't address all the concerns and rectify all the risks that would come from making this investment decision.

The final thing I wanted to address was a statement -- and I believe Mr. Cooper tripped over this because of a word you used. You asked whether we were agreeing to PSA, and that is not in this agreement.

PSA is a method by which you avert regulatory lag. If a utility makes investment between rate cases, there is a time between when that goes in service and when rates go effective in which they are booking depreciation and not making a return. PSA is a mechanism by which you are allowed to capture the depreciation and the return and recover it in a future case. We're not doing that here.

There will be a period of time, five months, in which this has been turned over to Empire by the developer and is in service and they will start depreciating they will not be making a return. There will be regulatory lag. There is nothing in here that addresses PSA. What it says is parties, signatories agree that you should book it to plant in service just like they do with any other investment, but it starts depreciating and there is no deferral of the depreciation and return. And I'm sure Mr. Meyer, Mr. Krygier, any number of people can talk about why this isn't PSA and how PSA is different.

CHAIRMAN HALL: That was helpful. So they would be able to book the depreciation, the return of, but they would not be able to book the return on?

MR. WOODSMALL: Right. Correct. Yes.

CHAIRMAN HALL: Thank you.

MR. WOODSMALL: So I think I covered all points, so that was all I had. Thank you.

CHAIRMAN HALL: One other final question. So you represent some industrial and commercial ratepayers in Empire District's --

MR. WOODSMALL: Correct.

CHAIRMAN HALL: -- service territory? Who are they?

MR. WOODSMALL: Typically I don't put that out because -- and I'll tell you why.

CHAIRMAN HALL: I'll tell you, I mean, this has kind of been a longstanding issue for me. You understand these issues extremely well, and when you tell me, when you tell us your views on things, it has weight and value. But when we understand who is paying you to say these things, it gives us context. It helps us understand what you're saying and where you're coming from. That's why I'm asking.

MR. WOODSMALL: First off, I'll start with the caveat, some customers do not like -- in the context of a rate case do not like to be seen as opposing the utility. It's their monopoly provider. You know, if you get out there and start opposing ROE, would the utility really want to start making programs like the non-residential program to benefit you if you oppose their ROE? Because you're a monopoly provider, it gives you some hammer over the customers. So the customers, a lot of them will tell me, I do not want you mentioning my name in pleadings.

So, frankly, I get it. You see it as customers hiding behind the MECG name and that's what's happening. Here we're not opposing now the utility. We are in agreement with the utility. So I will tell you now who they are, but that changes case to case. In some cases they won't let me use their name. So let me see if I've got them all. I think there's 11. Wal-Mart, Praxair, Jasper

Products, Tamco Building Products, Tyson, George's Processing, Simmons Foods, Explorer Pipeline, Marathon Petroleum. I've got nine of them.

But they are all customers -- as you know, Empire has a limited industrial base. All of these customers are served under Empire's large prime-- or large power rate schedule. So they are the vast majority of Empire's industrial base.

And you can see for purpose of any point in time not who is involved in a particular case but parties that support MECG. If you go to our website, there is a link that says participating companies, and you'll see, I don't know, 40, 50 companies there. That doesn't mean those companies are involved in any particular case, but I think I've rattled off the ones that are involved in this case.

CHAIRMAN HALL: So are a number of those companies interested in being assigned a portion of the renewable energy credits?

MR. WOODSMALL: I haven't taken a poll of which ones would actually do it. Those terms will -- the terms that come with that program will dictate who gets involved.

I can tell you from cases in Kansas,

the KCP&L case, the Ameren green power tariff, Wal-Mart is very interested in this, very interested. We filed testimony in support of Ameren's proposal. So Wal-Mart's a customer of Empire and will be interested in getting this program in place.

But beyond the customers that are current -- or beyond the current Empire customers, there are other customers or potential customers, like I mentioned, the Amazons of the world, Facebooks, Googles. Those type of customers are always looking to build facilities, fulfillment centers, places to do their -- I don't know, their computer banks. They want to find places where they can say they're served by renewable energy.

So there are current customers that want this, but there are other potential customers that will want this, and we are precluding them even looking at Empire because this isn't available. So this is a big deal to all nonresidential customers.

And on the Ameren side, it is important to recognize that we have attempted to structure these programs in other cases so simply because nonresidential customers may be able to access the RECs, it's being done in a way where it's not intended to be detrimental to other customers. I just mention that because it is a live issue in the Ameren case, and I don't want to go too far, but that was Wal-Mart's desire was to make it not detrimental to other customers.

CHAIRMAN HALL: Thank you.

COMMISSIONER KENNEY: No questions.

JUDGE BUSHMANN: Thank you. Let's do one more. Sierra Club.

MR. ROBERTSON: May it please the Commission?

Sierra Club supported Empire's original customer savings plan. We like plans that put more clean energy on the wires and retire coal plants. So we were less enamored of the revised plan under the Nonunanimous Stipulation & Agreement that cut back the amount of wind and leaves Asbury running for the time being. We did not sign the stipulation, but we do not oppose it. Instead, we offered a measure of lukewarm support.

Old assumptions die hard. Some people it seems still can't believe that wind energy is cheaper than coal or natural gas even from existing power plants. They can't believe a grid can be reliable with a -- if it has a lot of intermittent wind on it even though it is proving that it can be reliable.

OPC objects that customers are being ripped off because of the early benefits that flow to Empire's tax equity partners. This overlooks the fact that those tax equity partners are putting up perhaps 60 percent of the capital, a share that will not be added to rate base.

OPC assumes that SPP will not do its duty to protect the reliability of the grid, that the system will collapse like a house of cards under the wind rush. There's enough diversity on the system, though, to ensure reliability, including natural gas which is close to half of Empire's capacity, and the accredited capacity of wind itself, 15 percent on SPP.

OPC objects that Empire has excess capacity. The figures they give are 1,431 megawatts of SPP accredited capacity for a 1,211 megawatt peak load. That's not a huge cushion given the reserve margin requirements. It might look extravagant to build 800 megawatts of wind with accredited capacity of 15 percent, but the fact is it's cheaper.

We ask the Commission to approve the revised plan in the Stipulation & Agreement. We regard it as, if not a missed opportunity, certainly a weakened opportunity. And we hope to see Asbury retired sooner rather than later. No one has refuted the case that Empire made that that would be the best outcome for customers.

Questions?

CHAIRMAN HALL: No questions. Thank you.

COMMISSIONER KENNEY: No, thank you.

MR. ROBERTSON: Thank you.

JUDGE BUSHMANN: Just to check, for City of Joplin, do you have a lengthy opening or a short one?

MS. BELL: It's fairly short, but my position will be closely aligned with OPC. So if you're looking to --

JUDGE BUSHMANN: This might be a good time to break. All right. Why don't we -- as I said before, because of the break later in the afternoon, we're going to take an early lunch. So why don't we do that now. Be in recess until 12:15.

(A LUNCH BREAK WAS TAKEN.)

JUDGE BUSHMANN: Let's go back on the record. We were almost finished with opening statements, and I believe our next one would be from the City of Joplin.
MS. BELL: Judge, just a brief procedural note. I had requested -- Mr. Edwards has scheduling issues on Friday, and I had requested whether or not the other parties had cross questions, and I believe no one does have cross questions. So at this time I'd request that he be waived from appearing, be excused for Friday.
JUDGE BUSHMANN: Did you want to actually introduce that affidavit into evidence at this point?
MS. BELL: Sure.
JUDGE BUSHMANN: I believe that was Exhibit 500.
MS. BELL: It was.
JUDGE BUSHMANN: Any objections to the introduction of Exhibit 500 into the record?
(No response.)
JUDGE BUSHMANN: I don't hear any objections, and I assume if the representation is correct that there's no cross either. In that case, Exhibit 500 is received into the record, and

Mr. Edwards is -- it is not necessary that he appear on Friday.

(CITY OF JOPLIN EXHIBIT 500 WAS RECEIVED INTO EVIDENCE.)

MS. BELL: Thank you. May it please the Commission? My name is Stephanie Bell, and I represent the City of Joplin in this matter, who Joplin makes up about one-third of Empire's Missouri ratepayers, ratepayers that will be directly affected by the application before you today.

Joplin agrees with MECG's original statement of position that Empire -- that the Commission lacks the authority to grant the authorization Empire seeks today to record its investment in costs to operate the wind projects. The Commission is constrained by its statutory authority, and that statutory authority does not authorize the pre-approval sought by Empire here.

It's been argued today that there is a difference between a finding finding something reasonable and finding something is prudent. I think that's a distinction without a difference. We know prudency slams the door on the Commission's authority, as has been said today. But if I call it reasonableness, does it provide an opening? What if I'm asking you to finding -- finding that the wind projects are just and equitable? What if I use the word sound? Again, I don't see any statutory authority for a nod or a directional guidance from the Commission.

The only case cited about a finding of reasonableness was the American -- Missouri American certificate case, and we've all agreed today that this is not a certificate case.

CHAIRMAN HALL: Okay. So let me turn that on its head. You say that there's nothing that would specifically allow the Commission to make that kind of determination. Is there anything that would prohibit it?

MS. BELL: I am not aware of anything that would prohibit it at this time. I'd be happy to brief that issue for you.

CHAIRMAN HALL: It seems to me that what you're really saying is that what they're asking for may not have much value, not that we can't do what they're asking.

MS. BELL: I think if -- in my review of Mr. Woodsmall's original statement of position, he outlined all the law about decisional pre-approval and specifically provided that the Commission's a creature of statutory authority and that it can only exercise the powers which it has been expressly granted. And so I think the fact that there is not an express grant of that power, because of the nature of the Commission itself, is the reason why the Commission cannot go forward.

CHAIRMAN HALL: Okay. Thank you.

MS. BELL: And so when asked, Mr. Woodsmall stated very matter of factly that this Commission doesn't have the power to tell the company to close Asbury, yet he maintained the Commission does have the power to give the okay to the wind facilities.

More importantly than the procedural issues that abound in this case, Joplin's primary concern has been, is, and will continue to be ratepayer impact. Since 2006, ratepayers have experienced increases in rates of 62 percent. You will be hard pressed to find ratepayers whose income has increased 62 percent since 2006.

As you know, these increases are particularly difficult for low-income and elderly ratepayers on a fixed income. Without this pending application, ratepayers would actually be facing a decrease in their rates for the first time in more than ten years due to the Tax Cut and Jobs Act in the near future. Instead, we are here today once again facing the prospect of a substantial increase.

Just over 18 months ago, this Commission approved the merger case, and in that case the testimony was that the -- there would be no rate impact from the results of that transaction, and here we are 18 months later back before you today.

It's important to also note that, among the public comments, over 75 percent of the written comments oppose Empire's application. John and Kerry divine wrote, I think this is a tremendous waste of money and resources. It is our money and we haven't even paid for the coal plant yet.

Cathryn Loy wrote, our utilities are too high in southwest Missouri. We cannot afford to change with each new idea.

Cynthia Campbell writes, the more this has been researched and studies, the more it has become apparent that the residential and business consumers in southwest Missouri are being set up to foot the bill.

And Roy and Bev Winans write, our main concern are the costs passed on to customers, especially those on fixed incomes and those not making a lot of money. Both groups operate on a shoestring budget, and any additional cost is a burden to them. We feel that they should take priority.

You might have seen Bev Winans before. A photograph of her made headline news in the aftermath of the tornado that struck Joplin, Missouri in May 2011. The F5 tornado killed 161 people, injured 1,100 others and destroyed 7,000 homes. The most deadly natural disaster in the state's history inflicted $2.2 billion worth of damage. Rebuilding has come at a high price and is ongoing, and Joplin is the largest urban area served by Empire.

This history makes the risk the company is asking the Commission -- or asking the customers to bear even more significant.

So what is the rate impact? And that's a really good question. Unfortunately, I haven't seen any really good answers. It's clear that OPC and the company differ, have differing opinions about the potential rate impacts, but even the signatories on the basis of their affidavits disagree as to their rate impacts. So why? Why can't we -- in other rate cases we get the schedule and we say, you know, if this is what happens, here's your bill number. If this is what happens, here's your bill number.

So why are there so many disagreements? And that's just because there's numerous uncertainties associated with this project. They are set forth in MECG witness Mr. Meyer's rebuttal and in OPC's witness Ms. Mantle's rebuttal, and they include items like identification of the contractor for the wind project, identification of a tax equity partner, location of the wind projects, transmission costs, market prices in the SPP market, generation mix at SPP, and frequency of negative market prices, among other things. The wildly different estimates about rate impacts should give you pause.

While Joplin customers understand Empire's need to make investments and improvements and have paid for the same in the last several rate cases, the undisputed evidence is that Empire has all the capacity it needs to serve its customers.

Excluding Asbury, Empire's current generation resources total 1,233 megawatts. Asbury has an accredited capacity of 198. Combined, those are well in excess of Empire's historical all-time peak.

Allowing a company to take on additional significant projects without regard to the needs of the ratepayers is a slippery slope. Where will you draw the line?

Empire is essentially asking the Commission to allow them to make a bet with the help of ratepayers that their projections will pay off in the long term. Empire wants you to tell me how to, as a Joplin ratepayer, how to invest my money. They want me to help them invest it in wind projects.

So imagine I'm a Joplin resident. With the approval of this application, I invest my additional 12 percent. I think that's the projection from Meyer's affidavit, a 12 percent increase. I invest that with Empire. They say I will see a return on that in the long term. I think some of the projections are the time when customers start seeing a benefit is ten years down the road.

So let's say instead I take that $150 or whatever that annual increase is and I invest it on my own and I put it in a money market. Am I better off being required to make that investment in wind projects or to be allowed to invest that money how I see fit?

I did see some investment advice recently that says if it takes you ten Excel spreadsheets to convince yourself to own something, then you shouldn't own it. And while we are typically way past the ten sheets in the PSC, we are seeming to have a lot of difficulties today.

First, the way in which this case was brought not as a certificate case has presented difficulties.

Second, we are having difficulties today in determining what the signatories are actually requesting. The stipulation itself contains its own Excel spreadsheet and a multi-page flowchart. You will see plenty more spreadsheets, flowcharts and graphs today, tomorrow and Friday, but I'd ask that you remember the price tag is big, uncertainties abound, and the payoff even in the best case is distant.

the courts have made clear that the

Commission's principal interest is to serve and protect the ratepayers. This is not one factor of a five-factor test. It's not a balancing. It is the principal interest. The courts have said that. And the Commission is charged with serving and protecting the ratepayers, a serious duty that helps balance the monopoly power utilities enjoy over captive customers.

Doctors take an oath and they have an interest in protecting the health of their patients, but what's doctors' baseline? First do no harm.

In Oklahoma with the Wind Catcher project you see a do no harm provision in that stipulation and agreement, and I suspect that's because the commission has a similar charge as this Commission to protect and serve ratepayers. This do no harm provision is absent from the initial application and is absent from the stipulation.

We ask that you dismiss Empire's application first because it seeks pre-approval, which the Commission is not authorized to grant, and in the alternative we ask that you deny the application for all of the reasons I stated today.

To address some of the questions that

have come up regarding Asbury, Commissioner Rupp, I think you have been particularly interested in that subject. We agree with some of the comments made by Mr. Woodsmall, that one of the reasons to keep Asbury open is because it does add diversity to Empire's generation mix. And Joplin residents have already paid for significant upgrades as recent as the last rate case, and those upgrades have significantly improved the efficiency of Asbury. And I'm hoping you will sigh more evidence on that as the hearing progresses.

It's also been suggested that keeping Asbury open will require additional costs. I think the numbers I heard today are 20 to 30 million. First, these costs pale in comparison to the costs we're talking about for wind projects with the initial application $1.5 billion as originally proposed.

And second, that 20 to $30 million figure, it's my understanding that some of those costs that are required to upgrade Asbury will be required even if Asbury is closed, and there are also additional costs associated with closing Asbury. So those are just some of the reasons why Joplin had to weigh and has thought about what the impact of Asbury closing versus remaining open is.

CHAIRMAN HALL: No further questions. Thank you.

COMMISSIONER KENNEY: No questions. Thank you.

JUDGE BUSHMANN: Thank you.

MS. BELL: Can I go ahead and offer, I have the public comments that I quoted in my opening, and I just have them as Joplin 501. I'd like to go ahead and offer them.

JUDGE BUSHMANN: Have you shown those to the parties?

MS. BELL: I can pass them out now.

JUDGE BUSHMANN: Why don't you do that and then we'll take that up at a later time so they have an opportunity to review them.

Opening by Public Counsel.

MR. HAMPTON WILLIAMS: Good afternoon. May it please the Commission? My name is Hampton Williams on behalf of the Office of the Public Counsel representing 172,000 ratepayers of Empire District Electric Company that, as a result of this application, will be exposed to at least a 12 percent rate increase resulting from the Stipulation & Agreement, the proposal that is propounded therein.

Just to give you an overview, I'm first going to discuss a little bit about some of the jurisdiction questions that have been asked today. I'm then going to address some of the modeling concerns that our office has raised. I'm going to discuss what our valuation of the ratepayer impact would be based off some of the assumptions or the numbers that were provided by the other parties. I'm also going to have a brief comment about the federal tax issue, and I will end with a brief statement about the Asbury plant.

So I would highly encourage as questions come up, feel free to ask them. This might take a little bit of time, but I appreciate your indulgence.

This proposal supports the creation of a separate corporate entity co-owned by one or more tax equity investors to construct a $1 billion 600 megawatt wind plant. This would add assets in the share of Empire's assets to its rate base, and Empire would then earn a return of and on that asset.

The company claims that the transaction will ultimately produce benefits to ratepayers. I believe Mr. Cooper earlier identified $185 million over 20 years. However, upon scrutiny, Office of Public Counsel believes the plan to be unlikely to produce those purported benefits.

Under the Stipulation & Agreement, ratepayers are exposed to an increase of rate base of $380 million within the first ten years, exclusive of additional exposures to risk.

I believe what the Commission is being asked to do in this case is to declare what a reasonably prudent utility would do, and what's being offered is the company's modeling of this proposal. And so based off the company's modeling, which as I explained we have concerns with, that's actually what's being put in front of the Commission.

Is Empire seeking pre-approval? In a data response Mr. Krygier stated, Empire's not requesting pre-approval of the customer savings plan per se -- that was the initial application -- but rather is seeking to support validation for its proposed framework. In essence, the approvals will provide a framework against which Empire could be judged for prudency in a later case.

OPC believes that these are semantics. This is a case about pre-approval. This is a case about predetermination, because what you're being asked to do is to prejudge on what basis a company can act in the future.

CHAIRMAN HALL: Excuse me. So I understand that you are opposed to pre-approval and you also don't believe that we have the statutory authority to do pre-approval. So then my question is, if we go ahead and do pre-approval, how are you harmed? Because you don't think we have the statutory authority to do it, and so it will essentially have no effect.

MR. HAMPTON WILLIAMS: Well, it would have the effect in the event that should I have to access my own resources to appeal a project or appeal an order. That would be a personal issue.

But with respect I think your question is what's the harm to ratepayers generally, and I think ultimately this comes down to what I will get to is what I think is a limitation on the Commission's authority, that should you grant the approval that's being sought today, that would be invalid. We will have a situation or circumstance in the future where the company comes in with either a subsequent CCN case or a subsequent rate case. They will assert your order as evidence or proof positive of their prudency of their costs, and at that point in time that Commission is going to have to deal with whether or not an order that may or may not be lawful provided that.

Again, this goes back to an issue that the Commission actually dealt with in a rulemaking in EO-92-250. The Commission identified four concerns with the pre-approval. First is the problem of the potential of shifting technology and demand risks from shareholders to ratepayers.

Second, the problem was -- is the significant resources that are wrapped up in the pre-approval process. That's not only resources of the parties themselves but the Commission. And this case I believe is proof positive of a case that's gone on for multiple months. We obviously -- all parties have applied considerable resources for a case that actually will not authorize the construction of anything.

The third issue that the Commission identified was that the pre-approval is likely to lock a utility into a plan approved by the

Commission. The fourth issue was once again the utility may have less incentive to closely scrutinize its costs.

In WA-97-46, which is the case that -- it's the CCN case that Mr. Cooper alluded to earlier, the Commission considered the express question as to whether or not it had the capacity to determine prudence of a proposed project prior to construction.

Quoting the Commission, authority exists supporting the position that the Commission may not legally take any further action regarding the pre-approval of a proposed project.

Capital City Water versus Public Service Commission, the court said, quote, the Commission's principal interest is to serve and protect ratepayers, and as a result, the Commission cannot commit itself to a position that, because of varying conditions and occurrences over time, may require the adjustment to protect ratepayers.

Similarly, in the Callaway nuclear case, 27 MoPSC 183, the Commission stated, the appropriate time for the Commission to inquire regarding prudence of capital improvement projects is a rate case in which the utility attempts to recover the associated costs of a project.

The Commission continued in the 97 case saying, in regulation the monopoly providers -- in regulation of monopoly providers, one of the basic functions of the Commission is to stand in the steed of competition. The Commission performs this function principally in the context of rate proceedings, authorizing recovery through rates of only those costs that were prudently incurred; that is to say, if they were spent as if the utility was operating in a competitive environment. This places the proper amount of risk on the regulated utility to manage its decisions and funds as if it were in an competitive environment. The Commission finds that pre-approval of the actual costs incurred in the management of the construction proposed in this project would upset that balance.

The Commission continued to ultimately identify the pre-approval of the project itself or the costs or how to complete that project were inappropriate.

But it's also important to point out, as Ms. Bell did, that that case was a CCN case. That case was actually about the construction of a project.

further, the Commission does not have jurisdiction to make management decisions on behalf of the company. Missouri case law states that the Commission does not have authority to take over the general management of the utility or dictate the manner in which the company shall conduct its business.

The Heartline versus Public Service Commission, the courts identified that the exercise of the management of the utility is a property right which the Commission does not have jurisdiction over. The court states that the powers of regulation delegated to the Commission do not have, however, clothe the Commission with the general power of management incident to ownership. The utility retains the lawful right to manage its own affairs and conduct its business as it sees fit.

In EO-2017-0065 Empire asserted its corporate management discretion as a defense against incurring tens of millions of dollars in natural gas hedging losses. In that proceeding, the fact that millions of dollars of hedging losses were incurred and passed through the fuel adjustment clause were not in dispute. OPC, Staff and the company agreed that losses occurred.

In its initial brief Empire argued, quote, Empire's management decisions are just that, decisions of Empire's management, and they should not be taken away from the company and placed in the hands of the Commission or the Office of Public Counsel.

So when convenient Empire will assert managerial discretion as a defense to protect shareholders. However, in this case Empire's asking the Commission to take the place of management, to make a management decision to protect the interests of shareholders at the expense of ratepayers.

Should the Commission determine that it does not have the authority to grant pre-approval or predetermination as many Commissions have in the past, as I've got on this slide here?

The Stipulation & Agreement should be rejected and the application should be denied. If the Commission decides to dismiss this proceeding on jurisdictional grounds, such an order would not have to speak to the construction of the excess wind capacity nor the future of continued operation of the Asbury plant. The company would be free to exercise its own self-determination in either the construction of the wind assets through subsequent CCN applications or the continued operational decisions of the plant itself.

The second concern related to the application is a request -- jurisdictional concern is a request to recover the remaining depreciation balance of the Asbury coal generation facility. Keep in mind in the company's initial application they were seeking an accounting treatment to recover not only the remaining depreciation assets on the account but also a return on.

The corr-- and there's also a corresponding condition to that in the Stipulation & Agreement which is more narrow which talks about the parties' ability to contest any investments due to the CCR, the additional upgrades to the plant to comply with the coal rule that is estimated to be about $20 million.

For the Stipulation & Agreement, the agreement sought that no party would contest the company's recovery of that amount. Now, the problem with the application itself which is seeking to recover that balance is that the -- it's an unlawful request. The Missouri Supreme Court does not permit continued rate base treatment for generation assets after the plant is no longer in use. City of St. Louis versus Public Service Commission, the court said the abandonment of property which is never replaced but is superseded by another instrumentality, as gas lamps by electric lights, or by the agency or another company is an extraordinary supersession. It's the loss of one -- its loss is one of the hazards of the game. Just as the extraordinary increases in values following the war was an unexpected gain, it follows that the abandonment of property, lights, service mains and the like, should not be considered for the purposes of determining annual depreciation reserve.

In the application the company seeks rate base treatment for the outstanding depreciation life of Asbury. In the Stipulation & Agreement the parties are recommending or I guess agreeing to recommend to the Commission continued recovery of any of the investments necessary to comply with the coal rule.

The problem with that recommendation

would be that if the company moves to shut the plant down early, that recommendation would be in violation of the Supreme Court.

Now, should the Commission determine that it has jurisdiction over the application, over the Stipulation & Agreement, Public Counsel recommends that the Commission deny the application on the basis that there's no utility service justification for the construction of additional plant assets; second, that the revenue modeling offered in support of the proposal is unreliable and insufficient; and third, that ratepayers will be exposed to substantial rate increases as a result.

The Commission's purpose is to prevent economic waste. To paraphrase the Commission on the role of competition and its purpose recently stated in the electric vehicle charging cases, the purpose to promote -- the purpose is to promote the public good from unnecessary burdens to the public and ensure that the public is protected and utility actions do not incur economic waste.

Empire's asking the Commission for pre-approval to spend approximately $380 million to fund a $1 billion construction project for these wind farms. Now, there's no utility service -- pardon me. There's no utility justification for this service. The proposed construction of wind assets are not actually proposed or needed to meet energy requirements for customers, as I'm showing on this graph.

In 2016 Empire's generation resources produced 5,877 gigawatt hours of energy, nearly 10 percent above its native customer load at 5,260 gigawatt hours. Even accounting for transmission and distribution losses, Empire still made significant net sales into the Southwest Power Pool integrated market.

Further, the additional production is not necessary to meet future or anticipated growth. Empire's 2017 integrated resource plan annual update report states that its updated 2017 to 2021 load forecasts, quote, demonstrates modest growth with an annual peak in energy growth rates of less than one-quarter of 1 percent over the five-year period. So the growth in the near term, it's not there. That's from the company's own statements.

Third, the company does not assert that the construction is needed or the construction of the wind assets are needed to meet the energy requirements of its customers. In fact, in a response to a data request from OPC, Empire admits that it will not be purchasing energy from Wind Holdco or the wind project.

Second, the proposed acquisition of 600 megawatts of excess wind assets are not proposed to meet -- or meet its capacity requirements. This additional wind production is not necessary to meet Empire's current capacity requirements. Empire presently has 1,712 megawatts of resources for supplying electricity to its customers. Empire's historical all-time peak demand for electricity is 1,199 megawatts, which occurred in 2010. That's what's on the record of this case.

Empire has a capacity reserve margin above 30 percent -- pardon me -- 30 percent above the SPP target reserve, and the SPP only requires a 12 percent reserve margin. So currently Empire is well in excess of that margin.

This additional wind production is not necessary to meet anticipated capacity requirements. The Southwest Power Pool's 2017 resource adequacy report shows that Empire's forecast of net peak load for 2017 through 2022 forecasts the net peak load from a range of 1,116 megawatts to 1,128 megawatts, both figures well below the 1,712 megawatt capacity of the plant.

Now, why does this matter? In the Iatan 2 case, the Commission weighed the utility's need for energy and capacity in justifying the construction of a coal plant. Unlike Iatan 2, Empire has not argued an inability to meet either its energy or capacity needs.

Further, there's no rule or regulation requiring the construction of additional wind. Missouri has renewable energy resource requirements, and Empire meets these requirements through purchased power agreements for all of its generation. It gets 150 megawatts from the Elk River Wind Farm and 105 megawatts from the Meridian Way Wind Farm, both located in Kansas.

These PPAs provide well in excess of the non-solar renewable requirements that Empire must meet to comply with Missouri's law. The construction of the 600 megawatts of wind in excess are not needed to meet with -- not needed to meet federal, state or renewable requirements.

So without an energy need, a capacity

need or a regulatory need for the project, why spend the money? To speculate on energy sales in the SPP. As articulated by the company, quote, the Wind Project Co. will generate electricity to sell all of its output into the Southwest Power Pool integrated marketplace and receive all the revenues for such sales.

Empire's plan is actually a request for the company to become an insulated independent power producer. The plan is designed to enrich shareholders. Whether or not it will result in customer savings is highly speculate and predicated on a static future. Empire's plan is surrounded by uncertainty and risk with only a limited exposure for shareholders.

Empire's customers do not require additional supply side generation and should not be forced to take financial risks associated with playing the market.

Move on to modeling concerns. As I stated before, the plan before you today and I think really the substance of what you're being asked to do is to provide predetermination based off of the company's modeling which underlies the estimates for the Stipulation & Agreement.

Now, what's unique about this proceeding is that all of the figures that you've heard, all the costs and the revenues are completely projected. Unlike a rate case or a FAC proceeding, Staff and other parties -- where Staff and other parties would be able to review actual incurred costs and actual revenues to form its recommendation. That's not the situation here.

The only evidence offered to support Empire's contention that ratepayers will benefit from the construction of the 600 megawatts of excess wind assets are Empire's own models. The signatories to the stipulation make it abundantly clear that they are relying solely on Empire's modeling.

If you believe that the model may not accurately depict anticipated costs or anticipated revenues associated with this project, then there's no evidentiary basis to support Empire's claim. Upon review of this model, the Office of the Public Counsel found numerous faults through calculating errors, tenuous assumptions and omissions of costs, all of which strike against the credibility of the model.

In discussing revenues, the omission

of operational costs, each of the four modeling scenarios offered in support of the Stipulation & Agreement omit operational costs that Empire presented to the parties in November of 2017.

Here when applying the costs that were provided earlier to the company's P75 scenario, ratepayers will be exposed to $380 million of additional costs. You'll have an opportunity in this proceeding to ask John Riley, who prepared this and provided this in his affidavit, how he arrived at this figure.

And, in addition, when you consider that the total impact that we're projecting here when you incorporate costs that the company had previously identified, the customer savings, the $35 million customer savings or I guess loss sharing program, you can see how quickly that can be exhausted. That will not last three years past the operation of this program.

A second issue, the reduced efficiency for siting in Missouri. I believe this was an issue that Commissioner Rupp identified. Historically Missouri has had less productive wind farms than Kansas. The Stipulation & Agreement commits to construction of a portion of the wind assets in Missouri, and this means that the portion of that wind asset would, in fact, be less efficient.

Now, the model that the company used in its application were based off of the Elk River wind facility, which is a wind PPA that the company currently maintains. It's my understanding that the modeling -- that that was not used for the modeling for this Stipulation & Agreement.

So it's very important that when you're considering whether or not to rely on models, that it actually takes into account circumstances that we know that will be true. So for any proportion of wind farm built in Missouri, it is likely to be less productive than a wind farm built in Kansas.

MR. WOODSMALL: Your Honor, can I interrupt just briefly? And I'm sorry, but he's getting into information that was supposed to be confidential. This discussion about Missouri, if he's going to talk about that, we need to go in-camera, and I'd like if there's some way to go back and fix the record so it's not out there as public information.

MR. HAMPTON WILLIAMS: Your Honor, I

believe --

JUDGE BUSHMANN: Did you relate anything that was confidential?

MR. HAMPTON WILLIAMS: Your Honor, I believe I did not. The only reference I made was that a proportion would --

MR. COOPER: Almost the conversation itself needs to be in-camera for us to have the conversation, I think.

MR. HAMPTON WILLIAMS: Well, I will tell you that that was the extent of my statement other than to identify or direct the Commission to where in my witness' testimony this issue would be addressed. So I --

JUDGE BUSHMANN: You're done with that subject?

MR. HAMPTON WILLIAMS: I am.

JUDGE WOODRUFF: Let me know if we need to go in-camera for any other portion.

MR. HAMPTON WILLIAMS: Yes, sir. Moving on. The wind asset degradation. This will be testified to by John Robinett.

Over time wind turbines become less efficient. Empire's model omits performance degradation of its wind turbines. Empire's model assumes perfect per and perpetual operational efficiency. If the Commission believes that there's a possibility for wind assets to degrade and become less efficient over time, the Commission should not rely on the company's model.

The excess wind supply in the SPP market. Dr. Geoff Marke speaks to -- Dr. Geoff Marke will speak to this issue in his affidavit with respect to additional wind projects that are coming online in the Southwest Power Pool.

Wind revenues follow supply and demand principles when the resource is available and producing. So, generally speaking, the more wind available on the market, the less revenue the wind resource individually may produce.

Empire's modeling assumes at the high end over 6 gigawatts of wind will be built into the SPP over a 20-year time span. Now, the problem is that if you -- that Empire's wind revenue models don't consider or did not model the construction of its own plants. That's 600 megawatts.

And if we look into construction that has been presented in front of this Commission, the 440 megawatts from the GPE -- or that were identified in the GPE/Westar merger case, as well as the 2 gigawatts of the AEP Wind Catcher case which is going through Oklahoma right now, we're not even through this proceeding and we've already hit half of the completed annual, I should say, anticipated construction that the company has modeled.

Empire's models also do not assume additional wind projects on the SPP after 2021, to be constructed after 2021. If the Commission believes it's possible or likely that after 2021 wind assets may be built in the SPP, you should not rely on the company's modeling.

There's also a risk of negative pricing. John Riley speaks to this. Negative pricing occurs when wind resources are being sold below the actual costs of operating the asset.

Now, production tax credits can be used as an offset to make up the difference. In this circumstance, however, the lion's share, 99 percent or the lion's share of those tax credits will be not enjoyed by the ratepayers themselves. As a result, there's going to be more exposure to the issue of negative pricing in the modeling itself.

One of the other just general

concerns when we're talking about wind revenues, wind generation, we've prepared a few charts for you which talks about historically wind -- just the wind generation models for Empire itself, and what we see here and what this chart represents is the output of Empire's wind. We see that it is high in a certain number of months and then is at its lowest in July. This is over a three-year time period.

Okay. We also see a pricing model over the same period of time. What this chart indicates is that during those summer months, the same July of 2015, '16 and '17 are those peak prices or when those peak revenues occur. And when you overlay the charts with each other, what we see is that when the wind produces -- the wind is at its least amount of production, the costs are at its highest and vice-versa, when it's at its greatest amount of production, the costs are low.

The reason that this is informative is with respect to, again, projecting either constant levels of wind revenues, which is a concern that we have.

In addition, and just to go back to I think some general conversations we've had about why it is important to maintain or even operate a diverse wind -- pardon me, diverse energy portfolio or energy assets. What these charts are going to show are four circumstances throughout the year of 2016. We'll start with the minimum load day, and what this chart is indicating is the blue lines are the actual energy needs for the company at that day. What the red line indicates are the point in time when the wind assets are actually producing.

So what we see is, sometimes when you actually need the capacity itself, the wind's not available, which means that either you're going to have to be generating it yourself or you're going to most likely purchase it from the SPP.

Same for the high peak load day for the winter. We also see again a lot of production around midnight hours, not so much in the afternoon. Here again, a lot of production at 3 or 4 a.m., not so much the afternoon. And summer 2017, we see a lot of demand at the point in time when the production of the wind is at its lowest.

An additional concern with the company's modeling as put into its application. As modeled for its initial application, the company assumed a 54 percent wind capacity, which means a very, very productive -- the wind capacity factor is when the wind is actually generating and when it is, in fact, selling into the market. When we compare that model number versus what has in reality occurred from 2014 to 2017, the capacity factor is well in excess of what is occurring in the market itself.

So when we normalize or I guess reduce or average the capacity factor modeled for the initial application assumed that those revenues that would be anticipated would be reduced.

Here we see the ABB modeling. This is an issue that -- pardon me. This is something that Mr. Cooper cited in his opening as a good justification as to why we'd be looking to do this project. In looking at the ABB models for Elk River, we see a -- we see a forecast which shows a dramatic increase over through 2035.

Here what we're looking at is the projection models for Elk River. We see projected average market prices between the 2016 model and the 2017 model. So in just one year we see a dramatic decrease in the efficiency of what actually is coming through.

Same with historical day-ahead

models, that the actual numbers are showing prices decreasing, though the projections are showing a dramatic increase.

Negative price intervals. Negative prices occur when wind resources are being sold below the price itself. Negative prices are an occurrence in the SPP. As we can see over the 2016, '15 -- pardon me, 2015, '16 and '17 period, they are increasing. The modeling itself again does not address for this 7 percent increase for negative pricing. When things are going in the negative price model, understand that those revenues are not being produced.

This is the Elk River minimum market pricing. So what we see here on this chart are annual projections on the top and then the actual numbers on the bottom. The ABB's projections of what these minimum prices could be or would be were dramatically off from what, in fact, occurred. Same thing is actually true with the maximums, that the -- that the future's actually less optimistic than the projection themselves.

Now, contrary to the Sierra Club's reputation about negative pricing, this is not something that OPC is coming up with or making up.

The SPP market model report for this year said that SPP's continued growth of wind generation into the market, that there are a number of intervals with negative prices that continue to increase. So this remains a problem.

To address this, the SPP actually considered a rulemaking which would require that the assets themselves would be dispatchable by the Southwest Power Pool. Now, this creates two problems, one of which is that the only way to receive the production tax credits is if you're actually in operation.

So if the SPP actually asserts the jurisdiction over the ability to dispatch that wind generation, then that means that whoever's -- who's holding or anticipating the benefit of the production tax credit will not be receiving that benefit.

There's a U.S. District case that came out earlier this week regarding a wind farm that had a contract with Independence, which was actually seeking contractual compensation for the lack of recovery for PTCs. We do not have a contract to review to determine whether or not the tax equity partner or any affiliate will have any terms like that. It is possible that this proposal could expose those ratepayers or customers to actually compensating the tax equity partners for the loss of PTCs due to curtailments.

This is a real issue. The question that was brought before -- pardon me. The rulemaking failed. It got 62 percent of the vote. It needed a two-thirds majority. SPP's going to take up the issue again in the summer. This is a present issue.

Now, those were all talking about concerns with revenues that were being modeled. We also have concerns with costs, and I will be expeditious. With respect to net salvage costs, Empire's scenarios omit net salvage costs. John Robinett addresses this issue in his testimony. Please ask him about it.

Risk of costs associated with other investments. Empire is short on -- is not short on energy capacity, but this project will require substantial investments on behalf of the company that may prevent it from investing in other demand side technologies, such as AMI meters.

There's an opportunity cost associated with this project. Dr. Marke addresses this in his affidavit. I would highly encourage you to ask him questions about that.

In addition, there is a concern that I think was addressed or at least brought up by Mr. Woodsmall regarding risks of extra-jurisdictional denial. What happens if Missouri approves it but Kansas denies it? Would the project continue? Would we face increased allocation of the costs related to that project? That is a present concern.

The risk of fair market value for buying out the tax equity partner. So in year ten, the -- there's a potential for the company to go ahead and assume the entire wind asset itself from the purchase. Right now the modeling identifies that as a set number. However, the terms identify that as a fair market value. So that's a question mark. It's going to be determined at that point in time.

So again, all of these scenarios that I'm discussing are factors that were included in the company's modeling, and if you cannot rely on the company's modeling, then it should not substantiate the predetermination of a proposal.

Moving on. I think Ms. Bell

discussed the rate case history for Empire. I did want to quickly discuss rate case impacts and basically what a 12 percent rate increase would be on the customers of Empire District Electric.

On the right column we see $17.17 per month increase for summer, for non-summer $16 per month increase, for the total increase of $196.67 per year.

Now, according to -- Ms. Bell already discussed it, that Joplin currently has some of the highest rates of any of the IOUs in this state. So again, this is going to exacerbate that disparity between the company itself.

Now, with respect to the original filing, and this was the 800 megawatt and shutting Asbury down, we can see here the difference between the rate base costs, and this jump down here on the bottom left corner is the impact of the construction of the 800 megawatts.

As you can see, that not only are the benefits projected well in the future, but there are a number of -- basically we're bringing on a lot of capacity assets about ten years in advance, and there's no reason for -- again, no utility purpose to bring on those assets early.

Now, when we compare that to something more akin to what's being proposed in the Stipulation & Agreement, this was a 550 megawatt scenario. The Stipulation & Agreement is 600. So there's a little variability here. But what we see for the same time periods is again a disparity for about ten years as far as when the company actually needs that investment to serve ratepayers. So the rate base will be increasing.

The other thing to note about this graph is the bottom left, what's happened since 2012 to 2015. Those cases were when we were actually making additional investments into the Asbury plant. We made environment upgrades to extend the life from 2030 to 2035. It was about $120 million to extend the life of the coal plant. And those costs were reflected in rate cases over the last five years.

So the question is who actually benefits? We don't believe the ratepayers do. We believe that there's an increased risk. All of the risk is -- actually, a vast majority of the risk is being placed on ratepayers themselves.

You know, an example of what was, you know, sought in the Stipulation & Agreement and identified as ratepayer protection is a $35 million shareholder exposure cap. So of the first $70 million in losses, there's a one for one tradeoff between shareholders and ratepayers. After that, that cap stops and shareholders will no longer be held liable.

In addition, there is a most favored nation clause which has exemptions. Does not include all things. Now, there's a stipulation that was filed in the AEP Wind Catcher case in Oklahoma. That stipulation identified a net benefit guarantee. It identified a capacity factor guarantee. It identified caps on investment costs, how much the program would actually be billed. It had commitments on off-system sales margins. It had commitments on extra-jurisdictional denial.

In short, they got a lot better deal. The protections that were sought in other jurisdictions were much stronger than what's being presented to the Commission today.

The Missouri Supreme Court states that the Commission's purpose is to protect customers against the natural monopoly, the public utility. The thought and purpose of this policy is the protection of the public, and the protection given to the utility is merely incidental.

So when we're looking at the terms of the stipulation, ask yourself, is that stipulation, is the cap proposed, is that designed to project shareholders or designed to protect ratepayers? Because if the answer is shareholders, then the Commission should deny the stipulation.

The -- I want to move on to the federal corporate tax rate reduction issue. Included in the Stipulation & Agreement is an attempt to conceal true costs of the wind proposal by proposing to implement tariffs to reduce utility rates associated with the reduction of the federal tax rate.

This is a red herring. It's an association fallacy because the outcome of either case is not predicated on the other. The Commission's already established a docket to consider the use of AAOs, which is scheduled later this month. The Legislature is considering legislation that would authorize the Commission to reduce electric rates based off of reduction of taxes.

Public Counsel opposes the use of tax cuts as an offset to this unnecessary spending project because within the near future the cost to ratepayers and the risks that they're going to be exposed to will exceed or outweigh the short-lived benefit from the tax reduction that will be passed through.

If the Commission dismisses or denies this application, you will still have an opportunity to address the tax issue itself in other proceedings.

Judge, may I go in-camera?

JUDGE BUSHMANN: You want to go in-camera?

MR. HAMPTON WILLIAMS: Yes, sir.

(REPORTER'S NOTE: At this point, an in-camera session was held, which is contained in Volume 4, pages 169 through 170 of the transcript.)

JUDGE BUSHMANN: All right. We're back in public session.

MR. HAMPTON WILLIAMS: With respect to the continued operation of the Asbury facility, its efficiencies or its cost effectiveness moving forward, both John Robinett and Lena Mantle provided testimony in this respect to the initial application that the Commission may find informative.

With that, I will stand open for questions.

CHAIRMAN HALL: No questions. Thank you.

COMMISSIONER KENNEY: No questions. Thank you.

COMMISSIONER RUPP: I have a question. All right. So looking here, the upgrades that were done made it more efficient from a fuel to electricity ratio. How often is it being -- we heard testimony it's not being dispatched very much from SPP. So if you have an efficient unit that's not being used, is it still efficient?

MR. HAMPTON WILLIAMS: So the testimony for both Lena Mantle I believe addresses the dispatch rate for the plant.

COMMISSIONER RUPP: All right. I'll wait for that.

MR. HAMPTON WILLIAMS: Please ask her that question. My recollection is, with respect to any of the coal facilities that Empire operates, that the Asbury plant has the most dispatch. So I would contest that characterization.

COMMISSIONER RUPP: Great.

JUDGE BUSHMANN: Thank you.

MR. HAMPTON WILLIAMS: Thank you.

JUDGE BUSHMANN: We're ready for Empire to call their first witness.

MR. COOPER: Thank you, your Honor. We would call James McMahon.

(Witness sworn.)

JUDGE BUSHMANN: You may be seated.

JAMES McMAHON testified as follows:

DIRECT EXAMINATION BY MR. COOPER:

Q. Please state your name.

A. James McMahon.

Q. By whom are you employed and in what capacity?

A. I'm employed by Charles River Associates. I am a vice president in the energy practice.

Q. Have you caused to be prepared for this proceeding certain direct and surrebuttal testimony in question and answer form?

A. I have.

Q. Did you also prepare an Affidavit in Support of Nonunanimous Stipulation & Agreement for purposes of this proceeding?

A. I did.

Q. Is it your understanding that those documents -- well, let me back up. Yeah. Is it your understanding that the direct testimony confidential and public has been identified as 6C and 6P for identification?

A. Yes.

Q. And is it your understanding that the surrebuttal testimony's been marked as Exhibit 7C and 7P for identification?

A. Yes.

Q. And that the affidavit has been marked as Exhibit 8C and 8P for identification?

A. Yes.

Q. Do you have any changes that you would like to make to that testimony or the affidavit at this time?

A. Just one to my direct testimony.
Q. Where is that?
A. So lines 9 to 11.
Q. Well, let's back up. Page number, how about?
A. Sorry. I'm reading from a data response without the page number. Hang on. Let me pull up the page number here. I don't have the specific page number.
Q. Okay. We'll table that for the time being.
A. That's the only correction I have.
Q. What was the correction going to be? Why don't you describe that?
A. Yes. It's the RAP portfolio of demand side management measures. So the correction should read that the reasonable achievable portfolio of demand side measures adopted in Case No. ER-2016-0023 utilized in Case No. EO-2016-0223 was included in all the portfolios. So it was a correction to indicate that the RAP DSM portfolio was used in all of the GSFA modeling.
Q. Thank you. Are the answers as now amended, I guess, in your testimony and your statements in the affidavit true and correct to the

best of your information, knowledge and belief?
A. Yes.
MR. COOPER: Your Honor, I would offer Exhibits 6C and P, 7C and P, and 8C and P at this time.
JUDGE BUSHMANN: Any objections?
MR. NATHAN WILLIAMS: Yes, Judge. I object to the modification, but I'd like to voir dire him.
JUDGE BUSHMANN: For what purpose?
MR. NATHAN WILLIAMS: Disclosure.
JUDGE BUSHMANN: Disclosure? Can you be more specific?
MR. NATHAN WILLIAMS: This is a big change that he's just made to his testimony about what demand side management was included in the generation fleet savings analysis. I'm trying to find out when it was disclosed to -- I want to inquire as to when it was disclosed to the parties. I heard him refer --
JUDGE BUSHMANN: Very briefly you can ask a few questions.
VOIR DIRE EXAMINATION BY MR. NATHAN WILLIAMS:
Q. Mr. McMahon, you just made I think a significant change to your direct testimony

regarding the RAP DSM portfolio, correct?

A. We made a change to the -- to the -- one of the data requests corrected my testimony.

Q. What data request response was that that correction showed?

A. I have to find that. I can pull it from my data request.

Q. When was that --

MR. COOPER: I'm sorry. Mr. McMahon, if you were able to go to your binder, would you be able to locate that?

THE WITNESS: Yes.

JUDGE BUSHMANN: Can someone bring his binder up, please? We might be able to clear this up.

THE WITNESS: So it's to Staff 215, and it's on page 24, lines 9 through 11.

BY MR. NATHAN WILLIAMS:

Q. And when was that data request response?

A. January 2nd, 2018.

Q. And was that -- was that information provided to the other parties aside from Staff?

A. I believe all parties had access to all the data requests.

Q. But this is more than just -- you're making a change to your testimony based on this information. Did you disclose that change to the parties affirmatively? Clearly you did to Staff.

A. It was disclosed in this data request.

Q. But beyond that, you're not aware of any disclosure before here today?

A. No.

MR. NATHAN WILLIAMS: May I have a moment?

JUDGE BUSHMANN: Yes. Any objection now to the admission of those exhibits?

MR. NATHAN WILLIAMS: I've been informed by tech-- or Public Counsel technical personnel that Public Counsel was aware at some earlier point in time. So I will not make an objection, or withdraw it.

JUDGE BUSHMANN: In that case, I will admit Exhibit 6C and P, 7C and P and 8C and P into the record of hearing.

(EMPIRE EXHIBITS 6C, 6P, 7C, 7P, 8C AND 8P WERE RECEIVED INTO EVIDENCE.)

MR. COOPER: Your Honor, we would tender Mr. McMahon for cross-examination.

JUDGE BUSHMANN: First cross would be by Staff.
MS. FORCK: Thank you, your Honor.
CROSS-EXAMINATION BY MS. FORCK:
Q. Good afternoon, Mr. McMahon.
A. Good afternoon.
Q. Are you familiar with OPC witness Lena Mantle's affidavit in opposition to the stipulation?
A. I am.
Q. Do you have a copy of it in front of you?
A. I do not.
MS. FORCK: May I approach, your Honor?
JUDGE BUSHMANN: You may.
BY MS. FORCK:
Q. Would you please refer to paragraph 20.
A. Yep.
Q. I'll give you a moment to read that.
A. Okay.
Q. Did the model used in determining the market protection mechanism in the stipulation include revenue from the SPP for wind energy sales?

A. Yes.
Q. And should it have?
A. Yes. I think there is an assumption that all wind will be sold into SPP and generate revenue if the price is not zero.
Q. Okay. Do you agree with Ms. Mantle's characterization of the impacts of not including revenue from the SPP for wind energy sales?
A. I agree that if you don't have any revenue from the wind and selling it into SPP, that then you only have cost, and that's an increase on rates. I don't know if I necessarily agree with her percentage increase, but I do agree that there's a cost without associated revenue. But I categorically disagree that there will be no revenue associated with SPP wind sales.
Q. Okay. Would the market protection mechanism help mitigate those impacts that she refers to?
A. Well, the market protection mechanism will mitigate the impact if the revenue is less than projected because the -- the stipulation, all of the analysis that we performed on behalf of Empire in this case gets to a net present value revenue requirement that is positive over the 20

and 30 year -- 20 and 30 years.

So in the case where in a downside, extreme downside case that effectively was not modeled, yes, the market protection mechanism would provide some mitigation or protection. Did that answer your question?

Q. I believe it did. Those are all the questions I had on Ms. Mantle's affidavit.

Are you familiar with OPC witness John Robinett's affidavit in opposition to the stipulation?

A. Yes, I've read his opposition.

Q. Do you have a copy of that in front of you?

A. No.

MS. FORCK: May I approach?

JUDGE BUSHMANN: You don't need to ask me.

BY MS. FORCK:

Q. Please refer to paragraph 8.

A. Yes.

Q. Mr. Robinett discusses a 30-year plan related to the stipulation. Did the modeling associated with the stipulation project out as far as 30 years?

A. Yes. Oh, with the stipulation was primarily 20 years.

Q. And why -- why was it 20 years instead of 30?

A. I think that's a better question for David Holmes specifically. The modeling that we performed with the GFSA was 30 years.

Q. Okay. Please refer to paragraph 9 of Mr. Robinett's affidavit.

A. Uh-huh.

Q. He points to your affidavit filed in support of the stipulation --

A. Uh-huh.

Q. -- in which you indicated Energy Center Units 1 and 2 and Riverton Units 10 and 11 would no longer be retired in the 20-year plan; is that correct?

A. Yes, I see that.

Q. What retirements are being contemplated by Mr. Robinett when he says, not shown are the retirements that occur during the period of the table?

MR. NATHAN WILLIAMS: I'm going to object to Mr. McMahon speculating on what Mr. Robinett is intending.

JUDGE BUSHMANN: Response?

MS. FORCK: Your Honor, Mr. Robinett was discussing Mr. McMahon's testimony, and at table -- or his affidavit, I should say, and a table that's included in that affidavit that outlines retirements and expected additions. And so I guess I'm not asking -- I'll rephrase the question to more accurately ask Mr. McMahon whether he had understands what's being asked her.

JUDGE BUSHMANN: All right. Go ahead.

BY MS. FORCK:

Q. So are there any retirements that are not shown on your table?

A. In Figure 3 in my stipulation, there is -- it's showing the 20-year build schedule for the stipulation versus the customer savings plan. So it's the build schedule, and so they -- the witness Robinett pointed out that it did not show retirements, which the title says build schedule.

So there are retirements in here, and probably a more accurate representation of the build and retirement schedule I would have illustrated that Energy Center 1 and 2 are retiring in 2023 and 2026, and Elk River and Meridian Way

contracts are expiring and there's a retirement of Asbury as well that's not shown. But again, it's a build schedule for Figure 3. Does that answer your question?
Q. I think it does because I think that actually preempted my follow-up, which was going to be why are those retirements not included. So because it's a build schedule, is that an accurate characterization?
A. Correct.
Q. Please refer to Figure 3 of your affidavit. This projection shows a comparison of the stipulation to both the CSP and the 2016 IRP and preferred plan; is that correct?
A. Yes.
Q. You stated that the CSP builds two combined cycles units and solar, while the stimulation plan would call for only a combustion turbine unit to replace Asbury; is that right?
A. Right, in the 2035 time frame.
Q. Why would the CSP need two combined cycle units and solar?
A. Where are you referring to the solar? Oh, sorry. I see the solar. I would have to go back specifically to the modeling, but this is an

optimization model that's determining to me the capacity requirement. At a given -- at any given time it requires a set of builds.

Q. Do any of these additions indicated in the 20-year projection offset the retirements that are -- that we just discussed that are expected to occur between years 20 and 30? I'm sorry. I don't think we discussed those. That was a set of questions I didn't ask you.

Mr. Robinett also discussed expected retirements between years 20 and 30; is that correct?

A. Right. This goes back to my comments about Energy Center 1 and Energy Center 2.

Q. So do any of these additions indicated in this 20-year projection offset those retirements?

A. Yes. That's what the question was getting at to prior. Yes, they're replacing capacity that's required to meet reserve margins out in the future.

Q. Okay. Thank you. Okay. Are you familiar with OPC witness John Riley's affidavit in opposition of the stipulation?

A. Yes.

Q. And I'm assuming you don't have a copy of that in front of you?

A. No.

Q. Okay. Please refer to paragraph 12.

A. Okay.

Q. Okay. Mr. Riley states, yet my analysis is that this wind project will lose money every year. In fact, my projections show the Wind Project Cos. will lose nearly 61 million in the first 1.25 years. Have you reviewed Mr. Riley's analysis?

A. I have generally.

Q. Would you agree that based on his projections, the Wind Project Cos. will lose money every year?

A. I think his analysis does show that.

Q. Do you agree with the analysis that he performed?

A. No. And I know witness Holmes will talk more about this, but specifically I take issue with the assumptions that he used in terms of the market price projections and the wind production estimates, as well as some differences in operating costs.

Q. Okay. Can you -- and if this is more

appropriate for Mr. Holmes, I'll ask this of him. But can you explain how Mr. Riley reached his conclusion as compared to how Empire modeled the costs and revenues?

A. I think that's a better question for Mr. Holmes.

Q. Thank you. Are you familiar with OPC witness Geoff Marke's affidavit in opposition to the stipulation?

A. Yes.

Q. Please turn to page 4. On page 4, Dr. Marke provides a commentary as to why Figure 3 from your affidavit is misleading. I'll give you a minute to take a look at that, and then I'm going to ask you if you agree with that commentary.

A. Yes, I reviewed it. It's the same graphic presented in the prior testimony I reviewed.

Q. Do you agree with his commentary that this figure is misleading?

A. No. Again, it's -- as indicated in the title, it's a build schedule stipulation and did not include all of the retirements.

Q. Okay. Dr. Marke indicates that every scenario will include additional solar in the

future. Would the solar additions he refers to all be included within the next 20 years?

A. I don't believe that's true, that every -- every plan includes solar in the next 20 years.

Q. Please turn to page 7. On 7 Dr. Marke discusses potential market rule changes that would require nondispatchable energy such as wind to register as dispatchable variable energy resources, which would allow SPP to curtail their output.

Does the customer protection mechanism described in the stipulation mitigate this concern?

A. It mitigates the concern by putting a limit on the amount of costs the customers could incur.

Q. And the customer protection mechanism is designed to address uncertainty in the market; isn't that right?

A. Correct.

Q. So this type of uncertainty could be covered by this mechanism?

A. Well, I mean, let me explain this a little bit more. So the -- there is a question about dispatchability of wind and potential curtailment of wind and basis differentials of wind, and I'm sure I'll get into that more so in my -- in other cross.

But the larger point here is that this was addressed in all of the modeling, the long-term modeling that we performed to look at the expected value of the wind under a base case, but also look at lower market conditions in situations where you had highest basis risk, all right, so differentials between different nodes.

So it was addressed in the risk modeling in the analysis, and it's also addressed in the market protection mechanism in terms of limiting customer risk.

MS. FORCK: Okay. Thank you. I have nothing further.

JUDGE BUSHMANN: It's almost a quarter to two. I think we're going to need to take a break here and then come back for the next cross. So we'll be in recess until approximately 2:30, unless the USB meeting runs late, then we might be a few minutes after that.

(A BREAK WAS TAKEN.)

JUDGE BUSHMANN: Let's go back on the

record. When we left off, we were in the middle of cross-examination, and the next cross would be by MECG.

MR. WOODSMALL: Thank you, your Honor.

CROSS-EXAMINATION BY MR. WOODSMALL:

Q. Good afternoon, sir. I'm going to ask you some questions about rate increases and Empire's current capacity. Are you comfortable talking about those issues?

A. Certainly Empire's current capacity. I think questions on rate increases specifically should be deferred to Mr. Holmes.

Q. Okay. That saves us some time. I'll move right on to current capacity. Were you here when OPC made their opening statement?

A. Yes, I was.

Q. And do you recognize the charts that I handed you, which is slides No. 5 and 6 from OPC's opening statement?

A. They're not numbered, but I -- if the first slide is Empire's energy requirements 2016 and then peak demand for the second slide, yes.

Q. Well, slide 6, the title is Empire's capacity requirements; is that correct?

A. Okay. If that's slide No. 6, that's Empire's capacity requirements, yes.

Q. Can you tell me for purposes of the energy and capacity comparisons, what is that comparing?

MR. NATHAN WILLIAMS: Judge, could we have this marked as an exhibit if we're going to use it, even if it's demonstrative?

MR. WOODSMALL: As long as it's demonstrative, I don't have a problem. It's certainly not evidence.

MR. COOPER: We would object to it being marked as evidence as well.

MR. NATHAN WILLIAMS: I'm asking that it be marked for identification.

JUDGE BUSHMANN: I think he's just wanting to make sure the record's clear; is that correct?

MR. WOODSMALL: And I have no problem with that. Nathan, are you going to mark it as one of yours?

JUDGE BUSHMANN: If you're going to use it, do you want to have it marked as an MECG exhibit?

MR. WOODSMALL: That's fine. So MECG

352. For purposes of clarity, I will mark the one page, which is a back and front, Empire's energy requirements, Empire's capacity requirements, as MECG 352, and that's what I'll provide to the court reporter. So I'm not marking the entire bundle, if that's your Honor's preference.

JUDGE BUSHMANN: That will be my preference.

MR. WOODSMALL: And I will get that to the court reporter.

BY MR. WOODSMALL:

Q. Do you have what has been marked as MECG 352, sir?

A. Yes, labeled Empire's capacity requirements.

Q. Yes. Can you tell me what the comparison is there for energy and capacity?

A. Well, it's the comparison of peak demand to total peak capacity for the Empire system.

Q. Okay. And for the energy side it is the 2016 native load energy requirements to the energy generated by the Empire facilities; is that correct?

A. Could you re-- could you ask the

question again, please?

Q. For the slide that is the energy requirements, that's comparing Empire's native load energy requirements to the energy generated by Empire's units; is that correct?

A. That is correct.

Q. And when I look at -- when we talk about the Empire generating facilities, not only the energy and the capacity, that is based upon their current facilities; is that correct?

A. Yes.

Q. And it would -- it would include Meridian Way; is that correct?

A. Correct.

Q. And it includes Elk River; is that correct?

A. Yes.

Q. And it includes Energy Center; is that correct?

A. Yes.

Q. And all of those are scheduled to be retired or expire sometime in the near future; is that correct?

A. Yes, in the 2020s.

Q. Okay. Thank you.

MR. WOODSMALL: I have no further questions, your Honor.

JUDGE BUSHMANN: Cross by Division of energy?

MR. POSTON: No questions.

JUDGE BUSHMANN: Renew Missouri.

MR. LINHARES: No questions. Thank you, Judge.

JUDGE BUSHMANN: Sierra Club?

MR. ROBERTSON: Yes, your Honor.

CROSS-EXAMINATION BY MR. ROBERTSON:

Q. Mr. McMahon, I want to refer you to your affidavit, Exhibit 8, page 7, paragraph 9 and Figure 5. There you give the difference in customer savings between the original customer savings plan and the stipulation; is that correct?

A. That's correct.

Q. Now, are you aware that as a result of their RFP responses, Empire revised the wind savings from the GFSA?

A. Yes, which is reflected in these plans.

Q. All right. So your Figure 5 shows for the SNA a wind energy savings that would be greater on a per megawatt basis; is that correct?

A. That the customer savings plan under the GFSA had higher savings than the settlement plan due to the fact that the GFSA customer savings plan had 800 megawatts of wind and was retiring Asbury. The settlement plan has 600 megawatts of winds and is retaining Asbury.

And in my affidavit I talk specifically to what drives that differential, what portion is Asbury, which gets back to a question I think asked by Commissioner Rupp, and what portion is driven by the 200 megawatt difference on the wind.

Q. Okay. But for in Figure 5 for the original customer savings plan, did you modify the wind energy savings or were those as in the original?

A. No. As described, this is using common assumptions on the fall 2017 reference case and the updated wind numbers --

Q. In both --

A. -- in the RFP.

Q. In both the stipulation and the customer savings plan you're using the same wind energy figures?

A. Well, not the same wind energy. It's

800 megawatts versus 600 megawatts.

Q. Exactly.

A. But there's also a difference in the projects that are incorporated into those -- into that 800 megawatt bundle and the 600 megawatt bundle based on the bids received.

Q. Figure 5 shows a difference in savings over 30 years of $139 million, with the savings being greater for the original customer savings plan; is that right?

A. Yes, sir.

Q. And of that 139 million in reduced savings, 101 million is attributable to Asbury continuing to run, and the other 38 million is due to there being less wind added to the portfolio; is that correct?

A. That's correct.

Q. What costs of operating Asbury did you include in your calculation?

A. The ongoing costs of operating Asbury from a fixed operating cost expense. There's variable operating costs and there's fuel costs. Then, of course, there's the capital costs and the carrying cost of that capital.

Q. And the rate base balance?

A. I don't have the rate base balance available?

Q. Taxes?

A. Yeah. Getting back to the carrying cost, it's a full revenue requirement of the Asbury plant.

Q. And did you include in your calculation the pending capital costs of bringing Asbury into compliance with the coal combustion residual rule and the effluent limitation guidelines?

A. Yes, that's included.

MR. ROBERTSON: All right. Thank you. That's all.

JUDGE BUSHMANN: Cross by Joplin?

MS. BELL: Yes. Thank you. Permission to approach?

CROSS-EXAMINATION BY MS. BELL:

Q. So I believe you've already answered this, but you were present for the opening by OPC, correct?

A. I was.

Q. If you'd turn to slide 10. Would you agree that there's performance degradation over time for wind projects?

A. Would I agree that there's performance degradation over time for wind projects, that's the question?

Q. Correct.

A. Yes.

Q. Okay. Was this accounted for in your model?

A. Yes, it was. We modified the capacity factor. So it's a levelized capacity factor of the wind to account for the degradation. So technically you would have a higher capacity factor in the early years if you modeled degradation and it would become a lower capacity factor over time, but what was used in the wind modeling was a levelized capacity factor. So I agree with this chart, and it was incorporated into the analysis.

Q. Can you flip to page 20?

A. Capacity factors, models and for the RFP.

Q. And so does your model still predict capacity factors at 54 percent?

A. Just to give a little bit of history -- the answer is no. To give a little history, the initial analysis did not have the benefit of the RFP data, and the initial analysis was based on some initial projections, which I think Mr. Mertens could talk to more specifically.

Once the RFP, initial RFP results were back and a short list was being developed, much more specific estimates of actual performance based on actual projects, potential projects, could be incorporated into the analysis. So the analysis was updated.

Q. And what year was that? When was that analysis conducted?

A. Well, the initial analysis on the GFSA, which was filed at the end of October of 2017, incorporated the estimates, which was the model number here of 54 percent, with the expectation that the numbers would be updated based on data that was received through the RFP process. That was then done in 2018 when updated analysis was provided.

Q. And so the updated number is 47 percent; is that correct?

A. The updated capacity factor estimate is now 47 percent capacity factor with other differences that drive a very significant reduction overall to just LCOE, which I'm sure I will talk about plenty later. This is one element of what it was updated between the initial modeling and the RFP, but you also have capacity costs, you have the location of the assets, and you have basis differential.

Q. So you would agree the initial model was 54 percent, correct?

A. Yes.

Q. Okay. And you had -- at the time you did the initial modeling, it was after 2014, 2015 and 2016, correct?

A. I'm sorry. Can I clarify one thing on your prior question? The initial modeling was actually done with two different numbers. There was a low LCOE number which was in a high wind region that was estimated around the 54 percent. There was also a mid LCOE region that had a lower percentage number. In any event, they were updated for -- once the RFP results, just for clarification.

Could you ask your question again?

Q. The analysis -- at the time you did the analysis, you had the numbers for 2014, 2015 and 2016 that are reflected in this chart, correct?

A. Can you give me the source of this

chart?

Q. I cannot.

A. Okay. Well, this looks like capacity factors of plants between 2014 and 2016 with some estimate for 2017 of existing wind units. I don't know the characteristics of all these wind units, what wind height, what turbines they use, where they're specifically located. All of those things would contribute to the capacity factor estimates at the time.

Q. Are any of the actual numbers in 2014, 2015 or 2016 over 50 percent?

A. No.

Q. Okay. And these are capacity factors for Kansas wind farms; is that correct?

A. That's what the title says of the chart.

Q. And is it a fair characterization that capacity for actual wind farms in Missouri is lower than in Kansas?

A. I think, generally speaking, if you look at wind charts, wind production charts, that capacity factors in Missouri are generally lower than in Kansas. That's not controverted.

Q. Thank you. If you flip to page 22,

and I guess 23 as well. Those are the ABB forecasts, and those were included in your model; is that correct?

A. Subject to check, this says ABB fall 27 forecast wind. I'm not sure what that means. It says Elk River annual market prices. I actually don't know how to interpret this chart. Can you describe it for me?

Q. I believe it is price per megawatt hour over by year for Elk River.

A. But for the Elk River node. And when it says fall 2017 forecast wind, I don't know if there's a fall 2017 forecast for wind. So I'm just --

Q. The answer is you don't know?

A. I guess I'd like some clarity to answer the question.

Q. Okay. I will ask a new question. Would you agree that the benefits to customers depend on the revenues received from SPP for the wind projects?

A. Empire operates within SPP today, and has been for the last few years, where all energy generated is sold into SPP and bought back by load. So all generation of energy that's produced by

Empire is dependant on revenue from SPP. So yes, the answer is that any wind or any other additions in any of the existing generation depends on revenues from SPP.

Q. So yes?

A. Correct.

Q. Would you agree that the revenues are largely dependent on market prices for wind energy and wind energy generated?

A. I guess I want to -- so the way I would answer that question is, again, every asset that sells, every generator that sells into SPP is dependent on the market price at SPP at the hour that it's selling, and that would also apply to wind. I don't know if that's the question you were exactly asking.

Q. The revenues in your model, one of the variables in calculating that is market price, correct?

A. Correct.

Q. And did you examine -- or are you familiar with the market prices used in Empire's analysis?

A. Am I familiar with the market prices used in Empire's analysis? Yes, I am.

Q. Okay. And my understanding is that there were two market price forecasts that were used; is that correct?

A. It's a matter of timing of when different market price forecasts were used. So the original GFSA analysis used what was current at the time that that analysis was produced. We then updated those numbers certainly as part of the stipulation based on the most current ABB price forecasts.

And just to be clear, ABB provides all the price forecasts and modeling that goes behind the scenes in terms of price formation for Empire and has been doing that for quite some time through the IRP process.

Q. So the 2017 ABB forecast was lower than the 2016 forecast; is that correct?

A. Generally speaking, yes, prices have reduced in the most recent ABB 2017 forecast.

Q. So if you're looking at page 23 of OPC's opening, which I believe we labeled MECG 352, the points on this chart, you have no dispute with those numbers, correct?

A. So if I interpret this chart to reflect the ABB fall 2016 to 2017 market prices, and it says here Elk River average annual market prices, ABB does not produce an Elk River specific node market price. ABB produces a sub-regional market price that then we adjust for basis differentials between zones.

So this is a -- I believe, and I haven't been shown this chart before, but I believe this is a difference between those two pricing points or two price curves, ABB 2016 and the ABB 2017.

Q. Okay. And if you flip to the next page, page 24. We have actual prices now for 2017, correct?

A. Yes.

Q. And how does -- how do those actual numbers compare with the forecasts?

A. I'm not sure how to read this graph. This says historical revenues have decreased. Model assumes revenues will increase. So you're showing me a price forecast and asking me to comment on the price forecast with these dots?

Q. Well, I believe you testified that you're familiar with ABB forecasts, and I hope that you're familiar with the actual prices in 2017. So without regard to the chart, my question is simply

how do the actual numbers compare with what was forecasted?

A. I haven't seen this before, so I can't comment specifically. But what's shown here is that the ABB -- or that the actuals through 2017 look slightly lower than a forecasted number, but I have not validated this.

Q. If we turn to your affidavit. Okay. First, you would agree that there hasn't been an identification of a contractor; is that correct?

A. That's not for me probably. I think it's probably Mr. Mertens or Mr. Wilson.

Q. Okay. And no identification of a tax equity partner?

A. That would be for Mr. Mooney.

Q. All right. Back to your affidavit. I'm looking at Figure 4 where we're talking about customer savings. Was the approximate capital contribution by Empire included in your calculation for customer savings?

A. The capital contribution for Empire relative to the wind we're talking about?

Q. Correct.

A. Yes.

MS. BELL: Okay. I would like to go

in-camera, Judge, please.

(REPORTER'S NOTE: At this point, an in-camera session was held, which is contained in Volume 4, pages 207 through 210 of the transcript.)

JUDGE BUSHMANN: We're now back in open session. Had you completed your cross-examination?

MS. BELL: Yes. Thank you.

JUDGE BUSHMANN: OPC?

MR. NATHAN WILLIAMS: Thank you.

CROSS-EXAMINATION BY MR. NATHAN WILLIAMS:

Q. Since we're on the topic, will you turn to page 4 of your stip-- or your affidavit in support of the stipulation?

A. Uh-huh.

Q. And then at the end of paragraph 3, and I don't see it marked as confidential, so I assume it's not, you have a sentence that says, tax equity is expected to contribute 529 million, leaving 429 million to be reimbursed through rates by Empire customers. And then the next sentence, the effective cost for Empire is thus $711 per kilowatt; is that correct?

A. Yes. Thanks for that clarification. So there was a $711 per KW I referenced a moment ago, and there is actually the breakout of the 429 million for Empire and 529 for tax equity.

Q. And you can take those numbers and come up with a percentage of the contribution by

the tax equity partners from those numbers at least for purposes of your modeling, can you not?

A. Again, I think any tax equity questions and percentages would be deferred to Mr. Mooney, but yes, you can come up with simple percentages.

Q. You just take the 529 and divide it by the sum of 529 plus 429, and that would give you --

A. 958, correct.

Q. -- tax equity contribution; is that correct?

A. That's my understanding of it. Again, I would defer tax equity questions to Mr. Mooney.

Q. But that's what you used for the modeling, right?

A. The modeling assumes a $429 million capital contribution from Empire, yes.

Q. Why don't you go ahead do the math if you can, 429 divided by 958.

A. 45 percent.

Q. That's what you used for purposes of the modeling, right? That was an input?

A. The $429 million capital contribution

was an input to the model, yes.
Q. But at this point in time, you don't know what the actual tax equity contribution will be, do you?
A. I'm not involved in any of the tax equity discussions, and again, I think that's a topic for Mr. Mooney.
Q. Well, that was my last question on this topic.
A. Perfect.
Q. Did you actually do the modeling or was that performed by ABB?
A. The modeling is done within the ABB models by ABB.
Q. So what was your role? Did you provide inputs, or did you just take the results and testify about them?
A. Right. The -- just generally speaking, Charles River Associates does work in this space broadly. I did work very similar to this related to a nuclear plant recently in Georgia that was looking for validation.
Q. Pardon me. I'm not asking about your credentials. I'm just asking what it is you did.
A. Well, I'm trying to answer your

question around the type of work we do in this space. So what I would describe what we did here was to review, identify, translate and explain, and that's very much a function of the work we do on a regular basis. We also do a lot of modeling work and actually are the outsource modeling for NIPSCO on related IRP work just as an example.

But I'm happy to talk more specifically about what we did in each of those areas, review, identify, translate, explain.

Q. But you did not provide inputs. Did those originate from Empire?

A. Inputs to the modeling vary based on the source. The sources vary. So a number of the inputs came from the 2016 IRP analysis. Some inputs were updated based on ABB's forward price curves, for instance. We provided guidance on some of the scenarios to look at, for instance, a low-coal case or a flat coal scenario. And then updates were provided through the RFP analysis that I described earlier that's contributing to this -- the wind cost calculations.

Q. I think you've identified the sources of inputs. Who decided which inputs to use or which sources of inputs to use?

A. Well, if you could be specific about the input. I can address the ones that I'm referring to. So the price forecasts came from ABB. As I addressed earlier, ABB has been providing price forecasts for Empire and for a subscription-based clientele for many years. So that's one item.

Q. Did Empire select, tell you to use -- or did Empire select to use the most recent ABB forecast for modeling purposes? That's the kind of the question I'm asking.

A. Yes. So at the time that this was initiated, Empire used what was the most current ABB price forecast, which was different than what was used in the IRP.

Q. When you did the generation fleet savings anal-- or when the generation fleet savings analysis was performed, who selected which units were allowed to be retired in that analysis?

A. Empire had already decided when we came on board around the specific parameters of which plants could or would be retained for reliability purposes primarily or because they had joint ownership and couldn't make a decision to retire something that was jointly owned or it was a new plant. We, however, reviewed those assumptions and, to the extent we had any disagreements about it, were free to offer an alternative opinion.

Q. Do you know specifically who at Empire provided the constraints on plant retirements?

A. I don't know specifically, but I know that many of the constraints were similar to what was used in the prior IRP process, but I can't tell you specifically who made that decision.

Q. Was Riverton 10 allowed to be retired for the modeling?

A. No.

Q. Was Riverton 11?

A. So Riverton 10, 11 and State Line were not allowed to retire for black start purposes.

Q. Was Riverton 12 allowed to retire?

A. Riverton 12 is a 7,000 heat rate CC that was built in 2016, and it was not allowed to retire.

Q. There are two units at State Line. Were either allowed to retire?

A. I mentioned the State Line CT was held for black start purposes, and Blake Mertens can talk more about that if you have specific questions. But the State Line CC was not allowed to retire as well.

Q. Were Iatan 1 or 2 allowed to retire?

A. As I mentioned a moment ago, anything with joint ownership where Empire was a minority owner was not allowed to retire, and that would include Iatan 1 and 2 and Plum Point.

Q. So the units that were permitted to retire were Energy Center 1, 2, 3 and 4, Asbury, and Ozark Beach 1, 2, 3 and 4; is that correct?

A. I believe that's correct, yes.

Q. For the Stipulation & Agreement, were those units allowed to retire?

A. For the modeling that supported the Stipulation & Agreement?

Q. Well, we've gone over the generation fleet savings analysis. Was there any difference in what was done for the Stipulation & Agreement in terms of the units that were allowed to retire, and if so, what?

A. No, I don't believe so.

Q. Well, since the agreement includes retaining Asbury, I assume it was allowed to retire in this stipulation analysis? I think that would

be a change.

A. Fair enough. So retaining -- in the stipulation, Asbury was forced to be retained.

Q. But the other units were left the same?

A. Correct.

Q. Were the Meridian Way or Elk River Wind Farm PPAs allowed to be terminated early?

A. When you say early, do you mean before the contract expiration date?

Q. Yes, I do.

A. So Elk River has an extension option, and it was -- the extension was not undertaken, so it expires in 2025, and Meridian Way expires in 2028. So those were the years modeled.

Q. So the model didn't allow them to be bought out or terminated early?

A. No. There was no buyout clause for the wind PPAs in the modeling.

Q. Do you know if there is in the contracts?

A. I'm not aware. I think that's probably a question for Mr. Mertens.

Q. Let's just -- because Empire's changed its position now, let's just jump to the

Stipulation & Agreement. When does the savings analysis from that current plan -- or stipulation plan show that customers will start to -- Empire customers will start to see savings on their bills?

A. Any rates question I would defer to Mr. Holmes, specific rates questions, but I can talk to you about the present value revenue requirement and when that goes positive and talk about the timing of the -- or talk about the 10-, 20- and 30-year costs.

Q. When does the present value revenue requirement flip in terms of being positive?

A. I believe it's in the first five years you see a positive revenue requirement.

Q. Looks like you're referring to some document. What are you looking at?

A. I'm looking at a document that summarizes the stipulation results.

Q. Is that something that's been included in some testimony or elsewhere?

A. All of the numbers in here are included in testimony.

Q. Can you point to where in testimony the information is that you're referring to in that document?

A. Sure.

Q. Would you?

A. So I can refer to my affidavit, and Figure 5 as we talked about earlier shows the 20-year savings from the settlement plan it's listed as, but we can also refer to it as the stipulation, in the blue bar and the 30-year savings from the settlement plan. These are the present value revenue requirement savings when comparing the settlement plan to the IRP preferred plan. So 169 million for 20-year savings, 295 million for 30-year savings, and there's data that underlies those numbers.

Q. And where is that data?

A. It's in data requests and responses that's been provided to parties.

Q. It's not been provided to the Commission, has it?

A. I don't know specifically if the work paper that the -- I believe the work papers that accompany the stipulation have the annual revenue requirements, and we can refer to that, but I'm not certain.

Q. What work papers accompany the stipulation?

A. I believe the attachments. I don't see it in the stipulation, so I would defer specific questions to Mr. Holmes on the specific annual revenue requirement reductions associated with the settlement versus the 2016 IRP preferred plan --

Q. Well, I --

A. -- that contribute to the numbers that I cited in my affidavit for the 20-year and 30-year savings.

MR. NATHAN WILLIAMS: Judge, may I have marked as an exhibit the documents that Mr. McMahon's been I think referring to as work papers, or at least a portion of them, to the stipulation?

JUDGE BUSHMANN: Your response, Mr. Cooper?

MR. COOPER: Well, I haven't seen what he wants to mark yet.

MR. NATHAN WILLIAMS: You know what? I haven't either. I just know Mr. McMahon's been referring to them.

JUDGE BUSHMANN: And also the witness is entitled to refresh his recollection.

MR. NATHAN WILLIAMS: I think I'm

entitled to see what he's --

JUDGE BUSHMANN: You're entitled to see it, but I'm not sure that that necessarily makes it an exhibit. So if you'd like to look at it, that's fine.

MR. NATHAN WILLIAMS: Thank you.

MR. COOPER: Judge, we might be able to take a five-minute break and see if we can discuss this a little bit with Mr. Williams, too.

JUDGE BUSHMANN: Do you need some time to review it?

MR. NATHAN WILLIAMS: Sure.

JUDGE BUSHMANN: We'll be off the record for five minutes.

(A BREAK WAS TAKEN.)

JUDGE BUSHMANN: Let's go back on the record. If any parties want to tell me something about where we are at this point, I'd appreciate it.

MR. NATHAN WILLIAMS: I think I'll just go on asking questions at this point.

JUDGE BUSHMANN: Sounds good to me. Thank you.

BY MR. NATHAN WILLIAMS:

Q. I believe where we left off, I'd

asked you when the PVRR flipped for purposes of the stipulation plan.

A. Right.

Q. And you'd indicated that it would occur within the first five years. Are you able to give a more definitive date than that?

A. No. Unfortunately, I'm able to only talk to what's in my affidavit, which does not include the year-by-year present value revenue requirement differences.

Q. And you're unable to point to any documentation that's already been prefiled in the case that would show that as well?

A. Not that I'm specifically aware of.

Q. Did Charles Rivers Associates provide any feedback to Empire regarding the generating units that it chose to force to not be retired?

A. So just to confirm the question, so the generating units that were allowed to retire? You said not forced to retire.

Q. I misstated. Yes, it would be the units that were selected that were not allowed to retire, did Charles Rivers Associates provide any feedback to Empire regarding, I'll use the word reasonableness of doing so in the modeling?

A. I can't recall any conversation that was specific to the choice about Asbury. It had already been made a decision to look at Asbury retirement in light of environmental spending that would have to happen. So we didn't offer an alternative opinion as to not letting the model retire Asbury.

Q. To your knowledge, it was Empire's choice to allow the model to retire Asbury?

A. In the 2016 IRP, Asbury was forced to be retained, and it was a -- it was a choice then to allow it to retire early in the GFSA analysis, and I think that choice was initially made by Empire.

Q. Let me ask it this way: Did Charles Rivers Associates provide any input to or feedback to Empire regarding what of its units should be allowed to retire or not to retire in the modeling?

A. Not specifically that I recall, though if we had an alternative view, we could have shared that and potentially been incorporated. But given the decisions made by Empire about which units to retain and the rationale that I discussed earlier, we thought those were reasonable.

Q. Basically -- let me rephrase what I

think you're saying, and you can tell me if I'm correct or not.

A. Sure.

Q. Essentially what you're saying is that you accepted what Empire provided to you and you did not, I'll use the word challenge it, it's just what you used for the modeling?

A. Correct. We didn't offer an alternative opinion to Empire.

Q. Aside from the constraints on what generation could be retired by the model, were there any other assumptions, inputs or constraints in the modeling that you have not disclosed in your prefiled testimony?

A. Not that I'm aware of.

Q. Let's turn your attention to page 22 of your direct testimony, lines 1 through 12. I'm sorry. It's lines 10 through 12.

A. On page 22?

Q. On page 22 of your direct.

A. Okay.

Q. You testify there, starting in the middle of the sentence, the removal of limits on the amount of energy Empire can sell to the market drove the CEM, which would be the capacity

expansion model, to select early wind additions as the least cost outcome across all of the scenarios, correct?

A. Correct.

Q. Why would you model the utility that is billing its generating units to serve its customers without limiting the amount of energy it is selling into the market?

A. Well, Empire is now part of SPP, and as part of SPP it has a lot more flexibility in how it can buy and sell power. A traditional vertically integrated utility that's not operating in an RTO has to rely on bilateral contracts that it might execute by picking up the phone and calling a neighbor.

When you're part of an RTO like SPP, you now have an ability to sell market -- well, you do sell your power, all of your power in your generation into a centralized market and you buy generation back to serve your load.

So it's a very different situation than what I would call the traditional Empire resource planning looked at, and that's why a new paradigm was developed in this modeling where there weren't strict limitations placed on the amount of generation that could be sold that's in excess of what meets specifically Empire's demands.

Q. Isn't it a, I think I'll use the word premise of that kind of a model that Empire is not owning and contracting sufficient capacity and energy just to serve its retail customers?

A. I guess what I would say is for any utility resource planning exercise where you're involved in an RTO in a centralized market, the analysis would be done in exactly the same way. You wouldn't place restrictions on purchases, outside purchases or on sales from your generation because you're operating with this centralized market in mind.

Q. Doesn't Empire as a vertically integrated utility subject to the Commission's jurisdiction for rate regulation have an obligation to assure that it has sufficient energy and capacity to serve its rate-regulated customers within Missouri?

A. Of course, and as part of being within SPP, it must meet a capacity requirement with its customers for meeting its customer demands. And so it must prove that it has met that capacity requirement with either owned resources or purchased resources.

Q. Are you suggesting that this Commission should rely on the SPP for what Empire's capacity requirement should be?

A. For setting Empire's capacity requirement?

Q. I'm not saying setting. For saying that it has sufficient capacity. The Commission does have mechanisms available to it to assure that the utilities it regulates are in a position to provide safe and adequate and reliable service?

A. Yes. The Commission can choose to require Empire to satisfy a very high capacity requirement well beyond its load. It can also choose to let Empire strictly meet what SPP considers as necessary for reliability. But if you're going to participate in SPP, you have to meet certain requirements.

Q. Well --

A. Which Empire does.

Q. By the Commission allowing Empire to participate in SPP, hasn't it already at least, I guess at least indirectly approved the SPP capacity requirement for Empire?

A. Yes, I think in choosing to be part

of SPP and gaining Commission approval for that decision, you are choosing to comply with SPP, but I think the Commission's free to set additional restrictions or constraints or requirements that go beyond SPP.

Q. I want to turn your attention to the same page of your direct testimony but starting on line 16 where you talk about how Empire constrained the amount of wind that could be built to prevent the model from building an unlimited amount of capacity.

A. Yes.

Q. And then you go on talking about how in the SPP integrated marketplace physical restrictions on off-peak energy production are no longer constraining since all generation is sold into the wholesale market. Do you see that? It's that last paragraph.

A. On the next page as well.

Q. Yeah, that flows over to page 23. Will not demand for energy in the SPP wholesale market be depressed when Empire is experiencing low demand off-peak periods?

A. When Empire specifically is experiencing low demand? I think it's a broader question around SPP's load and depending on the location of the generation.

Q. Isn't it reasonable that if Empire's experiencing low demand on off-peak periods, that SPP, the wholesale market and SPP will be depressed, in other words, that other entities will be experiencing the same reduction in demand?

A. I can't say for certain, but certainly there's hourly load shapes that probably look reasonably similar across utilities, but there's differences. Some utilities have, you know, greater penetration of certain electric heating demand. So I can't say specifically, but as a general statement, I think off-peak periods and on-peak periods tend to line up.

Q. And doesn't negative pricing in the SPP market typically occur when there is low demand during off-peak periods in the SPP?

A. Right. So negative pricing is a function of primarily wind bidding into a market where it's bidding in its production tax credit amount, because if it can produce, it can generate a production tax credit, so it's willing to take a negative price. We see negative prices not typically across all of SPP. We see them in congested spots.

So the answer, I think, to your question, it would just depend on where the location of the negative pricing due to the generation was versus the Empire load.

Q. Would you explain what you mean by congested spots?

A. Sure. So congestion is just a function of any operating market. As I mentioned before, we have -- we had traditionally bilateral markets where there wasn't a lot of price transparency between regions because energy was being bought and sold by people on phones.

Now we have RTOs where power can be instantaneously exchanged among a bunch of market participants, and it's going to flow to -- from the generators to the demand spots unless there are transmission constraints. And so when there are transmission constraints and you have a lot of generation that wants to get to a load and it can't get there, you have what's called congestion.

And so on the load side you might have higher prices, and on the generation side you might have lower prices, which is what we modeled when we modeled what was referred to as the low

LCOE versus the mid LCOE.

Q. Your answer referring to getting negative prices because of the production tax credit, I think you used the term PTC, but I assume that's what you meant?

A. Yes.

Q. If SPP starts making wind dispatchable so that it can constrain wind production from entering into the market, won't that reduce the number of production tax credits -- if that occurs, won't that reduce the number of production tax credits that in this case, under the stipulation, the tax equity partner is to receive?

A. I think that specific question is probably best for Mr. Mertens and Mr. Mooney on the tax equity and on the curtailment specifically risk. What I can answer is how curtailment was factored in to the long-term modeling through some of the basis analysis. So I'm happy to answer questions about that.

Q. Do you know if, if there is a curtailment, is there a PTC created?

A. I would assume if you're not producing you're not generating a PTC.

Q. And is it your understanding, or

maybe you know, although I heard your preference to defer it to someone else, if -- you spoke earlier in response to some questions from Staff about the customer protections pertaining to market pricing and constraints that might be imposed on the market on dispatch of wind, making wind dispatchable as opposed to a must take. Do you recall that?

A. I recall being asked a question about the market protection that was in place and whether that was a mitigant against low prices.

Q. Well, there were also, I believe, questions relating to wind being -- becoming dispatchable and the impact that would have on revenues to Empire as a result or ultimately flowing to Empire under the agreement, correct?

A. Yes.

Q. But do you know anything about what happens with the production tax credits that are associated with those? Because my understanding is that the tax equity partner is supposed to get a degree of its compensation from production tax credits.

A. I'm sorry, but I think I'm going to have to defer that to Mr. Mooney on the tax equity.

Q. Okay. On page 23 of your direct

testimony, around lines 4 to 7, you testify about Empire constraining the model to cap total nameplate wind capacity in the portfolio to a level roughly equivalent to peak load. Do you recall that?

A. Yes.

Q. Did that constraint eliminate risk to Empire's customers?

A. The modeling that we ran that constrained the wind to that level did show risk reduction to Empire customers. It showed both cost savings and risk reduction when looking at the range of scenarios that were used in this analysis.

Q. Well, there were some constraints in those analyses, were there not? We talked about what was allowed to retire, for example.

A. Sure. I've been doing modeling for 20 years, and there's always constraints in modeling analysis, and yes, there were constraints in this analysis, too.

Q. Does reducing the amount of wind to be built from the 800 megawatts to the 600 megawatts reduce the risk to Empire's customers?

A. No. Well, first of all, the

600 megawatt case was accompanied by retaining Asbury, and what we've shown in my affidavit is that retaining Asbury and moving to 600 megawatts actually is more costly.

But we've also done the risk analysis, an updated risk analysis as part of this stipulation, and in my affidavit on page -- Figure 2 on page 5, I illustrate the risk reduction by showing three different scenarios, a base market, a high market and a low market for both the 2016 IRP plan and the stipulation. And what this shows is that in all three scenarios there is cost savings in the stipulation plan relative to the 2016 IRP plan.

I think that's very important, No. 1, that there's cost savings, but No. 2, and to specifically address your question, there is also lower risk. I think your question may have been nuanced around how the risk difference between going from 800 to 600 megawatts, and because of the differences in the data and the combination of the portfolios, I can't speak to the specific risk reduction between 800 megawatts and 600 megawatts. But I can illustrate with this graphic that in the stipulation plan it's lower risk and it's lower cost.

Q. With regard to the GFSA, didn't Empire -- it looks like you're the responsible party for providing the response -- say that the savings from retiring Asbury are 26 million over 20 years and 90 million over 30 years with regard to the GFSA, the 800 megawatt plan that was done in the application?

A. Yes, the GFSA that used the 2016 ABB price curves described what you said, which was the $26 million in savings.

Q. What are you saying the -- under the stipulation scenario of the savings attributable to retiring Asbury as opposed to not retiring it are now?

A. Right. And this goes to a question Commissioner Rupp had earlier, and it's illustrated in my affidavit. I believe it's item 9. Page 7, item 9, it says Figure 5 shows a difference in 20-year and 30-year present value revenue requirement savings using common assumptions. On a 30-year basis, approximately 38 million of the difference relates to the difference in size of the wind addition, that's going from the 800 to the 600, while the remaining portion, 101 million, relates to the retirement of Asbury.

Q. So why is there such a big difference between the GFSA where you said the amount attributable to Asbury 9 million and now you're saying with the stipulation plan it's 101 million?

A. Sure. As I had said a second ago, the GFSA used the 2016 fall ABB price curves, and the settlement used the ABB 2017, fall 2017 price curve, which as we established earlier through some questions is lower. And in a low market environment, a coal plant that was already dispatching at only 65 percent capacity factor for 2017 gets hurt more. So you're looking at about $10 million a year from memory of incremental cost.

Q. Shouldn't the Commission take from this that the inputs and the assumptions in the modeling can make huge differences in the results?

A. I think the -- any decision --

Q. I think that's a yes or no response.

A. Could you repeat the question?

Q. Should the Commission conclude from this that the changes in the inputs in the modeling can have big impacts on the results? That's what occurred, isn't it?

A. I would agree that changing an input

in a model can have an impact on the results, and it can be charge if one of the inputs is large and changed.

Q. And whenever you're talking about 20 and 30 years, you're talking about some pretty big numbers, aren't you, can be, PVRR?

A. Over 20 and 30 years, when you're taking a present value revenue requirement and you're calculating the present value of each year's revenue requirement, so that sums to a larger number than certainly one year.

Q. Give me a moment. Turn your attention to page 24 of your direct testimony, line 7 to 8 in particular.

A. Yes.

Q. And starting toward the middle of line 7, you testified there is now enough nodal pricing data after three years of markup operation to provide confidence in the nodal modeling, correct?

A. Yes, that's what I stated.

Q. How much confidence does three years of data provide?

A. It's three years of historic data that I think provide some indication, provides an indication of nodal pricing differences. As I mentioned before, lots of nodes across SPP. We know there's congestion depending on constraints. And three years of data using averages provides confidence that we're capturing those nodal differences certainly as they exist today, and I'm happy to tell you about how we looked at those real specifically in the modeling.

Q. I'm going to turn your attention to page 3 of your surrebuttal testimony.

A. 3?

Q. Hopefully, if I have the pagination correct. I had some line numbers wrong before, so my confidence is shaken a little.

If you read line 6 to 9 on page 3. Paraphrasing that, you testify that Empire's plan will yield, quote, significant near-term benefits for customers, close quote, do you not?

A. Yes.

Q. This is, of course, referring to the original plan for 800 megawatts?

A. Correct.

Q. What significant near-term benefits for customers were you referring to in that testimony?

A. The revenue requirement differences between the RFP -- or sorry, the IRP, 2016 IRP preferred plan and the GFSA customer savings plan.

Q. Is that all?

A. Well, talking specifically to cost and what relates to the 325 million. There's also benefits that I've described around turning a portfolio that is 85 percent fossil to a portfolio that's 60 percent fossil and 40 percent renewable. So I think those are some of the benefits that I might have also been referring to here.

Q. And are those the same benefits that you see from the stipulation plan, the 600 megawatts?

A. Well, speaking to the taking -- moving from a portfolio that is predominantly fossil with significant fuel cost risk to a portfolio that has a significant non-fuel renewable element, yes, I think that's accomplished with a 600 megawatt portfolio of wind, in addition to what Empire already has.

Q. You did say significant near-term. The PVRR's more longer term, is it not?

A. Well, the present value revenue requirement is capturing however many years are incorporated in the present value calculation, so it's as many years as are described. So here is describing a 20-year present value revenue requirement of $325 million in savings.

Q. So the economic benefit may not be -- well, I guess it depends on how you define near-term. Is 20 years near-term in your view?

A. Well, if the only benefit was in year 20, it would be heavily discounted and I doubt would get us to a $325 million benefit. So I believe there were benefits in all years and time periods, but I need to refer to specific spreadsheets.

Q. Turn your attention to page 4 of your surrebuttal testimony, in particular lines 18 through 20. In part you testify there, the hefty tax credits that make the benefits so clear and convincing for Empire are schedule to phase out soon, correct?

A. Correct.

Q. Haven't those tax credits been available at least since 1994?

A. There's been tax credits available, but the capital cost of wind has not been nearly what it is today.

Q. I think you touched on this theme before, but on page 5, at lines 5 to 6 you testify wind reduces portfolio risk because, relative to conventional resources, wind's costs are more certain.

A. That's correct.

Q. Does not wind increase portfolio reliability risk because wind is intermittent relative to conventional resources?

A. Well, I think part of the answer to this question goes back to SPP is the central operator of the grid that is handling reliability issues. The intermittency is more a function of when you need the power and what price it's being sold at.

Q. Aren't we talking about -- well, I'm talking about Empire's -- well, try this again.

For Empire particular utility, does not adding wind increase portfolio reliability risk because wind is intermittent relative to the conventional resources Empire has?

A. I define reliability in terms of outages and performance of a grid. I don't define it in relation to Empire's portfolio reliability. So the grid, I don't believe this wind that we're suggesting adding to SPP is creating reliability issues, but I'd suggest you ask Mr. Mertens about that. And any reliability questions for Empire I would characterize on the distribution side, which are unrelated to this.

Q. So you don't think that reliability plays any role with regard to generation?

A. Reliability is an extremely important aspect of a functioning grid in a functioning RTO, and SPP's role is ensuring reliability by setting reliability standards and ensuring that all generation adheres to that. That's the function of the grid, and that's how I see reliability as being important. I'm not sure I understand what your question's getting at.

Q. Well, it's kind of like if I go outside and I want to go home and I'm using a vehicle, I kind of like for it to start and that's reliability.

A. Okay.

Q. And if I'm Empire and I need to have -- meet a certain load at a certain point in time, then I need to have the power available to do that. And I think there is a difference in the capability of different resources to supply that

power at that time to meet that load.

A. So --

Q. And that's the kind of reliability I'm --

A. I understand your question. So if this was five years ago, then I think my answer to your question would be different, and it would be specific to Empire as a vertically integrated utility in its own balancing authority and having to make its own decisions about how to ensure reliability for its specific customers and doing bilateral deals.

I assume that Mr. Mertens and others could talk to how they would have managed that back then. But when you're in an RTO, the generation, all of the generation is part of the RTO, and the RTO is responsible for serving the load in that RTO. So that becomes an RTO requirement, not an Empire specific requirement beyond what Empire's requirements are to have -- to meet its reserve margin requirements for SPP.

Q. So you don't believe that Empire has an obligation to be able to meet its load in Missouri separate and apart from SPP?

A. Empire has an obligation to meet its

load by proving to SPP and to this Commission that it has sufficient capacity and can deliver energy. The energy can be bought through SPP. It is bought through SPP, but it can be specifically tied to an Empire resource or not.

Q. Turn your attention to, hopefully it's page 26 of your surrebuttal, and in particular the Q and answer that starts on line 5 and ends on line 12.

A. Okay.

Q. Am I correct that what you're saying there is that a three-year shift in the period that was analyzed caused a $120 million change in the PVRR?

A. Yes, I think you read that correctly.

Q. And isn't that over a 75 percent increase from the lower amount?

A. I would have to check these numbers, but I'm assuming that the 2015 to 2018 portion of this would not have been discounted. So that's probably contributing a significant portion to it. But yes, I would agree with your math, and subject to check on some of the details here.

Q. Turn your attention to page 30 of your surrebuttal testimony, first two lines of the

footnote. There you indicate you have some familiarity with Ameren Missouri's latest integrated resource planning filing with this Commission, do you not?

A. What question -- oh, sorry. The first -- Footnote 11?

Q. If you want to look at the question that goes with that answer, it starts on page 29, but yes, and in particular Footnote 11 references Ameren Missouri's resource planning filing.

A. Yes.

Q. Are you aware that Ameren Missouri plans to add 700 megawatt of wind generation in the near future?

A. I am, through news reports.

Q. Do you know why Ameren Missouri plans to add that 700 megawatt of wind generation?

A. I can't comment specifically.

Q. Does that mean you don't know?

A. I don't know specifically why Ameren wants to add 700 megawatts.

Q. I don't know the fine answer. If you don't know, that's what I want to hear.

A. Right. I think the question was do other utilities use the same or similar forecasting process, and I indicated that they use the ABB/Ventyx power price forecast.

Q. And you also made a reference to Ameren Missouri's resource planning filing with this situation. I'm just asking some questions about it. If you don't know, that's fine.

A. I don't have any specific information or knowledge of Ameren's filing.

Q. That's fine. Thank you. I'm going to turn your attention to page 39 of your surrebuttal testimony, below the figure that appears on that page.

A. Sure.

Q. You testified that it does not concern you that Empire will be selling more energy into the SPP market than its customers buy out of the market if the Commission implements the GS-- or if Empire implements the GFSA, correct?

A. That's correct.

Q. And that would be the case even with the stipulation plan as well, correct?

A. That there would be more energy sold from Empire generating resources than what's purchased by load, yes.

Q. Shouldn't this Commission be

concerned with the potential impacts on Empire's customers and their electric utility bills from Empire caused by Empire acquiring more rate base generation so that it can sell even more energy into the SPP market than its customers buy out of the market?

A. The figure right above the question, Figure 8 on page 39, addresses this issue, which is similar to what I said earlier around the stipulation, which is that in all -- in the high market, base and the low market cases, not only does the customer savings plan reduce cost, but it also reduces risk. So I don't think the Commission should be concerned about that.

Q. I want to turn your attention to page 42 of your surrebuttal testimony, Footnote 19. See that?

A. Yes, I do.

Q. You refer to a correction, do you not?

A. I do. It says the $26 million in savings is from plan 4B, which includes a correction to plan 4.

MR. NATHAN WILLIAMS: May I have an exhibit marked and approach the witness?

JUDGE BUSHMANN: You may. I think your next number is 212.

(OPC EXHIBIT 212 WAS MARKED FOR IDENTIFICATION BY THE REPORTER.)

BY MR. NATHAN WILLIAMS:

Q. I'm handing you what's been marked for purposes of identification as Exhibit 212. Have you had an opportunity to review Exhibit 212?

A. Generally. Is there a specific page you'd like me to reference?

Q. Actually, I'm just going to ask you a question about it, and there's a memorandum attached to that exhibit that indicates that it originated from you.

A. Correct. I did produce this.

Q. And does that memorandum explain the correction that you referred to in Footnote 19 of your surrebuttal testimony?

A. Yes, it does.

MR. NATHAN WILLIAMS: I offer Exhibit 212.

JUDGE BUSHMANN: Any objections?

MR. COOPER: I guess I'm confused. Does the cover sheet go with the Staff DR response that's inside of it?

MR. NATHAN WILLIAMS: Actually, this was produced in response to Public Counsel's data request, so yes, it does. I think the response was see Staff data request.

MS. FORCK: When you refer to the memorandum, are you talking about the one on page 3?

MR. NATHAN WILLIAMS: Yeah.

MR. COOPER: I guess I'm -- I guess I'm still confused. I'm not -- as to an answer to all four?

MR. NATHAN WILLIAMS: Let's just pull it off. We can go to the memorandum if you'd like.

JUDGE BUSHMANN: Tell me what's going on.

MR. NATHAN WILLIAMS: Remove the first sheet.

JUDGE BUSHMANN: The top sheet that says Public Counsel Data Request Nos. 8543 through 8547, that should be removed?

MR. NATHAN WILLIAMS: Yes. And the rest of the exhibit stays the same.

JUDGE BUSHMANN: With that change, is there any objection to introduction of that exhibit?

MR. COOPER: No, your Honor.
MS. FORCK: Just to be clear what we're looking at, this is Staff's data request and then Mr. McMahon's response?
MR. NATHAN WILLIAMS: I'm not sure it's the entirety of the response. The point is just to clarify the footnote, and that's the purpose for which it's being offered.
JUDGE BUSHMANN: Any objection from Staff?
MS. FORCK: No, your Honor.
JUDGE BUSHMANN: Exhibit 212 is admitted.
(OPC EXHIBIT 212 WAS RECEIVED INTO EVIDENCE.)
BY MR. NATHAN WILLIAMS:
Q. Does Empire's analysis for the stipulation sufficiently account for the intermittency of wind?
A. I'm sorry. Is this related to this?
Q. No.
A. Okay.
Q. I think that speaks for itself.
A. Okay. Could you repeat the question?
Q. Does Empire's analysis for the

stipulation sufficiently account for the intermittency of wind, wind generation?

A. Yes, it accounts for the intermittency of wind generation.

Q. How does it do that?

A. The wind projects are modeled using their profiles, their wind profiles in terms of when they would tend to produce and tend to not produce to get you to that levelized 47 percent capacity factor.

Q. I don't believe I fully understand your answer. You're saying you took the wind -- the production profiles over hourly for a year and used the 47 percent capacity factor? Can you explain more of what you mean?

A. Sure. There's hourly shapes associated with these locations, with these wind projects that are incorporated into the model to understand the hourly -- an hourly level when these plans, when these wind farms will produce and when they will not produce.

MR. NATHAN WILLIAMS: Can I have another exhibit marked? This is -- it says on the document it's affidavit of John A. Robinett. May I approach the witness?

JUDGE BUSHMANN: You may. That exhibit will be 213. Isn't this something that had already been premarked?

MR. NATHAN WILLIAMS: I don't believe so. No. It's a different affidavit.

JUDGE BUSHMANN: This is the one that was filed today?

MR. NATHAN WILLIAMS: Yes.

JUDGE BUSHMANN: So that would be 213.

MR. COOPER: Does counsel have copies I guess of the exhibit?

MR. NATHAN WILLIAMS: Yes. May I approach?

JUDGE BUSHMANN: Yes. You don't have to ask.

(OPC EXHIBIT 213 WAS MARKED FOR IDENTIFICATION BY THE REPORTER.)

BY MR. NATHAN WILLIAMS:

Q. I'm handing you what's been marked for identification as Exhibit 213. Would you ignore the first page but turn to the second page. There's a graph there, and the title of it says total load versus estimated 855 megawatt wind production 1/18/2016 winter peak. I want to direct

your attention to the curve that -- not the bars but the line curve that says estimated wind production. Does that curve shape -- you talked earlier about using curve -- wind production curves. Does that curve shape look like a typical wind production curve over a 24-hour period?

A. Does one represent 1 a.m.?

Q. Yes. Assume it's 24 hours starting from midnight to midnight. Actually, there are a series of such curves. I'm just asking you if they look representative of what you've seen of different types of wind production at different points in time. I'm not trying to spring something on you.

A. So I'm just reading the front of the affidavit. Says this is related to Elk River and Meridian Way, but they're not labeled. I can't comment. I honestly --

Q. I'm not asking you if these are Meridian Way and Elk River. I know how they were created. All I'm asking you is if this kind of a shape for a 24-hour period is the sorts of shapes that you are familiar with seeing from wind farm production? If you don't know --

A. Shapes are seasonal and very region

dependent. So I can't comment specifically on this. I'm sorry.

Q. Okay.

A. I mean, there's all different shapes here, and they're ostensibly talking about different time periods, but I -- I mean, I could describe a wind curve generally, but I'm not sure that accomplishes much relative to this.

Q. All I was asking is if these are the kinds of curves you see from wind farms producing on -- it can vary that much from day to day, but these are the kinds of typical -- I don't know if typical is the right word, but you wouldn't be surprised if these were actual wind production curves because of the shapes they reflect?

MR. COOPER: I'm going to object. I think Mr. McMahon said he doesn't know. I don't know how many times we'll go back to that.

JUDGE BUSHMANN: Response, Mr. Williams?

MR. NATHAN WILLIAMS: I think he's trying to do more with the exhibit than I'm asking him to is what I think's occurring. All I'm trying to --

JUDGE BUSHMANN: It seems to me that

in response to your question he said he couldn't answer it. Is there another question about that that you wanted to pose?
BY MR. NATHAN WILLIAMS:
Q. Let me try to ask my question again and see, maybe rephrase a little bit differently. All I'm asking him is if -- what I'm trying to ask him and the only answer I'm trying to get is if these -- what's an orange curve shape would be unusual for a wind farm production for a 24-hour period.
And there are several different ones, and I'm not asking that any -- if these are just typical and general. You wouldn't be surprised to see this kind of a 24-hour curve from a wind farm?
A. Let me just state generally what I would expect. A number of years ago if you asked me to shape a wind curve I would say it goes way up in the off-peak periods when the wind's blowing the hardest and it drops lower in the on-peak periods. But I think with the new technologies and a lot better identification of wind sites, we get a very different picture as to when wind can actually generate and be reliable.
So I can't comment specifically to

these because every shape is different on here. So I'm not sure what you'd like me to respond other than what I just did.

Q. Well, is it unusual to have a lot of variability in the wind shapes for different 24-hour periods?

A. I think it's very dependent on the wind, the wind resource, the height of the turbines, the location. There's so many factors that -- the time of year. And so yes, there's variability. It's an intermittent resource that spins when there's wind blowing.

But as you know and as we've stated in our testimony, or my testimony, these capacity factors have risen over time, performance is much better, the wind turbines are taller. There's a lot of evolution in this space.

Q. Thank you. Did the analysis Empire conducted for its generation fleet savings analysis, is that as robust as the analyses Empire's performed for complying with the Commission's Chapter 22 resource planning rules?

A. I think generally speaking, and it's a legal question which I think can be directed to someone else whether Empire was required to comply with Chapter 22, but generally speaking, I think we complied with all the aspects of Chapter 22 as I recall it.

Q. That's not what I asked. I asked if the analyses that were performed are as robust as the analyses that are required by -- or that Empire performed for the Commission's Chapter 22 resource planning rules.

A. Oh, I see. You didn't ask whether they complied with Chapter 22 but was the analysis as robust?

Q. Correct.

A. So my answer is yes, from a modeling perspective and from the areas that I was focused and I directed, this was taking a model that had been used for the 2016 IRP, updating certain key assumptions specifically related to the wind resource, and generating an updated analysis that reflected these new assumptions.

So I think it was robust in that it used the same modeling framework, updated some assumptions, looked at uncertainty in stochastics. That's how I would define robust.

Q. Turn your attention to your affidavit, which has been marked for identification

as Exhibit 8C, in particular paragraph 3 on page 3. There you state, adding up to 600 megawatt of wind to Empire's portfolio is expected to generate customer savings because the levelized cost of the wind is significantly lower than the forecasted price paid for energy in Southwest Power Pool, correct?

A. Yes.

Q. As part of its stipulation, is Empire guaranteeing that the actual levelized costs of the wind will be significantly lower than the price paid in the Southwest Power Pool for the energy generated by that wind?

A. Could you repeat the question?

Q. Maybe. Is Empire guaranteeing as part of its Stipulation & Agreement that the actual levelized cost of the wind generated by the 600 megawatts will be significantly lower than the price paid in the Southwest Power Pool for the energy generated by that wind?

A. I think I can answer your question. So Empire's market price protection is insuring -- well, is protecting customers in the event that prices are significantly lower than expected.

Q. Is that a guarantee that the actual

levelized cost of the wind will be significantly lower than the price paid in the Southwest Power Pool for the energy generated by the 600 megawatts of wind?

A. So the -- I think I understand your question, and it's whether the price that Empire will receive from the wind sales in SPP, whether Empire through its market price protection is guaranteeing a price that is below the LCOE of the wind resource; is that right?

Q. No, that isn't what I was asking.

A. Okay.

Q. I wasn't referring to the -- except to the extent it does so, I wasn't referring to the customer protections in the agreement. I'm just asking, in the agreement is Empire guaranteeing that customers will be held harmless if the actual levelized cost of the wind is -- or if the actual cost of the wind is not significant -- hang on.

What I'm asking is if in the stipulation Empire's guaranteeing that what Empire gets in terms of a price for the wind in the Southwest Power Pool, the energy, is significantly higher than the actual levelized cost of the wind, the production of the wind energy?

A. So the stipulation -- the stipulation is providing some protection against the downside risk of the price that Empire receives in the SPP being lower than is expected, and basically looking at the wind revenue requirement in each year versus the amount of revenue that is received from selling the wind into SPP. And to the extent that that difference is not positive, that's what relates to the market price protection.

Q. I'm not asking about the market price protection per se. I'm asking whether or not Empire is protecting its customers if the projections are wrong basically.

A. But that's effectively what the market price protection does. As I stated, it's protecting customers against in the event that market revenues are lower than the expected case, expected case being as I show in my affidavit, customer savings in the 20 and 30-year NPV numbers that we talked about earlier.

Q. But there's a limitation on that protection, is there not?

A. Yes. And I'm not the one to talk specifically about the stipulation. I reserve that for Mr. Holmes or Mr. Krygier, but I'm happy to talk about the customer savings that are generated from the model in relation to that.

Q. Turn your attention to paragraph 4 on page 4 of your affidavit. There you state, in a rising market price environment, Empire would be able to sell wind output at higher prices without any incremental fuel costs. What happens in a flat market price environment?

A. I think I would just -- the sentence would say in a flat market price environment, Empire would sell wind output at those prices without any incremental fuel costs.

Q. And what happens in a declining market price environment?

A. Right. So it would sell at the lower prices in a declining market environment, still without any incremental fuel costs.

Q. Do you have Public Counsel witness Lena Mantle's affidavit with you?

A. I do.

Q. Would you look at pages 133 to 136 of the attachment?

A. Okay.

Q. Do those show your responses to the Office of the Public Counsel's Data Requests 8,551

and 8,552?

A. Yes. Yes, they do.

Q. And does that explain what you intended the purpose of Figure 3 on page 6 of your Affidavit in Support of the Nonunanimous Stipulation & Agreement to do?

A. Well, this adds in the -- this adds in the retirements that we talked about earlier into that figure.

Q. So this is the same as the figure in your affidavit except that now the retirements that would occur under those scenarios are included?

A. I think this includes the Energy Center 1 and Energy Center 2 and the Riverton -- it includes all the retirements. It doesn't include the contract expirations.

Q. I'm going to turn your attention to page 7 of your Affidavit in Support of the Nonunanimous Stipulation & Agreement, in particular paragraph 9.

A. Okay.

Q. And there you state, I updated the assumptions of the GFSA to be consistent with the assumptions used to evaluate the stipulation. Then on the following -- in the following paragraph on

page 8, paragraph 10, you state, in the second sentence, I believe, two sets of assumptions were updated: One, the cost of acquiring and operating wind; and two, the fuel and market price assumption, correct?

A. Yes.

Q. Was the GFSA based on market prices at the Elk River node?

A. The GFSA had a number of different plans. Plan 2, which had 800 megawatts of wind, used low LCOE wind, which was at the Elk River node.

Q. Is that the only one?

A. So that's Plan 2, which is what the comparison point is in this table on page 8. But Plan 3 in the GFSA used a mixture of 400 megawatts of low LCOE and 400 megawatts of mid LCOE. So the low LCOE corresponded to Elk River node, and the mid LCOE corresponded to the Asbury node.

Q. And what was the source of the market prices for the stipulation analysis?

A. The source of the market prices for the stipulation analysis was the updated ABB price curves which are referred to as the fall 2017 case, which is something that again ABB produces a couple times per year.

Q. Were they modeled on a node like the GFSA was, the SPP node?

A. The stipulation analysis?

Q. Yes.

A. Yes.

Q. Which one was that?

A. The Asbury node.

Q. And why was the Asbury node used?

A. We might want to go in-camera here if we're talking about confidential information.

MR. COOPER: Yes, Judge. Can we go in-camera for a moment?

(REPORTER'S NOTE: At this point, an in-camera session was held, which is contained in Volume 4, page 266 of the transcript.)

JUDGE BUSHMANN: Back in open session.
BY MR. NATHAN WILLIAMS:
Q. Is there any wind energy currently being delivered into SPP at the Asbury node?
A. Not that I'm aware of.
Q. Historically, has there been any negative pricing at the Asbury node?
A. I would have to check.
Q. Does that mean you don't know?
A. I don't know.
Q. Do you know if there's been negative pricing historically at the Elk River node?
A. Yes, I believe there has been.
Q. Do you know between Asbury and -- the Asbury and the Elk River nodes, which one was higher annual average prices?
A. Asbury has higher annual average prices.
Q. And where is it that Elk River is located?
A. In Kansas.
Q. Where in Kansas roughly? West central? Southwest?
A. Central to the eastern side of

Kansas.

Q. And where is the Asbury node located?

A. Within Empire's service territory.

Q. Where within --

A. I believe there's a map in my testimony, in my direct.

MR. COOPER: Would it be page 4 of the GFSA?

THE WITNESS: Thank you. Yes. And so it's not very clear in the picture, but there is a labeling of Asbury.

BY MR. NATHAN WILLIAMS:

Q. Is that in Kansas?

A. No. Missouri.

Q. Northeast Missouri?

A. No. Southeast Missouri.

Q. Are you sure?

A. Sorry. Southwest Missouri. Southwest Missouri, yeah. Thank you.

MR. NATHAN WILLIAMS: Could we have a moment? I may be done.

JUDGE BUSHMANN: Yeah.

MR. NATHAN WILLIAMS: I don't have any more questions for this witness at this time. May I approach and collect my exhibits?

JUDGE BUSHMANN: Which exhibits are you referring to?

MR. NATHAN WILLIAMS: I think it's 212 and 213.

JUDGE BUSHMANN: From the witness, sure. Commissioner questions.

QUESTIONS BY CHAIRMAN HALL:

Q. Good afternoon.

A. Good afternoon.

Q. Turning to page 5 of your affidavit, in particular Figure 2, and you have a reference to the savings, and I want to make sure that I understand what those savings are.

A. Sure.

Q. My understanding is that what you're doing is you're comparing what customers will pay, i.e. the revenue requirement, under the stipulation and then comparing that with the 2016 IRP. Is that correct?

A. The 2016 IRP plan but using the same assumptions for market prices.

Q. Correct. So in other words, there's going to be certain things that are going to increase savings, certain things that are going to decrease savings and I want to make sure that I

understand, when you're looking at the ledger, the things that add and the things that subtract.

So in terms of increased revenues from off-system sales, that's going to increase savings, correct?

A. Correct. More revenue from SPP sales.

Q. Okay. And that could be higher price or it could be just more quantity?

A. Yes.

Q. Okay. Then there's also going to be reduced costs from using a lower cost energy, i.e. wind versus coal or possibly gas?

A. Right. So there's no -- there's no fuel costs associated with these resources, right, so it's strictly a variable operating cost and some fixed operating costs for -- small operating costs for the wind, and so it's -- there's not -- there's no fuel cost for that.

Q. But there is a reduced operating cost associated with using wind versus another energy source?

A. Well, in this case, I think you're -- if you're comparing the 2016 IRP plan to the settlement plan and the only difference is the

600 megawatts of wind in this case, that's the only difference, the other generating resources are going to dispatch to the market price signal in the same way that they always have. It will be consistent between the two plans. So the difference will be strictly the wind.

Q. So you're assuming that Asbury, other coal plants, other gas facilities are operating at the same capacity factor?

A. Under these two cases where you're using the same price curves, it's -- the modeling of those resources is exactly the same. So the difference is strictly the wind and that you have an asset that's producing a lot of -- a lot of revenue but has limited cost.

Q. And then on the negative side of the ledger, it's the costs to construct the new wind and the payments to the tax equity partner, partners; is that correct?

A. There's the cost to construct. There's the rate base, the return on rate base. There's the fixed --

Q. That's part of the costs, right?

A. That's part of the cost of the wind.

Q. Right.

A. That we talk about as this LCOE, which is this levelized cost of electricity for building and opening, operating the wind resource.

Q. Okay. And the payments to the tax equity partner?

A. Correct. So the tax equity is incorporated into that analysis.

Q. Are there any other factors other than essentially those four that we identified that affect the savings?

A. Not when comparing these two plans. If it was comparing the GFSA original plan with the Asbury being turned off, you have a different --

Q. So, for example, we're not taking the tax cuts into effect when figuring the savings from the customer savings plan?

A. I think in both cases we're incorporating the tax -- the tax savings from the lower tax rate.

Q. So in both cases you're assuming that customers will get the benefit of the tax cut as of October 1 of '18?

A. So I'm speaking about this strictly from a go-forward basis on the revenue requirement of operating these assets and the cost of capital associated with these investments, with the wind investment, and a lower tax rate associated with that investment.

Q. Okay. So --

A. I'm not talking about the rates per se.

Q. But you're applying it evenly between the two?

A. Correct.

Q. Okay. Anything else? Any other significant factors that come into play when you're determining these savings?

A. Not that I can think of.

Q. Okay. Could we turn to page 44 of your surrebuttal?

A. Sure.

Q. I understand that this testimony was provided, submitted prior to the negotiations that led to the stipulation, but I want to understand if what you say here is still your opinion, that Asbury -- and I'm at line 2. Asbury is projected to not generate enough revenue in the SPP market to cover just its variable and fixed operation and maintenance costs without consideration -- excuse me, without considering any additional capital for

three years. Is that still your position?

A. Yes, I believe that's still the case.

Q. So there could be a basis for keeping Asbury open unrelated to your modeling, but specific to your modeling, there is no reason to keep it open, is there?

A. Well, our modeling from the get go was focused on both cost and risk.

Q. Right.

A. And so certainly from a least cost perspective, and this is why the GFSA proposed retiring Asbury, it made sense to retire it. But I think there's --

Q. Okay. And I understand that there could be other reasons to keep it open, but from an economic modeling perspective, there is no reason to keep it open; is that correct?

A. On an expected value basis, with the expected forward curves, I would agree with that statement.

Q. On page 16 of your surrebuttal, on line 15, you note that in 2017 Asbury's capacity factor was 57 percent; is that correct?

A. I'm sorry. I'm on the wrong page. Page 16?

Q. Yes.
A. On line 15?
Q. Yes.
A. Yes.
Q. And I believe that it is the case, and I think you alluded to this, that that capacity factor has been going down over the last couple of years?
A. Right.
Q. And why is that?
A. I think it's primarily due to market prices and the cost of dispatching this plant relative to the market price, it's making a decision in every hour or time block. And Mr. Mertens can talk more specifically about how they operate the plant, but from an economic perspective, I believe it relates to market prices.
Q. And so as more and more wind gets incorporated in the -- in the SPP market, you would expect that capacity factor to go down, correct?
A. Well, not necessarily. I think it depends on wind, but it depends on the composition of the resource mix in the region.
Q. Everything else constant, if we're introducing significantly more wind into the

market, would you expect the capacity factor to go down?

A. Introducing wind into the market in that region or that zone or nodal area, yes.

Q. Page 21 of your surrebuttal and then on to page 22, you describe the up-front savings for the customer savings plan or ten-year savings, and I want to understand -- and I know that this is with regard to the original application of 800 megawatts, but I want to know the -- the second column on Figure 5 refers to 550 megawatts. Is that close to the savings that you're projecting under the stipulated 600 megawatt amount?

A. Over the ten years?

Q. Yes.

A. I think with the new curves the ten-year period is lower. I know it's lower than that.

Q. Is that set forth somewhere either in your affidavit or in other -- I didn't see it in your affidavit.

A. It's not in my affidavit. It's -- I show the 20-year and the 30-year. In the stipulation modeling that Mr. Holmes can talk more specifically to, I believe he shows the ten-year annual savings.

Q. A couple of questions about your testimony on page 24 concerning the impact of additional wind on the -- on the market price.

A. Yes.

Q. I don't understand completely or maybe even that much about how the queue works in SPP. I have a little more understanding about how it works in MISO. But it's my understanding that there are 60,000 megawatts of wind in the queue in SPP right now?

A. Right.

Q. What did you anticipate for how much wind would come into SPP over any particular time period as it relates to that 60,000 that's sitting there now?

A. Right. Well, so part of this is done as a part of the process that ABB goes through in their power price forecasting exercise based on what is in construction or fully permitted. So there's different thresholds that get it into the actual modeling at that time period, and they have very discrete cutoffs in terms of when they'll look at that for purposes of their next update.

So, for instance, for the fall 2017

curves, I believe the cutoff was September 1st or something to that effect of 2017 when they look at the queue and they make that designation. As you probably know, there's lots of projects in the queue that are hoping that maybe they'll get to the next stage with a PPA with some entity. They're bidding into lots of different procurements or development opportunities.

So I'm not sure the queue itself is a good source of information to derive just at an aggregate level the amount of wind we can expect to come into the market. I think understanding what's sort of in construction versus permitted is a more important exercise.

That said, I think it's also important to recognize, and Dr. Marke points this out, that this is changing. It's dynamic. There's a lot of new announcements from day to day, projects that are going into service and projects that maybe aren't happenings as a result.

So as part of the GFSA modeling, we took what was assumed by ABB, and these are the models that are -- again, they're subscription models. They weren't produced specific to Empire. They're produced for all their clients, and it was their latest update.

But we did run a scenario for OPC where we looked at the queue at a later date in time after ABB had done their cutoff and said, okay, we see Wind Catcher, for instance, which was actually referenced in the opening statement of OPC as not being incorporated, but we looked at Wind Catcher and we probability weighted Wind Catcher by 50 percent probability.

So in this additional scenario that we ran for OPC, which I can describe the results, I think they are in my testimony, we incorporated that. We also looked at a whole range of projects depending on what they were listed in terms of permitting and such and assigned probabilities ranging from 10 to 30 to 50 percent. And that led to an additional 9.6 gigawatts more wind in the OPC scenario that we ran.

Q. 9.6 gigawatts over what time period?

A. Well, over the entire time period. It was just added into the ABB numbers, but it was based on the near-term projects. So just another clarification from something said in the opening, the ABB model looks at known projects in the coming years and looks at this list in terms of what's been permitted and so on, but then out in the future it also looks at what they call generics that are being built for economic purposes.

So to characterize no more wind's coming into SPP I think is inaccurate. There's substantial more wind coming in just in the generic modeling, and I can find that number if it's helpful, but -- so they have a generic modeling, they have the specific projects, and then we ran a scenario on OPC's behalf that looked at adding even more wind and what does that do to pricing, and that dropped prices 5 to 7 percent. But our low market case was 20 percent lower, so well within that range. The savings went down some but not a large amount, and I can get you the specific numbers.

Q. Okay.

A. Would you like those numbers?

Q. Sure. Are they in testimony somewhere?

A. I believe -- I believe they are in data request responses, but I'm thinking specifically whether it's incorporated in my surrebuttal. I believe it is. Let me confirm here. Yes, actually, it is. Page 26 of the surrebuttal, top of the page, and you can see the additional wind additions and retirements led to an average market price reduction of 5 to 7 percent. It dropped the savings 44 million to -- from 325 million to 281 million.

CHAIRMAN HALL: I have no further questions. Thank you.

COMMISSIONER KENNEY: No questions. Thank you.

COMMISSIONER RUPP: None for me.

JUDGE BUSHMANN: Recross based on Commissioner questions. Staff?

MS. FORCK: Briefly, your Honor. Thank you.

RECROSS-EXAMINATION BY MS. FORCK:

Q. Mr. McMahon, do you recall the Chairman asking you -- pointing you to page 44 of your surrebuttal testimony?

A. Yes. Yes, I do.

Q. The sentence that he directed you to starts on -- well, I guess it starts on line 1, but starting on line 2 it says, Asbury is projected to not generate enough revenue in the SPP market to cover just its variable and fixed operation and maintenance costs without considering any

additional capital for three years under many of the stochastic end points. Did I read that right?

A. Yes.

Q. So I want to point to the last part of that sentence, under many of the stochastic end points. Which end points are you referring to?

A. Well, I think we can see the end points in Figure 11, and, you know, the end points just for clarity were -- these are the scenarios that combined the CO2 price uncertainty, the high and low market price uncertainty, and the basis congestion uncertainty.

So as you can see in Figure 11, in the cases that start with no CO2, base market, high congestion and move to the right, those are negative EBITDA for Asbury, but in the cases where there is high market, you have a positive EBITDA.

MS. FORCK: Thank you. Nothing further.

JUDGE BUSHMANN: MECG?

MR. WOODSMALL: No questions.

JUDGE BUSHMANN: Division of Energy?

MR. POSTON: No questions.

JUDGE BUSHMANN: Renew Missouri?

MR. LINHARES: No questions.

JUDGE BUSHMANN: Sierra Club?
MR. ROBERTSON: No questions.
JUDGE BUSHMANN: Joplin?
MS. BELL: Just a couple questions.
RECROSS-EXAMINATION BY MS. BELL:
Q. I believe Chairman Hall asked you some questions and we've been talking exclusively about SPP. Are you authorized to speak on behalf of SPP?
A. No.
Q. Do you have any official affiliation with SPP?
A. I do not.
Q. Are you aware of anyone who will testify in this case or who I can direct questions to that does have authority to speak on SPP rules or regulations or plans for the future?
A. Not that I'm aware of specifically. Mr. Mertens would be probably the closest representative from the company.
MS. BELL: Thank you.
JUDGE BUSHMANN: OPC?
MR. NATHAN WILLIAMS: Thank you.
RECROSS-EXAMINATION BY MR. NATHAN WILLIAMS:
Q. Do you remember Chairman Hall asked

you about the SPP queue and you indicated that Empire had done some additional modeling where it had increased the amount of wind generation in the SPP footprint?

A. Yes, I do.

Q. You indicated that Empire had assigned some probabilities to -- or somebody had assigned some probabilities to wind projects being built and that influenced, I guess, how many gigawatts or megawatts were included in the modeling?

A. Yes.

Q. What probability did Empire assign for this project in that modeling?

A. This project was not included in that modeling.

Q. Why not?

A. Simply because it wasn't -- it was not.

MR. NATHAN WILLIAMS: No further questions.

JUDGE BUSHMANN: Redirect?

MR. COOPER: Thank you, your Honor.

REDIRECT EXAMINATION BY MR. COOPER:

Q. Mr. McMahon, you were asked several

questions about the, I think what you described as the build schedule that was in your -- was that in your affidavit; is that correct?
A. Correct.
Q. And you talked about the retirements that could have been in there and, in fact, were shown on DR responses, correct?
A. Correct.
Q. Were all those retirements included in the model runs?
A. Yes.
Q. You were asked questions about capacity factors for wind projects, I think, or actual wind farms that related to 2014, 2015 and 2016. Do you remember that?
A. Yes.
Q. Are those directly relevant to what capacity factors would be for wind on a going-forward basis?
A. If you're referring to Elk River and Meridian Way projects as being relevant to evaluating the 600 megawatts of new build wind, I would say no.
Q. And why is that?
A. I think the characteristics, as I

explained in my response, of the new wind are very different than what would be considered traditional wind in years ago with higher turbines and more efficient turbines, better siting and a range of other factors.

Q. You were asked, I think, a general question about whether Kansas capacity factors for wind are generally better than Missouri. Do you remember that?

A. Yes.

Q. I think you said yes. How about for the RFP results that have been -- that you've reviewed, are capacity factors better in Missouri or Kansas?

A. I haven't reviewed specifically the RFP results other than what was incorporated in the modeling.

Q. You were asked about CRA's role, and I think you focused on four words: Review, identify, translate and explain; is that correct?

A. Correct.

Q. What do you mean by review?

A. Well, there was hundreds of modeling runs completed for this analysis, and in every one of these modeling runs there was up-front analysis or review of inputs, and there was review on the back end of all of that analysis as well. So review of the analysis, review of the responses to the hundreds or -- of data requests, and obviously review and development of the testimony.

Q. How about identify, what job are you talking about there?

A. Identifying issues, issues with the modeling, issues with any of the results that came out that looked different than expected that needed to be reviewed again or just in a general QC process.

Q. Translate?

A. Translate, as part of the process there was a lot of interaction with the various parties on these results, again, thousands of runs, concluding all the stochastic analysis, and lots of explanation that needs to come out of this to translate this into something like the line chart that we've been talking about. That has a lot of information embedded behind it. I think it's a useful tool for looking at how this plan impacts cost and risk.

Q. And that's the explain portion?

A. Yeah. Explain I think is what we're

doing here and taking the -- taking all those translated datas and putting them into comm-- into a communicated form.

Q. And this is just kind of a definition. I think you, in answering some questions about what units were left on or not left on in the modeling runs, you referred to some being left in for black start purposes. What does that mean?

A. That's generally just reliability, and if the system goes down, that certain units have to be available for that to bring the system back up.

Q. I think you answered to one of the questions that you didn't offer opinion to Empire on the closing of units. Do you remember that?

A. Could you refresh me?

Q. Yeah. There was a question about whether you offered any opinions as to the units that Empire had decided to allow to retire, that sort of thing. Do you remember that now?

A. Right.

Q. Did you consider the selections that had been made by Empire? I guess the real question is did you have any contrary opinion to what was

done?

A. No, we didn't have a contrary opinion to what was done, but we did review it.

Q. You were asked some -- hold on. Let me turn to my own testimony before I get too far down the road here.

You were asked questions about negative pricing and the possibilities of that. I think in your surrebuttal testimony on page 33 you have a chart where you observe some negative pricing incidents; is that correct?

A. Yes.

Q. And how would you describe what you discovered there?

A. Well, I think negative pricing is much more common in real time, which is -- the market monitor for SPP described that, and in day-ahead we see a much lower incidence of negative pricing. This is when units are being scheduled in to meet load.

So I think you're -- and day-ahead is really how we model. So I think the bigger question was, well, did you incorporate negative pricing in your modeling? And the answer is, absolutely, yes. It was factored in to the nodal basis adjustments to the ABB price curve that we describe in our testimony by looking at the history of basis differentials, and those -- those incorporate negative pricing.

Q. And I think this chart actually is specific to Elk River, correct?

A. Correct.

Q. But incident of -- and maybe you said this already, but incident of negative pricing would be impacted by specific locations node by node?

A. Correct. Depending on the amount of resource in that region, the amount of congestion, the amount of load.

Q. You were asked questions about, I think, potential changes in SPP regarding dispatchability of wind. Do you remember that?

A. Yes.

Q. Did you model wind as dispatchable?

A. We modeled wind as a shaped resource.

Q. So give me some more explanation about what you mean by that.

A. Well, wind has a shape to it, an average shape to it. So it's not dispatchable in the sense that it's turning on and off specific to a price signal per se. It's a -- it's modeled as a shape.

Q. And then there was some discussion about curtailment. Curtailment, is that included in the modeling?

A. Yeah, curtailment's included in the modeling to the extent that it's accommodated in the scenarios that we ran around the basis differentials, so in cases where you have different levels of basis, but it's not modeled explicitly as curtailment in the model.

Q. You were asked some questions about, I think, the history of PTCs, 1994, and you made a statement that capital costs, I assume you meant for wind, hasn't been near what it is today over that time period. What did you mean by that?

A. Well, I meant that capital costs have declined substantially, and this is one of the reasons that Empire filed at GFSA because capital costs are so much lower today. And the intersection of the expiring PTC and very low capital costs that have been proved out through the RFP process has really made this a very different situation today than it was, you know, in the past when we had PTCs. I mean, consider the fact that you can -- you can buy a wind farm today for a price that's, on a capital cost basis, that's lower than a combined cycle generating unit with no fuel cost. That's pretty compelling. And that's not true of the past.

MR. COOPER: That's all the questions I have, your Honor. Thank you.

JUDGE BUSHMANN: Thank you for your testimony, Mr. McMahon. You may step down now. You're excused.

That's all we're going to do today. I had intended to stop at five anyway. Obviously we're not where I anticipated to be as far as the schedule. So as a result, for tomorrow I think we'll start at 8:30 a.m., and if our pace doesn't pick up, I would ask the parties to be prepared to go late tomorrow night to try to keep on schedule.

That's all I have. We'll be in recess until 8:30 tomorrow morning.)

(WHEREUPON, the hearing was recessed at 5:27 p.m.)

I N D E X

EXHIBITS INDEX

EMPIRE'S EXHIBITS

C E R T I F I C A T E

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

I, Kellene K. Feddersen, Certified Shorthand Reporter with the firm of Alaris Litigation Services, do hereby certify that I was personally present at the proceedings had in the above-entitled cause at the time and place set forth in the caption sheet thereof; that I then and there took down in Stenotype the proceedings had; and that the foregoing is a full, true and correct transcript of such Stenotype notes so made at such time and place.

Given at my office in the City of Jefferson, County of Cole, State of Missouri.

Kellene Feddersen

Kellene K. Feddersen, RPR, CSR, CCR

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