

Missouri Statewide DSM Potential Study

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TIGER COURT REPORTING, LLC

1 MS. DIETRICH: We do have a court
2 reporter and she's going on the record, so if
3 you could identify yourselves on the phone.

4 MR. MCCORMICK: This is Jerry
5 McCormick with Empire District.

6 MR. BRUBAKER: Maurice Brubaker with
7 MIEC.

8 MR. LINTON: David Linton with
9 Southwest Power Pool.

10 MR. EDWARDS: This is Troid,
11 T-r-o-i-d, Edwards, Landis+Gyr.

12 MR. MARK: Good morning. This is Dan
13 Mark from Ameren, Missouri, and there's several
14 here with me: Steve Kidwell, Rick Voytas, and
15 Dave Costenaro.

16 MS. DIETRICH: Other people on the
17 phone?

18 MS. TATRO: This is Wendy Tatro with
19 Ameren.

20 MS. DIETRICH: And did somebody else
21 say something?

22 MS. NIGAIL: Paula Nigail from
23 Walmart. I'm sitting in for Ken Baker.

24 MS. DIETRICH: Anyone else on the
25 phone?

1 MR. SHOFF: This is Kyle Shoff with
2 Ameren.

3 MS. DIETRICH: Could you spell your
4 last name, please.

5 MR. SHOFF: S-h-o-f-f, as in Frank.

6 MS. DIETRICH: We have a microphone
7 at the speakerphone and we have the court
8 reporter as close as we can get her to the
9 phone, so we're just making due today.

10 Anybody else on the phone?

11 MR. WELLEN: This is Bob Wellen with
12 Ameren.

13 MS. DIETRICH: Anyone else?

14 (No response.)

15 MS. DIETRICH: Okay. Well, with us
16 in the room we have Tom Franks and Fred Coito
17 from KEMA. We have myself, Natelle Dietrich,
18 and John Rogers from Staff. We have Mark
19 Hughes, Commissioner Davis' advisor, and we just
20 e-mailed the presentation to everyone, so you
21 should have received that, and with that I'll
22 turn it over to Tom Franks to get started.

23 MR. FRANKS: Two microphones. Do I
24 need one?

25 (A discussion was held off the record.)

1 MR. FRANKS: Good morning. Tom Franks
2 here from KEMA here to present draft results on our
3 potential study for the state of Missouri. Sorry I
4 brought this weather with me. It's what I'm used to
5 in Vermont. I hope you get to enjoy it. I just
6 regret I didn't bring my snow blower.

7 You're welcome to ask questions during
8 the presentation and go through it, but please speak
9 clearly and slowly, considering we're not all present
10 and the technology may not live up to our
11 expectations.

12 This is an overview of the agenda. We
13 have an overview of the project, results summary, and
14 then we'll go into the specific fuels, electricity,
15 and natural gas, and an overview of what we did for
16 the demand-response potential, for the appendices
17 that I have not planned to do a line-by-line review,
18 go over the -- what they contain, and if there's any
19 specific questions, we'll open those files and look
20 at the lines in question and address them to the best
21 of our ability, and closing with the next steps.

22 MS. DIETRICH: If I may, this is Natelle
23 Dietrich. I should mention that we also received a
24 presentation from Ameren this morning, and so I have
25 that whenever it's appropriate to present it.

1 MR. FRANKS: Thank you.

2 This is a repeat of some of the materials
3 we provide at the project kickoff, just to sort of
4 set a context of what we're doing and why we're here
5 today, to develop -- our objective is to develop an
6 estimate of technical, economic, and achievable
7 potential for natural gas and electric savings in the
8 state of Missouri.

9 Our methodology was basically two-prong.
10 To do all of that in one package, we use KEMA's DSM
11 Assyst model, primarily populated with secondary
12 research, and we did what we could to collect
13 Missouri data.

14 We scaled the secondary research with
15 Missouri-specific data, and then our final
16 deliverable is a detailed report, which a draft was
17 circulated earlier this week.

18 And I'm sure this is old hat to many of
19 you, but in case some of you newcomers -- it's just
20 good to have a sense of what we're talking about.
21 There are a couple levels of potential, what will be
22 saved naturally if nobody takes any action, people
23 just go out in the market and buy compact
24 fluorescents or LED lights.

25 I was in a restaurant last night in

1 Jefferson City and noticed that all the lighting was
2 provided by LED. I was quite excited.

3 The next ring out is a small report. I
4 wish I could go from the outside. The greatest
5 amount of savings that could be achieved is called
6 technical potential. That means if you took every
7 energy saving measure you could find, installed it
8 wherever it would fit and wherever it was necessary
9 and took out all of the less-efficient equipment,
10 that's what you would save.

11 The next ring in is economic potential.
12 That would be installing all the measures that are
13 cost-effective; in other words, your lifetime revenue
14 stream is greater than your lifetime cost stream.

15 The next one in is what's called many
16 different things, but the short word I used is
17 "achievable potential." There are many flavors of
18 achievable, but it has to do with what you actually
19 get in the marketplace. We are not perfect actors in
20 a market, none of -- very few of us, at least. There
21 may be some out there.

22 So we may not make choices or decisions
23 that are in our best economic interest all the time,
24 so even if you offer to give somebody something that
25 will save them energy, you offer to give it to them

1 for free and you offer to install it for them, and
2 all they have to do is say, Yes. A certain
3 percentage won't.

4 And then there's a little piece that
5 happens anyway, which is where I start. This is an
6 overview of our model. It develops technical and
7 economic and achievable potential. It's basically a
8 two-step -- a three-step model.

9 You gather all the inputs. We set up a
10 large number of input files, which I believe most of
11 you on the phone have received as part of the ongoing
12 interim memo communication. We then take those
13 inputs and put them into the model and say, Tell us
14 what the technical and economic potential is. It
15 does that in one run.

16 We look at those and say, Hmm. What did
17 we miss? What's wrong? And we go through it over
18 and over again until we say, Yeah, this looks right.
19 After that we take those results and give the model
20 some more information: what do we expect to be
21 happening in the world?

22 Up till that -- you know, at the end of
23 economic potential the model doesn't care what the
24 world is doing. It knows what things cost. To get
25 to achievable potential, you have to involve humans,

1 which is behavior, and a little more challenging.

2 So here's a picture of the model, a
3 schematic. Key inputs. Many of you have reviewed
4 our inputs or contributed to the creation of them.
5 Economic data; measure data, building data. I'm just
6 going to run through this quickly. Stop me if you
7 have questions, please. I won't see your hands
8 probably.

9 THE COURT REPORTER: I may have to have
10 you talk a little slower too.

11 MR. FRANKS: I'm sorry.

12 So the first thing we do is develop a
13 base case: what is the energy usage in whatever area
14 we're studying? Take a year. We worked with the
15 PSC, who gave us direction on what -- many of the
16 inputs, working with the stakeholder input.

17 We've already been over it -- this is a
18 more verbose description of technical potential, or
19 at least an accurate one. Here's a description of
20 economic potential, and note the last line. We tend
21 to work as incremental costs. That's important, what
22 we really focus on, just indicative to me as what
23 would be happening anyway, but what's there and what
24 you have to add for input, because there's some
25 carrying costs, having the light on, regardless of

1 its technology, so you assume your light -- whatever
2 your light costs to have it on now is your base and
3 what the light costs for the new efficient measure is
4 your incremental costs.

5 And this microphone's not locked.

6 The economic potential is the technical
7 potential for all measures and market sectors with a
8 total cost rate -- it's just blank. Benefit cost
9 ratio greater than one; total resource cost;
10 description of achievable potential. And this is --

11 MS. DIETRICH: Your sleeve's blocking --

12 MR. FRANKS: So the people aren't seeing
13 this from the computer? They're seeing it from
14 the --

15 MS. DIETRICH: By the projector on the
16 screen.

17 MR. FRANKS: Oh. Okay.

18 So anyway, this is where we look at
19 programs that exist, look at what the study sponsor
20 anticipates for a program, if they'd like to get out
21 of those programs, and adjust and design some basic
22 program information to put into the model.

23 For Missouri we took, basically, a sector
24 basis rather than saying there'll be eight programs
25 in the residential sector, because we didn't know

1 what your program design was. It's not in our
2 mandate to do such.

3 We said, Okay, in general, if you want
4 to -- looking at the technical and economic savings,
5 what would you want to get for programs to achieve
6 various scenarios, which I'll get to in a moment. So
7 this is a key -- I think this microphone is dropping
8 out, so let me know.

9 MS. DIETRICH: Let's try -- let me grab
10 that one.

11 MR. FRANKS: Then we won't get the phone.

12 MS. DIETRICH: I was going to put this one
13 over here. The wire's in the screen now.

14 MR. FRANKS: Now I'd like to --

15 MS. DIETRICH: Dan, from Ameren, Dan
16 Morris, if you have questions, go ahead and ask them,
17 or anybody else at any time. You'll just have to
18 speak up so that we can hear you on the phone.

19 MR. HUGHES: I have a question. Can I
20 take it over here (indicated)?

21 MR. COITO: Uh-huh.

22 MS. TATRO: You have to speak up because
23 we don't hear you on the phone.

24 MS. VOYTAS: All right. This is Rick
25 Voytas with Ameren. Can you hear me?

1 MS. DIETRICH: Yes.

2 MR. FRANKS: Yes, we can.

3 MS. VOYTAS: Okay. This is Rick Voytas
4 from Ameren. Can you hear me?

5 MR. FRANKS: Yes, we can.

6 MS. DIETRICH: Can you hear us on the
7 phone? I think we have some communication problems.
8 Rick?

9 MS. VOYTAS: I'll try it again. This is
10 Rick Voytas. We have some questions on the
11 development of the base case. Would now be an
12 appropriate time to ask those?

13 MR. FRANKS: Sure. We're -- go ahead.

14 MR. VOYTAS: All right. We don't
15 understand how the base case was developed. I think
16 at the beginning of the presentation it was implied
17 that the Staff provided some base case data from the
18 Missouri utility, but I guess, you know, I know
19 Ameren Missouri provided some base case data.

20 I'm trying to figure out all -- if we
21 used our forecast, if -- I really don't know at this
22 point if you aggregated all the forecasts of the
23 various utilities together or -- their own bottom-up
24 type of -- and upgraded those forecasts. I'm trying
25 to get an understanding of how the base case forecast

1 was developed.

2 MR. FRANKS: You were breaking up a little
3 bit, and maybe it's because someone else hasn't
4 muted, but just as a courtesy, if you're not
5 speaking, please mute your phone.

6 I think I understood your question to be:
7 How do we develop our base case? As per our project
8 proposal, we developed our base case primarily on
9 secondary imports from the sources, such as the EIA
10 and others.

11 We were not able to acquire a complete
12 set of data for -- offhand. I can't think of any
13 input to the model that we had the same input and the
14 same units for every utility, so what we did was we
15 took the information we had and looked at it to scale
16 and calibrate.

17 MR. COSTENARO: Sir, we're having a very
18 difficult time on the phone. Is there a way that you
19 can lose a microphone and put the telephone closer to
20 the speaker?

21 MR. FRANKS: I think --

22 MR. COSTENARO: We were trying to --
23 through the webcast, and there's a delay, so we have
24 some communication problems.

25 MR. FRANKS: I think probably if you're

1 not -- if you're not speaking --

2 MR. COITO: What if you tried not to use
3 the mic and just talk right into the phone? Right
4 here. Doesn't that thing pick up?

5 MS. DIETRICH: Yeah. I mean, this has its
6 own microphone. If everybody on the other end can
7 mute, because we're getting feedback from our
8 presentation here and hearing it over the phone, too,
9 so that might help.

10 MR. FRANKS: Okay.

11 MR. COITO: Sit down and talk into that
12 and see if it works.

13 MR. COSTENARO: Natelle, we could hear you
14 very well just then.

15 MS. DIETRICH: Okay.

16 MR. FRANKS: Okay. I've been trying to
17 use the microphone for the conference room. It
18 apparently is not working. How does this sound?

19 MR. COSTENARO: That sounds great.

20 MS. VOYTAS: Oh, that's superb. That's
21 wonderful.

22 MR. FRANKS: We'll give up on third-order
23 technology for now.

24 MR. COITO: Can everyone hear?

25 MS. TATRO: Yeah, that's much better.

1 MR. FRANKS: All right. Thank you.

2 THE COURT REPORTER: And if I could just
3 say, the people on the phone need to introduce
4 themselves each time because I cannot see who's
5 speaking.

6 MR. FRANKS: Did you capture that?

7 MR. VOYTAS: Okay.

8 MR. FRANKS: All right. I'll start over.
9 I heard your question. You asked how we developed a
10 baseline. I won't go the long answer. The short
11 answer is: We took secondary data, such as EIA
12 sources, we took what we could acquire, which was not
13 a complete set of utility data, reviewed it for -- to
14 see how we could scale the secondary data or adjust
15 it based on what we knew from -- was happening in the
16 state of Missouri, and we presented that in one of
17 our earlier memos for review and comment and that
18 we -- there were several comments. We took direction
19 from the PSC as to -- for all of the measure inputs
20 as to which to adjust, based on comments.

21 MR. VOYTAS: Okay. Tom, this is Rick
22 Voytas at Ameren again.

23 I appreciate that explanation, and I'm
24 most familiar with Ameren Missouri but, you know, our
25 sales forecast -- you know, if you use the ones that

1 I'm thinking about -- are complete forecasts,
2 there's -- there's nothing, you know, incomplete
3 about it, so for our portion of the Missouri ties,
4 did you use the forecasts that we had provided or
5 that we had -- not normally give Staff, or did you
6 use EIA data to represent some of the Ameren Missouri
7 service territory?

8 MR. FRANKS: Fred Coito is going to
9 respond to that question.

10 MR. COITO: Let me -- let me -- let me try
11 and address your question here. What we typically do
12 is our forecast -- and I -- we need to confirm this
13 with our staff -- we actually did it, but it's
14 typically a -- what we call a "frozen efficiency
15 forecast," you know, and this is mainly just to
16 benchmark and show percents.

17 We do not, you know, try to use
18 someone's, you know, forecast that's already got
19 energy efficiency in it, already has, you know,
20 naturally-occurring price response, energy efficiency
21 in it, so our base case is typically a, you know,
22 year-one base case that we then extend out based on,
23 you know, essentially customer growth, you know,
24 floor space growth, such that, you know, we kind of
25 assume that, you know, without energy efficiency in

1 it, so we do our own separate projection for base
2 case.

3 And let me also just say that, you know,
4 with our methodology, it's not a crucial part of our
5 methodology. It's not -- you know, we build our
6 energy savings up from the actual technologies out
7 there and, you know, we have -- kind of move along
8 assuming that things are constant efficiency, and the
9 model actually predicts kind of a naturally-occurring
10 savings, you know, things people would do anyway, you
11 know, somewhat like a price elasticity.

12 Then we also try to, you know -- and I
13 don't like to use "predict," because they're really
14 just scenarios or potentials, you know, what we try
15 and build potentials on what would happen if you
16 actually run programs, increase awareness, give
17 people incentives, that type of thing. Does that
18 help?

19 MR. VOYTAS: I'm a little bit -- I could
20 just spend another minute on this. I think the base
21 line is exceptionally important in this study. I
22 think it's the crucial piece of this study, and
23 that's why we're trying to understand it.

24 Now, we had started off with that target
25 diagram of naturally-occurring energy efficiency, and

1 that was the smallest circle in the set of circles,
2 but on Figure 522 in the draft report, there's a
3 graph of the cumulative annual kwh for all the
4 various forms of energy efficiency, and the
5 naturally-occurring energy is huge. It's, like, in
6 the 40 percent range. It's almost as much as the
7 realistic achievable potential, so it's just a --
8 that target diagram really doesn't depict the
9 magnitude, how serious that naturally-occurring
10 energy efficiency is.

11 And the Ameren Missouri sales forecast
12 that we're so familiar with has got naturally-
13 occurring energy efficiency built into it. To the
14 extent that you use that forecast, calibrate it to
15 that forecast, I can see issues pertaining to double-
16 counting of energy efficiency. That's why we're
17 trying to get an understanding, and I'm not clear
18 what that under-- I heard some theory, but I think
19 that's something we're going to want to probe more.
20 There is a concern that there may be a double-
21 counting of energy efficiency.

22 MR. COITO: Okay. Yeah. We -- yeah, we
23 did not use your forecast in that way but, you know,
24 if you want to put that in writing, we can -- we can,
25 you know, confirm that with our analysts, but we do

1 not -- we do not -- like I say, we use a frozen
2 efficiency forecast.

3 You know, our growth is based on, you
4 know, new construction. You know, it's actually, you
5 know, customers out, assuming that they're using
6 pretty much kind of what they're using now, so we do
7 not build into our baseline forecast the naturally-
8 occurring.

9 we did not use your forecast, per se, of
10 energy growth. We would, you know, if anything, use
11 your forecast of customer growth, so that -- that's
12 where we go with that.

13 And, you know, we want -- we also want to
14 characterize our scenario as the one -- three-year
15 payback scenario is the one that you say is, you
16 know, just above naturally-occurring but, yeah, we
17 can -- we can get through that, too, but we do not
18 build -- you know, we do not build in declining use
19 per customer into your baseline initially, and
20 that's -- you know, like I say, if you want to put --
21 you know, put something down, we can address that and
22 we can confirm that with our analysts, but -- and I'm
23 pretty sure that's how -- you know, that's how we've
24 done it in most of our studies.

25 MR. FRANKS: And just for the audience,

1 please direct all questions and comments to the PSC
2 directly.

3 MR. COITO: Yes.

4 MR. FRANKS: They're our client.

5 MR. VOYTAS: Thank you. We can move on.
6 we'll do -- we'll do --

7 MR. COITO: No, you know, we want to make
8 sure you understand what we did but, you know, I
9 think it's a little difficult here in that -- in also
10 that, you know, once you get down into the real
11 details, you know, I need to confirm some of this
12 with our analysts but, you know, I'm pretty sure that
13 we do not build any -- you know, any efficiency or
14 any, you know, declines and use per customer into our
15 baseline.

16 MR. VOYTAS: Okay.

17 MR. FRANKS: Mr. Hughes, you had a
18 question?

19 MR. HUGHES: Yeah. Let me apologize in
20 advance. I beg the indulgence of the highly-skilled
21 technical and engineering staff, but if we could go
22 back to -- on page 9 of the PowerPoint --

23 MR. FRANKS: I will go back.

24 MR. HUGHES: -- the concentric diagram.

25 MR. FRANKS: Yes, sir.

1 MR. HUGHES: We've got three other than
2 naturally-occurring, we've got three categories of
3 potential. The first is the technical potential,
4 which is the hypothetical possible using all the
5 technology that we're aware, and the second one, the
6 economic potential we, again, use the term "technical
7 potential," and my question is: Is the definition of
8 "technical potential" and "economic potential" the
9 same as "technical potential" and "technical
10 potential"?

11 MR. FRANKS: The phrase -- the word
12 "technical" is engaged with -- what, are you
13 referring to a particular slide or page?

14 MR. COITO: Go to page 15, Tom. I think
15 it's 15 that you're --

16 MR. HUGHES: I'm just working out of that
17 draft report.

18 MR. FRANKS: Yeah.

19 MR. HUGHES: And it's in the summary.

20 MR. FRANKS: Effectively, economic
21 technical potential and economic potential is the
22 same. It's the economic share of technical
23 potential.

24 MR. COITO: Economic potential is the part
25 of technical potential that's cost-effective.

1 MR. HUGHES: Under the further limitations
2 described in economic potential?

3 MR. COITO: Yes.

4 MR. HUGHES: Such as we then bring in the
5 cost --

6 MR. COITO: Yes.

7 MR. HUGHES: -- of these applications.

8 MR. COITO: Exactly right.

9 MR. HUGHES: Okay. Very good.

10 MR. COITO: Yeah, technical is even
11 measures that don't pay, but some people might buy
12 them anyway --

13 MR. HUGHES: Correct.

14 MR. COITO: -- but economic is what we
15 think.

16 MR. HUGHES: But now we've integrated the
17 economic constraints.

18 MR. COITO: Yes, and it passes the TRC
19 test.

20 MR. HUGHES: Very good. Thank you.

21 MR. FRANKS: Are there any other questions
22 from those on the phone at this point?

23 (No response.)

24 MR. FRANKS: We're up to the three A's of
25 achievable potential. My shoulder is blocking some

1 of your view.

2 There's availability, awareness, and
3 adoption. Each of these general categories has
4 various inputs that our model requires in order to
5 run. Since the real world doesn't say, Here's an
6 adoption rate, we need to generate those.

7 We generate those by looking at studies.
8 In some potential studies we do perceive preference.
9 we do telephone surveys. we didn't in this study, so
10 we took what we could find from studies that were
11 conducted in the state of Missouri. we looked at
12 studies from other jurisdictions and developed inputs
13 for these factors.

14 Now, this will come -- this issue is
15 important when we get to the scenarios. we were
16 directed by the PSC to match, or attempt to match,
17 the outputs of the model that Ameren used, which were
18 one-year and three-year payback scenarios.

19 MR. HUGHES: If I could beg your
20 indulgence or another question.

21 MR. FRANKS: Certainly.

22 MR. HUGHES: while you're on the matter of
23 scenarios, it was my understanding, and according to
24 your report and what I sat through in the Commission
25 hearings, that we now have the categories of the

1 one-year payback, and I'm assuming that this -- what
2 is your definition of "payback" in that model?

3 MR. FRANKS: Payback is that the costs are
4 recovered in one year from the savings in one year.

5 MR. HUGHES: So netting out the energy
6 savings of costs included over one year and three
7 year?

8 MR. FRANKS: Or in a more complex model,
9 because I know you're interested in the details, you
10 might also include operation and maintenance costs.

11 MR. HUGHES: Correct, but the netting out
12 the benefit covers the cost of the improvements?

13 MR. FRANKS: (Witness nodded.)

14 MR. HUGHES: And then you guys wanted to
15 run a 75 percent incentive model, and you did.

16 MR. FRANKS: We did it.

17 MR. COITO: No, we were asked to run -- to
18 consider a typical aggressive program that we do
19 elsewhere.

20 MR. HUGHES: That showed that 75 percent.
21 This is incentivized? Is that my understanding?

22 MR. FRANKS: It's 75 percent of the
23 incremental cost is covered by the program, wherever
24 that is.

25 MR. HUGHES: Okay. So would this be like

1 a rebate program through utility or would this be the
2 benefit gained from implementing the technology to
3 cost savings, or a combination of both?

4 MR. FRANKS: That represents the incentive
5 to the customer for installing -- on installation
6 of -- the incremental costs.

7 MR. HUGHES: So if I understand this
8 correctly, if I'm a customer of Jet Electra and I
9 want to upgrade my water heater, and this would be
10 based on a 75 percent incentive that I would receive
11 from the utility or the government to make that
12 improvement, and there's no consideration in the
13 calculus of the cost savings in that determination?

14 MR. FRANKS: No, in terms of the cost
15 savings to the customer.

16 MR. HUGHES: It's strictly incentive as
17 opposed to --

18 MR. FRANKS: Yeah.

19 MR. HUGHES: -- energy --

20 MR. COITO: Exactly. Now, with the one --
21 one thing on the water heater, though, would be the
22 rebate would probably be based on -- you know, the
23 way we've run it would be -- what they call "replace
24 on burnout," so if you wanted to replace it and it's
25 still working really well, we didn't run that

1 scenario.

2 we assumed it had come up on its turnover
3 cycle, and the only rebate is on the cost of the
4 high-efficiency -- the 75 percent rebate would only
5 be on the difference between the high efficiency and
6 the standard efficiency --

7 MR. HUGHES: Gotcha.

8 MR. COITO: -- so it's not going to be the
9 whole water heater.

10 MR. HUGHES: Gotcha.

11 My question is whether this is an energy
12 savings basis --

13 MR. COITO: No.

14 MR. HUGHES: -- or an external program
15 incentive?

16 MR. COITO: It's external -- it's the
17 expense of that 75 percent of the scenario.

18 MS. DIETRICH: Now that we can't use the
19 microphones because of the feedback on the phone,
20 you're going to have to talk louder because people on
21 the web can't hear you now.

22 MR. FRANKS: So if you have a question, I
23 guess you need to come up and -- towards the
24 speaker.

25 MS. DIETRICH: No, they can't hear the two

1 of you.

2 MR. FRANKS: Oh. They can't hear the two
3 of us?

4 MS. DIETRICH: Right, because the webcast
5 is also broadcasting for us, so we have kind of two
6 issues. The people on the phone aren't necessarily
7 also on the webcast or vice versa.

8 (A discussion was held off the record.)

9 MR. FRANKS: We are working with technical
10 issues for a moment.

11 (A discussion was held off the record.)

12 MR. FRANKS: I think I have listened to
13 web broadcasts from the PSC in the past and had also
14 called in, and I found I had to turn off the audio on
15 one of them.

16 MS. SUGGETT: It's the people that aren't
17 on the phone but just on the broadcast that are
18 having problems now.

19 MR. FRANKS: Okay. My apologies.

20 So I think with that, we'll move on.
21 Here's the bottom line. We developed -- this is a
22 ten-year cumulative potential, so the total savings
23 over the ten years of up to 2020, and it's a
24 summary. We show, you know, technical at 35 percent
25 of the base energy use in 2020, absent any activity

1 -- you know, just absent any activity.

2 Economic potential at 25 percent, and
3 then the potentials for the three different
4 scenarios, 7 percent for a three-year payback, 10
5 percent for a one-year payback, and 13 percent at 75
6 percent incentive design.

7 MR. VOYTAS: Excuse me. This is Rick
8 Voytas at Ameren Missouri. May I interrupt at this
9 point?

10 MR. FRANKS: Please.

11 MR. COITO: Yes.

12 MR. VOYTAS: One thing, we didn't send a
13 presentation. We sent one graph. Would it be
14 possible that the -- PowerPoint slide. Would it be
15 possible to display that on the web right now? It
16 goes exactly with this table right here, and then
17 we've got a few questions to ask from that. Would it
18 be possible to display that?

19 MR. FRANKS: Natelle has left. I don't
20 know whether to speak to the mic or the phone.

21 MS. SUGGETT: She said it's loaded. We'll
22 look for it.

23 MR. VOYTAS: Yeah, if we could show that,
24 we just want to speak to that part a few moments.

25 MR. FRANKS: Are you seeing it over the

1 web?

2 MR. VOYTAS: No.

3 MR. COSTENARO: There's a little bit of a
4 delay. It might be coming up any second here.

5 MR. VOYTAS: All right. Now we see it.
6 It just came up.

7 MR. COSTENARO: Yes.

8 MR. VOYTAS: So one of the things that we
9 wanted to do with this -- I know we've gotten several
10 KEMA drafts, the middle of December, January 6, and
11 the current January 15th draft, and we didn't plot
12 the middle of December, but the economic and
13 potential numbers are -- apparently there were some
14 errors in the commercial database, December 15, and I
15 guess those were corrected, and now on the early
16 January and this current version, we note that the
17 technical and the economic potentials have stayed the
18 same.

19 There was some verbiage in the draft
20 report that this is a really conservative estimate,
21 that behavioral modification, conservation-type
22 measures were removed and that emergent technologies
23 were removed.

24 Looking at the technical and economic
25 potential, you know, I don't see any movement there,

1 but it sounded like some measures were removed. Then
2 we noted that in the last graph -- in the January 5th
3 version, we had a one-year payback estimate of
4 6 percent. That's been decreased to 10 percent, I
5 guess, four over six is a 67 percent increase in
6 one-year potential, and then the three-year potential
7 increased from 5 to 7, a 2 percent over 5, a 40
8 percent increase, and then for the first time --
9 we've never seen this here before -- there's an
10 entirely new scenario based on a -- I don't know -- a
11 75 percent payment of incentives that achieved 13
12 percent, so this is all new information. It doesn't
13 coincide with what we see in the report.

14 You know, when we look at the top 20
15 measures that are attached to this report, we still
16 see the behavior modifications contributing a huge
17 amount to the overall potential, but some of the
18 things we're going to want to talk -- you know, we
19 can go on with this but, you know, a very important
20 point to note is the huge difference in -- I'm
21 sorry -- the green line is the Ameren Missouri study,
22 the study that we're most familiar with that we used
23 as a reference point, but one clear, clear outlier is
24 the economic potential, you know, the 25 percent
25 versus 14 percent, the statewide number versus the

1 Ameren Missouri number, that the statewide number is
2 an 80 percent increase over the Missouri number.

3 And if you think about it, at the end of
4 the day we end up with the same -- just call them RAP
5 and MAP numbers. I know there's some differentials
6 and definitions.

7 But if we end up at the same place there,
8 the statewide study starts at a much higher economic
9 potential. What that's saying is that the statewide
10 study is very pessimistic on how customers will
11 accept energy efficiency, much more so than the
12 Ameren Missouri study.

13 As we get into this, there's a lot of
14 things going on. You can look at that economic
15 potential. You can do some benchmarking, and there's
16 all kinds of issues with that, or you can go to the
17 actual database itself and see the parameters, the
18 estimates, the incremental costs and the savings that
19 went into measures, and at some point today we'll
20 raise -- we'll point to numerous examples where we've
21 got benefit cost ratios of 30, 40, 200, and then
22 we'll talk to the costs that underlie those, and
23 we've got some real issues here that we're going to
24 need to discuss at some point, say -- at least we'll
25 key them up and we'll submit written questions to

1 pursue that.

2 But most of every question that we'll
3 have from this point forward will be kind of based on
4 this graph, so there's no need to keep it up, but
5 this -- this will be the central point of questions
6 from which we'll be speaking.

7 MR. FRANKS: Thank you.

8 MR. VOYTAS: Just at a high level -- I
9 know we want to move on, but what was it, then, that
10 changed between the January 5 version and the January
11 15 version to cause a 40 and 67 percent increase in
12 achievable potential if several measures were removed
13 from the database?

14 MR. FRANKS: Let me address the "removed"
15 comment. There were no measures removed from the
16 database between the runs. What we did not do is
17 start out by incorporating programs that addressed
18 explicitly emergent technologies and behavioral
19 conservation in that.

20 The difference between the first run
21 and -- which was delivered on January 5, the
22 achievable high-level memo, and the results that are
23 in the draft report, January 15, were based on
24 revisions we made to the inputs to try and make our
25 model do what Global Energy Partner's model was

1 designed to do, and Fred can speak to that directly.

2 MR. COITO: Well, let me just -- we need
3 to check on this, you know, with our analysts, but I
4 think a big -- a big change was that we tried to
5 express things in gross savings.

6 I think -- I think initially we had
7 presented net savings in our initial memo, but as we
8 looked through, you know, your report, we didn't see
9 any net or -- net-to-gross. It just talked about
10 savings. So I think the big change there was to
11 express, you know, the results in -- you know, in a
12 comparable way as gross savings.

13 Now, I think in our report we show both,
14 but the bottom -- you know, the results that are
15 shown in the tables that Tom's presenting here today
16 are gross savings, and like I say, we can -- we
17 can -- we need to confirm -- I need to confirm that
18 with our analysts, but my understanding is that's one
19 of the biggest adjustments that was made is just the
20 presentation.

21 MR. COSTENARO: Right, so that was a
22 question.

23 MR. VOYTAS: Identify yourself.

24 MR. COSTENARO: All right. Dave Costenaro
25 with Ameren again.

1 So your comment on the net-to-gross
2 savings, I think that's definitely important until
3 one of the things that comes out now is that our
4 baseline had the naturally-occurring efficiency
5 removed beforehand, and then what we present coming
6 out of that, there is no distinction between net-to-
7 gross because all of the savings and the study that
8 GEP did for Ameren are net. The naturally-occurring
9 efficiency is taken care of beforehand, and then what
10 comes out is what the programs will accomplish
11 themselves.

12 And so looking at your study, it seems
13 that you have the net-to-gross thing taken care of
14 after the fact, after the study is done, so the net
15 savings in your study seem to be what we would
16 compare to the savings in the Ameren study, and that
17 being a potential range of 3.5 percent to 8.2 percent
18 from Table 1.5.

19 And I wasn't sure 'cause Table 1.5 has
20 different potential numbers than Table 1.1 that
21 appears in the summary. Are we talking about, you
22 know, 11 percent that occurs in Table 1.5 or are we
23 talking about 13 percent that occurs in Table 1.1,
24 for instance, for the 75 percent incremental
25 achievable case?

1 MR. COITO: Are you going to answer that
2 one, Tom?

3 MR. FRANKS: I'm not there yet.

4 MS. DIETRICH: Dave, can you repeat your
5 question?

6 MR. COITO: Can you say it again? We
7 didn't have the report open to those questions.

8 MR. COSTENARO: Yeah. Yeah. So Table
9 1.1, which I think is in the executive summary, it
10 shows -- and I'll just talk about the 75 percent, the
11 newly-added case.

12 MR. COITO: Okay.

13 MR. COSTENARO: It shows gigawatt hour
14 savings in 2020 of 11,942 or a 12.9 percent
15 reduction, and so that, I assume, is gross gigawatt
16 hour savings. Then in Table 1.5 in the body of the
17 report, that 11,942 changes to 10,185, but then the
18 net number is 7,561, so I don't know which one is the
19 right number to compare to the Ameren report, and it
20 seems to me the 7,561 is the corresponding number,
21 the program potential, you know, in the year 2020.

22 MR. FRANKS: We will need to check the --

23 MR. COITO: Yeah, clear there's -- clear
24 there's inconsistency there but, you know, going from
25 Table 1.5, I would say, yeah, that the -- that if you

1 want to compare -- I guess it would be the net,
2 although, you know, based on reading how your study
3 was put together, it was hard for us to understand
4 how net and gross came together so, you know, to the
5 extent we're comparing net against gross in our, you
6 know -- well, we didn't do a comparison, but that's
7 good to know.

8 MR. COSTENARO: Okay. Yeah. Thank you.

9 MR. COITO: Because it sounds like -- it
10 looked like a lot of your penetration of programs was
11 just kind of based on, you know, assumptions, so we
12 weren't sure what they were -- you know, how that was
13 working.

14 And the other thing we really don't
15 understand is, you know, from your study, which makes
16 it impossible for us to compare, is we don't know how
17 much naturally-occurring is embedded in your
18 forecast. That's just taken off the top, so it's not
19 very transparent so, you know, we -- we tried to look
20 at some of those numbers, you know, to some degree,
21 but we found comparisons not to be very easy to do
22 from the report. Thank you.

23 MR. COSTENARO: Yeah. No, I agree, it is
24 difficult to compare the methodologies when they're
25 all so layered and complex. Yeah, we -- our baseline

1 included interchanging and -- and with the stock
2 turnover and new technologies coming online, so we
3 kind of had all that included in the baseline.

4 MR. COITO: Yeah. Let me also just
5 address one more thing on the -- on the difference
6 between the economic potential. To some degree I
7 think our economic potential includes quite a bit of
8 light savings that are going to be picked up in
9 standards.

10 we still showed it as economic potential
11 for -- you know, for society, but when we get to our
12 achievables we -- you know, we net -- you know, we
13 netted out lighting with the understanding, you
14 know -- I think we showed a couple years of a
15 lighting program for things like CFLs, and then those
16 dropped -- you know, and then they dropped off so,
17 you know, that is one of the reasons the economic
18 potentials will look different is because, you know,
19 from what we can tell, yours excluded a lot of
20 lighting that was going to go to standard, and ours
21 did not.

22 MR. COSTENARO: So would there -- the
23 naturally-occurring efficiency then, should that be
24 backed out of all the potentials: The technical,
25 economic and achievable potentials?

1 MR. COITO: No. Yeah, like I said --
2 yeah, we -- yeah, I mean, it could -- if you're
3 trying to compare, I guess so. We just didn't -- you
4 know, we do it that way but -- and you guys did so,
5 yeah, there's a difference in methodology, so either
6 you back it out or you add it back, depending on, you
7 know, what perspective you're looking at.

8 MR. COSTENARO: Can you comment just a
9 little bit on the kind of methodology of how the
10 naturally-occurring efficiency was done. Did you
11 estimate, like, in-stock turnover, like, the number
12 of CFLs are going to be in -- come online in the
13 marketplace naturally, and then there's another
14 number of CFLs that the programs would be doing?

15 MR. COITO: Yes, exactly, and we -- and we
16 use the same penetration curves, and the whole point
17 being that, you know, without an incentive and
18 without, maybe, increased awareness, you know, from
19 the programs, there's still going to be a certain
20 level of energy efficiency going on, you know, either
21 from -- through government awareness, you know,
22 initiatives, Energy Star, or through, you know, word
23 of mouth.

24 You know, yeah, we show some level, and
25 we use pretty much -- you know, we use the same

1 penetration curves, and then what we do is say, You
2 know, we're increasing the cost effectiveness of a
3 measure by giving an incentive and then -- you know,
4 the model then picks up additional savings that
5 would, you know, accrue to the program.

6 MR. COSTENARO: I see. Okay. Thank you.

7 MR. FRANKS: Any other questions?

8 MR. NOLAR: John Nolar, DNR.

9 Is this mic working, by the way? I just
10 want to clarify -- I just want to clarify when --
11 when KEMA uses the word "naturally-occurring
12 potential," does it incorporate potential -- I mean
13 naturally-occurring efficiency -- sorry -- that that
14 includes efficiency resulting from market-driven
15 technology improvements and efficiency resulting from
16 customers responding to the kind of government and
17 other information that's not driven by the utility
18 and also responding -- and also efficiency resulting
19 from market-driven innovations? Are all those
20 included in that term?

21 MR. COITO: It -- it picks up the market-
22 driven. I think, you know, government initiatives,
23 I -- we're not that -- we're not that exact. I mean,
24 I think there's -- it's a gray area. We try -- we
25 haven't really done the attributions to government

1 initiates.

2 MR. NOLAR: If there are new DOE
3 standards, that also is a part of the --

4 MR. COITO: Yep. We -- we -- we try -- we
5 pick up standards -- you know, and I could check
6 exactly what standards. Government lighting, the big
7 lighting ones, we definitely pick those up.

8 we don't usually look at standards that
9 aren't on the -- you know, on the books yet.

10 MR. NOLAR: So, like, if there's a
11 standard that's been legislative but DOE has not yet
12 developed a rule stating what the standard will be in
13 response to the legislation, that would be one that
14 you would --

15 MR. COITO: Yeah, it's a gray area. I
16 mean, it's a big one we know about. I mean, it's
17 going to be a major change, and it's on the radar.
18 Like a couple years ago, they went from the SEER 10
19 to a SEER 13 air conditioner. As long as we know
20 it's happening -- if it's -- if it's not official, we
21 typically don't put it in, but if it's official, we
22 see it coming, we'll put it in.

23 MR. NOLAR: Actually, I ask this question
24 first of KEMA but, you know, both KEMA and Ameren
25 were using the same term "naturally-occurring

1 efficiency." I think it's interesting how Ameren
2 uses this term as well to make sure we're all using
3 the same terms in the same way. I don't know if
4 Ameren --

5 MS. DIETRICH: Ameren, did you hear the
6 question?

7 MR. COSTENARO: We couldn't hear that very
8 well, no.

9 MR. NOLAR: Rick, this is John Nolar from
10 DNR. Both Ameren and KEMA have been using the term
11 "naturally-occurring potential," and what I did was
12 ask KEMA to sort of explain what different categories
13 that might be part of that term they were including
14 into that term, and I was going to ask you the same
15 question, because I wanted to know if we were all
16 using the same term of "naturally-occurring
17 efficiency" in the same way, and so how are you guys
18 using the term?

19 MR. VOYTAS: John, the easiest way I can
20 explain "naturally-occurring" is natural growth is
21 equated to the natural growth ratio in the free
22 ridership portion. These are both -- would do the
23 energy efficient thing regardless of the utility
24 program, so that's what we try to capture, and that's
25 how I think of naturally-occurring energy efficiency.

1 MR. NOLAR: All right. Rick, did you hear
2 the discussion where I was asking about the several
3 different categories?

4 MR. VOYTAS: No, John. We couldn't really
5 catch any of that.

6 MR. NOLAR: Sorry. I might've been using
7 a dead microphone.

8 So when you use the term "naturally-
9 occurring efficiency," does that include the impact
10 of, for example, federal plant standards?

11 MR. VOYTAS: No, John. That -- the effect
12 of federal standards is built into our baseline, so
13 we use a statistically-adjusted end-use forecasting
14 model, so we've got things like the Energy and
15 Dependence and Security Act of 2007 and the phase-out
16 of incandescent bulbs through time. That's embedded
17 in our forecast, so that's in our base forecast
18 itself.

19 MR. NOLAR: So that's not part of -- so
20 that would not be something you would include in that
21 term. Okay.

22 MR. VOYTAS: Correct.

23 MR. NOLAR: And are you including
24 technical innovations that occur as a result of
25 market forces?

1 MR. VOYTAS: Naturally-occurring?

2 MR. NOLAR: Yeah. Well, I guess that's
3 what I'm asking. Is that part of what you mean by
4 when you say "naturally-occurring?" Are you
5 including changes in technology that are market-
6 driven?

7 MR. COSTENARO: Well -- this is Dave
8 Costenaro at Ameren.

9 Yes, we did include new technology and
10 comment online as it became cost-effective throughout
11 the time horizon considered in our study.

12 MR. NOLAR: Okay. Well, I was just -- I
13 was just trying to clarify the term, you know. I
14 hope -- I'm not sure, but I hope we're closer.

15 MR. COITO: Yeah. We don't -- we don't,
16 you know -- I don't know for you, but we both don't
17 include standards which is --

18 MR. NOLAR: Yes. All right.

19 MR. COITO: I think some of the technology
20 and innovation -- you know, I mean, when you have a
21 bottom-up, if you don't know what it is, that
22 technology innovation, you can't build.

23 I mean, we've -- we've done other things
24 but, you know, we don't show -- we really don't show
25 that in any of our numbers because it's things --

1 it's things like emerging technologies, like LEDs.
2 we'd have to assume now -- LEDs are in the
3 marketplace. we'd have to assume they're dropping in
4 price a lot and, you know, I think per our -- you
5 know, up-front, we're maybe looking at commercially-
6 available technology in the study. So this study, if
7 anything, is probably a little conservative on the
8 technology side in that in a bottom-up model where
9 you actually have to account for all the pieces, it's
10 very difficult to pick up innovation unless you want
11 to put, like, a generic increase in lighting in to
12 pick up technology that you don't know about, so we
13 don't have that in there.

14 You know, we fully expect that in five
15 years there's going to be newer technologies coming
16 on, and so we have to revisit these studies every,
17 you know, number of years because the bottom-up --
18 the nature of a bottom-up model of any type, it does
19 not pick up things like technology, innovation that
20 you don't know about.

21 MR. HUGHES: Looking at this slide, under
22 our technical potential, the savings is a percentage
23 of base. I assume this is a -- is this in load or
24 have remonitized (ph.) this?

25 MR. FRANKS: That's gigawatt ours in 2020.

1 MR. HUGHES: So from this am I to
2 understand that in our residential category, if we're
3 discounting behaviors such as children who refuse to
4 turn off the lights or televisions, our residences
5 are 43 percent inefficient in terms of available
6 technology?

7 MR. FRANKS: Yes, that's -- and it's
8 not -- there's some -- the average home -- the energy
9 use in an average home is fairly large compared to
10 someone who really tries, and I've been a party to
11 some cases where in the single homes, you know, with
12 people with no costs barred have attempted to save
13 energy and they have achieved -- they have achieved
14 in excess of 50 percent.

15 MR. COITO: One other thing, though: In
16 some cases people are out of step because they've got
17 an old air conditioner. You know, this is -- this
18 technical and economic assumes everything goes in
19 now, whereas we know, like, in air conditioners, you
20 know, if it's five years old, they're not going to
21 maybe replace it for another five to ten, so there's
22 some --

23 MR. HUGHES: I just wanted to make --

24 MR. COITO: Yeah, it's --

25 MR. HUGHES: -- sure that I was perceiving

1 what --

2 MR. COITO: Yeah, some of them are less
3 efficient.

4 MR. HUGHES: But I find that an incredible
5 number.

6 MR. FRANKS: It's not uncommon.

7 MR. COITO: No.

8 MR. HUGHES: Okay.

9 MR. FRANKS: Are there any more
10 questions -- on this slide?

11 MS. SUGGETT: Good qualifier there.

12 (No response.)

13 MR. FRANKS: This is a comparable slide
14 for electric demand. The demand characteristics and
15 the energy using characteristics of a particular
16 sector may not be exactly the same, and it has to do
17 with how much they draw in various time periods and
18 how often they draw it, so that explains some
19 difference in the percentages.

20 And as we note at the bottom, this
21 excludes savings from demand-response programs, which
22 are addressed separately.

23 This is a description of the benefit cost
24 summary across the three scenarios. The definition
25 of the scenarios comes a little bit later, but we've

1 discussed them already. And these are all in present
2 value.

3 This chart summarizes the same for
4 natural gas energy only, and a benefit cost summary
5 for natural gas.

6 MR. ROGERS: This is John Rogers. Tom,
7 looking at the one-year payback and the 75 percent
8 incentive, the costs in the 75 percent incentive are
9 lower than the one-year payback costs and yet the --

10 MR. FRANKS: Are you on electric?

11 MR. ROGERS: Yes.

12 MR. FRANKS: Let me go back to that.

13 MR. ROGERS: And yet the net benefits in
14 the 75 percent incentive are greater than the
15 one-year payback.

16 MR. FRANKS: That's correct.

17 MR. ROGERS: Help me understand that.

18 MR. FRANKS: The 75 percent incentive,
19 it's an allocation of the program dollars
20 differently. In some cases the one-year payback
21 required an immense amount of money for certain
22 measures to get it down to there, or a larger amount
23 of money, and therefore produced lower net benefit.

24 Also in the 75 percent payback scenario,
25 our model develops -- developed a higher level of

1 savings for some measures based on that when we had
2 the same awareness and other factors and
3 availability, so it's a model output.

4 It makes sense that if you're trying to
5 pay -- get everybody the same payback as opposed to
6 offering a percentage of incremental. You can
7 generate sometimes more interest in the market with a
8 percentage of incremental on measures that are highly
9 cost-effective but not get any incentive at all
10 within a payback-limited scenario.

11 MR. HUGHES: If I can, in the same vein --

12 MR. FRANKS: Certainly.

13 MR. HUGHES: -- am I correct in my
14 understanding that on the electric we show 4.3
15 billion in benefits under your 75 percent incentive?
16 would this be the result if we saw 3.225 billion in
17 incentives; in other words, is this the cost to get
18 that -- You follow me? -- with the 75 percent
19 incentive sort of reversed?

20 MR. FRANKS: I've got to look at the
21 numbers underlined there that are not on this chart,
22 but I'm not sure -- I can't speak to that number.

23 MR. HUGHES: Okay. Okay.

24 MR. FRANKS: It's -- I think the -- the
25 total program cost, the --

1 MR. HUGHES: Right.

2 MR. FRANKS: -- total cost, which would be
3 incentives, and this includes participant costs,
4 because the net benefit includes the participant
5 costs, which is not part of the program costs. In
6 other words, it includes incentives --

7 MR. HUGHES: Okay. So is that in the 75
8 or not? Here's my question: Can I take that net
9 benefit, multiply by .75 --

10 MR. FRANKS: No.

11 MR. HUGHES: -- and determine the costs?

12 MR. FRANKS: No.

13 MR. HUGHES: Okay. All right.

14 Is there an appendix or something that
15 claims to me why?

16 MR. FRANKS: 75 percent is an incentive of
17 incremental costs at one point in time.

18 MR. HUGHES: Okay.

19 MR. FRANKS: Net benefits is a stream over
20 time adjusted to be in present value.

21 MR. HUGHES: In dollars but --

22 MR. FRANKS: It's -- it's in term -- it is
23 converted to dollars because you can't compare wants
24 of dollars and have a meaningful --

25 MR. HUGHES: Okay. Very good.

1 MR. FRANKS: Or one hour.

2 MR. VOYTAS: This is Rick Voytas at Ameren
3 Missouri. Could I interrupt for a second?

4 On the issue of costs, since we were just
5 talking about costs, I just had a global comment. As
6 we look through the draft report, we saw some of the
7 program costs, we saw some line items for incentives
8 for marketing for admin, but we really don't have an
9 understanding how KEMA applied those costs, and so if
10 the costs were developed on a percent-of-something
11 basis, pro rata basis, we'd really like to know
12 exactly how the specific program costs associated
13 with these various measures were determined. We
14 could not find a discussion for that particular
15 thing.

16 Another area that we were struggling with
17 is we really didn't see any useful cost matrix to
18 compare this draft with other studies. I mean, we
19 saw the total, you know, 1 billion, \$2 billion over
20 ten years to acquire some of the estimates but, you
21 know, in terms of what the first costs in terms of
22 dollar per kWh or the levelized costs, we didn't see
23 any of that information. That would've been really
24 helpful to give us a better understanding of, really,
25 a better comfort level as to the reasonableness of

1 some of these numbers.

2 And also we would've liked to have seen a
3 little discussion on how KEMA approaches levelization
4 of costs. Clearly, I mean, we're looking at a 2010
5 to 2020 time period, and we've got -- in terms of
6 dollars per Kwh, we've got a numerator of dollars and
7 a denominator with Kwh, and we'd like to know if you
8 discount Kwh similarly to how you discount dollars.

9 So those are some areas that, again,
10 we'll gladly put this in a memo for KEMA to chew on
11 after this date, but those are some issues that we
12 just couldn't find that information in the report.

13 MR. COITO: And some of that will probably
14 show up in the appendix. You know, some of that --
15 we actually, I think, have an Appendix H that hasn't
16 been completed yet that would speak to some of that.
17 Having more detailed questions might allow us to be
18 more specific as we get into that appendix but, you
19 know, that was not included in this -- in this draft.

20 MR. VOYTAS: All right.

21 MR. COSTENARO: This is Dave Costenaro
22 from Ameren again.

23 Do you have any insight that you can give
24 us about just general methodology of developing the
25 costs, what is in the measure with a certain

1 incremental cost then levied with, you know, 20
2 percent for admin costs and -- or 40 percent, or was
3 that the type of methodology you used or a fixed cost
4 added program build-up?

5 MR. COITO: Yeah, we -- yeah, let me just
6 real quick -- one of the things we did, like, our
7 marketing budgets, we bench-marked it to what a
8 typical marketing budget would be for, you know, for
9 a certain base load energy, you know, for a certain
10 size of a service territory or, you know, in this
11 case the state of Missouri, you know, what we've seen
12 at typical marketing budgets, you know, to educate
13 people. We looked at that, so we kind of benchmarked
14 that off of -- off of base use.

15 MR. FRANKS: Somebody is speaking. Would
16 you please mute if you're not speaking at the time.

17 Go ahead, Fred. I'm sorry.

18 MR. COITO: Okay. So -- you know, so we
19 tried to -- you know, we looked at that, and we
20 looked at -- yeah, and we looked at typical, you
21 know, benchmarked typical administration costs to
22 what we would -- you know, what we would see to
23 support a, you know, certain size of savings so,
24 yeah -- you know, to the extent we -- you know, we
25 benchmarked off of what we have seen --

1 MR. FRANKS: There is a woman laughing
2 right now. Would you please mute your microphone.

3 (A discussion was held off the record.)

4 MS. DIETRICH: Somebody needs to put your
5 microphone on mute or your phone on mute.

6 (A discussion was held off the record.)

7 MS. DIETRICH: Somebody about your little
8 book right there, can you put your phone on mute?

9 MR. COITO: Maybe they have something good
10 in there.

11 MS. SUGGETT: Dave Costenaro? Dave?

12 MR. COSTENARO: Yeah.

13 MS. SUGGETT: Can you guys put your phone
14 on mute?

15 MR. COSTENARO: We have ours in Missouri
16 on mute, yeah.

17 MS. SUGGETT: Okay. There's somebody
18 that's not. It almost sounded like you. Thanks.

19 MR. COSTENARO: Wasn't me. Sounds like we
20 have radio silence, so it's -- if you could continue.

21 MR. COITO: Yeah.

22 MR. COSTENARO: You were saying that you
23 estimated --

24 MR. COITO: So -- so we tried to bench--
25 yeah, so we tried -- basically what we tried to do is

1 benchmark our marketing costs to, you know, kind of
2 what would be, you know, an average of a, you know,
3 typical -- I wouldn't say typical, because they
4 bounce around, but, you know, fairly typical for a
5 certain size of the service territory baseload.

6 we then, you know, kind of -- you know,
7 benchmarked admin budgets to -- to what we would, you
8 know, typically seek to get, you know, based on -- on
9 the size of a program which is, you know, based on
10 typical Kwh . Admin is actually one of the last
11 pieces of the model, so basically, you know,
12 marketing actually affects awareness and, you know,
13 that kind of affects the size of the program, how
14 much rebate you might have to give out.

15 Then, you know, once we see the size of a
16 program, we -- we will attach an admin budget. I
17 think, if anything, in Missouri, we actually -- given
18 that there hasn't been as much history of programs,
19 we probably start out with a little higher
20 admin budgets per Kwh in therms saved than we would
21 maybe in areas like, you know, California or the east
22 coast that have run programs for a while, because,
23 you now, we understand that there's probably, you
24 know, some learning curve on the program so, you
25 know, yeah, we did try to benchmark these things.

1 MR. COSTENARO: Okay. So it sounds like
2 you applied a dollar amount that was kind of based on
3 the size of the kilowatt hours of therm savings in
4 the program.

5 MR. COITO: Yeah.

6 MR. COSTENARO: Okay. All right. Thanks
7 for clarifying.

8 MR. FRANKS: I think this is where we
9 are. This is the result -- some of the results from
10 the Federal Energy Regulatory Commission model, just
11 showed that four different scenarios and at several
12 different time frames. We will address this in a
13 little more detail later.

14 Move on to the technical and economic
15 potential. We developed this from Missouri-specific
16 input sources to the extent they were available, made
17 them available to PSC and stakeholders in interim
18 memos for review and comment.

19 The sample files were distributed in
20 advance so the folks would know what the -- at least
21 have a sense of what the big spreadsheets were when
22 they got them. They included baseline data, building
23 characterization data, measure data and economic
24 data. These inputs are documented in the report
25 appendices.

1 Now we'll move on to electricity. This
2 is the --

3 MS. DIETRICH: Please place your phones on
4 mute.

5 MR. FRANKS: Especially if you're having a
6 lot of fun.

7 We have base energy by sectors. This is a
8 sector breakdown of the base, which is -- and
9 demand. Shows that from what we -- you know, from
10 our research, Missouri is residential-driven, a
11 smaller industrial base and a moderate commercial.

12 And here's the summary, technical
13 potential and economic potential for both energy and
14 peak demand savings. These are all at 2020. This is
15 the savings broken down by sector, so each sector's
16 contribution in gigawatt hours and then shown as a
17 percent of sector load, not of full state load.

18 Now, this is contribution by sector,
19 which you'll note is different. It's 43 percent of
20 the residential sector load can be saved in gigawatt
21 hours, but that contributes 55 percent of the total
22 state savings.

23 Demand savings by sector; demand savings
24 as a percentage of sector load; contribution to total
25 demand savings by sector, and the top 20 measures for

1 economic potential. Not on this chart, but I think
2 in a subsequent table, you will see some measures
3 that have a TRC, total resource cost, test result of
4 less than one. That was for measures across all
5 sectors.

6 In some sectors a measure may have a
7 positive TRC to the extent -- and contributably a
8 large amount of savings, and those measures are
9 incorporated in these high-level summary tables, so
10 this is in the top 20 residential measures broken out
11 by measure name and building type. There were four
12 building types: single --

13 MR. VOYTAS: This is Rick Voytas. Could I
14 interject at this point?

15 MR. FRANKS: Sure.

16 MR. VOYTAS: Okay. So one of the concerns
17 that we have, as I expressed earlier, is the really
18 large discrepancy between economic potential between
19 the Ameren Missouri study and the draft statewide
20 study. I mean, it's almost a two-to-one
21 differential, and I think if we did a GAP analysis,
22 there's probably a few technologies that are in the
23 statewide studies that are not in Ameren Missouri's.

24 One is the streetlights. Things on the
25 utility side of the meter we did not include in the

1 Ameren Missouri study, but at the end of the day that
2 gap -- you know, those type of issues are few and far
3 between. That gap is going to be huge.

4 I don't think it's due to -- and we look
5 at this top 20 measure list. We see some TRCs, our
6 benefit cost ratio, in the stratosphere, you know,
7 20, 30, things of that nature. So one of the things
8 that we looked at was we just -- and this is hard to
9 do when you have PDF files and you don't have all the
10 data. It's very difficult to manipulate this.

11 We took a very unscientific sample of
12 measures and we compared those to the measure TRC in
13 our database that we scrubbed rather thoroughly,
14 especially in preparation for our integrated resource
15 plan filing, and the discrepancies are just huge. I
16 mean, we're talking multiple, three to ten per
17 measure.

18 And one measure I think everybody's
19 familiar with, I'll just use as an example, is
20 refrigerator recycling is a measure that both studies
21 looked at. In the KEMA analysis, I think the benefit
22 cost ratio is close to 30. On the 12/15 issuance it
23 was 29.75 and the latest one is 26.42. This is at
24 the measure level.

25 On the Ameren Missouri work the TRC is 4,

1 so what is that? A difference of a multiple of
2 seven? And when we try to understand what's going on
3 in the KEMA database, an incremental measure cost of
4 \$25 is assigned to this. The Ameren Missouri
5 database -- this is at the measure level, it's closer
6 to 100. I mean, \$25 doesn't even represent the
7 incentive needed to acquire these.

8 Then there's the cost to recycle these,
9 which is extensive, so I could give another 20
10 examples of these huge discrepancies. But it's
11 things like this that I think are driving the
12 economic potential because this contributes directly
13 to the payback and things of that nature that
14 contribute to this huge two-to-one discrepancy in
15 economic potential.

16 MR. COITO: Can I say, first of all, I
17 appreciate your difficulty looking into your report.
18 We had a similar difficulty looking into your
19 report. I don't think we could get your costs out of
20 your report very easily, otherwise we would've
21 probably done a little more sleuthing to see why some
22 of these differences were available up-front.

23 I don't have any direct answers right
24 now, but I also see quite -- you know, my
25 understanding is you guys don't have CFLs in your

1 economic potential, but we can't tell exactly. But
2 that's all -- if you look at some of our top ten
3 measures, they show up pretty prominently here.

4 You start taking some of those out, and
5 that bridges the gap quite a bit too. A TRC of 4 or
6 a TRC of 24, there's still economic -- they would
7 still show up in the count of economic potential, so
8 I don't think that that comment was really relevant
9 to what's in economic potential or not but, you know,
10 I do believe we tried to probe into your report to
11 understand where you guys were coming from.

12 we did not -- you know, if things would
13 have been a little more transparent, I think we
14 would've used more of your -- tried to understand
15 more of the differences up-front.

16 we did not have that opportunity, so we
17 appreciate, you know, that you're telling us this now
18 but -- you know, and measure by measure, I am not
19 sure about, exactly, some of these costs right now.
20 we could -- we could look at them if you wanted to --
21 you know, given that you have all of our measured
22 costs, if you want to highlight, you know, the ones
23 that are different, we -- you know -- you know, we
24 might be able to take a little bit of look at it. we
25 don't have a lot of budget for that but, you know, on

1 the back end it's a little difficult. We tried to
2 get -- we tried to get a lot of this data upfront,
3 and I don't think we got all of it.

4 MR. FRANKS: I have a question. Dave?

5 MR. VOYTAS: Just one second. I
6 appreciate that, and I've never been involved in a
7 study with a time frame like this, you know, where I
8 get a report two days before the meeting that's
9 several hundred pages and review it. But I
10 understand that but, please, I -- you know, Dave
11 Costenaro and I are extremely familiar with the
12 Ameren Missouri report.

13 I don't recall having getting any calls
14 from the KEMA team on this. We would have loved to
15 sit down and talked with you. Come to our place. We
16 would've loved -- I don't recall ever having done
17 that, and that offer was always open, and so to hear
18 that at this late date, there certainly was no
19 intention to be nontransparent.

20 We would've opened all of our files,
21 books, and given you all the knowledge we have, but I
22 don't recall that request ever happening --

23 MR. COITO: Okay.

24 MR. VOYTAS: -- but going forward, we can
25 talk.

1 MR. O'DONNELL: This is Joe O'Donnell.

2 May I speak?

3 MR. FRANKS: Would you hold off a moment,
4 Mr. O'Donnell? I'd like to ask Mr. Voytas a question
5 in relation to his last issue you raised.

6 MR. O'DONNELL: Mine's on the same issue.

7 MR. FRANKS: Well, let me -- yeah, please
8 let me ask this question. We'll get right back to
9 you.

10 In regard to the economic potential, you
11 said the -- and specific example of second
12 refrigerator recycle, you said the \$25 was not enough
13 to even acquire the refrigerator and indicated there
14 were other costs. So if I understand what you said,
15 when you're doing -- when your study did economic
16 potential, you also included program costs in the
17 costs of the measure. Is that correct?

18 MR. VOYTAS: That's not correct.

19 MR. FRANKS: So then how is -- okay. So
20 then --

21 MR. VOYTAS: We looked at the incremental
22 measure costs and we looked at the incremental
23 measure savings, period; no net-to-gross, no program
24 costs.

25 MR. FRANKS: So from a programmatic

1 incentive level, we see refrigerator recycling
2 programs that pay \$25 to the customer, the incentive,
3 for the -- you know, to acquire the device. The
4 other costs --

5 MR. VOYTAS: That is a fraction of the
6 cost but, yeah, I've seen \$25 incentives too.

7 MR. FRANKS: Okay. So it just sounds to
8 me like you might be incorporating program costs into
9 economic potential, and I was -- that's a different
10 methodology.

11 MR. VOYTAS: No, we don't do that. We
12 make a conscious effort to not do that, so pretty
13 sure you won't find that.

14 MR. FRANKS: Okay. Thank you.

15 Mr. O'Donnell, sorry for interrupting. I
16 just wanted to clarify that point.

17 MR. O'DONNELL: Sure. I have a question
18 that's related to Rick's observation. I've seen
19 measures with, you know, TRCs that are that high,
20 and, you know, 30-plus, and sometimes -- I'd like to
21 know how you're handling the issue of incentive
22 payments when the customer does not have any out-of-
23 pocket expense.

24 Typically the incentive payment is a
25 transfer payment from the utility to the customer,

1 and the assumption is that it doesn't affect the
2 total cost. You know, it increases the utility costs
3 but reduces the customer's net out-of-pocket expense.

4 A lot of times that cost is excluded in
5 the calculation, but if it's excluded in the
6 calculation where the customer does not have any
7 direct out-of-pocket expense like you would see in
8 the supply recycling program. Then you're going to
9 see TRCs that are through the roof because you're
10 excluding costs that should be in there, and I'd like
11 to know how you're handling that issue.

12 MR. COITO: Yeah, we don't have an answer
13 for that right now. That's a point we could take
14 under consideration but, yeah, it's not a bad point.

15 MR. O'DONNELL: We use a software package
16 that, you know, generally makes the assumption that
17 incentive payments are transferred and don't come
18 into the calculation. But if you throw that out, you
19 know, typically with demand response programs where,
20 you know, the customer's not spending any money
21 considering, you know, payment to a loan or you have
22 an appliance recycling program where the customer is
23 not spending any money yet you get an incentive, you
24 cannot exclude that cost because, you know, it's a
25 program cost and it's not offsetting some customer's

1 expense. Typically you'll see TRC 30, 40, 50 when
2 you do that.

3 MR. VOYTAS: This is Rick Voytas at Ameren
4 Missouri again.

5 And I know time is of the essence and we
6 will put some of our concerns in writing and get them
7 to you, but I just used refrigerator recycling to
8 exemplify some of the issue, but clearly, you now,
9 there's a number of LED measures that replace an
10 incandescent bulb. We question whether the
11 incandescent bulb is appropriate baseline.

12 After 2014, EISA will be -- the Energy
13 Independence and Security Act -- will be the
14 baseline, and we've got several examples there.
15 Other things, we see windows that got a really large
16 share of both electric and gas potential savings,
17 TRCs are high. They don't even come close to passing
18 our measure level screening. I'm not going to delay
19 the point --

20 MR. COITO: Excuse me. Excuse me. No,
21 no, let me just ask you about windows. We -- we --
22 we model the window as an incremental, so we're not
23 saying go out and replace your window as a retrofit
24 and pay the full cost of a window. Ours is more
25 incremental from, if you're going to replace your

1 window anyway, let's go to the more efficient one,
2 so -- in fact, it shows up as a big chunk of economic
3 potential because it's calculated as everything
4 happens at once, but as achievable, you know, you're
5 only going to get one -- you know, 1/40th of those
6 each year because, you know, people aren't replacing
7 their windows, you know, every year.

8 It's -- it's, you know, a 20- to 40-year
9 cycle or some, you know, long-term renovation cycle
10 so, you know, there are probably some approach issues
11 why things are different, and that's -- you know,
12 that's just something that we need to, you know --
13 you know, I mean, those are just differences that we
14 have to understand.

15 You know, when you see the achievables,
16 you're not going to see windows being, you know, one
17 of the top measures.

18 MR. COSTENARO: I see. Yeah, I think for
19 us we had a lot of costs associated with the windows
20 and the same sort of issues with frequency of uptake,
21 so I guess it was just --

22 MR. COITO: Yeah.

23 MR. COSTENARO: -- looking at these
24 economic top 20. So you're saying that they don't
25 appear as much in the achievable --

1 MR. COITO: No.

2 MR. COSTENARO: -- in light of the
3 economic potential?

4 MR. COITO: Right. And we -- you know,
5 exactly. And some people will run an economic where
6 you -- you know, you do a stock adjustment through
7 that. Our model doesn't work that way, so we don't
8 don't -- you know, we tend to have an instantaneous
9 adoption of everything, and then it really -- the
10 dynamics get into the achievable potentials so, you
11 know, that might be just a -- you know, a difference
12 of modeling, so it may be a little difference of
13 definition in the economic potential. Hopefully that
14 will help a little bit.

15 MR. COSTENARO: Gotcha.

16 MR. VOYTAS: I'm sorry. This is Rick
17 Voytas.

18 On the residential top 20 list, the
19 incorrect feedback, is that the old power-of-
20 behavior-modification-like type of thing?

21 MR. COITO: Yes. Yeah, 2 percent savings
22 for -- you know, I don't know what the exact cost is,
23 you know, whatever Opower -- you know, 10 or \$20 a
24 year.

25 MR. VOYTAS: Okay. So that's a real

1 measure in the analysis, and when I read on page 3
2 that we excluded a general modeling of emergent
3 technologies and behavioral conservation approaches,
4 what I thought that meant -- that's really not what
5 it meant. There actually is behavior modification
6 programs in this potential analysis.

7 MR. FRANKS: Yeah, just the Opower.

8 MR. COITO: Yeah, but it's not in the
9 achievables? We'll look -- yeah.

10 MR. FRANKS: I think it is in the
11 achievable by -- I mean, there's a -- we did not --
12 we, perhaps, should've been more precise and said
13 that, you know, we were referring to the vast array
14 of other behavioral conservation programs.

15 MR. COITO: We'll look at the language
16 there and we'll make sure it's clear to the reader
17 what's in and what's not.

18 MR. VOYTAS: Okay. And I don't have this
19 data plan in front of me, but I believe -- I mean,
20 most -- there's a lot of issues with Opower, but one
21 is persistence. It's got a one-year effect. I
22 thought I saw a ten-year life ascribes to this
23 particular measure. Can you confirm or deny that at
24 this eleventh hour?

25 MR. FRANKS: No.

1 MR. COITO: No, but we can look at that
2 one.

3 MR. VOYTAS: Okay. Enough said. Thank
4 you.

5 MR. FRANKS: The same for commercial, top
6 20 economic potential measures. Comments noted
7 previously with regard to residential.

8 The industrial top 20, and then one of
9 the issues that came up was how much difference does
10 the avoided cost make? And we tested the sensitivity
11 of avoided costs at the economic potential level, and
12 this chart displays the differences in gigawatt hours
13 and megawatts.

14 Based on discussion with staff, we
15 proceeded to take just the database avoided cost
16 scenario forward into the achievable potential.
17 Determining the sensitivity to avoided costs was
18 within acceptable range for the two scenarios we
19 modeled, 20 percent below the database and 50 percent
20 above.

21 A more detailed description of those
22 scenarios, and now to achievable potential
23 electricity.

24 MR. BRUBAKER: Could I ask a question at
25 this point? This is Maurice Brubaker.

1 MR. FRANKS: Certainly.

2 MR. BRUBAKER: I think there at Appendix C
3 of the report, at what point in time was the -- were
4 the avoided cost numbers developed?

5 MR. FRANKS: Avoided cost numbers were
6 developed as part of the economic data collection and
7 review database, and they were direct and accepted,
8 and we took forward to avoid -- face avoided costs
9 that were from direction of PSC.

10 MR. COITO: It was probably about
11 October?

12 MR. FRANKS: Yeah, I think so.

13 MR. BRUBAKER: Okay. At what point in
14 time were the avoided costs developed that are used
15 here?

16 MR. FRANKS: Do you mean what time frame
17 are they referenced? Do you mean what time frame are
18 they referencing?

19 MR. COITO: No, when --

20 MR. BRUBAKER: No, I mean is it 2008 or
21 2009, or were they developed in late 2010?

22 MR. FRANKS: The PSC provided direction to
23 us on the avoided costs our model should use in
24 October or November of 2010.

25 MR. COITO: Yeah, we don't -- we don't

1 have an answer for that one.

2 MR. BRUBAKER: I don't know who to ask. I
3 suppose John or someone could answer that or maybe --
4 if I look at those numbers, they're roughly twice
5 what the current projections are. I'm guessing they
6 came out of the last round of IRPs, which were
7 developed with prices.

8 MS. DIETRICH: That's correct, Maurice.
9 They were from the IRPs.

10 MR. BRUBAKER: In any of the forward price
11 curves I've seen lately and any of the utility
12 avoided cost data I've seen lately is a lot more than
13 20 percent lower than what those numbers are, so I
14 just want to understand what the frame of reference
15 is.

16 MR. COITO: And you're looking by time of
17 use period that we've got in there.

18 MR. BRUBAKER: Yeah.

19 MR. COITO: Yeah, I'm not sure.

20 MR. NOLAR: Hey, Maurice, this is John.
21 I'm going off of memory now, but I think what you did
22 was take the IRP avoided costs for Ameren and Kansas
23 City Power & Light and weight by sales, retail sales.

24 This is Joseph -- hi. This is Joseph
25 O'Donnell, KCP&L. May I make a comment, a question?

1 MR. FRANKS: Please.

2 MR. COITO: Certainly.

3 MR. O'DONNELL: We were provided with
4 several tables showing KEMA's humpty, lofty summer-
5 winter avoided energy costs several months ago, and
6 when we kind of read in the description, it appeared
7 that KEMA was using data from the -- half KCPL and
8 Ameren and came up with some weighted average cost.

9 One, when I looked at it, there was some
10 discrepancy in the number of hours that were
11 allocated to number on peak, and seems we resolved
12 that, but the energy prices near term are -- were
13 three times what were commonly seen in the market,
14 and I sent Natelle Dietrich comparative files showing
15 historical actual three years of prices at SPP to
16 KCPL interface and also a price forecast that's most
17 recently came out of our minus modeling and, you
18 know, we're seeing on peak summer prices
19 approximately 35 percent of what KEMA was using.

20 You know, prices, quite frankly, in the
21 open market on average are not at the 150, \$120 level
22 anymore on peak summer -- they're more like \$45 -- so
23 we had an issue with that, and I never got a response
24 on how KEMA did -- you know, did KEMA look at that?
25 Did they adjust their numbers or were they using data

1 from four years ago?

2 MR. FRANKS: I believe we responded by
3 saying we took direction from the PSC.

4 MR. O'DONNELL: Okay. But I -- I e-mailed
5 Natelle Dietrich tables showing the KEMA values for
6 avoided energy and showing actual SPP historical
7 prices for the last three years since the market went
8 live, and these were based upon hourly actual
9 clearing prices, and then we also showed the KCPL
10 forecast, and there was a big discrepancy.

11 MR. FRANKS: We do not dispute that that
12 happened.

13 MR. O'DONNELL: So essentially we feel
14 that your near-term avoided energy costs are
15 overstated greatly.

16 MR. FRANKS: Noted.

17 MR. O'DONNELL: And we can validate this
18 by calling historical SPP clearance prices out from
19 the market website.

20 MR. BRUBAKER: The same thing is true if
21 you look at the MISO prices.

22 MS. DIETRICH: who was that speaking,
23 please?

24 MR. FRANKS: who spoke to the MISO prices,
25 please.

1 MR. BRUBAKER: Sorry. Maurice Brubaker
2 again.

3 MR. FRANKS: Thank you.

4 Moving on to achievable potential --

5 MS. DIETRICH: Does she need a break?

6 MR. FRANKS: We should take a break. We
7 will take a 15 minute break.

8 MS. DIETRICH: We'll take a 15-minute
9 break to allow the court reporter some time.

10 THE COURT REPORTER: Thank you.

11 MS. DIETRICH: We'll start back up at five
12 after 11:00.

13 (A recess was taken.)

14 MS. DIETRICH: Okay. We're going to go
15 ahead and go back on the record.

16 while we were on break we were talking
17 about how to proceed with the weather and people
18 having to catch flights and that type of thing.

19 we're going to try to just keep going
20 along and work through lunch and see how we do,
21 hopefully ending up, probably, in a couple hours so
22 that KEMA can get on the road to head to the airport.

23 MR. FRANKS: And you can always -- I'm
24 sure that the PSC will want to set an end date for
25 comments for your convenience.

1 MS. DIETRICH: The Commission has to
2 provide feedback to KEMA by the 25th, and so I think
3 we're going to have to have any kind of comments that
4 you might have by the first thing Monday morning, so
5 8:00 a.m. Monday morning I need to have any comments
6 that you might have that we need to incorporate in
7 our feedback to KEMA and that I can share with KEMA,
8 so anything you send me I will forward to KEMA.

9 MR. FRANKS: Proceeding with achievable
10 potential for electricity --

11 MS. WHEELER: This is Janet Wheeler. I'm
12 Commissioner Jarrett's advisor. I hate to interrupt,
13 but I think my question would probably be best placed
14 before you kick off a new topic.

15 MR. FRANKS: Please. Go ahead.

16 MS. WHEELER: I usually precede my
17 questions and workshops with a disclaimer that I am
18 not making a representation from the Commissioner,
19 but in this case I am actually making representation
20 on behalf of Commissioner Jarrett.

21 In particular, he read an article
22 yesterday in The Wall Street Journal regarding the --
23 titled, "The new light bulbs lose a little shine," by
24 Rebecca Smith, where the California Utilities
25 Commission is rethinking its reliance on the CFL

1 bulbs for use in energy efficiency, and in
2 particular, the Staff of the state utility commission
3 has said that utilities missed their overall energy
4 savings target partly because of the difficult
5 linking results from light bulbs, and his question is
6 to have KEMA respond to that finding in the article,
7 that energy savings from CFLs are difficult to
8 predict and measure energy savings overall and then
9 have any stakeholders respond.

10 MR. FRANKS: I think that in light of the
11 time and -- it would be best if those responses were
12 put in writing and -- from the stakeholders, and
13 we'll look to the Commission to provide direction for
14 us on how we should respond.

15 MS. WHEELER: And I understand.
16 Obviously, the article was yesterday and not
17 everybody's had an opportunity to read it, but
18 Commissioner Jarrett is, in particular, interested in
19 the specific question addressing the finding in the
20 article that energy savings from CFLs are difficult
21 to predict and measure energy savings and the
22 ultimate conclusions that it was going to be
23 distribution of energy efficiency technology as
24 opposed to the actual energy savings that the
25 California Commission may be using as a model moving

1 forward in the future.

2 Thank you very much.

3 MS. DIETRICH: Janet, this is Natelle.
4 would it be okay if I get with you after a while to
5 get the exact question and send it out to the --

6 MS. WHEELER: Yeah. I think if you read
7 the article, the question is pretty -- the question
8 is very clear from the article, because the
9 California Commission is indicating that the compact
10 fluorescent light bulb hasn't really delivered for a
11 variety of different reasons.

12 One of them, not only the difficulty in
13 measurement but that the life span of the bulb itself
14 hasn't lived up to its expectation and that the
15 Commission is reconsidering how they're going to pay
16 utilities for these incentives in energy efficiency
17 and whether it would be through a measurement tool or
18 through some other method.

19 MS. DIETRICH: Okay.

20 MS. WHEELER: But, yes, I can get with you
21 later. Thank you.

22 MR. FRANKS: And now the promised scenario
23 description. For the one-year payback, database
24 incentive levels are set such that all measures have
25 a payback period for the customer of one year, except

1 for those measures which inherently have a payback
2 period of less than one year, they have no incentive.

3 The budgets for the program
4 administration, marketing, et cetera, were set at
5 moderately aggressive, not full out, and that is
6 based on the kilowatt hours, you know, the savings
7 that were generated by the model not -- you know, it
8 wasn't a per kilowatt hour, you know, by measure.

9 Three-year payback is a similar
10 approach. Incentive level brings everything down to
11 a three-year payback if it gets less than -- if the
12 measure has inherently less than a three-year
13 payback, there was no incentive pay, and the program
14 budgets were where we would describe as modest. They
15 were pretty much business as usual for a jurisdiction
16 where there is a, you know, moderate level of ongoing
17 program.

18 And then the third scenario that we did
19 on our own initiative was for comparison to do
20 something that we're familiar with. We -- the
21 payback scenario was not a -- we didn't have a simple
22 toggle we could change on our model and say, Spit out
23 one-year payback.

24 we had to adjust many of the inputs from
25 our normal procedures to try and track or follow

1 Amerun's, you know, to say -- saying that that was
2 what a one-year payback would look like, but we
3 didn't actually have -- you know, even if we had had
4 all the inputs that Global Energy Partners had used,
5 we might not have called them the same thing or used
6 the same number of inputs broken out in the same way,
7 so there was an inherent challenge in trying to make
8 a model do something that it wasn't designed to do.

9 MR. COITO: Well, and, I mean, one thing
10 to be clear, there's some measures that, you know,
11 without any incentive, anyway, have paybacks less
12 than one year or less than three years. For those
13 types of measures, they get run through the model
14 with zero incentive, and the only program effects
15 would be from increasing customer awareness.

16 MR. FRANKS: And that's very minimal.

17 MR. VOYTAS: So one of the things I'd like
18 to ask: On the KEMA report on page 1.2, you know,
19 KEMA talks to the Senate Bill 376, and apparently
20 you've read it and saw the term "all cost-effective
21 energy savings" and so you took it upon yourself to
22 interpret that and ascribe the KEMA norm or 75
23 percent incentive to that.

24 Can you talk just a little bit more about
25 your reading of Senate Bill 376 and why you think

1 this is equivalent to what might be meant by all
2 cost-effective energy savings.

3 MR. FRANKS: That was based on our
4 experience in other jurisdictions where programs have
5 been -- when we've been asked to model various
6 incentive levels.

7 You know, we typically will use a 50, 75,
8 and 100 percent incentive level. As a policy
9 initiative, 100 percent incremental incentive is not
10 generally an option. 75 percent, on the other hand,
11 is often seen as a -- I think I said a realistic -- a
12 realistic target, therefore --

13 MR. COITO: Well, it's a realistic -- it's
14 an aggressive target, but it's an aggressive target
15 that we've seen elsewhere.

16 MR. FRANKS: So that was the rationale
17 behind the determination of that.

18 MR. VOYTAS: Well, I'm still confused. I
19 want to read from the report and, again, on page 1.2
20 in the middle of that page it says, These incentive
21 levels correlate to average aggressive and
22 theoretical maximum levels of program effort.

23 I don't think Senate Bill 376
24 rulemaking -- I know the definition of the term
25 "maximum achievable potential" is in there, but

1 "theoretical maximum achievable potential" isn't in
2 there.

3 Is this theory or is this practice? I
4 mean, the theory is if you get a college education
5 you'll make a good salary. That's not always the
6 practice. I'm struggling with this new term, this
7 new definition and how it relates to the whole
8 maximum achievable potential thing.

9 MR. FRANKS: We do not use the word
10 "maximum achievable potential."

11 MR. COITO: Well, I mean -- well, in this
12 context, at least.

13 we've used it where clients have asked us
14 to use it, but we -- I don't think we have a "maximum
15 achievable" definition in this study.

16 MR. FRANKS: The 100 percent incentive, I
17 guess you could -- is meant to be a theoretical
18 maximum level. That's a qualifier and not a
19 technical term. I'd be glad to take the word
20 "theoretical" out of the next draft.

21 MR. VOYTAS: That's fine. I know in the
22 interest of time we should move on, so no more
23 questions on this subject.

24 MR. FRANKS: Here's what the scenarios
25 look like for energy savings, demand savings across

1 all three scenarios; summary of the results in
2 numerical format across all three scenarios.

3 MR. O'DONNELL: This is Joe O'Donnell. I
4 have a question.

5 MR. FRANKS: Please.

6 MR. O'DONNELL: Can you provide a set
7 of -- specifically the quote "probability of adoption
8 curve" that shows the simple payback versus
9 percentage probability of adoption?

10 I mean, we have worked with consultants
11 where we developed similar curves to that. It's, you
12 know, typically not a linear curve, you know. As you
13 get down to a eight-year payback, the adoption could
14 be 10 percent, and when you get to that three-year
15 payback, you get typically 70, 80 percent, and when
16 you get to that 1 percent, the incremental would go
17 from a three-year to a one-year increase while you
18 get more is not the same as going from a six-year to
19 a three-year.

20 It would be nice to see that data. I
21 mean, can that be provided on what was the underlying
22 assumption for the change in adoption versus the
23 change in simple payback? I mean, what assumption
24 was used, you know?

25 MR. FRANKS: Joe, I think our model does

1 not use -- I think what the closest analog that our
2 model uses and our modeling uses are penetration
3 curves, which are not shown based on payback levels,
4 but they're based on incremental costs.

5 MR. COITO: Yeah, we -- I mean, it's not a
6 straight-line curve. It's an S-shaped curve,
7 basically, which shows that, you know, that, you
8 know --

9 MR. FRANKS: Reference the page number,
10 Frank.

11 MR. COITO: -- lower benefit cost
12 ratios -- I'm just trying to see where the best
13 place -- if you look at Appendix A in our report, it
14 discusses some of these things.

15 MR. O'DONNELL: You're showing payback
16 versus the change in adoption potential, you know,
17 and that's -- that directly speaks to the probability
18 of an adoption curve.

19 MR. COITO: Yeah, but it's not that -- our
20 adoption curves are basically an S-shaped curve that
21 basically -- I mean, we don't model with payback
22 directly. Our model doesn't use that.

23 We're using those and we enable those as
24 scenarios because that is what we were asked to model
25 as scenarios. To get at that, though, we had to --

1 you know, we had to back into what rebate levels
2 would get a certain payback, and then that gives a
3 certain benefit cost ratio that we actually used.

4 But, you know, essentially our adoption
5 curves are -- if you look at -- you know, in a sense
6 where paybacks are real, real high, changes in
7 payback don't really affect things too much. As
8 paybacks get into a certain range, things definitely
9 move more as payback changes.

10 Then you get to where paybacks are real,
11 real low, and in that case, you know, if they're one
12 month or two months, you're not going to get a lot of
13 change in there either, so there is a range where
14 we're showing, you know, bigger changes in
15 penetration relative to a change in payback, and it's
16 basically, you know, an S-shaped curve, but these
17 results are just -- go ahead.

18 MR. O'DONNELL: Are those curves
19 accessible or can they be --

20 MR. FRANKS: We have not generated it.

21 MR. COITO: It's pretty buried in the
22 model. I'm not sure. You can put that -- we can
23 look at it, but we can't really promise you anything
24 right off the top.

25 MR. O'DONNELL: What I see here, I would

1 characterize all three of these one-year, three-year,
2 and 75 percent as very aggressive incentive levels
3 and, you know -- you know, one-year payback is a
4 no-brainer to a --even a three-year is very
5 attractive, and 75 percent of the total cost --
6 typically you're up around 70, 80 percent adoption
7 already.

8 MR. COITO: Well, if you look at the
9 Ameren study, I think they disagree with you.
10 They're showing much lower -- much lower customer
11 penetrations with their paybacks of one and three
12 years.

13 MR. O'DONNELL: Well, yeah, we have a set
14 of curves that would disagree with that.

15 MR. COITO: Okay.

16 MR. O'DONNELL: Three-year paybacks you
17 get 65 percent, maybe, and when you get to
18 one-year --

19 MR. FRANKS: Mr. O'Donnell, your point is
20 noted. Please send us something. Send the PSC
21 something for them to consider.

22 MR. COITO: No, we understand. I mean,
23 that's -- no, that's -- I mean -- and we did not see
24 it that way but, you know, that's -- you know, it's
25 definitely the whole payback penetration issue is

1 definitely a -- one of the more difficult pieces of a
2 study to work through, much more difficult than
3 calculating economic potential, so we appreciate that
4 there's a wide range of penetration numbers out
5 there.

6 MR. FRANKS: This breaks out the
7 individual scenario of the 75 percent incentive by
8 sector. It shows the net savings and the impact of
9 free riders.

10 MR. COITO: Can we -- this graph is
11 actually -- the labeling "free rider" should just --
12 it should be "naturally-occurring." That is not a
13 correct depiction of what those numbers are. If you
14 look at our other graph that aren't by sector, it's
15 known as naturally-occurring. This should say
16 "naturally-occurring" as well, just broken up by
17 sector.

18 MR. FRANKS: The demand savings, same
19 comment that Fred made. Detail on the 75 percent
20 incentive scenario, and the real millions aren't -- I
21 think the numbers have six more decimal places than
22 they are.

23 MR. COITO: Yeah, the dollars aren't in
24 the millions here, because you break the bank.

25 MR. FRANKS: So it's not \$4 trillion

1 million at the All Programs Net Benefits. Sorry for
2 the labeling error.

3 One year payback, same issue of free
4 riders; naturally-occurring, not free riders. Demand
5 savings, and the numerical summary. Three-year
6 payback scenario, and back to the electric benefit
7 cost summary, a slide we've seen earlier with a
8 little more context behind it now.

9 we'll move on to natural gas, unless
10 there are some remaining questions on electric.

11 (No response.)

12 MR. FRANKS: This is a breakout of the
13 sector contribution to the natural gas baseline
14 load. This is a summary of the potential. It shows
15 the baseline usage, the technical potential and the
16 economic potential broken out by sector in millions
17 of therms, then displayed as a percentage -- the
18 savings as a percentage of sector load.

19 And then finally, the contribution by
20 sector of the total potential for technical potential
21 and economic potential. The residential top 20
22 measures for economic potential; the commercial top
23 20 measures.

24 Now, here's where you'll note on
25 installation of energy management systems, the TRC is

1 less than one. We have ten building types in our
2 model for the commercial sector, so in some of those
3 building types, the overall TRC for that measure in
4 the commercial sector is .56; however, in some
5 building types is over one and they contribute
6 984,000 decatherms to the potential.

7 This is now maybe a better example of a
8 high efficiency brittle that only shows up in one
9 sector, yeah, one of the building types.

10 MR. COITO: Where it's cost-effective.

11 MR. FRANKS: Where it's cost-effective,
12 but since there's ten other -- nine other building
13 types where it's not cost-effective, you get pretty
14 low sector-based TRC.

15 Industrial top 20 measures; maintain
16 boilers jumps right out at you, but it does --

17 MR. COITO: Yeah, the thing about maintain
18 boilers, it's a high TRC, but typically when we
19 bottle it, you know, that's an information-only
20 program because you really -- once people figure it
21 out, they should be doing it. We don't want to imply
22 incentives on that type of measure because everyone
23 who is already maintaining their boiler would come in
24 looking for money.

25 MR. VOYTAS: Folks, this is Rick Voytas

1 with Ameren Missouri. I'd like to just make a
2 comment. This is no big deal, but there's a lot of
3 silence on our part. We've been pretty vocal for
4 most of the day, and I just wanted to state that with
5 the limited time that we have, we put all of our
6 energy on the electric energy efficiency side of the
7 report, and although we looked at the natural gas
8 things in the prior graph report, we have not put
9 energy into that now, so although we're quiet, it
10 doesn't mean we don't have questions.

11 It just means that we have not had time
12 enough yet to review this in depth, so perhaps we can
13 do that in the next few days and get the comments to
14 you, but that's why there's very little comments on
15 this side of the microphone. Thank you.

16 MR. FRANKS: Thank you. We'll look
17 forward to -- or the PSC, I'm sure, will look forward
18 to that.

19 MR. COITO: And, you know, the other
20 thing, Rick, the more specific you can be with your
21 questions or comments, you know, the better it will
22 be.

23 If we -- you know, if we get to some
24 blanket statement that we think your measure costs
25 aren't right, there's not much we're going to be able

1 to do with that. If you can be specific on things,
2 it gives us just more -- you know, if we're going to
3 make adjustments, it'll make it easier. It makes it
4 real to us.

5 MR. FRANKS: As with the electric sector,
6 we did two avoided cost scenarios aside from a
7 database cost, and this shows the results using a
8 database cost, avoided cost, a 20 percent lower
9 avoided cost and a 50 percent higher avoided cost.
10 We proceeded with just the database avoided cost into
11 the achievable potential scenario; the same
12 information in numerical format.

13 MR. COITO: I think, if anything, we
14 showed gas had a little more variation in response to
15 avoided cost than the electric did.

16 MR. FRANKS: And now the achievable
17 potential for natural gas; the three scenarios
18 stacked on top of each other, which has an
19 incremental; a summary of the results, noticing at
20 the bottom that the total scenario, total resource
21 cost goes up as the investment goes up.

22 MR. MCKINNIE: Adam McKinnie with the
23 Missouri Commission Staff. Oh, I get to stand up by
24 the microphone? I feel bad for everyone. My name's
25 Adam McKinnie with the Missouri Commission Staff. Do

1 you adjust your naturally-occurring energy efficiency
2 with the result of the high, low, and middle gas
3 prices?

4 MR. FRANKS: Um, no.

5 MR. COITO: Well, we would, but we didn't
6 do an achievable analysis where we do that. It
7 would -- naturally-occurring would change if we were
8 to run it all the way through.

9 MR. MCKINNIE: And why wasn't it run all
10 the way through?

11 MR. COITO: I think they were close enough
12 to where we decided, you know, given the time frame
13 for the study, thrown out the database case. We just
14 saw about a 40 percent difference or a bigger -- you
15 know, a big difference in, you know, more
16 sensitivity than would've merited running more
17 achievables all the way through on the other
18 scenarios.

19 MR. MCKINNIE: Okay.

20 MR. FRANKS: Are people listening on the
21 phone or the web hearing the static as well or the
22 popping sound?

23 MR. O'DONNELL: Yes.

24 MR. COITO: Yeah, we don't know what's
25 causing that.

1 MR. O'DONNELL: This is Joe O'Donnell.
2 I'm getting static on both the web and my phone, so
3 it's coming from your end.

4 MR. FRANKS: I guess we'll have to live
5 with it.

6 MS. DIETRICH: I'm not sure what it is.

7 MR. FRANKS: These are the results for the
8 75 percent incentive scenario and the natural gas
9 sector, total savings, cumulative annual therms in
10 millions, the detail.

11 This chart actually has all the labeling
12 correct, and I'm aware that the next one, I think,
13 does not for the next incentive, so here's the
14 one-year payback. Yeah, this has the millions of
15 dollars, and the therms is not -- you're not getting
16 1800 therms for a 20-year program.

17 MR. COITO: Millions of therms; right?

18 MR. FRANKS: It's millions of therms.
19 Actually, it's 100,000 therms, not millions. I'm not
20 sure how the numbers came out that way.

21 MR. COITO: We need to check our --

22 MR. FRANKS: Three-year scenario results.
23 The scales are not the same as on the previous
24 charts. This is a much finer grain with a peak at
25 about 120,000,000 therms compared to a peak of

1 300,000,000 therm.

2 The detail on the three-year, and then
3 the benefit costs summary, as with the electric, are
4 similar to the chart.

5 We're going to shift gears quite a bit
6 now. All the other results, inputs, have been based
7 on KEMA's DSM Assyst model. For the demand response
8 we reviewed FERC national assessment of demand
9 response potential as it applied to the state of
10 Missouri.

11 We checked the values from the
12 information -- the inputs we had gathered from our
13 DSM Assyst model to see -- for the values that were
14 in the FERC model, and in most cases they were
15 accepted. In some cases we did make some revisions.

16 The FERC model is a bottom-up approach
17 using four customer segments. It models five
18 different demand response program types, and it uses
19 four different demand response scenarios: Business
20 as usual, expanded business as usual, achievable
21 penetration, and full -- achievable participation and
22 full participation.

23 Here's a tabular summary of the
24 difference in assumptions that go into that model.
25 Notice that full participation is mandatory for

1 dynamic pricing for those customers that are eligible
2 for it.

3 Here are the results summarized by -- at
4 different years and by -- for the different
5 scenarios, both in megawatts and as a percentage of
6 reduction.

7 MR. HUGHES: I have a question.

8 MR. FRANKS: Yes, sir.

9 MR. HUGHES: Is dynamic pricing the same
10 as time of day pricing?

11 MR. FRANKS: I'd have to look at the first
12 definition.

13 MR. HUGHES: In your definition, you know,
14 we have some voluntary --

15 MR. FRANKS: Sure. The definition is a
16 FERC definition. I do not have it off the top of my
17 head. It is in the report.

18 MR. COITO: I think it's real -- kind of
19 like dynamic, kind of like a realtime pricing.

20 MR. HUGHES: So it's synonymous with time
21 of day pricing or --

22 MR. COITO: Yeah, but more than just
23 block pricing. I think it's actually day-to-day --
24 you know, day-ahead pricing, that type of thing not,
25 you know -- you know, if you have a time and use rate

1 you set up, it stays fixed for the whole --

2 MR. HUGHES: Okay. Got you.

3 MR. COITO: Versus this one, it's more
4 day-ahead type pricing.

5 MR. FRANKS: I think that should be at
6 about page 7.3 of the report, offer varying
7 electricity prices on day-ahead or realtime basis.

8 MR. HUGHES: Very good. Thank you.

9 MR. FRANKS: I think I -- no, I didn't.
10 Here's a benefit cut cost analysis summary of two
11 different scenarios. One of the issues that often
12 comes up with demand response is the cost as a
13 barrier to entry, and the analysis for Missouri
14 showed that largely these have positive benefit cost
15 ratios, which is not necessarily enough for a
16 customer to take action, but it's worth a policy
17 consideration.

18 And successfully rush to essentially the
19 last slide, I believe. There are several appendices
20 attached to the report. Rather than going through
21 them line-by-line, which would be a challenge,
22 even if we had had more time, this basically -- this
23 shows what's in each of those appendices, and I open
24 it up if there's specific questions regarding any of
25 the appendices.

1 We can try and find the page and go to
2 them and discuss it, and I have those loaded, I
3 believe. Here they are. So are there any --

4 MR. O'DONNELL: This is Joe O'Donnell.
5 This is Joe O'Donnell. I have a question regarding
6 the sliding to the model's results.

7 MR. FRANKS: Okay. Let me go back to
8 that.

9 MR. O'DONNELL: It's a labeling question.

10 MR. FRANKS: Please begin.

11 MS. DIETRICH: Joe, can you speak up?
12 We're having trouble hearing you.

13 MR. O'DONNELL: Sure. I'll do my best.

14 You show in the system peak column
15 without DR, but then the whole table is labeled
16 "megawatt reduction."

17 MR. COITO: That's correct. You got -- I
18 think you're on the right track there. Just to save
19 you time, those are just the reduction -- you're just
20 shown the reduced peak numbers versus, you know, the
21 difference between -- the differences we'd get in the
22 reduction.

23 MR. O'DONNELL: Okay. So those are the
24 peaks and it's not necessarily the megawatt
25 reduction?

1 MR. FRANKS: Yes. There's a problem with
2 that table.

3 MR. COITO: No. Yes, that's right.
4 That's right. So, like, for business as usual at
5 2010, the business as usual megawatt reduction would
6 be the 18102 minus the 17820.

7 MR. O'DONNELL: Okay. So it's labeled
8 wrong.

9 MR. COITO: Yes, it's labeled wrong.
10 We'll -- that's --

11 MR. O'DONNELL: All right. Thank you.

12 MR. FRANKS: Thank you, Joe.

13 MR. COITO: And the percent reductions are
14 correct though, I believe.

15 MR. FRANKS: Yeah, the numbers don't work
16 on that though.

17 MR. COITO: No.

18 MR. FRANKS: Are there any questions
19 regarding a specific appendix?

20 MR. COSTENARO: This is Dave Costenaro
21 from Ameren. We were looking through Appendix F, and
22 I think that there was -- some of the tables of the
23 different sectors were -- they didn't appear to have
24 all the columns, so maybe when you're compiling them
25 for the final, make sure not to cut off columns on

1 the right.

2 MR. COITO: Yeah.

3 MR. FRANKS: Thank you, Dave.

4 MR. COITO: Yeah, thank you. Those
5 appendices were put together a little quick, and
6 we'll check that, we'll make sure we get a page
7 number on the last appendices.

8 MR. FRANKS: I'm not going to take silence
9 as acceptance, but I appreciate that there will be
10 much more review on all -- by all parties and that we
11 will be getting comments.

12 MR. BICKFORD: I'll jump in.

13 MR. COITO: Oh, there we go.

14 MR. FRANKS: Oh, good.

15 MR. BICKFORD: This is Adam Bickford from
16 DNR. You can stop anywhere.

17 MR. FRANKS: I just want to make people
18 dizzy.

19 MR. BICKFORD: Yeah, can you go back to
20 the definitions of one-year and three-year and 75
21 percent scenarios, please?

22 MR. COITO: Be page 42, I believe.

23 MR. BICKFORD: Okay. There we go.

24 Let's focus on the one-year payback
25 situation. My understanding is that there were

1 measures that had a incentive, a payback value less
2 than one-year, and they were left out of your
3 calculation of savings; is that correct?

4 MR. COITO: No. My understanding -- my
5 understanding is we -- and we can check on this, but
6 my understanding is that what we did if it had less
7 than a one-year payback, we were not given an
8 incentive.

9 MR. BICKFORD: Okay.

10 MR. COITO: It would stay in the measure
11 mix with the understanding that we could increase
12 awareness and that the naturally-occurring
13 penetration, you know, whatever the pay -- if it's
14 .75 payback, it would show up.

15 MR. BICKFORD: Okay.

16 MR. COITO: So in some cases this is why,
17 you know -- you know, there's not as big a program
18 impact there because it's just education versus some
19 other measure where you're given a 50 or 75 percent
20 rebate, which, you know, some rebates in the one-year
21 payback are pretty high 'cause you're getting a
22 measure from a five-year or six-year payback down to
23 one year.

24 Other measures, like, you get zero, but
25 we left them all in. The ones that get zero just get

1 a boost from increased awareness because you're out
2 there trying to market the programs and giving
3 information about a lot of measures.

4 MR. BICKFORD: So you're saying that
5 there's no cost associated with that.

6 MR. COITO: No rebate costs. General
7 marketing but, yeah, you would not see that exactly.
8 And also that measure wouldn't have much net savings,
9 if you look at the net savings.

10 MR. BICKFORD: Okay. My question for
11 Ameren, who also use these terms: Is that the same
12 way that your modeling some of these measures?

13 MR. COSTENARO: This is Dave Costenaro.
14 That is an issue that has a little nuance around it.
15 Our RAP was generally tied to incentive levels that
16 were associated with the three-year payback but that
17 did not mean that they all were across the board,
18 that was not the calculation method, you know, a
19 three-year payback, this is it, go, that's the
20 incentive level, but the same thing with MAP.

21 They were generally tied to measures that
22 had paybacks at one year, so we had -- you know, this
23 is a scatter plot all around the one-year payback in
24 the -- some in terms of percent of incremental cost,
25 some in terms of payback and that sort of thing.

1 So I think it's not an exact one-for-
2 one. Does that help, Adam?

3 MR. BICKFORD: So -- so -- okay. Hence my
4 question: You have two approaches using the same
5 terms, but sounds like there are really different
6 definitions.

7 MR. COSTENARO: Yeah, I think --

8 MR. BICKFORD: Is there going to be a way
9 to reconcile those at all?

10 MR. FRANKS: I don't -- I can't imagine it
11 offhand, and if there were, I would -- it would have
12 been appropriate to have done that several months ago
13 in terms of the project time line.

14 MR. COITO: What we will do is probably --
15 what we can -- we will do in our appendix is by
16 measure. We'll put the percent incentive of
17 incremental cost that we assume -- that we got for
18 each one so you'll see, you know, in the one-year,
19 three-year and 75 will all be 75, except some will be
20 0, because, like I say, some of the maintenance,
21 O&M measures, we don't believe they're really --
22 those types of measures that you should provide
23 incentives for, but we can present that as part of
24 our appendix so you can at least see what -- how we
25 backed into our incentives.

1 MR. BICKFORD: Great. Thank you.

2 This is Joseph O'Donnell. I have a
3 related question.

4 MR. COITO: Yes.

5 MR. O'DONNELL: Regarding the definition
6 of "one-year payback," I'm assuming you mean to the
7 participant, and that means the net -- the customer
8 bill savings plus the reduction in taxes divided by
9 the growth -- I mean, rather, the net participant
10 cost. Is that a correct definition?

11 MR. COITO: Yeah, I don't think -- we
12 don't factor taxes in. It's -- it gets -- it -- our
13 model just doesn't pick that up, but it would be, you
14 know, minus the tax effects.

15 MR. O'DONNELL: But at the basic level
16 this is the payback to the participant?

17 MR. FRANKS: Yes.

18 MR. COITO: Yes.

19 MR. O'DONNELL: Thank you.

20 MR. HUGHES: In a general presentation
21 application and during our discussions on the
22 one-year payback and the three-year payback as
23 specified by the Commission and the KEMA norm of 75
24 percent, there's an indication that those are two
25 different measures, and you indicated that there was

1 significant adjustment to your modeling that had to
2 be made to comply with the Commission's request;
3 however, in the presentation of the data output they
4 are side-by-side.

5 MR. COITO: Yeah.

6 MR. HUGHES: And I would caution you that
7 very different metrics presented in an identical
8 format could confuse those who simply look at the
9 numbers that come out, that there are distinctions
10 there, so I would hope in the final report -- and
11 this is just a personal observation -- I'm not
12 speaking for Commissioner Davis, but in the final
13 report that you be aware of that potential for
14 confusion and that those are very different matrix,
15 and you can't look at a one-year and a 75 percent
16 payback and draw a straight line between them on a
17 slope.

18 MR. COITO: No. Yeah. Can I address that
19 for a second, because I think Tom might have
20 misspoke.

21 I don't think we did the model. What we
22 had to do was we had to do some calculations to get
23 at the rebate incentives, and that just took
24 significant effort, so it wasn't like -- we ran the
25 same model, same everything.

1 The only thing that changed was in one
2 case we had 75 percent of incremental measure cost
3 for each measure; other case we had to do the
4 calculations to actually figure out measure by
5 measure what the incentive was based on, you know, to
6 get -- to get to the paybacks.

7 MR. HUGHES: Right.

8 MR. COITO: So that's -- everything else
9 is the same, so I think that's really -- it was just
10 an additional step we had to go through to calculate
11 those, and we had to just look at the model -- we had
12 to pull a bunch of data out of the model to do that.

13 That's why probably -- it took awhile, so
14 that's -- we call them significant, but in terms of
15 running the model, everything stayed the same. It's
16 just what the customer would've seen as an incentive.

17 MR. HUGHES: Okay.

18 MR. COITO: Like I say, we can show
19 measure by measure what those incentives were.

20 MS. DIETRICH: Perhaps you can add some
21 language to kind of explain that too.

22 MR. COITO: Yeah. Yeah.

23 MR. VOYTAS: This is Rick Voytas at
24 Ameren. Just general, I'm not exactly certain of
25 this, but just project management structure, Tom, I

1 take it that you're the project manager for this
2 statewide potential study.

3 MR. FRANKS: That's correct.

4 MR. VOYTAS: And not that you're not a
5 worker bee, but who actually is it who's running the
6 models, putting the inputs, doing that work? Is that
7 a person or group of people?

8 MR. FRANKS: It's a group of analysts.

9 MR. VOYTAS: Okay. And are they -- with
10 the budgets that you were given for this project, are
11 they senior analysts or junior analysts --

12 MR. FRANKS: A mix.

13 MR. VOYTAS: -- or somewhere in between?

14 MR. COITO: We have a mix. Some are
15 senior; some are a little more junior, you know.
16 Most -- our key analysts that have worked on this
17 have done other potential studies.

18 MR. VOYTAS: Okay. What's the process for
19 internal review? I know we've talked about a lot of
20 inconsistencies and errors and some mismatches of
21 data, but when the analysts get done with their work,
22 what is the review process within KEMA before it
23 comes back to your client, before the draft product
24 goes out the door and goes to the Missouri Public
25 Service Commission?

1 MR. COITO: We review it at several
2 levels. The review is time-dependent, so the more
3 time we have, the more review we get. There's lots
4 of numbers in there. We -- we try to -- you know,
5 first of all, we review the overall results, to start
6 with.

7 Results in this study have been, I think,
8 consistent with other studies we've seen at the big
9 picture level. I think our gross savings shown, you
10 know, about 1 percent per year savings for our 75
11 percent, which is our aggressive scenario. Lines up
12 pretty well with, you know, what we've seen in some
13 other states.

14 Some other states are going to 2 percent
15 per year savings. We don't, you know, buy into that
16 completely. You know, our net numbers, you know,
17 look about, you know, a little -- you know, about --
18 I would say, you know, much less than one percent per
19 year savings, so that's the first check.

20 You know, we -- we start getting back as
21 far as we can into the weeds given how much time we
22 have so, you know, the fact that probably -- you
23 know, looking in our appendices, there was not senior
24 review over every single number and, you know, we
25 continue to review. In fact, that's why there

1 was some updates between our, you know, economic
2 potential change and our final report, 'cause
3 we're -- you know, as time goes, we continue to
4 review this.

5 This is a very tight deadline project so,
6 you know, I would argue that probably the review is
7 not as -- you know, if we'd have had more time, we'd
8 have done more review.

9 MR. VOYTAS: All right. I appreciate
10 that. Thank you.

11 MR. FRANKS: Are there any other comments?

12 MR. VOYTAS: this is Rick Voytas. Could I
13 ask one more --

14 MR. FRANKS: Oh, sure.

15 MR. VOYTAS: This is a question -- it's
16 not intend to be flippant or anything, but so
17 everybody is busy. You know, Staff, consultants, the
18 utilities. Everybody's busy, and there's such tight
19 time lines associated with this study.

20 You know, the next time line is the 25th,
21 and we've got an IRP filing going out our door which
22 requires a lot of work, and everything's due just
23 immediately and drop everything else and get this
24 done.

25 we're struggling. This is important

1 work, and it's going to guide some of the policies of
2 this state going forward, I'm sure, but why is
3 everything so -- why do we have to kill ourselves,
4 perhaps skim some data and not give it the attention
5 it deserves because there's not enough time? What is
6 driving the very, very tight time schedule that we
7 have here at the end of this project?

8 MS. DIETRICH: Rick, this is Natelle.
9 Basically, the contract was set up for "X" number of
10 days, and so the time line was derived from that. We
11 have done a slight contract amendment extending it a
12 little bit because, if you recall, we had some
13 issues, maybe November, something like that, where we
14 had a Commission decision item that we were not able
15 to get in time to meet the deadline so we had to do a
16 contract amendment, but basically we have the
17 contract with a drop-dead date, so we're having to
18 work back from that to meet that date.

19 MR. VOYTAS: But if we extended the drop-
20 dead date but didn't require KEMA to do any more
21 work, just the stakeholders had more time to review,
22 what harm --

23 MS. DIETRICH: It's not between -- the
24 contract's between the PSC and KEMA, but we have to
25 go through the Office of Administration, so they're

1 actually the ones that negotiate and administer the
2 contract, and we're not allowed to extend a contract
3 without being able to give them very good reasons as
4 to -- there was something that happened like, you
5 know, the computer failed and we had to wait for them
6 to get the computer fixed. I mean, it has to be a
7 pretty big thing in order to extend the contract.

8 we were able to do it once, but they've
9 already told us that unless the sky is falling, it
10 probably won't happen.

11 MR. VOYTAS: well, Natelle, I appreciate
12 that. Not having been a government employee, I don't
13 appreciate all the bureaucratic things that you have
14 to address, but I do know the issues of quality and
15 schedule, and sometimes, like in this case, you can
16 have one or the other, you know, but the study is
17 important. That concerns me but, you know, we work
18 within the constraints that we have, and if that's
19 what it is, that's what it is, but at the end of the
20 day that's a shame.

21 MS. DIETRICH: And the commissioners
22 recognize that, too, and they've had discussions
23 about, you know, they're just going to have to accept
24 the limitations also, not only with time but with
25 budget.

1 MR. COITO: Yeah, and for us, you know,
2 it's been a challenging project. We typically do not
3 do these studies in 120 days but, you know, we -- we
4 understood at the time that the Commission had a, you
5 know, a time frame that they needed to work with, so
6 we -- you know, we're doing our best, you know, given
7 the time frame.

8 MR. NOLAR: This is John Nolar, DNR.
9 When Fred was answering the question
10 about review, he mentioned that the results of the
11 study could be compared to other studies that KEMA
12 has done in other jurisdictions.

13 MR. COITO: And others, too, not just
14 KEMA.

15 MR. NOLAR: And others as well, so I guess
16 our feeling is, I know the time is limited, but to
17 the extent that KEMA could provide, you know, those
18 comparisons of studies done using comparable
19 methodology by KEMA or by others in other
20 jurisdictions, we certainly would appreciate seeing
21 those results to help us get a more comprehensive
22 view of the work that has been done.

23 MR. FRANKS: In response to that question
24 and a previous question, I believe, by another --
25 someone on the telephone as to the level of -- to the

1 review of the results, we did -- as I believe
2 Mr. Voytas pointed out, we did discover an error. We
3 corrected it, and we responded to it.

4 Part of that effort was to look at -- you
5 know, show what we do, and this little table shows
6 the very current KEMA study for a territory with a
7 very -- you know, a long history of aggressive energy
8 efficiency, and then, you know, we did a potential
9 study for them, and it breaks out the potential, an
10 achievable potential by -- sorry -- achievable -- no,
11 an economic potential by sector.

12 We showed the results as they were -- as
13 we first saw them before we discovered the error and
14 we saw, you know, 30 percent for residential compared
15 to 20 percent in light of Missouri's past program
16 history, that did not seem at all out of line.

17 Commercial, industrial thought, Okay.
18 That seemed reasonable, you know, at a high level to
19 expect that in a jurisdiction where there is -- has
20 been comparatively low energy efficiency program that
21 you would have a higher potential.

22 And then we show -- to the right, V-2,
23 the results when we revised the baseline, so that's
24 the -- part of the review and also a partial answer
25 to Mr. Nolar's question.

1 MS. DIETRICH: Are there any other
2 questions or comments from anyone?

3 MS. SUGGETT: I have a question real
4 quick. The transcript, when will that be available?
5 I know it will be filed with the case. Do you know
6 when that might be available?

7 THE COURT REPORTER: How soon are you
8 needing this?

9 MS. DIETRICH: well, I was going to ask
10 you about an expedited transcript. would it be
11 possible to get it Monday?

12 THE COURT REPORTER: Yeah.

13 MS. DIETRICH: we'll try to get it Monday
14 so that we have it to help formulate our
15 recommendations to the Commission.

16 MS. SUGGETT: Great. That was my
17 question. Thank you.

18 MS. DIETRICH: Anything else from anyone?

19 (No response.)

20 MS. DIETRICH: I'd like to thank Tom and
21 Fred for coming in and explaining this to us, and I'd
22 also like to thank everyone for their participation.
23 I appreciate your patience as we work through some
24 issues with the weather and technology, but I think
25 we've had some good discussions and we've had a lot

1 of good questions and feedback.

2 Like I said earlier, if you could get me
3 any comments, suggestions that you have by first
4 thing Monday morning, 8:00 a.m. Monday morning, then
5 I can pass those on to KEMA, and then also Staff can
6 use that as guidance when we make a recommendation to
7 the Commission on any changes that we need to see in
8 the final report.

9 with that, thank you.

10 MR. FRANKS: Thank you all.

11 MR. COITO: Thank you.

12 (The meeting ended.)
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CERTIFICATE

I, Nancy L. Silva, RPR, a Certified Court Reporter, CCR No. 890, the officer before whom the foregoing hearing was taken, do hereby certify that the witness whose testimony appears in the foregoing hearing was duly sworn; that the testimony of said witness was taken by me to the best of my ability and thereafter reduced to typewriting under my direction; that I am neither counsel for, related to, nor employed by any of the parties to the action in which this hearing was taken, and further, that I am not a relative or employee of any attorney or counsel employed by the parties thereto, nor financially or otherwise interested in the outcome of the action.

Nancy L. Silva, RPR, CCR

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