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SOAH DOCKET NO. 473-19-6862

PUC DOCKET NO. 49737

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APPLICATION OF SOUTHWESTERN	§	BEFORE THE STATE OFFICE
ELECTRIC POWER COMPANY FOR	§	
CERTIFICATE OF CONVENIENCE	§	
AND NECESSITY AUTHORIZATION	§	OF
AND RELATED RELIEF FOR THE	§	
ACQUISITION OF WIND	§	
GENERATION FACILITIES	§	ADMINISTRATIVE HEARINGS

**TEXAS INDUSTRIAL ENERGY CONSUMERS'**  
**SIXTEENTH REQUEST FOR INFORMATION TO SWEPCO**

Pursuant to 16 T.A.C. § 22.144, Texas Industrial Energy Consumers (“TIEC”) requests that Southwestern Electric Power Company (“SWEPCO”) provide all of the information requested in Exhibit “A” within the time frame specified under the procedural rules.

Pursuant to 16 T.A.C. § 22.144(c)(2), TIEC further requests that answers to the requests for information be made under oath. Each answer should identify the person responsible for preparing that answer (other than the purely clerical aspects of its preparation) and the name of the witness in this proceeding who will sponsor the answer and who can vouch for its accuracy. In producing documents pursuant to this request for information, please indicate the specific request(s) to which the document is being produced. These requests are continuing in nature, and should there be, for any reason, a change in circumstances which would modify or change an answer supplied by you, such changed answer should be submitted immediately as a supplement to your original answer pursuant to 16 T.A.C. § 22.144(i). Please answer each request and sub-request in the order in which they are listed and in sufficient detail to provide a complete and accurate answer to the request. TIEC further requests that each item of information be made available as it is completed, rather than upon compilation of all information requested.

All information responsive to the requests on the attached Exhibit “A” should be sent to the following persons via overnight courier, on a piecemeal basis as individual items become available:

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Mr. Rex D. VanMiddlesworth  
Mr. Benjamin B. Hallmark  
Mr. James Z. Zhu  
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### **DEFINITIONS AND INSTRUCTIONS**

A. "SWEPCO" refers to Southwestern Electric Power Company, and its affiliates, subsidiaries, and any person acting or purporting to act on their behalf, as it relates to the true-up proceeding and related appeals, including without limitation, attorneys, agents, advisors, investigators, representatives, employees or other persons.

B. "AEP" refers to American Electric Power, and its affiliates, subsidiaries, and any person acting or purporting to act on their behalf, including without limitation, attorneys, agents, advisors, investigators, representatives, employees or other persons.

C. The terms "document" or "documents" are used in their broadest sense to include, by way of illustration and not limitation, all written or graphic matter of every kind and description whether printed, produced or reproduced by any process whether visually, magnetically, mechanically, electronically or by hand, whether final or draft, original or reproduction, whether or not claimed to be privileged or otherwise excludable from discovery, and whether or not in your actual or constructive possession, custody, or control. The terms include writings, correspondence, telegrams, memoranda, studies, reports, surveys, statistical compilations, notes, calendars, tapes, computer disks, data on computer drives, e-mail, cards, recordings, contracts, agreements, invoices, licenses, diaries, journals, accounts, pamphlets, books, ledgers, publications, microfilm, microfiche and any other data compilations from which information can be obtained and translated, by you if necessary, into reasonably usable form. "Document" or "documents" shall also include every copy of a document where the copy contains any commentary or notation of any kind that does not appear on the original or any other copy.

D. Pursuant to Rule 196.4 of the Texas Rules of Civil Procedure, TIEC specifically requests that any electronic or magnetic data (which is included in the definition of "document") that is responsive to a request herein be produced on CD-Rom in a format that is compatible with Microsoft, Macintosh and/or Word Perfect and be produced with your response to these requests. If emails are responsive to these requests, please provide a printed copy of the entire email string. Attachments to emails should be printed or, if the attachment is an Excel or other similar file, should be provided in native format on CD-Rom.

E. The terms “and” and “or” shall be construed both disjunctively and conjunctively as necessary to make the request inclusive rather than exclusive.

F. “Each” shall be construed to include the word “every” and “every” shall be construed to include the word “each.”

G. “Any” shall be construed to include “all” and “all” shall be construed to include “any.”

H. The term “concerning,” or one of its inflections, includes the following meanings: relating to; referring to; pertaining to; regarding; discussing; mentioning; containing; reflecting; evidencing; describing; showing; identifying; providing; disproving; consisting of; supporting; contradicting; in any way legally, logically or factually connected with the matter to which the term refers; or having a tendency to prove or disprove the matter to which the term refers.

I. The term “including,” or one of its inflections, means and refers to “including but not limited to.”

J. “Relate to,” “regarding,” “concerning” and similar terms mean addressing, analyzing, referring, discussing, mentioning in any way, explaining, supporting, describing, forming the basis for, or being logically or causally connected in any way with the subject of these discovery requests.

K. “Provide the basis,” “state the basis,” or “explain the basis” means provide all information on or describe every fact, statistic, inference, estimate, consideration, conclusion, study, and analysis known to SWEPCO that was relied upon in support of the expressed contention, proposition, conclusion or statement.

L. Words used in the plural shall also be taken to mean and include the singular. Words used in the singular shall also be taken to mean and include the plural.

M. The present tense shall be construed to include the past tense, and the past tense shall be construed to include the present tense.

N. If any document is withheld under any claim of privilege, please furnish a list identifying each document for which a privilege is claimed, together with the following information: date, sender, recipients of copies, subject matter of the document, and the basis upon which such privilege is claimed.

O. Pursuant to P.U.C. Proc. R. 22.144(h)(4), if the response to any request is voluminous, please provide a detailed index of the voluminous material.

P. If the information requested is included in previously furnished exhibits, workpapers, and responses to other discovery inquiries or otherwise, in hard copy or electronic format, please furnish specific references thereto, including Bates Stamp page citations and detailed cross-references.

Q. The term "emails" includes the entire email string and all attachments found anywhere within the email string. Please refer to paragraph "D." regarding specific instructions for producing such items.

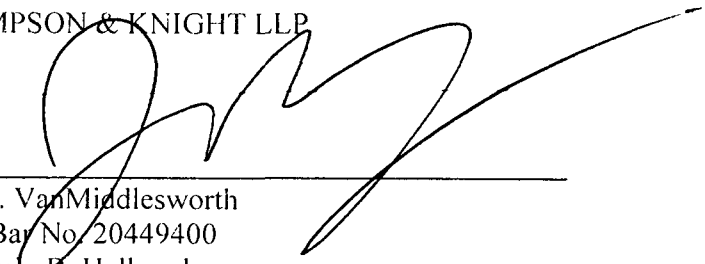
R. "Communications" refers to correspondence of any kind, including emails.

S. "Identify" and "describe" shall have the meaning set forth below according to the context in which the term is used:

- i. When used in reference to an individual, shall mean to state his or her full name, present or last known residence address, business affiliation and business address, and residence and business telephone number;
- ii. When used in reference to a corporation, shall mean to state its full name, its state of incorporation, its address and its principal place of business;
- iii. When used in reference to any entity other than an individual or corporation, shall mean to state its official name, its organizational form and its address;
- iv. When used in reference to a document, shall mean to state the type of document, date, author, addressee, title, its present location, the name and address of its custodian, and the substance of the contents thereof. In lieu of identifying any document, copies thereof may be furnished; and
- v. When used in reference to a communication, shall mean to state the form of the communication (e.g., telephone conversation, letter, telegram, teletype, telecopy, written memorandum, face to face conversation, or any other form), the date of the communication or the dates on which the communication was sent and/or received if not the same, the parties to the communication, the party who initiated it, the substance of the communication, and the present location and the name and address of the custodian if the communication was non-verbal and/or of any written memorialization of the communication.

Respectfully submitted,

THOMPSON & KNIGHT LLP



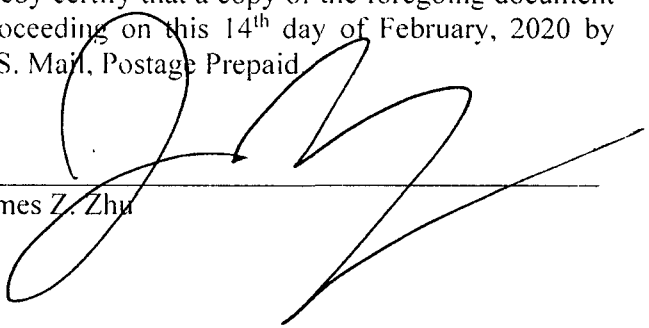
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**ATTORNEYS FOR TEXAS INDUSTRIAL  
ENERGY CONSUMERS**

**CERTIFICATE OF SERVICE**

I, James Z. Zhu, Attorney for TIEC, hereby certify that a copy of the foregoing document was served on all parties of record in this proceeding on this 14<sup>th</sup> day of February, 2020 by facsimile, electronic mail and/or First Class, U.S. Mail, Postage Prepaid.



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James Z. Zhu

SOAH DOCKET NO. 473-19-6862  
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APPLICATION OF SOUTHWESTERN § BEFORE THE STATE OFFICE  
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TEXAS INDUSTRIAL ENERGY CONSUMERS’  
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**TIEC 16-1** Has SWEPCO made any effort to explicitly value whether customers would be better off if the wind projects were delayed for any period of time given that natural gas prices are now much lower than SWEPCO’s forecast at the time of its IRP? If not, why not?

**TIEC 16-2** Are Mr. Pfeifenberger, Mr. Hollis, or Mr. Torpey individually familiar with the certainty equivalents approach to valuing a project? If the answer is yes, please explain why SWEPCO has not used a certainty equivalents approach to valuing the wind projects.

**TIEC 16-3** Does SWEPCO agree that, from the ratepayers’ perspective, the cash flows paid by ratepayers for the cost of the Wind Facilities are more certain than the cash flows received by ratepayers in the form of energy savings (excluding the production tax credits) from those facilities? If SWEPCO does not agree, please (a) identify all of the sources of uncertainty relating to the cash flows paid by ratepayers for the cost of the Wind Facilities, (b) identify all of the sources of uncertainty relating to the cash flows received by ratepayers in the form of energy savings (excluding the production tax credits), and (c) provide a detailed explanation of how the first set of uncertainties imposes greater risks onto ratepayers than the second set of uncertainties.

*The following questions refer to the Rebuttal Testimony of Joseph G. DeRuntz:*

- TIEC 16-4** Referring to pages 3-4 of the Rebuttal Testimony of Mr. DeRuntz:
- a. Is it the Company’s position that it is unwilling to bear the risk that the ongoing capital and operations & maintenance (O&M) expense may be higher than projected?
  - b. Is it the Company’s position that ratepayers should bear the risk that the ongoing capital and O&M expense may be higher than projected?
  - c. Is the risk that ongoing capital and O&M expense may be higher than projected accounted for in the Company’s economic analyses? If so, please provide a detailed explanation of how the Company’s economic analyses account for the described risks that the ongoing capital and O&M expense may be higher than

projected.

**TIEC 16-5** Referring to page 4 of the Rebuttal Testimony of Mr. DeRuntz, please provide SWEPCO's 30-year ongoing capital and O&M forecast for each of the Wind Facilities that was used in calculating the projected economic benefits.

**TIEC 16-6** Referring the Rebuttal Testimony of Mr. DeRuntz, Exhibit JGD-1R, pages 15-16:

- a. Please state the projected capital cost of replacing the following components for the Traverse project: [REDACTED]
- b. Please identify in what year of the ongoing and capital O&M forecast provided in response to TIEC 16-4 each of the projected capital costs identified in subpart (a) are made.
- c. Please indicate where the costs associated with these activities have been included in the net benefits analysis (Updated Torpey Errata Benefits Model Final.xlsx).
- d. Please provide a copy of the standard maintenance manual and the site-specific manual addendum for the Traverse project.

**TIEC 16-7** Referring the Rebuttal Testimony of Mr. DeRuntz, Exhibit JGD-1R, pages 31-32:

- a. Please state the projected capital cost of replacing the following components for the Maverick project: [REDACTED]
- b. Please identify in what year of the ongoing and capital O&M forecast provided in response to TIEC 16-4 each of the projected capital costs identified in subpart (a) are made.
- c. Please indicate where the costs associated with these activities have been included in the net benefits analysis (Updated Torpey Errata Benefits Model Final.xlsx).
- d. Please provide a copy of the standard maintenance manual and the site-specific manual addendum for the Maverick project.

**TIEC 16-8** Referring the Rebuttal Testimony of Mr. DeRuntz, Exhibit JGD-1R, pages 47-48:

- a. Please state the projected capital cost of replacing the following components for the Sundance project: [REDACTED]
- b. Please identify in what year of the ongoing and capital O&M forecast provided in response to TIEC 16-4 each of the projected capital costs identified in subpart



(a) are made.

- c. Please indicate where the costs associated with these activities have been included in the net benefits analysis (Updated Torpey Errata Benefits Model Final.xlsx).
- d. Please provide a copy of the standard maintenance manual and the site-specific manual addendum for the Sundance project.

**TIEC 16-9** Referring to the Rebuttal Testimony of Mr. DeRuntz, Exhibit JGD-2R at 1, n.2, please provide AEP's survey response to the Benchmarking Anticipated Wind Project Lifetimes survey. Please also provide any draft responses and communications regarding AEP's response to the aforementioned survey.

**TIEC 16-10** Please explain why the projected O&M expenses and capital additions included in the net benefits analysis model (Updated Torpey Errata Benefits Model Final.xlsx) are relatively constant throughout the projected lives and do not reflect any substantial increases to account for these extended life maintenance activities in the 20-year time frame.

**TIEC 16-11** Identify all differences in the equipment and projected interim capital additions/retirements as reflected in the net benefits analysis for the Wind Catcher Project and the corresponding analysis for the Traverse, Sundance, and Maverick projects.

**TIEC 16-12** Has SWEPCO or AEP prepared or reviewed any analyses or studies of the life spans of the initial capital investments in wind farms placed in service over the past five years? If so, please provide all such analyses or studies.

**TIEC 16-13** Has SWEPCO or AEP prepared or reviewed any analyses or studies of the projected life spans of wind farms either currently under construction or to be placed in service over the next three years? If so, please provide all such analyses or studies.

**TIEC 16-14** Has SWEPCO or AEP prepared or reviewed any analyses or studies of the performance degradation of wind turbines? If so, please provide all such analyses.

**TIEC 16-15** Is Mr. DeRuntz aware of any wind turbines that have lasted for thirty years? If so, please identify any such wind turbines, including location, commercial operation date, and retirement date.

*The following questions refer to the Rebuttal Testimony of Noah K. Hollis:*

**TIEC 16-16** Referring to the Rebuttal Testimony of Noah K. Hollis at page 9, please provide the calculations, in Excel format with all links intact, supporting the claim that the payback period would only be 9 years.

*The following questions refer to the Rebuttal Testimony of Karl R. Bletzacker:*

**TIEC 16-17** Referring to the Rebuttal Testimony of Mr. Bletzacker at page 10, lines 12-20:

- a. Has SWEPCO prepared a calculation of the value of NextEra's option to deliver at three different points on the Enable pipeline? If so please provide it.
- b. Please provide the basis differential between those 3 delivery points over the last three years.

**TIEC 16-18** Referring to the highly sensitive attachment to SWEPCO's Response to TIEC 8-1:

- a. Does Mr. Bletzacker agree that the attachment includes line items entitled [REDACTED] and [REDACTED]
- b. Does Mr. Bletzacker believe that the prices associated with these line items includes any value for NextEra's ability to deliver at the three different points?
- c. Please explain the source of the line items and the line item entitled [REDACTED]
- d. Please provide the emails referenced under the heading [REDACTED]
- e. Does Mr. Bletzacker agree that these are curves purporting to be market prices as of a certain point in time?
- f. Does Mr. Bletzacker agree that the NYMEX closing price on the day before this contract was entered into is closer to the actual contract price than any of AEP's Base Case or Low Case that are closest in time to when the contract was signed? If not, why not?

**TIEC 16-19** Does AEP have a forward price curve for natural gas delivery to Henry Hub, whether generated internally or provided by a third party? If so, please provide the most recent forward price curve for natural gas delivery to Henry Hub, and describe the source of the price curve.

**TIEC 16-20** Please provide the source of the data used for the inflation adjustment in Figure 2 of Mr. Bletzacker's testimony.

- a. Does Mr. Bletzacker believe market participants would have collectively used the same source as Mr. Bletzacker?
- b. If inflation were 1.5% annually instead of the rate assumed by Mr. Bletzacker, would inflation adjusted NYMEX prices have a negative slope?
- c. Why did Mr. Bletzacker use a base year that is other than the current year for his inflation adjustment?

**TIEC 16-21** Does Mr. Bletzacker agree that the monthly prices in his inflation-adjusted prices in his Figure 2 begin increasing relative to the previous year's prices beginning in 2030?

**TIEC 16-22** Referring to the Rebuttal Testimony of Mr. Bletzacker at page 16, line 11, please

explain in greater detail why Mr. Bletzacker believes Mr. Griffey's comparison of AEP's natural gas forecasts to actual Henry Hub spot prices and the Henry Hub futures price on 12/30/19 is misleading. Please provide a detailed explanation of Mr. Bletzacker's belief that declining inflation adjusted forward prices through 2032 makes the comparison misleading.

**TIEC 16-23** Does Mr. Bletzacker agree that there have been previous periods of at least ten years where inflation-adjusted natural gas prices have declined?

**TIEC 16-24** Please refer to Figure 10 of Mr. Bletzacker's testimony. Does Mr. Bletzacker believe that anything other than the most recent third-party forecasts are relevant to the decision of whether the wind projects are economic? If he believes that older forecasts are relevant, please explain the relevance of the older forecasts.

**TIEC 16-25** Referring to the Rebuttal Testimony of Mr. Bletzacker, page 27, line 17:

- a. Does Mr. Bletzacker agree that the High and Low cases presented in this proceeding form a +/-15% band around the Base case? If Mr. Bletzacker disagrees, please state the basis of his disagreement.
- b. Does Mr. Bletzacker believe that a +/- 15% band around SWEPCO's base natural gas forecast represents the plausible range of natural gas prices in the future? If so, why does Mr. Bletzacker not believe that lower prices are not within the plausible range?
- c. Can Mr. Bletzacker place a probability around the likelihood that gas prices will be within his plausible range? If so, please provide that probability and all supporting calculations.

**TIEC 16-26** Does Mr. Bletzacker agree with the statement on page 21 of Mr. Pollock's Direct Testimony (errata) that SWEPCO Low/No-Carbon gas price forecast is higher than the EIA's 2020 reference case forecast?

- a. If agree, is it Mr. Bletzacker's position that the EIA 2020 EIA Reference Case forecast is outside of a plausible range of outcomes?
- b. If disagree, please provide a detailed explanation of why Mr. Bletzacker disagrees.

**TIEC 16-27** Referring to the Rebuttal Testimony of Mr. Bletzacker at Figure 12, please reconcile this chart with the cumulative renewable capacity figures shown in SWEPCO's Response to TIEC 6-3.

**TIEC 16-28** Referring to the Rebuttal Testimony of Mr. Bletzacker, Highly Sensitive Figure 9, please provide the precise publication date/month of each of the third-party forecasts.

**TIEC 16-29** Referring to the Rebuttal Testimony of Mr. Bletzacker at page 15:

- a. Please confirm that Mr. Bletzacker still uses EIA's forecasted natural gas

demand for each sector except electric generation as inputs to the Aurora model in producing the Fundamentals Forecast, as set forth in his response to TIEC 10-1 in Docket No. 47461.

- b. Please confirm that Mr. Bletzacker still reviews EIA's Annual Energy Outlook to come up with natural gas price elasticities, as set forth in his response to TIEC 11-2 in Docket No. 47461.
- c. Is Mr. Bletzacker planning on producing a new Fundamentals Forecast in light of the newest EIA AEO that has been released? If not, please provide a detailed explanation why the \$1/MMBtu drop in the EIA's reference case between the 2019 and 2020 AEOs does not justify creating a new Fundamentals Forecast.

**TIEC 16-30** Is Mr. Bletzacker aware of any utilities that use implied volatilities in natural gas forecasting and resource planning? If not, please describe all efforts that AEP or Mr. Bletzacker have made to determine whether other utilities use implied volatilities in their planning.

*The following questions refer to the Rebuttal Testimony of John F. Torpey:*

**TIEC 16-31** Referring to the Rebuttal Testimony of Mr. Torpey at page 13 lines 8-9: Please provide the heat rates and variable O&M associated with the "new efficient natural gas plants that have very low fuel costs" that Mr. Torpey cites as the cause of the jump in energy benefits in 2047.

*The following questions refer to the Rebuttal Testimony of Johannes F. Pfeifenberger:*

**TIEC 16-32** Referring to the Rebuttal Testimony of Mr. Pfeifenberger at page 5, is it Mr. Pfeifenberger's position that none of the projects in the "Facility Study" stage and in the "DISIS" stage will be put in commercial operation? If the answer is no, please provide the percentages that Mr. Pfeifenberger believes are reasonable to assume for the percentage of projects in the "Facility Study" and in the "DISIS" stage that will be put in commercial operation.

**TIEC 16-33** Referring to the Rebuttal Testimony of Mr. Pfeifenberger at page 5, lines 15-18, please provide the documents supporting Mr. Pfeifenberger's calculation along with an explanation of how he made this calculation.

**TIEC 16-34** Referring to the Rebuttal Testimony of Mr. Pfeifenberger at page 7, lines 3-9:

- a. Please provide the current projections of coal generation retirements to which Mr. Pfeifenberger refers;
- b. Please provide any analysis or data upon which Mr. Pfeifenberger relies on for his statement that "a lot more SPP coal generation would be retired than currently projected."
- c. Please provide the data or source document upon which Mr. Pfeifenberger relies for his statement that "there is a significant surplus of generation in the SPP footprint."

- d. Please provide the data or source document upon which Mr. Pfeifenberger relies for his statement that the surplus referenced in subpart (c) of this RFI will be “reduced and eliminated over time,” including any projections that Mr. Pfeifenberger has created or reviewed as to when and to what extent surplus generation in the SPP footprint will be reduced or eliminated.

**TIEC 16-35** Referring to the Rebuttal Testimony of Mr. Pfeifenberger at pages 19-20. In the non gen-tie cases, are any of the costs associated with the technologies cited that can reduce congestion (e.g., gen-tie, batteries, demand response) included in SWEPCO’s economic analysis? If not, please explain why it is reasonable to include the benefits from such options but not the costs in the economic analysis of the wind projects.

**TIEC 16-36** Please explain why Mr. Pfeifenberger believes that it is appropriate to assume technologies such as batteries will be useful to reduce congestion but not to reduce power prices over the next thirty years.

**TIEC 16-37** Does Mr. Pfeifenberger believe over the next thirty years that battery technology combined with renewables will result in lower locational marginal prices than fossil fuel alternatives? If not, please explain why not.

**TIEC 16-38** Refer to the Rebuttal Testimony of Mr. Pfeifenberger at page 28, lines 1-2. Please provide his calculation of the after-tax WACC. Please explain Mr. Pfeifenberger’s choice of capital structure that he employed in his calculation.

**TIEC 16-39** Referring to the Rebuttal Testimony of Mr. Pfeifenberger at page 26, lines 11-12:

- a. Please provide all of Mr. Pfeifenberger’s bases for his claim that “the WACC of merchant natural gas generators has been found to be in the 8.0% to 8.5% range.” including copies of any quantitative analyses underlying his claim.
- b. Is his basis for the statement referenced in the prior subpart of this RFI from work that Brattle has done for PJM in calculating the cost of new entry for PJM’s capacity market? If so, please provide a copy of those calculations.

*The following questions refer to the Rebuttal Testimony of Thomas P. Brice:*

**TIEC 16-40** Referring to the Rebuttal Testimony of Mr. Brice, page 22, lines 1-16:

- a. Are all of the costs associated with the “optimization activities” described recovered through SWEPCO’s retail rates? If the answer is no, please identify with specificity each cost associated with the “optimization activities” that is not recovered through SWEPCO’s retail rates.
- b. Does SWEPCO perform these “optimization activities” regardless of whether it makes an off-system sale? If not, please explain how SWEPCO decides whether to perform these optimization activities.