

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF LOUISVILLE	)	
GAS AND ELECTRIC COMPANY FOR APPROVAL	)	CASE NO.
OF AN AMENDED ENVIRONMENTAL	)	2020-00061
COMPLIANCE PLAN AND A REVISED	)	
ENVIRONMENTAL SURCHARGE	)	

NOTICE OF FILING

Notice is given to all parties that the following materials have been filed into the record of this proceeding:

- The digital video recording of the evidentiary hearing conducted on September 10, 2020 in this proceeding;
- Certification of the accuracy and correctness of the digital video recording;
- A written log listing, inter alia, the date and time of where each witness' testimony begins and ends on the digital video recording of the evidentiary hearing conducted on September 10, 2020.

A copy of this Notice, the certification of the digital video record, and hearing log have been served upon all persons listed at the end of this Notice. Parties desiring to view the digital video recording of the hearing may do so at <https://youtu.be/2xvh-326g6o>.

Parties wishing an annotated digital video recording may submit a written request by electronic mail to [pscfilings@ky.gov](mailto:pscfilings@ky.gov). A minimal fee will be assessed for a copy of this recording.

Done at Frankfort, Kentucky, this 25<sup>th</sup> day of September 2020.



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Kent A. Chandler  
Acting Executive Director  
Public Service Commission of Kentucky

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

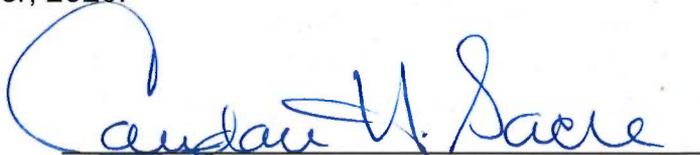
ELECTRONIC APPLICATION OF LOUISVILLE )	
GAS AND ELECTRIC COMPANY FOR )	
APPROVAL OF AN AMENDED )	CASE NO.
ENVIRONMENTAL COMPLIANCE PLAN AND A )	2020-00061
REVISED ENVIRONMENTAL SURCHARGE )	

CERTIFICATION

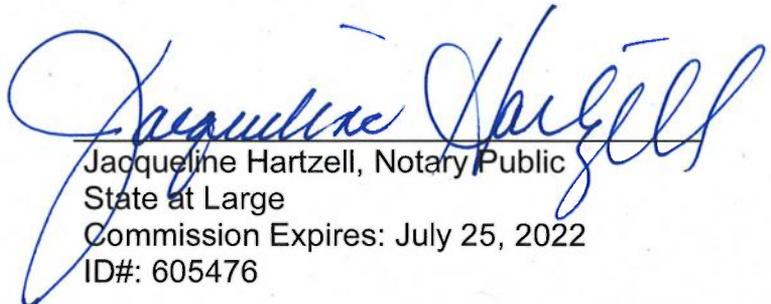
I, Candace H. Sacre, hereby certify that:

1. The attached DVD contains a digital recording of the Formal Hearing conducted in the above-styled proceeding on September 10, 2020. The Formal Hearing Log, Exhibit List, and Exhibits are included with the recording on September 10, 2020;
2. I am responsible for the preparation of the digital recording;
3. The digital recording accurately and correctly depicts the Formal Hearing of September 10, 2020; and
4. The Formal Hearing Log attached to this Certificate accurately and correctly states the events that occurred at the Formal Hearing of September 10, 2020, and the time at which each occurred.

Signed this 24<sup>th</sup> day of September, 2020.



Candace H. Sacre  
Administrative Specialist III



Jacqueline Hartzell, Notary Public  
State at Large  
Commission Expires: July 25, 2022  
ID#: 605476



## Session Report - Detail

2020-00060 and 2020-00061  
10Sept2020

**Kentucky Utilities Company (KU)  
and Louisville Gas and Electric  
Company (LG&E)**

Date:	Type:	Location:	Department:
9/10/2020	Public Hearing\Public Comments	Hearing Room 1	Hearing Room 1 (HR 1)

Witness: Daniel Arbough; Robert Conroy; Gary H. Revlett; Stuart A. Wilson  
Judge: Kent Chandler; Talina Mathews; Michael Schmitt  
Clerk: Candace Sacre

Event Time	Log Event	
9:03:58 AM	Session Started	
9:04:18 AM	Video Conference Activated	
9:04:55 AM	Chairman Schmitt Note: Sacre, Candace	Opening remarks by Chairman Schmitt, introducing Vice Chairman Chandler and Commissioner Mathews
9:05:09 AM	Chairman Schmitt Note: Sacre, Candace	Reviewing COVID-19 requirements and recommendations for remote hearing.
9:07:27 AM	Chairman Schmitt Note: Sacre, Candace	The hearing today is in Case No. 2020-00060 and 2020-00061, Applications of Kentucky Utilities and Louisville Gas and Electric Company for Approval of its 2020 Compliance Plans for Recovery by Environmental Surcharge. This proceeding is being recorded by digital video. A transcript will be made and will constitute the official record of this hearing.
9:08:03 AM	Chairman Schmitt Note: Sacre, Candace	At this time, would counsel for Kentucky Utilities and Louisville Gas and Electric Company please identify themselves, their client, and the witnesses they expect to call today?
9:08:15 AM	Atty Riggs KU/LG&E Note: Sacre, Candace	Good morning, Your Honor. My name is Kendrick Riggs with the law firm of Stoll Keenon Ogden. Forgive me for not standing. Appearing with me today is my colleague and partner, Lindsey Ingram, and Ms. Allyson Sturgeon, managing senior counsel, regulatory and transactions, for LG and KU Services.
9:08:35 AM	Atty Riggs KU/LG&E Note: Sacre, Candace	The witnesses today that appear before you, Your Honor, are Mr. Conroy, Mr. Arbough, Mr. Wilson, Ms. Fackler, and Mr. Revlett. Mr. Straight, a witness in this case, filed direct testimony and was excused from attending this hearing.
9:08:59 AM	Atty Riggs KU/LG&E Note: Sacre, Candace	I am ready to proceed, Your Honor, with asking the witnesses to identify themselves and lay a foundation. That's your decision, Your Honor.
9:09:09 AM	Chairman Schmitt Note: Sacre, Candace	Okay, thank you, and for Staff?
9:09:12 AM	Asst Gen Counsel Nguyen PSC Note: Sacre, Candace	Quang Nguyen on behalf of Commission Staff along with Mary Beth Purvis, Your Honor.

9:09:16 AM	Chairman Schmitt Note: Sacre, Candace	Thank you. I notice and for the record will note that the Notice of Hearing has been properly given and is filed in the record. Are there any confidentiality motions or other motions pending or things that you would like to bring up at this time, Mr. Riggs or Mr. Ingram?
9:09:34 AM	Atty Riggs KU/LG&E Note: Sacre, Candace	Your Honor, there are no confidentiality issues at this time or motions that need to be decided. With the publication for the hearing, there were no issues with respect to the publication of the hearing with (inaudible), and, in the Motion for Deviation that we filed for KU, we noted that 87 of 91 newspapers did publish the Notice. (Click on link for further comments.)
9:10:18 AM	Chairman Schmitt Note: Sacre, Candace	At this time then, before we proceed with the testimony, we will open the public comments section. (Click on link for further discussions.)
9:12:51 AM	Chairman Schmitt Note: Sacre, Candace	There being no one on the line, the opportunity for public comment is now closed
9:13:05 AM	Chairman Schmitt Note: Sacre, Candace	If counsel is ready, Mr. Riggs, you may call your first witness.
9:13:13 AM	Atty Riggs KU/LG&E Note: Sacre, Candace	Thank you, Your Honor. If it please Your Honor, to be more efficient, I'm going to ask this question of each of our witnesses concurrently.
9:13:26 AM	Chairman Schmitt Note: Sacre, Candace	I probably better swear Mr. Conroy, swear the witness. Are all the witnesses on the call at this time? (Click on link for further discussions.)
9:13:48 AM	Chairman Schmitt Note: Sacre, Candace	Witnesses are sworn.
9:14:03 AM	Chairman Schmitt Note: Sacre, Candace	Mr. Riggs, then you may proceed.
9:14:06 AM	Atty Riggs KU/LG&E Note: Sacre, Candace	Thank you, Your Honor.
9:14:08 AM	Atty Riggs KU/LG&E - witness Conroy Note: Sacre, Candace	Direct Examination. Full name, title, business address, and the filing of direct testimony.
9:14:27 AM	Atty Riggs KU/LG&E - witness Arbough Note: Sacre, Candace	Direct Examination. Full name, title, business address, and the filing of direct testimony.
9:14:43 AM	Atty Riggs KU/LG&E - witness Wilson Note: Sacre, Candace	Direct Examination. Full name, title, business address, and the filing of direct testimony.
9:15:06 AM	Atty Riggs KU/LG&E - witness Revlett Note: Sacre, Candace	Direct Examination. Full name, title, business address, and the filing of direct testimony.
9:15:38 AM	Atty Riggs KU/LG&E - witness Fackler Note: Sacre, Candace	Direct Examination. Full name, title, business address, and the filing of direct testimony.
9:16:00 AM	Atty Riggs KU/LG&E Note: Sacre, Candace	Mr. Revlett, I ask you to listen to this question and not respond to it. I'll ask you a question in just a moment.

9:16:08 AM	Atty Riggs KU/LG&E - witnesses Conroy/Arbough/Wilson/Fackler Note: Sacre, Candace	Direct Examination. Answers to questions in testimony, Data Responses, or both be same today.
9:16:25 AM	Atty Riggs KU/LG&E - witnesses Conroy/Arbough/Wilson/Fackler Note: Sacre, Candace	Adopt and affirm testimony or Data Responses today.
9:16:36 AM	Atty Riggs KU/LG&E - witness Revlett Note: Sacre, Candace	Direct Examination. Answers to questions in direct and supplemental testimony and Data Responses subject to update in supplemental be same today.
9:16:51 AM	Atty Riggs KU/LG&E - witness Revlett Note: Sacre, Candace	Adopt and affirm direct and supplemental and Data Responses as testimony today.
9:17:00 AM	Atty Riggs KU/LG&E Note: Sacre, Candace	Your Honor, the witnesses are now available for any questions.
9:17:05 AM	Chairman Schmitt Note: Sacre, Candace	Mr. Nguyen, do you have cross examination for one or more of these witnesses?
9:17:08 AM	Asst Gen Counsel Nguyen PSC Note: Sacre, Candace	I do, Your Honor. Thank you.
9:17:13 AM	Asst Gen Counsel Nguyen PSC Note: Sacre, Candace	Can I ask who would be the person most responsible and knowledgeable about the ROE that has been proposed by the companies in the cases.
9:17:23 AM	Atty Riggs KU/LG&E Note: Sacre, Candace	Yes, that would be Mr. Conroy or Mr. Arbough, depending upon the particular nature of the question.
9:17:34 AM	Asst Gen Counsel Nguyen PSC Note: Sacre, Candace	Okay, well, let me start with Mr. Conroy.
9:17:43 AM	Asst Gen Counsel Nguyen PSC - witness Conroy Note: Sacre, Candace	Cross Examination. Provided proposed ROE in two cases.
9:18:06 AM	Asst Gen Counsel Nguyen PSC - witness Conroy Note: Sacre, Candace	Have direct testimony and look at that.
9:18:25 AM	Asst Gen Counsel Nguyen PSC - witness Conroy Note: Sacre, Candace	Attached curriculum vitae or experience to direct testimony,
9:18:49 AM	Asst Gen Counsel Nguyen PSC - witness Conroy Note: Sacre, Candace	Formal training or education in finances or developing ROE.
9:19:10 AM	Asst Gen Counsel Nguyen PSC - witness Conroy Note: Sacre, Candace	ROE analysis developed in prior cases prepared by you or someone else.
9:19:30 AM	Asst Gen Counsel Nguyen PSC - witness Conroy Note: Sacre, Candace	In 2018-00295 and 2018-00296 witness who sponsored ROE testimony.
9:20:01 AM	Asst Gen Counsel Nguyen PSC - witness Conroy Note: Sacre, Candace	McKenzie presently under contract or agreement for ROE analysis.
9:20:27 AM	Asst Gen Counsel Nguyen PSC - witness Conroy Note: Sacre, Candace	McKenzie's testimony in Case Nos. 2018-00295 and 2018-00296 and ROE testimony in current Kentucky Power Case No. 2020-00174
9:22:11 AM	Asst Gen Counsel Nguyen PSC - witness Conroy Note: Sacre, Candace	Wrong case numbers, direct testimony of McKenzie in 2018-00294 KU's rate case and also 2018-00295 LG&E 's most recent rate case filed on September 28, 2018, for ROE analysis, agree.
9:23:00 AM	Asst Gen Counsel Nguyen PSC - witness Conroy Note: Sacre, Candace	On screen also 2020-00174 McKenzie direct testimony filed on behalf of Kentucky Power for base rate adjustments.

9:23:43 AM	Asst Gen Counsel Nguyen PSC - witness Conroy Note: Sacre, Candace	2018-00294 and 2018-00295 McKenzie ROE models, discounted cash flow model or PCF model, capital asset pricing model or CAPM model, the empirical capital pricing model or ECAPM, agree.
9:24:40 AM	Asst Gen Counsel Nguyen PSC - witness Conroy Note: Sacre, Candace	Kentucky Power rate case, Section 5, capital market estimates, McKenzie uses same ROE models - DCF, CAPM, ECAPM, as well as risk premium model, correct.
9:25:25 AM	Asst Gen Counsel Nguyen PSC - witness Conroy Note: Sacre, Candace	Agree main models do not vary between two cases.
9:25:42 AM	Asst Gen Counsel Nguyen PSC - witness Conroy Note: Sacre, Candace	Components of each of ROE models, Conroy or Arbough.
9:26:18 AM	Asst Gen Counsel Nguyen PSC - witness Conroy Note: Sacre, Candace	ROE models in general, Arbough appropriate witness.
9:26:50 AM	Asst Gen Counsel Nguyen PSC Note: Sacre, Candace	Those are all the questions I would have for Mr. Conroy at this time, Your Honor, if I could go to Mr. Arbough.
9:27:24 AM	Chairman Schmitt Note: Sacre, Candace	Mr. Chandler, do you have any questions of Mr. Conroy?
9:27:27 AM	Vice Chairman Chandler Note: Sacre, Candace	Just a few, Chairman. Thank you.
9:27:47 AM	Vice Chairman Chandler - witness Conroy Note: Sacre, Candace	Examination. Your testimony recommended 9.725 return on equity for ECR.
9:28:43 AM	Vice Chairman Chandler - witness Conroy Note: Sacre, Candace	ROE reasonable, why McKenzie under contract to provide ROE testimony in subsequent matter.
9:29:22 AM	Vice Chairman Chandler - witness Conroy Note: Sacre, Candace	Plan to introduce direct testimony of McKenzie to support ROE.
9:29:51 AM	Vice Chairman Chandler - witness Conroy Note: Sacre, Candace	Aware of 2016 ECR cases.
9:30:09 AM	Vice Chairman Chandler - witness Conroy Note: Sacre, Candace	Aware of Final Order in that case.
9:30:14 AM	Vice Chairman Chandler - witness Conroy Note: Sacre, Candace	Brief as relates to return on equity.
9:31:22 AM	Vice Chairman Chandler - witness Conroy Note: Sacre, Candace	Copy of brief.
9:31:44 AM	Vice Chairman Chandler - witness Conroy Note: Sacre, Candace	On screen, page 24, line 6, Commission's standard practice applying ROE established to environmental surcharge.
9:32:07 AM	Vice Chairman Chandler - witness Conroy Note: Sacre, Candace	Assuming standard practice, agree Commission did not apply utility's most recent base rate case ROE in ECR.
9:32:39 AM	Vice Chairman Chandler - witness Conroy Note: Sacre, Candace	Clear that standard practice to use most recent ROE, not arguing that now. No discernible trend. Using ROA now to support most recent ROE.
9:34:22 AM	Vice Chairman Chandler - witness Conroy Note: Sacre, Candace	Capital cost decreased in last case, reflected in other utilities' authorized ROEs.
9:35:18 AM	Vice Chairman Chandler - witness Conroy Note: Sacre, Candace	Basis for other awards of ROE based off capital costs, reflect changes in market signals or capital cost assumptions.

9:35:46 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Conroy Page 25, third line, ROA reports hearsay, not sufficient to overturn ROE. 2018 cases did not set ROE to apply to environmental matters, ECR cases.
9:37:14 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Conroy None of Commission settlements in 2018- 00294 or 2018-00295 explicitly mention application of ROE to environmental matters, confirm in post-hearing data request.
9:37:20 AM	POST-HEARING DATA REQUEST Note: Sacre, Candace Note: Sacre, Candace	VICE CHAIRMAN CHANDLER - WITNESS CONROY CONFIRM 2018-00294 AND 2018-00295 COMMISSION SETTLEMENTS DO NOT MENTION APPLICATION OF ROE TO ENVIRONMENTAL MATTERS
9:37:40 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Conroy 2014 settlement ROE apply to future environmental matters.
9:38:01 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Conroy 2018 cases did not, has not been been ROE to apply to ECR matters.
9:38:36 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Conroy Previous period, confirming reasonableness of costs incurred.
9:38:51 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Conroy Subsequent review period to reconcile two amounts.
9:39:00 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Conroy Under ECR statute, reasonable return on compliance related capital expenditures.
9:39:12 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Conroy Only evidence ROE report, ROEs authorized by other states have not moved in any direction to change Commission ROE set in companies' last base rate cases.
9:40:52 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Conroy Bottom of pg 25.
9:41:19 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Conroy Second sentence, ROA reports, agree ROA report is all evidence provided in Application.
9:42:32 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Conroy Next part, ROA reports fail to provide information, agree financial analyses mandated are type discussed earlier.
9:43:41 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Conroy Analyses undertaken by McKenzie are type mandated by Bluefield and Hope.
9:44:02 AM	Vice Chairman Chandler Note: Sacre, Candace	I think that's all I have, Mr. Conroy. I appreciate it.
9:44:07 AM	Chairman Schmitt Note: Sacre, Candace	Commissioner Mathews, any questions?
9:44:10 AM	Commissioner Mathews Note: Sacre, Candace	I just have one question.
9:44:13 AM	Commissioner Mathews - witness Note: Sacre, Candace	Conroy Examination. Always have McKenzie on retainer.
9:44:47 AM	Commissioner Mathews - witness Note: Sacre, Candace	Conroy Consult with McKenzie in this.
9:45:01 AM	Commissioner Mathews - witness Note: Sacre, Candace	Conroy Not even when preparing ROE testimony.
9:45:08 AM	Commissioner Mathews Note: Sacre, Candace	Okay, thanks, that's all I have.
9:45:12 AM	Chairman Schmitt Note: Sacre, Candace	Mr. Nguyen, anything?

9:45:13 AM	Asst Gen Counsel Nguyen PSC Note: Sacre, Candace	Nothing further, Your Honor.
9:45:18 AM	Chairman Schmitt Note: Sacre, Candace	Mr. Riggs, would you like to ask the witness any questions based upon cross examination or the questions by the Commissioners?
9:45:29 AM	Atty Riggs KU/LG&E Note: Sacre, Candace	Yes, Your Honor, very briefly.
9:45:33 AM	Atty Riggs KU/LG&E - witness Conroy Note: Sacre, Candace	Redirect Examination. Recall questions regarding brief company filed in 2016 ECR case.
9:45:44 AM	Atty Riggs KU/LG&E - witness Conroy Note: Sacre, Candace	Comment on the position of the company in this case in comparison to company position in ECR case.
9:46:21 AM	Atty Riggs KU/LG&E - witness Conroy Note: Sacre, Candace	Position of companies in this case, RRA reports evidence of fullblown return equity analysis or confirmation of the 9.725 ROE remains reasonable compared to other average ROEs.
9:47:21 AM	Atty Riggs KU/LG&E Note: Sacre, Candace	Thank you, Your Honor. I have no further questions.
9:47:25 AM	Chairman Schmitt Note: Sacre, Candace	Mr. Nguyen, you would like to cross examine another witness, is that correct? Arbough?
9:47:32 AM	Asst Gen Counsel Nguyen PSC Note: Sacre, Candace	Yes, Your Honor, if I may.
9:47:45 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	Cross Examination. Recall questions McKenzie testimony in companies' most recent rate cases in 2018.
9:47:57 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	Also recall questions regarding McKenzie testimony in KU rate case, Case No. 2020-00174.
9:48:17 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	Recall asking Conroy confirmation McKenzie presented several ROE models in all three cases.
9:48:56 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	Agree that McKenzie utilized financial models to establish proposed ROEs in all three rate cases.
9:49:27 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	Agree main models do not vary between those cases.
9:49:52 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	Discuss each model and inputs in general, DSF model page 38 of McKenzie direct testimony in 2018 rate cases
9:50:58 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	Formula for DSF model presented in KU/LG&E last rate case.
9:51:16 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	Kentucky Power rate case, pg 48 of McKenzie testimony, the same DSF formula.
9:51:46 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	Formula is identical.
9:51:52 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	Formula, $k$ equals expected dividend $d$ over $p$ which is stock price plus growth rate expressed by $g$ .
9:52:26 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	Dividend yield, the ratio $d$ over $p$ expected dividend decreases stock price increases, overall ratio or dividend yield would decrease.

9:53:05 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	Also agree, coupled with decrease in growth rate, with dividend yield decreasing and growth rate also decreasing, overall DCF model result in lower return.
9:53:27 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	Exhibit 5 of McKenzie testimony in 2018 rate cases, pg 97 of 112, DCF Model - Utility Group, Cost of Equity Estimates generated from McKenzie model.
9:54:35 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	Average DCF models, average for Value Line column, bottom, 10.5 percent under Value Line column, averages for earnings growth, top, columns labeled (a), earnings growth taken from various publications.
9:55:41 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	Companies listed on far left column, represent utility proxy group for analysis.
9:56:07 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	Average line at bottom for each earnings growth publications.
9:56:24 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	McKenzie testimony in pending Kentucky Power case, similar exhibit, Exhibit AMM-4 page 3, testimony page 102.
9:57:04 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	DCF Model/Electric Group, Cost of Equity Estimates, same type analysis as McKenzie DCF model Kentucky Power ROE analysis.
9:57:36 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	Again, top, columns labeled (a), earnings growth various publications, to left proxy utility group.
9:57:58 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	Bottom, average earnings for each of the earnings growth publications for each of the proxy utility group.
9:58:24 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	Value Line average for Kentucky Power rate case in 2020 9.7 percent.
9:58:37 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	2018 KU/LG&E rate case, average proxy group Value Line 10.5 percent.
9:58:53 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	Agree decrease with respect to that data set.
9:59:09 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	2018 to 2020, decrease with respect to two analyses.
9:59:30 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	Agree trend itself, decreased.
9:59:44 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	CAPM model, Exhibit 7 McKenzie 2018 rate case, page 100 of 112, shows CAPM - Current Bond Yield for Utility Group.
10:00:41 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	Also shows 21 proxy utility groups, comparison for LG&E and KU in CAPM model McKenzie used.
10:01:02 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	Unadjusted Ke.
10:01:16 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	Symbol Ke, expected return.
10:01:43 AM	Asst Gen Counsel Nguyen PSC - witness Arbough Note: Sacre, Candace	Size adjusted, last column, and unadjusted column for expected return.

10:01:54 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Unadjusted, not adjusted for varying size of utilities in proxy group.

10:02:04 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Focus on unadjusted Ke column, shows average for proxy group of 9.6 percent.

10:02:40 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Go back to LG&E, average 9.6 percent, also midpoint unadjusted expected return 9.4 percent.

10:03:01 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Kentucky Power rate case, McKenzie testimony, Exhibit AMM-6 page 1, page 106 of 122, CAPM - Current Bond Yield, Electric Group.

10:03:52 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Similar analysis, McKenzie has proxy group formulated under CAPM model to arrive at CAPM results, at bottom, average and midpoint for all utilities in proxy group.

10:04:27 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Unadjusted earnings rate, earnings growth, unadjusted Ke for 23 utilities used as proxy, agree majority of expected earnings growth between six and seven percent.

10:05:38 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Alliant Energy 7.7 percent.

10:05:48 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Ameren 7.2 percent.

10:05:55 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Between six and eight percent.

10:06:09 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Highest OGE Energy at 9.3 percent.

10:06:20 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace All below average 2018 LG&E/KU rate case 9.6 percent unadjusted Ke.

10:06:44 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Unadjusted Ke Kentucky Power rate case not calculated, agree that average, if calculated, below average 9.6 percent unadjusted Ke.

10:08:12 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Other components CAPM modeling, other components within model, any changes in other components may outweigh any change in beta component.

10:08:44 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Last model, risk premium model, Exhibit 9 McKenzie testimony LG&E/KU 2018 rate cases, page 1, pg 104 of 112, Electric Utility Risk Premium Current Bond Yield.

10:09:57 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Implied Cost of Equity for the Baa Utility Bond Yield, 4.60 percent.

10:10:14 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Kentucky Power current pending rate case, McKenzie testimony, Exhibit AMM-8, page 1, pg 110 of 122, Electric Utility Risk Premium Current Bond Yield analysis.

10:11:02 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Implied Cost of Equity for Baa Utility Bond Yield, 3.79 percent.

10:11:15 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Agree, since 2018, Baa Utility Bond Yield used by McKenzie premium analysis 2018 KU/LG&E rate cases compared to 2020 Kentucky Power rate case, bond yield decreased.

10:12:04 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Kentucky Power 2020 rate case, 9.6 percent in risk premium analysis for KU.

10:12:23 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace LG&E/KU, risk premium cost equity analysis in 2018, 10.04 percent.

10:12:34 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Agree trend risk premium analysis in 2018 rate cases as compared to 2020 KU rate case, risk premium analysis decreased overall.

10:13:24 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace General trend decreased same expert used provided testimonies in LG&E and KU in 2018 and Kentucky Power 2020 rate case same modeling lower ROEs for each model.

10:14:20 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Direction of interest rates since 2018 rate cases.

10:14:34 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Current 30-year treasury bond yield.

10:14:50 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Would have been 2018 when companies filed last rate cases.

10:15:00 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Gone down since 2018.

10:15:17 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Monetary policy report Federal Reserve June 2020.

10:16:05 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Read summary section of monetary Policy Report pursuant to Section 2B of Federal Reserve Act.

10:17:36 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Current economic policy Fed changed written policy.

10:17:45 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Fed turned attention to labor market by removing bias, also allowed for inflation above two percent target (Click on link for further reading.)

10:18:41 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Increased since that time.

10:18:48 AM Asst Gen Counsel Nguyen PSC - witness Arbough  
Note: Sacre, Candace Interest rates remain low compared to past, current ROE models compared to 2018 decrease in general.

10:19:39 AM Asst Gen Counsel Nguyen PSC  
Note: Sacre, Candace Those are all the questions I have. Thank you.

10:19:43 AM Chairman Schmitt  
Note: Sacre, Candace Vice Chairman Chandler, questions?

10:19:45 AM Vice Chairman Chandler  
Note: Sacre, Candace Yes, thank you, Chairman.

10:19:52 AM Vice Chairman Chandler - witness Arbough  
Note: Sacre, Candace Examination. Good morning, Mr. Arbough. Your comment, have your cake and eat it too situation, forecast lower interest rates longer, McKenzie widening equity risk premium, short term forecast lower interest rates, equity risk premium widening gap except when forecast higher interest rates, McKenzie points out cost of capital increasing, more attention to higher interest rates providing investor return.

10:21:04 AM Vice Chairman Chandler - witness Arbough  
Note: Sacre, Candace (Inaudible) short term interest rates, equity yields.

10:21:20 AM	Vice Chairman Chandler - witness Arbough Note: Sacre, Candace	Asked about trend, agree difference between LG&E/KU latest rate case proxy group 21 companies, Kentucky Power proxy group 23 companies, agree 18 companies shared in both proxy groups.
10:22:11 AM	Vice Chairman Chandler - witness Arbough Note: Sacre, Candace	In both groups, Alliant, Ameren, Avangrid, Black Hills, CMS, ConEd, DTE, Duke, Entergy, Eversource, Exelon, Fortis, PPL, PSEG, Sempra, Southern, WEC, Xcel.
10:22:54 AM	Vice Chairman Chandler - witness Arbough Note: Sacre, Candace	18 out of 21 proxy group 2018 rate cases, 18 of 25 Kentucky Power.
10:23:10 AM	Vice Chairman Chandler - witness Arbough Note: Sacre, Candace	Pretty similar proxy group.
10:23:19 AM	Vice Chairman Chandler - witness Arbough Note: Sacre, Candace	Asked about trends, two points in time, struggle to agree a trend.
10:23:36 AM	Vice Chairman Chandler - witness Arbough Note: Sacre, Candace	In front of you LG&E/KU McKenzie 2018 cases.
10:24:16 AM	Vice Chairman Chandler - witness Arbough Note: Sacre, Candace	DCF CAPM current interest rates, empirical CAPM.
10:24:31 AM	Vice Chairman Chandler - witness Arbough Note: Sacre, Candace	Equity risk premium model.
10:24:42 AM	Vice Chairman Chandler - witness Arbough Note: Sacre, Candace	Same exhibit, McKenzie AMM-7, KIPCO R PSC Response PSC 3-1 Attachment 7 McKenzie Workpaper 34.
10:25:23 AM	Vice Chairman Chandler - witness Arbough Note: Sacre, Candace	Electronic version, McKenzie exhibits, Kentucky Power case AMM-4.
10:26:02 AM	Vice Chairman Chandler - witness Arbough Note: Sacre, Candace	Confirm same exhibit, one electronic, one paper.
10:26:29 AM	Vice Chairman Chandler - witness Arbough Note: Sacre, Candace	DCF model, dividend yield plus growth rate.
10:27:06 AM	Vice Chairman Chandler - witness Arbough Note: Sacre, Candace	CAPM for current, McKenzie exhibits in Kentucky Power, did not do average of unadjusted return.
10:27:27 AM	Vice Chairman Chandler - witness Arbough Note: Sacre, Candace	Average of J-9 through J-31, 7.6 percent for unadjusted return Kentucky Power case, how compares to average unadjusted return CAPM for current LG&E/KU.
10:28:24 AM	Vice Chairman Chandler - witness Arbough Note: Sacre, Candace	200 basis points difference.
10:28:32 AM	Vice Chairman Chandler - witness Arbough Note: Sacre, Candace	Min and max of same cells, R-33 and R-34 average same as McKenzie average midpoint 8.3, midpoint 7.7 for unadjusted returns, how compare to 2018 LG&E/KU case.
10:29:06 AM	Vice Chairman Chandler - witness Arbough Note: Sacre, Candace	170 basis points.
10:29:38 AM	Vice Chairman Chandler - witness Arbough Note: Sacre, Candace	Next page, McKenzie LG&E/KU CAPM projected bond yield, 8.2 unadjusted return, 8.3 midpoint, 10 percent and 9.8 percent.
10:30:13 AM	Vice Chairman Chandler - witness Arbough Note: Sacre, Candace	180 and 150 basis points.
10:30:25 AM	Vice Chairman Chandler - witness Arbough Note: Sacre, Candace	Agree capital costs declined between those two periods, September 2018 and June 2020.
10:31:16 AM	Vice Chairman Chandler - witness Arbough Note: Sacre, Candace	McKenzie similar proxy group months ago. agree numbers dramatically changed since LG&E/KU rate case.

10:32:04 AM	Vice Chairman Chandler - witness Arbough Note: Sacre, Candace	Agree with Conroy, the DCF, the CAPM, the ECAPM, risk premium, all are analyses required under Hope and Bluefield.
10:32:34 AM	Vice Chairman Chandler - witness Arbough Note: Sacre, Candace	Moody's long-term rating for companies.
10:32:47 AM	Vice Chairman Chandler - witness Arbough Note: Sacre, Candace	S&P corporate rating of companies.
10:33:08 AM	Vice Chairman Chandler - witness Arbough Note: Sacre, Candace	For separate, non-(inaudible) rating, individual holding company, individual operating company level.
10:33:34 AM	Vice Chairman Chandler Note: Sacre, Candace	I appreciate it, Mr. Arbough. Thank you, Chairman.
10:33:37 AM	Chairman Schmitt Note: Sacre, Candace	Dr. Mathews, questions?
10:33:46 AM	Commissioner Mathews Note: Sacre, Candace	Are we excusing Mr. Conroy and Mr. Arbough, or are we able to come back to them later?
10:33:54 AM	Chairman Schmitt Note: Sacre, Candace	We haven't excused anyone, and, since we're all here, we probably ought to keep everybody here until everybody's satisfied they've asked their questions.
10:34:02 AM	Commissioner Mathews - witness Arbough Note: Sacre, Candace	Risk and COVID pandemic economic downturn, split in looking at utilities rate regulated moved toward coupling higher charge in place protect from revenue erosion.
10:35:35 AM	Commissioner Mathews - witness Arbough Note: Sacre, Candace	18 in both proxy groups mostly regulated or unregulated.
10:36:31 AM	Commissioner Mathews - witness Conroy Note: Sacre, Candace	Examination. Company fared with regard people not disconnected moratorium relative to other companies.
10:38:05 AM	Commissioner Mathews - witness Arbough Note: Sacre, Candace	Order of magnitude.
10:38:45 AM	Commissioner Mathews Note: Sacre, Candace	I don't have any questions right now, but I will reserve the right to come back, if possible.
10:39:34 AM	Chairman Schmitt Note: Sacre, Candace	Mr. Riggs, do you have any redirect?
10:39:45 AM	Atty Riggs KU/LG&E - witness Arbough Note: Sacre, Candace	Redirect Examination. Changes treasury bond yields.
10:40:00 AM	Atty Riggs KU/LG&E - witness Arbough Note: Sacre, Candace	Other economics factors changed beta measure.
10:40:08 AM	Atty Riggs KU/LG&E - witness Arbough Note: Sacre, Candace	Explain.
10:40:49 AM	Atty Riggs KU/LG&E - witness Arbough Note: Sacre, Candace	Affect calculations ROE methods reviewed in cross exam.
10:41:07 AM	Atty Riggs KU/LG&E - witness Arbough Note: Sacre, Candace	McKenzie recognized impact of COVID-19.
10:41:52 AM	Atty Riggs KU/LG&E - witness Arbough Note: Sacre, Candace	Adjusted recommendation, how many basis points.
10:42:01 AM	Atty Riggs KU/LG&E - witness Arbough Note: Sacre, Candace	Comparison this morning McKenzie 2018 LG&E/KU and 2020 Kentucky Power does not reflect impact COVID-19.
10:42:36 AM	Atty Riggs KU/LG&E Note: Sacre, Candace	Thank you, Your Honor. I have no further questions.

10:42:41 AM	Chairman Schmitt Note: Sacre, Candace	Let's take a break until 11 and then come back for another hour, and then we'll break for lunch, so we'll be in recess until 11 a.m.
10:43:04 AM	Session Paused	
11:01:00 AM	Session Resumed	
11:02:28 AM	Chairman Schmitt Note: Sacre, Candace	We are back on the record. Mr. Nguyen, do you have another witness from whom you'd like to obtain some cross examination or conduct a cross examination?
11:02:38 AM	Asst Gen Counsel Nguyen PSC Note: Sacre, Candace	I do not, Your Honor, at this time.
11:02:41 AM	Chairman Schmitt Note: Sacre, Candace	Vice Chairman Chandler, do you have questions of any witness?
11:02:48 AM	Vice Chairman Chandler Note: Sacre, Candace	I do have just a couple, Commissioner, Chairman. I don't know if I should ask Mr. Revlett or Mr. Wilson. I think it may be easier to start with Mr. Wilson, and then, one of these questions, maybe we can go to Mr. Revlett, if the companies' okay with that. Mr. Riggs, Ms. Sturgeon, do you all have a concern?
11:03:18 AM	Atty Riggs LG&E/KU Note: Sacre, Candace	No. Please proceed, Your Honor.
11:03:20 AM	Vice Chairman Chandler Note: Sacre, Candace	Thank you.
11:03:23 AM	Vice Chairman Chandler - witness Wilson Note: Sacre, Candace	Examination. Trimble Station.
11:03:45 AM	Vice Chairman Chandler - witness Wilson Note: Sacre, Candace	Mill Creek Station.
11:03:49 AM	Vice Chairman Chandler - witness Wilson Note: Sacre, Candace	One more, Ghent.
11:04:04 AM	Vice Chairman Chandler - witness Wilson Note: Sacre, Candace	Two units Trimble.
11:04:09 AM	Vice Chairman Chandler - witness Wilson Note: Sacre, Candace	Four units Mill Creek.
11:04:18 AM	Vice Chairman Chandler - witness Wilson Note: Sacre, Candace	Four co-boiler units, same at Ghent.
11:04:42 AM	Vice Chairman Chandler - witness Wilson Note: Sacre, Candace	Three out of four, only serve three or some reduced demand during non-attainment (inaudible) months.
11:05:17 AM	Vice Chairman Chandler - witness Wilson Note: Sacre, Candace	Current direction from Louisville-Jefferson County (inaudible) Control Board, marginal non-attainment (inaudible) issue, between April and October only run three units at Mill Creek.
11:05:49 AM	Vice Chairman Chandler - witness Wilson Note: Sacre, Candace	Baseline, outstanding issue/concern makes sense water treatment ELG compliance three units, one not necessarily needed gallon-per-minute perspective.
11:06:26 AM	Vice Chairman Chandler - witness Wilson Note: Sacre, Candace	Plan only operating three, ELG compliance plans to treat water from three, plan to retire fourth Mill Creek unit.
11:07:04 AM	Vice Chairman Chandler - witness Wilson Note: Sacre, Candace	Unit not compliant, operate until 2028. Retire in 2025, operate, and not be compliance until 2028.
11:08:03 AM	Vice Chairman Chandler - witness Wilson Note: Sacre, Candace	Implicate 2025 versus 2028 data, how affected. Station in compliance, 2028 immaterial.

11:08:38 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Compliance on unit basis or station basis.
11:08:54 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Single discharge point implication.
11:09:01 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Compliant at discharge point.
11:09:12 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Approving three Mill Creek proposed compliance plan, continue to operate four Mill Creek but never more than three at a time or not compliant with ELG or retire one of four before Commission.
11:10:00 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Formal decision to retire Mill Creek units.
11:10:28 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Compliance plan approved, three of four operate, only three of four Mill Creek can operate.
11:11:10 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Construction started on three stations.
11:11:22 AM	Atty Ingram KU/LG&E Note: Sacre, Candace	Vice Chairman Chandler, I think Mr. Revlett can speak to some of these compliance questions, particularly the one you just asked.
11:11:30 AM	Vice Chairman Chandler Note: Sacre, Candace	Chairman, do you have an objection to me switching to Mr. Revlett and then coming back to Mr. Wilson because I only have a couple that I think will sort of touch on the compliance (inaudible)?
11:11:40 AM	Chairman Schmitt Note: Sacre, Candace	No, that's fine.
11:11:54 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Revlett Examination. If approved, compliance plan seal fate of one Mill Creek unit operational past 2025.
11:13:01 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Revlett Cost of complying Louisville/Metro Air Pollution Control Board directives for agreements.
11:14:17 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Revlett Chicken/egg situation, approve compliance plan for LG&E assumes three units operating, ever be economical to change it, situation that the case.
11:15:30 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Revlett Compliance date different than what it was, more time for compliance.
11:16:38 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Revlett After date in 2020, apply to both bottom ash and other ELG rule.
11:17:14 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Revlett Companies choose station not in compliance, operate until 2028 out of compliance as long as retired by December 31, 2028.
11:18:19 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Revlett Mill Creek decided to retire than comply, have until 7/31/2028 to retire.
11:18:44 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Revlett Plan on ELG, retire or compliance to Division of Water or EPA.
11:19:36 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Revlett \$215 million water treatment system proposed Ghent.
11:19:47 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Revlett \$150 million new process water facility at Ghent finished in 2019.
11:20:12 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Revlett Proposed to be compliant with CCR, chemical instead of biological.

11:20:50 AM	Vice Chairman Chandler Note: Sacre, Candace	I guess this is now for Mr. Wilson.
11:21:00 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Examination. Studies \$150 million new process water facility, more economical to install than retire.
11:21:26 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Schram.
11:21:32 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Reference those in direct testimony, one analysis, worked on with Schram,
11:22:03 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Project 40: Analysis Results (PVR of Costs Incurred from 2016, \$M, 2016 Dollars).
11:22:23 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Aware, Project 40.
11:22:36 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson New process water system at Ghent, ECR Project Costs, \$232 million without new process water versus \$386 million with new process water, \$150 million new process facility cost Mr. Revlett discussed.
11:23:05 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson \$150 million net difference, low gas scenario difference, retire immediately, first stage of individual ELG compliance, difference of \$278 million.
11:23:36 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson \$216.5 million, per Mr. Conroy.
11:23:44 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Modeling, \$150 million stage 1, \$216 million stage 2, cost efficiency of updating Ghent, ignore \$150 million sunk cost.
11:24:09 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Projects in isolation instead of cumulative, replacement with upgrades more or less economic.
11:24:31 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Analysis Ghent water treatment systemt upgrade, more economic \$216 million or \$365 million upgrade.
11:24:56 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Don't look at Phase 1 \$150 million investment. Look forward to expected environmental rules, take into account costs.
11:26:33 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Retirement lives at Ghent 1 through 4 are 2034, 2034, 2037, and 2038.
11:26:46 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Break even is 2033-1/2.
11:26:58 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Analysis looks at making upgrades and shorter life.
11:27:12 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Companies have expectation, projects approved, fully recovered regardless economic life of units.
11:27:30 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Why timing of retirement have bearing on cost effectiveness given costs recovered either scenario.
11:28:41 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Ghent investment, \$216-1/2 million, difference unit lasting five years and accelerating recovery over five instead of ten or 15 years, present value revenue requirement basis, merely carrying cost.

11:29:11 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Same amount of investment, Ghent water treatment system \$216-1/2 million, difference in recovering over five years, ten years, through 2034 retirement Ghent 1, only difference present value revenue requirement basis is carrying costs.
11:30:18 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Retirement scenario dates don't matter other than time value of money, difference to customers carrying costs in each year extended further.
11:32:03 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Present value revenue requirement analysis, project cost immaterial, other variables caused by ability to extend life of unit, fixed annual stay-open costs, O&M expenses, variables between 2025, 2029, and 2034 retirement date.
11:33:08 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Difference between analyses, costs to stay open plus investment cost of system versus investment and replacement cost of energy.
11:33:22 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Not taken into account expected environmental investments, analysis assumes Ghent station between now and 2034 for two units, 2037 for another, and 2038 fourth unit, no environmental costs other than stay-open costs.
11:35:02 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson As in 2016 case, analysis looking at \$150 million or the \$232 million, don't have function looking back to historical costs, those included as sunk costs.
11:35:38 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson This analysis, looking exclusively at \$216 million and ignores \$150 million. In future, new environmental upgrades, will look solely at present value revenue requirement analysis of upgrades compared to replacement capacity and energy, ignore \$216-1/2 million water system.
11:36:06 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson By doing ex-post review, going back to environmental compliance plans of 2012 and 2014, known ultimate compliance costs, could change outcomes.
11:36:44 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Investment cost Mill Creek, four units, one retired, ECR upgrade investment over last ten years.
11:36:55 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Hundreds of million, billions.
11:37:06 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Wilson direct testimony, page 3, alternative to making ELG investment.
11:37:43 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Ghent 2000 mw capacity facility, replacement capacity and energy, replace entirety of capacity or enough to bottom end of required reserve market.
11:38:35 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Why reasonable if target range for reserve margin assume full replacement versus replacement within reserve margin.
11:39:39 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Agree capacity factors Mill Creek and Ghent in 60s.
11:39:46 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Not concern for natural gas combined cycle have capacity factor in 60s.

11:40:10 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Not just economically feasible but physically feasible natural gas combined cycles able to have capacity factors in 60 to 70 percent, like Ghent and Mill Creek.
11:40:35 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Direct testimony, bottom page 4 to top of page 5, analysis assume remaining economic operating life existing coal plants, response. Table 2, Depreciation Retirement Years, Ghent 2034, 2034, 2037, and 2038.
11:42:14 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Direct testimony, bottom pg 5, multiple alternatives.
11:42:36 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Gas scenario, low expectation current futures market 2020 to 2030 extrapolated from 2030 out to 2050.
11:43:37 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Trimble 1 extends to 2050 and Trimble 2 assumed 2056.
11:43:53 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson SAW 1 redacted, stay open costs, key inputs, fuel price scenarios.
11:44:18 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Low gas scenario, NYMEX forward market prices 5/22/2019 for 2020 -2030 extrapolated through 2050, actual prices do business today, buy and sell.
11:44:59 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Future price, if can set today, why is low.
11:45:33 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Lock those in today for 10 years, reasonable low scenario.
11:45:55 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson No discussion, using transparent market price signal as low case, not base case.
11:46:33 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Base case, blend transparent market price and EIA high expectation forecast.
11:47:32 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Analysis ex-post basis determine whether reasonable analysis or assumption since done over years.
11:49:05 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Analysis discusses average three scenarios, greater range, midpoint, above and below. Ghent, Table 29.
11:49:53 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Summary Ghent analysis, present value revenue requirement through end last Ghent unit retirement.
11:50:15 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Table 29, Ghent Analysis Results, Replacement Generation Portfolios, full replacement of capacity and energy, in millions.
11:50:26 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Values under replacement generation portfolios, natural gas combined cycle, \$12.9 billion.
11:50:57 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Total cost of those scenarios.
11:51:19 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Mid fuel price, scenario that makes most sense.
11:52:24 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Zero, net difference between least cost project and individual alternative.

11:52:39 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Second least cost alternative, present value revenue requirement, only \$50 million difference, early Ghent retirement not in compliance, retire end 2028.
11:53:10 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Low fuel price scenario, least cost alternative, early retirement, never in compliance, operate to 2028.
11:53:36 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Next, \$64 million more, ELG and retirement assumed 2034.
11:53:54 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson High, proposed plan cheapest, early retirement most expensive.
11:54:05 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Numbers on right range from \$50 to \$269 million, in relation to overall present value revenue requirement, if those differences contrast to total range from \$12 to \$14 billion dollars.
11:54:48 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Big picture, a lot of money, marginal differences between.
11:55:25 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson All include certain alternatives, other than peak and renewable, all include natural gas combined cycle units.
11:55:38 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Analysis natural gas combined cycle assumed prevailing cost assumed and increased by 15 percent.
11:56:16 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Pg14 Section 4.7 of exhibit, bids and projects currently built for that price.
11:56:55 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Simple cycle assumed build together cheaper pricing, natural gas combined cycle 15 percent higher than 2019 ATV cost natural gas combined cycle capacity. Cost estimate increase 15 percent or cost estimate used 15 percent higher.
11:58:33 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Conservative, possibly overstate cost of replacement capacity.
11:58:53 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Not run with ATV values, ran on conservations with others building these or bids to build these.
11:59:24 AM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Why integral values for some, not for others.
12:00:11 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Capacity cost compared as check on reasonableness.
12:00:30 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Cost of new entry, referenced new unit, forward capacity cost reasonableness check.
12:01:04 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson New unit in PJM, natural gas combined cycle unit, other real world implications, cost of units in other scenarios.
12:01:46 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Analysis run assuming natural gas combined cycle capacity costs.
12:01:57 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Could run.
12:01:59 PM	POST-HEARING DATA REQUEST Note: Sacre, Candace Note: Sacre, Candace	VICE CHAIRMAN CHANDLER - WITNESS WILSON ANALYSIS ASSUMING NATURAL GAS COMBINED CYCLE CAPACITY COSTS

12:02:43 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Also run scenario replace only capacity (inaudible) for reserve margin towards bottom proposed range 18.5 or 19 percent.
12:02:56 PM	POST-HEARING DATA REQUEST Note: Sacre, Candace Note: Sacre, Candace	VICE CHAIRMAN CHANDLER - WITNESS WILSON SCENARIO REPLACE ONLY CAPACITY (INAUDIBLE) RESERVE MARGIN BOTTOM RANGE 18.5 OR 19 PERCENT
12:03:51 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Two primary base load units 60 percent capacity factor, need for energy base load units not near 70 or 80 percent capacity factor.
12:04:33 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson At 20 percent less than max capacity factor.
12:04:56 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Twenty percent below.
12:05:18 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Asking earlier natural gas combined cycles replace with unit(s) better capacity factor pick up energy on replacement.
12:05:37 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Replacement of megawatts name-plate capacity of megawatts not replaced won't get energy, difference between megawatts and energy is capacity factor.
12:06:12 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Scenarios even close, net benefit more baseload than simple cycle CTs.
12:06:30 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Run analysis with 19 percent reserve margin on capacity replacement.
12:07:09 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Number of programs still subject to Commission approval.
12:08:10 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Looking whether most cost-effective upgrades or what analysis to maintain status quo.
12:09:01 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Agree Commission consider reasonableness, range of results.
12:09:08 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Possibility run analysis coming up with 19 percent replacement reserve margin.
12:09:20 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Run scenario Commission can see numbers, provide context with response.
12:10:00 PM	POST-HEARING DATA REQUEST Note: Sacre, Candace Note: Sacre, Candace	VICE CHAIRMAN CHANDLER - WITNESS WILSON ANALYSIS WITH 19 PERCENT REPLACEMENT RESERVE MARGIN
12:10:07 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Confirm going forward capital costs, no relation to expected environmental controls not known.
12:10:31 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Transmission costs, Table 15, qualitative concern for cost not included in analysis.
12:10:55 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson How those calculated.

12:12:12 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Assume Ghent analysis least cost \$200 million, retirement and replacement capacity was least cost. How Commission determine least cost alternative when decision \$700 million and \$1 billion in unquantified costs.
12:13:50 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Testimony reflects not enough room Mill Creek to build combine cycles before retire and remove, Ghent pipeline. Price out pipeline.
12:14:18 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson When company provide Commission least cost analysis if upgrades not least cost but replacement capacity energy least cost, when provide qualitative or quantitative analysis of transmission upgrades or refuel or replace capacity with gas.
12:15:00 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Repeat question.
12:15:23 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Replacement capacity least cost, then analysis transmission expenses, location replacement facilities, delivery of gas, when company provide those to Commission, frustrating and hard to determine least cost.
12:17:38 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson If Commission disagreed companies' perspective on analysis, does not matter. \$600-900 million transmission upgrades, pipeline not analyzed.
12:19:07 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Fair determination of least cost alternatives.
12:19:25 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Not analysis before Commission.
12:19:33 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Commission can only look at it qualitative perspective.
12:19:58 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson 2034 break even on Ghent, assumes Ghent available entire life.
12:21:27 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Investment justified even if Ghent units retired 2034.
12:21:37 PM	Vice Chairman Chandler - witness Note: Sacre, Candace	Wilson Table 31 indicate Ghent units retired early in 2033, companies' proposal net negative least cost alternative.
12:22:47 PM	Vice Chairman Chandler Note: Sacre, Candace	I appreciate it, Mr. Wilson. I think that's all I have, Chairman.
12:22:50 PM	Chairman Schmitt Note: Sacre, Candace	Commissioner Mathews, any questions?
12:23:02 PM	Commissioner Mathews Note: Sacre, Candace	I have a few. It's 12:23. Are we breaking for lunch or -
12:23:11 PM	Chairman Schmitt Note: Sacre, Candace	Why don't we break for lunch and come back at 1:15? We'll go into lunch recess until 1:15. Thank you.
12:23:27 PM	Session Paused	
1:17:09 PM	Session Resumed	
1:17:14 PM	Chairman Schmitt Note: Sacre, Candace	We are now back on the record. Commissioner Mathews, do you have questions?
1:17:20 PM	Commissioner Mathews Note: Sacre, Candace	I do.

1:17:35 PM	Commissioner Mathews - witness Note: Sacre, Candace	Revlett Examination. Changes reflected in Revlett testimony change time line.
1:18:11 PM	Chairman Schmitt Note: Sacre, Candace	Is that question addressed to Mr. Revlett?
1:18:15 PM	Commissioner Mathews Note: Sacre, Candace	Yes, sorry.
1:19:40 PM	Commissioner Mathews - witness Note: Sacre, Candace	Wilson Examination. Natural gas prices, 2015 annual energy outlook EIA, low price over-estimate or under-estimate price of gas.
1:20:44 PM	Commissioner Mathews - witness Note: Sacre, Candace	Wilson Over a number of years, includes pre-2008.
1:21:29 PM	Commissioner Mathews - witness Note: Sacre, Candace	Wilson Most models over last five years over-estimated price of natural gas.
1:21:54 PM	Commissioner Mathews - witness Note: Sacre, Candace	Wilson VC asked, model lower gas price.
1:22:17 PM	Commissioner Mathews - witness Note: Sacre, Candace	Wilson Low gas price estimate as base, model true low gas price.
1:22:28 PM	POST-HEARING DATA REQUEST Note: Sacre, Candace Note: Sacre, Candace	COMMISSIONER MATHEWS - WITNESS WILSON USING LOW GAS PRICE ESTIMATE AS BASE, MODEL TRUE LOW GAS PRICE
1:23:03 PM	Commissioner Mathews - witness Note: Sacre, Candace	Wilson Experience building base load combined cycle plant at Cane Run.
1:23:15 PM	Commissioner Mathews - witness Note: Sacre, Candace	Wilson Cane Run, plant come in higher, lower, or right at estimate.
1:24:18 PM	Commissioner Mathews - witness Note: Sacre, Candace	Wilson How model higher probability carbon, more stringent carbon case.
1:25:49 PM	Commissioner Mathews - witness Note: Sacre, Candace	Wilson Have limit.
1:27:42 PM	Commissioner Mathews - witness Note: Sacre, Candace	Wilson Not binding constraints.
1:28:13 PM	Commissioner Mathews - witness Note: Sacre, Candace	Wilson From that to extremely stringent, natural gas combined cycle not possible.
1:28:58 PM	Commissioner Mathews - witness Note: Sacre, Candace	Wilson Carbon constraints tip over to natural gas life cycle versus retrofit to meet ELG.
1:29:45 PM	Commissioner Mathews - witness Note: Sacre, Candace	Wilson Repeat question.
1:31:00 PM	Commissioner Mathews - witness Note: Sacre, Candace	Wilson Took something off table, what that is in the middle. Probabilistic modeling look at all scenarios especially environmental costs.
1:31:42 PM	Commissioner Mathews - witness Note: Sacre, Candace	Wilson Probability to CO2 scenarios, probability to other pollutants reduced, back in 2012 forward, probabilistic look to get us to today, not sure where we would be if making decision.
1:37:27 PM	Commissioner Mathews - witness Note: Sacre, Candace	Wilson Model combined cycle case, build at Ghent, 20-mile gas pipeline, model cost.
1:38:30 PM	Commissioner Mathews - witness Note: Sacre, Candace	Wilson Check, please.

1:38:34 PM	Commissioner Mathews Note: Sacre, Candace	If Mr. Nguyen would make a note of that and include that in a post-hearing data request, that might help me with my questions about the cost of natural gas combined cycle in your model.
1:38:36 PM	POST-HEARING DATA REQUEST Note: Sacre, Candace	COMMISSIONER MATHEWS - WITNESS WILSON
1:38:56 PM	Commissioner Mathews - witness Wilson Note: Sacre, Candace	MODEL COST OF COMBINED CYCLE CASE AT GHENT Cost of wind/solar, assumption certain percentage price decrease.
1:39:10 PM	Commissioner Mathews - witness Wilson Note: Sacre, Candace	Two to three percent.
1:39:29 PM	Commissioner Mathews - witness Wilson Note: Sacre, Candace	Makes sense, run out of technological advances.
1:39:56 PM	Commissioner Mathews - witness Wilson Note: Sacre, Candace	Lot of uncertainty, may/may not be less uncertain couple of months.
1:40:36 PM	Commissioner Mathews - witness Wilson Note: Sacre, Candace	Utility scale, built by companies.
1:40:48 PM	Commissioner Mathews - witness Wilson Note: Sacre, Candace	Uncertainty, more uncertainty than initially, not cut and dry decision before Commission.
1:43:06 PM	Commissioner Mathews - witness Wilson Note: Sacre, Candace	Why transmission costs not included.
1:44:01 PM	Commissioner Mathews - witness Wilson Note: Sacre, Candace	Four units, transmission upgrade at once, so much uncertainty around modeling.
1:47:01 PM	Commissioner Mathews - witness Wilson Note: Sacre, Candace	Assuming replace capacity on megawatt basis, baseline or higher natural gas price, natural gas combined cycle capital cost, two nonbinding CO2 scenarios.
1:49:40 PM	Commissioner Mathews - witness Wilson Note: Sacre, Candace	Look forward questions next week discussion.
1:50:55 PM	Commissioner Mathews Note: Sacre, Candace	I think that's all that I have. I will give it back to the Chairman.
1:51:02 PM	Chairman Schmitt Note: Sacre, Candace	Commissioner Mathews, don't you have any questions for Mr. Conroy?
1:51:22 PM	Commissioner Mathews Note: Sacre, Candace	I don't have anything at this time.
1:51:25 PM	Chairman Schmitt Note: Sacre, Candace	Is there anything further, Mr. Nguyen or Vice Chairman Chandler that anyone would like to ask?
1:51:33 PM	Vice Chairman Chandler Note: Sacre, Candace	I do have one question before Mr. Riggs or Ms. Sturgeon, Mr. Ingram do redirect.
1:51:42 PM	Vice Chairman Chandler - witness Wilson Note: Sacre, Candace	Examination. Limited capacity cost for companies.
1:52:00 PM	Atty Riggs KU/LG&E Note: Sacre, Candace	I'm sorry, Mr. Vice Chairman, we're getting a lot of feedback.
1:52:13 PM	Vice Chairman Chandler Note: Sacre, Candace	Can you hear me better now?
1:52:19 PM	Vice Chairman Chandler - witness Wilson Note: Sacre, Candace	Based off analysis, capacity costs replacement and cost per kilowatt of upgrades, avoided capacity cost for current fleet even though no need to add capacity.

1:53:19 PM	Vice Chairman Chandler - witness Wilson Note: Sacre, Candace	Cost of deferring investment in energy capacity now.
1:53:51 PM	Vice Chairman Chandler Note: Sacre, Candace	That's all I have, Chairman. Thank you.
1:53:54 PM	Chairman Schmitt Note: Sacre, Candace	I know there were several data requests, and I would just wondering, Mr. Riggs, how much time will your client need? (Click on link for further comments.)
1:54:28 PM	Atty Riggs KU/LG&E Note: Sacre, Candace	If it please the Chair, the companies would appreciate the opportunity to do some redirect.
1:54:34 PM	Chairman Schmitt Note: Sacre, Candace	Oh, I'm sorry. Go right ahead.
1:54:37 PM	Atty Riggs KU/LG&E Note: Sacre, Candace	Thank you. Mr. Ingram will take the floor.
1:54:41 PM	Atty Ingram KU/LG&E Note: Sacre, Candace	Mr. Chairman, I have a few questions on redirect for Mr. Wilson and then a handful of questions for Mr. Revlett, and I'll start with Mr. Wilson, if that's okay with you.
1:54:54 PM	Atty Ingram KU/LG&E - witness Wilson Note: Sacre, Candace	Redirect Examinaion. SAW1, Section 4.8, page 16, qualitative or quantitative, additional costs on top of not the least cost solution.
1:55:48 PM	Atty Ingram KU/LG&E - witness Wilson Note: Sacre, Candace	Explain from quantitative perspective, build those into analysis.
1:57:06 PM	Atty Ingram KU/LG&E - witness Wilson Note: Sacre, Candace	Better solution for customers, ELG compliance, lead to lower costs.
1:57:21 PM	Atty Ingram KU/LG&E - witness Wilson Note: Sacre, Candace	Assumptions in modeling in 2016 for ECR cases, knowing today, recommendations the same.
1:58:05 PM	Atty Ingram KU/LG&E - witness Wilson Note: Sacre, Candace	Possible for companies to predict future environmental regulations.
1:58:15 PM	Atty Ingram KU/LG&E - witness Wilson Note: Sacre, Candace	What companies do to make sure projects brought to Commission are timely.
1:59:28 PM	Atty Ingram KU/LG&E - witness Wilson Note: Sacre, Candace	VC asked redo modeling based on adjustments to companies' reserve margins, conclusions.
2:01:23 PM	Atty Ingram KU/LG&E Note: Sacre, Candace	Mr. Chairman, that's all I have on redirect for Mr. Wilson. I do have some questions for Mr. Revlett. I can proceed with that.
2:01:31 PM	Vice Chairman Chandler Note: Sacre, Candace	Mr. Ingram, just one second.
2:01:39 PM	Vice Chairman Chandler - witness Wilson Note: Sacre, Candace	Examination. Capacity factors of companies' base load units maximum amount of energy produced, forced/unforced outages, or amount being used.
2:02:37 PM	Vice Chairman Chandler - witness Wilson Note: Sacre, Candace	As generation supply mix changes so do utilization rates of those given resourses.
2:03:05 PM	Vice Chairman Schmitt Note: Sacre, Candace	Thank you, Mr. Ingram.
2:03:08 PM	Chairman Schmitt Note: Sacre, Candace	Do you have some additional questions or additional redirect, Mr. Riggs?

2:03:16 PM	Atty Riggs KU/LG&E Note: Sacre, Candace	Yes, Your Honor, Mr. Ingram has redirect of Mr. Revlett, if you please.
2:03:25 PM	Atty Ingram KU/LG&E - witness Revlett Note: Sacre, Candace	Redirect Examination. Timing of when to come to Commission for environmental compliance costs.
2:03:42 PM	Atty Ingram KU/LG&E - witness Revlett Note: Sacre, Candace	Direct testimony, page 4, when it makes sense to spend money on environmental compliance.
2:06:16 PM	Atty Ingram KU/LG&E - witness Revlett Note: Sacre, Candace	Now is time to move forward on environmental compliance for ELG rule.
2:06:50 PM	Atty Ingram KU/LG&E - witness Revlett Note: Sacre, Candace	Explained in direct testimony as soon as possible.
2:07:00 PM	Atty Ingram KU/LG&E - witness Revlett Note: Sacre, Candace	August 31, prepublication notice EPA.
2:07:12 PM	Atty Ingram KU/LG&E - witness Revlett Note: Sacre, Candace	Notice used same phraseology, as soon as possible for compliance, after final rule published Federal Register.
2:07:29 PM	Atty Ingram KU/LG&E - witness Revlett Note: Sacre, Candace	Expect ELG final rule to be published Federal Register.
2:07:48 PM	Atty Ingram KU/LG&E - witness Revlett Note: Sacre, Candace	Proposed plan for Mill Creek, direct testimony, bottom page 11, top page 12, projects proposed for Mill Creek.
2:08:27 PM	Atty Ingram KU/LG&E - witness Revlett Note: Sacre, Candace	Sizing of Mill Creek, explain answer.
2:10:50 PM	Atty Ingram KU/LG&E - witness Revlett Note: Sacre, Candace	Achieve compliance, no cost overruns or over-estimates.
2:11:05 PM	Atty Ingram KU/LG&E - witness Revlett Note: Sacre, Candace	Needed to expand later, could seek approval from Commission.
2:11:15 PM	Atty Ingram KU/LG&E - witness Revlett Note: Sacre, Candace	Companies look continuously at projects as developed to determine if continue to be least cost solutions.
2:11:58 PM	Atty Ingram KU/LG&E Note: Sacre, Candace	Thank you, Mr. Revlett. That's all I have.
2:12:00 PM	Chairman Schmitt Note: Sacre, Candace	Anything further from anyone else?
2:12:05 PM	Chairman Schmitt Note: Sacre, Candace	If not, Mr. Riggs, Mr. Ingram, how long would it take your clients to respond to what you understand these data requests will be? They'll be served upon you tomorrow. How much time will you need to get a response?
2:12:24 PM	Atty Riggs KU/LG&E Note: Sacre, Candace	Next Friday, Your Honor, September 18.
2:12:27 PM	Chairman Schmitt Note: Sacre, Candace	That'll be fine. We'll get an order out to that effect in an hour or so.
2:12:34 PM	Chairman Schmitt Note: Sacre, Candace	If there's nothing further, is there any reason why this hearing shouldn't be adjourned at this time?
2:12:41 PM	Chairman Schmitt Note: Sacre, Candace	If not, then thank you all very much. We appreciate everybody's testimony and the questioning. This hearing is hereby adjourned.
2:12:57 PM	Session Ended	

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