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In the Matter of an Investigation Into an Incident in December 2005 at the Taum Sauk Pumped Storage Project Owned and Operated by the Union Electric Company, doing business as AmerenUE.	) Case No. ES-2007-0474

COLLEEN M. DALE, Presiding,
CHIEF REGULATORY LAW JUDGE
STEVE GAW,
COMMISSIONER.

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P R O C E E D I N G S

JUDGE DALE: All right. Let's go back on the record in Case No. ES-2007-0474. And we are ready for Staff to inquire of the next witness. Mr. Reed.

MR. REED: Yes, Judge, thank you.

DIRECT EXAMINATION BY MR. REED:

Q. Good morning, Mr. Schukar. My name is Steve Reed. I'm with the General Counsel's office.

A. Good morning.

Q. Would you -- would you give us your name and spell it, please.

A. Shawn E. Schukar, S-h-a-w-n, E., S-c-h-u-k-a-r.

Q. What -- what is your job and your duties currently?

A. I'm currently the vice president of AmerenEnergy which is responsible for optimizing the load and generation of AmerenUE.

Q. Who's the president of AmerenEnergy?

A. Tom Voss.

Q. How long have you been the vice president?

A. A little over two years.

Q. I guess I should say a vice president,

would that be more accurate? Are there other vice presidents?

A. There's only one in AmerenEnergy.

Q. All right. When you -- you indicated that you would maximize, I guess, the assets of AmerenUE; is that accurate?

A. Optimize.

Q. Optimize. Tell us how you do that.

A. We look at the load requirements that we have from AmerenUE which is a regulated load plus some of the wholesale contracts that we have and any other obligations that may have been made, and then we look at the generation assets and also the market for energy to determine where is the best -- what is the best way to put the portfolio together to minimize the cost to serve the load and to maximize the opportunity associated with off-system sales.

Q. What do you do with the trade floor? What is the trade floor?

A. The trade floor is a group -- that's part of the AmerenEnergy group that is responsible for placing the assets into the wholesale marketplace.

Q. When you say "wholesale marketplace," what -- what does that mean? Where is the power

going?

A. The power could go several places. It's -- it's buying and selling in -- in the wholesale marketplace. One of the places it would go is within the Midwest ISO. But it could also go to other entities such as Entergy or out east to PJM or up to the north -- to companies up north or down south like a southern company or someplace like that. So basically anyplace in the eastern interconnect.

Q. Tell us who works for you.

A. Directly?

Q. Yes.

A. I have three individuals who work for me. One is responsible for the trading operations, one individual is responsible for the dispatching operations, and then -- and then the third individual is responsible for the analytical support and analysis for both the dispatch and the trading operations.

Q. And who's the trading person?

A. Jaime Haro.

Q. Can you spell it for us?

A. Jaime is J-a-i-m-e, Haro is H-a-r-o.

Q. And what about dispatch, who's that person?

A. Jim Vaughan.
Q. And the analytical support person?
A. Ron Rickman.
Q. What about Steve Schoolcraft?
A. Steve works for Jaime.
Q. Okay. There are power supply supervisors on this trading floor, aren't there?
A. Yes, there is.
Q. There are five, as I understand it. Do they work for you?
A. They -- they work under Jim Vaughan.
Q. Under Jim Vaughan under -- in dispatch, correct?
A. Correct.
Q. In -- in the fall of 2005, who was your immediate boss?
A. Andy Serri.
Q. And today it is Tom Voss?
A. Tom Voss, yes.
Q. Can you tell us a little bit about the prior positions you've had with any Ameren entity?
A. When you say -- just to make sure I'm clear, because I was with Illinois Power for most of my career, and that is now an Ameren entity. So do you want me to go through all the -

Q. Yeah, let's have that too.

A. Okay. Well, when I started with the -- with the company, I was in the plant operations and worked at the Hennepin power station, went into generation analysis group and then went back to plant operations for some period of time.

After I left plant operations, I went into generation dispatch and trading and marketing. Subsequent to that I was responsible for retail risk management. After I did the retail risk management, I went into transmission operations and then became responsible for transmission operations, gas LDC operations and generation dispatching.

Then I was made responsible for the transmission distribution field operations for the company, and that's when Ameren bought Illinois Power, and was responsible for that for some period of time. Had a short period of time where I was responsible for interaction with the RTO and getting prepared for RTO operations before I was put in my current position.

Q. At -- at one point in time you were an engineer at the Hennepin station, correct?

A. That is correct.

Q. And did you -- how long were you an

engineer there?

A. I think about two years.

Q. Do you remember during that period of time having any contact with the trading group, the group who now works for you?

A. No.

Q. No contact that you recall?

A. Not at that time, no.

Q. Of course, we've had several witnesses over the past few weeks, and one of the things that we've talked about is when Taum Sauk was run, it was generally determined by MISO when that would take place; is that accurate?

A. Somewhat.

Q. Tell us.

A. There's two aspects to Taum Sauk, and when you say "when Taum Sauk was run," if you're talking about when the unit was generating power --

Q. Yes, that's what I mean.

A. And for that period, in general, the Midwest ISO would give us indication of when that plant should be run.

Q. We've heard it -- we've heard the word "award." Is that the correct term?

A. The Day-Ahead award, yes.

Q. Yes. Can you describe what the Day-Ahead award is?

A. Okay. When we offer -- when you offer generation into the Midwest ISO, they run an algorithm, and what comes out of that algorithm is what is called an award. And so they will tell us for these hours we would expect you to generate at these levels.

Q. Okay. Regarding the pump-back, do -- does AmerenEnergy determine the precise times that that will take place?

A. In general, yes.

Q. In general. All right. That's not a MISO -- that's not part of the MISO algorithm, or is it?

A. It's not part of the Day-Ahead algorithm because the Midwest ISO really never figured out how to deal with negative generation.

Q. Okay. We heard some testimony about factors that go to MISO for them to use in this algorithm to determine when Taum Sauk would generate, for instance.

A. Uh-huh.

Q. Are you familiar with what those factors are?

A. Generally, yes.

Q. What are they?

A. They would include the minimum emergency operating level, the minimum economic operating level, the maximum economic operating level, the maximum emergency operating level. Since Taum Sauk was a fuel-limited resource, it would also include how many megawatt hours could be generated by the plant for that period of time.

It would also indicate how many times a unit could be started or stopped in a given day, if there was any cost associated with startup, and like for a -- well, for Taum Sauk, that's not -- that's not an issue. But then also it includes the price that the -- the plant would be available and also how quickly it can ramp up and down.

Q. Would those factors be determined every day?

A. Yes.

Q. In other words, you would -- you would make an assessment of what -- what has changed, for instance, with Taum Sauk and you would provide that information to MISO?

A. Do that for all of our units, yes.

Q. All right. That brings me to -- to the

question of the operating level of the Taum Sauk reservoir. Back in the fall of 2005, are you generally familiar with what that level was? I mean the elevation level when the pool was full.

A. If you're asking for a number, I can't --

Q. All right.

A. -- give you what the number was, no.

Q. Generally, the factors that -- that were provided to MISO, I would think they would include the total power that could be generated by Taum Sauk on a given day?

A. That is correct. When I -- when I said that it's a fuel-limited resource --

Q. Yes.

A. -- and that we would tell them how many megawatt hours --

Q. Right.

A. -- that's what that was based on.

Q. All right. So if -- if the reservoir were being operated at a lower level for a period of time than it -- than it usually would be operated --

A. Uh-huh.

Q. -- that information would have to be provided to MISO, would it not?

A. It would only be provided to them through the offer of how many megawatt hours were available.

Q. Okay. So if the operating level of the reservoir were changed --

A. Uh-huh.

Q. -- that information would -- would, I guess, still exist, would it not, in the records of those offers that AmerenEnergy made to MISO?

A. In the offer parameters?

Q. Yes.

A. Yes, uh-huh.

Q. All right. When Taum Sauk is scheduled to generate, do you generally know where that power is going?

A. It's going to the grid.

Q. Just into the grid?

A. Yes.

Q. All right. You can't be any more specific about where it's gonna go, I guess?

A. No. In the interconnection, whenever you generate, you really don't -- you can't trace the electrons to say an electron generated at a plant ends up at a load somewhere else.

Q. On -- but on -- on any given day, you

would -- you would know what your -- I guess what your peak load need is going to be and -- and how you're gonna meet that, wouldn't you?

A. Not exactly. We would know that we would have enough generation assets to meet our peak load requirements, but when you offer it into the Midwest ISO, it looks at the economics. And so while I may anticipate that my generators -- the AmerenUE generators would have served the load, if there was cheaper resources that were available that could flow, those may be the resources that supply that energy.

Q. Do you know personally -- or I guess, have you heard about whether the factors that went to MISO with regard to the total power that Taum Sauk would generate was changed in the fall of 2005?

A. Yes.

Q. What do you know about that?

A. I know that they were decreased. The amount of total energy was decreased, I want to say in October. I don't know the specific time but I think it was mid to late October that the amount of energy available from the Taum Sauk units was reduced.

Q. And what if -- what if you reduced the

total power that you expected to generate but, in fact, you generate more power than you had anticipated; what would happen?

A. I'm not following your question. I'm sorry.

Q. As I understand it, the -- well, maybe I don't understand it. But as the reservoir drops, the people on the trading floor, for instance, would keep track of the level of the reservoir as would people at the Bagnell facility, and if the -- if the sensors are off, if they're -- if they're inaccurate, you may actually generate -- I mean, the level may actually drop farther than what the sensors indicate the level of the water really is. Do you follow me?

A. Not exactly. I'm sorry.

Q. I guess -- I guess maybe the question is, do you keep track of how long you're gonna -- you're gonna generate the Taum Sauk facility using the elevation level of the water or do you -- do you measure the total power that you've generated and then stop at a certain point?

A. Oh. We have a -- a indication on the level of the Taum Sauk reservoir, and so we would be monitoring that level to determine how much we would expect to come out. And so if the level was somewhat

lower because, you know, we weren't operating in the efficient mode, we were operating in the maximum mode, then you may not get as many megawatt hours out.

And so the traders would monitor that as well as the dispatchers to monitor when they thought that the unit would be coming off and how that would affect the amount of megawatts we would have to put into the market.

Q. Okay. Now, did MISO -- was -- if Ameren had plenty of power to meet its -- its needs for a particular day but there were opportunities for an off-system sale of some kind, would MISO assist in scheduling that sort of sale?

A. The Midwest ISO would clear the power into the market. And so if there was more generation from the AmerenUE generation than what was needed to serve our load, then that excess, if it was economic in the marketplace, would be sold into the MISO market.

So they would give us a -- as we talked about before with the Day-Ahead, they would give us a schedule based on where it was economic Day-Ahead. Then in the realtime, they would dispatch the units based on what the economic factors were in the

realtime market.

Q. So could -- could you -- could you know generally a day ahead, then, that you were gonna have opportunities for -- well, I call it off-system sales?

A. I could anticipate. We -- we get the Day-Ahead clear generally late in the afternoon. So for tomorrow by, say, five o'clock this afternoon, I will -- I will have a schedule on what's going to happen, both for my load and my generation for the next day.

Q. On one of those days where -- where AmerenUE generates more power than it needs and it goes into the MISO grid and it is sold to somebody else who needs it, tell us how -- tell us how -- I think you call it settlement, tell us how everything is settled in terms of who pays who, where the money goes.

A. If it's a MISO transaction and we clear in the MISO and so we have excess generation, that generation that was cleared to the Midwest ISO, the Midwest ISO pays us for.

Q. Pays you --

A. So it comes from the Midwest ISO.

Q. Okay. And by "us" you mean

AmerenEnergy?

A. Ameren -- well, it goes to AmerenUE.

Q. Okay. Does it come through the Ameren --

A. No. We transact on behalf of AmerenUE. It's all done under AmerenUE.

Q. Okay. All right. Now, what if it's not a MISO -- you can tell that I'm a little slow with a lot of this stuff, so I appreciate your patience. But what if it's not a MISO transaction, are there other transactions?

A. Yes. Their -- if we sold excess into Entergy because that is not part of the organized market, then we would schedule power to Entergy, and we would have costs associated with not only the Midwest ISO but also potentially transmission on the Entergy system.

And then whomever the counterparty is down in the Entergy area, they would be responsible for paying for -- so say the counterparty was Constellation, Constellation would pay us for the energy at a pre-agreed-upon price.

Q. Thank you. Are you familiar with the Joint Dispatch Agreement?

A. Yes.

Q. Can you tell us what that is?

A. The Joint Dispatch Agreement -- I'll give you my best --

Q. That's fine.

A. -- understanding of it because I'm not completely aware of it, but it was an arrangement that was put in place where we jointly dispatched the assets that were previously CIPS assets and AmerenUE assets as a joint pool.

And then once -- and so we would -- we would dispatch them against the load obligations of the unregulated side of the business and the -- and the AmerenUE. And then there was an after-the-fact accounting allocation of the -- the generating unit cost.

Q. And then the excess power that would have been produced by AmerenUE, for instance, that was -- that would have been -- let's say AmerenUE -- the assets are dispatched jointly but AmerenUE is producing more power that day than it would need --

A. Uh-huh.

Q. -- and then the Illinois facility doesn't need it either so it could be sold off-system, correct?

A. That is correct.

Q. Then how would you settle up who gets, I guess, the profit from that, whether it be the Illinois or the Missouri entity?

A. Off-system sales margins under the Joint Dispatch Agreement were allocated -- it changed, if I remember correctly, in 2006, but previous to that there was an allocation based on the load of the two entities.

And so if there was -- you know, if it was a 50/50 -- and I'm just making up numbers here, but if there was a 50/50 split of the load on both sides, it was equal load, then any off-system sales margin would have been split 50/50 between the two sides.

Q. I would think that AmerenUE can make its native load requirements without the Taum Sauk facility. It's -- it's been done for a couple years and even during this hot weather, Ameren could do that, correct?

A. They can now, yes, that is correct.

Q. What do you mean by "they can now"?

A. Well, remember we purchased some -- some peaking facilities that give us additional capacity from what we had previous years. And so having that excess capacity means that we have enough generating

assets to do that.

Q. What about back in the fall of 2005, was Taum Sauk necessary to meet the native load requirements?

A. When you say "necessary," if you're talking about for that period of time, I would -- my estimation is probably not. The fall period is generally a low-load period. And so during -- during those periods of the year we generally have excess capacity, a significant amount of excess capacity. And so to remove 440 megawatts from the -- from the capacity that we had available probably wouldn't have been a big issue.

Q. If -- and so if -- if Taum Sauk facility were generating every day, that would -- that could be going to sales off the system, off the AmerenUE system?

A. It could, yes.

Q. In your position, are you familiar with any of the pressures that the plant operators feel to keep these generating assets going?

A. I'm not sure what pressures you're talking about, sir.

Q. Do you think they feel any pressure from the trading group or from AmerenEnergy to keep these

plants operating no matter what?

A. No.

Q. Earlier in the hearing, we had an e-mail that we talked about that Mark Birk had sent a group of his people. It's marked as No. 44, and I think I have a copy here I'd like to show you. May I? Mr. Schukar, you've had a chance to look at Exhibit 44, haven't you?

A. Yes.

Q. The highlighted portions that -- those were my highlights, by the way. It indicates here that "ESO in trading will generally push to keep a unit on." Would that be your group?

A. Well, ESO was a slightly different group but I think that the folks that he was referencing would be the folks who are currently in our group.

Q. That would -- that would be trading anyway, correct?

A. Trading and dispatching.

Q. All right.

A. I think the dispatching portion was probably where he was focusing.

Q. Would you agree with his characterization of the ESO and trading group pushing to keep units on?

A. With a qualifier.

Q. What's that?

A. We -- we will always look to do what is optimal with the assets into the marketplace. We will push to do what we think is most economically profitable, but that entails that we view the operations of the plant and our understanding of those operations of the plant to the extent that if we know there's a safety or reliability issue, it makes absolutely no sense for us to push to keep those units operating because of the long-term implications.

Q. Richard Cooper who ran the -- who is the superintendent of the Taum Sauk plant, when interviewed by the Missouri State Highway Patrol, indicated that in the past he had felt pressure to keep the plant running and had been overruled on issues to keep the plant running. Are you familiar with anything like that at the Taum Sauk facility?

A. I am not.

Q. Are you familiar with any disagreements between your group and the plant operators with regard to running any plant?

A. Any disagreement with running?

Q. Yeah, with -

A. I think I need to clarify what your question is.

Q. All right.

A. Because if it's an operational issue, I would say no.

Q. Have there ever been occasions where the people who work for you have come to you and said we have a disagreement about an outage for a plant and we need a resolution?

A. Timing of an economic outage, yes.

Q. With regard to timing?

A. Uh-huh.

Q. When Steve Schoolcraft testified, I asked him about an e-mail that he had sent. It's Exhibit No. 37. Jeff Scott had -- had sent an e-mail to Mr. Schoolcraft and said, "We need to do some work at Taum Sauk involving disabling the seal water lines on both units."

And Mr. Schoolcraft's reply was with regard to when this outage would take place. "We would be okay with this as long as you are 100 percent sure both pumps will be available by the time we need to pump back Monday night."

And my question to you is, is it generally the policy of your group that the plant

operators need to be 100 percent sure with regard to when an outage is going to start and finish?

MR. BYRNE: Mr. Reed, could he look at the document you're referencing? I don't think he's ever seen it before.

BY MR. REED:

Q. Mr. Schukar, could you answer my question?

A. Could you repeat the question?

Q. Is it generally -- is it generally the policy of your group that you need a 100 percent assurance that an outage would start and stop at a certain time?

A. No.

Q. Do you feel -- would you agree with me that Mr. Schoolcraft's reply e-mail would put pressure on the plant operators?

A. It would put pressure on the plant operators to accurately portray what they can or can't do.

Q. Mr. Schukar, can you give us an average -- can you give us an average revenue amount for running the Taum Sauk facility at, let's say, full capacity for any given day, can you give us a ball park about how much revenue would be produced?

A. The price varies so much and the amount of times that it runs, that would be almost impossible.

Q. Because the prices change so often --

A. Uh-huh.

Q. -- I guess, you -- it would vary over time --

A. Significantly.

Q. -- and from season to season probably. But when you -- when you -- when you do your own calculations to determine whether Taum Sauk would be profitable to run at all, you would have to have some idea, I would think, of what -- what you're going to get for the generation mode versus -- or less what it's gonna cost to pump it back full; is that the kind of thing you look at?

A. That is correct.

Q. Is there any -- is there any, I guess -- is there any average of those kinds of numbers that you look at to determine whether it's gonna be profitable?

A. No, because every day you have to look at what's the cost to pump versus what is the revenue that you think you would get from that.

Q. If Taum Sauk were not operated for a day

or two days consecutively, what would you -- what would you in your experience suppose the market would be like for those days?

A. Taum Sauk is relatively small when it comes to the MISO footprint, and so I don't view that it has a -- a large impact upon the prices.

Q. I'm talking about in terms of whether it's economical to run it or not. Like there's a day when Taum Sauk would sit idle; what do you suppose the market would have been like that day?

A. One of two things: One, you would have had either pretty low on-peak prices, or you would have had very high off-peak prices.

Q. Can you -- can you tell us why Taum Sauk would be generating every day in months like October, November and December? What sort of load do you suppose it would be meeting?

A. When you say what kind of load would it -- once again, when we dispatch our system into the MISO, we bid in the load and we offer in the generation, and then the MISO clears it all. And so it would have been economic for it to have been into the market on those days that it would have been running based on what we would have anticipated the cost to generate would be.

Q. I guess what I'm -- what I'm thinking about is on those months, October, November especially, I wouldn't think of those as being air conditioning months, for instance, or generally peak months. October's a shoulder month; isn't that what you call it?

A. Uh-huh, yes.

Q. So if AmerenUE didn't need that power, that would generally be going into MISO to be sold somewhere else?

A. When you say it doesn't need that power, remember, it's an economic stacking of the power. And so if we had excess power available, then the excess power from whichever unit was the higher cost units would be going into the MISO for off-system sales.

Q. Okay. I understand. The cheaper units need to run first --

A. Uh-huh.

Q. -- right? All right. In the fall of 2005 were you aware of Taum Sauk engineers, in particular, Mr. Bloomer calling Steve Schoolcraft about getting an outage to repair the gauge piping in Taum Sauk?

A. I was aware that there was a need to

have an outage with Taum Sauk. I don't know who made the calls.

Q. Were you aware of what in particular needed to be done at Taum Sauk?

A. To -- to a general extent, yes.

Q. Is that something that you're generally involved in day to day?

A. No.

Q. When would you get involved?

A. Generally I will get involved if there is an issue that we're trying to arrange that may cause balance between several different outages or something like that. The guys may ask me about it, but in general, that's handled by folks like Steve and Jim and Jaime.

Q. In the fall of 2005 did your group have a policy with regard to outage and how they would be requested and scheduled?

A. There was a communication coordination document.

Q. And what does that mean, what would be contained in it?

A. Well, basically, it would -- it would outline -- excuse me -- it would outline the communications that would take place between plant

personnel and the dispatching and trading personnel to determine what was available to place into the marketplace, what kind of parameters and limitations we had on the equipment, if there was any outages that were expected, and then a coordination if we needed to schedule something off from an economic of when we would get that schedule off.

Q. Is there -- is there now a written protocol of some kind that's followed for outages?

A. When you say "written protocol," that protocol is a similar communication protocol and how we coordinate. We have several procedures that outline different things that we do in the trading and dispatching function.

Q. Are weekends generally the best time for an outage at a plant?

A. Generally, yes.

Q. Is that when most of the repairs are done, then, on weekends?

A. That would be nice.

Q. Mr. Schoolcraft, when he testified, he mentioned a risk management policy that dealt with AmerenUE trying to meet its native load with its own generation. Are you familiar with that policy?

A. Yes.

Q. Tell us about that.

A. The risk management policy and the parameters that are in there are really to how we price the units that we offer into the Midwest ISO for serving our native load.

And so if we have 8,000 megawatts of load, we would make sure that we priced 8,000 megawatts or somewhere around there at a minimum, at the minimum cost of that generation to make sure that economically it would clear against our -- our generation -- or against our load, I'm sorry.

Q. Can you explain why the -- let me make sure I get this term right. The MISO node price for a plant for Taum Sauk, for instance, would be different than the node price for something like Rush Island?

A. Each node in the Midwest ISO has three aspects to it when it clears it in the Day-Ahead and the realtime, and it's called the locational marginal price. Those three different parts of the LMP are one, is the energy which is the same across the whole Midwest ISO footprint.

The second part is what's called congestion, and the third part is losses. And so if there's a difference between a generation node – two

generator nodes, the two things that would be different are congestion cost and potentially losses.

Q. And so that -- those kind of things would account for, for instance, if Taum -- if the node price for power from Taum Sauk were higher, it would be because it had -- there was less congestion?

A. If it was higher, generally yes, that would be true, there would be less congestion out of that plant.

Q. All right. Are the -- are calls that come into the trading floor, are they recorded?

A. Some are.

Q. What kind of calls are recorded?

A. The calls that I focus most on are transactional in nature. When we're doing transactions with counterparties, you always want to make sure that your calls are recorded.

Q. For instance, if there's a deal done over the phone, you want to have a recording of that?

A. Correct.

Q. What about calls from -- from the Taum Sauk plant, for instance?

A. I don't know if they're recorded. It's not an area that I would focus on.

Q. All right. How -- how does the

recording take place if something needs to be recorded? Is it automatic, everything is recorded and then it's later edited or how does it work?

A. It's -- the way our phone system is set up is that we have, if it's a recorded line, it's recorded; if it's not, then it's not a recording.

Q. Oh, okay. So the particular line you're talking about is, at the time would be the recorded line?

A. In general, yes.

Q. Would -- would, I guess, employees from Taum Sauk, for instance, call in, could they call in and be on the recorded line?

A. Depending on which individual they call and if that line was a recorded line or not, yes.

Q. Tell -- which people specifically would use the recorded lines?

A. The folks who I know would?

Q. Yes.

A. I know that all of the trading individuals, folks who do transactional natures, so it would include the realtime and the short-term traders who work for me.

Q. What about the power supply supervisors?

A. I'm uncertain if that's recorded or not.

MR. REED: I want to talk about the bonus or incentive compensation plan for the people who worked for you in particular back in the fall of 2005. Can we talk about that generally without going in-camera?

MR. BYRNE: Yes.

BY MR. REED:

Q. Back in the fall of 2005, can you explain -- let's take the power supply supervisors, for instance. Were they -- were they part of an incentive compensation plan?

A. They were part of a variable pay plan.

Q. What does that mean?

A. That means that a portion of their pay was a fixed amount, and then there was a portion of their pay that may or may not get paid.

Q. And what would be the criteria for the variable part of that?

A. There's really three aspects to it: One is the performance of that individual, the second part is the performance of the group and then the third part is the performance of the company.

Q. And how do you measure the performance of the -- the individual?

A. It's a multitude of things. One is how

they interact with the plants, you know, what kind of decisions are they making, how well they analyze situations. I mean, there's just a lot of different parameters that you look at, both from a behavioral perspective and from a personal goal perspective.

Q. What about is there -- are there goals of some kind for increasing the -- AmerenUE's revenue through off-system sales, for instance?

A. There -- there wasn't really a specific goal for increasing revenue.

Q. Were there general goals for increasing revenue?

A. The goals were really more focused around -- there's four areas of goals at the departmental level. One was a margin area, one was tied to the accuracy of trade entry, one was tied -- one area was tied to the -- how many of the economic megawatts were placed into the marketplace and sold, and the last one was around training.

Q. Would -- would the generation coordinators of the load plan be similar to what you've described here?

A. I believe so.

Q. And what about the traders?

A. Yes.

Q. They would all be similar?
A. (Nodded head.)
Q. Are there variations among them for different criteria?
A. In 2005 we were putting the groups together, so I don't remember specifically how much variation there was at that time. I know that today it's -- it's the same.
Q. Earlier I introduced an exhibit that's marked No. 34. I'm gonna hand you a copy of that. I know it's not very clear. I'll explain it a little bit, but this is a -- Staff had taken some information from AmerenUE and made these graphs indicating when the Taum Sauk plant was generating and the generation modes are the -- are those numbers above zero.
The pump-back were the numbers that go below zero, so that's megawatts on the left. And each of the blocks as you move across is a day, so the front page is September 16th through 30. There is some disagreement, I think, about its accuracy, but for purposes of discussion, I wanted to ask just a couple of things.
If you turn through the November 16th through 30 page, and you can see there were a couple

of days which I counted over the 19th and 20th where it would appear that this is accurate that Taum Sauk did not generate power, okay? So I have to ask you to suspend your disbelief and go with me on this.

And you -- if that were the case, if Taum Sauk did not generate for those few days in November, what -- what would you speculate would be the reason it did not generate?

MR. BYRNE: Object, it calls for speculation.

MR. REED: I can rephrase it.

JUDGE DALE: Yeah, maybe you should to suspend your disbelief.

BY MR. REED:

Q. What in your professional opinion would be the reason that Taum Sauk did not generate for those two days? Is that better?

A. Well, I think there's probably two reasons that could be: One is, if there was any kind of maintenance activity that may have needed to be done, or the plant was not economic during that day.

Q. With Taum Sauk -- if you look back through this chart, you can see that Taum Sauk is generating every day according to these graphs. In your professional opinion, why do you suppose that

those few days, the 19th and 20th, following such a long period generation day to day would not be economic?

A. Well, one of the reasons, it may be economic -- may not have been economic was the mild weather, plant generation to marketplace and prices were very low.

COMMISSIONER GAW: May I interrupt real quickly just -- I think he said, Mr. Reed, but would you mind giving me those dates that you're referring to again?

MR. REED: Yes, the dates were the 19th and 20th, November 19th and 20, 2005.

COMMISSIONER GAW: Thank you.

MR. REED: I have a couple of exhibits I need to mark, Judge. Can you give me a number -- two numbers, please?

JUDGE DALE: We're at -- we're at 54 and 55.

MR. REED: The first -- I'm sorry. Give me the numbers again. 54 and 55. 54 will have a date of November 19th, 2005. 55 will have the date November 20th, 2005.

(EXHIBIT NOS. 54 AND 55 WERE MARKED FOR IDENTIFICATION BY THE COURT REPORTER.)

BY MR. REED:

Q. Mr. Schukar, I've handed you Exhibits 54 and 55 which I believe are realtime market LMPs from the MISO web site for the dates November 19th, 2005, and November 20th, 2005. Are you familiar with these kind of numbers that MISO provides?

A. I am familiar with LMPs, yes.

Q. Okay. Now, we talked about -- a few minutes ago about Taum Sauk and whether it generated on the 19th and 20th of November, 2005. When you look at the numbers on these two exhibits, would this indicate to you that it would not have been economic to run Taum Sauk for those -- during those few days?

A. Remember, Taum Sauk cleared the Day-Ahead Market.

Q. Okay.

A. And so I'm -- I'm not certain what the Day-Ahead Market looked like to say that this was good or bad. But in general, when I look at these numbers, they're low enough that I would have expected them not to have generated this.

Q. Because of the -- there's -- when you look across these, there's really no -- like on No. 55 I really don't see any large jump in the numbers during any particular period. So the

pump-back may -- I guess, may make it cost-prohibitive because you're not making enough money in the generation mode, something like that, right?

A. Yes.

MR. REED: All right. That's all, Judge, except to move for admission of those two exhibits, 54 and 55.

JUDGE DALE: Is there any objection?

MR. BYRNE: No, no objection, I guess. Nobody -- nobody authenticated them or anything, but you know, go ahead, no objection.

JUDGE DALE: In which case they'll be admitted.

(EXHIBIT NOS. 54 AND 55 WERE RECEIVED INTO EVIDENCE AND MADE A PART OF THE RECORD.)

JUDGE DALE: Let me just reiterate what I said at the beginning of all of this about the evidence that will need to be used should any further proceeding happen. Once admitted here, doesn't necessarily make it evidence in another case. Whenever you're ready, Mr. Mills.

MR. MILLS: Thank you.

CROSS-EXAMINATION BY MR. MILLS:

Q. Good morning, Mr. Schukar.

A. Good morning.

Q. I told Mr. Byrne that I won't keep you on the stand as long as I did during the rate case. I'm sure you'll appreciate that.

A. I appreciate that.

Q. Did you have the opportunity to talk to Mr. Voss after his testimony yesterday?

A. No, sir.

Q. Okay. It's my understanding that his testimony yesterday was that -- at least during the fall of 2005, that Taum Sauk was essentially self-dispatched rather than bid into MISO; is that different from your understanding?

A. Partially true.

Q. Okay. Can you please explain?

A. Yeah. When we would do the pumping of the unit, we had to because the MISO did not have a good way of handling that into the -- into the Day-Ahead Market. We would run it realtime, must run it as negative generation. And so for that aspect of it, we had to dispatch it. Then the generation portion, we would generate based on the Midwest ISO price signals and we would offer it in Day-Ahead as I've explained previously.

Q. Okay. From the MISO's perspective,

how -- how is negative generation different from load?

A. It's really an issue of the nodes. And a load node which is where all your loads occur at, that comes in as a negative, and the MISO could deal with that. But because Taum Sauk has both a load and a generation at that point, their Day-Ahead model can't handle that negative generation. They can in the realtime, but they couldn't in the Day-Ahead model.

Q. So at least for generating purposes. And let me ask you this: Have you had the opportunity to either see, hear or read the transcript of Mr. Bolden's (phonetic spelling) testimony?

A. I have seen none of this.

Q. Seen none of that. Okay. It was -- well, is it your understanding that -- that at least through the fall of 2005, that essentially Taum Sauk was bid Day-Ahead routinely into the MISO?

A. Taum Sauk was offered Day-Ahead for generation into the MISO.

Q. Okay.

A. Generally speaking, that is true.

Q. Okay. And is the way that that process

works is that AmerenUE essentially commits that unit for the following day into MISO and if MISO decides to dispatch it, then AmerenUE has to have it ready to dispatch?

A. We offer the unit Day-Ahead -- into the Day-Ahead Market. The Midwest ISO then clears it and will give us an offer based on it being economic. Then they make the assumption, generally speaking, that that unit will be on and operating for the realtime market. That is not a requirement.

So if it cleared for the Day-Ahead Market for 400 megawatts and based on what the realtime prices were at, it wasn't covering the cost, we could make the decision not to dispatch it at that point, and then it's just an economic issue for us.

Q. Are there any -- any penalties involved in not dispatching under those circumstances?

A. Well, there's -- there's the economic risk that we take, but beyond that, no, as long as it's economic. If there's a reliability issue on the system and the Midwest ISO tells us that we need to run it for the reliability purposes, then we would run it absent the plant being unavailable.

Q. Okay. So in most circumstances -- and really, all my questions are gonna focus in on the

fall of 2005, and so if there's some different time in which things are operating differently, you're free to tell me about that. But really --

A. Okay.

Q. -- I'm not gonna preface every question by talking about that. So throughout that period of time, almost -- well, would it be the practice of your group to bid Taum Sauk in on a daily basis?

A. Offer it in on a daily basis?

Q. Offer it in, yes.

A. Yes.

Q. Okay. So that if someone for the plant were to call on any given day and say, can we take Taum Sauk out tomorrow, at that point it would have already been offered in for tomorrow?

A. Depending on what time they called.

Q. What time of day?

A. Uh-huh.

Q. Okay. But if that same person had called at the exact same time and said, how about the day after tomorrow, would the answer from -- from dispatch have been different?

A. Are you asking if there -- if there was a can-you-take-it-off-or-not question?

Q. Uh-huh.

A. Because the answer is the same in both cases. If they tell us that they need to take a unit off, we will take the unit off. If they say is it economic, then we would basically say, well, it may or may not be economic even if I have a Day-Ahead clear.

Q. But if -- if -- if at the time that the -- the -- that the person called from the plant and said, it's not an emergency but I need to take it out soon, from the perspective of offering units into the MISO, it would be more convenient to do it the day after tomorrow than tomorrow; is that true?

A. It may or may not be. That's -- that's not a given.

Q. Okay. And why is it not a given?

A. Well, tomorrow based on the information I have, it may be marginal. And you know, I'm making a dollar or two on it and the market has changed since the bids were put in and when we received the clears, you may go ahead and take it off because the following day may be warmer or may have a higher need and have higher prices. So it's not a given on any day that you can make that kind of assumption.

Q. Now, in the fall of 2005 Callaway was out for refueling; is that correct?

A. Yes.
Q. Do you recall when it came back on line?
A. No, I do not.
Q. Okay. Does the -- how significantly does it change the dispatch order of the remaining units when Callaway is not operating?
A. I don't know that it changes the dispatch. I --
Q. Okay.
A. Callaway is a cheap dispatch but remember that the dispatch was into the whole MISO market, and so that you're looking at a much broader group of generators than just the AmerenUE generation.
Q. Okay. So the question of whether or not Taum Sauk will -- would be called on any given day is not greatly affected by whether or not Callaway is operating; is that what you're saying?
A. The -- I'll preface it on one -- in general. That's true with the preface of if there is congestion, that would make that more likely in the area.
Q. Now, is congestion the kind of thing that changes from day to day, or is it fairly static?
A. It changes hour to hour.

Q. Hour to hour. Significantly?
A. It can, yes.
Q. Okay. And I think you testified earlier that congestion is one of the factors that goes into determining the LMP for a particular unit; is that correct?
A. It is one of them, yes.
Q. Do you still have Exhibits 54 and 55 in front of you?
A. Yes.
Q. Why, in any given hour would the -- well, let me ask you this: On the left-hand column there's some notations, and the bottom two are AMRN.TS 1 and AMRN.TS 2. Is it your understanding that's Ameren Taum Sauk 1 and Ameren Taum Sauk 2?
A. That is correct.
Q. Okay. Why would the LMP be different in a given hour for those two units?
A. As I explained before, there's the three aspects, the energy is gonna be the same depending on how they connect up to the system and how they're modeled in the MISO's model, what losses and what congestion may exist at those units may be slightly different even though they're at the same location.
Q. Okay. Is there calculate -- and this

probably isn't all that relevant, but is their calculation that accurate that the difference in losses between two units are essentially right next to each other, would show up in the LMP?

A. It's how they connect up to the system and where the flows go from. So if they -- if they connected up to a bus and they had a different connection point into a bus, they could be different, and we -- and we see that with several of our units.

Q. And on -- on Exhibits 54 and 55, these -- what are -- what are the numerical -- what are the -- are those dollars?

A. Based on what was provided to me, if these are LMPs, then these would be the locational marginal price which is in dollars per megawatt hour.

Q. Dollars per megawatt hour. For -- for each of those hour ending times?

A. Correct, and location.

Q. Okay. And what would -- what would drive that price to be negative?

A. What would generally drive a price to be negative is if there is more -- if there's a constraint and there's more generation in that area with the bounded constraints and they need to back down generations, that would cause it to be negative.

Q. All right. Is that -- is that common?
A. We see it quite often.
Q. Okay. Now, I think in response to a -- to a question from Mr. Reed, you -- you gave a hypothetical example of a transaction with Constellation; do you recall that?
A. Into Entergy, yes.
Q. All right. Okay. In order for -- well, first of all, were -- are transactions like that based upon any particular unit on the Ameren system -- AmerenUE system, or are they just sort of transactions in general?
A. I think that to say they're based on any specific units, that's probably not realistic because of the way the Midwest ISO works. It would generally be based on what our whole portfolio looked like and where we had linked that.
Q. Okay. So if you're -- if you're doing a transaction with Constellation, does that -- I'm not talking about the electrons, but the financial aspects of the transaction, does that essentially flow through MISO through Entergy to Constellation?
A. It depends.
Q. Okay.
A. Because we have -- we have contracts in

other areas, so it doesn't necessarily flow out of the MISO.

Q. Okay. So you could do a transaction like that without really having any contact through MISO?

A. Yes.

Q. Okay. And is there any way of knowing whether or not the Taum Sauk plant was involved in a transaction with Constellation, for example?

A. From an economic standpoint?

Q. Yeah.

A. Not really, and especially during that period of time.

Q. In order for output from any unit to be involved in a transaction like that, would it have to be at a time in which it hadn't been offered into MISO?

A. I'm not following your question. I'm sorry.

Q. Well, if -- if -- if you want to make a transaction with Constellation --

A. Uh-huh.

Q. -- that would -- that would have to come from the output of some plant or plants that's not actually giving output at that particular time into

MISO; isn't that true?

A. It could either come out of the MISO or it could come from some other location.

Q. Okay. And I'm talking about the transaction that you just described in which -- in which you're using a transmission path that doesn't go through MISO.

A. Okay. So I'm using a resource external to the Midwest ISO.

Q. Exactly.

A. Okay.

Q. So in that situation, would the -- would the power that you're selling to Constellation necessarily have to come from a resource that wasn't committed to MISO at that particular time?

A. Would the power have to come from -- that was not committed, no.

Q. Okay. So for example, you -- you -- on a given day in the fall of 2005, you could have offered Taum Sauk into the MISO and also used it to supply power to fulfill a contractual obligation with Constellation through a separate transmission path?

A. I could not do that.

Q. You couldn't do that?

A. No.

Q. Okay. Then explain why not.

A. Well, if I had -- if I had used that as a commitment to a transaction to Entergy, as we have described, then that resource is already taken. So I would have had to schedule it out of the Midwest ISO and provided that information to them.

Q. Okay.

A. And so I can't offer that as an additional resource to do that, and I would have had to must-run it in the scenario that you provided to make that transaction work.

Q. Okay. And so in the fall of 2005 when you were routinely offering Taum Sauk into MISO, you wouldn't have been making any external transactions based on Taum Sauk; is that safe?

A. In general our transactions are based on what our portfolio length is and trying to obtain a fixed price rather than a floating realtime price, getting some certainty around the -- the length that you had.

Q. Okay. So the -- the kinds of transactions that you're talking about are not really spot transactions, they're -- they're --

A. They're both.

Q. They're both. Okay. All right. Now, I

believe you testified in response to a question from Mr. Reed that you are aware that in -- in approximately October of 2005 that the typical maximum operating level in the upper reservoir at Taum Sauk was lowered by two feet; is that true?

A. I was aware that it had been lowered, yes.

Q. Okay. And -- and what is the change in megawatt hours available from Taum Sauk because of that drop in water level?

A. I think it's like 60 megawatts or something like that. 60 or 120, somewhere in there.

Q. Okay. So if -- if you -- if you ran Taum Sauk -- well, let me ask you this question: I believe you mentioned something about operating Taum Sauk in efficient mode versus -- versus maximum mode?

A. Uh-huh.

Q. Can you describe for me what those two modes are?

A. Well, Taum Sauk can operate up to like 220 megawatts, and you get more megawatt hours out in a short period of time, but over your whole level change, you would get less megawatt hours. So you could produce 220, but the total number of megawatt hours that you would get out the time you'd pumped it

down to the bottom would be less than if you operated in the efficient mode which would be 190 to 200 and you pumped it all the way down. So you'd get more megawatt hours but you wouldn't get as many in any given hour.

Q. And typically -- well, was there a typical mode of operation or was it typically operated efficiently or --

A. Typically efficient.

Q. Okay. So in efficient mode from a full pool at the two-foot-higher level, how many megawatt hours would you expect to get out of Taum Sauk?

A. I don't know the specific number.

Q. Okay. Do you know the delta between the efficient mode at two feet up versus two feet down, how much difference in megawatt hours would that entail?

A. No.

Q. You don't know that difference either?

A. No, I'm sorry.

Q. In terms of percentages, are we -- are we talking, you know, a couple of percent or is that a significant difference?

A. I don't -- I don't believe it's a huge amount. I mean, it's gonna be several megawatt hours

across the whole dispatch.

Q. Okay. Okay. And is -- if, for example, you're in efficient mode, is the -- is the generation constant as the level of water drops in the upper reservoir or does it become less over time as pressure drops?

A. If you have a higher level, you can get more megawatts than when it gets closer to being pumped all -- or at the lower level.

Q. And so there's sort of a curve as you go down --

A. Uh-huh.

Q. -- as you operate it?

A. That's correct.

Q. Okay. And do you know the difference between the number of megawatts when it's full as opposed to when it's nearly at the lower end of the cycle?

A. No.

Q. Okay. Now, is there any way to -- would there have been at the time, say, October 14th, 2005, for someone to say within a fairly confined range, this is the opportunity cost that we'll miss out on tomorrow or the next day or the day after if we take Taum Sauk out for -- for not an emergency but a

fairly quick scheduled outage?

A. Would -- would we be able to provide an estimate?

Q. Yes.

A. Generally, yes.

Q. Okay. And -- and have you -- have you seen an estimate of that?

A. No.

Q. Do you know whether one has been done?

A. No.

Q. Do you have the information available that you could do such an estimate?

A. Well, I think the difference is if I looked back now, you'd have to say I have perfect knowledge, where at that time you're making an estimate on what may or may not happen. You may have some forward prices that you could -- you could look at and say, well, at this kind of price here's what the expectations are.

The problem that you would have is if -- excuse me -- the information that's publicly available for that is 16 hours on and eight hours off are pumped and generation don't match with that. And so I'd have to make a lot of assumptions to even come up with anything.

Q. Okay. And that was really my question. Would you have maintained the forward-looking price information from that time?

A. We maintain -- we maintain forward curve information and it is available.

Q. Okay. So within -- within some kind of a range at least, you could make that estimate of what someone at the time would have -- would have estimated?

A. It could be a pretty broad range.

Q. And just give me a ball park; how broad a range do you think it might be?

A. If you're asking differences between days?

Q. Uh-huh.

A. Based on -- and we're talking '05 which is when we had the effects of the hurricane and the high gas prices. You know, some days dispatched in the $20 range, some days dispatched in the $100 range, so it could be fairly significant.

Q. Okay. And if there was an opportunity, though, to schedule an outage over a weekend, you would expect the weekend days to be closer to the bottom end of the range?

A. That's generally true. That's not

always true, but that's generally true.

Q. Okay. Now, are you familiar with the concept of red days, yellow days and green days?

A. Yes.

Q. Okay. And do you know who those are generally announced to the AmerenUE employees?

A. Well, we have a call every morning in that we kind of ascertain what's going on with the units. We look at the market prices and the system, what it looks like. And so every morning you make a judgment on what that's gonna look like.

Q. For the -- for the -- for that day --

A. For that day and the following day.

Q. And the following day. Okay. And that gets posted at some sort of intranet site so that employees can look at it?

A. Yes.

Q. Okay. And do -- do all plant managers and superintendents have access to that kind of information?

A. I do not know.

Q. Okay. So you don't know if it -- at what level of plant operations that kind of information extends to?

A. I assume it's available to all the -

all the plant and management level. I don't know how far down into the plant it goes.

Q. Okay. And what's the purpose of making that information available to them?

A. The reason that we have those different days is for folks when they're out in the plant and may be doing maintenance or whatever to be aware of the risk on the system. And if you've got maintenance that may put a piece of equipment at risk that could cause your unit to trip off or something like that, if it's a red day, you probably don't want to do those kind of things. If it's a green day, it's probably not as risky from a system perspective.

Q. And are plant managers and superintendents expected to, you know, follow the -- the power markets and to know what kind of market prices are generally around out there?

A. I don't know what expectations they have had outlined for them.

Q. Do you know whether any of them do?

A. Do I know whether any of them look at that, yes.

Q. Do follow market prices?

A. Yes.

Q. Okay. Now, in terms of dispatchers,

Mr. Bolding testified that he's a former plant operator and it's his understanding that most dispatchers are plant operators; is that the case?

A. Most are those, correct.

Q. Are any of them dispatchers from hydro plants?

A. I don't believe so.

Q. Now, do you recall Mr. Reed asking you about an e-mail from Mr. Schoolcraft to Mr. Cooper about the 100 percent assurance about whether the outage would be --

A. Yes.

Q. And I believe you testified that that might put pressure on an operator to accurately estimate outages?

A. Yes.

Q. Okay. Could it also pressure a plant operator to rush through an outage if they had underestimated?

A. I don't believe so.

MR. MILLS: That's all the questions I have.

JUDGE DALE: Thank you. DNR?

MS. VALENTINE: DNR doesn't have any questions for this witness.

JUDGE DALE: Thank you. Let's go ahead and take a break and come back with questions from the bench. Let's come back at 20 of.

(A RECESS WAS TAKEN.)

JUDGE DALE: Okay. We're back on the record and ready for Commissioner Gaw to inquire of the witness.

COMMISSIONER GAW: Thank you.

QUESTIONS BY COMMISSIONER GAW:

Q. Good morning, Mr. Schukar.

A. Good morning, Commissioner Gaw.

Q. Some of this has kind of been covered and I may repeat that. I hope I don't do it too often, but I wanted to ask you first of all a few questions that are in the -- in the area postMISO day two while the JDA was still in effect. That would have been the time frame that would have been relevant in 2005. Is that after -- after the first of April?

A. Correct.

Q. Okay. And -- but I also want you to give me a little bit of information on -- on what changed after MISO -- the MISO Day-Two Market went into effect so I can understand how -- how your-all's business changed in your department, okay?

A. Okay.

Q. In regard to that latter part, let -- let me ask you, in handling the dispatch of the units in your -- in your department, how -- how was that done as far as -- as far as the system was concerned with UE and the Illinois units? Just generally speaking, very generally.

A. And you're asking preMISO or postMISO?

Q. Preday two.

A. Okay. Preday two. I'll just give you general because I started in the trading function basically in line with MISO day two.

Q. Thank you. I didn't catch that this morning, I think, so your involvement began around the spring of 2005?

A. Correct.

Q. Okay. And where were you just before that again?

A. Well, just before that, I was doing MISO activities.

Q. Yes.

A. And then prior to that I was in field operations.

Q. Okay. What -- and what is field operations?

A. It's the folks who are out in the field, the linemen, the gas journeymen, things like that.

Q. Okay. Why in the world would you get involved with that MISO stuff?

A. Looked like an interesting opportunity.

JUDGE DALE: Seemed like a good idea at the time.

BY COMMISSIONER GAW:

Q. Okay. Go ahead, tell me about the preday two to the extent that you know.

A. Okay. Preday, two the -- the market was a physical market. Excuse me. And so inside the Ameren control area which would have included the AmerenUE and the Ameren CIPS, we would have had the load of those two territories, and we would have dispatched the generation unit to that. And then any excess above what would have been dispatched to meet the load would be sold in the market.

Q. Okay.

A. And we would physically schedule it so you would have to acquire the transmission, both on the Ameren system and then on any other system depending on where you sold it at, and schedule the power across that transmission to the counterparty and then sync it wherever the load was at.

In those instances, we could tell because it was just the Ameren system in essence, you knew exactly where your units stacked up economically against your load, and then when you dispatched off you would sell over and above your generation dispatch price.

Q. Okay. Was -- was there any information available in preday two in regard to market pricing in the Midwest -- in the ISO region?

A. The market information that was available, you could get some Day-Ahead kind of information.

Q. Where would you get that from?

A. Plats, probably, or somebody like that.

Q. Okay.

A. The broker markets and things like that. So that's where you would get that information at. And then in the realtime, you basically got that information from calling around to counterparties and finding out what people were willing to transact at.

Q. Okay. And those transactions, would you describe them in that time frame as being bilateral in nature?

A. Yes.

Q. Okay. Okay. Now, in regard to the JDA

which I think -- I think we've pretty much fleshed out, but the JDA from a financial standpoint in regard to the -- to the UE generators that were utilized to meet CIPS load, is that a fair way of saying it, is that -- is that an accurate characterization that that could happen?

A. It could, yes.

Q. Okay. So in that regard financially, how was that handled, if you know, on settlement?

A. Make sure I get your question correct.

Q. That's fine.

A. Are you asking if a UE generator was allocated -- excuse me, was allocated to the CIPS load --

Q. Yes.

A. -- what cost was used to transfer that over --

Q. Yes.

A. -- right? Okay. In general, system energy transfers were at cost.

Q. Okay.

A. So either direction.

Q. Either direction. What do you -- when you -- when you say "cost," what do you mean by that?

A. I want to make sure that I don't

misspeak here but here's my understanding: It would have been our incremental costs associated with that, so fuel, incremental O&M, if there's any incremental emissions costs or anything like that.

Q. Right. And as you said, if CIPS generation was allocated over to serve UE load, it worked the same way?

A. That is correct.

Q. Okay. Are you familiar with -- with generally as you net generation from UE and CIPS that might have been cross-allocated in whole or in part, are you familiar with from -- on a year-to-year basis, was -- was UE a net provider to CIPS or a net taker, do you know?

A. Are you talking just on an energy perspective? Because there's more than just the energy aspect to that.

Q. Why don't you break it down because I think that would be quicker.

A. Well, part of it you can see because of the energy transfers and you may have UE generation going over to supply CIPS load. But what you couldn't tell when you look at those things was that quite often the ancillary services, the spending reserves and the regulation, was provided from the

CIPS units.

Q. Because those units were -- at least there was -- some of those units on that side that might be more gas or --

A. No.

Q. -- more space load or for some other reasons?

A. There's -- there's several reasons: One, how quickly can they ramp up and down. When you get up to the top, some units have to come down a little bit before they can regulate; others can regulate all the way up to the top.

And so there's a lot of different aspects like that that affect which units you would use to provide that service, and so there's some balancing between those two. You're not gonna see the megawatt hours that were held back on the other system providing the reserves and the spin and things like that. You would see where the megawatt hours transferred back and forth between the two.

Q. On energy?

A. On system energy transfer, that's correct.

Q. On energy, was UE a net provider?

A. It's my understanding that they

generally were in the latter years.

Q. Okay. Latter years being, do you know when you say that --

A. Well, I mean, we're talking '05, '06 right?

Q. Yes. I'm trying to understand -- when you say latter years, I just want to see what you mean. So '05, '06?

A. (Nodded head.)

Q. You have to answer out loud --

A. Yes.

Q. -- for her sake.

A. Understood.

Q. Okay. Now, in regard to the -- if you -- if you did put ancillary services in, do you know, did you ever see any figures of what it would be in regard to -- to the net if the JDA had not existed and the transactions were accounted for at a market price, did you ever see any figures on that?

A. I don't know that I have.

Q. There's been discussion of that, significant discussion in past cases, correct?

A. That's my understanding, yes.

Q. Were you involved in any of that?

A. I was -- I was involved in the market

price perspective.

Q. To that extent, though, that's kind of what I'm asking, if you had -- did you ever see that place in a market perspective --

A. The total number, I'm not sure that I've seen the total number if I'm responding to --

Q. What have you seen? And I'm not gonna go very far down this line.

A. Well, I've seen -- you know, I can't remember or recall the specific number, but I've seen what system energy transfers were. And so in general I would have seen what -- how many megawatt hours were transferred either way.

Q. Okay.

A. And then -- then when you understand what the cost of our system generation is versus what the markets may have been at that time, that would have, you know, given you some idea of how much that may have been.

Q. Okay. And do -- but do you know, do you have any of those figures?

A. I do not know what those figures are.

Q. Okay. That's -- that's fine. And now, as you move in to the -- first, and then let me ask you this for clarification: The JDA terminated when,

if you know?

A. The end of '06.

Q. Okay. Now, you were describing earlier how this thing worked postday two, and one of the things that I think Mr. Mills was asking you about was a clarification on what Mr. Voss had testified to yesterday.

A. Yes.

Q. My recollection is that -- that he said -- and I'm sure the record will correct me if this is -- if this is inaccurate, that he said that -- that the unit was -- or the units were -- at Taum Sauk were self-dispatched for generation and not for -- for the pump portion of the spinning of those -- those turbines. That's -- that's pretty much the opposite of what you've testified to today as I understand it?

A. In general that is true. But just to be clear, if in the realtime we -- we made a decision to run the unit outside of what the -- the dispatch was for the Day-Ahead Market, we would self-dispatch into the market then.

Q. Okay.

A. And so there is a combination of both. And generally, we would self-dispatch it for bidding,

or for pumping the unit back up, and then we would offer it in Day-Ahead and whatever cleared, we would still make the decision realtime how we were going to operate the unit based on that Day-Ahead clear.

Q. Sure. But I think that -- I think there was just a little confusion yesterday in regard to which way it was primarily utilized from a self-dispatch point, and I think your clarification today helps to explain that.

A. Okay.

Q. All right. And so as we're looking at the -- at the units, I'd like to go back for a brief period of time in regard to the -- how the bidding process works. On the Day-Ahead your -- your people will be looking in -- at bidding in all of the UE units or some of them; how does that generally work?

A. The -- the units that are AmerenUE units are designated as network resources under the Midwest ISO. What that means is we've told the Midwest ISO, these units are here to meet our load, and so when we get in peak periods these are the units that we -- we will count on.

Q. Okay.

A. And under the Midwest ISO tariff, it's required that we have to offer in that generation in

the Day-Ahead Market. And so all of the units that are designated network resources are offered in in the Day-Ahead Market.

Q. And your bidding in price for those units will generally be what? Not a price, I'm not looking for a price, I'm just asking you how do you determine what to bid them in at?

A. Okay. Just for -- as a trader, I think of bid and offer differently.

MR. BYRNE: Just --

BY COMMISSIONER GAW:

Q. Yes. Yes.

A. We offer generation and we bid loads. So I just -- I just want to make sure that I'm answering your question appropriately. But for offering the units --

MR. BYRNE: Can I ask, is there any confidentiality -- I mean, have you ever --

THE WITNESS: (Shook head.)

MR. BYRNE: Okay. I just wanted to make sure.

THE WITNESS: No, I'm good.

COMMISSIONER GAW: I think we're -- I think we're avoiding those specific issues. I don't intend to go into them. If I do, you-all just raise

your hands.

THE WITNESS: Okay.

BY COMMISSIONER GAW:

Q. So go ahead, Mr. Schukar.

A. So from a unit-offering perspective, there's -- there's several things that we're going to think about.

Q. Okay.

A. One is what -- what units would we need to serve our load. So if we had -- as I mentioned in the example earlier, if we had 8,000 megawatts of generation and we have 8,000 -- 8,000 megawatts of load that we're bidding in, I would want to offer in 8,000 -- at least 8,000 megawatts of our generation at their cost without any kind of adders on them.

Q. And again, that cost, when you use that -- that term, is that the same definition that you gave me earlier about cost?

A. It's a -- it's a dispatch cost, right, incremental type of cost.

Q. Okay.

A. And then over and above that, we would make a decision over and above the 8,000 megawatts for our load, we would make a decision about whether we wanted to offer it in as a pure cost or if we

wanted to put some adders on there. And specifically, if, you know, you have a unit that has some risk to it like Taum Sauk, you may want to offer a premium in there if it was -- if we thought that it was gonna be over and above the market.

Q. Okay.

A. Because of things like the -- you know, what the realtime prices would look like, we had to make an estimate on the Day-Ahead price and we didn't know what it was gonna cost to pump it up.

Q. Yes.

A. And so you may put an additional adder on to cover things like that.

Q. And that -- you've just described the problem in regard to Taum Sauk in trying to ensure that you were putting the unit out there at a price that would not be a loss to run, correct?

A. Correct.

Q. And you're trying to gauge how much it's gonna cost to pump the water up to the top of the reservoir, and you don't necessarily have -- do you or do you not have that information at the time you're making your Day-Ahead bid?

A. You don't have that when you're making the Day-Ahead bid.

Q. You do at what point in time, later in the evening of that day or when does that happen?

A. Well, because -- as I was describing it before, the negative generation didn't clear in the Day-Ahead, so we had that information once we pumped it up.

Q. But that would have been later on in that -- in that day?

A. It would typically be late that current day or early hours of tomorrow if we were talking about tomorrow.

Q. Okay. How much of a -- was there a -- did you have a rule of thumb on a premium on Taum Sauk?

A. It really depends on the market at the time.

Q. Yes.

A. You know, if you look at a market where the hours have been $20 and they've been consistent, you probably aren't gonna do much. If you're looking at -- across a period where there's a lot of volatility in prices and a lot of volatility in loads, you may do it with more premium in it.

Q. Okay. Can you give me an example about a set of potential numbers that you would be looking

at and when you would build a premium in and about what kind of premium you're looking at? For instance, let's -- let's say you're going in and you're looking in the summer period when you're seeing fairly significant differences in the nighttime pricing compared to the daytime pricing, what would that mean in regard to a premium?

A. Well, there's a couple things that we're going to want to be concerned with. One is, say the prices have been $20 for a week and the weather is exactly the same.

Q. All right.

A. We would probably look at that and say that's a pretty good bet that you're gonna see $20 power off-peak that that's good to go.

Q. Okay.

A. So you wouldn't put a lot of premium on that.

Q. Okay.

A. If the on-peak prices, though, were fluctuating a lot, and recognizing some of the concerns we've had with the Midwest ISO dispatch in trying to make sure that because of that limited megawatt hours of availability, you wanted to get it in the best hours, in essence, so you may adjust your

pricing to some extent to try to make sure you didn't clear in a low price hour. And so you would have to look at that also and say, okay, what are my on-peak prices looking like on a Day-Ahead basis.

Q. Okay.

A. If it was during a period of time where you may have been billing from 20 to $40 in the off-peak period, you know, you take your best estimate and maybe your estimate was 30, but you might put more of a premium in it at that point.

Q. Okay. You've got -- did you have certain individuals that were specifically trained to deal with the Taum Sauk portion of your generation portfolio?

A. Not specifically trained. Most of the folks who I have on the trade floor have to deal with that --

Q. Okay.

A. -- both from a realtime and a -- and a Day-Ahead kind of basis.

Q. But it just seems like Taum Sauk has a uniqueness to it, and I wondered whether or not because of that you allocated the duties of that to a particular people?

A. No, because several of our units have

unique characteristics.

Q. Okay.

A. And so, you know, if you've got a gas unit that only has a certain amount of gas that's coming to it, it's energy-limited, so you have to know how to deal with that. Taum Sauk was no different than that. And so we had to -- we had to deal with that with several of the generating assets that we have.

Q. That's the -- that's the first time I've had anybody draw that connection between a gas unit. So there are some gas units -- I'm not gonna ask you which ones, but some -- some gas units that -- that are limited in the -- in the amount of fuel they have access to so they only have limited amounts of time they might be able to run?

A. And they would be limited based on what we may have set up Day-Ahead, right.

Q. The difference would be you would -- you would have still more -- a more consistent knowledge about what it would cost to run them, the gas units?

A. In the Day-Ahead, yes; in the realtime maybe not.

Q. Oh, okay, okay, that's fair. Now, when you get -- when you look at the bidding-in process

again, as you're doing the bidding-in on the Day-Ahead, are you bidding in units or are you just bidding in dollars? And I'm using the wrong term and I apologize for that.

A. That's fine.

Q. Offering-in, I should be saying, I guess. Go ahead.

A. We're putting offers in for each specific unit.

Q. Okay.

A. So --

Q. That's what I needed to know.

A. If it was Taum Sauk 1, Taum Sauk 2, Lavity 1, Lavity 2, each unit, when you bring an offer into the Midwest ISO, you have to put in the specific parameters with those units and the specific prices with those units.

Q. Okay. And then you -- and then let's say you roll around to the next day, the realtime market, then what's -- what's your analysis as that day is progressing through in regard to those units?

A. Well, generally, when you're offering in the units, you're looking at what are your operational parameters and what are your cost parameters. And you will make adjustments as you go

from Day-Ahead to realtime based on new information you have.

Q. Okay.

A. And so if you have new information on a limitation on a unit, you may change its economic maximum offer and lower it if it was derated or whatever.

Q. And you're gonna have to walk through some example there for me to follow that.

A. Okay. Lavity Day-Ahead, we have it offered in at 600 megawatts. A -- they have a coal mill outage that says that you can only get to 580 megawatts.

Q. Okay.

A. So our economic maximum that we offered in the Day-Ahead would have been 600; in the realtime we would have had to change that to 580.

Q. Okay. And then what happens as a consequence from a -- from a economic standpoint and what do you have to do with the fact that you're 20 shorter than what you -- what you offered in?

A. It depends on what cleared Day-Ahead --

Q. All right.

A. -- all right? So depending on what the unit cleared Day-Ahead impacts what you may or may

not have to do. But in essence, the unit is D-rated, we can't change that. The Midwest ISO redispatches a system based on what's available in the realtime.

Q. Okay.

A. And so they will dispatch based on that new parameter. And so if we had cleared for more than that, we would buy back those extra megawatts from the market in the realtime.

Q. Okay. So you have -- there's a financial consequence. Now, if the realtime market is higher than the Day-Ahead was, what does that do? And I'll ask you the lower part after that.

A. If the --

Q. If the -- if the realtime market is higher --

A. Uh-huh.

Q. -- than what you had offered in with that unit.

A. It depends on when it cleared in the Day-Ahead.

Q. Okay.

A. So if I was at 600 and I cleared at 600, okay, if we go that route, I think that's where you were going.

Q. Okay.

A. And we had to go to 580 in the realtime --

Q. Yes.

A. -- then we would have bought 20 megawatts back at a higher price than what we cleared Day-Ahead.

Q. Okay.

A. Vice versa, if the price was lower, then we would have bought it back at a lower price than what was in the Day-Ahead Market that we cleared out.

Q. Okay. Now, let's go ahead and make sure that we clarify that distinction that you're making. The price that you offer in at is not necessarily the price that you -- paid --

A. Correct.

Q. -- because there is a market clearing price?

A. Yes.

Q. Can you explain that just very -- just very general?

A. Each generation node, each load node has a locational marginal price, as we talked about before, that is either paid or received based on whether you're generating or whether you're -- a load at that LMP. The locational marginal price, as I

described, is a combination of the energy price, the congestion price and the loss price.

Q. Okay. So if the clearing price -- first of all, if your offer price is higher than the clearing price, what happens?

A. Generally, you would not clear for that period.

Q. Okay. So -- okay. Now, let's reverse it, say it's lower. Then what happens?

A. Then the unit would be expected -- and once again, generally would be expected to clear.

Q. Okay. And the amount that -- that you are paid if -- if the market price is higher than your offer price, which one -- which is the important number to you?

A. What we are paid is the location of marginal price.

Q. Yeah. So actually, even though you might have bid it in at a lower price, you get paid the market clearing price?

A. That's correct.

Q. Okay. From the standpoint of the -- if you know how the books were handled on the price for pumping the upper reservoir full, was that -- was that booked at whatever the -- the price was on the

market at that time? How was -- do you know how that was done?

A. Make sure -- I'll repeat your question just to make sure I'm following it. What price was allocated for the pumping of the generation at Taum Sauk?

Q. Yes.

A. In general, we would try to treat that as a load.

Q. Yes.

A. And with our load what we did was we tried to basically utilize our generation that was in the money to serve that load.

Q. Okay.

A. And so we would generally use our own generation to supply that.

Q. Okay.

A. And that's how that would have normally settled out for us internally.

Q. Okay. So basically, it was treated as any other load on the Ameren system, and if -- assuming that you had generation available --

A. Uh-huh.

Q. -- the consequences from -- to UE would have been basically running at incremental cost of

your generation?

A. To supply the pump-back?

Q. Yes.

A. In general. And that's assuming that the market price was higher than our generating cost; otherwise, we would have purchased from the market to supply that.

Q. And that's -- okay. That's -- that makes sense to me. So I want you to help me, though, while we're on this subject with what you were testifying to earlier about this question of why MISO had difficulty dealing with this as negative generation.

What's the difference -- and Mr. Mills sort of asked you this question too. What is the difference between trying to create a special category of something called "negative generation" and just saying it's load, treating it in the same way as other load that you have?

A. I think because it's a node, it's a generation node. I can't explain to you why they had the technical issues, but I know that there's only a couple of pump storage kind of facilities in the Midwest ISO.

Q. Okay.

A. And so the time that it probably would have required them to change their systems to handle that would be more difficult than just operating the way we did.

Q. Okay. There are nodes that are load nodes on the system though, correct?

A. Yes.

Q. Why couldn't it just be treated that way during pump-up? Was it -- was it -- was that a software issue within MISO or something?

A. That's my understanding. It was -- it was not something within our shop.

Q. Okay. Describe for me the determination of when the pump -- pump-up or pump-back would be determined.

A. We would determine the pump-back when -- in the realtime, and we would base that on what the prices were in the realtime, what we had experienced historically to determine what would be the lowest cost hours in general. And because you could -- you had some flexibility of starting and stopping, you know, you would try to pick the lowest cost hours and pump it up during that period of time.

Q. Okay. How -- how much ahead of the actual act was -- were the decisions made about doing

the pumping?

A. Well, I think the traders in general were -- were trying to look ahead for several hours and say, okay, well, maybe we're going to pump up at -- start pumping up at midnight, but if the prices in the LMP market were still high, they wouldn't have to make that decision. I think they probably needed 15 minutes to a half hour of notification to the plant to start pumping.

Q. Okay. But it was a fairly short swing between decision and pumping, generally?

A. Right.

Q. But you're getting -- you're trying to get as close as you can to knowing what that price is likely to be and make the best decision that you can economically?

A. To the start of it, anyhow.

Q. Yeah. And then would you generally go ahead and do the pumping procedure all in one fell swoop, or might you pump for a while, see a price change, wait, and then pump a little later; how did that work?

A. You would generally pump for the whole period but if you had prices that spiked way up for some period of time, you would back away from that.

Q. Was there a -- was there some sort of protocol on making that decision; if there was a spike of over a certain amount you stepped back?

A. That was an economic decision that was made by each of the -- the traders and dispatchers at the time. And because there's so many different parameters that you have to think about on the system to write down a protocol that says when it's price of X you don't pump, wouldn't make a lot of sense for us.

Q. Okay. So you're relying on your traders to factor in those things and come up with the best decision?

A. Traders and dispatchers, they work together as a team.

Q. Okay. They're right together too, aren't they?

A. Yes, they are.

Q. All right. So you -- when you deal with the generation side, then, on decisions to generate on the day that you're -- that you're dealing with generation, are they basically in line with the decisions that were made the day before on offering the units in? And if there's -- if there are changes to that, describe for me when those changes might be

made. Do you want me to break it down a little bit?

A. Well, I think I've got your question. If I don't, please reask it. We would -- the information that may be available -- so say we expected that it was gonna cost us $20 to pump Day-Ahead and that's what we offered it in at --

Q. Yes.

A. -- and it came in at $25, the folks may change the offer price depending on what was offered in Day-Ahead to adjust for that. They may not have because they may have had enough of a premium put in there already to account for that.

Q. Okay.

A. So they may make a change to the price adjustment. The other thing that may happen is if you cleared for the -- say you just cleared across the peak hours in the evening but you've got a price spike coming in the morning that you didn't clear for, the realtime trader may go ahead and must-run that generation into the market to generate during those first few hours.

Q. What does that mean, "must-run that generation"?

A. You basically -- the Midwest ISO can clear it economically or we can make the decision to

put the unit into the market and take the price, whatever that price may be. And in that case, the trader may have decided that he thinks for the next couple of hours prices are gonna be good, go ahead and start up the unit even though it had been cleared for later on in the day --

Q. Okay.

A. -- and then take some risk later on whether we had to buy it back or we took the time and pumped in between there.

Q. Okay. So in essence -- I'm not gonna describe this as well as you will, but I'm sure you'll -- you'll fine-tune this. In essence, then, the unit could be run at a different time if the trader felt like economically there was more money to be made then, taking into account and taking a little risk that at the time it was designed to be run.

The price that would have to be paid on the market to substitute for Taum Sauk in this instance would -- would also not cost more than the -- than the profit margin that you had built in on running it earlier in the day?

A. That is generally true, yes.

Q. Okay. And was that done often or do you -- would it just vary a lot from circumstance to

circumstance?

A. I think probably what you would see more of is right around the start and stop, you know, they may have us start at four o'clock and we may not start until 4:30 --

Q. Okay.

A. -- or something like that. So there may have been probably more variation around that than what there really is around the -- you know, there was probably a few opportunities to do it early in the day and that.

But you know, the -- the responsibility of the trading and dispatching group is to optimize at all times what we have available. And so you're always gonna have slight adjustments based on unit characteristic market prices, input prices and things like that.

Q. Okay. Now, we've had a lot of discussion about how often Taum Sauk was run on a -- on a daily basis. I want to ask you whether or not there was a consistency in running the plant from full down to -- to its lowest level on a daily basis or whether that varied significantly from day to day in '05, let's say.

A. I haven't reviewed the records to see if

they dispatched it the whole amount. I know that it did change there time to time. You know, specifically in the winter it would dispatch differently than the summer. But I don't know if they ever went -- if they went every day from full pool down to the bottom pool.

Q. That's not clear to me either at this point. There was some days, I'll represent to you, that some days when there would -- there was more than one dispatch of the unit in a day --

A. Uh-huh.

Q. -- it might dispatch in the morning and then again in the early evening, for instance. But it wasn't clear to me from what I was seeing how -- how much of the unit was dispatched over the course of the entire day in regard to megawatt hours. Is that information available historically that you might be able to provide?

A. Well, you can look at how many megawatt hours were produced --

Q. On a daily basis?

A. -- on a daily basis. But I don't know if that's gonna tell you the whole story.

Q. Tell me what -- what would help, flesh that out.

A. Well, you need to know if you're generating in economic or in max mode.

Q. Okay.

A. So that way you can tell how many megawatt hours you could have produced in the -- in the day.

Q. Okay. Can you give me a real quick example of a comparison there so I can understand that a little better?

A. Well, in max mode you can't produce as many megawatt hours across the whole -- from the top to the bottom as you can in the efficiency mode.

Q. Right. Right.

A. And so in that manner -- in that day, then, if you look at it and it pumped from completely full down to the bottom, that megawatt hours for that day would be different than if you pump from top to the bottom and ran it in efficiency mode the whole time.

Q. Okay. Translate that for me, though, into -- into something that would be an apples-to-apples comparison in regard to the -- to the dollars that might be produced if you assume that the -- and this is not an assumption. I suppose that would be helpful in most days, but if you assume the

price was the same during the generation time that you had.

A. If you assume the price was the same, you generate less megawatt hours. And so if you -- if you did less megawatt hours, then the revenue you had would have been less, your costs should have been the same --

Q. Okay.

A. -- under the scenario you provided, and so your margin would have been less --

Q. Okay.

A. -- in the max mode.

Q. Would you also have the dollars of revenues per day off of Taum Sauk? Historically would you have that information?

A. When you say "the dollars of revenue," I think what we have to be careful with here is how that was dealt with under the allocation and the accounting allocations. And when we use financial schedules to move the energy from one to the -- you know, if we use the financial schedule to move it from Taum Sauk to native load.

Q. Yes.

A. You know, so the margin and the revenue that's associated with that doesn't -- you know,

that's very difficult to identify.

Q. And when we're talking about native load during the time frame in '05, you have to consider the Ameren CIPS load as being native load too for all intents and purposes, don't you?

A. That would have been a system energy transfer.

Q. Are you agreeing with me?

A. Well, I would have thought of it as native load as I was dispatching the system, yes.

Q. I thought you were agreeing with me because you were nodding your head while you were saying it, but I wanted to make sure. Okay. So you think we can find out the megawatt hours per day produced by Taum Sauk?

A. Yes.

Q. That information is there. Would -- would it also -- and it would also be helpful to know in what mode it was being run in during that day?

A. And I don't know if that's available.

Q. Okay. And we can get a revenue stream of sorts, but the revenue stream might not be nearly as meaningful if -- because we're not really talking about true market prices unless there's some portion of it used for off-system sales, correct?

A. That is correct.
Q. Okay. Okay. When you're -- now, these -- these generation units are -- and the income off of them are somehow factored into earnings for the company, right?
A. Yes.
Q. On an annual basis anyway?
A. (Nodded head.)
Q. Nodding head, saying yes?
A. Yes.
Q. Thank you. And in that -- in that -- in that case, when the units are being dispatched for native load including under the JDA, I'll use native load to include CIPS in this question, how does that help or impact would be a better way -- the earnings of the company?
A. Ask the question again, I'm sorry.
Q. Yeah, it's -- I'm trying to understand. If we were doing -- if we were measuring the impact of the units that were being utilized for off-system sales purposes, and we assume that there -- if we assume they're all in-market, which is not necessarily the case but assume they're in-market, there would be dollars that would be fairly transparent on the impact it would have on earnings?

A. If we assume they're all off-system sales and they were revenue --

Q. Yes.

A. -- at the LMP price?

Q. Yes.

A. Yes.

Q. What I am trying to understand a little better is when they're being utilized to serve native load, using term fairly loosely here --

A. Uh-huh.

Q. -- how does that factor in in regard to earnings, do you know?

A. Well, it would be part of the cost that you used to serve your native load. And so earnings are going to be revenue less your cost. And so when it's used to serve native load, then that is the cost of serving that native load. That -- that delta that is part of what goes into your earnings.

Q. Okay. So it's important from that aspect as well, I guess?

A. Yes.

Q. And the impact on earnings of units running would depend upon what it costs to substitute for that generation if they're not running?

A. Yes.

Q. Okay. So if you've got -- if you've got a unit out and you need to then pull in other generation to substitute for the fact that you don't have that unit running, then if that generation costs more than the generation that's out, there is a negative impact on earnings?

A. Under that scenario, true.

Q. Okay. I am a little -- at this point I need a little bit more explanation on the -- on how you view the impact of Callaway and the Callaway outage in the -- in the fall of '05 in regard to that question of earnings.

A. Well, the Callaway unit being out for an outage means that we're not producing energy from that unit.

Q. Yes.

A. That's a low-cost unit, and so in general, we would either be utilizing higher-cost units to serve our native load or off-system sales. And so whenever a Callaway type unit is out of service, there is an impact -- a negative impact to the earnings.

Q. And was that a scheduled outage in the fall of '05 for Callaway?

A. Yes.

Q. Did it run about the same length of time as was expected, do you know?

A. I think it was fairly close.

Q. Okay. So when you have a scheduled outage in regard to projected earnings that are used as the benchmark to try to -- to try to meet or exceed, they're adjusted by scheduled outages, aren't they, if that benchmark is adjusted? I can rephrase that. It's not -- that's a little confusing.

A. If you could, please.

Q. What I'm looking for is when the earning projections are made, is it true that scheduled outages are factored into those earnings projections?

A. Yes.

Q. So the fact that Callaway was out had been taken into account from the standpoint of earnings projections?

A. Correct.

Q. Okay. If a unit is not scheduled for an outage during the time those projections are made, that does have an impact in regard to those earnings projections?

A. It may. We include a certain level of forced outages in our earnings projections, yeah. You have to assume plants are going to fail sometime

during the year. We have outages with several of our plants, and so you're going to include that in your projections.

Q. Okay. To the extent that you can beat the expectations or the projections in regard to units running, does -- is that helpful in regard to also trying to -- to meet or exceed the earnings projections?

A. It may be.

Q. Okay.

A. Because you've got -- you have the price and the generation. And so if the available time is a period of time where market prices are very low, it may bring absolutely nothing to you.

Q. But they're -- but they're also -- generally outside of that you would -- you'd have to say, wouldn't you, that it would be a -- it would be likely to be beneficial?

A. Generally I prefer to have units on than not.

Q. Yes. And I would assume that the lower price -- let me -- let me rephrase that. That the lower cost units to run are more important to stay on from a financial economic standpoint than those that are on the higher level?

A. Generally, yes.
Q. Can you explain that? I think it's self-evident, but --
A. Well, if you had a low cost unit that has to be displaced by a higher cost power, then you're gonna -- you're gonna lose that opportunity between the cost of that unit and the cost that you have to replace it with. So in general, that's going to be the issue.
Now, in the Midwest ISO, you may have a higher cost unit that you lose because it's in a constrained area, may have a different impact and that's why I said general.
Q. Okay. How much -- do you remember how much additional pressure it put on Ameren in regard to the -- to the Callaway outage in dealing with substituting generation? What -- what -- when I say pressure, I'm talking about how much additional generation was utilized in the Ameren system for off-system purchases?
A. I do not know.
Q. How many -- Callaway runs all the time unless it's out, right?
A. Pretty much, yes.
Q. And how many megawatts?

A. 1200.

Q. Did Ameren have sufficient base load generation available to it to meet that outage?

A. I'd have to look back at the period, but you know, in the fall we typically are very long. That's why we take generation outages either in the spring or fall when you have more of that base load available. And so in general, we're able to cover it.

Q. Okay. So you think that there was enough coal generation that you had access of to take -- take -- to take care of the loss of Callaway during the scheduled outage?

A. I'd say generally that would be true.

Q. Okay. I want to ask you a question from the standpoint of the dates on these historical LMPs at -- on the MISO web site that are posted. When you're looking at Day-Ahead, the Day-Ahead historicals --

A. Uh-huh.

Q. -- if the date is -- on their web site is -- is 10/22, for instance, of '05, is that the Day-Ahead Market for the -- for a reflection of what's being -- going to be generated on 10/23 or on 10/22?

A. 10/22.
Q. Okay. So if I'm following you, that would mean that the actual Day-Ahead offering that was done was on 10/21?
A. Yes.
COMMISSIONER GAW: Okay. There are some -- I'll -- I'll hand these over to you. I think there's some additional things that you were referring to earlier on the realtime market, but I think --
JUDGE DALE: Just these two?
COMMISSIONER GAW: For now. There's some extra copies, guys.
MR. BYRNE: Are these new ones?
COMMISSIONER GAW: Yeah, they're kind of new ones but they're all around that.
JUDGE DALE: Should we call these 56 and 57?
COMMISSIONER GAW: That would be great.
(EXHIBIT NOS. 56, 57, 58 AND 59 WERE MARKED FOR IDENTIFICATION BY THE COURT REPORTER.)
BY COMMISSIONER GAW:
Q. If those are marked Exhibit 56, which should be, and we're gonna have -- let's assume these are accurate, and we'll deal with that. But for the

most part, I'm just -- I'm looking for just kind of an idea of how this Day-Ahead pricing impacts decisions on Taum Sauk.

So this is the 10/22 date, and that has some of the nodes on it. But it includes Ameren TS1 and TS2 down at the bottom. Now, if you -- if you had -- if you're looking in Day-Ahead prices here on this -- on this date, can you give me a perspective on what that might have meant to a trader in regard -- in regard to Taum Sauk?

A. Well, remember, when they're putting the offers in, they don't have this information, so they have to put the offers in before you get the Day-Ahead clear. They get their Day-Ahead information on where market prices will generally be at --

Q. Okay.

A. -- based on the traded market. And so --

Q. What do you mean "based on the traded market"?

A. The over-the-counter market on -- in our electronic format where we're doing financial transactions or bilateral transactions with other counterparties or from brokers where we would get

quotes.

Q. Okay.

A. That's where they're going to know the price for an on-peak period and an off-peak period.

Q. Okay.

A. And then they would have to take that information, and then based on the information they're getting from -- from that market, make the decision on what shape we think the prices are going to have for the day, are they gonna be flat across the day, are they gonna be spiked across the peaks or the mornings, and you would look at that from a historical basis --

Q. Okay.

A. -- to make a decision on how you were gonna offer in the generation on the next day.

Q. Okay. So this information that you have on 56 you don't have at the time you're making your offer because this is what you're offering into, correct?

A. Right.

Q. These are the clearing prices for those -- for those hours of the -- in the Day-Ahead Market?

A. Correct.

Q. All right. With these kinds of clearing prices, if you assume your signals that you got from your trading markets -- I hope I said that right -- are -- are similar to this, is this -- is this a pricing that you would expect Taum Sauk to run in or likely not run in?

A. I think there's a potential that it would have run a load.

Q. Okay. And tell me how that -- how that analysis would work based -- based on what you have.

A. I was looking in the off-peak price, was in the 27, 28. So you take one and a half times that, it's gonna be probably 40 -- low 40s and there was a few hours where it was at that -- at that price level.

Q. Okay. And if you're running it in this time of a -- type of a price situation, what kind of a mode, if you know, would it have likely been run in?

A. I really don't know.

Q. That's okay. This isn't the kind of a day when you would expect Taum Sauk, if it did run, to run all the way down?

A. Probably not. I only see where it would probably run three or four hours in that day.

Q. Okay. Let's look at 57. I think that's an 11/19 date. You see in the analysis there on Taum Sauk in regard to what you might expect on running?

A. Well, based on this information, I would -- probably wouldn't expect it to run on that date.

Q. Okay. And tell me why.

A. The off-peak prices are in the 40s, so if you take a 1.5 multiplier, you're gonna be in the 60-plus range, and I don't see any one hour where it actually cleared above that, so very limited opportunity.

Q. Okay. I want you to explain why you're using the 1.5.

A. Oh, one -- one point -- 1.4 to 1.5 is generally the cost that it took. 1.4 to 1.5 megawatts of pumped generation to then turn around and generate one megawatt whenever you were generating with the unit, so ...

Q. Do you know -- this would probably predate your involvement there, but do you know whether or not that figure or that factor changed at some point in time before the generators were redone or there were new generators placed in to Taum Sauk? Are you familiar with any of that?

A. No, I am not.
Q. But it was based upon the efficiency of the system as it existed?
A. Uh-huh, yes.
Q. Did it change when the liner was installed?
A. Should not have.
Q. Okay. So is it -- it's true, isn't it, that the -- that the plant stopped -- not stopped but it slowed leakage --
A. Yes.
Q. -- after the liner was put in?
A. (Nodded head.)
Q. Did that in your opinion, or do you know whether it changed the efficiency?
A. I do not know.
Q. Okay. Take a look, same thing on 59. I think that's -- oh, no, sorry. Did we do 58?
A. No, we did not.
Q. Let's do 58. Same -- same general questions.
A. That would be similar to 57. There's upper 30s in the off-peak, and if you take that times 1.5, you get 45 and there was only one hour that may have cleared.

Q. Okay. Now look at 59. What do you think about that one? Sorry, I wasn't watching you.

A. Okay. It appears with the pricing that it would probably clear in the Day-Ahead probably for two periods.

Q. Okay. Is this -- based upon what you can see here, would Taum Sauk have run from -- run down to low level on this day?

A. I would have guessed it would have, yes.

Q. And will the information that you -- that you-all have historically show how far down the reservoir was run on a daily basis for particular days?

A. I don't know if I have that information. I have the generation information.

Q. Okay. Can we make any assumptions from that generation information as to how -- how much water was run out of Taum Sauk?

A. Once again, we'd need to know what mode it was generating in --

Q. Okay.

A. -- before you can make any assumptions.

Q. All right. Do you know for sure that the megawatts -- the megawatt hours on a daily basis available on Taum Sauk were diminished subsequent to

the adjustment for operating level in October of 2005?

A. I know we reduced, when we made the offers to the MISO, the amount that was available.

Q. And did you say how much the reduction was? I believe you did.

A. I said it was like 60 megawatts of a unit -- megawatt hours a unit. I'm sorry.

Q. All right. Can you tie -- how did you know how much that was?

A. Just discussions with the folks who do the work.

Q. Who would that be?

A. The traders, they're the ones who -- who submit the information.

Q. Okay. So do they -- do they know how to calculate volume of water over the megawatts -- or megawatt hours?

A. Well, we have curves that show how much generation is available based on the level of the plant, so they would be able to look at that. But they would probably also talk with the plant to make sure that they understood what kind of level adjustment was made.

Q. Okay. And where would that – where

would those records be again?

A. The records of?

Q. In regard to the amount of capacity that you had to bid in?

A. On what our offers were?

Q. Offers, yes.

A. Okay. Our offers would -- I believe that they would be in our -- in our system where we offer to the MISO.

Q. Okay. Are you aware of whether or not the conversations between -- first of all, are you aware of conversations between Mr. Pierie and Mr. Schoolcraft about scheduling an outage at Taum Sauk in '05?

A. I'm aware that there was conversations about scheduling a Taum Sauk outage. Who they were between, I don't monitor that.

Q. Would those conversations have been recorded?

A. Only if Steve's line is recorded, and I don't know if it's recorded or not.

Q. You've never checked to see whether or not that was the case?

A. No.

Q. Do you know if anyone else has?

A. I do not.
Q. How long are those recordings kept?
A. I do not know.
Q. Who keeps them?
A. I'm not sure I know who that is.
Q. Who should I ask? Who would have that information?
A. I mean, I can check where the recordings are at.
Q. Okay.
A. But I don't -- who the ultimate keeper is, I don't know.
Q. Okay. I'm most interested in how to obtain a copy if one exists, so --
A. Okay.
Q. -- if you wouldn't -- if you wouldn't mind checking into that. I think we've asked that before of someone else, so I'm not intending to create multiple duties for one purpose here.
You mentioned earlier these written -- you used a different word but some sort of written protocols that exist in regard to scheduling outages, correct?
A. Communication document?
Q. Yes.

A. Yes.
Q. Where does that exist or where do those documents exist?
A. In our department.
Q. Do you know when they were initially adopted?
A. Not -- I mean, they're up -- they've been changed over time, but I think they were there when I -- when I came to the department.
Q. Okay. How lengthy are they, just generally? I'm not looking for --
A. I'm trying to think. I mean, a few pages each.
Q. Is that per plant or --
A. No, it's one document --
Q. Okay.
A. -- that was between the dispatch group and all the plants.
Q. Okay. Did the plants have a copy of it?
A. I believe so.
Q. Okay. Is it difficult to get copies of it?
A. Is it difficult to?
Q. Uh-huh.
A. No.

Q. Would it show, if we were looking at it, when -- when things were revised, what dates of revision?

A. It should.

Q. Okay. And if -- if there was -- if we were looking at -- to see what was in existence during the fall of '05, for instance, would we be able to find the written protocols or information on communications that would have existed then?

A. I don't know.

Q. Okay. So if something were -- if a page is revised and it's shown as a revision, you're not sure what happens to the --

A. I'm not sure we keep the old revisions.

Q. Yeah. Who would know that?

A. I'm the one who could check on it.

Q. Okay. What -- what is it that makes -- is there a -- let me ask it. Is there a definition or some sort of reference to a safety issue that relates to whether a plant should be shut down immediately or not in those communications protocols?

A. Ask the question again, I'm sorry.

Q. Yeah. Is there any kind of a definition of a safety issue in a plant that clearly delineates that a plant should be immediately shut down?

A. I don't know the protocols that well that I could tell you exactly what's written in there.

Q. Okay. Do the protocols address weighing different factors in making a decision about when a plant should be shut down if it's -- if the discussion is being held?

A. I think that's more of a how do we communicate between the different groups --

Q. Okay.

A. -- not what are the parameters that are going to be evaluated to determine when you do or do not shut down a plant.

Q. Okay. Who's involved generally in those discussions?

A. Of whether you're gonna shut down a plant or not?

Q. Yes.

A. Well, generally, it depends on the timing.

Q. Okay.

A. If it's -- if it's a -- something that has to come down right away, then the plant personnel, and that may be the operations personnel, the shift management, will call to the realtime

operations and inform them that the plant is coming off if they have time to do that. Sometimes they just take the plant down and we see it.

Q. Okay.

A. If it's being planned for in the future, they would coordinate with Steve Schoolcraft or that -- whoever's performing that role at that time.

Q. Okay. And if it's in that latter category, how are those -- who's -- who's involved in that decision first? Just generally speaking, not necessarily names.

A. When you say "the decision," if the decision to shut down the unit, it's plant personnel --

Q. Okay.

A. -- and the folks from the trading group. If it's a safety or reliability issue, that is the call of the folks who are at the plant because they're the ones who know what's going on.

Q. Okay.

A. If it's an economic issue, then we get involved with it.

Q. And I understand that you're drawing a distinction between the two, and I guess I want to make sure, do you know of any written document that

existed in '05 that defined the difference between the two?

A. I'm not aware of whether there was or was not one.

Q. Do you know if there is today?

A. Yes.

Q. Okay. Tell me what -- tell me about that.

A. Tom Voss put out a -- a protocol that basically explained that, you know, safety, reliability, environmental -- I'm not recalling all of them, but certain issues, those are -- you know, come first before any economics.

Q. Okay. Once again, I think we've heard about this protocol. Does it make -- does it define the distinction between -- that you were making earlier between economic and safety, reliability-related in that document?

A. I think it does.

Q. You do? Okay. How long is that document?

A. One page.

COMMISSIONER GAW: Okay. Can -- do we have a copy of that yet?

MR. REED: Not that I'm aware of.

MS. HOUSE: Yes.

COMMISSIONER GAW: Yes, no, yes, no?

MS. HOUSE: We submitted it in response to one of the first set of data requests.

COMMISSIONER GAW: Does somebody have a copy of it now?

MR. BYRNE: We can probably find one.

COMMISSIONER GAW: I can probably find one too but whoever can find it first, that would be great. Does anybody know what data request that is?

MR. MILLS: It looks like it would be 23 or 25, just from my guess. And Commissioner, I don't know that. I'm just -- I don't have the responses, I just have the questions and I'm trying to find it.

MR. BYRNE: Here. Does that look like what you're --

COMMISSIONER GAW: I don't know. I'm trying to go with what he's talking about.

MR. BYRNE: I think that's what he's talking about.

COMMISSIONER GAW: Can we hand that to him?

COMMISSIONER GAW:

Q. Mr. Schukar, Mr. Byrne is handing you a document. Is this -- is this the page that you're

referring to?

A. Yes.

COMMISSIONER GAW: Okay. How do we -- I need to identify that, Judge, for the record.

JUDGE DALE: It will be Exhibit 60.

(EXHIBIT NO. 60 WAS MARKED FOR IDENTIFICATION BY THE COURT REPORTER.)

JUDGE DALE: What do you want to call it?

COMMISSIONER GAW: I'm not sure.

BY COMMISSIONER GAW:

Q. What do we call it? Mr. Schukar, what's it entitled?

A. It says AmerenUE Operational Responsibility.

Q. Okay.

A. And it's just a one-page -- actually, it's attached to a multipage data request but we're only talking about this one page, I think.

Q. And Mr. Schukar, can you tell me, is there a definition on that page of safety or reliability as opposed to economic outage that you --

A. When you say "a definition," there's no specific definition.

Q. Okay. It's an over -- would you

characterize it more as a -- as a directive to generally be aware and make safety a priority --

A. Yes.

Q. -- rather than a definition and a set of written protocols about what constitutes a safety and reliability issue as opposed to an economic matter?

A. Yes.

Q. Okay. So -- so after seeing that, do you know of any other written protocols that do make such a distinction today?

A. I'm not aware of any.

Q. Okay. Now, in regard to the issue of the negotiations that may take place, if something has not been categorized as a safety or a reliability matter, are some of those decisions -- some of those cases involve matters that could at some point in time impact the safe running of a unit that might fall into that category? And I don't mean on an immediate basis.

A. Can you rephrase the question?

Q. Yeah. When you say that something falls into the category of a safe -- safety issue that requires immediate shutdown, does that -- does that mean that it is something that -- where the safety of the unit is imminent? Can you give me some sort of

an understanding of what -- what falls into that category?

A. From our perspective the --

Q. And who is "our," first of all?

A. The trading --

Q. That's fine.

A. -- AmerenEnergy perspective, whenever they say that the -- when the plants indicate that they have a safety or a reliability issue that requires a plant to come off-line --

Q. Right.

A. -- you know, at that point we take it that they have made a judgment on what they need to do to maintain the safe, reliable operation of the plant, and we comply with that.

Q. In other words, that decision is -- however it's made and however it's evaluated, if they categorize it into that -- into that position, that's not a matter for further discussion --

A. Correct.

Q. -- with your -- with your area?

A. Right. I mean, they may say we have this issue and we need to take it off by midnight tonight --

Q. Right.

A. -- and we'll work with them to get it off by that time or before.

Q. Let's say it's not categorized that way --

A. Okay.

Q. -- it's categorized the other way. Do some of those issues that get into the discussion involve matters that can lead to the safety of that plant if they're not addressed in a certain period of time?

A. I guess that any issue that continues to go, may ultimately have some other impact on the plant.

Q. Right. And what I'm looking for, then, is do the -- do any of the writings that you're familiar with describe how to balance those aspects against the other factors that go in to trying to schedule this outage? Do you know whether they -- any written protocols exist helping to make that assessment?

A. Like, I guess I'm not quite understanding your question because if it's a safety or a reliability issue, then the plant would --

Q. I'm not -- I'm not talking about that. Set that off the table for the time frame. You've

already -- you've already said that sometimes there are issues with a plant that could eventually be an issue from a safety and reliability standpoint, but that don't necessarily require immediate -- immediate shutdown. Let's say the plant hasn't taken -- said we're gonna shut it down.

A. Uh-huh.

Q. But they do see some -- some issues here that could cause a problem if they're not addressed. I'm looking to see whether or not there are any written protocols within Ameren that exist now or that existed in the past that help Ameren employees to work through the balancing of that scheduling issue.

A. Once again, I'm not certain that's the scheduling issue, what --

Q. In this case -- I'm taking that one piece off the table. Don't -- just -- just in the circumstance where there is a discussion going on about scheduling an outage.

A. Uh-huh.

Q. The plant has not said this has to be taken off immediately. Are there written protocols that help Ameren employees to balance the need for scheduling sooner rather than later with the economic

impacts of doing so and the reliability impacts of doing so?

A. I'm not certain.

Q. Okay. Do you know of any as we sit here today?

A. Well, the communication protocol discusses -- in general it discusses that there is an evaluation that takes place.

Q. Okay.

A. But I'm not certain that there's anything out there that says you're going to look at how long it's going to take before this plant issue rises to level A or B or C or D or whatever --

Q. Yes.

A. -- and here are the economic issues and here are the reliability issues because there is so many of those out there to do that in a document, it would be massive. Because you have -- every issue that comes up has 50 other issues that are tied to it, and that's why we have plant discussions with -- with the coordination individuals.

Q. I understand, and what I'm looking for is whether or not any written guidance or protocols exist to assist with making that decision. And I think you're saying you're not certain?

A. Yes.

Q. And then I ask you, do you know of any?

A. Not specifically.

Q. Okay. And we can look at the documents that you referred to, hopefully, so we can see kind of what that refers to.

As that discussion occurs in that category, if there is a dispute between individuals who are involved in the discussion in your shop and the plant about when to do this, when to make this fairly short-scheduled shutdown -- it could be short, I guess it could be a little longer -- how are those disagreements or -- well, let's say disagreements handled, how are they dissolved?

A. If I understand your example, at this point it's an economic evaluation.

Q. I'm making -- I'm taking that -- that part off the table clearly in these questions about the plant saying, we demand an immediate shutdown, we are shutting this plant down. That's off the table. We're in this other area that has some grayness to it. How is that evaluation handled?

A. So it's a -- under your description it's an economic evaluation --

Q. Yes.

A. -- and basically we're looking at what the market impacts are versus the impact to the plant from a cost perspective.

Q. Okay. From a cost perspective?

A. Right, because you may have overtime or call out of contractors or things like that that have to be coordinated.

Q. Okay.

A. And so you're going to balance the two off, and it's generally handled between the coordination folks and the plant personnel.

Q. Okay. Well, what -- what if they -- what if there is also an element of -- you know, we've got this part in this -- in this coal generation unit, it's -- it looks like it's getting close to time when we need to replace this thing, and we think it's -- it needs to be done within the next month, let's say, the next -- next -- next two weeks.

A. Uh-huh.

Q. And your people say well, you know, we really -- we really need to run this thing for another three weeks or so without being -- without shutting it down in the middle of some very, very high loads, who resolves that kind of situation?

A. If the plant says they need to take it

down within two weeks, then we schedule it down within that two-week period.

Q. All right. Now, let's say -- now, where does it say that that will occur in any written protocol?

A. I don't know that it says that.

Q. Okay.

A. That's how it works.

Q. All right. Now, what happens -- what happens if there is a disagreement? Is there -- how does that disagreement get resolved?

A. Two different aspects: If you're talking about the first example that you said that was economic --

Q. Yes.

A. -- and if there's a disagreement about where the economics lie, then that may be a discussion that the plant manager has with me or somebody else to say, we think that these costs don't line up, there may be more costs here that you're not thinking about. And you know, you make a discuss -- a decision at that point. If it's one where they say it has to be off in two weeks, in two weeks it comes off.

Q. Okay. What if they -- what if they say,

this is what we believe, we're not certain, but we'd rather do it sooner than later and it's not quite soon enough?

A. If what is not quite soon enough? Because if the plant wants to come off, the plant comes off. We don't make that ultimate decision. The decision at the plant, if they need to come off, whether it's for reliability or safety and they need to come off, they make that decision.

Q. All right. Have you ever -- have you ever been involved in discussions where there's a disagreement between the plant and your shop about scheduling an outage?

A. On the economic side, yes.

Q. Okay. And how is it resolved when those matters -- when there is a disagreement?

A. Generally when it's economic, we put together our numbers and put together the case and look at them and you look at the economics of it, and whichever case is the most appropriate, that's what happens.

Q. How -- who makes the decision about when that scheduling event happens under that scenario; is it your shop or the plant?

A. It's in combination together. I mean,

at that point, you have the economic numbers in front of you and you can see what is the right answer.

Q. So in other words, your shop makes the decision?

A. It's made in concert with the plant because part of those economics are plant economics also.

Q. And that's important to the plant because?

A. Well, you have costs associated with outages and what are required to bring in contractors and things like that that you have to take into account. It's not just what the market prices are.

There's also the costs associated with an outage, and if it -- if you take it off, can I accomplish it in two days or do I take three days because of, you know, not being able to get the labor in or things like that. So there's a lot of those different issues that go together when you're looking at scheduling a unit on it.

Q. And why is it important to a plant manager or superintendents that are -- that are making those decisions in regard to the budget matters, what causes them to care about that?

A. Well, I think the overall good of the -

the corporation and the -- and the ability to serve load and things like that are what everybody in the corporation worries about.

Q. Is anybody's -- is anybody's pay, incentive -- incentive portions of pay tied to any of those things that you just mentioned?

A. When you say variable pay?

Q. Yes.

A. The variable pay -- in our shop, variable pay is tied to margin and it depends on what time period you're talking about, but it has aspects of margin, it has aspects of how well we put data entry into the trade capture systems, training functions and selling of the -- of the excess megawatts that are economic into the marketplace.

Q. What about the plant?

A. I do not know what the plants -- I don't specifically recall what the plant's variable pay looks like.

Q. Do you -- do you think that the -- from what you know about the -- the matter at Taum Sauk that there were any elements, safety elements involved in the request for the outage that was made to your -- to your shop to Mr. Schoolcraft in the fall of '05?

A. When you say "safety elements," operation of the plant includes safety elements, so any discussion around the plant includes safety and reliability. But in the case of what was requested and what information we had, it's my belief that we were asked for a time to schedule it and we tried to provide the best economic time to schedule that plant off.

Q. And do you know whether or not Mr. Schoolcraft was made aware of any of the issues that were going on regarding the Taum Sauk plant in the fall of '05?

A. When you say "aware of issues," yes, I'm certain they provided him information on some of the work that was -- that needed to be done.

Q. Okay. And is it your -- your understanding that any of those issues, then, were safety-related?

A. As I said before, any operational issue, you know, you can take it down to the smallest issue at the plant, is safety related. So that's a very broad category.

Q. So the answer would be yes?

A. Yes.

Q. And yet, it was being handled at that

time as an economic category outage?

A. Well, I think, though, your question was --

Q. Is that --

A. Your question was is it -- your question was, was it safety-related?

Q. Is that true?

A. Well, your question was, was it safety-related.

Q. Yes.

A. And like I said, everything in the plant --

Q. I know.

A. -- has that.

Q. I know.

A. At the time the request that came into us was an economic request.

Q. Mr. Schukar, I understand what you said and I agree -- I understand that you're trying to answer the question as you wish it was posed, but my question was a yes or no, and I guess I need it read back because I lost it.

(THE REPORTER READ BACK THE PREVIOUS QUESTION.)

THE WITNESS: What was being handled?

BY COMMISSIONER GAW:

Q. The discussion on the -- on the outage at Taum Sauk in the fall of '05 with Mr. Schoolcraft and Mr. Pierie.

A. That a -- the discussion for when an outage would take place was being handled is an economic?

Q. Yeah, that's all I was -- is -- okay. Now, I'm want to -- I want to have a better -- I'm gonna switch gears just a little bit with you. In regard to the -- the incentive pay in your group, because I'm not sure I'm following it completely and I want to make sure I am. You said there were three categories; is that right? Did I follow that right?

A. Well, there were several categories.

Q. You had a -- there are three categories --

A. I think four is what I listed.

Q. -- of performance for individuals and then a group and then the company, right?

A. Oh, okay, yes.

Q. And then within that -- within your group, again, what were the factors that go into the incentives?

A. You're talking about the group level

portion of it?

Q. Yes.

A. There was metrics associated with the performance of the group.

Q. And what were those metrics?

A. There was metrics associated with margin.

Q. And what does margin mean?

A. Well, there was two different metrics associated with margin.

Q. Okay.

A. One was that the business line level, which would include all the costs, all the revenues of the generation UE business line. The second portion was the level of margin associated with off-system sales which was called a gross margin.

So those were the two margin categories, and if I remember correctly, they accounted for about 20 percent of that pay-out.

Q. The first subcategory that you were talking about, did you say business -- what did you say?

A. The business line performance. So that's kind of like an overall generation performance cost and revenues where the 80 gross margin was

really just the off-system sales margins.

Q. Okay. So does a business line include the -- something to do with how -- how well you were doing on dispatching units for native load, for instance?

A. That would -- that would be accounted for in there, how effective we were in putting the load into the MISO markets and things like that.

Q. Okay. And that was about 20 percent on that -- on those two --

A. Those two.

Q. -- categories?

A. Yes.

Q. Okay. And then what else was there after margin?

A. There was a area on how accurately we -- we put the transactions into the trade capture system.

Q. What does that mean?

A. Every time you do a transaction, you have to put that into a trade capture system so that you can accurately reflect it, you can generate confirmations in the back office, you can account for it appropriately, and it also helps us firm out a reporting perspective. And so with the Midwest ISO

operations and the -- making sure that we had everything put in correctly, that was one of the goals for the group.

Q. Okay. And what percentage was that, do you know?

A. I believe it was about 20 percent also.

Q. Okay. And then what else?

A. The percent of megawatts that were economically available that were put into the marketplace.

Q. What does that mean?

A. Well, it -- when you have excess generation on the -- on your generators that are -- that are less than the market price, you would like to sell all of those into the market.

Q. Okay.

A. There's transactional limitations in that that may not allow you to get them all into the market, so you try to put as many as possible into the market. And so that goal was the incentive to make sure that if generation was economic, that you were selling it into the marketplace.

Q. Okay. And I think you said "economically available." Did you use that phrase?

A. Yes.

Q. And is that what you were just describing?

A. Right. If it was generation that was on and was below the market price, I would call that economically available.

Q. Okay. So unless it was declared out by a plant --

A. Or was uneconomic.

Q. Or it was not -- it didn't make sense to run it because of the cost --

A. Right.

Q. -- of running it compared to what you could get out of it in the market?

A. Correct.

Q. Okay. And what percent was that?

A. I think that it was either 20 or 30 percent.

Q. Okay. And what else?

A. The last one was some training goals.

Q. Okay. What kind of training are you talking about?

A. There was two aspects to the training goals. The one was because of the Midwest ISO startup; it was making sure that all of the trading and dispatching personnel had gone through Midwest

ISO training, understood how the markets work, understood how you operated within those markets.

The other one was to provide some training to the plants also, so that they also understood because they would be seeing operations somewhat differently than what they had in the past.

Q. Okay. And that's what -- however much was left over, is that one --

A. Yeah, I think it was 30 percent.

Q. Okay. And what percentage of the total incentive pay portion of your shop was the group portion? I mean, we broke them down into individual group and company and maybe that question doesn't work. Can you tell me how that fits in with the other two categories, individual and company?

A. Well, the company starts on the top. The company has a certain level of performance that -- that we need to have to -- sorry -- to have the variable pay.

Q. That's in essence a hurdle. You have to clear --

A. Right.

Q. -- that before you get into the question of how much incentive pay you can get?

A. Right. And then the next level down

which is at the department level which is what we just went over --

Q. Okay.

A. -- is the -- that's what gets allocated out to the group. And then when you look at individual performance, they may receive that level, they may receive -- you know, an average level associated with that, they may receive less or more based upon their personal performance.

Q. So is there a range of incentive pay available if you're in the group and then you get some -- some portion of that --

A. Right.

Q. -- in that range?

A. Yes.

Q. I'm -- was there a -- of the salary that individuals in your group might have available, what portion was incentive pay as opposed to base amount?

A. It varied from position to position.

Q. It did?

A. Yes.

Q. Okay. Was it a significant amount for some people, as much as half potentially of their -- of their -- of their income for the year could be incentive?

A. I don't know that there was anybody who had up to half.
Q. Okay. 25 percent?
A. There would be some in that range.
Q. Okay. Some more than that?
A. I believe there was a few that have more than that.
Q. Okay. Very many less than that?
A. Several that have less than that.
Q. Okay. And I'm talking potential here, not actual.
A. That's what I'm saying.
Q. Okay. Does the incentive pay increase as your -- as your level increases in the company?
A. Generally speaking, yes.
Q. Just to clear this up for me, was the number of megawatt hours in efficiency mode that could be generated at Taum Sauk during the day at a maximum, do you know?
A. It -- not -- not specifically because it ranges from full to the bottom.
Q. How would you translate that?
A. Well, you would offer it and we'd just offer it in as an average level.
Q. Okay.

A. Generally about 190 is what we'd offer them per unit.
Q. Is that per unit, did you say?
A. Yes.
Q. Okay. So I could double that?
A. (Nodded head.)
Q. And how many hours at one time maximum?
A. Once again, depending on how much water you have in there, but it would -- I want to say it was between six, six and a half, seven, somewhere in that range.
Q. Do you know how long it took to pump it up?
A. Probably -- well, if it's one and a half, it would be ten, 11 hours.
Q. How did you come up with that?
A. Well, six to seven times 1.5.
Q. You're assuming it takes that much longer to pump it up than it does to generate it down?
A. Yeah, I think -- I think it was around ten hours.
Q. You do?
A. (Nodded head.)
Q. I didn't -- I didn't make the connection

that it actually translated into more time and it lost energy, so ...

A. It's not specific. I'm just -- I think that's about -- if you go from empty to full.

Q. Okay. Do your dispatchers have access to monitors on the different plants?

A. They have information that is displayed on different plants.

Q. Okay. Are you familiar with what was displayed on Taum Sauk?

A. The only thing that I really seen was the level that's displayed. I know they have displays on their monitor where they can look at the plant that have other information on it, but the only thing I'm really familiar with was the Taum Sauk level.

Q. Was it a digital display or a graphic and digital?

A. I -- I would have to check on that.

Q. You don't recall right now?

A. I don't recall.

Q. And were there any written protocols in regard to how a dispatcher would watch those screens?

A. Specific to each screen, no.

Q. And more specific to whether or not

there were written directions about make sure you check these -- this particular piece of information or these particular screens every so many -- time intervals?

A. Not that I'm aware of.

Q. Okay. Oh, the incentive pay that you were describing, is that current or what was in effect in '05?

A. '05.

Q. Okay. And it's changed since then?

A. Yes.

Q. Significantly?

A. Some of the -- I mean, we still have margin goals but we have similar liability-related goals as they pertain to NERC, and then compliance with the risk management and any of the internal policies. And we also have a developmental role that's consistent with the training roles, so ...

Q. Okay. When were those changes made?

A. Well, they -- we change them each year, there's slight changes each year.

Q. Okay. So when were these changes made, the ones that are in effect now?

A. Well, they would have been for '07?

Q. Yes.

A. It would have been late '06.
Q. Do you know whether -- whether any of those changes were related to Taum Sauk?
A. No.
Q. They were not?
A. They were not.
Q. Okay.
COMMISSIONER GAW: Thanks.
JUDGE DALE: Thank you, Mr. Schukar. Do you guys have any questions?
MR. BYRNE: No questions. And I guess I would like -- if we're done I would like to renew my motion to terminate this proceeding since all the witnesses have testified.
JUDGE DALE: Thank you. I will poll the Commission and let you know as soon as I know something. Is there anything else that I need to do before we go off the record?
(NO RESPONSE.)
MR. REED: Can I go ahead and move for admission of 56 through 59? I thought we wouldn't mess with No. 60, but that's up to Commissioner -- I don't think we need 60 in, but I'd like to have 56 through 59 into evidence.
JUDGE DALE: Is there any objection?

MR. BYRNE: No.

JUDGE DALE: In that case, then, Exhibits 56 through 59 are admitted into the record.

(EXHIBIT NOS. 56 THROUGH 59 WERE RECEIVED INTO EVIDENCE AND MADE A PART OF THE RECORD.)

MR. BYRNE: Your Honor, I guess I would move to admit 60, then, which I think is the Tom Voss letter.

JUDGE DALE: Okay. Then Exhibit 60 will also be admitted.

(EXHIBIT NO. 60 WAS RECEIVED INTO EVIDENCE AND MADE A PART OF THE RECORD.)

JUDGE DALE: Anything else?

(NO RESPONSE.)

JUDGE DALE: Then we are adjourned, and you will find out from me whether or not these proceedings will continue.

(WHEREUPON, the hearing of this case was recessed.)

I N D E X

SHAWN E. SCHUKAR

EXHIBITS INDEX

CERTIFICATE OF REPORTER

STATE OF MISSOURI)
)ss.
COUNTY OF COLE)

I, PAMELA FICK, RMR, RPR, CSR, CCR #447, within and for the State of Missouri, do hereby certify that the foregoing proceedings were taken by me to the best of my ability and thereafter reduced to typewriting under my direction; that I am neither counsel for, related to, nor employed by any of the parties to the action to which this hearing was conducted, and further that I am not a relative or employee of any attorney or counsel employed by the parties thereto, nor financially or otherwise interested in the outcome of the action.

_____

PAMELA FICK, RMR, RPR, CSR, CCR #447