

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC 2024 INTEGRATED RESOURCE)	
PLAN OF DUKE ENERGY KENTUCKY, INC.)	CASE NO.
)	2024-00197
)	

NOTICE OF FILING

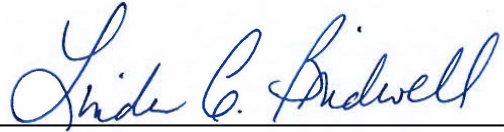
Notice is given to all parties that the following materials have been filed into the record of this proceeding:

- The digital video recording of the evidentiary hearing conducted on December 10, 2024 in this proceeding;
- Certification of the accuracy and correctness of the digital video recording;
- All exhibits introduced at the evidentiary hearing conducted on December 10, 2024 in this proceeding; and
- A written log listing, *inter alia*, the date and time of where each witness's testimony begins and ends on the digital video recording of the evidentiary hearing conducted on December 10, 2024.

A copy of this Notice, the certification of the digital video record, and the hearing log has been served upon all persons listed at the end of this Notice. Parties may view the digital video recording of the hearing at <https://youtu.be/KKKBun4POAI>.

Parties may request a copy of the annotated digital video recording of the hearing by submitting a written request by electronic mail to pscfilings@ky.gov. A minimal fee will be assessed for a copy of this recording.

Done in Frankfort, Kentucky, on December 10, 2024.



Linda C. Bridwell, PE
Executive Director

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ELECTRONIC 2024 INTEGRATED RESOURCE) CASE NO.
PLAN OF DUKE ENERGY KENTUCKY, INC.) 2024-00197

CERTIFICATION

I, Candace H. Sacre, hereby certify that:

1. The attached flash drive contains a digital recording of the Formal Hearing conducted in the above-styled proceeding on December 10, 2024. The Formal Hearing Log, Exhibits, and Exhibit List are included with the recording on December 10, 2024;
2. I am responsible for the preparation of the digital recording;
3. The digital recording accurately and correctly depicts the Formal Hearing of December 10, 2024, and;
4. The Formal Hearing Log attached to this Certificate accurately and correctly states the events that occurred at the Formal Hearing of December 10, 2024, and the time at which each occurred.

Signed this 21st day of December, 2024.



Candace H. Sacre
Administrative Specialist III



Stephanie Schweighardt
Kentucky State at Large ID# KYNP 64180
Commission Expires: January 14, 2027



Session Report - Detail

2024-00197 10Dec2024

Duke Energy Kentucky, Inc. (Duke Kentucky)

Date:	Type:	Location:	Department:
12/10/2024	Public Hearing\Public Comments	Hearing Room 2	Hearing Room 2 (HR 2)

Witness: Chad Donner; Tim Duff; Michael Geers; Kimberly Hughes; Matthew Kalemba; Ibrar Khera; Sarah Lawler; Jim McClay; Matt Ruscio; John Swez; Daniel Sympson; Ryan Trogstad
 Judge: Angie Hatton; John Will Stacy; Mary Pat Regan
 Clerk: Candace Sacre

Event Time	Log Event
9:03:38 AM	Session Started
9:03:43 AM	Chair Hatton Note: Sacre, Candace
	Preliminary remarks.
9:04:32 AM	Chair Hatton Note: Sacre, Candace
	Introductions.
9:04:50 AM	Chair Hatton Note: Sacre, Candace
	Purpose of hearing.
9:04:56 AM	Chair Hatton Note: Sacre, Candace
	Entry of appearance.
9:05:03 AM	Atty D'Ascenzo Duke Kentucky Note: Sacre, Candace
	Rocco D'Ascenzo, Larisa Vaysman, witnesses are Matthew Kalemba, John Swez, Michael Geers, Daniel Sympson, Chad Donner, Ryan Trogstad, Jim McClay, Ibrar Khera, Timothy Duff, Matt Ruscio, Kimberly Hughes, and Sarah Lawler.
9:06:22 AM	Asst Attorney General West Note: Sacre, Candace
	Mike West.
9:06:47 AM	Atty Childers Sierra Club Note: Sacre, Candace
	Joe Childers, Tony Mendoza, and Nathaniel Shoaff.
9:07:03 AM	Atty Gary Joint Intervenors Note: Sacre, Candace
	Byron Gary, Cassandra McRae.
9:07:10 AM	Staff Atty Colyer PSC Note: Sacre, Candace
	Jason Colyer, Kayla Means, and Wright Williams.
9:07:23 AM	Chair Hatton Note: Sacre, Candace
	Public notice.
9:07:31 AM	Chair Hatton Note: Sacre, Candace
	Outstanding motions.
9:08:57 AM	Chair Hatton Note: Sacre, Candace
	Public comments.
9:11:17 AM	Chair Hatton Note: Sacre, Candace
	Call first witness.
9:11:22 AM	Atty D'Ascenzo Duke Kentucky Note: Sacre, Candace
	Matthew Kalemba.
9:11:39 AM	Chair Hatton Note: Sacre, Candace
	Witness is sworn.
9:11:45 AM	Chair Hatton - witness Kalemba Note: Sacre, Candace
	Examination. Name and address?
9:11:58 AM	Atty D'Ascenzo Duke Kentucky - witness Kalemba Note: Sacre, Candace
	Direct Examination. Position with company?
9:12:09 AM	Atty D'Ascenzo Duke Kentucky - witness Kalemba Note: Sacre, Candace
	Describe responsibilities as VP of Integrated Resource Planning?

9:12:42 AM Atty D'Ascenzo Duke Kentucky - witness Kalemba
Note: Sacre, Candace Cause to file responses?

9:12:47 AM Atty D'Ascenzo Duke Kentucky - witness Kalemba
Note: Sacre, Candace Adopting responses by other witnesses?

9:12:54 AM Atty D'Ascenzo Duke Kentucky - witness Kalemba
Note: Sacre, Candace List of who those are?

9:12:57 AM Atty D'Ascenzo Duke Kentucky - witness Kalemba
Note: Sacre, Candace Identify whose responses are adopting?

9:13:11 AM Atty D'Ascenzo Duke Kentucky - witness Kalemba
Note: Sacre, Candace Any changes or corrections to responses?

9:13:31 AM Atty D'Ascenzo Duke Kentucky - witness Kalemba
Note: Sacre, Candace Only correction you have?

9:13:34 AM Atty D'Ascenzo Duke Kentucky - witness Kalemba
Note: Sacre, Candace Asked same questions, answers be same?

9:13:41 AM Atty D'Ascenzo Duke Kentucky - witness Kalemba
Note: Sacre, Candace Adopt responses as testimony?

9:13:52 AM Chair Hatton
Note: Sacre, Candace Procedural discussion.

9:14:04 AM Chair Hatton
Note: Sacre, Candace Sierra Club?

9:14:36 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Cross Examination. Duke plan Convert East Bend to dual fuel by 2030 and retire and replace with natural gas combined cycle plant in 2039, accurate?

9:15:02 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Primary driver for change is EPA 111(d) rule?

9:15:13 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Four potential pathways for power plants comply with rules, walk through what four options are?

9:16:38 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Preferred pathway coal-fired dual-fuel operation?

9:16:46 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Analysis of coal firing at East Bend modeled option under different future scenarios?

9:17:10 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Test full conversion where plant 100 percent gas by 2030, test those scenarios under high fuel, low fuel, and high load?

9:21:45 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Not model 100 percent conversion to gas under low gas prices?

9:21:53 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Limestone conversion project, tell what this is from a lime reagent process to a limestone reagent process?

9:23:19 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Is input into scrubber system, one reagent for another?

9:23:29 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace What Duke current estimate of cost limestone conversion?

9:24:07 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Duke pegged number at \$125.8 million, sound right?

9:24:26 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace What cost modeled in IRP?

9:24:42 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Agree current estimate higher than what modeled in IRP?

9:25:05 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Agree \$125 is bigger than \$105?

9:25:08 AM	Atty D'Ascenzo Duke Energy	Note: Sacre, Candace	Objection, asked and answered.
9:25:16 AM	Atty Shoaff Sierra Club - witness Kalemba	Note: Sacre, Candace	Project expected completed and operational beginning 2027?
9:25:21 AM	Atty Shoaff Sierra Club - witness Kalemba	Note: Sacre, Candace	Cost of quick lime, so current process, numbers in IRP higher than Duke current estimate would cost?
9:26:25 AM	Atty Shoaff Sierra Club - witness Kalemba	Note: Sacre, Candace	Know what prices are, what costs were Duke current estimates?
9:27:24 AM	Atty Shoaff Sierra Club - witness Kalemba	Note: Sacre, Candace	Costs for quick lime less than modeled, and cost for conversion project more than modeled?
9:27:43 AM	Atty Shoaff Sierra Club - witness Kalemba	Note: Sacre, Candace	Page 10 of IRP walks through 17 different scenarios with and without 111(d)?
9:28:02 AM	Atty Shoaff Sierra Club - witness Kalemba	Note: Sacre, Candace	Cost of limestone conversion project included as base assumption, included for all projects?
9:28:22 AM	Atty Shoaff Sierra Club - witness Kalemba	Note: Sacre, Candace	All 17 included cost of limestone conversion project?
9:28:40 AM	Atty Shoaff Sierra Club - witness Kalemba	Note: Sacre, Candace	Sierra Club comments proposed be less expensive (1) not spend \$125 million on limestone conversion project and (2) convert to natural gas by 2030, no modeling where unit continues to use quick lime, not spend \$125 million, and convert to gas in 2030, correct?
9:32:09 AM	Atty Shoaff Sierra Club - witness Kalemba	Note: Sacre, Candace	Told us gas risky but do intend replace East Bend with gas eventually?
9:33:10 AM	Atty Shoaff Sierra Club - witness Kalemba	Note: Sacre, Candace	Project be in place starting 2027 cost \$125 million, make economic sense go forward with limestone conversion project if East Bend convert to gas in 2030?
9:35:33 AM	Atty Shoaff Sierra Club - witness Kalemba	Note: Sacre, Candace	Cost of project, \$125 million, converts to gas in 2030, make money back on investment in three years?
9:36:33 AM	Atty Shoaff Sierra Club - witness Kalemba	Note: Sacre, Candace	Said possibly, where started answer, how does that work, fuel cost differences or reagent differences in price between quick lime and limestone process, save \$40 million a year?
9:37:53 AM	Atty Shoaff Sierra Club - witness Kalemba	Note: Sacre, Candace	If major equipment failure 2032, what that do economics of project?
9:38:05 AM	Atty Shoaff Sierra Club - witness Kalemba	Note: Sacre, Candace	MATS compliance, project needed for compliance, on FDG scrubber?
9:38:29 AM	Atty Shoaff Sierra Club - witness Kalemba	Note: Sacre, Candace	Brought up MATS, all MATS questions to Geers?
9:38:49 AM	Atty Shoaff Sierra Club - witness Kalemba	Note: Sacre, Candace	Leaving MATS aside, another environmental obligation prompt limestone conversion project?
9:39:15 AM	Atty Shoaff Sierra Club - witness Kalemba	Note: Sacre, Candace	Should not analysis went through at least one of those tested converting East Bend to gas without cost of limestone conversion project?
9:39:50 AM	Atty Shoaff Sierra Club - witness Kalemba	Note: Sacre, Candace	Limestone conversion project not required plant converts to gas by 2030?

9:40:07 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace What be required for if not MATS or other obligation?

9:40:44 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Cost of limestone conversion and cost for plan, have Duke reply comments?

9:41:38 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace See table on page 23?

9:41:44 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Revenues and fuel costs for East Bend Unit 2?

9:42:04 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Look at second column, revenue from PJM, go down get to 2023, then year to date 2024 through July?

9:42:26 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Shows PJM revenue 2023 about \$70.9 million?

9:42:44 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Move one column right and shows fuel costs for East Bend 2, accurate?

9:42:53 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace What are fuel costs 2023?

9:43:00 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Roughly \$15 million more than revenue?

9:43:15 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Look one row down, first half of 2024, what are revenues for East Bend reported in table?

9:43:31 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Fuel cost?

9:43:40 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Reading table, looks like, in 2023 and so far in 2024 through July, fuel costs exceeded revenue, accurate?

9:44:24 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Description '23, '24, '25 not Swez testimony?

9:44:34 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace What driving cost to be so high?

9:45:13 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Talk about cost for inputs to limestone conversion project, before and after, what company best estimate of annual cost in 2027, 2028, and 2029 if operate with current quick lime process?

9:45:47 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace If look at Duke discovery response DR 02006 to Sierra Club, pages 2 and 3 ---

9:46:17 AM Atty D'Ascenzo Duke Energy
Note: Sacre, Candace Believe response confidential.

9:46:30 AM Chair Hatton
Note: Sacre, Candace Switch to confidential.

9:46:58 AM Private Mode Activated

9:46:58 AM Private Recording Activated

9:53:59 AM Normal Mode Activated

9:53:59 AM Public Recording Activated

9:54:02 AM Chair Hatton
Note: Sacre, Candace Okay, are back on public.

9:54:11 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Cross Examination (cont'd). Duke reply comments on page 11 states, reading, see those words?

9:55:03 AM	Atty D'Ascenzo Duke Kentucky Note: Sacre, Candace	Would object that counsel misstated what is in quote.
9:55:22 AM	Atty Shoaff Sierra Club - witness Kalemba Note: Sacre, Candace	Bottom paragraph, even under scenario stops burning coal by 2030, limestone conversion makes economic sense?
9:55:42 AM	Atty Shoaff Sierra Club - witness Kalemba Note: Sacre, Candace	Is that opinion today?
9:56:18 AM	Atty Shoaff Sierra Club - witness Kalemba Note: Sacre, Candace	Acknowledged cost modeled in IRP different than what modeled in IRP?
9:57:07 AM	Atty Shoaff Sierra Club - witness Kalemba Note: Sacre, Candace	Position Duke not need reanalyze costs before Commission acts on IRP?
9:57:38 AM	Atty Shoaff Sierra Club - witness Kalemba Note: Sacre, Candace	How out of date cost forecasts have to be before recommend new analysis?
9:57:49 AM	Atty D'Ascenzo Duke Kentucky Note: Sacre, Candace	Objection, argumentative.
9:59:15 AM	Atty Shoaff Sierra Club - witness Kalemba Note: Sacre, Candace	Page12 of reply comments, read first full sentence?
9:59:49 AM	Atty Shoaff Sierra Club - witness Kalemba Note: Sacre, Candace	Future costs and supply risks, not exist if converts to gas in 2030?
10:00:13 AM	Atty Shoaff Sierra Club - witness Kalemba Note: Sacre, Candace	Gas price forecasts included in IRP, know date of gas price forecast relied on?
10:00:58 AM	Atty Shoaff Sierra Club - witness Kalemba Note: Sacre, Candace	Gas prices in 2023 including 2022 those prices high?
10:01:08 AM	Atty Shoaff Sierra Club - witness Kalemba Note: Sacre, Candace	Know what primary cause of high prices was?
10:01:35 AM	Atty Shoaff Sierra Club - witness Kalemba Note: Sacre, Candace	One of causes was Russia and Ukraine war?
10:01:40 AM	Atty Shoaff Sierra Club - witness Kalemba Note: Sacre, Candace	Gas prices in 2024 been lower?
10:01:48 AM	Atty Shoaff Sierra Club - witness Kalemba Note: Sacre, Candace	If Duke update gas forecast, price projections be lower than in IRP?
10:02:12 AM	Atty Shoaff Sierra Club - witness Kalemba Note: Sacre, Candace	Lower gas prices tend to make full conversion scenario more attractive than coal?
10:02:48 AM	Atty Shoaff Sierra Club - witness Kalemba Note: Sacre, Candace	In scenario lower gas prices than IRP, also make dual fuel operation more attractive?
10:03:07 AM	Atty Shoaff Sierra Club - witness Kalemba Note: Sacre, Candace	PVRR, tell what stands for?
10:03:18 AM	Atty Shoaff Sierra Club - witness Kalemba Note: Sacre, Candace	Tell what acronym means?
10:03:46 AM	Atty Shoaff Sierra Club - witness Kalemba Note: Sacre, Candace	Duke view that dual fuel operations cheaper than full conversion?
10:04:07 AM	Atty Shoaff Sierra Club - witness Kalemba Note: Sacre, Candace	Look at Sierra Club comments?
10:04:13 AM	Atty Shoaff Sierra Club - witness Kalemba Note: Sacre, Candace	Duke contended full conversion plan not correct, not know how Sierra Club calculations done, right?
10:04:39 AM	Atty Shoaff Sierra Club - witness Kalemba Note: Sacre, Candace	Have Sierra Club comments in front of you?

10:04:52 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Pull up page 11, see first full paragraph, read first three sentences?

10:05:49 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Sentences just read clearly describe calculation and data used by Sierra Club?

10:06:50 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Duke ask questions how Sierra Club calculated figures?

10:07:11 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Get data request despite objection?

10:07:20 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Try to replicate calculations?

10:08:25 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Have reason dispute Sierra Club PVRR numbers?

10:08:44 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Confusion about numbers refer optimized or alternative portfolios?

10:08:54 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Ask which of those included in calculations?

10:09:07 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace What happen to PVRR by 2030 if Duke excluded \$125 million limestone conversion?

10:09:22 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Know magnitude of decrease?

10:09:28 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace But not modeled in IRP?

10:09:34 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Was modeled in CPCN?

10:09:42 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace PVRR of gas conversion case without \$125 million?

10:10:06 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace What are costs of operating East Bend beyond 2035?

10:11:13 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Those costs are maintenance costs?

10:11:27 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Maintenance costs going up operating a 55-year-old power plant?

10:11:54 AM Atty Shoaff Sierra Club - witness Kalemba
Note: Sacre, Candace Duke have gas price forecast more recent than one in IRP?

10:12:16 AM Atty Shoaff Sierra Club
Note: Sacre, Candace Ask for numbers post-hearing data request.

10:12:17 AM POST-HEARING DATA REQUEST
Note: Sacre, Candace ATTY SHOAFF SIERRA CLUB - WITNESS KALEMBA
Note: Sacre, Candace GAS PRICE FORECAST MORE RECENT THAN IN IRP

10:12:33 AM Chair Hatton
Note: Sacre, Candace Joint Intervenors?

10:12:48 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Cross Examination. Talked about directional impact, not include limestone conversion?

10:13:09 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Shoaff asked about magnitude, said be about cost of project?

10:13:23 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace \$125 million capital project Duke want return?

10:13:33 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace PVRR numbers include not just capital expense but return?

10:13:41 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace More than capital cost for limestone conversion?

10:13:57 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Know total cost recovered from customers?

10:14:05 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Another witness might be able to answer?

10:14:33 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Moved into current role overseeing midwest resource planning earlier this year?

10:15:02 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Involved with integrated resource planning over a decade?

10:15:12 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Software using, use EnCompass?

10:15:23 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace EnCompass has both resource optimization function and production cost model function?

10:15:45 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Around when used ProSim for production cost modeling?

10:15:50 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Part of team evaluated what to do after ProSim stopped supporting?

10:16:11 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Recall why moved off of ProSim?

10:16:15 AM Atty D'Ascenzo Duke Kentucky
Note: Sacre, Candace Objection, irrelevant.

10:17:18 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Moved from ProSim to EnCompass get higher quality analysis?

10:17:28 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Not gone back, sticking with EnCompass?

10:17:32 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace EnCompass still supported with updates?

10:17:41 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Duke has license for EnCompass?

10:17:44 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Any limit to use would make software in one-year period?

10:18:07 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Not as though license says get to do 20 EnCompass runs in 2024?

10:18:25 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Duke in-house computing capacity, or contract for access to cloud computing?

10:19:00 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace 2024 IRP has differences updated inputs and other differences from 2021 IRP?

10:19:10 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace When make change, intends change improve quality of IRP?

10:19:35 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Also getting more certainty, example 111 rules, compared to 2021 IRP use of carbon tax adder?

10:20:18 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Fair say with every filing at some have to snap chalk line?

10:20:36 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Practice to try to snap chalk line as close as possible when needs file application?

10:20:57 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Table 1, Duke reply comment at page 12, giving difference between with or without 111(d) scenarios?

10:21:32 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Understand numbers right, first one be \$2.5 billion?

10:21:41 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Difference between PVRR for natural gas conversion by 2030 with or without 111(d) rules, delta of \$13 million?

10:22:03 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Way can see cost impacts for each of pathways?

10:22:16 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Done analysis to see what cost impacts Kentucky new laws rebuttal presumption against retirement of fossil fuel-fired units?

10:22:42 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Done analysis anywhere else?

10:23:00 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Talking about alternate portfolios, portfolios fixed and results from production cost modeling or some resource optimization modeling done for alternate portfolios?

10:24:07 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Possible without 111 rules model would retire East Bend after 2036?

10:24:27 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Possible without 111 rules model retires East Bend before 2036?

10:26:19 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Possible if model economically choose when retire East Bend 2, could retire unit before or after any year?

10:26:43 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace And Duke did not do such modeling run?

10:27:01 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Doing modeling run not commit Duke to implement result?

10:27:31 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace When last time Duke ran capacity expansion model without limiting East Bend 2 retirement so model could choose retirement date?

10:28:03 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace 2021 IRP?

10:28:06 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Based on inputs for chalk line, recall when chalk line for inputs 2021 IRP be?

10:28:23 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace If this was summer of '24 for '24 IRP and late 2023 for chalk line, put us late 2020 for 2021 IRP?

10:28:45 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace In last three years, never thought to rerun that model?

10:29:36 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Integrated resource planning and energy affordability, Duke reply, second sentence, second paragraph, reading, see that?

10:30:28 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Agree with that?

10:30:34 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Agree integrated resource planning important setting Duke on road map that protects energy affordability?

10:30:48 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace One of three primary criteria in development of IRP was PVRR intended as proxy for energy affordability?

10:31:02 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Doing that, using PVRR as metric, can protect energy affordability because utility doing portfolio-level integrated analysis all reasonable alternatives, right?

10:31:43 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Reporting IRPs every three years?

10:31:58 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Two-fold purpose behind regulation make sure integrated resource planning is happening and Commission and stakeholders informed?

10:32:20 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Is that similar to why Duke affiliates in other jurisdictions do IRPs as well?

10:32:32 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Also posted on Duke website?

10:32:42 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Is ordinary practice?

10:32:52 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Know how many proceedings Duke involved in in 2024?

10:33:09 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Not uncommon have 20 proceedings?

10:33:19 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace In three years since 2021 IRP be about 60 proceedings?

10:33:40 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace How many those proceedings Duke put application testimony on website?

10:33:55 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Possible answer is none?

10:34:00 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace IRP gets special recognition, and that's a good thing?

10:34:10 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Read joint intervenors comments?

10:34:19 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Recall expressing concerns IRP lack of discussion about changes capacity market participation and new capital investment at East Bend 2?

10:34:47 AM Atty McRae Joint Intervenors
Note: Sacre, Candace Objection, nonresponsive.

10:35:15 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Have Joint Intervenors comments?

10:35:50 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Section 4, IRP not identify or evaluate certain decisions, is page 15 where section begins?

10:36:12 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace But if jump ahead to subpart B at page 17, read first full paragraph to yourself?

10:36:31 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Confirm 2024 IRP not talk about how Duke may change participation in PJM capacity markets?

10:37:01 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Confirm no narrative discussion within 2024 IRP of limestone conversion project?

10:37:33 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Concepts, steps taken next three years, recall JI comments questioned whether or not specific enough?

10:38:09 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Familiar with response and reply to comment?

10:38:19 AM Atty McRae Joint Intervenors - witness Kalemba
Note: Sacre, Candace Duke offered specificity?

10:38:27 AM Atty McRae Joint Intervenor - witness Kalemba
Note: Sacre, Candace Found at pages 9 and 10 of reply?

10:38:40 AM Atty McRae Joint Intervenor - witness Kalemba
Note: Sacre, Candace Can tell me, what if CPCN is denied?

10:39:29 AM Atty McRae Joint Intervenor - witness Kalemba
Note: Sacre, Candace Assuming go ahead with East Bend 2, when file CPCN application?

10:39:56 AM Atty McRae Joint Intervenor - witness Kalemba
Note: Sacre, Candace Second quarter, second half, third quarter maybe in '25?

10:40:04 AM Atty McRae Joint Intervenor - witness Kalemba
Note: Sacre, Candace Things change?

10:40:10 AM Atty McRae Joint Intervenor - witness Kalemba
Note: Sacre, Candace Page 10, idea of when CPCN application filed?

10:40:36 AM Atty McRae Joint Intervenor - witness Kalemba
Note: Sacre, Candace Energy efficiency and demand response, company plan perform market potential study?

10:41:02 AM Atty McRae Joint Intervenor - witness Kalemba
Note: Sacre, Candace Transmission and distribution analysis in IRP, recall JI comment questioned whether company presented adequate analysis efficiencies as part of IRP?

10:41:28 AM Atty McRae Joint Intervenor - witness Kalemba
Note: Sacre, Candace Section 6, page 25, JI comments, refresh recollection?

10:41:58 AM Atty McRae Joint Intervenor - witness Kalemba
Note: Sacre, Candace Refer Duke reply comment, page 8 and 9, second full paragraph, page 8?

10:42:23 AM Atty McRae Joint Intervenor - witness Kalemba
Note: Sacre, Candace Continuing on to page 9, am I understanding that?

10:43:03 AM Atty McRae Joint Intervenor - witness Kalemba
Note: Sacre, Candace Exception for that?

10:43:25 AM Atty McRae Joint Intervenor - witness Kalemba
Note: Sacre, Candace Generic SMR resource get same exception?

10:43:42 AM Atty McRae Joint Intervenor - witness Kalemba
Note: Sacre, Candace But aware IRP in Appendix A also reports on transmission and distribution?

10:44:00 AM Atty McRae Joint Intervenor - witness Kalemba
Note: Sacre, Candace Understanding because IRP requires discussion all options?

10:44:22 AM Atty McRae Joint Intervenor - witness Kalemba
Note: Sacre, Candace Specific projects in Appendix A?

10:44:51 AM Atty McRae Joint Intervenor - witness Kalemba
Note: Sacre, Candace VP Integrated Resource Planning?

10:44:58 AM Atty McRae Joint Intervenor - witness Kalemba
Note: Sacre, Candace Data responses have adopted, people on IRP analysis team?

10:45:08 AM Atty McRae Joint Intervenor - witness Kalemba
Note: Sacre, Candace But all witnesses today not part of working up IRP?

10:45:30 AM Atty McRae Joint Intervenor - witness Kalemba
Note: Sacre, Candace Separate team?

10:45:52 AM Atty McRae Joint Intervenor - witness Kalemba
Note: Sacre, Candace Inputs used IRP modeling, who provided transmission inputs, network upgrade interconnection cost?

10:46:56 AM Chair Hatton
Note: Sacre, Candace Take a ten-minute break.

10:47:01 AM Session Paused

11:09:04 AM Session Resumed

11:09:07 AM Chair Hatton
Note: Sacre, Candace Back on the record, counsel proceed.

11:09:41 AM Chair Hatton
Note: Sacre, Candace Mr. Cook?

11:09:48 AM Asst Attorney General Cook - witness Kalemba
Note: Sacre, Candace Cross Examination. Stated been involved with IRP in other Duke companies?

11:10:00 AM Asst Attorney General Cook - witness Kalemba
Note: Sacre, Candace Utilities are charged with maintaining reliability?

11:10:10 AM Asst Attorney General Cook - witness Kalemba
Note: Sacre, Candace Duke goal plan for system 24/7 reliability?

11:10:23 AM Asst Attorney General Cook - witness Kalemba
Note: Sacre, Candace Failure could subject utility to penalties?

11:10:33 AM Asst Attorney General Cook - witness Kalemba
Note: Sacre, Candace End goal must be system reliable all the time?

11:10:55 AM Chair Hatton
Note: Sacre, Candace Staff?

11:11:00 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace Cross Examination. East Bend baseload station, if were natural gas only station risk problems with startup, characterize correctly?

11:11:48 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace But something considered?

11:11:55 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace When say baseload unit, considered must-run status?

11:12:34 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace Not expect answer in detail must-run status, indicated run for a long time, how concerned be about ability to start up expect run when not in maintenance outage?

11:13:10 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace Woodsdale Station startup issues?

11:13:37 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace If issue post-hearing about start-up faults for Woodsdale, be able to answer that?

11:13:38 AM POST-HEARING DATA REQUEST
Note: Sacre, Candace STAFF ATTY COLYER PSC - WITNESS KALEMBA
Note: Sacre, Candace NUMBER OF START-UP FAULTS FOR WOODSDALE STATION

11:14:01 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace Cross Examination (cont'd). Duke reply comments, first three rows and look at PSC 118 attachment, looks like numbers for East Bend natural gas conversion 2030 and East Bend retirement 2032 are 2040 numbers?

11:14:07 AM Wireless Presentation Activated

11:15:23 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace However, 2592 for East Bend DFO conversion 2030 not match row for that, Figure 6.1 optimized with CAA Section 1.11 update DFO conversion 2030?

11:16:59 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace Spreadsheet is correct number?

11:17:57 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace Why 2040 selected as year compare costs?

11:18:26 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace Made more sense take total amount 15-year review period as opposed to taking one-year snapshot?

11:18:56 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace Talk about modeling assumptions, numbers on spreadsheet include retirement and replacement generation in 2038?

11:20:09 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace Include CCS for conversion option?

11:21:20 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace CCS was or was not included in this second- row natural gas conversion?

11:22:26 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace Factor in 40% capacity factor rule for natural gas CCS?

11:23:04 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace IRP Table 6.10 and 6.11 both with CCAA and both with CAA and both have CCs, include carbon capture or not?

11:23:44 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace And why not?

11:25:02 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace Fair to say main generation selection pathway hard coated into each scenario?

11:26:18 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace As far as years selected, model have ability select years other than years pertinent to the CAA?

11:26:49 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace Expect planning outlook be different next few years, election?

11:28:24 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace Possible DFO might?

11:28:40 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace East Bend continue operating as currently is?

11:28:57 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace Still do the MATS?

11:29:19 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace Carbon capture and sequestration, model account for storage or disposal of CO2?

11:29:59 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace Have room for that at East Bend?

11:30:54 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace Identify any costs or revenue increases result of generation selections not captured by model?

11:33:16 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace Duke have plan how expect East Bend run converted to DFO, fuel ratios, coal versus gas. and blend?

11:35:00 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace Record indicates model add solar generation 8-12 MW blocks, why done that way?

11:35:30 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace Part of IRP want to refer to?

11:37:48 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace For 17 scenarios, model allowed to pick whatever wanted as far as solar additions or hard coated in?

11:39:43 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace Carbon capture, tell me what total cost as modeled is?

11:40:10 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace How that figure arrived at?

11:40:47 AM Chair Hatton
Note: Sacre, Candace Did you say \$7 billion?

11:40:59 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace Reason ask, started asking about that number, wildly different, more information give us sources of data, any existing use of technology that can be looked at?

11:42:16 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace Selection of portfolio or model take into effect stranded cost in conversion?

11:42:53 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace Expect appreciate over a nine-year period?

11:43:23 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace Any stranded cost with option of retiring East Bend in 2032, costs not recovered before then?

11:44:23 AM Staff Atty Colyer PSC - witness Kalemba
Note: Sacre, Candace Any avoided costs realized from retirement in '32 not captured by model?

11:45:01 AM Chair Hatton
Note: Sacre, Candace Commissioner Stacy?

11:45:10 AM Commissioner Stacy - witness Kalemba
Note: Sacre, Candace Examination. Talked about computer modeling, what model use?

11:45:22 AM Commissioner Stacy - witness Kalemba
Note: Sacre, Candace How spell that?

11:45:30 AM Commissioner Stacy - witness Kalemba
Note: Sacre, Candace Questions about gave direction sometimes what to show and what not to show and sometimes let show whatever answer could find, explain that a little bit?

11:45:44 AM Wireless Presentation Deactivated

11:46:29 AM Camera Lock Witness Activated

11:48:20 AM Commissioner Stacy - witness Kalemba
Note: Sacre, Candace Not let model decide at all about retirement dates?

11:49:10 AM Commissioner Stacy - witness Kalemba
Note: Sacre, Candace Tell me about how modeling works and computing involved in that, how long does it take system to generate a model based upon one of those dates?

11:49:10 AM Camera Lock Deactivated

11:49:35 AM Camera Lock Witness Activated

11:49:40 AM Camera Lock Deactivated

11:52:05 AM Commissioner Stacy - witness Kalemba
Note: Sacre, Candace How long take develop information input into model?

11:52:58 AM Commissioner Stacy - witness Kalemba
Note: Sacre, Candace Then the model takes a day or so?

11:53:14 AM Commissioner Stacy - witness Kalemba
Note: Sacre, Candace How many times do that in previous 12 months?

11:54:03 AM Commissioner Stacy - witness Kalemba
Note: Sacre, Candace Do modeling assumed 1.11 not be enforced?

11:54:13 AM Commissioner Stacy - witness Kalemba
Note: Sacre, Candace What was biggest difference found with results in that?

11:54:49 AM Commissioner Stacy - witness Kalemba
Note: Sacre, Candace One showed where 1,11 not be enforced and then did others where would be, does everyone have access to all models done or just have access ones used?

11:55:57 AM Commissioner Stacy - witness Kalemba
Note: Sacre, Candace Have other runs not include in IRP be relevant to IRP?

11:56:33 AM Commissioner Stacy - witness Kalemba
Note: Sacre, Candace How many runs were there?

11:56:54 AM Commissioner Stacy - witness Kalemba
Note: Sacre, Candace Curious about let program select something, and other times say all allow model show, curious why not let model show something what it came up with, another snapshot of alternative?

11:58:35 AM	Commissioner Stacy - witness Kalemba Note: Sacre, Candace	Bottom line, intervenors and everyone have access to all modeling did?
11:59:07 AM	Chair Hatton Note: Sacre, Candace	Commissioner Regan?
11:59:12 AM	Commissioner Regan - witness Kalemba Note: Sacre, Candace	Examination. Talk about what process is, how rolled out to you?
12:01:48 PM	Commissioner Regan - witness Kalemba Note: Sacre, Candace	Running models for Kentucky or doing for all other locations?
12:02:25 PM	Commissioner Regan - witness Kalemba Note: Sacre, Candace	Report all to you?
12:02:31 PM	Commissioner Regan - witness Kalemba Note: Sacre, Candace	How given direction to do this, corporate decision beginning of year, how get to place doing these?
12:02:49 PM	Commissioner Regan - witness Kalemba Note: Sacre, Candace	Where coming from?
12:03:18 PM	Commissioner Regan - witness Kalemba Note: Sacre, Candace	When have models and coming back in here, run by corporate?
12:03:43 PM	Commissioner Regan - witness Kalemba Note: Sacre, Candace	Make final decision or they make final decision on modeling and inputs?
12:04:30 PM	Commissioner Regan - witness Kalemba Note: Sacre, Candace	Never given target numbers need to hit?
12:04:47 PM	Chair Hatton - witness Kalemba Note: Sacre, Candace	Examination. To extent keeper of crystal ball, how much consideration tax credits play into how this works?
12:07:30 PM	Chair Hatton - witness Kalemba Note: Sacre, Candace	Witness Ruscio?
12:07:51 PM	Chair Hatton - witness Kalemba Note: Sacre, Candace	Said not think carbon capture sequestration technology feasible by 2032?
12:08:01 PM	Chair Hatton - witness Kalemba Note: Sacre, Candace	Best educated, when think?
12:08:18 PM	Chair Hatton - witness Kalemba Note: Sacre, Candace	Considered nuclear, modeled small modular reactors, Kentucky placed emphasis on researching, prepare regulate nuclear, at least modeled reactors, summarize Duke thinking on how soon affordable, how oppressive be to ratepayers, summary?
12:09:33 PM	Chair Hatton - witness Kalemba Note: Sacre, Candace	But so expensive?
12:11:04 PM	Chair Hatton - witness Kalemba Note: Sacre, Candace	One of things look at when retiring coal-fired power plant is replacement dispatchable, reliable, so nuclear could be option, whether is least cost or not?
12:11:46 PM	Chair Hatton - witness Kalemba Note: Sacre, Candace	Provided explanation how presumption plays into thinking, Kentucky three-county area for Duke, smallest territory?
12:12:05 PM	Chair Hatton - witness Kalemba Note: Sacre, Candace	Imagine other states very different state guidelines for goals?
12:12:18 PM	Chair Hatton - witness Kalemba Note: Sacre, Candace	Any other territories operate in have something similar to EPIC, rebuttable presumption cannot retire coal until have replacement?
12:12:26 PM	Chair Hatton - witness Kalemba Note: Sacre, Candace	Kentucky unique?

12:12:30 PM	Chair Hatton - witness Kalemba Note: Sacre, Candace	As far as Duke territory?
12:12:33 PM	Chair Hatton - witness Kalemba Note: Sacre, Candace	Not operate in West Virginia or Wyoming?
12:12:44 PM	Chair Hatton - witness Kalemba Note: Sacre, Candace	2032 earliest have replacement generation in Kentucky?
12:13:04 PM	Chair Hatton - witness Kalemba Note: Sacre, Candace	If dual-fired plant, does that require an EPIC filing?
12:13:46 PM	Chair Hatton - witness Kalemba Note: Sacre, Candace	Could potentially dual fire indefinitely?
12:14:08 PM	Chair Hatton - witness Kalemba Note: Sacre, Candace	Just asking how these play into considerations, looking at just cost or just emissions, totally different idea this where headed in IRP, something have to think about a lot?
12:15:32 PM	Chair Hatton - witness Kalemba Note: Sacre, Candace	Shareholders, have PJM requirements, and affordability to the customers?
12:15:53 PM	Chair Hatton - witness Kalemba Note: Sacre, Candace	While predict which costs go up for fuel, equipment, or supplies?
12:16:21 PM	Chair Hatton Note: Sacre, Candace	Recross?
12:16:53 PM	Atty McRae Joint Intervenors - witness Kalemba Note: Sacre, Candace	Recross Examination. Mentioned before start with modeling market price of Eastern interconnect to get idea, is that energy prices?
12:17:05 PM	Atty McRae Joint Intervenors - witness Kalemba Note: Sacre, Candace	IRP not consider capacity revenues?
12:17:10 PM	Atty McRae Joint Intervenors - witness Kalemba Note: Sacre, Candace	Relationship between space covered for PJM footprint and full footprint of Eastern interconnect?
12:18:20 PM	Atty McRae Joint Intervenors - witness Kalemba Note: Sacre, Candace	If utility in PJM model energy prices just looking in PJM, not as robust as what using?
12:19:45 PM	Atty McRae Joint Intervenors - witness Kalemba Note: Sacre, Candace	Do lookback at any point?
12:20:30 PM	Chair Hatton Note: Sacre, Candace	Be back at 1 o'clock.
12:21:08 PM	Session Paused	
1:07:11 PM	Session Resumed	
1:07:14 PM	Chair Hatton Note: Sacre, Candace	Back on the record.
1:07:30 PM	Chair Hatton Note: Sacre, Candace	Next witness?
1:07:33 PM	Atty D'Ascenzo Duke Kentucky Note: Sacre, Candace	John Swez.
1:07:42 PM	Chair Hatton Note: Sacre, Candace	Witness is sworn.
1:07:52 PM	Chair Hatton - witness Swez Note: Sacre, Candace	Examination. Name and address?
1:07:57 PM	Camera Lock Witness Activated	
1:08:08 PM	Camera Lock Deactivated	
1:08:10 PM	Atty D'Ascenzo Duke Kentucky - witness Swez Note: Sacre, Candace	Direct Examination. Position with company?
1:08:17 PM	Atty D'Ascenzo Duke Kentucky - witness Swez Note: Sacre, Candace	Summarize responsibilities?

1:09:22 PM Atty D'Ascenzo Duke Kentucky - witness Swez
Note: Sacre, Candace Cause to file response?

1:09:29 PM Atty D'Ascenzo Duke Kentucky - witness Swez
Note: Sacre, Candace Adopting responses from other witnesses?

1:09:41 PM Atty D'Ascenzo Duke Kentucky - witness Swez
Note: Sacre, Candace Changes or corrections?

1:09:54 PM Atty D'Ascenzo Duke Kentucky - witness Swez
Note: Sacre, Candace Asked same questions, answers be same?

1:10:00 PM Atty D'Ascenzo Duke Kentucky - witness Swez
Note: Sacre, Candace Intention responses considered as testimony?

1:10:12 PM Chair Hatton
Note: Sacre, Candace Mr. Cook?

1:10:14 PM Chair Hatton
Note: Sacre, Candace Sierra Club?

1:10:19 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Cross Examination. Pull up two responses to data requests, Sierra Club Set 1, Question 10, Attachment 1 and 2, this document shows O&M costs for East Bend?

1:11:12 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace See at bottom says Duke not track fixed and variable O&M costs separately, \$50 million 2019 O&M, fixed and variable or just fixed?

1:11:36 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Agree in 2019 through 2022 O&M roughly \$50 million?

1:11:54 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace What proportion of that is variable O&M?

1:12:32 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Able to answer my question what amount of \$50 million be variable O&M?

1:13:33 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Twenty percent of 50 is \$10 million or so?

1:13:45 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace What goes into that cost?

1:15:05 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Cycling has a cost?

1:15:46 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace That shutdown cost is accounted for as equipment damage, some amount of damage doing?

1:16:18 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace For O&M on Attachment 1, portion of that includes wear and tear costs?

1:16:56 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace As East Bend continues to age, expect shutdown cost increase?

1:17:32 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Turn to Attachment 2, in Column H, PJM energy market revenues, see that?

1:17:50 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Column K have fuel costs, agree in 2023 fuel costs exceeded energy market revenues?

1:18:14 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Fuel costs customers had to pay?

1:18:20 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace This not include variable O&M?

1:19:08 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Say variable O&M about \$10 million year, customers took \$25 million loss in 2023?

1:19:26 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Talking about prudence of decision to operate unit on given day, talking about results how unit performed, took in \$70 million revenue and cost about 95 if assume \$10 million variable O&M, revenues received from PJM about \$25 million?

1:20:31 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace 2022 very high gas prices?

1:20:44 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Gas prices in 2023 lower than that, half of that number?

1:20:59 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Lost \$25 million in energy market?

1:21:11 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace 2024 year-to-date numbers through July, relatively small loss of \$4 million, gas prices remainder of 2024 were and are low?

1:21:45 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace If one were to speculate, would have continued to lose money?

1:22:17 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Were times this year ran for environmental test?

1:22:26 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Telling you going to lose money, but you ran it because environmental test?

1:22:59 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Take a look at Column P, net heat rate, agree heat rate trending up starting below 11,000 and gradually trending up?

1:23:29 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Pretty high heat rate?

1:24:00 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Column G, see shows PJM accredited capacity?

1:24:17 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Know why capacity value gone down?

1:25:45 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Reply comments Duke mentions profit and loss analysis, responsible?

1:26:01 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Designed to inform energy market status for generating units?

1:26:23 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Goal of profit and loss analysis determine profitable operate specific unit?

1:26:52 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Goal generate net energy market revenue for generating units that defer fixed cost customers pay?

1:27:28 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Customers have certain amount of dollars pay every month, have goal of net positive energy margin help lower?

1:27:54 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Look out over 21-day period?

1:28:01 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace PJM next day energy market, four statuses, economic, must run, emergency, and not available?

1:28:17 PM	Atty Mendoza Sierra Club - witness Swez Note: Sacre, Candace	Economic means tell PJM in supply curve how much cost to provide curve of power, make decision to turn on unit, if unit in money, how economic commitment works?
1:29:23 PM	Atty Mendoza Sierra Club Note: Sacre, Candace	Move to strike answer?
1:29:44 PM	Atty Mendoza Sierra Club - witness Swez Note: Sacre, Candace	One advantage is are eligible for and will receive make-whole payments if called on?
1:30:10 PM	Atty Mendoza Sierra Club - witness Swez Note: Sacre, Candace	If made money, already whole?
1:30:21 PM	Atty Mendoza Sierra Club - witness Swez Note: Sacre, Candace	Must run not eligible for make-whole payments?
1:30:41 PM	Atty Mendoza Sierra Club - witness Swez Note: Sacre, Candace	PJM might decide dispatch higher if type generating unit has difference between minimum and maximum output?
1:31:07 PM	Atty Mendoza Sierra Club - witness Swez Note: Sacre, Candace	If unit committed as must run and operating most hours, tend to show not economic in energy market?
1:31:52 PM	Atty Mendoza Sierra Club - witness Swez Note: Sacre, Candace	What is minimum operating level for East Bend?
1:32:08 PM	Atty Mendoza Sierra Club - witness Swez Note: Sacre, Candace	Reason not operating at lower level not operate stable manner?
1:32:45 PM	Atty Mendoza Sierra Club - witness Swez Note: Sacre, Candace	Last three years, Duke committed East Bend must run every hour not on outage?
1:33:44 PM	Atty Mendoza Sierra Club - witness Swez Note: Sacre, Candace	Saying times was not planned outage but saw problem coming and decommitted unit?
1:34:53 PM	Atty Mendoza Sierra Club - witness Swez Note: Sacre, Candace	Talked earlier distinction between accounting fuel cost and what other?
1:35:18 PM	Atty Mendoza Sierra Club - witness Swez Note: Sacre, Candace	Customers concerned about accounting fuel cost shows up on their bill?
1:35:47 PM	Atty Mendoza Sierra Club - witness Swez Note: Sacre, Candace	In reply comments, Duke mentions reasons must run unit a prudent decision, going to make profit?
1:36:15 PM	Atty Mendoza Sierra Club - witness Swez Note: Sacre, Candace	Another reason are times analysis shows net negative margin but run to avoid paying spot price of coal?
1:36:58 PM	Atty Mendoza Sierra Club - witness Swez Note: Sacre, Candace	In that scenario. running East Bend at loss to avoid bigger loss to not take coal contracted for?
1:37:19 PM	Atty Mendoza Sierra Club - witness Swez Note: Sacre, Candace	Know going to take loss, expect loss, but take it anyway because take bigger loss on coal supply contract?
1:39:16 PM	Atty Mendoza Sierra Club - witness Swez Note: Sacre, Candace	Another reason mentioned is to avoid PJM capacity performance penalties?
1:39:30 PM	Atty Mendoza Sierra Club - witness Swez Note: Sacre, Candace	Worried unit not able start up again if turn off in winter?
1:40:29 PM	Atty Mendoza Sierra Club - witness Swez Note: Sacre, Candace	In profit and loss documents, when commit a unit must run, document that decision?

1:41:31 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace If Commission wanted to review prudence, is your practice to maintain documentation reason must running generator other than profitable, reliability operational or testing related document that?

1:42:40 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Back to capacity performance issue, East Bend especially prone to breaking down in winter or middle of the pack?

1:43:55 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Table referred to just says by year, if looked a winter separately, be noticeably higher must running in winter?

1:45:39 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Lot of wind and solar in interconnection queue?

1:45:49 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Some of that be built?

1:45:58 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace PJM wide, solar has zero fuel costs?

1:46:21 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Same for wind?

1:46:33 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace As more added, more of a daily swing in energy market prices?

1:47:25 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace As more wind and solar added, must running East Bend more challenging?

1:48:41 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Simplest level, as more wind and solar in market, lower prices day?

1:49:23 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Because of high cycling cost, East Bend not positioned to cycle rapidly or frequently?

1:49:54 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Solar and wind built in PJM other states, planning to do it, other places do it regardless?

1:50:16 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Agree gas units better suited to economic commitment?

1:51:10 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Woodsdale combustion turbine, commit those as economic regulator, generally practice?

1:51:44 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace In room for Kalemba?

1:51:52 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Recall said winter coal prices might be lower?

1:52:00 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace Most coal secured under long-term supply contracts?

1:52:16 PM Atty Mendoza Sierra Club - witness Swez
Note: Sacre, Candace None of contracts have provision allows for lower prices in winter?

1:52:27 PM Chair Hatton
Note: Sacre, Candace Joint Intervenors?

1:52:46 PM Atty McRae Joint Intervenors - witness Swez
Note: Sacre, Candace Cross Examination. Talked about known cold weather coming, went ahead and committed unit get up to steady rate?

1:53:11 PM Atty McRae Joint Intervenors - witness Swez
Note: Sacre, Candace Tell me how long it takes from cold start to steady state?

1:54:11 PM Atty McRae Joint Intervenors - witness Swez
Note: Sacre, Candace Another way to start other than cold start?

1:55:02 PM Atty McRae Joint Intervenors - witness Swez
Note: Sacre, Candace Idea how ballpark intermediate start?

1:55:40 PM Atty McRae Joint Intervenors - witness Swez
Note: Sacre, Candace Commitment and dispatch, make sense use commitment unit on or off and dispatch order of PJM?

1:56:26 PM Atty McRae Joint Intervenors - witness Swez
Note: Sacre, Candace If had East Bend not running, not be possible to immediately dispatch unit?

1:56:52 PM Atty McRae Joint Intervenors - witness Swez
Note: Sacre, Candace Sometimes not dispatchable as much as five days?

1:57:10 PM Atty McRae Joint Intervenors - witness Swez
Note: Sacre, Candace Sometimes not dispatchable?

1:57:30 PM Atty McRae Joint Intervenors - witness Swez
Note: Sacre, Candace Capacity revenues not considered in IRP, your understanding?

1:57:43 PM Atty McRae Joint Intervenors - witness Swez
Note: Sacre, Candace Agree IRP very concerned how Duke meet PJM capacity obligation?

1:57:56 PM Atty McRae Joint Intervenors - witness Swez
Note: Sacre, Candace One of primary objectives?

1:58:11 PM Atty McRae Joint Intervenors - witness Swez
Note: Sacre, Candace Part of how Duke meets load requirements as fixed resource requirement participant PJM capacity markets?

1:58:27 PM Atty McRae Joint Intervenors - witness Swez
Note: Sacre, Candace If Duke move from FRR utility to liability pricing mechanism, demand response can be offered into auctions as capacity resource?

1:58:54 PM Atty McRae Joint Intervenors - witness Swez
Note: Sacre, Candace Like any other resource, PJM assigned effective load carrying capacity value for demand response?

1:59:09 PM Atty McRae Joint Intervenors - witness Swez
Note: Sacre, Candace Agree 76 percent ELCC value for demand response?

1:59:36 PM Atty McRae Joint Intervenors - witness Swez
Note: Sacre, Candace Know about Woodsdale ELCC be?

2:00:30 PM Atty McRae Joint Intervenors - witness Swez
Note: Sacre, Candace Agree PJM capacity market designed to provide incentives for generation, demand response, energy efficiency, and transmission solutions through capacity market payments?

2:01:06 PM Atty McRae Joint Intervenors - witness Swez
Note: Sacre, Candace Four things again, incentives for development generation, demand response, energy efficiency, and transmission solutions, transmission solutions not generation resources with ELCC?

2:01:43 PM Atty McRae Joint Intervenors - witness Swez
Note: Sacre, Candace Are transmission investments can have impact on capacity markets and ways meet capacity load obligations?

2:02:18 PM Chair Hatton
Note: Sacre, Candace Staff?

2:02:20 PM Staff Atty Colyer PSC - witness Swez
Note: Sacre, Candace Cross Examination. Data request responses from Duke that the post-switch not affect modeling, explain why be case?

2:06:10 PM Chair Hatton
Note: Sacre, Candace Commissioner Stacy?

2:06:13 PM Commissioner Stacy - witness Swez
Note: Sacre, Candace Examination. Answered question about having a generator available, go back and describe little more detail?

2:08:10 PM Commissioner Stacy - witness Swez
Note: Sacre, Candace Saying \$3,000 an hour?

2:08:14 PM	Commissioner Stacy - witness Swez Note: Sacre, Candace	Per megawatt hour?
2:08:37 PM	Commissioner Stacy - witness Swez Note: Sacre, Candace	How many dollars in fees?
2:09:15 PM	Chair Hatton Note: Sacre, Candace	Commissioner Regan?
2:09:18 PM	Commissioner Regan - witness Swez Note: Sacre, Candace	Examination. What happened if not turned on unit early in Elliott?
2:10:56 PM	Commissioner Regan - witness Swez Note: Sacre, Candace	Turned on early based on local weather reports?
2:11:25 PM	Chair Hatton Note: Sacre, Candace	Commissioner Stacy, follow up?
2:11:27 PM	Commissioner Stacy - witness Swez Note: Sacre, Candace	Examination. Go back and describe cold start, how long say could take?
2:11:40 PM	Commissioner Stacy - witness Swez Note: Sacre, Candace	Explain why takes so long?
2:12:33 PM	Commissioner Stacy - witness Swez Note: Sacre, Candace	Ramp up temperature slowly?
2:13:00 PM	Commissioner Stacy - witness Swez Note: Sacre, Candace	Warming process possibly could take up to five days?
2:13:35 PM	Commissioner Stacy - witness Swez Note: Sacre, Candace	What trying to say have to keep from being caught flat footed on an event and paying huge penalties, try to warm up from cold start?
2:15:05 PM	Chair Hatton - witness Swez Note: Sacre, Candace	Examination. During Elliott, Duke received \$800,000 credit being willing to start up when not required?
2:15:30 PM	Chair Hatton - witness Swez Note: Sacre, Candace	Both were on scheduled outage?
2:15:50 PM	Chair Hatton - witness Swez Note: Sacre, Candace	Not remember what IRP said about oil, operating on oil, recall?
2:16:05 PM	Chair Hatton - witness Swez Note: Sacre, Candace	Who would know?
2:16:18 PM	Chair Hatton - witness Swez Note: Sacre, Candace	Say, started up and forecast wrong, not need after all, what cost?
2:16:38 PM	Chair Hatton - witness Swez Note: Sacre, Candace	\$100,000 risk to start up and maybe not need it?
2:17:21 PM	Chair Hatton Note: Sacre, Candace	Redirect?
2:17:25 PM	Atty D'Ascenzo Duke Kentucky - witness Swez Note: Sacre, Candace	Redirect Examination. Mentioned company received \$800,000 in credits, recall that?
2:17:40 PM	Atty D'Ascenzo Duke Kentucky - witness Swez Note: Sacre, Candace	What happened to those dollars?
2:17:53 PM	Atty D'Ascenzo Duke Kentucky - witness Swez Note: Sacre, Candace	PSM, know what that is?
2:17:55 PM	Camera Lock Applicant Activated	
2:18:05 PM	Camera Lock Deactivated	
2:18:18 PM	Atty D'Ascenzo Duke Kentucky - witness Swez Note: Sacre, Candace	Fair to say customers received benefit of those credits?
2:18:20 PM	Camera Lock Applicant Activated	
2:18:25 PM	Camera Lock Witness Activated	
2:18:32 PM	Chair Hatton Note: Sacre, Candace	Mr. Cook, recross?

2:18:35 PM	Chair Hatton Note: Sacre, Candace	Sierra Club?
2:18:38 PM	Chair Hatton Note: Sacre, Candace	Joint Intervenors?
2:18:40 PM	Chair Hatton Note: Sacre, Candace	Staff?
2:18:41 PM	Chair Hatton Note: Sacre, Candace	Commissioners?
2:18:42 PM	Commissioner Regan - witness Swez Note: Sacre, Candace	Examination. Know what credit per customer was?
2:18:50 PM	Chair Hatton Note: Sacre, Candace	Next witness?
2:18:51 PM	Camera Lock Deactivated	
2:19:10 PM	Atty D'Ascenzo Duke Kentucky Note: Sacre, Candace	Michael Geers.
2:19:19 PM	Chair Hatton Note: Sacre, Candace	Witness is sworn.
2:19:24 PM	Camera Lock Witness Activated	
2:19:28 PM	Chair Hatton - witness Geers Note: Sacre, Candace	Examination. Name and address?
2:19:54 PM	Camera Lock Deactivated	
2:20:06 PM	Atty D'Ascenzo Duke Kentucky - witness Geers Note: Sacre, Candace	Direct Examination. Cause to file responses?
2:20:06 PM	Camera Lock Applicant Activated	
2:20:12 PM	Atty D'Ascenzo Duke Kentucky - witness Geers Note: Sacre, Candace	Have any changes or corrections?
2:20:17 PM	Camera Lock Deactivated	
2:20:51 PM	Atty D'Ascenzo Duke Kentucky - witness Geers Note: Sacre, Candace	If asked those questions again, answers be same?
2:21:00 PM	Atty D'Ascenzo Duke Kentucky - witness Geers Note: Sacre, Candace	Adopt and intend responses be testimony?
2:21:10 PM	Chair Hatton Note: Sacre, Candace	Mr. Cook?
2:21:14 PM	Chair Hatton Note: Sacre, Candace	Sierra Club?
2:21:17 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	Cross Examination. Mercury and Air Toxics rule, a topic familiar with?
2:21:28 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	In Duke IRP, updating analysis based on new regulations?
2:21:43 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	Those updates include Mercury and Air Toxics rule?
2:21:49 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	Could tell us what Mercury and Air Toxics rule is, will refer to as MATS?
2:22:30 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	Talk to us how it is units like East Bend measure compliance with MATS rule?
2:23:49 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	And those filterable particulates measured on 30-day rolling basis?
2:24:07 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	Accurate to refer to as PM limits?
2:24:21 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	If use PM, will understand what talking about?

2:24:44 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Have in front of you IRP?

2:24:53 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Page 127, bottom paragraph, see that?

2:25:18 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Read second sentence?

2:25:47 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace What capital projects Duke evaluating?

2:27:06 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace What are most recent filterable particulate emissions measured on 30-day rolling basis?

2:27:24 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Let's look at most recent compliance period?

2:27:32 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Compliance determined on 30-day rolling average?

2:28:55 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace When say serious reservations?

2:29:06 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Duke done analysis if would violate that lower 0.01 standard based on 30-day rolling average?

2:29:50 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Put a number on a very good feeling, how many times estimated out of compliance?

2:30:06 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace How many violations would plant have received?

2:30:18 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Think East Bend change current operations comply new MAT standard?

2:30:56 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace In your view, limestone conversion project reduce PM emissions?

2:31:05 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace By how much?

2:31:15 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Know if Duke done calculation as to amount of reduction available through limestone conversion process?

2:32:07 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Duke has done calculations?

2:32:21 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Any reason expect current PM emissions go up if not go through limestone conversion process?

2:32:40 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace If not make changes to scrubber and use lime reagent, reason believe PM emissions go up?

2:33:10 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Agree new MATS limits have limited impact East Bend?

2:33:22 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Current scenario?

2:33:35 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Without going through limestone conversion process?

2:33:49 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Think plant could comply new MATS without limestone conversion?

2:33:59 PM Atty D'Ascenzo Duke Kentucky
Note: Sacre, Candace Objection, asked and answered.

2:34:08 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	Does IRP explain whether plant's current PM emissions at, above, or below new MATS limits?
2:34:30 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	Actual emissions?
2:34:34 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	Does IRP document whether emissions at plant at, above, or below new threshold?
2:35:20 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	If new MAT standard in place 2024, would Duke have violated MATS limit on 30-day operating standard?
2:35:35 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	Have data that backs that up?
2:35:39 PM	Atty Shoaff Sierra Club Note: Sacre, Candace	Post-hearing data request on that point.
2:35:40 PM	POST-HEARING DATA REQUEST Note: Sacre, Candace Note: Sacre, Candace	ATTY SHOAFF SIERRA CLUB - WITNESS GEERS DATA SUPPORTING IF NEW MATS NOT IN PLACE IN 2024 DUKE WOULD HAVE VIOLATED LIMIT ON 30-DAY OPERATING STANDARD
2:35:48 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	If Commission denies CPCN limestone conversion project, what plant do to comply new MATS?
2:36:38 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	IRP, page 127, bottom paragraph, reading, other MATS compliance pathways studied?
2:37:46 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	The only pathway comply with MATS to convert from quick lime to limestone?
2:38:20 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	How increase rate of flow if use current lime?
2:40:10 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	Aware EPA, when finalized MATS rule, published list of plants thought need upgrade to comply with new MATS limits?
2:41:14 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	Reason to believe EPA list inaccurate?
2:42:33 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	When say comments, you mean in EPA rulemaking?
2:42:50 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	Data as to East Bend relevant here is data suggested asked Donner about?
2:43:15 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	Effluent limitation guidelines, updated regulations, IRP evaluate cost of compliance with newest EPA effluent limitation update?
2:44:43 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	Answer is yes or no?
2:45:29 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	Mentioned coal residual leachate, tell us what that is?
2:45:45 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	East Bend discharge coal residual leachate?
2:46:35 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	When you say tie up water in a landfill?
2:46:58 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	If successful doing this, be no coal residual leachate?
2:47:20 PM	Atty Shoaff Sierra Club - witness Geers Note: Sacre, Candace	Is standard in new rule no coal residual leachate?

2:47:39 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Sounds like fair bit of study of this treatment system, have cost estimate Duke comply?

2:48:08 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Does Duke have them?

2:48:28 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace ELG rule update states cease burning coal by 2034 not have to comply with leachate requirement?

2:48:50 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Assuming provision is there?

2:49:16 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Even under bag of cement metaphor, still be leachate?

2:49:45 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Under that scenario, still need some sort of treatment?

2:49:55 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Have cost estimate for that?

2:50:03 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Different witness have that number?

2:50:19 PM Chair Hatton
Note: Sacre, Candace Ten-minute recess.

2:50:44 PM Session Paused

3:11:47 PM Session Resumed

3:11:49 PM Chair Hatton
Note: Sacre, Candace Back on the record.

3:11:52 PM Wireless Presentation Activated

3:12:00 PM Chair Hatton
Note: Sacre, Candace Counsel?

3:12:06 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Cross Examination. Have document in front of you?

3:12:38 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace This document cost estimate for complying with updated ELG rule, look at tab at bottom CRL Unit-Level Cost Estimates, see tab?

3:13:08 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Cursor on row 107, plant name says East Bend, correct?

3:13:13 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Column L is CRL, coal residual leachate discussing before, zero discharge, looks like \$26.7 million in capital costs?

3:13:43 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Scroll to Column M, annual operating and maintenance costs achieve zero discharge CLE, says \$3.4 million?

3:14:08 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Look to me like EPA estimates for what cost East Bend to comply ELG rule, have reason dispute estimates?

3:15:16 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace EPA estimate, does Duke have own estimate?

3:15:44 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Would any costs be necessary if unit converted to gas?

3:17:01 PM Chair Hatton
Note: Sacre, Candace Procedural discussion.

3:18:14 PM Atty Gary Joint Intervenors - witness Geers
Note: Sacre, Candace Cross Examination. Environmental compliance, Clean Air Act, different types of requirements, controls, operational requirements, too?

3:18:43 PM Wireless Presentation Deactivated

3:20:10 PM Atty Gary Joint Intervenor - witness Geers
Note: Sacre, Candace Sometimes are requirements run a specific type of control?

3:21:03 PM Atty Gary Joint Intervenor - witness Geers
Note: Sacre, Candace Mentioned modeling for specific units to keep emissions from going up?

3:21:18 PM Atty Gary Joint Intervenor - witness Geers
Note: Sacre, Candace New source review standards, what referring to?

3:22:01 PM Atty Gary Joint Intervenor - witness Geers
Note: Sacre, Candace With regard to MATS, if change at unit cause increase pollutants over certain level, go through new source review?

3:23:00 PM Atty Gary Joint Intervenor - witness Geers
Note: Sacre, Candace For PSD, control limit is BACT, right?

3:23:18 PM Atty Gary Joint Intervenor - witness Geers
Note: Sacre, Candace Could you spell what BACT is, the acronym and what it means?

3:24:04 PM Atty Gary Joint Intervenor - witness Geers
Note: Sacre, Candace And those costs depend on what control methodology be?

3:24:27 PM Atty Gary Joint Intervenor - witness Geers
Note: Sacre, Candace Could be requirement install specific type control technology?

3:25:36 PM Atty Gary Joint Intervenor - witness Geers
Note: Sacre, Candace Multiple ways get to same limit?

3:25:44 PM Atty Gary Joint Intervenor - witness Geers
Note: Sacre, Candace East Bend complies MATS using couple different controls?

3:26:00 PM Atty Gary Joint Intervenor - witness Geers
Note: Sacre, Candace Said SCR part of compliance?

3:26:27 PM Atty Gary Joint Intervenor - witness Geers
Note: Sacre, Candace Aside from those, also mentioned page 127 both ESP and FGD?

3:26:42 PM Atty Gary Joint Intervenor - witness Geers
Note: Sacre, Candace Both are types controls use compliance MATS?

3:27:04 PM Atty Gary Joint Intervenor - witness Geers
Note: Sacre, Candace In MATS, mercury limit, PM limit lowered .03 to .01, right?

3:27:17 PM Atty Gary Joint Intervenor - witness Geers
Note: Sacre, Candace Not say thou shalt use ESP to achieve limit for FGD?

3:28:12 PM Atty Gary Joint Intervenor - witness Geers
Note: Sacre, Candace Compliance with PM limit, even with controls, emissions go up and down?

3:29:07 PM Atty Gary Joint Intervenor - witness Geers
Note: Sacre, Candace How operate unit and controls affect levels?

3:29:54 PM Atty Gary Joint Intervenor - witness Geers
Note: Sacre, Candace Evaluated how operations affect compliance with updated MAT standard?

3:30:53 PM Atty Gary Joint Intervenor - witness Geers
Note: Sacre, Candace Is one hour but 30-day rolling average, some room adjust operations?

3:31:25 PM Atty Gary Joint Intervenor - witness Geers
Note: Sacre, Candace Evaluate possible costs comply in that manner or other operational adjustment?

3:32:58 PM Atty Gary Joint Intervenor - witness Geers
Note: Sacre, Candace Speaking of compliance opportunities, portion read earlier, said, reading, say what capital projects on ESP being evaluated are?

3:33:47 PM Atty Gary Joint Intervenor - witness Geers
Note: Sacre, Candace Were evaluating capital projects with ESP for compliance with MATS?

3:33:57 PM Atty Gary Joint Intervenor - witness Geers
Note: Sacre, Candace That evaluation for compliance with MATS?

3:34:35 PM Atty Gary Joint Intervenors - witness Geers
Note: Sacre, Candace But ESP upgrades could have helped with compliance with MATS as well?

3:34:45 PM Atty Gary Joint Intervenors - witness Geers
Note: Sacre, Candace Elaborate what costs upgrades to ESP are?

3:35:32 PM Atty Gary Joint Intervenors - witness Geers
Note: Sacre, Candace But upgrades to ESP also gotten you into compliance?

3:35:45 PM Atty Gary Joint Intervenors - witness Geers
Note: Sacre, Candace EPA, when passing standards, have to show compliance pathway, pathway for MATS rule upgrades to ESP?

3:36:04 PM Atty Gary Joint Intervenors - witness Geers
Note: Sacre, Candace Yes or no first, then feel free?

3:36:15 PM Atty Gary Joint Intervenors - witness Geers
Note: Sacre, Candace Have to show pathway, way said was possible by upgrades to ESPs?

3:37:23 PM Atty Gary Joint Intervenors - witness Geers
Note: Sacre, Candace Review EPA cost projections for MATS compliance for East Bend?

3:37:33 PM Atty Gary Joint Intervenors - witness Geers
Note: Sacre, Candace Review cost projections for MATS compliance?

3:38:15 PM Atty Gary Joint Intervenors - witness Geers
Note: Sacre, Candace Did review it though?

3:38:21 PM Atty Gary Joint Intervenors - witness Geers
Note: Sacre, Candace And how came up with cost projections for compliance?

3:38:37 PM Atty Gary Joint Intervenors - witness Geers
Note: Sacre, Candace EPA projected be achieved by upgrading ESPs, yes or no?

3:39:16 PM Atty Gary Joint Intervenors - witness Geers
Note: Sacre, Candace And EPA expected most units comply by upgrading ESPs?

3:39:27 PM Atty Gary Joint Intervenors - witness Geers
Note: Sacre, Candace Before flawed, yes or no, did or did not?

3:39:58 PM Atty Gary Joint Intervenors - witness Geers
Note: Sacre, Candace Do not agree with EPA are multiple ways comply with ruling?

3:40:22 PM Atty Gary Joint Intervenors - witness Geers
Note: Sacre, Candace Could East Bend comply just ESPs?

3:40:29 PM Atty Gary Joint Intervenors - witness Geers
Note: Sacre, Candace Said evaluating capital projects for compliance with ESPs in IRP?

3:41:09 PM Chair Hatton
Note: Sacre, Candace Staff?

3:41:15 PM Staff Atty Williams PSC - witness Geers
Note: Sacre, Candace Cross Examination. DFO conversion chosen in alternate portfolios applying to EPA CA Section 111 update?

3:41:26 PM Staff Atty Williams PSC - witness Geers
Note: Sacre, Candace Though natural gas conversion or retirement 2032 scenarios greater reductions CO2 emissions than DFO conversion portfolio, emission levels factor in selection preferred and alternate portfolios?

3:42:28 PM Chair Hatton
Note: Sacre, Candace Redirect?

3:42:31 PM Chair Hatton
Note: Sacre, Candace Recross?

3:42:34 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Recross Examination. Asked East Bend comply with MATS upgrading ESP, answer was no?

3:42:47 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Why not?

3:44:53 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Talked how plant built, described flue gas goes into precipitator, ESP?

3:45:05 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Then goes somewhere else, then to FGD scrubber?

3:45:09 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace And then comes out, is where emissions measured?

3:45:20 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace As Gary related, EPA estimates most plants be compliant with MATS making upgrades to ESP?

3:45:36 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Is East Bend set up differently than power plants across country?

3:46:32 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Why is that, based on age of plant?

3:47:17 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Thing makes East Bend different, temperature?

3:47:56 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Location of air heater before precipitator or after precipitator changes how effective precipitator is?

3:48:26 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Just move that heater?

3:48:42 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace When was last time evaluated?

3:48:52 PM Atty Shoaff Sierra Club - witness Geers
Note: Sacre, Candace Ballpark hugely expensive be?

3:49:25 PM Chair Hatton
Note: Sacre, Candace Next witness?

3:49:30 PM Chair Hatton
Note: Sacre, Candace Procedural discussion.

3:50:35 PM Atty D'Ascenzo Duke Kentucky
Note: Sacre, Candace Chad Donner.

3:50:48 PM Chair Hatton
Note: Sacre, Candace Witness is sworn.

3:50:51 PM Camera Lock Witness Activated

3:50:53 PM Chairman Hatton - witness Donner
Note: Sacre, Candace Examination. Name and address?

3:51:06 PM Camera Lock Deactivated

3:51:07 PM Atty D'Ascenzo Duke Kentucky - witness Donner
Note: Sacre, Candace Direct Examination. Position with company?

3:51:21 PM Atty D'Ascenzo Duke Kentucky - witness Donner
Note: Sacre, Candace Summarize responsibilities and how relate to hearing?

3:51:48 PM Atty D'Ascenzo Duke Kentucky - witness Donner
Note: Sacre, Candace Cause to file responses?

3:51:54 PM Atty D'Ascenzo Duke Kentucky - witness Donner
Note: Sacre, Candace Changes or corrections?

3:51:59 PM Atty D'Ascenzo Duke Kentucky - witness Donner
Note: Sacre, Candace If asked same questions, answers be same?

3:52:06 PM Atty D'Ascenzo Duke Kentucky - witness Donner
Note: Sacre, Candace Intention be adopted and considered testimony?

3:52:18 PM Chair Hatton
Note: Sacre, Candace Everyone passing?

3:52:20 PM Chair Hatton
Note: Sacre, Candace Staff?

3:52:24 PM	Staff Atty Means PSC - witness Donner Note: Sacre, Candace	Cross Examination. DFO conversion, explanation of how going to work?
3:53:01 PM	Staff Atty Means PSC - witness Donner Note: Sacre, Candace	Energy market, how East Bend dispatch based on DFO conversion?
3:53:30 PM	Staff Atty Means PSC - witness Donner Note: Sacre, Candace	Once converted, can burn natural gas?
3:54:07 PM	Chair Hatton Note: Sacre, Candace	Redirect?
3:54:12 PM	Chair Hatton Note: Sacre, Candace	Commissioners?
3:54:15 PM	Atty Gary Joint Intervenors Note: Sacre, Candace	Ask clarifying question.
3:54:27 PM	Atty Gary Joint Intervenors - witness Donner Note: Sacre, Candace	Recross Examination. Is 50% total capacity, could do 300-some-odd megawatts just gas, not have to be 50/50?
3:54:49 PM	Chair Hatton Note: Sacre, Candace	Mr. D'Ascenzo?
3:54:57 PM	Atty D'Ascenzo Duke Kentucky Note: Sacre, Candace	Ryan Trogstad.
3:55:13 PM	Chair Hatton Note: Sacre, Candace	Witness is sworn.
3:55:18 PM	Camera Lock Witness Activated	
3:55:19 PM	Chair Hatton - witness Trogstad Note: Sacre, Candace	Examination. Name and address?
3:55:32 PM	Atty D'Ascenzo Duke Kentucky - witness Trogstad Note: Sacre, Candace	Direct Examination. Position with company?
3:55:38 PM	Atty D'Ascenzo Duke Kentucky - witness Trogstad Note: Sacre, Candace	Explain responsibilities and how relate to this proceeding?
3:56:04 PM	Camera Lock Deactivated	
3:56:09 PM	Atty D'Ascenzo Duke Kentucky - witness Trogstad Note: Sacre, Candace	Cause to file responses?
3:56:19 PM	Atty D'Ascenzo Duke Kentucky - witness Trogstad Note: Sacre, Candace	Changes or corrections?
3:56:27 PM	Atty D'Ascenzo Duke Kentucky - witness Trogstad Note: Sacre, Candace	Asked same questions, answers be same?
3:56:32 PM	Atty D'Ascenzo Duke Kentucky - witness Trogstad Note: Sacre, Candace	Intention responses adopted and considered testimony?
3:57:13 PM	Chair Hatton Note: Sacre, Candace	Mr. D'Ascenzo, next witness?
3:57:20 PM	Atty D'Ascenzo Duke Kentucky Note: Sacre, Candace	James McClay.
3:57:30 PM	Chair Hatton Note: Sacre, Candace	Witness is sworn.
3:57:34 PM	Camera Lock Witness Activated	
3:57:37 PM	Chair Hatton - witness McClay Note: Sacre, Candace	Examination. Name and address?
3:57:48 PM	Camera Lock Deactivated	
3:57:52 PM	Atty D'Ascenzo Duke Kentucky - witness McClay Note: Sacre, Candace	Direct Examination. Position?
3:58:00 PM	Atty D'Ascenzo Duke Kentucky - witness McClay Note: Sacre, Candace	Explain responsibilities and how relate to this proceeding?
3:58:30 PM	Atty D'Ascenzo Duke Kentucky - witness McClay Note: Sacre, Candace	Cause to file responses?

3:58:35 PM Atty D'Ascenzo Duke Kentucky - witness McClay
Note: Sacre, Candace Changes or corrections?

3:58:40 PM Atty D'Ascenzo Duke Kentucky - witness McClay
Note: Sacre, Candace Asked same questions, answers be same?

3:58:44 PM Atty D'Ascenzo Duke Kentucky - witness McClay
Note: Sacre, Candace Intention be adopted as testimony?

3:58:55 PM Chair Hatton
Note: Sacre, Candace Mr. Cook?

3:58:57 PM Chair Hatton
Note: Sacre, Candace Sierra Club?

3:59:00 PM Atty Mendoza Sierra Club - witness McClay
Note: Sacre, Candace Cross Examination. If lateral pipeline need is different or is it the same pipeline?

4:00:00 PM Atty Mendoza Sierra Club - witness McClay
Note: Sacre, Candace Duke selected 100 percent gas conversion 2030 and build combined cycle at plant in late 2030s, plan to build initial lateral pipeline to meet both options?

4:00:46 PM Atty Mendoza Sierra Club - witness McClay
Note: Sacre, Candace In building project no increased cost, add cost on later?

4:01:10 PM Atty Mendoza Sierra Club - witness McClay
Note: Sacre, Candace Lateral pipeline and main pipeline, might be needed upgrades on main line?

4:01:33 PM Atty Mendoza Sierra Club - witness McClay
Note: Sacre, Candace Know if those be different?

4:01:41 PM Atty Mendoza Sierra Club - witness McClay
Note: Sacre, Candace Under combined cycle, likely be more needed upgrades on main line?

4:01:43 PM Atty Mendoza Sierra Club - witness McClay
Note: Sacre, Candace Put a figure on that what difference is?

4:02:08 PM Atty Mendoza Sierra Club - witness McClay
Note: Sacre, Candace Agree going forward with lateral pipeline construction soon maintain flexibility to go forward?

4:02:36 PM Atty Mendoza Sierra Club - witness McClay
Note: Sacre, Candace Does pipeline company itself do construction or hire a contractor?

4:03:25 PM Atty Mendoza Sierra Club - witness McClay
Note: Sacre, Candace Duke not actively pursuing permits in FERC filing mentioned?

4:03:59 PM Atty Mendoza Sierra Club - witness McClay
Note: Sacre, Candace Actively working on that now or waiting for go-ahead signal from Duke?

4:04:44 PM Atty Mendoza Sierra Club - witness McClay
Note: Sacre, Candace Focusing on lateral pipeline, path been determined?

4:05:45 PM Commissioner Regan - witness McClay
Note: Sacre, Candace Examination. If Duke would engage in pipeline project, would be pushback environmentally?

4:06:00 PM Commissioner Regan - witness McClay
Note: Sacre, Candace Not just that but from residents?

4:06:29 PM Chair Hatton
Note: Sacre, Candace Counsel?

4:06:37 PM Atty Vaysman Duke Kentucky
Note: Sacre, Candace Ibrar Khera.

4:06:48 PM Chair Hatton
Note: Sacre, Candace Witness is sworn.

4:06:52 PM Camera Lock Witness Activated

4:06:55 PM	Chair Hatton - witness Khera Note: Sacre, Candace	Examination. Name and address?
4:07:07 PM	Camera Lock Deactivated	
4:07:09 PM	Atty Vaysman Duke Kentucky - witness Khera Note: Sacre, Candace	Direct Examination. Title?
4:07:19 PM	Atty Vaysman Duke Kentucky - witness Khera Note: Sacre, Candace	Describe responsibilities and how relate to proceeding?
4:07:36 PM	Atty Vaysman Duke Kentucky - witness Khera Note: Sacre, Candace	Cause responses to be filed?
4:07:41 PM	Atty Vaysman Duke Kentucky - witness Khera Note: Sacre, Candace	Corrections?
4:07:47 PM	Atty Vaysman Duke Kentucky - witness Khera Note: Sacre, Candace	Received same questions, responses be same?
4:07:53 PM	Atty Vaysman Duke Kentucky - witness Khera Note: Sacre, Candace	Intent adopt for purposes of this proceeding?
4:08:07 PM	Chair Hatton Note: Sacre, Candace	Questions?
4:08:18 PM	Staff Atty Means PSC - witness Khera Note: Sacre, Candace	Cross Examination. Agree risk of large energy-intensive customer locating in the area?
4:09:05 PM	Staff Atty Means PSC - witness Khera Note: Sacre, Candace	Saying no inquiry at all?
4:09:48 PM	Staff Atty Means PSC - witness Khera Note: Sacre, Candace	Aware case filed 2024-00285, where Duke transition to RPM?
4:11:05 PM	Chair Hatton - witness Khera Note: Sacre, Candace	Examination. Monitoring economic development activity, aware Economic Development Cabinet tends to communicate regularly, accurate?
4:11:31 PM	Chair Hatton - witness Khera Note: Sacre, Candace	Where would get information, from economic development team?
4:11:35 PM	Chair Hatton - witness Khera Note: Sacre, Candace	Not someone communicate with?
4:11:45 PM	Chair Hatton - witness Khera Note: Sacre, Candace	You have economic development team do communicating and they will let you know?
4:11:52 PM	Chair Hatton - witness Khera Note: Sacre, Candace	Someone whose job it is to follow economic development?
4:12:04 PM	Chair Hatton Note: Sacre, Candace	Redirect?
4:12:29 PM	Chair Hatton Note: Sacre, Candace	Procedural discussion.
4:13:29 PM	Chair Hatton Note: Sacre, Candace	Ten-minute recess.
4:13:43 PM	Session Paused	
4:15:11 PM	Session Resumed	
4:15:15 PM	Session Paused	
4:31:16 PM	Session Resumed	
4:31:19 PM	Chair Hatton Note: Sacre, Candace	Back on the record.
4:32:05 PM	Chair Hatton Note: Sacre, Candace	Counsel, next witness?
4:32:07 PM	Atty Vaysman Duke Kentucky Note: Sacre, Candace	Timothy Duff.

4:32:13 PM	Chair Hatton Note: Sacre, Candace	Witness is sworn.
4:32:25 PM	Chair Hatton - witness Duff Note: Sacre, Candace	Examination. Name and address?
4:32:28 PM	Camera Lock Witness Activated	
4:32:39 PM	Camera Lock Deactivated	
4:32:42 PM	Atty Vaysman Duke Kentucky - witness Duff Note: Sacre, Candace	Direct Examination. Title?
4:32:52 PM	Atty Vaysman Duke Kentucky - witness Duff Note: Sacre, Candace	Describe responsibilities?
4:33:24 PM	Atty Vaysman Duke Kentucky - witness Duff Note: Sacre, Candace	Cause data requests responses be filed?
4:33:29 PM	Atty Vaysman Duke Kentucky - witness Duff Note: Sacre, Candace	Corrections?
4:33:33 PM	Atty Vaysman Duke Kentucky - witness Duff Note: Sacre, Candace	If received same questions this afternoon, responses be same?
4:33:39 PM	Atty Vaysman Duke Kentucky - witness Duff Note: Sacre, Candace	Intent to adopt as testimony?
4:33:51 PM	Chair Hatton Note: Sacre, Candace	Mr. Cook?
4:33:54 PM	Chair Hatton Note: Sacre, Candace	Sierra Club?
4:33:58 PM	Chair Hatton Note: Sacre, Candace	Joint Intervenors?
4:34:02 PM	Atty Gary Joint Intervenors - witness Duff Note: Sacre, Candace	Cross Examination. Review comments submitted by intervenors?
4:34:26 PM	Atty Gary Joint Intervenors - witness Duff Note: Sacre, Candace	Specifically, comments dealing with DSM and EE?
4:34:30 PM	Atty Gary Joint Intervenors - witness Duff Note: Sacre, Candace	Assist in preparing any of those?
4:34:33 PM	Atty Gary Joint Intervenors - witness Duff Note: Sacre, Candace	Review Duke reply comments filed?
4:34:37 PM	Atty Gary Joint Intervenors - witness Duff Note: Sacre, Candace	Assist in preparing any of those?
4:34:50 PM	Atty Gary Joint Intervenors - witness Duff Note: Sacre, Candace	Asking about reply comments regarding DSM, properly addressed to you?
4:35:07 PM	Atty Gary Joint Intervenors - witness Duff Note: Sacre, Candace	On reply comments, have those with you?
4:35:10 PM	Atty Gary Joint Intervenors - witness Duff Note: Sacre, Candace	Look at page 6, subpart 2?
4:35:36 PM	Atty Gary Joint Intervenors - witness Duff Note: Sacre, Candace	Read first sentence of subpart 2?
4:35:57 PM	Atty Gary Joint Intervenors - witness Duff Note: Sacre, Candace	Goes on to explain evaluations done through annual cost recovery filing and annual program modification filing?
4:36:15 PM	Atty Gary Joint Intervenors - witness Duff Note: Sacre, Candace	Those are where address relevance to customers new technology and cost effectiveness?
4:36:42 PM	Atty Gary Joint Intervenors - witness Duff Note: Sacre, Candace	Company position evaluations necessary in those filings?
4:37:13 PM	Atty Gary Joint Intervenors - witness Duff Note: Sacre, Candace	As far as filings with this Commission, where issues addressed?

4:37:20 PM Atty Gary Joint Intervenors - witness Duff
Note: Sacre, Candace Not needed again in IRP?

4:37:42 PM Atty Gary Joint Intervenors - witness Duff
Note: Sacre, Candace Duke also evaluate energy savings potential?

4:39:05 PM Atty Gary Joint Intervenors - witness Duff
Note: Sacre, Candace Not ever conducted market potential study just for Kentucky?

4:39:14 PM Atty Gary Joint Intervenors - witness Duff
Note: Sacre, Candace Say when that was?

4:39:18 PM Atty Gary Joint Intervenors - witness Duff
Note: Sacre, Candace Ballpark, how long ago?

4:39:25 PM Atty Gary Joint Intervenors - witness Duff
Note: Sacre, Candace Not have plans to conduct further MPS for Kentucky?

4:40:06 PM Atty Gary Joint Intervenors - witness Duff
Note: Sacre, Candace Talk about cost effectiveness, assesses benefits versus cost?

4:40:37 PM Atty Gary Joint Intervenors - witness Duff
Note: Sacre, Candace Are number of different inputs into cost effectiveness tests?

4:40:53 PM Atty Gary Joint Intervenors - witness Duff
Note: Sacre, Candace Some are on kilowatt hour basis as far as savings?

4:41:06 PM Atty Gary Joint Intervenors - witness Duff
Note: Sacre, Candace Some are based off total demand?

4:41:19 PM Atty Gary Joint Intervenors - witness Duff
Note: Sacre, Candace These would be included inputs into cost effectiveness testing of DSM programs in Kentucky?

4:41:40 PM Atty Gary Joint Intervenors - witness Duff
Note: Sacre, Candace Returning to reply comments, page 2, last sentence, read that for us?

4:42:30 PM Atty Gary Joint Intervenors - witness Duff
Note: Sacre, Candace IRP includes updated costs, where in IRP included for demand side management cost testing?

4:43:36 PM Atty Gary Joint Intervenors - witness Duff
Note: Sacre, Candace Capacity costs and energy costs IRP used not same ones used for DSM effectiveness?

4:44:23 PM Atty Gary Joint Intervenors - witness Duff
Note: Sacre, Candace Would have updated avoided costs as part of more recent DSM filing?

4:45:09 PM Atty Gary Joint Intervenors - witness Duff
Note: Sacre, Candace What in most recent program modification filing be '25-'26 projection?

4:45:51 PM Atty Gary Joint Intervenors - witness Duff
Note: Sacre, Candace Cost effectiveness be part of program modification filing?

4:46:02 PM Atty Gary Joint Intervenors - witness Duff
Note: Sacre, Candace Use forward looking projection of avoided costs?

4:46:06 PM Atty Gary Joint Intervenors - witness Duff
Note: Sacre, Candace Not basis for DSM choices made in IRP?

4:46:18 PM Atty Gary Joint Intervenors - witness Duff
Note: Sacre, Candace Not have those?

4:46:28 PM Atty Gary Joint Intervenors
Note: Sacre, Candace Ask post-hearing.

4:46:29 PM POST-HEARING DATA REQUEST
Note: Sacre, Candace ATTY GARY JOINT INTERVENORS - WITNESS DUFF
Note: Sacre, Candace DSM CHOICES MADE IN IRP

4:46:36 PM Chair Hatton
Note: Sacre, Candace Staff?

4:46:43 PM	Staff Atty Williams PSC - witness Duff Note: Sacre, Candace	Cross Examination. Duke evaluate any DSM programs end up not adopting?
4:47:36 PM	Staff Atty Williams PSC - witness Duff Note: Sacre, Candace	Able provide list considered not admitted?
4:48:10 PM	Staff Atty Williams PSC - witness Duff Note: Sacre, Candace	Any of those involve EV charging?
4:48:26 PM	Staff Atty Williams PSC - witness Duff Note: Sacre, Candace	Any DSM programs Duke used in other states not used in Kentucky?
4:49:27 PM	Staff Atty Williams PSC - witness Duff Note: Sacre, Candace	Is that community program where customers subscribe to battery storage?
4:49:56 PM	Chair Hatton Note: Sacre, Candace	Commissioners?
4:49:58 PM	Chair Hatton - witness Duff Note: Sacre, Candace	Examination. No new DSM programs considered?
4:51:06 PM	Chair Hatton - witness Duff Note: Sacre, Candace	While not included in IRP, not mean not considering in other potential filings?
4:51:52 PM	Chair Hatton - witness Duff Note: Sacre, Candace	In IRP, like to see future IRPs include decreasing demand?
4:52:12 PM	Chair Hatton Note: Sacre, Candace	Redirect?
4:52:14 PM	Chair Hatton Note: Sacre, Candace	Anyone else?
4:52:29 PM	Chair Hatton Note: Sacre, Candace	Next witness?
4:52:32 PM	Atty Vaysman Duke Kentucky Note: Sacre, Candace	Kimberly Hughes.
4:53:01 PM	Chair Hatton Note: Sacre, Candace	Witness is sworn.
4:53:02 PM	Camera Lock Witness Activated	
4:53:08 PM	Chair Hatton - witness Hughes Note: Sacre, Candace	Examination. Name and address?
4:53:21 PM	Camera Lock Deactivated	
4:53:22 PM	Atty Vaysman Duke Kentucky - witness Hughes Note: Sacre, Candace	Direct Examination. Title?
4:53:28 PM	Atty Vaysman Duke Kentucky - witness Hughes Note: Sacre, Candace	Describe responsibilities?
4:53:57 PM	Atty Vaysman Duke Kentucky - witness Hughes Note: Sacre, Candace	Cause responses be filed?
4:54:04 PM	Atty Vaysman Duke Kentucky - witness Hughes Note: Sacre, Candace	Corrections?
4:54:08 PM	Atty Vaysman Duke Kentucky - witness Hughes Note: Sacre, Candace	If received same questions today, answers be same?
4:54:14 PM	Atty Vaysman Duke Kentucky - witness Hughes Note: Sacre, Candace	Intent be adopted as testimony?
4:54:27 PM	Chair Hatton Note: Sacre, Candace	Sierra Club?
4:54:35 PM	Atty Mendoza Sierra Club - witness Hughes Note: Sacre, Candace	Cross Examination. Turn to data response KSES Set 1, Question 55, Attachment 1 of 1, shows current coal supply contracts?
4:55:14 PM	Atty Mendoza Sierra Club - witness Hughes Note: Sacre, Candace	Current as of fairly recently?

4:55:24 PM	Atty Mendoza Sierra Club - witness Hughes Note: Sacre, Candace	Name of mine confidential?
4:55:36 PM	Atty Mendoza Sierra Club - witness Hughes Note: Sacre, Candace	Was going to ask you what name of each mine is, is that information confidential?
4:55:52 PM	Atty D'Ascenzo Duke Kentucky Note: Sacre, Candace	Do contracts state the mine?
4:56:08 PM	Atty Mendoza Sierra Club - witness Hughes Note: Sacre, Candace	Go through each of seven lines, first one, 35746, what is name of mine and state?
4:56:34 PM	Atty Mendoza Sierra Club - witness Hughes Note: Sacre, Candace	Approach different way, true majority of tons supplied come from out-of-state mines?
4:56:46 PM	Atty Mendoza Sierra Club - witness Hughes Note: Sacre, Candace	Say majority comes from Pennsylvania, West Virginia, and Illinois?
4:56:58 PM	Atty Mendoza Sierra Club - witness Hughes Note: Sacre, Candace	As go down to bottom, larger volume contracts, all out of state?
4:57:11 PM	Chair Hatton Note: Sacre, Candace	Joint Intervenors?
4:57:14 PM	Chair Hatton Note: Sacre, Candace	Staff?
4:57:16 PM	Chair Hatton Note: Sacre, Candace	Commissioners?
4:57:19 PM	Chair Hatton Note: Sacre, Candace	Redirect?
4:57:31 PM	Chair Hatton Note: Sacre, Candace	Next witness?
4:57:36 PM	Atty Vaysman Duke Kentucky Note: Sacre, Candace	Matthew Ruscio.
4:57:48 PM	Chair Hatton Note: Sacre, Candace	Witness is sworn.
4:57:53 PM	Chair Hatton - witness Ruscio Note: Sacre, Candace	Examination. Name and address?
4:58:05 PM	Atty Vaysman Duke Kentucky - witness Ruscio Note: Sacre, Candace	Direct Examination. Position?
4:58:18 PM	Atty Vaysman Duke Kentucky - witness Ruscio Note: Sacre, Candace	Describe responsibilities?
4:58:48 PM	Atty Vaysman Duke Kentucky - witness Ruscio Note: Sacre, Candace	Cause responses be filed?
4:58:52 PM	Atty Vaysman Duke Kentucky - witness Ruscio Note: Sacre, Candace	Corrections?
4:58:56 PM	Atty Vaysman Duke Kentucky - witness Ruscio Note: Sacre, Candace	If received same requests, responses be same?
4:59:04 PM	Atty Vaysman Duke Kentucky - witness Ruscio Note: Sacre, Candace	Intent responses adopted as testimony?
4:59:15 PM	Chair Hatton Note: Sacre, Candace	Questions?
4:59:52 PM	Chair Hatton - witness Ruscio Note: Sacre, Candace	Examination. Extent to which tax credits considered, tossed to you, general idea how Duke considered tax credits?
5:01:09 PM	Chair Hatton - witness Ruscio Note: Sacre, Candace	Consideration changing or subject to change with new administration in Washington?

5:01:54 PM	Chair Hatton - witness Ruscio Note: Sacre, Candace	At what point earned or claimed, when new generation built or funded or approved?
5:02:41 PM	Chair Hatton - witness Ruscio Note: Sacre, Candace	Familiar in Kentucky requirement tax credits not considered in retirement of generation facility decisions, company cognizant of that?
5:03:02 PM	Chair Hatton Note: Sacre, Candace	Did that trigger redirect?
5:03:07 PM	Chair Hatton Note: Sacre, Candace	Did I trigger anyone?
5:03:19 PM	Atty McRae Joint Intervenors - witness Ruscio Note: Sacre, Candace	Cross Examination. Production tax credit or investment tax credit, understanding what take from next administration change either of those?
5:04:22 PM	Atty McRae Joint Intervenors - witness Ruscio Note: Sacre, Candace	Opinion informed by knowledge of what executive authority to change letter of law passed by Congress?
5:05:17 PM	Atty McRae Joint Intervenors - witness Ruscio Note: Sacre, Candace	Right now, folks looking at it of opinion Duke be continuing model PTC and ITC?
5:05:31 PM	Atty McRae Joint Intervenors - witness Ruscio Note: Sacre, Candace	Not know if reached conclusion should continue model availability of production tax credit?
5:05:35 PM	Atty Vaysman Duke Kentucky Note: Sacre, Candace	Objection, asked and answered.
5:06:00 PM	Atty McRae Joint Intervenors - witness Ruscio Note: Sacre, Candace	Modeled current law, and current law Congress passed ETC and ITC available through 2032?
5:06:15 PM	Atty McRae Joint Intervenors - witness Ruscio Note: Sacre, Candace	Lining up projects for Duke Kentucky or other affiliate, continuing to assume would seek production tax or investment tax credits?
5:06:47 PM	Atty McRae Joint Intervenors - witness Ruscio Note: Sacre, Candace	Answer to question was, yes, do consider PTC and ITC?
5:07:08 PM	Chair Hatton Note: Sacre, Candace	Redirect?
5:07:29 PM	Atty Vaysman Duke Kentucky Note: Sacre, Candace	Sarah Lawler.
5:07:37 PM	Chair Hatton Note: Sacre, Candace	Witness is sworn.
5:07:38 PM	Camera Lock Witness Activated	
5:07:45 PM	Chair Hatton - witness Lawler Note: Sacre, Candace	Examination. Name and address?
5:07:56 PM	Atty Vaysman Duke Kentucky - witness Lawler Note: Sacre, Candace	Direct Examination. Position?
5:07:57 PM	Camera Lock Deactivated	
5:08:07 PM	Atty Vaysman Duke Kentucky - witness Lawler Note: Sacre, Candace	Describe responsibilities?
5:08:29 PM	Atty Vaysman Duke Kentucky - witness Lawler Note: Sacre, Candace	Caused responses be filed?
5:08:35 PM	Atty Vaysman Duke Kentucky - witness Lawler Note: Sacre, Candace	Adopting responses?
5:08:39 PM	Atty Vaysman Duke Kentucky - witness Lawler Note: Sacre, Candace	Which are those?

5:08:43 PM Atty Vaysman Duke Kentucky - witness Lawler
Note: Sacre, Candace Adopting responses of Bruce Sailers?

5:08:48 PM Atty Vaysman Duke Kentucky - witness Lawler
Note: Sacre, Candace Corrections?

5:08:56 PM Atty Vaysman Duke Kentucky - witness Lawler
Note: Sacre, Candace Receive same data requests, responses be same?

5:09:03 PM Atty Vaysman Duke Kentucky - witness Lawler
Note: Sacre, Candace Adopt as your testimony?

5:09:19 PM Chair Hatton
Note: Sacre, Candace Questions?

5:09:41 PM Atty McRae Joint Intervenors - witness Lawler
Note: Sacre, Candace Cross Examination. Ballpark, portion of energy charge taking care of distribution and transmission expenses?

5:10:18 PM Atty McRae Joint Intervenors - witness Lawler
Note: Sacre, Candace Some utilities report through EIA?

5:10:38 PM Atty McRae Joint Intervenors - witness Lawler
Note: Sacre, Candace Is ascertainable if look at cost-of-service study?

5:11:28 PM Atty McRae Joint Intervenors - witness Lawler
Note: Sacre, Candace If were to ask in post-hearing data request, help us with this number, if were to disaggregate, just throwing out number here --

5:11:33 PM Atty Vaysman Duke Kentucky
Note: Sacre, Candace Object, calls for new analysis.

5:11:40 PM Atty McRae Joint Intervenors - witness Lawler
Note: Sacre, Candace Cannot tell me anything today?

5:12:02 PM Atty McRae Joint Intervenors - witness Lawler
Note: Sacre, Candace Understand customers pay one rate?

5:12:20 PM Chair Hatton
Note: Sacre, Candace Questions?

5:12:31 PM Chair Hatton
Note: Sacre, Candace Redirect?

5:13:12 PM Chair Hatton
Note: Sacre, Candace There was at least one exhibit, already marked in the record?

5:13:37 PM Chair Hatton
Note: Sacre, Candace It will be Sierra Club Hearing Exhibit 1.

5:13:48 PM Chair Hatton
Note: Sacre, Candace Have that one marked, any objection to admission?

5:13:52 PM Atty D'Ascenzo Duke Kentucky
Note: Sacre, Candace Object, no foundation

5:15:00 PM Chair Hatton
Note: Sacre, Candace Some issues with foundation; however, be more toward admissibility.

5:15:01 PM SIERRA CLUB HEARING EXHIBIT 1
Note: Sacre, Candace ATTY MENDOZA SIERRA CLUB - WITNESS SWEZ
Note: Sacre, Candace UNIT-LEVEL COSTS AND LOADINGS ESTIMATES FOR THE 2024 FINAL RULE (DCN SE 11756A)

5:15:25 PM Chair Hatton
Note: Sacre, Candace Outstanding motions.

5:16:02 PM Chair Hatton
Note: Sacre, Candace Procedural schedule.

5:19:11 PM Chair Hatton
Note: Sacre, Candace Anything further?

5:19:15 PM Chair Hatton
Note: Sacre, Candace Adjourned.

5:19:33 PM Session Ended



Exhibit List Report

2024-00197 10Dec2024

Duke Energy Kentucky, Inc. (Duke
Kentucky)

Witness: Chad Donner; Tim Duff; Michael Geers; Kimberly Hughes; Matthew Kalemba; Ibrar Khera; Sarah Lawler; Jim McClay; Matt Ruscio; John Swez; Daniel Sympson; Ryan Trogstad

Judge: Angie Hatton; John Will Stacy; Mary Pat Regan

Clerk: Candace Sacre

Name:	Description:
SIERRA CLUB HEARING EXHIBIT 1	UNIT-LEVEL COSTS AND LOADINGS ESTIMATES FOR THE 2024 FINAL RULE (DCN SE 11756A)

Unit-Level Costs and Loadings Estimates for the 2024 Final Rule (DCN SE11756A1)

4/22/2024

Worksheet	Description
FGD Unit-Level Cost Estimates	Presents unit-level costs for flue gas desulfurization (FGD) wastewater treatment under all regulatory options.
BA Unit-Level Cost Estimates	Presents unit-level costs for bottom ash (BA) transport water handling under all regulatory options.
CRL Unit-Level Cost Estimates	Presents unit-level costs for combustion residual leachate (CRL) treatment under all regulatory options.
Legacy Unit-Level Costs	Presents unit-level costs for legacy wastewater treatment under all regulatory options.
FGD Unit-Level Loadings	Presents unit-level total pollutant loadings for FGD wastewater under baseline and all regulatory options.
BA Unit-Level Loadings	Presents unit-level total pollutant loadings for BA transport water under baseline and all regulatory options.
CRL Unit-Level Loadings	Presents unit-level total pollutant loadings for CRL under baseline and all regulatory options.
Legacy Unit-Level Loadings	Presents unit-level total pollutant loadings for legacy wastewater under baseline and all regulatory options.

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