COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

THE APPLICATION OF KENTUCKY POWER FOR: (1) THE APPROVAL OF THE TERMS AND CONDITIONS OF THE RENEWABLE ENERGY PURCHASE AGREEMENT FOR BIOMASS ENERGY RESOURCES BETWEEN THE COMPANY AND ECOPOWER GENERATION-HAZARD, LLC; (2) AUTHORIZATION TO ENTER INTO THE AGREEMENT; (3) THE GRANT OF CERTAIN DECLARATORY RELIEF; AND (4) THE GRANT OF ALL OTHER REQUIRED APPROVALS AND RELIEF) CASE NO. 2013-00144

VOLUME II

Transcript of August 29, 2013, hearing before David L. Armstrong, Chairman, James W. Gardner, Vice-Chairman, and Linda Breathitt, Commissioner, at the Kentucky Public Service Commission, 211 Sower Boulevard, Frankfort, Kentucky 40602-0615.

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(Hearing commenced at 10:03 a.m.)

CHAIRMAN ARMSTRONG: We are on the record. Good morning.

COUNSEL: Good morning.

MR. KURTZ: I think the Company has some preliminary, Your Honor.

MR. GISH: Mr. Chairman, I want to clear up a couple issues outstanding from yesterday's part of the hearing. The first was I believe a question that you had regarding the planned commercial operation date of the facility, and in Exhibit 1 to the REPA, the command -- which is -- sorry, Exhibit A to the REPA, commercial operation milestone is January 31 of 2017.

And then with regard to the data request regarding rate impacts that the Vice-Chair had, we -- and we went back and looked at what we had done for -- in response to the data request Staff 5-10 in the Mitchell case, which prepared kind of incremental, almost milestone-by-milestone revenue requirement change where we had the 2014 to 2015 period with the 5.33 percent rate increase and then the post-2015 eight percent rate increase for a cumulative of two -- or for a cumulative 13 percent rate increase, revenue requirement increase.

And what we -- what we understand is that we look for what happens when we do the Big Sandy 1 conversion and do an incremental revenue requirement increase, cumulative, and the same with the ecoPower revenue, incremental revenue requirement and cumulative.

VICE-CHAIR GARDNER: Sure. I mean, we can do that now if you'd like, Mr. Chairman, or at the end.

Okay. Well, just so we're on the same page --

MR. GISH: Certainly.

VICE-CHAIR GARDNER: -- I've got a copy of this, of what we're talking about, the Exhibit itself --

MR. GISH: Sure.

VICE-CHAIR GARDNER: -- just to make sure. Do you mind handing that out to the other folks?

MR. GISH: No problem.

MS. HARWARD: Can I have one too, please?

VICE-CHAIR GARDNER: And this is, you know, a post-hearing data request.

MR. KURTZ: Oh, thank you.

VICE-CHAIR GARDNER: So line -- so column 2, the way you've done it here was the Mitchell overlap period, that --

MR. GISH: Yes, sir.

VICE-CHAIR GARDNER: -- 17-month period, and I guess what I'd like to do to use Mr. Wohnhas's more current number would be the -- from his Exhibit 1, page 1 of 1, use the 501,037 rather than the 511,321, so that we have that number current. Does that make sense?

MR. GISH: Yes, sir.

COMMISSIONER BREATHITT: Is that line 12?

VICE-CHAIR GARDNER: That is line 12. So then we'll get a new number for line 13. We'll get a new percentage there. Okay?

MR. GISH: Yes.

VICE-CHAIR GARDNER: Then in column three, we'll -- you know, we'll do it exactly as you had done before, we'll be getting a new -- except we'll have a new line 13 on there, because we will have changed what that -- and Ranie is nodding his head, so he understands that.

And then -- so we'll have what that incremental 2015 percent change is, and that'll be a

different number. And then -- so -- then I'd like a new column four.

MR. GISH: Uh-huh.

VICE-CHAIR GARDNER: Which is the -- and let's do it this way: Let's do it with the Big Sandy Unit 1 repower, and then -- so we'll -- going down we'll have a percent change and an incremental, you know, in --

MR. GISH: Certainly.

VICE-CHAIR GARDNER: -- liens 13 and 14. And then similarly in -- we'll have a new column five for the ecoPower REPA, what that is, and then we'll be able to see what that incremental change is.

MR. GISH: Absolutely, sir.

VICE-CHAIR GARDNER: Okay.

MR. OVERSTREET: And Mr. Vice-Chairman, just so that I'm clear, row 12 is changed to 501,037 all the way across?

VICE-CHAIR GARDNER: Yes. Yes.

MR. OVERSTREET: Okay.

VICE-CHAIR GARDNER: So that we have those -- that current.

MR. OVERSTREET: Apples to apples.

VICE-CHAIR GARDNER: Right. Thank you all. Thank you, Mr. Chairman.

CHAIRMAN ARMSTRONG: Uh-huh. General.

MS. HANS: We have no witnesses, Your Honor.

MR. KURTZ: KIUC calls Mr. Alan Taylor.

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ALAN TAYLOR, called by Kentucky Industrial Utility Customers, Inc., having been first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Kurtz:

CHAIRMAN ARMSTRONG: Have a seat. Speak up loud and clear. Your name?

THE WITNESS: My name is Alan Taylor.

CHAIRMAN ARMSTRONG: What do you do, Mr. Taylor?

THE WITNESS: I do energy consulting. I'm the president of Sedway Consulting, Inc.

CHAIRMAN ARMSTRONG: And why are you here?

THE WITNESS: I am here testifying on behalf of the Kentucky Industrial Utility Customers. I specialize in power procurement and evaluation of power supply options. I do this all around the country, and I think that the ecoPower transaction that is the subject of the hearing is a very expensive transaction and that there are better options out there in the marketplace that would satisfy the

laudable goals that Kentucky Power is pursuing here of fuel diversity and economic development, but I think that there are cheaper options out there that would be more effective.

CHAIRMAN ARMSTRONG: Welcome.

THE WITNESS: Thank you.

CHAIRMAN ARMSTRONG: Your witness.

MR. KURTZ: Thank you, Your Honor.

Q Mr. Taylor, do you have in front of you a document marked direct Taylor [sic] of Alan S. Taylor?

A Yes, I do.

Q Was it prepared by you or under your direct supervision?

A Yes, it was.

Q If I was to ask you the same questions as those contained therein, would your answers be the same?

A Yes, they would.

Q Any additions or corrections?

A No.

MR. KURTZ: Your Honor, I tender the witness for cross.

CHAIRMAN ARMSTRONG: Mr. Gish.

MR. GISH: Thank you, Mr. Chairman.

CROSS-EXAMINATION

By Mr. Gish:

Q Good morning, Mr. Taylor.

A Good morning.

Q Can you turn to your testimony on page 6, please?

A Yes.

Q And on lines 2 and 3 of page 6 you testify that you have seen 20-year REPA proposals offered for prices less than a third of the ecoPower REPA price; is that correct?

A Correct.

Q And in response to the data request 1-2 propounded by Kentucky Power, you noted that in your role as an independent evaluator of renewable solicitations you reviewed over 1,500 proposals for renewable energy?

A That is correct.

Q And in response to Staff data request 1-1, you responded that while you cannot provide any details of the REPAs that are a third of the price of the ecoPower REPA due to confidentiality agreements --

A That is correct.

Q -- similar to the confidentiality agreements that Mr. Godfrey entered into, you did identify those projects as being located in Iowa, Minnesota, North Dakota, South Carolina, and Wisconsin; is that correct?

A That's correct.

Q Okay. So none of those projects were located in Kentucky Power service territory?

A Correct.

Q And none in Kentucky?

A No.

Q None in PJM?

A I don't believe so.

Q And these projects were predominantly wind and solar projects; is that correct?

A Predominantly.

Q Were there any biomass projects in this?

A No.

Q And can you turn to page 16 of your testimony?

A Yes.

Q The version I have lost the line numbers in the middle of it, but you testified that in fact you have seen any proposed renewable projects in recent years that could generate renewable energy and

RECs, R-E-C's at prices that are less than forecasted prices for brown power; is that correct?

A That sounds right, I just want to see the -- okay. In my version it's actually at the bottom of page 15. Yes.

Q And in response to Kentucky Power's data -- you've heard of this as a negative REC price, correct?

A Correct.

Q In response to Kentucky Power data request 1-15, again noting that you can't provide the details of the proposal, you testified that these projects are located in Arizona, California, Colorado, Iowa, Minnesota, New Mexico, North Dakota, Oregon, South Dakota, and Wisconsin, correct?

A Correct.

Q Okay. And you also testified that these were wind and solar projects?

A Predominantly, yes.

Q Your data response said that they were wind and solar projects. Do you have a copy of that in front of you?

A I believe so. One moment. Yes, that's correct, in response to Kentucky Power's question number 15.

Q So no biomass projects?
A That's correct.
Q And, again, none of these projects were located in Kentucky Power service territory?
A That's correct.
Q And none in Kentucky?
A None.
Q And none in PJM?
A I do not believe so, no.
Q And so you're familiar with renewable energy development in the United States, I presume?
A Uh-huh. Yes, I am.
Q So you're aware that Kentucky has -- is a -- I think what would be described as a poor state for potential wind development; is that correct?
A I would not characterize myself as a renewable resource expert for Kentucky. I think my expertise is really in the soliciting of power supply options and seeing what the marketplace comes up with. I think that that's the real failure in this case is that there has not been sufficient economic backdrop with which to judge this transaction, and I think that it's not for me to sit on the stand and try to determine what I think the price might be of various renewable options or exactly what renewable

technologies might be available to Kentucky Power. I think it's beneficial to actually have a solicitation and let the marketplace tell you.

Q But back to my question. Kentucky is not a state where you're likely to find wind energy development?

A I don't know.

Q You don't know?

MR. GISH: Pass out what will be marked as Kentucky Power Exhibit 1.

Q And, Mr. Taylor, this is a map of the United States entitled Annual Average Wind Speed at 80 Meters; is that correct?

A I accept that representation, yes.

Q And it's from the National Renewable Energy Laboratory?

A Correct.

Q And it looks -- the date at the bottom corner is 1 April 2011; is that correct?

A That's correct.

Q And this map shows the wind speed at 80 meters, average annual wind speed at 80 meters for the entire country. And 80 meters is a rough estimate of the hub height of a wind turbine generator; is that correct?

A That's correct.

Q Okay. So if you look at this map, the colors that are shown and the wind speeds that are shown for Eastern Kentucky, Kentucky Power service territory, are among the poorest in the country for wind resources; is that correct?

A I mean, there certainly are some brown colors in the central area. I don't know whether that's within the footprint of East Kentucky -- of Kentucky Power or not.

Q But in the eastern third of the state, Kentucky, there's -- it is a green to dark green, which is the slowest wind speeds at 80 meters?

A That is correct, although technologies have improved to the extent of new wind turbines being able to extract more energy from low wind speeds.

I think that the map is illustrative of where the absolute best places to put wind turbines if one is just looking at a national perspective, but I still don't think that this says that wind energy here in the eastern part of the state would not be exceptionally more competitive than the prices that have been put in place from the ecoPower transaction.

Q But there's no -- but there's nothing on this map that shows that there's -- it's considerably

less likely to have wind resources than, say, the Dakotas, where you found -- where you have had your experience; is that correct?

A No. I think if you're looking for in-state renewables, I think it's worth testing the marketplace and seeing what sort of prices they could put in front of you. I think you'd be impressed.

Q And Kentucky is not a -- or Eastern Kentucky is not a particularly strong area for solar resources; is that correct?

A I don't necessarily know that. Commercial and industrial facilities are often a good spot for rooftop solar installations, and that may be a possibility.

MR. GISH: I'm going to pass out what I'd like to have marked as Kentucky Power Exhibit 2.

Q This is a map also from the National Renewable Energy Laboratory titled Photovoltaic Solar Resources of the United States; is that correct?

A That's correct.

Q And it's an October 20th, 2008, date; is that correct?

A Correct.

Q And the -- again, this is color-coded based on kilowatt hours per meter squared per day

measurement of photovoltaic resources; is that correct?

A Yes.

Q And the color that's associated with Kentucky Power service territory appears to be roughly the same color associated with the upper peninsula of Michigan, upstate New York, and northern Maine; is that correct?

A Some of those areas. It looks like there is some potential in -- again, closer to the center part of the state.

Q Right. But in the Kentucky Power service territory, it's green, just like it is in the upper peninsula of Michigan?

A I see a lot of dark green in the upper part of Michigan. I see some light green in what I think is probably Kentucky Power service territory.

Q Okay. Do you know what Kentucky Power service territory is?

A From this map, no.

Q Do you know what it is generally?

A Generally.

Q Okay. Where is Kentucky Power service territory?

A It's the eastern, kind of northeastern

part of Kentucky.

Q Based on the data that is produced by the National Renewable Energy Laboratory, it appears that on a relative scale, the Eastern Kentucky is at a disadvantage for -- as compared to other parts of the country is at a disadvantage for solar and for wind; is that correct?

A I would definitely say that there are better geographic areas than east Kentucky for locating those technologies if you were just looking at this from a national basis. I don't think that that in and of itself, though, warrants not asking the market for their best options for meeting renewable energy needs or desires of Kentucky Power.

Q And you would agree that biomass resources provide the best renewable option for Eastern Kentucky; is that correct?

A No, I would not.

Q Despite the abundance of woody resources; is that correct?

A I think that you need to ask the marketplace and then review the options that are in front of you.

Q And are you familiar with the -- Kentucky's 2008 energy plan?

A Yes, I am.

Q Okay. And that specifically calls out biomass energy as a -- as a renewable alternative for Kentucky; is that correct?

A As a possibility, yes.

Q Are you familiar with -- are you aware of whether or not Kentucky Power has conducted a recent RFP?

A I know that they looked at the Big Sandy 1 replacement. They issued that RFP after they signed this ecoPower REPA.

Q Have you reviewed the RFP?

A I glanced at it.

MR. GISH: Pass out what is the Kentucky Power Exhibit Number 3.

Q Can you turn to page 4 of this document, please?

A Okay.

Q I'm sorry. Can you turn to Section 4 of this document on page 6?

A Yes.

Q Okay. Can you look at Section 4.1?

A Uh-huh.

Q The Company is seeking a low-cost bundled product from PJM Generation Capacity Resources

that include the following: Capacity, energy, ancillary services, and environmental attributes, if available; is that correct?

A That's correct.

Q So renewables were eligible to bid into this RFP; is that correct?

A They were eligible. I found that, in an electronic search of the document, renewable only occurred once, and that was actually in the footnote at the bottom of this page 6, so I don't know that I'd really say that this was opening the door wide open and encouraging renewable bidders to propose resources.

Q But you have testified that renewable resources are available and are competitive with any other source; is that correct?

A True.

Q All right. So they would have not been dissuaded by the lack of bells and whistles and lighted invitation, correct?

A I think they would. I think the fact that, first of all, a renewable energy contract had just been signed earlier in the month, so any appetite that Kentucky Power had for renewables may have already been sated by that contract.

The fact that there is no RPS requirement in Kentucky I think also has most renewable developers looking for better business opportunities elsewhere, where states are requiring some portion of a utility's supply portfolio to be renewable.

I think that if you really want to encourage renewable bidders to submit options, you need to publicize it more than saying, "We're considering converting a coal plant, come to Kentucky and see what you can provide."

Q But, again, you believe that renewables are equivalent to any other power source, so they should have been able to bid in here, if available, correct?

A I think they were allowed to bid in. I don't consider this, though, to be a renewable solicitation.

Q But, again, you don't think that it needs to be a renewable solicitation because you have testified that the price that you've seen is equivalent, so if there were resources out that -- out there that they believed were competitive with other gas, coal, they would have bid in, correct?

A Okay. To the first part of your

question, I disagree. I think that if you want renewable resources, you really do need to have a renewable solicitation where you're opening the door wide, widely publicizing it as a solicitation for renewable power supplies, and that this does not meet that test.

Q Did any renewable resource submit a proposal in response to this RFP?

A I don't know. I did not see the results of this RFP.

Q The R -- the results of the RFP was -- were provided in the case study. Did you review that?

A I did not.

Q Just -- again, just to clarify, you've reviewed -- you've never reviewed a biomass renewable project that produced a negative REC value; is that correct?

A I don't believe so.

Q And you never reviewed a biomass REPA at prices that were one-third less than the ecoPower REPA; is that correct?

A I don't believe so.

Q Can you turn to page -- your testimony at page 17, and there's the question that starts, "But does the REPA expose the Company's customers to

fluctuations in diesel fuel prices?"

A Yes, I see that.

Q And you answer no, which is correct, then you testify in the second-to-the-last sentence, (Reading) If the current REPA were approved, that could lead to another regulatory proceeding in the future regarding an amended REPA with yet a higher price.

And you're testifying here with regard to increases in trucking costs, is that correct, diesel fuel costs?

A Correct, although it could go even beyond that.

Q You reviewed the REPA; is that correct?

A Yes, I did.

Q Okay. Do you have -- is there any -- there's no provision in the REPA that allows ecoPower to unilaterally change the agreement, correct?

A That's correct.

Q All right. There's no provision that allows ecoPower to force any future regulatory proceedings before this Commission?

A That is correct.

Q So even if the contract becomes economic for ecoPower, they have -- I'm sorry, uneconomic for

ecoPower, they cannot force a proceeding, correct?

A They cannot, although my basis of my testimony here is really more anecdotal, what I've seen occur in other state jurisdictions, and I simply wanted to bring it to the attention of the Commission is circumstances where even though the utility and effectively, by translation, the utility's customers are protected from certain cost increases because it is a fixed price contract, I have seen circumstances where, for issues that were out of the control of the developer, costs went up, either -- in this case it could be diesel prices, it could be GHG costs, what have you.

Once an approved contract is -- has the momentum of regulatory approval and construction is under way, or perhaps the facility is entirely built, it's hard for a utility and the commission that's overseeing it to resist at least consideration of cost increases that might -- may be a -- may have been outside of the developer's control. The argument is always made, "We're the developer. We did the best we could. Through no reason of mismanagement, we've got these additional costs that weren't foreseen when we came up with our original fixed prices. We need a -- we need a higher price or this project is going to go

into bankruptcy and the jobs associated with it and all of the investment is going to dry up." And it could leave a black mark on that state's record for the promoting of renewable contracts, and it may make other renewable developers less likely to consider doing business in that state.

So kind of with that threat, I have seen fixed price contracts get reopened, higher prices negotiated and the commission being placed in a position where they felt they had to approve things. Even though what you're looking at with the ecoPower contract indeed says it's fixed price and this is the end of the story, it's not always the end of the story.

Q But just to clarify, there's no provision in the REPA that allows ecoPower to force a future Commission proceeding relating to increased costs?

A That's correct.

Q And there are provisions in the contract that relate to what their -- that protect the customer in the event of a bankruptcy of ecoPower; is that correct?

A That's correct.

Q And on page 18 of your testimony you

testify regarding the ability of the ecoPower facility to meet future potential carbon emission standards; is that correct?

A Yes.

Q And there's nothing in the REPA that allows ecoPower to unilaterally change the REPA to address future requirements to install, operate, or maintain additional pollution control equipment, is there?

A That's correct.

Q And under the REPA the risk of increased costs to operate the facility arising from operating this additional hypothetical control equipment lies with ecoPower, not Kentucky Power; is that correct?

A That's correct, but, again, it's the same issue. If costs aren't as high as have been expected, ecoPower will enjoy the benefits of the additional profits. If they do end up being too high, on the other end of the spectrum, and imperil the project, this contract could end up back in front of you at some later date.

Q But, again, that -- ecoPower cannot force that unilaterally?

A That's correct.

MR. GISH: I have no further questions,

Mr. Chairman.

CHAIRMAN ARMSTRONG: General.

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CROSS-EXAMINATION

By Ms. Hans:

Q Good morning, Mr. Taylor. I have a question just for clarification. Yesterday I asked Mr. Pauley, and I neglected to follow up, and I just wanted to know if you know. And, again, aside from whether the -- what your opinion is about the final transaction or whether the transaction would have even been a good transaction prior to today's date, if there had been a transaction or a REPA between Kentucky Power and ecoPower, if they had been able to agree prior to 2013, and I think that we had testimony yesterday that we're looking at probably the 2011 time frame, 2010, 2011, would ecoPower -- would the project, ecoPower project, have been eligible for federal incentives or subsidies which are no longer available?

A That is correct.

Q And what were those subsidies and when did they sunset, for the record?

A I don't know exactly when they sunsetted. They were associated with the fiscal stimulus legislation that was passed at federal level. There was the Section 1603 30 percent cash grants that Kentucky Power referred to in their data responses. There were bonus tax depreciation elements that were also in effect at that time and are no longer available.

MS. HANS: Thank you, sir. That's all I have, Your Honor.

CHAIRMAN ARMSTRONG: Mr. Nguyen.

MR. NGUYEN: Yes, Your Honor. Just a couple questions.

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CROSS-EXAMINATION

By Mr. Nguyen:

Q Good morning, Mr. Taylor.

A Good morning.

Q Were you here yesterday for

Mr. Godfrey's -- when he testified on the stand?

A Yes, I was.

Q Okay. Were you here for the part where we discussed sort of evaluating biomass REPAs versus wind, solar, renewable energy purchase agreements?

A I believe so, yes.

Q Okay. And then there could be some adjustments that were made so that you could compare, you know, each of those REPAs on an apples-to-apples comparison?

A Right.

Q Okay. And he testified that with respect to biomass and wind, that wind REPAs are, in general, less expensive than biomass. Would you agree with that statement?

A I would agree with that statement.

Q Okay. And then with respect to solar REPAs, that they were generally competitive with or on par with biomass REPAs. Do you agree with that statement?

A Not the ecoPower REPA price. And even the more competitively priced biomass --

Q Well --

A -- proposals that I've seen.

Q Let's just state in general, biomass

REPAs in general first, in comparison to solar REPAs. In general, are they on a comparable basis?

A They used to be, but I'd probably date that back maybe two years or so. Solar photovoltaic panel prices have been coming down so fast that those projects are now looking more cost effective than biomass.

Q Okay. And specifically with the ecoPower contract, with solar REPAs in general, are the price for -- just on a per megawatt hour basis, is it comparable to other general solar REPAs?

A No. I hesitate a little bit because in deference, actually, to Kentucky Power, one can't look necessarily at, say, solar prices in Arizona and compare them to what would be available here in Kentucky.

The central point, really, of my testimony has been, though, that they have to ask the marketplace. The marketplace is an amazingly innovative, and I think innovation was one of the key elements of the Governor's program. The marketplace is amazingly innovative at providing options.

What the price of solar would be here in Eastern Kentucky or in surrounding areas, because I really -- I honestly don't believe that Kentucky Power

should limit their renewable search just to their own footprint. I think that they really should look at a solicitation that considers what sort of premium they would have to pay for renewable power to be right in their footprint versus just outside of their service territory.

But I don't know what solar prices would look like. I sense that given the technology costs, their tremendous decline and the efficiency increases in solar PV panels, that solar could be cost effective and, you know, much, much cheaper than the ecoPower transaction.

MR. NGUYEN: Those are all the questions I have, Your Honor.

CHAIRMAN ARMSTRONG: Questions.

VICE-CHAIR GARDNER: Thank you.

* * *

EXAMINATION

By Vice-Chair Gardner:

Q Good morning, Mr. Taylor.

A Good morning.

Q My questions are in two areas. One is the production tax credit and then the RECs. So if you could first turn to page 6 of your testimony. And this is the para -- in my version, it begins on page 9. Excuse me, line 9, with the sentence, "In addition, the provisions in the REPA."

Do you see that?

A Yes, I do.

Q Okay. You say "are weak and vague, exposing the Company's customers to unnecessary risks and costs."

Tell me what you mean by that. What are the risks and costs and why are the provisions here weak and vague?

A Right. What I have seen as far as a contracting proposition in other solicitations around the country regarding the Section 45 production tax credits or any tax credits that may be available is pushing that, the pursuit of those tax credits, onto the developer and not automatically having a price that assumes that the developer doesn't achieve those production tax credits.

So what the ecoPower transaction, the ecoPower REPA does and what the Commission is being asked to approve is a contract that has a price that's

assuming guaranteed failure of ecoPower to achieve the PTCs.

Contrary to that, the contracting structure in other parts of the country frequently is to hold a solicitation, to, by the competitive nature of a solicitation, push all developers to try and develop their facilities on a schedule and with a mind-set of capturing as much as of the PTC benefits as they can and converting those PTC benefits into the lowest possible contract price that they could offer in the solicitation.

So when you're just negotiating with one counterparty, you can end up with these awkward and kind of weak provisions like what's in Article 7 of the REPA, where there's no obligation for ecoPower to pursue the PTC.

MR. GISH: Just sort of caution here when we get into specifics of that part of the REPA regarding the production tax credits, those terms are confidential.

THE WITNESS: I understand.

MR. GISH: Okay.

THE WITNESS: And I wasn't going to talk about the percentages, but there are -- there's a generous portion of the PTC benefits that would be

awarded to the ecoPower developer if they were able to achieve that.

What we were hearing yesterday is certainly under the current deadlines, it may be rather difficult for ecoPower to pursue that, but in a competitive solicitation, those percentages that are in -- confidential percentages that are in Article 7 are inherently crushed down to a very small number as far as what the developer would be really keeping for themself, because they're under the competitive pressure of trying to win the solicitation at the lowest possible contract price.

COMMISSIONER BREATHITT: I'm sorry. What did you say? They're at the -- they're under pressure to what?

THE WITNESS: To basically take that percentage number of what they would get out of the PTCs and perhaps give it -- you know, go with zero percent and give all the PTC benefits to the customers and the lowest possible REPA price that they would offer. The lower the price they offer in a solicitation, the more likely they're going to get awarded the contract by the utility.

Q Okay. Let me ask this. Again, not getting to the specifics, but is it your opinion that

Article 7, the title of which is Sale and Purchase of Renewable Energy deals with production tax credits under those provisions?

A I don't have the REPA in front of me, but I believe it is Section 7.2 or 3 or 4 that -- I may have referenced the wrong section, I apologize, but there is somewhere in that part of the REPA a reference to production tax credits.

MR. GISH: And, Your Honor -- Mr. Chairman -- or Mr. Vice-Chair, it is in Section 7.1.

VICE-CHAIR GARDNER: 7.1?

MR. GISH: Yes.

A Usually there is not this kind of trying to carve up production tax credit benefits. As I say, it's usually embedded in the price, and then often these contracts include a seller termination right, and that's really what is more typical.

VICE-CHAIR GARDNER: Okay. Can I see the confidential version. My version that I have up here is --

Q Okay. So the contract -- so let me try to summarize what you've said to make sure I understand it. You're not saying that there are any future costs or risks to the customers for -- related

to production tax credits, what you're saying is the way the contract is structured in the solicitation created, in your opinion, not the optimum, not the best provisions to benefit customers. Is that a fair statement?

A Yes.

Q I'm -- with your language about risks and costs, I'm wanting to make sure that there are not going to be -- if the production tax credits are not obtained because a developer doesn't get its act together with respect to financing or, you know, whatever, that -- I'm wanting to make sure that that doesn't mean that there's additional costs to the consumer. Is that accurate or fair?

A That is. I guess my testimony had really been taken from the perspective of what I've seen elsewhere in the country, where the status quo, if you will, is that the production tax credit benefits will flow through to the customers and that if the product -- in the production tax credits are not achieved, the seller, the developer has a termination right to say, "I simply can't perform at this price anymore," and then the contract disappears.

The way that the ecoPower REPA is structured is they're basically asking for approval of

this rather high price, and then if the production tax credits are achieved or there are some benefits to be distributed, that there's a provision for bringing that price down.

Q Okay. And the obligation is on the developer to make the application; is that correct?

A That is correct.

Q Okay. And the provisions of the contract provide an allocation of what those benefits would be between the developer or ecoPower or whomever and Kentucky Power?

A That is my understanding, yes.

Q And -- okay. So I understand that. Thank you.

Let me turn to your analysis with respect to the RECs. And once again you talk about cost to the customers and the negative cost. And what I thought I heard the testimony yesterday from Mr. Godfrey, I believe, was that there is -- in a contract like this, there is -- there's an allocation, either expressly or implied, between different elements such as capacity, such as energy, such as environmental attributes, such as ancillary services, and that this -- well, let me ask this: Is there an express -- does the contract have an express

allocation as to what the dollar amount assigned to RECs will be?

A No, it does not. The analysis I was performing was simply the kind of analysis that you see utilities all around the country calculate in terms of a renewable premium or a REC cost, where they are simply taking that renewable contract price and backing out the beneficial elements of avoided energy costs after avoided capacity costs similar to what Mr. Wohnhas did in his testimony.

Q Okay. And likewise, just what the imputed or implied costs would be for capacity, I mean, it's the -- is that fair?

A Yes. I mean, these are the three main pieces --

Q Okay.

A -- of this contract. It has no ancillary service value.

Q Okay. So then talk to me about -- did you, in your testimony -- so, for example, on page 16 of your testimony, and mine doesn't have lines, so this is the question about based on cost and sales price estimates provided above, what range of above-market REC costs might the Company's customers be forced to bear over the term.

I guess my first question is: Like my question with respect to the PTCs, this is not an additional cost to the customer, it's, in effect, a lack of a benefit or addit -- or additional costs that were built into the -- it's not incremental costs; is that correct?

A You're absolutely right.

Q Okay.

A These are not incremental costs.

Q Okay. So then my next question is: If one uses -- or your answer is, (Reading) If one uses 450 [sic] megawatt hours per year estimate of generation from the ecoPower project, data request of $38 REC cost and a $6 REC sales price.

So you -- in here we were imputing, if you will, or implying a $50 REC cost, and so the loss or the cost comes if you're selling it between 2 to $6 and the -- and you're -- one is imputing a $50 REC cost, then that's where that loss is, if you will?

A Exactly. Effectively what I'm trying to capture here -- maybe it's better to think of the ecoPower facility as a REC factor rate. That's, in effect, the proposition here, where Kentucky Power's customers will be paying a particular contract price, the facility will be generating capacity and energy,

the benefits of that will also be accruing to the Kentucky Power customers. So effectively there's this residual cost that, in effect, they are paying for RECs that are not currently needed under any sort of Kentucky state statute.

Q So they've --

A If --

Q -- gotta go to the market?

A Right. So if you go to the market, then, how much did it cost this factory to produce the RECs? The first point that I want to make here is that these numbers are rather conservative. I used the Kentucky Power's estimates of 2017 and on out of what they thought market prices might be for energy and for capacity.

If I used Mr. Wohnhas's numbers for the first year numbers, instead of a base case of $50 per REC, we're really looking at numbers that are closer to $78 --

Q Okay.

A -- per REC.

Q Okay. Well, let me ask this: So you do not -- or is your -- is the way this is done, it's one doesn't actually compute what the REC cost is? What one does is look at what the energy and capacity cost

is and then subtract that?

A Exactly.

Q Really? Okay.

A So this is the residual cost.

Q Okay.

A So from a factory standpoint, how much does it take for these RECs to roll off the assembly line.

Q Okay.

A And the $50 number is, as I say, I think a very conservative number. I just used the future assumptions that were provided by the Company. But as far as a first-year cost, where we were seeing in Mr. Wohnhas's testimony something along the lines of a net $35 million cost for Kentucky Power's customers, if you divide that number by the 450,000 megawatt hours, you're talking about this factory producing RECs at something closer to $78 a megawatt hour.

Q Okay. So what you're saying is, is that -- your testimony is that because the price is high, if you will, that the actual base load energy and capacity, we know what that is --

A Right.

Q -- that that's why the cost of REC built -- the cost of the REC part of it built into the

contract is therefore going to be much higher, and that if you try to sell it -- or when one sells it, the price is going to be low, so that's where that loss comes in?

A Exactly.

Q It's basically another way of arguing or supporting the position that the -- that this is a very high price for renewables?

A Exactly.

Q Okay.

A I just wanted to come at it from a different angle.

Q Okay.

A Certainly the idea of this being a REC factory, if you will, is used in other utilities that have RPS requirements. This is a common evaluation metric to see which renewable resource really is providing the RECs at the lowest possible cost, so which REC factory makes the most sense.

Q Okay.

A The only difference is I -- again, I was fairly conservative here. I did not include all the costs that are generally included in other utility solicitations. There's a debt equivalence value of maybe another $7 a megawatt hour that's usually added

on top of this number. And in most utility solicitations there's any sort of costs of transmission upgrades that also forms a transmission adder, so -- but basically, in a nutshell, at a very simplified level, with three moving parts here, a contract price and a capacity and energy benefits, this is the calculation that is --

Q Okay.

A -- is done by utilities around the country.

Q Okay. And tell me about the -- there is no -- the contract price will not increase if the REC the RECs are sold for a low price, it's just that -- okay. I understand.

But there -- so what you're -- so now what I want to do is, is ask a few questions related to the sale of RECs --

A Certainly.

Q -- and in the market. And I guess is there -- you've indicated that there's no risk -- that the customers do not have a risk if -- in this if EPA at some point says, you know, carb -- this is a problem, carbon, carbon from a biomass facility or carbon from any is, you know -- so that ecoPower determines or its successor determines that it's

uneconomic to continue, there's no expenses allocated to the customers at that point.

But what if -- is there a risk, because these RECs are based on biomass, that their value could be less than the value of RECs generated by wind or solar going forward?

A There is a risk of that. Maybe to step back for a second and really just talk about what these RECs are within PJM. They have the GATS system, the G-A-T-S, Generation Attribute Tracking System.

That GATS system basically is something that every renewable resource signs up to be a part of, and PJM uploads, I think on the tenth business day of every month, what the meter generation was from a renewable resource. And every megawatt hour, then, that comes out of a renewable resource is tagged with a serial number and tracking information about where it came from, what the fuel was that went into producing that, what the vintage is of the generation of that REC, and when that facility actually came on-line.

So then the owner of those RECs can go into the marketplace and try and sell those. Throughout PJM, though, each state has different rules. For example, a number of the states have solar

RECs that need --

Q Right.

A -- to be part of their RPS requirement, so those might trade at a premium. I know New Jersey has rules against procuring any biomass RECs unless it can be proven that the biomass is, quote, cultivated and harvested in a sustainable manner, unquote.

Q So that would be the open --

A The closed loop --

Q Closed loop, right.

A -- biomass. So this is an open loop using waste wood feature. Other states could adopt similar kind of prohibitions.

I'd also have to say that in my experience, the majority of utilities that are facing RPS kind of state requirements tend to satisfy most of their requirement through signing long-term contracts, long-term REPAs.

The REC market out there is primarily used for kind of topping off annual requirements, but we're talking about a facility here that's going to produce close to half a million RECs per year. If there's no need for those in Kentucky, which currently there's no RPS statute, and that may change, but going on that premise for a moment that these are now ready

to be dumped in the market, I think that puts quite a depressing influence on the market price.

Another thing to note about these RECs is they do have a shelf life. There are various state requirements. Ohio says that half of the renewable energy must come from within state, and what is pulled in from out of state has to meet various other requirements and certainly has to be produced within the last five years. Maryland has a three-year shelf life. West Virginia has a one-year shelf life.

So if you're trying to sell these RECs to say different counterparties, it can be challenging. The buyers are certainly going to be looking at their own state requirements and seeing whether your RECs, as they have been cataloged and certified through this GATS system, are going to allow them to be qualified within their state RPS requirements.

VICE-CHAIR GARDNER: All right. Thank you.

* * *

EXAMINATION

By Commissioner Breathitt:

Q Is GATS G-A-T-S?

A Correct. Generation Attribute Tracking System.

Q I'm trying to think how to be articulate with a couple of follow-up questions I have to the Vice-Chair. RECs are sold at an auction, or can they be bilateral?

A They can be bilateral, and, in fact, I've overseen REC transactions usually on a bilateral basis myself.

Q But are they also sold at auction?

A I believe so. I -- subject to check.

Q So is there a REC catalog, so to speak, where a REC purchaser would go and look at an array of options to meet their portfolio standard?

A They would probably get in touch with a broker who would be more in touch with canvassing the market of who may have RECs to supply. There are -- under the GATS system, there's even a bulletin board where --

Q Okay.

A -- those who have RECs for sale can post their offers.

Q And your testimony on page 7 talked about the ecoPower -- on line 3 and 4, the ecoPower transaction RECs are likely to be much higher than current and future REC prices.

A Correct.

Q And I think I am beginning to understand, from the cross and the conversation that you and the Vice-Chairman had, that the lower the REC price, the more likely it is to be obtained or purchased by someone needing those credits?

A Correct. I mean, first there needs to be a need. So a utility or load-serving entity needs to be in a situation where they are not covering their RPS obligation with the amount of generation that they have already secured, renewable generation under contract.

So assuming that somebody is in a deficient state, they can see that by the time they get to the end of this year -- there's another point there about the timing of all this, but assuming that they're going to be in a deficient situation, that they would go out looking for REC purchases.

What makes it a little bit difficult as

far as the timing is the states have different REC seasons. Some of the states are calendar year RECs, from January 1st through December 31s; other states have a REC season that goes from June 1st to May 31st. So it can get complicated as far as what a generator of RECs is able to provide to these different market sectors.

Q If an ecoPower REC is $50, or you had said it might be closer to 78 --

A Correct.

Q -- could that REC be -- could a REC purchase be consummated at a lower price than, let's say, $50, just using that number?

A Absolutely. I mean, it's my thinking that with renewable technology costs coming down so much and there being quite a few projects out there that are now able to generate basically renewable energy at less than the brown power, that that's going to create very, very low REC prices on the purchasing side of the market.

So what we're looking at here is a very expensive REC factory that's producing a product that may only be going for a few dollars per REC in the future.

Q So they can be sold, but at a lower

price?

A Correct.

Q Or it's possible they can be sold?

A They can be sold at any price. Obviously ideally you would want a situation where, if you did have a REC in factory, as I keep referring to it, but a renewable power agreement that generated RECs at very low cost, that if you were in surplus, you could turn around and sell those, hopefully at a price that's higher than what you were producing.

Q Okay.

A That would be a positive business transaction.

What I'm seeing here with the ecoPower transaction is something that's likely to be producing RECs at a very high cost, and I don't think that the countervailing revenues from any sales are going to be a significant dent in that debt weight cost.

Q So the term you used in your testimony -- I marked it, but I can't find it right now, but it's --

A Above market cost, I think.

Q And that --- you used the term negative REC?

A Negative --

Q That's what you mean by that?

A Yes. Yes. The negative renewable premium or negative REC cost is simply where a renewable contract has pricing that is so low that it comes in below the cost of market purchases from brown power or conventional resources.

COMMISSIONER BREATHITT: I don't have anything else.

CHAIRMAN ARMSTRONG: Redirect.

MR. KURTZ: Thank you, Your Honor.

* * *

REDIRECT EXAMINATION

By Mr. Kurtz:

Q Let's just finish up a little bit on the factory discussion. So at what price will the ecoPower factory produce RECs?

A Well, based on Mr. Wohnhas's numbers, the first year value seems to be closer to $78 a REC. With debt equivalence, that kicks it up into the mid $80 range. I was basing kind of my conservative analysis just on the Company's forecast of energy and

capacity values, and that yielded a number in the neighborhood of $50.

Q Okay. And if -- so it's producing -- the factory's producing this product at a very high price, the sales price is less, and that's how you're concluding that consumers are harmed by $288 million to $432 million?

A That's correct. The 288 was kind of a low bookend. It was assuming the Company's highest market price forecast, so that, in the arithmetic, it squeezes that last residual renewable premium, the REC cost, to the smallest possible number. The 432 million was using the base case numbers. Optically, I probably failed to show this as appropriate bookends, because really the bookend would be what happens if market prices end up being low. And indeed Kentucky Power did have a forecast there of low energy and capacity prices over time, and if you use that estimate, you end up with a $504 million kind of above-market loss.

Q So the full value over the full term of this transaction is a multi-hundred-million-dollar harm to consumers?

A That's correct.

Q Essentially, then, through this

contract, the consumers of Kentucky Power or Kentucky Power would be a REC merchant generator?

A I think that that's an appropriate characterization.

Q Right. Because they are making 450,000 of these RECs per year and they have no value in Kentucky?

A That's correct.

Q So they have to be sold elsewhere, if they can be sold elsewhere?

A That's correct. And there could be impediments to that, as I elaborated.

Q And 450,000 is a lot, isn't it?

A It is.

Q Because, as you say, most utilities meet their RPS standards on their own and then top off a little bit?

A Exactly.

Q Do you know how many RECS are traded per year nationwide? I have no idea?

A I don't have that information, no.

Q One question about the Big Sandy 1 RFP. The Big Sandy 1 was an RFP that said, "Hey, if anybody can beat our natural gas conversion, then feel free to bid." That was it?

A That's the gist of it, yes.

Q And the natural gas conversion, we know, is approximately a $60 million enterprise to get 268 megawatts of capacity, correct?

A I take that as a representation, sure.

Q Now, but your point is that there should have been an RFP to compare against the ecoPower transaction, essentially, to see if there was something cheaper than ecoPower, not cheaper than Big Sandy 1?

A Yes. One would have expected that during the course of these negotiations, when the price started jumping up so significantly, that that would have been the time that I think most utilities would have said, "We're going to see what our other options are and entertain other proposals to see if this is justified."

Q So that would have been the nonnegotiable situation? That would have been a good time to say, "We're going to do an RFP to see if there's a better price"?

A Right.

MR. KURTZ: Okay. Thank you, Mr. Chairman.

MR. NGUYEN: No questions, Your Honor.

CHAIRMAN ARMSTRONG: Yes.

MR. GISH: Mr. Chairman, I have no questions, I just want to move my exhibits into the record.

CHAIRMAN ARMSTRONG: Without objection, so ordered.

(Kentucky Power Exhibits 1, 2, and 3 admitted.)

VICE-CHAIR GARDNER: I have one follow-up.

CHAIRMAN ARMSTRONG: Sure.

* * *

REEXAMINATION

By Vice-Chair Gardner:

Q One follow-up question, and you may not know the answer to this. If they sell these RECs for a loss, is that loss deductible on federal income taxes?

A I don't believe it would show up as a loss, because the renewable rider that's being proposed for this case is indeed passing through all

of the -- all of the costs associated with the ecoPower transaction, and the -- it's my understanding that any sort of sales revenues that come from the sale of the RECs will simply diminish that rider, but I don't believe that's going to show up as kind of a taxable event.

Q Do you know if, apart from the rider issue, if those are considered losses for tax purposes? And again, you may not. I'm just curious.

A I suspect not, but to be clear, for the record, I do not know for sure.

VICE-CHAIR GARDNER: Okay. That's all. Thank you. Thank you.

CHAIRMAN ARMSTRONG: Thank you, Mr. Taylor.

THE WITNESS: Thank you.

CHAIRMAN ARMSTRONG: You are excused.

MR. KURTZ: Your Honor, our next witness is Professor Coomes.

* * *

PAUL COOMES, called by Kentucky Industrial Utility Customers, Inc., having been first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Kurtz:

CHAIRMAN ARMSTRONG: Welcome. State your name.

THE WITNESS: Paul Coomes.

CHAIRMAN ARMSTRONG: What do you do, Mr. Coomes?

THE WITNESS: I'm a consulting economist.

CHAIRMAN ARMSTRONG: How long have you been in this job?

THE WITNESS: Well, I just retired last year as a professor at the University of Louisville in economics, and now I'm professor emeritus and have a little more time to do consulting jobs.

CHAIRMAN ARMSTRONG: And you're here to what?

THE WITNESS: So Kentucky Industrial Utility Customers engaged me several months ago to

analyze the economic impacts of this proposal in Eastern Kentucky.

CHAIRMAN ARMSTRONG: Welcome.

THE WITNESS: Thank you.

CHAIRMAN ARMSTRONG: Your witness.

MR. KURTZ: Thank you, Your Honor.

Q Dr. Coomes, do you have in front of you the direct testimony and exhibits of Paul Coomes?

A I do.

Q Was this prepared by you or under your supervision?

A It was.

Q If I were to ask you the same questions, would your answers be the same?

A They would.

Q Any additions or corrections?

A I have none.

MR. KURTZ: Your Honor, the witness is ready for cross.

MR. GARCIA: Thank you, Your Honor.

CHAIRMAN ARMSTRONG: Mr. Garcia.

MR. GARCIA: Thank you, Your Honor.

* * *

CROSS-EXAMINATION

By Mr. Garcia:

Q Mr. Coomes, good morning.

A Good morning.

Q In your testimony you stated that if the ecoPower project goes forward, it is expected to create local jobs in Eastern Kentucky, correct?

A In a gross sense, yes. There would be jobs associated with construction of the generating facility and then there would be trucking and logging jobs to provide the fuel.

Of course, my analysis goes on to compare that to alternative sources of energy, but that's correct, there would be jobs associated with the transaction.

Q Right. And since you started breaking them out, there will also, of course, be the jobs associated with the actual facility and the generation?

A Yes.

Q Of course. And you indicated that those jobs, according to your calculations, would result in an estimate of $6.4 million per year in total earnings

of workers?

A Something like that, yes.

Q And that number is actually for the permanent jobs, right? That doesn't include the construction jobs, so during the construction period the number would be slightly higher?

A That's true.

Q Okay. Now, in your testimony, then you go on to compare those numbers to a hypothetical alternative of obtaining the same 58 megawatts of power from a coal-fired generation in Eastern Kentucky.

And here is my question: If the project does not go forward, if the ecoPower project does not go forward, that automatically by itself does not create those coal jobs; is that correct?

A Say that again. If the -- you got too many --

Q Right.

A -- negatives.

Q Sure. If the ecoPower project does not go forward, that by itself does not create the coal jobs that you are comparing to the ecoPower jobs that are going to be created if the project goes forward?

A I'm not sure. So -- and this has been

educational for me the last two days, because I didn't know about all these RECs and environmental side constraints, but in my mind, Eastern Kentucky is very rich in coal, has a long history of producing electricity from coal. There are a lot of power plants around the region and the rest of Kentucky. If this plant produces a certain amount of electricity and provides it to the market, that same amount of electricity could also be generated using coal-fired plants, either inside the Kentucky Power region or around Kentucky from LG&E, KU, and others.

So to me it's the issue of a certain amount of electricity that's being provided to the market by one fuel versus the economic impact of providing it from an alternative fuel, namely coal. So that's the way I set the comparison up and did the two simulations to determine the net economic impact compared with the coal.

Q But in order to make an apples-to-apples comparison, if you are going to compare the new jobs that are going to be created by 58 megawatts of generation from ecoPower, you would be comparing that to the new jobs that would be created with 58 megawatts of coal-fired?

A Or another way to look at it would be,

if you put more power out into the system, into the grid from the biomass facility, that would displace electricity generated somewhat, maybe largely, by coal, which would reduce the number of jobs in the coal industry, correct?

Q But in order to make the comparison apples to apples, you need to be looking at new jobs, and you cannot, for example, build economically 58 megawatts of new coal-fired generation? That seems to be an impossibility from an economic standpoint?

A I don't know, but my -- still my point is, if you are generating that much power from biomass and putting it into the market, it's displacing energy that's produced by an alternative fuel, namely coal, which would have a negative impact on the coal industry, correct?

Q If that were going to be a displacement, but you could have both.

A If the market demands it, I suppose.

Q Right. And the demand for coal-fired generation, it's, so to speak, different than the demand for renewable generation?

A I don't know.

Q Fair enough. Assume with me that these are not displacing the jobs. Let me say that you can

have both.

A Okay.

Q If you were going to go ahead and have the coal generation burn those 58 megawatts, you would generate the severance taxes that you mentioned in your testimony, correct?

A Yes, sir.

Q The fact that the ecoPower project goes forward or doesn't go forward, if it doesn't go forward, that wouldn't take away those taxes, right? So there is nothing lost by going ahead with the project?

A If this electricity that's being generated displaces electricity that's generated from coal-fired plants, it would reduce the demand for coal, which would therefore reduce or eliminate that amount of severance taxes.

Q But the assumption that I was giving you is that it doesn't displace it.

A Oh. Well, you assumed the answer, then.

Q We just said that, right?

A You just assumed the answer by saying that there's no effect on the coal industry, so therefore your other statement would have to be true that it wouldn't affect coal severance taxes.

Q Right. So assuming that there is no displacement -- just so that we have a clear record, assuming that there is no displacement, the fact that the project doesn't go forward doesn't eliminate any severance taxes by itself?

A You assumed the answer. Yes.

Q If the project were to go forward, and that there would be no effect?

A Sure.

Q Let me ask you something else. You did some analysis about the impact that you estimated in household spending of the seven percent rate associated with going forward with the project, correct?

A Yes.

Q And in your testimony you indicated that there was a seven percent impact, but then in your exhibit you clarified that that number may be overstated, correct?

A That's true.

Q Okay. And, for example, when you were describing the effect of that increase in your testimony, you indicated it would be about a hundred jobs. In your report you actually explained that that was probably overstated and that the number is roughly

83 instead of a hundred; is that correct?

A So -- and the reason is, in two cases -- in the first case I was assuming that consumers, households, would not change the amount of electricity that they purchased in response to higher electricity prices, so that's a zero price elasticity assumption.

The literature -- we don't know. I haven't studied Eastern Kentucky. It may be zero, I don't know. But the national averages are more like an elasticity of negative .2, which is a very small substitution effect.

So, just for sake of academic honesty, I made estimates that were somewhat smaller from a job point of view, assuming that customers did some substitution. For example, they may turn their thermostat a few degrees and put up with more heat and humidity and not have the air-conditioner run as long when electricity prices are higher. Of course, that means less sales to Kentucky Power if that's true.

But since you raised it, you do understand I was only looking at the household impacts, the residential customers. There's also impacts that I have not quantified that would take a lot of work, but I think everyone would agree there would also be negative impacts on commercial

establishments, grocery stores, restaurants, hospitals, et cetera, as they had to either reduce the amount that they sold, go out of business, or raise the prices to the local customers.

And then finally, there may be some effects on industrial customers in the region if their rates go up. Some may decide to leave the region. Like no one can predict which company might leave. It would be most likely the ones that are most -- the highest energy users and the ones most sensitive to that and are not able to pass prices along, their costs along in the form of higher industrial prices.

So there's a lot more than those hundred jobs, I think, at stake due to the rate increases.

Q Just to clarify, in your testimony you indicated that you did not estimate those impacts for commercial and industrial customers, correct?

A I have not made estimates of the magnitude, but I assure you the direction is negative for all customers. The reason I was able to do it for the residential customers is I have this nice IMPLAN model that we invested in, and it has beautiful, rich estimates of how much customers at every income bracket, households in the region, in the Eastern Kentucky 20-county Kentucky Power Company territory,

how much each customer by income bracket spends on electricity per year and also what they spend for everything else in their household budget.

So I had a tool that I could easily make an estimate of the negative job impacts on the region from higher electricity rates on residences and households, but I don't have an easy tool -- it's much harder to do it for commercial and for industrial customers, but it's --

Q And so --

A -- certainly negative.

Q And do I understand correctly that the tool that you used doesn't account for the price elasticity that you just described that --

A No.

Q Does not?

A It does not have price elasticities in it. It is a static model, but you can make an assumption based upon the literature and do a simulation to find out the impact on any industry of a price change or a reduction in demand, and that's what I did.

Q Well, and the model will give you a number that is slightly overstated, just like you indicated?

A Which is why I did a second simulation --

Q Fair enough.

A -- to be consistent with the literature, and you end up -- I can't remember the number. Eighty-five jobs instead of a hundred jobs, but certainly negative.

Q Eighty-three is the number that --

A Is it? Thank you.

Q -- you have in your report. Did your analysis calculate the impact of the increased household spending by the families of the new permanent and construction workers that would be expected to gain employment as a result of the ecoPower project?

A Well, I guess you're -- I didn't do it exactly that way, but I've got a lot of the elements here that -- where you could make that side-by-side comparison. I think what you're wanting to do is say there's some cost to customers of paying more for electricity, but there is some benefit because there are more employees related to production and of the fuel acquisition and those salaries and wages that go into the household income.

And based on what I've heard the last

two days, it's not a very favorable proposition in the sense that it looks like you're proposing to raise electricity rates by -- I heard anywhere from 28 million to 35 million yesterday. That gets passed through in the form of higher costs to customers in the region. Balance that against maybe, depending upon whose numbers you want to use, 8, 10 million, maybe even up to 15 million, if you want to be generous, in the form of new income coming into the region.

So if you want to think of the Eastern Kentucky economy as a box of a certain size, and if it gets bigger, that means the economy grows. The way -- what I've heard the last two days suggests that you are taking 35 million out in the form of increased electricity payments to the customers and you're putting in 10 to 15 million in the form of new wages and salaries to truckers, to people that work at saw mills, to people that operate the plant.

So according to the numbers I've been hearing the last two days, it's about two to one negative if you want to put it in terms of an overall cost-benefit for the region.

Q But, sir, just to clarify, you did not carry out those calculations? You didn't plug in in

your calculations of your analysis the money that was going to be coming in from the investment and from the jobs, earnings?

A Well, I quantified the amount of jobs and payroll related to the acquisition of the fuel very clearly. There are several pages discussing that. So I have an estimate. It's a little lower than the one Kentucky Power and ecoPower provided, but it's -- there is an estimate of the labor income. Whether it's new or net new, that's a different matter, but I certainly have estimates of the amount of income in the region related to getting the biomass fuel to the plant.

MR. GARCIA: Thank you. No further questions of this witness, Your Honor.

CHAIRMAN ARMSTRONG: General.

* * *

CROSS-EXAMINATION

By Ms. Hans:

Q Help me understand in terms of your responses so I don't have a lot of questions,

Dr. Coomes, but in terms of these -- this comparison, and I think you said at this point it's running like a two to one negative in terms of investment over -- what about a multiplier effect? So, for example, if you create -- if you create a job, it might be based on what kind of job, that you could have a positive or negative multiplier effect in the region. Have you studied that or do you have any comments about the multiplier effect of job creation?

A Sure.

Q Okay.

A I can give a long seminar. I'll try to resist.

Q I probably need to come and take your class, sir. That's --

A There's plenty of multipliers being used in the analysis, and they fall out of a very rich model of the 20-county region that I have constructed.

Q Uh-huh.

A And it has a very, I believe, accurate, reliable representation of all of the purchases between -- among every industry in the region and among households.

So that's how you get multipliers is you construct a model and then you shock the system in

some way and see what happens to the rest of the economy, and the ratio is a multiplier.

So we do have multipliers for the coal industry, for sawmills, for lumber industry, for jobs, for wages and salaries, et cetera.

So I can answer pretty much any question you want about the application of multipliers to this puzzle.

Q Uh-huh.

A It's not going to change the characterization I just gave, though, because you've -- if you're taking 35 million or 30 million out of the economy and you're putting back in 10 million, it doesn't really matter what multiplier you're going -- you have to use multipliers on both sides. If you're taking money from households, then they purchase less things in the economy, less retail items, and then they purchase less from their suppliers, and their employees have less income to spend throughout the economy, and the ripple effect keeps going there in the same way that it goes in a positive direction when employees in the region have more income.

Q Okay.

A They spend that on goods and services,

they spend it on their vendors. Their vendors have employees, then they have more income and they spend it, and it goes round and round. So -- but it wouldn't change the net --

Q The net --

A -- conclusion that I'm drawing here from what I've heard the last two days. At the time I did the study, I didn't know about the 28 to $35 million hit that the regional economy would take from higher rates, I only simulated what I thought it would be on the residential side because I had the tool to do it, so --

Q And just to follow up, that tool was the -- that the -- Mr. Wohnhas's estimate as to the seven percent? Was that the number that was used to come up with that?

A I took that from some of the earlier testimony that there would be a seven percent increase in rates due to the ecoPower contract. I'm assuming that's true. And then IMPLAN, the model that I have, has nice estimates of how much electricity is purchased from households at all income brackets in the 20-county Eastern Kentucky region. So I took that number, it was 230 something million dollars, I think, in electricity expenditures, by households, looked at

what seven percent of that would be --

Q Uh-huh.

A -- and then shocked that -- the system with a seven percent increase in costs for electricity to those households and then used the model to predict how that would lower their expenditures on other items in the regional economy and then all the downstream things that happen from that.

Q Presuming the actual impact, and we have heard a couple of percentages, and again the seven percent is what the Company is representing. There is some testimony by Mr. Kollen that it could be higher. I mean, that subject -- it was slightly higher than the seven percent. And then the notice to the customers, which Mr. Wohnhas, I wasn't -- I'm not sure if you were here for Mr. Wohnhas's testimony --

A I was.

Q -- but the -- but the 8.69 percent which was noticed to the customers but he explained would be offset. But you only used the seven percent, right? You didn't use those -- those additional numbers weren't --

A All I had was seven percent, so --

Q So is the model flexible enough to where, if you adjust it even by a half a percentage

point or a couple of percentage points higher, would that -- do you believe, in your opinion, would that affect this -- these total 83 jobs? I mean, would it likely impact negatively more? I mean, would it -- or impact the region negatively?

A It would -- the model, anyway --

Q The -- yes.

A -- is just a -- you know, a box.

Q It's just a tool, uh-huh.

A And it would just prorate. So it would be a proportional increase in the job impacts if you raised rates from seven -- instead of seven percent to eight percent or nine percent --

Q Uh-huh.

A -- certainly, yeah.

Q Do you think it would go -- I mean, and again, you're -- you don't have your toolbox and your model, and I understand that, but do you think it would go over the hundred? You kind of gave that 83 to 100. Would it --

A In that range.

Q But that -- it would be about the same thing?

A It would be about that range, about a hundred jobs.

Q That answers my question.
A Yes.
Q Thank you.
A We're only talking here about households --
Q Right.
A -- and the residential side of the rate structure, not the commercial --
Q Not the commercial --
A -- or the industrial customers, yes.
Q Not the commercial-industrial class. I didn't mean to interrupt you.
MS. HANS: Thank you, sir.
No further, Your Honor.
MR. NGUYEN: No questions, Your Honor.
VICE-CHAIR GARDNER: Yes, sir. Thank you.

* * *

EXAMINATION

By Vice-Chair Gardner:

Q Dr. Coomes, I have just a couple

questions. The first has to do -- is just more general about price elasticity of demand.

A Yes.

Q You stated you didn't consider that here in your analysis; is that correct?

A Actually, I did consider it for the residential customers.

Q Okay.

A It's sort of buried in the back, because I got thinking about it after I assumed no substitution, that maybe there would be some, so I went to the literature and looked at some national studies, and I cite one in there by Rand that estimates that the price elasticity for electricity for residential customers was about negative .2.

Q So tell me what that means.

A So what that means is, if you were to raise electricity rates by ten percent, electricity consumption would fall by two percent. So .2 is just the ratio of the amount that the price is raised versus the consumption decrease.

Q And --

A It's fairly small. Electricity has a fairly small elasticity in absolute terms because we can't do without it.

Q Okay. So a utility doing planning in general should consider -- when they are forecasting demand, should include a price elasticity if they're assuming prices are going to be going up; is that --

A I'm sure they do.

Q Okay. And the Rand, is there -- so what you did was, the study was limited to or was -- you -- what you did was look at electricity specifically?

A Yes.

Q Okay. And maybe if you were discussing this in response to questions to Mr. Garcia, I missed it, and I apologize. So is there -- is that regionalized at all? So in other words, if people are lower income, does that impact -- like this geographical area is lower income, does that -- would the price elasticity be greater?

A That's a great question, and I can't remember how much they cut it and parsed it in the study. Your basic statement I agree with, that low income customers will be less price sensitive to electricity, because it's one of the things you have to purchase, like food, and so you just absorb it and you have less money available for other things. You have to keep the lights on and the refrigerator running and heat your house.

Q So, I mean, I could make an argument that they could do -- because of the -- but I don't know, I'm not an expert, but I could make a -- it seems like I could argue that they would, in fact, have the air-conditioner on less or they would have the TV on less if their total income that they have to spend -- so you're saying that is probably not accurate, or are you -- or you just don't know? I'm just --

A Yeah, I'm really not prepared --

Q Okay. That's fine.

A It wouldn't take me much work to answer these questions very well, but I have not looked at it in the last few years.

Q And that would -- would that be in the Rand --

A There are some good estimates in the Rand study, yes.

Q And did it look at income in there that you recall or not?

A I can't remember.

Q Okay.

A I know it had some regional differences.

Q Okay.

A And it also distinguished between

short-term and long-term.

Q Okay. So --

A In the short term, like with gasoline, customers tend to absorb price increases in the short run. You know, they -- in other words, it's hard to substitute if you already own your car and you have a job that's 20 miles away or whatever it is, you're just going to hold your nose and pay for the gasoline if it goes to $4 a gallon or 4.50 a gallon. Electricity is the same way.

But over the course of five years or ten years, you can make some changes, right? You can move closer to work, work closer to home, buy a more fuel efficient vehicle.

In the case of electricity, if electricity prices stay high for a long time, people would invest in more efficient air-conditioning units, they would put timers on, they would learn to turn off lights and change their behavior.

So in the long term, and this is true of most things, consumers are more sensitive to price increases than they are in the short run.

Q Okay. And then again following up -- or following up on questions from Mr. Garcia about assumptions, and I liked your quote about you assumed

the answer, so let me ask you this: It seemed to me that -- I mean, you know that coal demand is down and that there are loss -- and the jobs are like 5,000 less coal mining jobs in Eastern Kentucky. I mean, are you aware of that generally?

A Generally. I mean, they did -- there was some comeback a few years ago when coal prices jumped, and there was some slight increase in coal employment a few years ago. Perhaps it's down now. And --

Q So you're --

A -- of course, in a secular sense it's been going down for 50, 60 years regardless of energy prices because of automation and the technology of extraction, but go ahead. Sorry.

Q Well, it -- I mean, so specifically you're not aware of all the publicity coming out of Eastern Kentucky about the loss of coal mining jobs because of EPA and the low natural gas price?

A I'm generally aware --

Q Okay.

A -- that there's -- it's very hard to build a coal-fired plant anymore and that natural gas is very inexpensive, and there's a lot of investment going into electricity generation based on natural

gas. I'm aware of those things, yes.

Q Well, it just seems as if -- that you assumed the answer as well --

A Okay.

Q -- that -- and that because there's not the coal mining jobs, because there's not the demand for coal generation of electricity, and it seemed as if it's a false comparison, and that's my sense, of not to include the reality on the ground in Eastern Kentucky with respect to the generation of electricity from coal and coal mining jobs generally. I guess that's more of a comment. I don't know if you have any response to that.

A I guess one could argue that this would accelerate the decline in coal jobs if you displace coal-fired electricity with biomass electricity. So in that sense my comparison is fair.

Q Of course, a lot of it is driven by legal requirements with respect to pollution, right?

A Yes, and that's where my knowledge really gets fuzzy. I'm no expert on national energy policy.

VICE-CHAIR GARDNER: Okay. That's all I have thank you.

* * *

EXAMINATION

By Commissioner Breathitt:

Q I have a follow-up, Dr. Coomes. In your exhibit, you, on page 2, state that -- you restate that Kentucky Power Company and ecoPower Company have testified that there will be about 30 full-time jobs to operate the facility and 225 timber and trucking jobs. And did I hear you say that your estimates were a hundred jobs, but you amended that to 85? Where am I getting that from?

A That's a separate -- we're confusing two issues.

Q Okay. Well, I -- can you clear that up for me, please?

A Sure. What you're look at is the jobs associated with procuring the fuel and delivering it to a facility --

Q Yes.

A -- and generating electricity. So that's one issue. That's the first part of my analysis is to compare wood versus coal.

Okay. The hundred jobs we were talking about just now had to do with the negative impact of

higher residential electricity rates on households in the region and then they have less money to spend in their community, which then reduces employment.

Q So it's a loss? Your analysis calls that a -- states that as a loss?

A Sure. It --

Q And did -- where does the 85 come in?

A The 85 was an adjustment I made --

Q Okay.

A -- to the hundred estimate --

Q Okay.

A -- under the assumption that customers might substitute --- as electricity prices rise, they may purchase less electricity, see, so that would free up money that they could spend --

Q Okay.

A -- in a discretionary way --

Q Okay.

A -- in their community.

So the first assumption was they don't substitute at all, they just eat the price increases, and that absorbs a lot of their income, which reduces the amount of dollars in their community, right?

The second analysis, subanalysis I did was assuming that they did substitute somewhat away

from electricity and it wouldn't absorb so much money.

Q But on the last page of your exhibit you make a statement, if I may quote from it, on page 3, there's only one paragraph on that page, "but certainly the regional economic impacts are negative."

And your analysis shows --

A I'm not sure exactly what you're pointing to, but I know --

Q Well, the -- your exhibit.

A -- the question.

Q Your -- your --

A Oh, I see. Of my preliminary report.

Q Yes.

A On page 3.

Q It's your full report, and it's 12 pages.

A Yes, ma'am. I have it. I have it now.

Q Okay.

A So what I'm addressing there is I'm acknowledging something and its directional impact even though I can't quantify it. So I feel like I can quantify the negative impact of higher rates on households and the residential customers, but it would be a lot of work for me to try to estimate the negative impact on commercial customers and industrial

customers.

The industrial customers, it would certainly raise the risk of them leaving the region, shutting down their plant and moving to a lower cost electricity region, but for me to predict which company or which industry is almost impossible, so that's why I couched it in more qualitative statements. It's certainly negative, I just don't know how negative.

COMMISSIONER BREATHITT: Okay. Thank you.

* * *

EXAMINATION

By Chairman Armstrong:

Q Doctor Coomes, is there an impact on the quality of life for the people who live in this area of service, based on your studies?

A Well, it seems to me there's two things going on. First, the cost of living is going to go up because of the higher electricity rates, so that hurts the standard of living, and it looks like it's about a

$35 million hit.

On the positive side, under the proponent's assumption, there would be some more timber jobs and some generation jobs, so you have whatever the number is, six million, nine million, $10 million worth of extra payroll from the biomass facility -- whether it's extra or not we can debate, but there it is -- versus a $35 million increase in the cost of living, so --

Q Do you know the average pay of a biomass worker?

A No. I think it's been in some testimony. The -- most of the jobs are in the trucking industry and in the forestry industries, and you're looking at $12 an hour, $14 an hour, that sort of thing, 4 or $500 a week. And I've got a chart in here that compares it to coal, which is three times that rate of pay. So I don't know about the generation jobs, but I'm sure the proponents have a number.

Q This is not pertinent. Mr. Coomes and I used to work on trying to attract industries to Louisville, and we used to judge it by hamburger stands, didn't we? Would there be more Morton Steakhouses or more McDonald's restaurants in the

service area?

A Well, the logging jobs and the trucking jobs are not very -- they're not paid very highly, so, you know, I'm sure somebody that gets a job is very happy to have it, but -- and Eastern Kentucky is a little different position than Louisville as far as need for jobs, I appreciate that.

So I don't want to demean the jobs, I'm sure they're -- they would be a nice addition to the regional economy. So I don't think the region would -- I'm sure the region would like to have those jobs.

CHAIRMAN ARMSTRONG: Thank you.

* * *

REDIRECT EXAMINATION

By Mr. Kurtz:

Q Dr. Coomes, just a couple things. In doing your analysis or any analysis of the economic impacts, you cannot look at just the gross side of either part of the equation, the ecoPower jobs versus the rate increase. Don't you have to look at the net

effect?

A Yeah, the more comprehensive a picture you take, I think, the more relevant it is for policy, yes.

Q Now, you described the Eastern Kentucky economy as a box. Do you recall that?

A You can characterize any regional economy as a box, and you draw the line generally -- in this case it's based on a service territory, so it's almost a legal jurisdiction.

Generally you start with commuting patterns and look at where people live and work and then you draw your box that way, but however you want to -- once you define a regional economy for whatever purpose, you can think of it as a box, and that box only gets bigger if more money is coming in than is going out, and that's the metaphor I was trying to use.

Q That's what I wanted to ask you. If you have a -- assume that $9 million is going into the box, the regional economy, from additional wages, and 35 to 39 million is coming out because of higher electricity costs, that box is shrinking, correct?

A That would be my prediction.

Q And that means there'll be less jobs

total, correct?

A Yes.

Q That's because there's a multiplier effect on both sides of the equation, as you have indicated, correct?

A That's true.

Q Where is that money going? Where is that 35 to $39 million going?

A Well, obviously that wasn't part of the scope of what I examined, but based upon what I've heard the last two days, if you've got, let's say $35 million in new revenues and you're only paying out 6, 9, $10 million in wages and salaries, the rest of it has to go for capital equipment and supplies. Trucks will be purchased, chain saws will be purchased, other things to operate the plant will be purchased.

A lot of those things -- most of those things are probably not made in Eastern Kentucky, which creates kind of a leakage. So if you purchase trucks, large trucks, I don't think there's a truck factory in Eastern Kentucky, so that money is going to wherever the community is that makes trucks. Chain saws, the money is going to the plant -- the community that has the plant that makes chain saws. So you've

got a leakage there. Unless you can establish the fact that all the things that go into running the plant are produced in Eastern Kentucky, you've got a leakage of dollars.

Q Well, the -- there's no -- a biomass electric generation facility is a fairly complicated piece of machinery; is that correct?

A I don't think I've ever seen one, but any generating plant is -- yes, it's going to be very --

Q Do you --

A -- sophisticated.

Q Do you know what part of the world those -- that machine is manufactured in?

A No, but I don't believe there's a turbine factory in Eastern Kentucky. I've never heard of one.

Q Okay. If your conclusion is that the box is -- the box is getting smaller, the Eastern Kentucky economy is getting smaller, or would get smaller as a result of in transaction and therefore there would be a net job loss, can you estimate how much the net job loss would be, or you just know directionally there would be a job loss?

A Actually, I could, but I can't right

now. If I had been asked this question a week or two ago, I could have done the calculations and made a net estimate of this whole thing, but it was never characterized that way until the last day or two, so --

Q But there would be a net job loss, in your opinion?

A That would be my forecast, sure. If you take twice as much out as you put in, the economy will get smaller.

MR. KURTZ: Thank you. Thank you, Dr. Coomes.

CHAIRMAN ARMSTRONG: Anything?

MR. NGUYEN: No questions, Your Honor.

CHAIRMAN ARMSTRONG: Thank you, Dr. Coomes. You're excused.

MR. KURTZ: Your Honor, KIUC's last witness is Mr. Kollen.

COMMISSIONER BREATHITT: Mr. Chairman, may we take a five-minute break?

CHAIRMAN ARMSTRONG: We're going to take about a five-minute break and --

COMMISSIONER BREATHITT: Five or ten.

CHAIRMAN ARMSTRONG: Ten.

COMMISSIONER BREATHITT: Thank you.

Thank you very much.

MR. OVERSTREET: Thank you, Commissioner.

(Recess from 11:47 a.m. to 11:58 a.m.)

CHAIRMAN ARMSTRONG: Back on the record.

MR. KURTZ: Oh, Your Honor, we call Lane Kollen as our final witness.

* * *

LANE KOLLEN, called by Kentucky Industrial Utility Customers, Inc., having been first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Kurtz:

CHAIRMAN ARMSTRONG: Have a seat. Speak up loud and clear. Your name?

THE WITNESS: My name is Lane Kollen.

CHAIRMAN ARMSTRONG: What do you do, Mr. Kollen? What do you do, Mr. Kollen?

THE WITNESS: I am an economic consultant and principal with the firm of J. Kennedy

and Associates.

CHAIRMAN ARMSTRONG: Located?

THE WITNESS: In Roswell, Georgia, a northern suburb of Atlanta.

CHAIRMAN ARMSTRONG: What brings you here?

THE WITNESS: I'm here to testify on behalf of KIUC in opposition to the Company's request, unnecessary rate increase, completely avoidable, for capacity and energy that is not needed.

CHAIRMAN ARMSTRONG: Your witness.

MR. KURTZ: Thank you, Your Honor.

Q Mr. Kollen, do you have in front of you a document, Direct Testimony and Exhibits of Lane Kollen?

A I do.

Q Was it prepared by you or under your supervision?

A Yes.

Q If I were to ask you the same questions, would your answers be the same?

A Yes.

Q Any changes or corrections?

A No.

MR. KURTZ: Your Honor, I tender the

witness for cross.

MR. GISH: Thank you, Mr. Chairman.

CHAIRMAN ARMSTRONG: Mr. Gish.

* * *

CROSS-EXAMINATION

By Mr. Gish:

Q Good morning, Mr. Kollen.

A Good morning. Well, it is --

Q Good noon.

A -- for about 38 seconds, right.

Q You obviously reviewed the REPA in this case, correct?

A Parts of it.

Q And you reviewed Section 6.1?

A Refresh my recollection, please.

Q Mr. Kollen, I have handed you what is Exhibit -- part of Exhibit JFG-1. The version I handed to you is labeled confidential, but the materials we are going to discuss are not confidential and the highlighting that is in here is not confidential highlighting, it's just my highlighting.

And I probably should have -- and I apologize for not using a different color than yellow. Are you familiar with Section 6.1?

A I have read it.

Q Okay. Have you reviewed Section 6.1(C) and Section 6.1(D)?

A I have read them.

Q And Section 6.1(C) allows the Company to terminate the REPA in the event that the Commission takes an action, an order or otherwise, to invalidate, terminate, revoke, modify, or disallow or has the effect of disallowing concurrent recovery by the purchaser of an amount that is greater than five percent of all the costs, rates, terms, and conditions associated with the REPA; is that correct?

A Yes. That's what it says.

Q And Section 6.1(D) similarly allows the Company to terminate, again without any further financial or other obligation, the REPA in the event that the Commission invalidates, terminates, revokes modifies, or disallows or takes an action that has the action of disallowing concurrent recovery by the purchaser.

This 6.1(D) is slightly different than 6.1(C) in the effect that it gives ecoPower the

opportunity to mitigate the impact of the rate recovery denial; is that correct?

A Generally I think I would agree with that. I'm assuming that you're referring to the unless and until provision in the middle of the paragraph? The mutually acceptable amendment?

Q Yeah. Correct.

A Okay.

Q And in the event that a -- the -- no mutually agreeable amendment to the REPA is agreed, or the -- a -- the Commission denies mutually amended -- or, excuse me, mutually agreeable amendment, the Company has the right to terminate the REPA; is that correct?

A Could you repeat that?

Q That's a -- probably a long --

A It was kind of a messy question.

Q I'm sorry.

A So --

Q The -- if the Company comes to a mutually-agreed-upon amendment to the REPA to address the fact that the Commission has denied or revoked or modified the Company's ability to obtain concurrent cost recovery of an amount less than five percent of the amount -- of the cost it needs to recover, that

amended REPA would be brought to the Commission, and if the Commission denies that REPA, the Company can terminate -- the amended REPA, the Company can terminate it without further financial obligation; is that correct?

A The Company can terminate if the Commission does not provide recovery; that's correct.

Q So the Sections 6.1(C) and 6.1(D) give the Company a right to terminate if concurrent recovery is denied, correct?

A Right. They protect the Company on a recovery basis.

Q And you're familiar with Senate Bill 46, correct?

A Yes.

Q Which has been codified at KRS 278.271; is that correct?

A I'm not sure what the subpart is, but it's certainly in Section 278.

Q And can you turn to page 16 of your testimony?

A Yes.

Q And can you read lines 6 through 11 and stop after "decision"?

A Yes. Question: "Should the Commission

apply a strict scrutiny test when assessing the Company's request to enter into this REPA and recover the costs thereunder?"

Answer, (Reading) Yes. A strict scrutiny test should be applied because of the special regulatory treatment awarded to biomass power plants by Senate Bill 46. Under this new law, once a biomass power plant is approved for recovery from ratepayers, the Commission can never revisit that decision.

Q This, Senate Bill 46, was passed unanimously in the Kentucky state legislature; is that correct?

A I've heard that. I don't know that personally.

Q This was in the most recent legislative session?

A Yes.

Q And did the Legislature mandate that the Commission employ any heightened standard of review for biomass agreements, strict or otherwise?

A Well, it did specify that no recovery shall be allowed unless the full cost of the purchase power agreement over the full term of the agreement, which shall be included as part of the application, have been found by the Commission to be fair, just,

and reasonable.

And I -- you know, I think that's consistent with the standards that the Commission has employed previously in assessing other contracts, purchase power contracts, REPA or otherwise.

Q Okay. So there's no -- there's no mandate to employ any heightened standard in the legislation?

A I'm not sure I would call it a heightened standard, but it does codify the standard that the Commission has previously employed.

Q So the -- and you further testify that the prohibition against subsequent Commission review would appear to apply even if it later turned out the contract was procured by fraud, that there was a change in the law, if lower cost of resources were available, or for any other significant reason which we cannot envision now; is that correct?

A Yes.

Q Okay. And just so we're clear, nowhere in your testimony do you allege any fraud in the procurement of -- procurement of this REPA, right?

A No. I must say, I don't know why the Company is in before the Commission proposing this contract. I do not understand the rationale for it,

but I haven't alleged any fraud or any other disreputable act.

Q Okay. So your concern, though, is that if the Commission approves this -- the cost recovery mechanism under this REPA, that it can never be changed; is that correct?

A Well, it can never go down. Even though there may be lower cost resources or if later on it's discovered that there was fraud involved in the negotiation or the procurement of this contract, there's just no way that this contract price can be modified, unless, for example, the Company were to come in and ask for a reopener, but certainly it wouldn't be in the Company's interest to try to bring it down.

Q All right. But if -- just so we're clear, that if the Commission approves the cost recovery mechanism that the Company is seeking for this biomass energy resource, under Senate Bill 46, that cannot be changed for the full term of the REPA; is that correct?

A Well, I'm not an attorney, but that's my understanding. In other words, once the Commission sets in motion its approval of this contract, that's it unless the Company were to come in and seek a

reopener for whatever reason.

MR. GISH: No further questions, Your Honor -- or Mr. Chairman.

MS. HANS: No questions, Your Honor.

MR. NGUYEN: No questions, Your Honor.

VICE-CHAIR GARDNER: I have a couple questions.

* * *

EXAMINATION

By Vice-Chair Gardner:

Q Mr. Kollen, good afternoon.

A Good afternoon. It is now afternoon, yes.

Q Right. My first question has to do with, were you here when I was asking Mr. Wohnhas questions yesterday about the capacity and the imputation or implying capacity into the payments?

A Yes, I was here.

Q Okay. And so specifically I'm looking at paragraph 43 of the amended application, which states that -- one of the sentences is, (Reading) This

is done by imputing a portion of the net present value of the stream of capacity payments as a debt obligation of the utility for purposes of evaluating the utility's credit statistics.

I think today Mr. Taylor helped me understand this a little bit better, but let me ask you if what I'm about to say is what this says and what you understand it to be, which is that in these contracts, these are just -- the payments, by agreement of the parties, do not break down the different component -- components of the stream of money that would be coming to -- that would be coming; is that correct?

A Yes, that's correct.

Q Okay. And therefore, one of your concerns, and this is what -- where you quantified an increase in the cost from 70 something to 780 something, I believe, is that it would, because of that, what is a possibility is that, first of all, there would be the amount that's energy, the amount that capacity would be calculated, I guess by the ratings agencies --

A Yes. There's a -- Standard & Poor's uses a standard 50 percent ratio for that, so --

Q Between energy and capacity?

A Yes, it does.

Q Oh, okay.

A And, in fact, that's what the Company reflected. Mr. Wohnhas wasn't quite correct yesterday when he described this as being my analysis. I did compute the effect on the rate increase, but the Company itself did the analysis to determine the amount of debt that Standard & Poor's would impute and --

Q Can -- before do you that --

A Uh-huh.

Q So the first step is, is how much of the payment is energy and how much is capacity?

A Yes, that's correct. And Standard & Poor's --

Q Is that 50/50? Is that --

A Yes.

Q -- what you have -- okay.

A Yes.

Q So now we know how much is --

A Is capacity.

Q -- is capacity, and the Company agrees with that calculation?

A Well, the Company did the calculation --

Q Okay.

A -- and assumed 50 percent.

Q Okay.

A And --

Q So the next step is, once we've got that split -- well, how does the -- how do the RECs fit into that if it's 50 --

A They do not.

Q Okay. So there's not allocated for these pur -- this is different purposes than what Mr. Taylor was talking about?

A That's correct.

Q Okay.

A That's correct.

Q So for purposes of this, the entire payment is either going to be -- for Standard & Poor's purposes, it's going to be either energy or capacity?

A Yes, that's correct. And Standard & Poor's just simply assumes a 50 percent ratio.

Q Okay. So now we know how much is capacity, how much of the payments coming are capacity, and then the next step or concern is that some of that has to be allocated to debt, because there -- because -- because --

A Well, the assumption is that these payment streams represent a debt equivalent liability,

and so if -- and this is the methodology that the Company employed, which is consistent with the S&P's methodology, but you project out for the lifetime of the REPA the capacity portion of the stream of revenues that will be going to the developer and then you discount that back at a debt interest rate. That then is the debt equivalent.

And then what Standard & Poor's does is it applies a risk factor. And Mr. Wohnhas described this in his direct testimony, and I generally agree with that, with the exception of the risk factor that would be applied. I think that the minimum that S&P's would apply is a 25 percent risk factor, but the Company did a ten percent and a 25 percent. And then that defines, according to the Standard & Poor's methodology, the debt equivalent.

And then what I did was I just said, "Well, what does that then cost customers if you have to add more equity in order to offset the" --

Q In order to maintain --

A -- "increase in the debt?"

Q -- the same ratio?

A The same capital structure, right.

Q Okay.

A And so that was the additional

$4 million. That was the piece that I computed. The Company computed the debt equivalent.

Q Okay. And then I have one more question, and I raised this yesterday. It's on page 6 of your direct testimony, and it has to do with -- it's your paragraph beginning with "Sixth" and has to do with off-system sales. And what you state here -- so currently -- and it's hard for me to keep these in my head, but currently on off-system sales, 40 percent goes to the Company and 60 percent to the customers?

A Yes, on the margins.

Q Right. Right.

A In other words, on the profit, right.

Q Right. So --

A And there's a base amount in base rates, so we're only talking about the increment, the increment in margins or the decrement in margins that's shared 60/40.

Q Okay. And in the stipulation in Mitchell, the Company would receive for the next 14 months or 16 months or whatever it is --

A Seventeen months.

Q -- they would -- yeah, 17. They would receive the entire amount above that $16 million, $17 million figure?

A I believe that's correct. The threshold may have been raised. I don't recall the specifics of that, but it would be a hundred percent over a threshold level.

Q Okay. So is your concern that -- with this point that they are building extra capacity that is needed, therefore, they will be able to have -- should have additional off-system sales above what they need and there's no reason for them to be able to retain, going forward, 40 percent of the margins?

A Yes. That's correct. That's one factor. That's one factor on the list here.

Q Correct. But that's what this factor is?

A That's correct. Yes.

Q Okay. Did you quanti -- did you do any sort of estimate as to what that might be?

A I did not. It would depend upon the PJM, you know, the average off-peak/on-peak energy pricing. But if you think that -- keep in mind that the energy purchased under the REPA is must-run. In other words, it's loaded first into the system. That moves everything else up the stack. And so that means there's simply that equivalent amount of energy or perhaps even more, because you'll have lower cost

energy available to sell into the PJM market.

So there will be additional off-system sales margins and there will be, more likely than not, more than just the amount of energy that's being purchased under the REPA.

Q Okay. Why for PJM purposes is this -- would this be considered must-run?

A Well, actually for purposes of the Company, this is the way their energy loading would be stacked. They're obligated to purchase it, and that just -- would just simply be the sequence.

Q Okay. And therefore PJM recognizes that bilateral agreement where they're --

A Yes.

Q -- required to do it and therefore that would be stacked first?

A Yes, that's correct.

VICE-CHAIR GARDNER: Okay. That's all I have. Thank you so much.

COMMISSIONER BREATHITT: No questions.

MR. KURTZ: Your Honor, I have no redirect.

MR. NGUYEN: No further questions, Your Honor.

CHAIRMAN ARMSTRONG: Thank you,

Mr. Kollen. You're excused.

THE WITNESS: Thank you, Your Honor.

CHAIRMAN ARMSTRONG: Anything else?

MR. KURTZ: No more witnesses, Your Honor.

MS. HANS: None here.

CHAIRMAN ARMSTRONG: Has there been any agreement, Quang, on --

MR. NGUYEN: Post-hearing data requests or briefs, Your Honor?

CHAIRMAN ARMSTRONG: Yes.

MR. NGUYEN: No, we have not spoken about that, but there's only a limited number of post-hearing data requests that --

MR. OVERSTREET: Right.

MR. NGUYEN: So --

MR. OVERSTREET: You tell me, Quang.

MR. NGUYEN: How about two weeks, the 13th?

MR. OVERSTREET: That would be great.

MR. NGUYEN: And then briefs, simultaneous briefs, ten days after that, the 23rd?

MR. GISH: That would be fine for the Company.

MR. NGUYEN: That's on a Monday.

MR. KURTZ: Kurt?

Yeah, Quang, that's great. Thank you.

CHAIRMAN ARMSTRONG: Once again.

MR. NGUYEN: Responses to post-hearing data requests September 13th and post-hearing briefs simultaneous September 23rd.

MR. OVERSTREET: That would be fine, Your Honor.

CHAIRMAN ARMSTRONG: Okay. Fine. Thank you all. We will adjourn.

(Hearing adjourned at 12:18 p.m.)

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STATE OF KENTUCKY)
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COUNTY OF JEFFERSON)

I, Laura J. Kogut, Notary Public within and for the State at Large, my commission as such expiring 25 July 2015, do hereby certify that the foregoing hearing was taken at the time and place stated and for the purpose in the caption stated; that witnesses were first duly sworn to tell the truth, the whole truth, and nothing but the truth; that the hearing was reduced to shorthand writing in the presence of the witnesses; that the foregoing is a full, true, and correct transcript of the hearing to the best of my ability; that the appearances were as stated in the caption.

WITNESS my hand this 5th day of September 2013.

Laura J. Kogut
Registered Merit Reporter
Certified Realtime Reporter
KY CCR 20042BF060
Notary Public, State at Large