STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

VERIFIED PETITION OF INDIANA MICHIGAN POWER COMPANY (I&M), AN INDIANA CORPORATION, FOR APPROVAL OF A CLEAN ENERGY PROJECT AND QUALIFIED POLLUTION CONTROL PROPERTY AND FOR ISSUANCE OF CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR USE OF CLEAN COAL TECHNOLOGY; FOR ONGOING REVIEW; FOR APPROVAL OF ACCOUNTING AND RATEMAKING, INCLUDING THE TIMELY RECOVERY OF COSTS INCURRED DURING CONSTRUCTION AND OPERATION OF SUCH PROJECT THROUGH I&M'S CLEAN COAL TECHNOLOGY RIDER; FOR APPROVAL OF DEPRECIATION PROPOSAL FOR SUCH PROJECT; AND FOR AUTHORITY TO DEFER COSTS INCURRED DURING CONSTRUCTION AND OPERATION, INCLUDING CARRYING COSTS, DEPRECIATION, TAXES, OPERATION AND MAINTENANCE AND ALLOCATED COSTS, UNTIL SUCH COSTS ARE REFLECTED IN THE CLEAN COAL TECHNOLOGY RIDER OR OTHERWISE REFLECTED IN I&M'S BASIC RATES AND CHARGES.	**CAUSE NO. 44871**

INDIANA MICHIGAN POWER COMPANY'S
SUBMISSION OF ITS PROPOSED ORDER

Indiana Michigan Power Company ("I&M"), by counsel, hereby submits the attached proposed order.

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned certifies that the foregoing was served upon the following via electronic email, hand delivery or First Class, United States Mail, postage prepaid this 22nd day of March, 2017 to:

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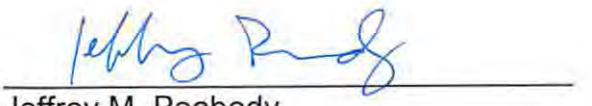

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ORDER OF THE COMMISSION

Presiding Officers:
Angela Rapp Weber, Commissioner
David E. Veleta, Administrative Law Judge

On October 21, 2016, Indiana Michigan Power Company ("Petitioner," "I&M" or "Company") filed its Verified Application, along with its verified direct testimony, attachments and supporting workpapers.

Petitions to intervene were filed on October 25, November 4, and November 15, 2016 by Citizens Action Coalition of Indiana, Inc. ("CAC"), Sierra Club, Hoosier Chapter and Valley Watch, Inc., (collectively "Joint Intervenors" or "JI") and an ad hoc group of industrial customers ("I&M Industrial Group" or "IG"). Each petition to intervene was granted by the Presiding Officers.

On December 14, 2016, the Commission issued a Prehearing Conference Order which, among other things, adopted the procedural schedule for this Cause.

On February 3, 2017, the Indiana Office of Utility Consumer Counselor ("OUCC"), Joint Intervenors and I&M Industrial Group filed their respective direct testimony and attachments. On February 17, 2017, I&M filed its rebuttal testimony and attachments.

Public field hearings were held on February 2, 2017, at 6:00 p.m. at South Spencer High School, 1142 N. County Rd. 275 W., Rockport Indiana and on February 21, 2017, at Homestead High School, 4310 Homestead Rd., Fort Wayne, Indiana.

The Commission held an evidentiary hearing in this Cause on March 1 and 2, 2017, in Hearing Room 222, 101 W. Washington Street, Indianapolis, Indiana, at which time the parties presented their respective evidence and offered witnesses for cross-examination. I&M, the OUCC, IG and Joint Intervenors appeared at and participated in the hearing. No members of the general public attended the hearing.

On March 17, 2017, the City of Fort Wayne, Indiana ("City") filed a Petition for Late Intervention. On March 20, 2017, the City filed the Affidavit of Douglas Fasick, Sr. Program Manager, Utilities Energy Engineering and Sustainability Services for the City's City Utilities Division, in support of its Petition for Late Intervention.

Following the hearing, JI filed a Motion for Modification of Post-Hearing Briefing Schedule on March 6, 2017, to which I&M responded on March 7, 2017. JI's Motion was granted by the Presiding Officers on March 8, 2017. Post-hearing proposed orders and briefs were filed in accordance with the modified schedule for such filings.

The Commission, based upon the applicable law, the evidence herein, and being duly advised, now finds as follows:

1. Notice and Jurisdiction. Due legal and timely notice of the hearing in this Cause was given and published as required by law. Petitioner is a "public utility" as defined in Ind. Code § 8-1-2-1(a) and Ind. Code § 8-1-8.7-2, and an "eligible business" as defined in Ind. Code § 8-1-8.8-6. Ind. Code chs. 8-1-8.7, 8.8 and Ind. Code §§ 8-1-2-6.1, 8-1-2-6.7, and 8-1-2-6.8 give the Commission authority to issue a certificate of public convenience and necessity ("CPCN") and to authorize certain accounting methods, financial incentives and timely cost recovery related to the installation and use of Clean Energy Projects, Clean Coal Technology ("CCT") and Qualified Pollution Control Property ("QPCP"). Therefore, the Commission has jurisdiction over Petitioner and the subject matter of this proceeding in the manner and to the extent provided by Indiana law.

2. Petitioner's Characteristics. I&M, a wholly owned subsidiary of American Electric Power Company, Inc. ("AEP"), is a corporation organized and existing under the laws of the State of Indiana, with its principal offices at Indiana Michigan Power Center, Fort Wayne, Indiana. I&M is engaged in rendering electric service in the State of Indiana, and owns and operates plant and equipment within the State of Indiana that are in service and used and useful in the generation, transmission, distribution and furnishing of such service to the public.

3. Background. I&M's operations are subject to federal environmental laws and rules promulgated by, among others, the United States Environmental Protection Agency ("USEPA"). These environmental laws and regulations include requirements to directly or indirectly reduce or avoid emissions of nitrogen oxides ("NO_x") from coal-fired generating units and the federal Prevention of Significant Deterioration and Nonattainment New Source Review ("NSR") provisions, which are part of the federal Clean Air Act. Pet. Ex. 2 at 6. As part of the federal Clean Air Act and related Consent Decree executed with the Department of Justice ("DOJ"), the USEPA and other parties, I&M must retrofit Rockport Unit 2 with selective catalytic reduction ("SCR") technology by December 31, 2019. *Id.* at 9. There are also several USEPA regulatory initiatives in various stages of development that may also necessitate installation of SCR at the Rockport Unit 2. *Id.* at 4-6.

4. Rockport Unit 2. The 2620 MW, two-unit Rockport Plant located in Spencer County, Indiana is a cornerstone of I&M's generation fleet that provides valuable capacity during period of peak demand, and reasonable-cost and dependable energy to I&M's customers. Rockport Unit 2 was placed in service in 1989, and is already equipped with conventional combustion controls to reduce the formation of NO_x, including low NO_x burners and overfire air. Pet. Ex. 3 at 3. It has achieved low emission rates of NO_x and sulfur dioxide by consuming predominately low-sulfur coal from the Powder River Basin ("PRB"). Pet. Ex. 1 at 7. For 2016, the nominal 2227 MWs of Rockport which I&M owns or purchases represent approximately 49% of I&M's total generating capacity. Pet. Ex. 1 at 7.

5. Rockport Unit 2 Lease. I&M and AEP Generating Company ("AEG") received approval on March 30, 1989, in consolidated Cause Nos. 38690/38691, to enter into a sale and leaseback transaction for Rockport Unit 2. Pet. Ex. 1 at 8. As a result, I&M jointly leases Rockport Unit 2 with AEG, with I&M's leased share being 50% of the unit ("I&M Ownership Share"). In its Order, the Commission found (p. 4) that "the proposed sale and leaseback of [I&M and AEG's] 50% undivided interests in Rockport 2 will yield substantial benefits to Petitioners and their ratepayers and thus are in the public interest." The Commission further found (p. 4) that "the terms of the lease of the facility back to Petitioners are fair and reasonable." This structure has benefitted I&M's customers for decades. Pet. Ex. 1R at 16.

The sale and leaseback financing arrangement regarding Rockport Unit 2 allows, among other things, I&M and AEG to invest in Rockport Unit 2 as necessary to comply with environmental regulations by installing environmental control equipment and systems. Pet. Ex. 6 at 3. I&M and AEG own any modifications made to Rockport Unit 2. *Id.* The Project costs associated with I&M's Ownership Share are recognized as plant-in-service by I&M, no different than project costs associated with Rockport Unit 1. *Id.* As the part owner and purchaser, I&M is ultimately responsible for 85% of the Rockport Unit 2 costs. Fifty percent of this total is associated with I&M's Ownership Share. The remaining 35% is incurred by I&M pursuant to a unit power agreement ("UPA") with AEG approved by the Federal Energy Regulatory Commission ("FERC").

The Rockport Unit 2 Lease terminates on December 7, 2022 unless it is extended under the terms of the Lease or through the mutual agreement of the parties to the Lease. Pet. Ex. 1 at 9. The Lease also provides for an early termination of the Lease in the event that Rockport Unit 2 is "economically obsolete." *Id.* at 8. If the Lease is terminated early due to obsolescence, I&M is

required by the terms of the Lease to pay the Lessors an amount referred to in the Lease as Termination Value, which is a calculable amount intended to essentially make the Lessors whole for the loss of the Lease payments. *Id.* For example, if the Lease was terminated as of January 1, 2020, due to becoming economically obsolete as a result of not installing and operating the requisite SCR system, the Termination Value owed by I&M and AEG to the Lessors would be approximately $716 million. *Id.*

6. Relief Sought and Introduction. I&M requests a CPCN under Ind. Code ch. 8-1-8.7 to install SCR technology to allow I&M to reduce NO_x emissions from Rockport Unit 2 (the "Rockport SCR Project" or "Project") in order to meet the requirements of the Consent Decree as well as future environmental regulations that could further necessitate the need for SCR technology on Unit 2.

To support this requested relief, I&M presented economic analyses evaluating two disposition alternatives associated with the Rockport Plant: (1) retrofit Unit 2 with SCR technology; or (2) forego installation of the SCR technology and return Unit 2 to the Lessor early. Mr. Weaver analyzed each alternative under two different sub-options:

- **"Option 1A"** – This option reflects installation of SCR technology on Unit 2 and the unit's continued operation through retirement at the end of the unit's useful life. Pet Ex. 4 at 6.

- **"Option 1B"** – This option reflects installation of SCR technology on Unit 2, but also assumes the return of the unit to the Lessor by the December 2022 Lease termination date. As Mr. Weaver testified, this option essentially sets the minimum bound for purposes of determining the economic advantage to I&M's customers of proceeding with the SCR Project versus early termination of the Lease. Pet. Ex. 4 at 9.

- **"Option 2"** – This option represents not installing the SCR Project and returning Unit 2 to the Lessors by December 31, 2019, which would require payment of the Lease Termination Value effective as of that date (approximately $716 million) and the replacement of Unit 2's capacity and energy with some combination of resources by January 1, 2020. Pet. Ex. 4 at 7-8.

- **"Option 2A"** – This sensitivity analysis follows Option 2, but assumes any replacement combined cycle capacity would be delayed until January 1, 2023, with I&M relying on the PJM capacity and energy market in the interim. Attachment SCW-4A.

These options were evaluated under five alternative future commodity pricing scenarios. The Company's analysis showed that either of the Rockport Unit 2 SCR retrofit alternatives (Options 1A and 1B) were economically superior to either of the "no SCR retrofit" alternatives (Options 2 and 2A). Pet. Ex. 4 at 40-41.

I&M also seeks cost recovery for the Indiana Jurisdictional portion of the I&M Ownership Share of the Rockport SCR Project in accordance with the Commission's authority under Ind. Code § 8-1-8.8-11 and related statutes and regulations. I&M requests the Commission

authorize the depreciation of I&M's Ownership Share of the Rockport SCR Project over a period of 10 years in accordance with Ind. Code § 8-1-2-6.7. Finally, I&M requests ongoing review of the Project in accordance with Ind. Code § 8-1-8.7-7.

7. Petitioner's Direct Evidence.

A. Overview of Company and I&M's Request. Paul Chodak III, Executive Vice President – Utilities for American Electric Power ("AEP") provided an overview of I&M's request, described the reasons why installing a SCR on Rockport Unit 2 makes sense for I&M and its customers and explained how the installation fits within the long term strategy of the Company to serve customers and comply with federally mandated requirements and environmental regulations. Pet. Ex. 1 at 1-17.[1]

Mr. Chodak discussed the Company's generation resource portfolio and testified that for over thirty years, the Rockport Plant has been a cornerstone of I&M's generation fleet and has achieved low emission rates of NO_x and sulfur dioxide by consuming predominantly low-sulfur PRB coal. Pet. Ex. 1 at 6-7. He recognized that the outlook for coal generation is changing. *Id.* at 7. He added that, the continued safe, reliable and efficient operation of the Rockport Plant is vital to meeting the need of I&M's customers for dependable and affordable electric service. *Id.* Mr. Chodak concluded that the Rockport Unit 2 SCR Project is a cost-effective means of maintaining the availability of relatively low cost, coal-fired generation that complies with environmental regulations. Pet. Ex. 1 at 17. He stated that approval of the Project will allow the plant to continue to serve I&M's customers' needs, provide jobs and taxes to the community, and mitigate the rate impact on customers. *Id.* He said the Rockport Unit 2 SCR Project is the most reasonable option to permit Rockport to continue to provide generation needed to serve I&M's customers' needs while maintaining reasonable rates. *Id.*

B. Rockport Unit 2 Lease. Mr. Chodak discussed the ownership of the Rockport Plant and described the Company's long term Lease of the Rockport Unit 2 approved by the Commission in 1989. Pet. Ex. 1 at 7-8. Among other things, Mr. Chodak stated that during the term of the Lease, I&M and AEG are responsible for installing, owning and operating major environmental controls, such as the SCR, to assure that the plant complies with all regulations. *Id.* at 8. Mr. Chodak testified that the Lease also provides for an early termination of the Lease in the event that Rockport Unit 2 is "economically obsolete." *Id.*He added that if the Lease is terminated early due to obsolescence, I&M is required by the terms of the Lease to pay the Lessors an amount referred to in the Lease as Termination Value, which is a calculable amount intended to essentially make the Lessors whole for the loss of the Lease payments. *Id.* For example, Mr. Chodak explained that if the Lease was terminated as of January 1, 2020, due to becoming economically obsolete as a result of not installing and operating the requisite SCR system, the Termination Value owed by I&M and AEG to the Lessors would be approximately $716 million. *Id.*

Mr. Chodak explained that the Rockport Unit 2 Lease terminates on December 7, 2022, unless it is extended under the terms of the Lease or through the mutual agreement of the parties

[1] At the time the Company's case-in-chief was prefiled, Mr. Chodak was I&M's President and Chief Operating Officer. Pet. Ex. 1R at 1.

to the Lease. *Id.*at 9. He stated that under the terms of the Lease, I&M has options to extend the Lease at the current fixed Lease payment or for a Lease Payment agreed upon in accordance with the fair market value. *Id.* He testified that I&M engaged in confidential discussions with the Lessors regarding what might occur at the end of the Lease and added that at this time, I&M has not exercised its option to renew the Lease under the current Fixed Rate payment or negotiated a payment based on fair market value, and it is not known whether or not it will do so. *Id.* at 9. Mr. Chodak stated that for purposes of evaluating whether to install the SCR on Rockport Unit 2 to comply with federal environmental mandates, I&M evaluated the possibility that it will not have access to the output of Rockport Unit 2 beyond 2022. *Id.*

Mr. Chodak explained the significant uncertainty surrounding the future of Rockport Unit 2 as a resource to meet the needs of I&M's customers obviously makes long-term decisions about I&M's generation portfolio more complex. He identified pending litigation between I&M and the Lessors and said I&M continues to explore all options as it determines the best way to serve customers. *Id.* at 9-10. Mr. Chodak explained that as shown in the Company's Integrated Resource Plan ("IRP"), there are several different paths available to take and the costs of several of the options are relatively comparable. *Id.* at 10. He added that I&M uses its IRP as a tool for making judgments on how to manage its business in the interest of customers. *Id.* Mr. Chodak testified that while clarity on the future of Rockport Unit 2 would be valuable, I&M does not have the luxury of time to wait for matters to become clearer. *Id.*

Mr. Chodak testified that what is clear at this point is that under the current circumstances, installing and operating SCR technology on Rockport Unit 2 in compliance with Federal environmental requirements is the correct decision for I&M and its customers. *Id.* at 10. He stated that I&M's analyses support, and it is the Company's reasonable business judgment exercised knowing what the Company knows now, that even if the Lease terminates at the end of its initial term in 2022, it makes economic sense for I&M and its customers to install and operate SCR technology for the remaining time that I&M and its customers would benefit from the output of the unit. *Id.* Mr. Chodak added that if future developments occur that alter that judgment, I&M is committed to timely advising the Commission and stakeholders about those developments and the impact they have on Rockport Unit 2. *Id.* at 11. He added, at this point, work on the Rockport Unit 2 SCR Project must begin if the Project is to be successfully completed and thus I&M needs to move forward with its filing in this Cause. *Id.*

C. SCR Project and Cost Estimates. Mr. Chodak and I&M Witness Frank R. Pifer, Vice President – Project Controls and Construction for the American Electric Power Service Corporation ("AEPSC"),[2] testified that the Rockport Unit 2 SCR Project will install a SCR system that is advanced clean coal technology designed to reduce NO_x emissions associated with the combustion of coal. Pet. Ex. 1 at 11; Pet. Ex. 3 at 19-20. Mr. Pifer has overall managerial responsibility for the Rockport Unit 2 SCR Project. Pet. Ex. 3R at 1.

Mr. Pifer described the processes that are being utilized to retrofit Rockport Unit 2 with SCR technology to reduce the plant's emissions of NO_x. Pet. Ex. 3 at 2-3. He described the

[2]At the time the Company filed its case-in-chief, Mr. Pifer was Managing Director of Projects with AEPSC. Pet. Ex. 3 at 1; Pet. Ex. 3R at 1.

expected performance of the technology and he discussed the current cost estimate for the proposed Rockport Unit 2 SCR Project retrofit. *Id.* at 3-22.

Mr. Pifer testified that Rockport Unit 2 is already equipped with conventional combustion controls to reduce the formation of NO_x, including low NO_x burners and overfire air. *Id.* at 3. He stated that the addition of SCR technology is required to satisfy the requirements of the Consent Decree and explained that SCR is a proven, reliable technology used throughout the electric utility industry to reduce NO_x emissions. *Id.* at 3, 22. Mr. Pifer described the SCR technology and discussed the anticipated NO_x emission rate associated with the installation of the SCR on Rockport Unit 2. *Id.* at 4-5. He testified that the reactor is designed to accommodate four catalyst layers, but will operate with only two layers initially due to the fan capacity of the unit. *Id.* at 5. He explained that there is a significant pressure drop that occurs when operating the SCR with three or four layers of catalyst and stated that installing fans as part of the SCR Project would increase the cost of the Project, and those fans would be rendered obsolete in any future flue gas desulfurization ("FGD") installation. *Id.* He explained that operation of an FGD will require much more powerful fans, and separate structural boiler stiffening to provide sufficient air flow through the SCR and the FGD. *Id.* He testified that it is in the best interest of I&M's customers to optimize the SCR design with the existing fan capacity and to defer making any investment in additional fan capacity at this time. *Id.* Mr. Pifer noted that this same design approach was used for the Rockport Unit 1 SCR installation. *Id.* at 5.

Mr. Pifer provided an overview of the current project plan for the Rockport Unit 2 SCR Project and discussed the major benefits derived from the AEP's phased approach to construction projects. Pet. Ex. 3 at 5-10. Mr. Pifer generally described the AEP process for selecting technology, the original equipment manufacturer ("OEM") vendor and the construction contractor. *Id*. at 3-4, 10. He also discussed the steps AEP takes to ensure that project costs are reasonable and necessary. *Id.* at 11. Mr. Pifer described AEP's processes to manage project cost, schedule, procurement/contract, risk, safety, and quality. *Id.* at 12-15.

Mr. Chodak and Mr. Pifer explained that the cost of the Rockport Unit 2 SCR Project in total is estimated to be approximately $274.2 million (excluding allowance for funds used during construction ("AFUDC")).[3] Pet. Ex. 1 at 12; Pet. Ex. 3 at 16. Mr. Pifer explained that this cost estimate includes the installation of the SCR and other associated upgrades to existing plant equipment as well as the AEP allocated cost for support of the Project. Pet. Ex. 3 at 16. He discussed how the cost estimate was developed, compared it to the cost estimate for the Rockport Unit 1 SCR Project, discussed the cost estimate accuracy and explained how the cost estimate will be further refined as the phased development process proceeds. *Id.* at 16-17. Mr. Pifer also discussed the methods the Company employs to mitigate the risk of cost escalation. *Id.* at 18. He concluded that the cost estimate for the Rockport Unit 2 SCR Project is reasonable considering the development basis and the degree of site-specific engineering and design work to date. *Id.* at 18. Mr. Pifer also explained that aside from the capital cost of the Project, there will be fixed and variable operation and maintenance ("O&M") costs associated with the operation of the Rockport Unit 2 SCR. *Id.* at 19.

[3] In accordance with 170 I.A.C. 4-6-13, and as described in the FERC Uniform System of Accounts ("USofA"), I&M will record AFUDC on construction work in progress ("CWIP") balances until CWIP ratemaking treatment begins or the associated assets are placed in-service. Pet. Ex. 6 at 7.

Mr. Pifer testified that SCR equipment is identified by name as part of the definition of Clean Energy Projects in Ind. Code § 8-1-8.8-2(1)(B). Pet. Ex. 3 at 19. He testified that this technology was not in general commercial use at the same or greater scale in the United States as of January 1, 1989. *Id.* He also noted that the Commission's Order in *Petition of Southern Indiana Gas and Electric*, Cause No. 41864 (IURC 8/29/2001) (at 4-5) states that SCR technology was selected by the Department of Energy for funding under its Innovative Clean Coal Technology Program and was finally approved for such funding on or after January 1, 1989. Pet. Ex. 3 at 19-20. He added that SCR systems are used to reduce emissions of NO_x, but do not affect the plant's ability to consume higher sulfur fuels, with higher sulfur being a general characteristic of Indiana coal. *Id.* at 20. Mr. Pifer also testified that the existing activated carbon injection ("ACI") system and the Dry Sorbent Injection ("DSI") system currently being utilized at the Rockport Plant will be used with the SCR. *Id.* at 20. He added that the installation of the SCR control technology will allow Rockport Unit 2 to continue operations beyond December 31, 2019, and added that as a result, Rockport will continue to provide value to I&M's customers and formal assessment of Rockport disposition options beyond this point can be performed in the future. *Id.* at 21-22.

D. Environmental Laws and Regulations. John C. Hendricks, Director Air Quality Services within the Environmental Services Division of the AEPSC, discussed the regulation of NO_x emissions, the Consent Decree, future environmental regulations, including those that could further necessitate the need for SCR technology on Rockport Unit 2, and associated permitting necessary to support the proposed retrofit. Pet. Ex. 2 at 3, 9-10. Mr. Hendricks and Mr. Pifer explained that the SCR retrofit will directly reduce emissions of NO_x by reacting NO_x with ammonia on the surface of a catalyst. Pet. Ex. 2 at 3; Pet. Ex. 3 at 4. Mr. Hendricks addressed the impacts of NO_x emission to the atmosphere and discussed the regulation of NO_x emissions under the Clean Air Act. Pet. Ex. 2 at 3-4. Mr. Hendricks explained that as part of the Clean Air Act and AEP's related Consent Decree, I&M must retrofit Unit 2 of the Rockport Plant with SCR technology by December 31, 2019. *Id.* at 6-7. Mr. Hendricks explained how the Consent Decree is related to the Clean Air Act, briefly discussed other consent decrees related to the Clean Air Act and the history of the Consent Decree applicable to I&M. *Id.* at 6-8. He also identified several USEPA regulatory initiatives in various stages of development that may necessitate the installation of SCR technology at Rockport Unit 2 and discussed the federal environmental mandate that currently requires the SCR retrofit at Rockport Unit 2. *Id.* at 4-5. Finally, Mr. Hendricks described the other environmental regulations that were considered in the Company's economic modeling effort. *Id.* at 10-17. Mr. Hendricks added that the proxy for carbon regulation used by Witness Weaver in this analysis reasonably accounts for potential greenhouse gas regulation. *Id.* at 16.

E. Economic Evaluation of Resource Alternatives. Scott C. Weaver, AEPSC Managing Director-Resource Planning and Operational Analysis, evaluated the cost and feasibility of an option to retire and replace Rockport Unit 2, described the modeling process undertaken to evaluate the relative economics of the alternative Rockport Unit 2 disposition options, including a discussion around the major input parameters and key drivers, chief among them the anticipated long-term price of natural gas and energy as well as carbon dioxide ("CO_2") that could impact the Rockport Unit 2 dispatch priority; affirmed that the analysis is consistent with I&M's 2015 IRP, and discussed the results of these economic modeling analyses and the determination that a decision in the near-term to retrofit Rockport Unit 2 by December 31, 2019

with SCR technology and associated equipment for the reduction of NO_x is reasonable and would further a course of action around this unit that could ultimately save I&M and its customers more than $300 million versus an option that would not perform that retrofit. Pet. Ex. 4 at 3-4.

Mr. Weaver presented the resource planning-related criteria that are necessarily introduced and considered as part of this evaluation of alternative options surrounding Rockport Unit 2 and focused specifically on the discrete economic evaluations performed that led to the Company's conclusions and recommendations in this Cause. *Id.* at 5. Mr. Weaver's testimony addressed: the Rockport Unit 2 disposition options, the December 31, 2019 disposition date, the Lease Agreement and related terms, including the Lease Termination Value as of that date estimated at $715.7 million, the evaluation process undertaken to assess potential cost of "down-stream" retrofit requirements, the terms of the Consent Decree, and additional USEPA requirements. Pet. Ex. 4 at 6-14.

Mr. Weaver discussed the capacity need that would be influenced by this Rockport Unit 2 disposition decision and explained how the disposition alternatives were analyzed. Pet. Ex. 4 at 15-18. Mr. Weaver presented his analysis with and without "end-effects". Pet. Ex. 4 at 22; Attachments SCW-4-1, 4-2 and 4A-E. Mr. Weaver discussed the Company's evaluation of demand-side/energy efficiency, demand response and renewable resources in determining the least-cost alternative to meet its long term obligations. Pet. Ex. 4 at 31-34. Mr. Weaver also explained that natural gas pricing is one of the key drivers in this analytical process and provided an overview of the forecasted fundamental commodity pricing in the Rockport Unit 2 disposition analyses. He testified that an array of five unique long-term commodity pricing scenarios were utilized in the analyses, consisting of a "base" view; two "price banding" sensitivity views; and two "CO_2/carbon" views. *Id.* at 36-38, 42-44. Mr. Weaver presented the modeling results and explained that the analyses indicate that a nearer-term solution that would call for the retrofitting of Rockport Unit 2 with SCR technology by December 31, 2019, would be the most economical option for I&M and its customers. *Id.* at 38-41. Mr. Weaver explained that over the relative shorter term, the results suggest that CO_2 would likely not be a significant issue. *Id.* at 45. He said that recognizing that, effectively, Option 1B and Option 2 are largely focused on the relative economics of those alternatives for the years 2020 through 2022 (only), one would anticipate that by virtue of a 2022 start-date for the Clean Power Plan ("CPP") (represented by a 2022 carbon tax proxy start-date in the modeling), it would have minimal impact on the relative economic results. *Id.* He said this fact is borne out when comparing the relative results found on Attachment SCW-4-2. He discussed the optionality offered by the Rockport Unit 2 SCR Project and explained that the Rockport Unit 2 SCR Project could potentially serve to "bridge" the unit for a period of 9 years; beginning with the required December 2019 SCR in service date up to the timeframe in which a more capital-intensive dry FGD retrofit which, for purpose of the analysis, would be required to be installed by December 31, 2028. *Id.* at 46; Attachment SCW-5. Mr. Weaver discussed the relative near-term economic advantage of the Project and stated that the analysis suggests that the Rockport Unit 2 SCR Project would afford the ability to capitalize on the significant relative value it would offer I&M and its customers, even for a brief, 3-year period that would lead up to a potential Return to Lessor disposition. *Id.* at 46-47.

Mr. Weaver concluded that the robust unit disposition economic analyses I&M performed would point to the nearer-term retrofitting of Rockport Unit 2 with SCR technology

by December 31, 2019, (via either Option 1A or Option 1B) as being a reasonable and least-cost solution over the long-term economic study period evaluated when compared to a view that would not install an SCR but rather terminate the Rockport Lease as of that same date and pay the Lessors a stipulated Lease Termination Value (Option 2). *Id.* at 51.

Mr. Weaver added that the Rockport Unit 2 SCR Project would serve to economically preserve a future option to potentially install dry FGD environmental controls on Unit 2 by the end of 2028, as required under the Consent Decree. *Id.* at 51. He stated that even under the assumption I&M would ultimately choose *not* to proceed with a Unit 2 dry FGD retrofit, the economic analysis clearly supports implementation of the Rockport Unit 2 SCR Project. He stated it is in the best interest of its customers to leverage the current investment of a thermally-efficient Rockport Unit 2 by recommending it be retrofitted with SCR technology by December 31, 2019, so as to be in compliance with the Consent Decree as well as other potential USEPA rulemaking that would require the reduction of NO_x emissions. *Id.* As summarized by Mr. Chodak, the Rockport Unit 2 SCR Project is a reasonable business decision regardless of whether the unit is no longer a resource available to I&M after 2022 because declaring the unit to be economically obsolete now would be a more costly alternative for I&M's customers. Pet. Ex. 1 at 16.

F. Accounting and Ratemaking. Andrew J. Williamson, I&M Director of Regulatory Services, explained I&M's requested accounting and ratemaking treatment related to the costs associated with I&M's Ownership Share of the Project.

Mr. Williamson explained that I&M seeks timely cost recovery via I&M's existing Clean Coal Technology Rider ("CCTR") of the following costs associated with I&M's Ownership Share: carrying costs including all applicable federal and state income taxes; depreciation; associated O&M expense; and associated consumable and property tax expenses. Pet. Ex. 6 at 5.

He stated that consistent with I&M's previous CCTR filings within Cause No. 44523 ECR-X, I&M requests approval to establish rates using the forecasted costs associated with the period in which future requested rates are expected to be in effect. He added that I&M also requests to recover gross revenue conversion ("GRCF") costs in the calculation of the CCTR revenue requirement associated with the Project, and said the calculation and application of the GRCF is consistent with the GRCF approved by the Commission in other I&M riders. *Id.* at 5-6, 10. He stated that I&M requests to implement CWIP ratemaking treatment for I&M's Ownership Share of the Project costs.

With regard to the proposed accounting treatment for I&M's Ownership Share, Mr. Williamson explained that I&M seeks authority to: depreciate I&M's Ownership Share, once the assets are in-service, over a 10 year period; defer and record as a regulatory asset the associated depreciation, carrying costs, O&M, consumable and property tax expenses until such time as these costs receive ratemaking treatment through the CCTR or are otherwise reflected in basic rates; and utilize, via the CCTR, traditional over/under recovery accounting for the annual true-up of rider revenues to actual costs consistent with I&M's past CCTR tracker reconciliations. *Id.* at 6.

Mr. Williamson explained how the Project costs are segregated and recorded and how I&M will account for its Ownership Share of the Project. He stated that I&M proposes to begin CWIP recovery for I&M's Ownership Share of the Project's capital costs once the Project has been under construction for at least six (6) months and the associated costs are included in CCTR rates. *Id.* at 6. He said I&M will record AFUDC on CWIP balances in accordance with 170 I.A.C. 4-6-13 as defined and prescribed in the FERC USofA, until CWIP ratemaking treatment begins or the associated assets are placed in-service. Mr. Williamson testified that I&M proposes to include its Ownership Share of the Project's associated O&M expense, including consumable expenses, in its CCTR and requests the Commission authorize I&M to defer O&M and consumable expenses incurred during the operation of the Project until such time as these costs are reflected in the CCTR. *Id.* at 7.

Mr. Williamson explained how I&M will account for and determine incremental O&M expenses related to the Project, discussed how I&M is proposing to depreciate the Project capital investment and explained the Company's proposal regarding property tax expenses related to I&M's Ownership Share of the Project. Pet. Ex. 6 at 7-9. Mr. Williamson also explained what return on equity ("ROE") I&M proposes to use to compute the revenue requirement for its Ownership Share. *Id.* at 9.

Mr. Williamson concluded that the request for authority to defer the associated carrying costs, depreciation, O&M, consumable and property tax expenses until such costs are reflected in the CCTR is reasonable and necessary to ensure timely recovery of the Project. Moreover, he said it would be very difficult and inefficient for I&M to perfectly time a base rate case, or base rate cases, with the in-service date of the Project. *Id.* at 10-11. He testified that the statutory and regulatory framework applicable to this proceeding recognizes this and was established to avoid the adverse financial impact that could otherwise occur during the interim period between the Project in-service date and the inclusion of I&M's Ownership Share of the Project costs in I&M's basic rates. He stated that allowing I&M to recover these costs through the CCTR also avoids the unnecessary cost and time commitment associated with filing a base rate case. *Id.* at 11.

Mr. Williamson described how the ratemaking treatment related to I&M's Ownership Share of the Project will be effectuated and explained how I&M will treat the return associated with the requested ratemaking treatment for its Ownership Share in its Fuel Cost Adjustment filings. Pet. Ex. 6 at 12-13. He stated the requested ratemaking treatment will continue until I&M's Ownership Share of the Project is included in basic rates, including the associated return and all aforementioned operating costs. *Id.* at 13.

Mr. Williamson also discussed the accounting that will occur if the Project is retired prior to being fully depreciated. He testified that at the end of the Lease, the Project will be retired for accounting purposes. He said I&M will follow the accounting for retirements according to the FERC USoA, the same accounting used for any other retired capital asset. *Id.* at 13. He described how any under-depreciated book value would be treated upon retirement and explained that any remaining balance will be included in future I&M filings until it has been fully recovered through the ratemaking process. *Id.* at 14.

G. Ongoing Review and Annual CCTR Filings. Mr. Williamson also explained I&M's request for ongoing review of the construction of the Project to be conducted annually as part of I&M's proposed annual CCTR proceedings and discussed how the ratemaking treatment will be effectuated. He stated (p. 11) that I&M will include progress reports of construction, updated cost estimates and any revisions to cost estimates for the Project in the annual CCTR filing.

H. Estimated Rate Impact. Mr. Williamson explained that I&M estimates the overall annual rate impact of the Ownership Share for the Indiana retail jurisdiction for all rate classes to be 1.6% upon completion of the Project. Pet. Ex. 6 at 14; Attachment AJW-1.

8. OUCC's Evidence.

A. Project Evaluation and OUCC Recommendations. Edward Rutter, Chief Technical Advisor in the OUCC Resource Planning and Communications Division, discussed the Rockport Unit 2 SCR Project and the OUCC's review of I&M's modeling results.

He said that based on his analysis of Mr. Weaver's results, Option 1A (*i.e.* install the SCR and renew the Lease) is the preferred alternative at this time. Pub. Ex. 1 at 5. He said the revenue requirement impact on ratepayers is minimized through this option, the need to replace the capacity and energy produced is minimized and the 2018 IRP should evaluate all options consistent with current generation capacity consistent with expected load requirements and will allow for a complete look at the need for Rockport Unit 2 beyond the Lease termination date. Pub. Ex. 1 at 5-6. He noted that basic inputs that I&M chose and considered reasonable for the model used in this case could change. He added that the probability of more (or fewer) environmental rules requiring more (or less) capital and O&M expense can materially impact a decision to retrofit a specific generating unit. Pub. Ex. 1 at 6. Mr. Rutter recommended that I&M install the Unit 2 SCR, but it should also review the balance of its options and model for future generation alternatives in the 2018 IRP. Pub. Ex. 1 at 7.

Mr. Rutter testified that a simple analysis of I&M's proposal looks at the immediate and total ratepayer cost. Pub. Ex. 1 at 7. He said under I&M's proposal, the cost to retrofit Rockport Unit 2 with SCR technology is approximately $274.2 million. He said the cost to terminate the Lease at December 31, 2019 is $716 million. He said Indiana ratepayers would be responsible for paying their allocated portion of I&M's costs, whether it is installation or termination. Pub. Ex. 1 at 7. He stated that the I&M share of the SCR Project cost is $137.1 million, which would result in a rate increase for Indiana ratepayers of 1.6% collected through the existing CCTR. Pub. Ex. 1 at 8. He said that assuming the Lease would terminate January 1, 2020, that the SCR retrofit technology was not implemented and that only the Lease termination costs were allowed to be recovered, the Indiana rate impact is an increase of 3.45% collected through the existing CCTR. He added that if I&M were allowed to not only recover the Lease termination costs in the form of annual depreciation or amortization, but also a return on the net unrecovered Lease termination cost, less accumulated depreciation or amortization, the rate impact is an increase in rates of 6.44% collected through the existing CCTR. Pub. Ex. 1 at 8; Attachment ETR-1.

Mr. Rutter stated (p. 9) that the OUCC recommends the Commission allow I&M to install SCR technology on Rockport Unit 2, and require I&M to robustly model generating

alternatives to the generation provided under the Lease agreement for Rockport Unit 2 in its next IRP.

B. Environmental Laws and Regulations. Cynthia Armstrong, Senior Utility Analyst in the OUCC Electric Division, discussed the environmental regulations and requirements concerning the SCR Project as well as future environmental regulations and how the costs for these regulations were considered in I&M's economic analysis supporting the SCR Project.

Ms. Armstrong testified that while there are many requirements that could obligate I&M to install an SCR on Rockport Unit 2, the three main requirements influencing the proposal are the recent revision to the primary 8-hour ozone National Ambient Air Quality Standards ("NAAQS"), the update to the Cross State Air Pollution Rule ("CSAPR"), and the Consent Decree. Pub. Ex. 2 at 2. She described each of these requirements and how they may impact the decision to retrofit Rockport Unit 2 with an SCR. Pub. Ex. 2 at 3-8.

With respect to future environmental regulations, Ms. Armstrong testified that the main environmental regulations that could impact Rockport's operations over the next decade are the Coal Combustion Residuals ("CCR") Rule, the updated Steam Electric Utility Effluent Limitation Guidelines ("ELGs"), the Cooling Water Intake Structure Rule ("316(b) Rule"), carbon regulations and the Consent Decree. Pub. Ex. 2 at 8. She testified that I&M has made assumptions for the cost of these regulations in its economic analysis, and they appear to be within the reasonable range for the expected retrofits these regulations would require. Pub. Ex. 2 at 13. She noted, however, that the costs assumed for these regulations are estimates based on preliminary studies, and the actual costs of compliance may be more once in-depth, site-specific engineering studies are completed in the future.

Ms. Armstrong concluded that the SCR is required for Rockport Unit 2 to operate beyond 2019, and the Consent Decree is driving this requirement. She said installing the Unit 2 SCR may help to improve the operational flexibility of the unit with regards to compliance of CSAPR, but Rockport can comply with CSAPR without the Unit 2 SCR. She added that I&M has assumed reasonable costs for future environmental compliance, specifically for the CCR Rule, the updated ELGs, and the Consent Decree. She said while the actual costs could be greater, I&M has made a reasonable effort to estimate costs on the technology expected to comply with these requirements. Pub. Ex. 2 at 14.

C. Accounting and Ratemaking. Mr. Blakley reviewed I&M's proposed accounting and ratemaking for the Project and discussed the proposed tracking of I&M's Ownership Share. He said that I&M's requested cost recovery is the same treatment that was approved for its 50% Ownership Share of the Rockport Unit 1 SCR in Cause No. 44523. Pub. Ex. 3 at 3. He said the OUCC does not agree with I&M's proposed ratemaking treatment for any under-depreciated asset that may happen as a result of early Lease termination. Pub. Ex. 3 at 4. He said any decision regarding recovery of the value of under-depreciated plant should be fully investigated in a base rate case, not in a tracker or other abbreviated proceeding. Mr. Blakley concluded that I&M's accounting and ratemaking treatment request for its Rockport Unit 2 SCR is consistent with the Commission's QPCP rules in 170 I.A.C. 4-6-1 and the CCT statutes under Indiana Code Section 8. He said these are the same statutes and rules I&M applies to its current ECR tracker for its Rockport Unit 1 SCR.

9. Industrial Group Evidence. Nicholas Phillips, Jr., a Managing Principal of Brubaker and Associates, Inc., reviewed the Project and requested ratemaking treatment. Mr. Phillips discussed significant elements of I&M's requested ratemaking treatment and raised concerns about the proposal.

A. Depreciation Period. Mr. Phillips contended that I&M's request to depreciate the SCR Project over 10 years is at odds with the 28-year life used by the AEG leased portion of the same SCR. He said I&M should not be permitted to use a depreciation period for the I&M-owned portion of the Lease that is nearly three times faster than the depreciation period of the AEG portion. He said this is especially true given the possibility that I&M ratepayers may only benefit from the SCR for three years before termination of the Lease. IG Ex. 1 at 8. He added that if a 28-year period is appropriate for AEG, it is appropriate for the half of the plant leased by I&M. He stated, however, that if the applicable law restricts the maximum period to 20 years, the 20 year maximum should be used. IG Ex. 1 at 9. Mr. Phillips also discussed prior testimony from Mr. Chodak in Cause No. 44033 and stated that a decision whether to renew, terminate or buy out the Rockport Unit 2 Lease is more than five years overdue. IG Ex. 1 at 10.

B. Undepreciated Balance. Mr. Phillips (p. 9) stated that based on the SCR construction schedule and the current Lease expiration date, the SCR would be used and useful in the provision of electric service to Indiana ratepayers for about 35 months or slightly less than three years. He disagreed that I&M should be allowed to recover the undepreciated balance from Indiana ratepayers in that circumstance. He said the Commission should either specifically find that I&M may not recover any undepreciated balance for the SCR from ratepayers or any CPCN granted to I&M should be conditioned on the SCR remaining used and useful to I&M ratepayers. IG Ex. 1 at 10. He explained Indiana's CPCN law confers benefits on utilities' ability to recover their costs once a Certificate is granted, however, he said the Certificate is only in the public interest after December 7, 2022, if the SCR property remains used and useful to I&M ratepayers. He explained why he believed his recommendation was consistent with Ind. Code ch. 8-1-8.7. IG Ex. 1 at 11.

C. Fixed Cost Allocation. Mr. Phillips testified that the appropriate method to allocate costs for both the Ownership Share and Allocated Share, if the Commission approves I&M's requests, is the allocation method used to allocate fixed production costs to classes as approved by the Commission in I&M's most recent base rate case (Cause No. 44075). He said the method approved by the Commission in Cause No. 44075 to allocate fixed production cost to classes is the six coincident peak ("6 CP") method and explained why this method is appropriate for allocation of fixed production investment in the CCTR, testifying it was consistent with the Commission's rules, and the Commission's prior approval of the use of the 6 CP method. He testified that if the Commission allows I&M to include AEG cost increases in the CCTR, those costs should be allocated to customer classes in the same manner as the Indiana jurisdictional SCR costs. IG. Ex. 1 at 13. He said he believed his proposal was consistent with I&M's proposal to allocate these costs.

D. Cost Cap and Contingency Plan. Mr. Phillips stated there is a risk that a significant portion of the Unit 2 SCR costs will be stranded in the event that the Lease is not renewed. He said under these circumstances, the Commission should cap the costs recoverable in

the rider for the Unit 2 SCR at I&M's current estimate. He stated any potential cost overruns can be addressed in a future rate case. IG Ex. 1 at 5, 11.

Mr. Phillips also testified that without the 1105 MW output of Rockport Unit 2 after December 7, 2022, I&M would be capacity deficient. He said I&M basically depends on four large generating units to provide adequate capacity to serve its customers, and that Rockport Unit 2 is the newest of the four units. He stated that since a rule of thumb to bring a combined cycle unit on line is approximately five years, it is in Indiana ratepayers' interest that I&M set forth a contingency plan in the very near future and should be required to do so by the Commission. IG Ex. 1 at 11.

10. Joint Intervenors' Evidence. Jeremy I. Fisher, a Principal Associate with Synapse Energy Economics, Inc., assessed I&M's analysis, examined if the installation of controls at this time is in the interest of I&M's ratepayers, discussed the basic specifications for the SCR in light of the Company's regulatory requirement, and assessed if the Company's proposal is consistent with its requirements. JI Ex. 1 at 3. Mr. Fisher did not substantially disagree with the structure of the Company's decision framework, which seeks to understand the balance between short-term optionality and long-term risk, but added that such a decision ought to rely on a robust analysis, reasonable inputs, and a reasonable interpretation of the analysis results. *Id.* at 5.

A. End-Effects. Mr. Fisher claimed the Company has been disingenuous about its interpretation of the analysis results by inappropriately relying on flawed results that emphasize outcomes which might occur more than thirty years in the future (the "end-effects period"). *Id.* at 6, 12-16, 51-52. He further claimed that the results from the core analysis period run counter the Company's findings. *Id.* He said, the end-effects error imposed by the Company (*i.e.*, assuming no additional capital costs at Rockport after 2045) is highly biased in favor of Option 1A. He stated therefore, removing end-effects decreases the overall cumulative present worth ("CPW") of the scenarios, but increases the cost of Option 1A by about $150-$170 million relative to the other options examined by the Company. *Id.* He stated that this correction inverts the position of Option 1A and 1B, with Option 1B slightly more cost effective than 1A by $84 million, and it reduces the relative cost of a 2019 (Option 2) Lease termination to approximately $170 million more than Option 1A—a drop of nearly 50 percent. *Id.* He added that removing the allegedly flawed end-effect analysis and simply assessing the Company's application through the 2016-2045 analysis period indicates that Rockport Unit 2 is unlikely to be a reasonable and prudent decision **over the extended period**. *Id.* at 52 (emphasis added). He said this means that, even under the Company's optimistic scenario, Rockport Unit 2's SCR is likely to become a stranded asset – either absorbed by ratepayers or litigated with the Lessors in 2022. *Id.*

B. Fuel and Market Price Forecasts. Mr. Fisher also claimed that the Company relied on outdated inputs by using fuel and capacity price forecasts. *Id.* at 6, 16-23, 52. He testified that the instant case before the IURC was filed on October 20, 2016, meaning that an updated forecast, completed in October 2016 was developed by, and would have been available to the Company within days of the filing. *Id.* He said a delay in filing by a few days *could* have resulted in a substantially different finding by the Company. *Id.* at 23 (emphasis added). Mr. Fisher contended it would not be appropriate to only assess the Rockport Unit 2 SCR decision on the basis of the Company's "Lower Band" analysis and added that the Company's "Lower Band"

and "Higher Band" fuel price forecasts are not particularly useful for these types of resource decisions, as the simultaneous higher and lower movement of the gas and coal prices dampens the extent to which a decision is in ratepayers' favor or a liability. *Id.* at 23-24.

Mr. Fisher made rough adjustments to the Company's analysis to account for updated fuel prices, the cost of market energy procured to serve load, and the revenue from energy sold into the market. *Id.* at 24-25. He said the impact of his natural gas price update is dramatic, as it impacts the core decisions of the Company's analysis. *Id.* at 26. He added that the lower gas prices, reflected in market prices, increase the relative merit of every option in which Rockport Unit 2 is not maintained **over the long term**. *Id.* (emphasis added). He stated that overall, his adjustment makes it clear that the **long-term** maintenance of Rockport Unit 2 is unlikely to be favorable for I&M ratepayers. *Id.* (emphasis added). He added however, it also equalizes the relative merit of Option 1B and Option 2, raising doubts about the clear option value of building the SCR even if I&M can successfully exit the Lease in 2022. *Id.*

C. Capacity Prices. Mr. Fisher also criticized the Company's capacity price forecasts and compared the forecast to the results of PJM Base Residual Auction. *Id.* at 30-36. He proposed a forward capacity price at 60 percent of net Cost of New Entry ("CONE"), or $180/MW-day, recalling that CONE is a ceiling price, and has never previously been reached. *Id.* at 34. He stated that his capacity price adjustment clearly impacts Option 2A most substantially, reducing the cost of replacing Rockport Unit 2's capacity with market purchases for the interim 2019-2023 period. *Id.* at 36. He said his capacity price adjustment impacts the other options as well, but to a lesser extent, as the replacement capacity envisioned here is roughly equivalent to the size of Rockport Unit 2. *Id.* Mr. Fisher stated that with this adjustment in place, cumulatively to the other corrections, Options 2 and 2A are almost the same cost. He said both Option 2 and 2A continue to show a substantial benefit against Option 1A (over $400 million). He recognized that, with his adjustments, Options 2 and 2A clear Option 1B by a benefit of approximately $50 million and stated that the analysis clearly indicates that the optionality of 1B—building the SCR and then abandoning it in 2022—is not reasonably established, and the **long-term** benefits of maintaining Rockport Unit 2 are non-existent. *Id.* at 36-37 (emphasis added). He added that if the 2016 forecast is substituted in his analysis, Option 2A clears Option 1A by nearly $500 million and Option 1B by $160 million. *Id.* Mr. Fisher calculated that investing in Rockport and maintaining the facility through the indefinite future actually will result in ratepayer losses of about $400 million—or a $700 million swing. *Id.* at 37-38.

D. Ongoing Capital Costs. Mr. Fisher said the Company made several key analysis errors in the consideration of ongoing capital costs at Rockport Unit 2 prior to the years when the unit is assumed to retire, biasing the Company's analysis in favor of building the SCR, even if the unit retires in 2022. *Id.* at 6, 27, 52. He said the first error arises from a mismatch between an explicit Company assumption and its execution with respect to ongoing capital. *Id.* at 27. He said the second error seems to be a simple transcription error, in which the Company used the wrong series of numbers for ongoing capital carrying costs at Rockport Unit 2 in Option 2A. *Id.* at 28. He applied the ongoing capital cost correction incrementally to the fuel price update discussed above and concluded that the adjustment does not impact Option 2, but increases the cost of Option 1B by $53 million and lowers the cost of Option 2A by $28 million. *Id.* at 28. He stated that under this correction, Option 2 becomes slightly more favorable than Option 1B by $39 million. *Id.* at 29. He added that while this difference is still small relative to the magnitude of

the decisions and swings associated with the corrections, it is indicative that the decision between Option 1B and Option 2 is narrower, or reversed, relative to the Company's contention. *Id.* Mr. Fisher also identified what he considered an error with respect to the disposition of shared unit costs between Rockport Unit 1 and Rockport Unit 2. *Id.* 29-30.

E. Litigation Risk. Mr. Fisher stated that the Company's analysis subjects I&M to substantial litigation risk by seeking to build what he referred to as a sub-standard SCR and planning for substantially reduced ongoing capital at Rockport Unit 2 prior to the expiration of the Company's Lease. *Id.* at 6, 10, 38-39, 53. Mr. Fisher argued that the Company's proposal exposes it to liability under the "Event of Default" Lease provision and to a possible enforcement action for noncompliance with the Consent Decree. *Id.* at 39-49. His analysis of this risk shrunk the cost differential between Option 1A and 1B. *Id.* at 49. He stated that while the Company portrays Options 1A and 1B as lower cost and maintaining optionality, his results indicate that the Company's outdated analysis fails to convey the very tangible costs and risks associated with maintaining Rockport. *Id.* at 49. He added that the certainty of terminating the Lease in 2019 at a known cost appears far more attractive—both lower cost and lower risk—than maintaining the plant in a manner inconsistent with its legal obligations on the off chance that the Lessors will not litigate and that market prices will recover significantly in two years. *Id.* He concluded that while the costs of simply building an appropriate SCR and maintaining Rockport Unit 2 are relatively smaller than his view of the potential litigation risk penalties, they are large enough alone to effectively render the decision to retrofit uneconomic and ill-considered. *Id.* at 53.

F. Cost of Renewables. Finally, Mr. Fisher argued that the Company artificially weakened the robustness of the analysis by overpricing reasonable alternative energy options. *Id.* at 6, 49-51. He stated that using his updated renewable costs assumptions would have the impact of making Option 2 more cost-effective relative to Option 1B, and Option 1B more cost-effective relative to Option 1A. *Id.* at 51.

G. Project Evaluation and JI Recommendations. Mr. Fisher found that Rockport Unit 2 is not a reasonable **long-term** resource and under current projections is likely to become a sizable liability to I&M ratepayers. *Id*. at 7 (emphasis added). He testified that when the Company's analysis is updated, Option **1A** (installing the SCR and renewing the Lease) is not cost-effective under reasonable assumptions. *Id*. (emphasis added). He described and executed four sequential adjustments to the Company's analysis: the removal of an erroneous end-effects calculation, updating a year-and-a-half old fuel price forecast relied upon by the Company, correcting Company mistakes in the calculation of ongoing capital costs, and recommending a capacity price forecast more consistent with known market behavior. *Id*. at 7. He stated that his adjustments substantially impact the decision to proceed with the SCR against other options examined by the Company. *Id*. at 7-9. He stated that it becomes immediately apparent through this series of adjustments that the option to install the SCR and maintain Rockport past 2022 is neither viable nor reasonable under current market conditions. *Id*. at 9. He added that even the Company's own analysis indicates that Rockport Unit 2 has a negative value if maintained past 2022. *Id*. He concluded that his assessment of the Rockport Unit 2 SCR indicates that the prompt divestment from Rockport Unit 2 ahead of the SCR requirement is beneficial for I&M's customers and provides a known, low risk exit from the power plant. *Id.* at 53.

Mr. Fisher recommended the Commission deny the CPCN on the basis that neither of the options examined by the Company for the installation of SCR are least-cost or least risk for ratepayers. *Id.* at 11, 54, 55. He added that the Commission should require that I&M expediently file a plan for the replacement of the capacity and energy requirements otherwise met through Rockport Unit 2. *Id.* at 11, 54.

H. Alternative Conditions. Mr. Fisher testified that if it does not reject the CPCN, the Commission should require a number of simultaneous conditions to protect ratepayers and encourage prudent planning: (a) that I&M maintain separate accounting for the cost of the SCR and that the Commission maintain the ability to adjust the rider at any time prior to 2019; (b) that the Company conduct, prior to signing a notice to proceed or other release to major SCR contractors, an updated analysis and present it to the Commission for review by April 2017; (c) that intervenors be afforded an opportunity to review and comment on such analysis by October 2017; (d) that the Commission retain the opportunity to hold back future funds if it is determined that the Company has proceeded against the best interests of ratepayers; (e) that the Company be required to file a request for approval to exit or renew the Lease at Rockport at least one year prior to informing the Lessor of such decision; (f) that I&M shareholders bear full responsibility for all litigation fees and penalties resulting from any non-compliance with the Consent Decree; (g) that I&M shareholders bear full responsibility for all litigation fees and penalties from any contract breach; (h) that I&M be restricted to recovery of a fixed percentage deadband around the $137.1 million capital estimate for the SCR; and (i) that I&M be required to aggressively pursue all cost-effective energy efficiency and renewable energy options in advance of the Lease termination date of 2022. *Id.* at 11, 55-56.

11. Petitioner's Rebuttal Evidence.

A. Response to OUCC.

(i) Project Evaluation. Mr. Chodak presented the Company's general reply to the OUCC and IG recommendations. He stated that he was pleased that Mr. Rutter corroborates the Company's view that I&M should proceed with retrofitting Rockport Unit 2 with SCR technology and not retire the unit at this time. He recognized that Option 1A in Mr. Weaver's economic analysis assumes that the Unit 2 Lease will be renewed and that various factors impact the renewal decision, including market conditions, environmental regulations and the customer impact. Pet. Ex. 1R at 3. He said the Company is working diligently on a resolution of the Lease renewal. He stated I&M has and will continue to conduct a robust analysis regarding Unit 2, including modeling of replacement generation based on an assumption that the Rockport Unit 2 Lease terminates at its currently scheduled date of December 2022. Pet. Ex. 1R at 3-4. He said I&M will keep stakeholders apprised of its analysis as part of the 2018 IRP stakeholder process which will commence in the first quarter of 2018. He added that should a material development occur before then, I&M will update the Commission, the OUCC, and Intervenors regarding the development as soon as practicable.

(ii) Environmental Regulations. Mr. Hendricks testified that while he agreed with Ms. Armstrong that the CSAPR Rule, the Consent Decree and the NAAQS for Ozone all contain requirements that could impact the allowable level of NOx emissions at the Rockport Units, he said she has omitted the 2012 fine particulate standard and the USEPA obligation to

review that standard. Pet. Ex. 2R at 2. He said that in addition, USEPA has used the "good neighbor" provision in Section 110 of the Clean Air Act to impose additional emission reduction obligations on large sources of NO_x and SO_2 emissions, like the Rockport Units, in an effort to achieve and maintain the NAAQS in downwind areas far from the emitting units. He said the CSAPR Rule is an example of this type of requirement. *Id.* He added that while I&M may be able to achieve compliance with its current CSAPR obligations without operating the Rockport Unit 2 SCR, I&M will likely have to secure additional ozone season NO_x allowances from the market. He said installing the SCR on Rockport Unit 2 will provide important compliance flexibility to I&M in the event that there is an increase in market prices for allowances, a decrease in state ozone season NO_x budgets, or an increase in Rockport Plant ozone season NO_x emissions. *Id.* at 3. He testified that while the Company has not done an economic analysis to quantify this benefit, due to the fact that the Rockport Unit 2 SCR installation is a requirement under the Consent Decree, it is nonetheless a benefit to I&M's customers. *Id.*

(iii) Accounting and Ratemaking. Mr. Williamson verified Mr. Rutter's calculation and assertions regarding the estimated rate impact of terminating the Rockport Unit 2 Lease. Pet. Ex. 6R at 1-3. He said the OUCC correctly found that the cost to customers for approval of the CPCN to be less than the cost to customers associated with termination of the Lease. *Id.* at 4. With respect to Mr. Blakley's concerns, Mr. Williamson testified that his direct testimony simply summarized the accounting that occurs upon retirement of any capital asset according to the FERC USoA and that any remaining costs or undepreciated book value resulting from retirement would be included in future I&M filings until fully recovered through the ratemaking process. *Id.* at 3. He said it has long been established that remaining book value of investments that are once used and useful in the provision of service to customers are recoverable through the ratemaking process regardless of whether they are fully depreciated at the time of retirement. *Id.* at 3-4. He added that he did not believe that a base rate case is the only type of proceeding that may be appropriate for the Commission to address remaining net book value of a retired asset. He noted as an example I&M's standalone proceeding in Cause No. 44555 to address the closure of the Tanners Creek Plant, including its remaining net book value, which both the OUCC and the Commission found to be reasonable. *Id.* at 4.

B. Response to IG.

(i) Project Evaluation and Consideration of Alternatives. Mr. Chodak disagreed that I&M has not been assessing its options. He said the Company's IRP analysis, as well as the modeling presented in this case, support the conclusion that the SCR Project is the preferred option. Pet. Ex. 1R at 4-5. He said the special contingency plan Mr. Phillips asks the Commission to require I&M to produce is unnecessary. He added that as circumstances develop regarding the Lease, I&M will make filings with the Commission outside of the IRP process to the extent necessary or appropriate. Pet. Ex. 1R at 5. He responded to Mr. Phillips' remarks regarding the five year "rule of thumb" to bring a new CCGT online. He explained that if the Company's IRP preferred near-term action plan includes a new CCGT, I&M would meet its customers' need for energy and capacity through existing generation and market purchases until the new facility could be completed. *Id.* at 6. In response to Mr. Phillips' contention that I&M does not have a long-term Lease arrangement past December 7, 2022, Mr. Chodak clarified that the Lease provides I&M a unilateral right to renew the Lease at a Fixed Rate payment. Pet. Ex. 1R at 6. He said this is not a situation where both the Lessor and the Lessee must mutually agree

to the Lease renewal. *Id.* Mr. Chodak stated that while reliance on the market exposes I&M and its customers to price risk, that price risk can be managed through the use of bi-lateral transactions. *Id.* at 7. He testified that should I&M need to rely on market purchases to replace the Unit 2 generation, he is confident that I&M is quite capable of effectively managing a need to engage in market transactions should that be the best path forward for I&M and its customers. *Id.*

Mr. Chodak disagreed that a decision regarding the Lease is "overdue." Pet. Ex. 1R at 7-8. He said I&M has proceeded diligently to pursue the reasonable least-cost options for its customers, including the successful renegotiation of the Consent Decree. He said that in doing so, the Company achieved significant optionality in the face of great uncertainty regarding environmental regulation and market conditions and reduced the near term cost of its environmental compliance at Rockport by hundreds of millions of dollars for the benefit of customers. Pet. Ex. 1R at 8-9.

(ii) Accounting and Ratemaking. Mr. Chodak and Mr. Williamson disagreed with IG's proposed cost recovery limitations, explaining that it is well established that the remaining book value of a retired unit of property that was once used and useful is recognizable in the ratemaking process. Pet Ex. 1R at 12; Pet. Ex. 6 at 13. Mr. Chodak explained that IG's proposed cost disallowance is also inconsistent with the pre-approval process, which was created to assure cost recovery, not limit it. Pet. Ex. 1R at 12.

Mr. Chodak further explained why IG's proposal to cap the Project costs recoverable in the rider at I&M's current estimate is unnecessary and could have unintended consequences. Pet. Ex. 1R at 20-21. He explained that the statutory framework and Commission practice allow for ongoing review of a project's status and costs in the going rider proceedings, which allows for timely review of the construction and of any changes in the estimated project cost. He explained the SCR cost estimate is based on a thorough analysis of the activities, materials and supplies, and labor associated with the project. He testified the cost estimate reflects the best information available at the time of the analysis, including experience with the costs of similar projects at other coal-fired facilities. *Id.* at 20. He said while I&M remains confident in its SCR cost estimate, he disagreed that the circumstances in this case warrant a departure from the Commission's ongoing review practice. *Id.* at 20-21.

Both Mr. Chodak and Mr. Williamson explained why I&M's proposed ten year depreciation rate is reasonable and why Mr. Phillips' recommended 28- or 20-year depreciation rate is not. Pet. Ex. 1R at 13-15; Pet. Ex. 6R at 5-7. Mr. Williamson explained that there is no reasonable basis for a 20-year depreciable period and that a 10-year depreciable period strikes a reasonable balance between the uncertainty associated with the remaining Lease term and what the useful economic life of Rockport Unit 2 may be. Pet. Ex. 6R at 6.

(iii) Cost Allocation. Mr. Williamson agreed with IG's recommendation that I&M should allocate any Commission-approve fixed production costs to the customer classes using the 6 CP method from I&M's most recent rate base. He said that once I&M receives an order in a future basic rate case, it would allocate any Commission-approved fixed production costs to the customer classes on the production demand allocator approved by the Commission in that case. Pet. Ex. 6R at 8.

C. Response to Joint Intervenors.

(i) General Response Mr. Chodak explained that Mr. Fisher has failed to identify sufficient reason to de-rail this proceeding and doing so places the Company's customers at risk. Pet. Ex. 1R at 21-22. Mr. Chodak testified that I&M's analysis considers the potential for both low and high gas and energy price forecasts based upon the information available at the time its case was prepared. *Id.* He said Mr. Fisher points out that a more recent forecast has become available during the period of time this case has been pending. *Id.* at 22. He added that it is usually the case that new information will become available. *Id.* He said that alone does not mean that we should delay a decision or extend this proceeding. *Id*. He added that updating the economic analysis and allowing time for input is a time consuming matter and if we were to pursue Mr. Fisher's recommended process, the deadlines regarding the SCR and Lease expiration would draw nearer and all the while new information, both actual and forecast, would continue to become available. *Id.* Mr. Chodak testified that the relevant question is not whether new information has or will become available. Rather, the issue is whether or not we have better information today that warrants a delay in making a decision and do the potential costs and risks of that delay outweigh the potential benefit of having more time to make the decision. *Id.*

Mr. Chodak's judgment is that there is no potential benefit that outweighs the costs and risk of delaying the SCR Project. *Id.* He added that while natural gas and other market prices may affect longer-term disposition decisions regarding Unit 2, in the near term the installation of the SCR is the reasonable least-cost path forward even if the Lease is ultimately terminated in December 2022. *Id.* He said not installing the SCR means that the Company will need to terminate the Lease early because the unit could not be operated in compliance with environmental requirements. *Id.* at 22-23. He stated that this in turn would subject the Company (and customers) to a Lease termination payment that significantly exceeds the cost of the SCR Project. *Id.* at 23. He said it will also remove the optionality provided by the SCR Project. *Id.*

Mr. Chodak explained that the Company understands its obligations under the Lease to keep the plant in working order and decades of experience show that the Company has complied with the Lease. *Id*.at 23. He said I&M has every intention of fulfilling that obligation even in the scenario where the Company returns the Unit to the Lessors in 2022. *Id.*

Mr. Chodak and Mr. Weaver explained that while there was an inadvertent error in the level of capital "tapering" in the modeling presented by I&M Witness Weaver, when the modeling is corrected, the proposed Rockport Unit 2 SCR Project remains the relative least-cost alternative. Pet. Ex. 1R at 23-24; Pet. Ex. 4R at 19-20.

(ii) Litigation Risk. Mr. Hendricks and Mr. Pifer refuted Mr. Fisher's contention that the Company is proposing to build a substandard SCR. Pet. Ex. 2R at 3-6; Pet. Ex. 3R at 1-7. Mr. Hendricks testified that the Consent Decree does not include any unit-specific NO_x emission rates or limitations. *Id.* He said instead, the Consent Decree includes annual tonnage limitations for NO_x on a system-wide level for the entire AEP Eastern System, which includes the Rockport Plant and other affiliated units. AEP and its affiliates specifically sought these system-wide limits because they provide significant flexibility to meet the conditions of the Consent Decree in an economic manner. *Id.* at 3-4. Mr. Hendricks testified that the Consent Decree does not provide any definition or reference to a "standard" SCR and added that Mr.

Fisher's claim that I&M's proposed SCR design for Rockport Unit 2 is "sub-standard" is conjecture and not based on the requirements of the Consent Decree. *Id.* at 4. Mr. Hendricks explained that the Consent Decree defines an SCR as "a pollution control device that employs selective catalytic reduction technology for the reduction of NO_x emissions." *Id.* He said that the design of the Rockport Unit 2 SCR, as conveyed by Mr. Pifer, complies with the requirements of the Consent Decree. He added that the Company's SCR Project is a pollution control device that will reduce NO_x emissions from Rockport Unit 2 through the use of selective catalytic reduction technology. *Id.* During cross-examination, Mr. Chodak confirmed that the SCR Project would install what is defined as an SCR under the terms of the Consent Decree. Tr. at A-38.

Mr. Hendricks provided the full definition of "continuously operate" contained in the Consent Decree and stated that the Company will operate the Rockport Unit 2 SCR in accordance with the Consent Decree's definition to continuously operate and in accordance with the system-wide NO_x tonnage limits. *Id.* at 4-5. He added that the Company's compliance with the Consent Decree's requirement to continuously operate is independent of the SCR system's design. *Id.* at 5.

Mr. Pifer explained that the SCR that I&M is proposing to install on Rockport Unit 2 is by no means "sub-standard" but rather is based on proven, reliable technology and sound engineering principles. Pet. Ex. 3R at 1-2, 4-6. He said the proposed SCR, which is identical in design to the SCR that the Commission has already approved for Rockport Unit 1, will effectively and immediately reduce NO_x emissions at Unit 2. *Id.* at 2. During cross-examination, Mr. Pifer explained that the contract I&M has with Riley Power includes a performance guarantee that calls for the SCR performance at the beginning of the installation period to achieve an 88% reduction in NO_x emissions. Tr. at B-6. He stated this performance guarantee is a 16,000-hour cycle, so over time as the catalyst wears out, there will be less and less removal, but that at the end of the guarantee period, the guarantee is 50% reduction. However, he also stated the catalyst management plan calls for 70% removal and that he does not expect to go below that level of removal. Tr. at B-6. He further testified that the Company's plan to operate the SCR initially with two catalyst layers is tailored to the unique design features of the Rockport plant and will allow the SCR to operate effectively to reduce NO_x emissions without the costly additional investment that would be required to operate the SCR immediately with four layers. Pet. Ex. 3R at 2.

Mr. Pifer discussed the catalyst function in the SCR and disagreed with Mr. Fisher's contention that the NO_x emission reduction from the SR is substantially smaller in magnitude that achieved by other contemporary SCR systems. Pet. Ex. 3R at 2-3, 6. Mr. Pifer stated that what Mr. Fisher fails to explain is that NO_x emission reductions from SCR technology depends on a number of variables that may vary from plant to plant. For instance, Rockport Units 1 and 2 predominantly burn low-sulfur PRB coal, which typically has a higher moisture content and which results in a lower combustion temperature. *Id.* at 6. He said that due to this lower combustion temperature, less NO_x is produced at Rockport Plant than at other units that largely consume Eastern Bituminous coal as their fuel source. *Id.* He testified that as explained in his direct testimony, Rockport Unit 2 is already equipped with conventional combustion controls to reduce the formation of NO_x, including low NO_x burners and overfire air. *Id.* He stated that based on these unit specific characteristics, it is misleading to compare the Company's expected NO_x reduction from the proposed Unit 2 SCR design against other coal-fired units' NO_x

reduction performance. *Id.* Mr. Pifer expanded on this explanation in response to JI's cross-examination, noting among other things that the USEPA document Mr. Fisher quoted acknowledges this very point. Tr. at B-7; see JI Ex. 1, Attachment JIF -21 at 3 of 109.[4]

Mr. Pifer explained why the Company does not propose to install the additional fan capacity to accommodate filling four layers of the catalyst initially and added that it is not cost effective or necessary to include the additional fan capacity to comply with the Consent Decree. Pet. Ex. 3R at 3-4; Tr. at A-123-127; Tr. at B-3. Mr. Pifer testified that the Rockport Unit 2 SCR design meets the definition of SCR as defined in the Consent Decree as it is a pollution control device that will reduce NO_x emissions from Rockport Unit 2 through the use of selective catalytic reduction technology. Pet. Ex. 3R at 4. Through his rebuttal testimony and testimony elicited during cross-examination, Mr. Pifer established that the Company proposes to install a fully complete SCR system for Unit 2 that will effectively and immediately reduce NO_x emissions in the same way as the SCR that has already been approved for Unit 1. *Id.* at 2, 4-5. Mr. Pifer stated that the Rockport Unit 2 SCR Project has the capacity to hold four catalyst layers and if the FGD is installed on the unit, with the additional corresponding fan capacity that is required of an FGD installation, the Rockport Unit 2 SCR will be able to operate with all four catalyst layers. Pointing to Mr. Hendricks testimony that there are many regulations affecting Rockport Unit 2, which could require additional NO_x emission reductions in the future, Mr. Pifer stated that if such reductions are required, the Company will have options to achieve them economically, and preserve the value of the SCR investment subject to this proceeding. *Id.* at 5. Mr. Pifer concluded that the SCR design that I&M has proposed for Rockport Unit 2 satisfies the definition of an SCR included in the Consent Decree, and will contribute reductions necessary to maintain compliance with the AEP Eastern System caps, as explained by Company witness Hendricks. *Id.* at 6-7. Mr. Pifer added that this SCR is designed to accommodate four catalyst layers, and could more cost effectively achieve even greater NO_x reductions at the time the unit is equipped with an FGD system. He concluded that the installation of the SCR system included in this proceeding allows I&M to satisfy its obligations under the Consent Decree at the lowest reasonable cost to customers. *Id.* at 7.

Mr. Chodak testified that Mr. Fisher's litigation risk argument is conjecture. Pet. Ex. 1R at 24. He said the Company regularly assesses and manages risk and in doing so, considers potential threats as well as the costs and risk of implementing measures to address the potential vulnerability. *Id.* Mr. Chodak stated that Mr. Fisher identifies a possible loss, but fails to adequately assess the probability of the loss or the cost/benefit of avoiding the potential threat by pursuing a different course of action. *Id.* He disagreed that there is substantial risk of a Lease default or violation of the Consent Decree that warrants the rejection of the Rockport Unit 2 SCR Project. *Id.*

[4] In his direct testimony, Mr. Fisher stated that "a recent USEPA report states that coal-fired SCR systems 'are often designed to meet control targets of over 90%.'" JI Ex. 1 at 45. While Mr. Fisher cited the USEPA report "at 2-2" (*id.* at footnote 75), the text Mr. Fisher quoted appears in Section 2.1 of the USEPA report. As pointed out by Mr. Pifer, the sentence immediately following the one Mr. Fisher quoted states: "However, the reduction may be less than 90% when SCR follows other NO_x controls such as LNB [low Nox burner] or FGR [flue gas recirculation] that achieve relatively low emissions on their own." JI Ex. 1, Attachment JIF-21, at 3 of 109. Although this sentence used the word "However" to expressly link this point to the sentence Mr. Fisher quoted, Mr. Fisher did not include this caveat in his testimony.

(iii) Fuel and Market Price Forecasts. Mr. Karl R. Bletzacker, AEPSC Director, Fundamentals Analysis, and Mr. Weaver refuted Mr. Fisher's contention that the Company's analysis is stale or otherwise unreasonable.

Mr. Bletzacker explained that the forecast used by the Company was the Company's most up-to-date Fundamentals Forecasts available at the time Mr. Weaver performed his analysis and added that it would have taken more than a few days to complete an analysis using the subsequent forecast. Pet. Ex. 5 at 3-4. Mr. Bletzacker explained that the Fundamentals Forecasts is not created to meet a specific regulatory need in a particular jurisdiction; rather, it is distributed ubiquitously across all AEP operating Companies after completion. *Id.* at 4. He said it may also be referenced by AEP for other purposes which include fixed asset impairment accounting, capital improvement analyses and strategic planning. *Id.* He explained that the length of time between Fundamentals Forecasts can vary widely depending on complexity and added that as such, there is no set timetable for its release. *Id.* He stated that downstream consumers, such as Witness Weaver, are directed to the contemporaneous Fundamentals Forecasts.

Mr. Bletzacker defended the reasonableness and reliability of the Company's Long-Term North American Energy Market Forecast (referred to herein as the "Fundamentals Forecasts"). He disagreed that Mr. Fisher's comparison of the first year natural gas prices used in the Company's analysis to 2016 actuals shows the fuel prices in the analysis are outdated. Pet. Ex. 5 at 4-5 (discussing JI Ex. 1 at 20, the first indicator that the natural gas price forecast used by I&M is outdated and too high is 2016 average prices at Henry Hub which are lower). Mr. Bletzacker explained that the comparison is erroneous because the forecast values are weather normalized and the actuals are not. Pet. Ex. 5 at 4-5. Mr. Bletzacker went on to provide examples of how and why this makes a difference. *Id.* He also explained why the Company's forecasted prices are not as low as the NYMEX commodities market and testified that the futures market is not relied on for long-term energy market forecasts. *Id.* at 10-16.

Mr. Bletzacker also disagreed with Mr. Fisher's contention that the subsequent 2016 Forecast has substantially different data than what was used in the Company's filing. *Id.* at 5 (discussing JI Ex. 1 at 18). Comparing the Company's 2015 and 2016 Fundamentals Forecasts, Mr. Bletzacker testified that generally, and except for adjustments due to the effects of actual weather in 2016 of weather-normalized values determined in 2015, the forecasts for Henry Hub natural gas, PRB coal and AEP Gen Hub on- and off-peak electric energy prices are similar. *Id.* at 5-6. Mr. Bletzacker stated that a notable difference and the primary driver of the 2016 Fundamentals Forecast, was the approach taken to potential CO_2 mitigation policy and went on to explain this difference in the two forecasts. *Id.* He said it is quite reasonable to conclude that, from the perspective of CO_2 mitigation policy and due to the present-day political environment, the 2015 Fundamentals Forecasts used by Witness Weaver has more merit. *Id.* at 6. He also stated most importantly, that both Fundamentals Forecasts are within a band of credibility that is supported by justifiable assumptions that are applicable today. *Id.*[5]

[5] During cross-examination, Mr. Bletzacker acknowledged that the Annual Energy Outlook was weather normalized. Tr. D-57. As noted above, Mr. Bletzacker did not contend otherwise in his written rebuttal. His discussion of weather normalization referred to Mr. Fisher's contention that average actual Henry Hub prices show the Company's forecast is outdated.

Mr. Bletzacker also rebutted Mr. Fisher's admittedly rough replacement of Company-established long-term fuel, energy and capacity values. Pet. Ex. 5 at 2-3, 6-7. Mr. Bletzacker explained that in contrast to Mr. Fisher's spreadsheet quality analyses, the Company's Fundamentals Forecasts utilizes the AuroraXMP Energy Market Model which is the most comprehensive and reliable electricity forecasting and analysis tool available. *Id.* at 6-7. He stated that the process used to develop the commodity prices in the Company's forecast relies on rigorous modeling which produces a market forecast where the components are necessarily "fitly-joined" and synchronized. *Id.* He said Mr. Fisher's targeted and simplistic replacement of Company-established long-term natural gas and energy prices is unreasonable because the values Mr. Fisher used are indifferent to the correlative effects on other salient forecast elements. Pet. Ex. 5 at 3, 7. Mr. Bletzacker stated that the natural gas and energy prices are simply not menu items that can be ordered "a la carte" because it defeats this valuable and necessary synchronization. *Id.* at 7. He added that by focusing only on lower natural gas and energy prices, Mr. Fisher ignores the possibility that commodity prices may be higher in the future and pointed out that OUCC witness Mr. Rutter recognized factors which could lead to higher natural gas prices. *Id.* Mr. Bletzacker noted that I&M considered an array of five unique, Fundamentals Forecasts scenarios to account for a reasonable range of future outcomes. *Id.* He said Mr. Fisher's approach lacks this robustness. *Id.*

Mr. Bletzacker also discussed the Energy Information Administration's ("EIA") Annual Energy Outlook ("AEO"). *Id.* at 8. He acknowledged that the AEO relies on rigorous modeling but explained that the components of the AEO forecast are not interchangeable with the Company's Fundamentals Forecast. *Id.* Mr. Bletzacker pointed out that the AEO warns that its projections are not predictions of what will happen. Rather, the AEO forecast represents modeled projections of what may happen *given certain assumptions and methodologies*. *Id.* at 8 (emphasis added). Mr. Bletzacker stated that Mr. Fisher's comparison of the Fundamentals Forecasts to the AEO Reference Case and his simplistic replacement of Company-established inputs are erroneous and misleading. *Id.* at 8-9. Mr. Bletzacker concluded that Mr. Fisher's targeted replacement of natural gas and energy prices alone, without integrating the effects of that replacement on other forecast elements, masks potentially critical final outcomes. *Id.* at 9. [6]

Mr. Bletzacker also disagreed that the Company's Fundamentals Forecasts' projections of capacity prices are deficient and should be replaced by some fractional value of CONE. *Id.* at 17. He explained that the Company's model-driven projections of capacity prices and energy prices are inextricably linked and stated that capacity values represent the non-energy revenue necessary for the least dispatched units to remain viable and for the entire fleet to meet required reserve margins. *Id.* He said consequently, capacity values, combined with expected energy margins, must approach the cost of a new entry ("CONE"). *Id.* He explained that the current three year PJM Base Residual Auction ("BRA") capacity prices may not offer enough assurance to be reflective of long-term capacity prices. *Id.* He added that as a result 1) new generation

[6] During cross-examination, Mr. Bletzacker acknowledged that the AEO Reference Case included assumptions about the EPA's Clean Power Plan. Tr. at D-58. This does not invalidate the Company's 2015 Forecast because 1) it relied on a different view of carbon policy; and 2) the AEO projections cannot simply be swapped for the Company's assumptions because the two are not interchangeable for the reasons explained by Mr. Bletzacker. Simply put, the AEO forecast is synchronized with the AEO inputs; it is not synchronized with the Company's Fundamentals Forecasts. Thus one cannot simply pick and choose the replacement of certain of the Company's inputs with those from the AEO forecast.

facilities will not be built or, 2) market energy prices will rise dramatically to provide sufficient revenue to justify the investment. He testified that the model-driven capacity price forecast requires capacity levels within PJM to exactly match its target reserve margin. *Id.* He stated that Mr. Fisher's selection of an arbitrary fractional value of CONE violates this necessary linkage and therefore yields results that are not consistent with market fundamentals. *Id.*

Mr. Bletzacker explained that the Fundamentals Forecasts do consider diverse sources of licensed and publicly available research information, which includes PJM and others. *Id.* at 18. He added that the Fundamentals Forecasts do reflect the PJM Base Residual Auction capacity value results available at the time the Fundamentals Forecasts are released. *Id.* He pointed out an inconsistency in Mr. Fisher's contentions. *Id.* Mr. Bletzacker noted that Mr. Fisher observed that the capacity auctions results should have been utilized by Mr. Weaver. *Id.* Mr. Bletzacker pointed out that Mr. Fisher's contention conflicts with his observation that the first four years of the analysis are irrelevant as the market purchases and sales from 2016 to 2019 are identical across all cases. *Id.* [7]

(iv) End-Effects. Mr. Weaver explained what end-effects are and why end-effects should continue to be reflected as a component of the Rockport Unit 2 disposition analysis. Pet. Ex. 4R at 8-10. He disagreed with Mr. Fisher that the Company had selectively chosen which costs to include, or exclude, from the end-effects period. *Id.* at 10. He explained that as demonstrated within its filed workpapers, all cost and revenue-contribution categories that were considered and reported directly by the modeling through the 2045 planning period were also incorporated into the end-effect calculations summarized by the Company, for *all* option alternatives evaluated. *Id.* (original emphasis). He stated that this is a planning analysis and consideration of end-effects is appropriately included in such sound planning evaluations. *Id.* at 11. He added that in this context we do not short-change the life of a gas unit; therefore it would be inappropriate to short-change the potential life of Rockport Unit 2. *Id.* He testified that there is a reasonable prospect that costs and revenues associated with the Rockport Unit 2 disposition alternatives could continue well beyond 2045, and this post-2045 cost and revenue could properly influence the relative option-to-option results. *Id.* He added that this is particularly relevant in a unit disposition analysis such as this that assesses options that have unique and varying resource life cycles. *Id.* at 11. For instance, he explained that Option 1B and Option 2, as defined in his direct testimony (pages 6 and 7), indicate that replacement resources—including modeled natural gas combined cycle units—would begin operation in 2023 and 2020, respectively. *Id.* He stated that since the projected operating life of a CC could be 30-40 years or longer, it could readily exceed the fixed model optimization end-date of 2045. He testified that recognizing that Rockport Unit 2 was placed into service in 1989, which is relatively recent compared to other coal-fired generating units, it is appropriate for Option 1A (also defined in his direct testimony) to consider that Unit 2 could provide generation service after 2045. *Id.* Mr. Weaver discussed information from the EIA AEO which supports the view that it is reasonable for planning purposes to consider the potential for the relatively young and efficient Rockport Unit 2 to continue to operation after 2045. *Id.* at 12-13. He clarified that conducting this planning

[7] During cross-examination, Mr. Bletzacker was asked repeatedly to acknowledge that the pricing in the Company's Fundamentals Forecasts differed arithmetically from the PJM Auction results. Tr. at D-38-44. The fact that the comparison reflected in JI's extended series of questions was unreasonable was already explained by Mr. Bletzacker in his rebuttal testimony and was explained again by Mr. Bletzacker during redirect. Tr. at D-62-63.

analysis does not commit the Company to this path forward and added that the SCR retrofit is a reasonable least-cost plan even if the future unfolds in such a way as to necessitate an earlier retirement of the unit. *Id.*

Mr. Weaver noted that Kentucky Power's Big Sandy unit 2 is significantly older than Rockport Unit 2 (*i.e.* 20 years older). *Id.* at 13. He explained that his analysis of a 2011 retrofit for this older unit was reasonable and added that the circumstances for the Rockport Unit 2 are different, explaining that at the end of the optimization period the Big Sandy unit would have been over 70 years old, while the Rockport unit would only be approximately 56 year at this point. *Id.*

Mr. Weaver disagreed with Mr. Fisher's view that all end-effects costs and revenues should be disregarded. *Id.* at 14-15. Mr. Weaver explained that in the case of Option 1A, over $830 million in on-going capital expenditures were forecasted at Rockport Unit2 over the 2016 through 2045 time period. *Id.* at 15. He explained that those ongoing capital expenditures are recognized in the form of subsequent recovered annual carrying charges over a forward period, some of which extend beyond 2045. *Id.* He stated that the elimination of the recovery of those capital carrying costs that occur after 2045 would, in fact, incorrectly bias the analysis in favor of Option 1A. *Id.* He added that the failure to consider (PJM) market energy revenue generated by the unit after 2045, given the typical larger energy margins/spreads available to an efficient coal unit, would simultaneously bias against Option 1A. *Id.* He stated that the Company's economic analysis considered both of these end-effects. *Id.* He added that if end-effects costs were simply ignored, other factors such as CO_2 costs that would be incurred by Rockport Unit 2 after 2045 would also be eliminated from economic consideration. *Id.* at 15-16. He added that this would introduce even more of a relative benefit to Option 1A and thus made the point that such relative higher incremental CO_2 costs *were* fairly reflected as a component of the end-effects cost captured in the Company's modeling in this filing. *Id.* at 16.

Mr. Weaver further responded to the claim that ongoing capital expenditures and attendant carrying costs should have been considered beyond the 2045 modeling period by showing that any impact on the overall CPW results would be small due to the significant discounting of such out-year carrying costs to current present dollars reflect in CPW. *Id.* at 16-17.

Mr. Weaver explained that the Company's modeling of end-effects in this case was performed consistently with the analysis of the Rockport Unit 1 SCR project offered in Cause No. 44523. *Id.* at 17. He concluded that Mr. Fisher's recommended adjustments to the study period CPW costs by simply eliminating the calculated end-effects cost and revenues is unwarranted based on the fact that the determination of such impacts is an essential aspect of the inherent disposition optimization modeling performed and relied upon. *Id.* at 18-20.

(v) Ongoing Capital Costs. Mr. Weaver acknowledged the transcription error noted by Mr. Fisher and stated that, when corrected, the ongoing capital costs for Option 2A should have resulted in a CPW that was $28.3 million lower. *Id.* at 20. He also concurred that the tapering of on-going capital cost for Option 1B did not follow the expressed assumption in his filed workpaper. *Id*. He stated that had that assumption been followed, it would have resulted in a CPW cost for Option 1B that was $52.4 million higher. *Id.* He revised his analysis to reflect

these corrections. He stated that although slightly less beneficial than the Company's original evaluation, the relative cost differences would indicate that Option 1A would continue to be the relative least-cost alternative. *Id.* at 21. He also included a comparative analysis regarding Option 1B. He explained that although slightly less beneficial than the Company's original evaluation, the relative cost differences would indicate that Option 1B continues to be the relative least-cost alternative when compared to either of the "Option 2" alternatives that would not install an SCR, but rather would return the unit to the Lessor in December 2019, triggering a $715.7 million Lease Termination Value payment. *Id.* at 21-22. He stated that his conclusion remains the same as with his direct testimony, namely that Option 1A continues to be the relative least-cost alternative, even with the minor correction made to the treatment of on-going capital costs. He added that the "modified" view presented in his rebuttal testimony also corroborates the Company's earlier determination that both of the retrofit options (Options 1A and 1B) are lower relative cost alternatives to either of the "Option 2" alternatives that would not install an SCR. *Id.* at 22-23.

(vi) Energy Efficiency and Renewables. Mr. Weaver refuted Mr. Fisher's recommendation that I&M be required to aggressively pursue all cost-effective energy efficiency and renewable energy options in advance of the Lease termination date of 2022. *Id.* at 23-25. Mr. Weaver explained that the Company has actively assessed incremental energy efficiency, as well as both wind and solar resources as part of a process to ensure greater resource diversity; a process that was informed, primarily, by the evaluations performed within its IRP. *Id.* He explained that the Company's economic modeling appropriately employed the most recent and pertinent renewable resource cost information available to the Company at the time the modeling was conducted and explained why wind and solar resources can only be considered a viable *capacity* disposition alternative for Rockport Unit 2 to a very limited degree. *Id.*

(vii) Flaws in Mr. Fisher's Analysis. Mr. Weaver explained that Mr. Fisher predicated all of his recommended adjustments to the Company's modeled CPW from the 'BASE' commodity price forecast. *Id.* at 25. Mr. Weaver pointed out that this BASE forecast included a carbon tax assumption starting in the year 2022 and continuing in perpetuity. *Id.* Mr. Weaver stated that Mr. Fisher did not discuss or opine on his view around the prospects that the EPA's Clean Power Plan at attendant CO_2 emission regulation of existing fossil-fired facilities may be reduced under the new presidential administration. *Id.* Mr. Weaver also noted that Mr. Fisher did not perform any sensitivity around a "No Carbon" pricing view even though the Company's analysis of this sensitivity was available to Mr. Fisher and showed that the relatively benefit of Option 1A increased by $163 million versus Option 2. *Id.* at 25-26.

Mr. Weaver disagreed with Mr. Fisher's assertions that the optionality of Option 1B is not reasonably established and the long-term benefits of maintaining Rockport Unit 2 are non-existent. *Id.* at 27-28. Mr. Weaver showed that even if one were to include Mr. Fisher's proposed "litigation risk" adjustment, the analysis shows the optionality associated with the continued operation of Rockport Unit 2 confirms Option 1A as being the relative least-cost alternative. *Id.* at 29.

Mr. Weaver testified that while Mr. Fisher relied solely on the "BASE" pricing, the Company's modeling utilized a suite of long-term commodity price forecasts as part of its modeling process. *Id.* at 29-30. He stated that the relative results for Options 1B and 2 in the

"Lower Band" analysis were comparable to the BASE pricing scenario. *Id.* He further stated that Mr. Fisher essentially ignored I&M's "Lower Band" commodity pricing analysis. *Id.* at 30.

Finally, Mr. Weaver stated the methodology Mr. Fisher used is not reasonable and explained a primary error in Mr. Fisher's analysis is that he failed to perform an appropriate economic dispatch when developing his gas price CPW cost adjustment. *Id.* at 31-32. Mr. Weaver showed that if Mr. Fisher had employed some type of economic dispatching tool, his analysis would produce unreasonably low capacity factors for Rockport Unit 2. *Id.* at 32-35. Mr. Weaver explained that this in turn suggests that the pricing employed in Mr. Fisher's analysis is fundamentally flawed. *Id.* at 35. Mr. Weaver added that when economic dispatch is used with Mr. Fisher's natural gas and energy pricing adjustments, the capacity factor output for the new combined cycle units increased as would be expected. *Id.* at 35-38. Mr. Weaver added that when corrected, Mr. Fisher's analysis suggests that the installation of the SCR is the relative least-cost alternative versus Option 2. *Id.* at 39-41. He explained that given the relative certainty of the Lease Termination Value payment in Option 2 as well as the cost upside risk of Option 2A (by virtue of being potentially dependent on the (PJM) market for as much as 1,100 MW of replacement capacity and energy resources for that interim 2020 through 2022 'pre-build' period), from a planning perspective Option 2A should not be considered the optimal resource path for I&M, even under the set of unwarranted natural gas and energy pricing profiles suggested by Mr. Fisher. *Id.* at 40. He explained that even recognizing Mr. Fisher's unwarranted commodity pricing adjustments, other areas of conservatism related to Option 1A include the relative impact of 1) a "No Carbon" view; and 2) of reduced Rockport Unit 2 Lease extension rates. *Id.* at 41. Mr. Weaver added that it is also important to realize that, given the broad timeframe and range of variables considered as part of long-term asset economic evaluations such as this, it is not uncommon that all sensitivities and scenarios would not produce the same result. *Id.* at 41. He stated that in this case it is the judgement of the Company that the SCR Project (Options 1A / 1B), on the weight of the information examined, is the best option. *Id.* at 41-42.

(viii) Proposed CPCN Conditions. Mr. Chodak explained that Mr. Fisher's proposed CPCN conditions go far beyond what is contemplated by the pre-approval process and depart from Commission practice. *Id.* at 25-27. He stated the Company needs to know whether or not the SCR retrofit is approved within a timeframe that will allow the Company to construct the SCR (if it is approved) or develop an alternative plan (if it is rejected). Pet. Ex. 1R at 26. He said the request for a Commission decision is consistent with the governing statutory framework, which contemplates "pre-approval", not "preliminary" approval. *Id.* He added that if adopted, Mr. Fisher's additional and protracted process would burden and cloud the SCR implementation and potentially delay construction such that the SCR would not be in-service by December 2019. He said that because the additional process Mr. Fisher seeks would create uncertainty it would also burden, if not delay, the Unit 2 Lease negotiations and renewal analysis. *Id.*

Mr. Chodak testified that the Commission should decline Mr. Fisher's invitation for the Commission to insert itself into the Lease negotiations. *Id.* at 27. Mr. Chodak testified that the Company proposes to keep the Commission and stakeholders informed of matters regarding the Rockport Unit 2 Lease. *Id.* He said it is premature to determine what and when additional process should occur with the Commission but clarified that the Company would come to the

Commission for approval of any decision to renew or otherwise extend the Lease. *Id.*; Tr. at A-22.

Mr. Chodak stated that Mr. Fisher's proposed percentage "deadband" should be rejected for the reasons set forth in his response to IG witness Phillips' proposed cap. *Id.* at 28. Mr. Chodak added that the ongoing review process should be used to review costs and changes (if any) in the capital cost estimate for the Rockport Unit 2 SCR Project. *Id.*

Mr. Chodak stated that I&M has and will continue to make decisions in the best interest of its customers in order to remain one of the lowest cost providers in the State of Indiana. *Id.* at 28. He noted that the OUCC and IG recognize the need for the Rockport Unit 2 SCR retrofit. *Id.* He concluded that the litigation risk issues raised by Mr. Fisher do not support the rejection of the Rockport Unit 2 SCR Project and the delay/additional regulatory process he seeks is not warranted. *Id.*

12. Commission Discussion and Findings. I&M requests a CPCN under Ind. Code ch. 8-1-8.7 for approval of the Rockport Unit 2 SCR Project. I&M seeks cost recovery for the Indiana Jurisdictional portion of the I&M Ownership Share and associated accounting and ratemaking treatment in accordance with the Commission's authority under Ind. Code § 8-1-8.8-11 and related statutes and regulations, including authority to depreciate I&M's Ownership Share of the Rockport Unit 2 SCR Project over a ten-year period in accordance with Ind. Code § 8-1-2-6.7. Finally, I&M requests ongoing review of the Project in accordance with Ind. Code § 8-1-8.7-7. As set forth below, the Commission finds the public convenience and necessity will be served by the Rockport Unit 2 SCR Project and that I&M's associated accounting and ratemaking proposals are reasonable.

A. Chapter 8.7 - CPCN. Clean Coal Technology ("CCT"), under Chapter 8.7, is defined as:

> [A] technology (including precombustion treatment of coal): (1) That is used in a new or existing electric generating facility and directly or indirectly reduces airborne emissions of sulfur or nitrogen based pollutants associated with the combustion or use of coal; and (2) That either: (A) Is not in general commercial use at the same or greater scale in new or existing facilities in the United States as of January 1, 1989; or (B) Has been selected by the United States Department of Energy for funding under its Innovative Clean Coal Technology program and is finally approved for such funding on or after January 1, 1989.

Ind. Code § 8-1-8.7-1.

Mr. Pifer explained that SCR is a proven, reliable technology used by AEP and others throughout the electric utility industry to directly reduce NO_x emissions from coal-fired generating units. Pet. Ex. 3 at 3; Pet. Ex. 3R at 1-2, 5. Mr. Pifer testified (p. 19) that this technology was not in general commercial use at the same or greater scale in the United States as of January 1, 1989. The Commission's Order in *Petition of Southern Indiana Gas and Electric*, Cause No. 41864 (IURC 8/29/2001) (at 4-5) reached the same conclusion and also stated that SCR technology was selected by the Department of Energy for funding under its Innovative Clean Coal Technology Program and was finally approved for such funding on or after January

1, 1989. In Cause No. 41864, the Commission found that SCRs reduce airborne emissions of nitrogen-based pollutants associated with the combustion of coal and concluded that SCR technology constitutes CCT as defined in Ind. Code §§ 8-1-2-6.6 and 8-1-8.7-3. *Id.* at 5. The record here supports the same conclusion. Accordingly, we find that the Rockport Unit 2 SCR Project constitutes CCT pursuant to Ind. Code § 8-1-8.7-1.[8]

Under Ind. Code § 8-1-8.7-4(b), in order to issue a CPCN, the Commission must make the following findings:

> (1) Public convenience and necessity will be served by the construction, implementation, and use of clean coal technology;
> (2) Approve the estimated costs;
> (3) The facility where the clean coal technology is employed:
> A. Utilizes and will continue to utilize Indiana coal as its primary fuel sources; or
> B. Is justified, because of economic considerations or governmental requirements, in utilizing non-Indiana coal; after the technology is in place; and
> (4) Make a finding on each of the factors described in Ind. Code § 8-1-8.7-3 (b), including the dispatching priority of the facility to the utility.

(i) Factors of Ind. Code § 8-1-8.7-3(b). Ind. Code § 8-1-8.7-3(b) sets forth nine factors, each of which we will consider.

1. The cost of constructing, implementing and using the CCT compared to conventional emission reduction facilities. I&M performed an analysis showing that the Rockport Unit 2 SCR Project will enable I&M to reduce NO_x emissions and comply with the Consent Decree. Mr. Weaver's analysis showed that the SCR Project is a cost-effective compliance option. The OUCC and IG also presented testimony supporting the use of the SCR technology. Mr. Hendricks discussed the benefits of this choice of CCT and we find it is reasonable compared to conventional emission reduction facilities.

2. Whether the CCT will also extend the useful life of existing generating facilities. The record reflects that the installation of the SCR control technology will allow Rockport Unit 2 to continue to operate beyond the December 31, 2019 deadline in the Consent Decree. The record reflects that the installation of the CCT will preserve the remaining life of this unit. While it is not currently known whether the unit life will extend beyond the current Lease term, we agree with Mr. Rutter's comments during the hearing that there is no reason to cut short the current Commission-approved Lease term. Tr. at D-89-91. The SCR is a cost-effective option for customers and ensures the availability of necessary capacity and energy through at least December, 2022. Therefore, we find that the proposed Rockport Unit 2 SCR Project will extend the useful economic life of Rockport Unit 2.

3. The potential reduction of sulfur and nitrogen based pollutants achieved by the proposed CCT system. The evidence demonstrates that the SCR technology will allow I&M to

[8] We also note that the Commission reached the same conclusion regarding the Rockport Unit 1 SCR Project in our order approving the settlement agreement in Cause No. 44523 dated May 13, 2015 (p. 17).

reduce its NO_x emissions. Mr. Pifer (p. 5) said the Company anticipates that the SCR will achieve an annual average NO_x emissions rate of 0.15 lb/MBtu or less based on the current coal supply and air flow configuration of Rockport Unit 2. This performance is based on operation with catalyst installed in two or more layers and reconfigured air heater baskets, but no changes to the fan capacity of the unit. Pet. Ex. 3 at 4-5. Mr. Pifer explained that installing additional fans as part of the SCR Project would be unnecessary and wasteful, because if FGD systems are later added to the unit, those fans would need to be removed and replaced as part of the FGD installation. *Id.*

Mr. Fisher contended that Company is proposing to build what he called a "sub-standard" SCR and this in turn raises a risk of litigation under the Consent Decree and the Lease. JI Ex. 1 at 6, 38, 40-41, 45-46. Mr. Fisher's contention that the proposed SCR is sub-standard rests on the contention that the proposed NO_x emission reduction is substantially smaller in magnitude than achieved by other contemporary SCR systems. JI Ex. 1 at 45. Mr. Fisher's claim that I&M's proposed SCR design for Rockport Unit 2 is "sub-standard" is not supported by the requirements of the Consent Decree. See Pet. Ex. 2R at 4. Substantial evidence demonstrates that the Company's SCR Project is a pollution control device that will reduce NO_x emissions from Rockport Unit 2 through the use of selective catalytic reduction technology. *Id.* The record also shows that the Company will operate the Rockport Unit 2 SCR in accordance with the Consent Decree's definition to continuously operate and in accordance with the system-wide NO_x tonnage limits in the Consent Decree. Pet. Ex. 2R at 5. Mr. Fisher's consideration of the "continuously operate" provision in the Consent Decree fails to give effect to the full definition of this term. Pet. Ex. 2R at 5. The SCR technology will be a retrofit to the Rockport Unit 2 and thus the technology cannot be considered in isolation. Furthermore, the Company's proposed operation of the SCR provides for cost-effective emission reductions, avoids waste, and appropriately considers the impact of the Project cost on customer rates for retail electric service.

Mr. Fisher, a geologist by training, based his "sub-standard" contention on an USEPA report which he represented to state that coal-fired SCR systems are often designed to meet control targets of over 90 percent. *Id.* Mr. Fisher failed to disclose in his testimony that the USEPA report he relied on included the following caveat in the sentence immediately following the one he quoted: "However, the reduction may be less than 90% when SCR follows other NO_x controls such as LNB [low NO_x burner] or FGR [flue gas recirculation] that achieve relatively low emissions on their own." JI Ex. 1, Attachment JIF-21, p. 3 of 109. The adverb "however" is used to introduce a statement that contrasts with something that has been said previously. The exclusion of the "however" point in Mr. Fisher's discussion is curious given the explanation in Mr. Pifer's direct testimony showing that Rockport Unit 2 falls within this exception because the Unit is already equipped with controls which reduce the formation of NO_x, including low NO_x burners and overfire air (Pet. Ex. 3 at 3; also Attachment FRP-2 at 3.) and Mr. Chodak's statement that the unit consumes PRB coal. Pet. Ex. 1 at 7. Further, Mr. Fisher confuses the proposed design of the SCR with its proposed operation. The proposed design of the SCR (included with JI's testimony at Attachment JIF-22) is consistent with the USEPA report. See JI CX-5 at 12 (setting forth system design and performance requirements, including that "[t]he SCR system with three (3) layers of catalyst initially installed shall remove a minimum of 90.0% of the NO_x produced by the steam generator…"). As Mr. Pifer and Mr. Chodak explained during cross-examination, the unique circumstances associated with Rockport Unit 2 (use of PRB coal, low NO_x burners and overfire air) will allow the SCR Project to achieve cost-effective NO_x

emissions reductions with two layers installed initially that approach the 90% design target cited by Mr. Fisher. Tr. at A-42-43; Tr. at B-6. Indeed, Mr. Pifer testified the performance guarantee requires a minimum of 88% reduction at the start of the performance period. Tr. at B-6.

Accordingly, we find that the NO_x emissions reductions from the Company's proposed Rockport Unit 2 SCR Project are reasonable and the Company's proposal would preserve flexibility to adjust to additional compliance requirements as they may unfold in the future.

4. The reduction of sulfur and nitrogen based pollutants that can be achieved by conventional pollution control equipment. The evidence demonstrates that reduction of air emissions through conventional technology would be insufficient to bring I&M into compliance with the Consent Decree and the several USEPA regulatory initiatives in various stages of development discussed by Mr. Hendricks (pp. 4-6). We find that conventional pollution control equipment cannot provide the proposed reduction of NO_x emissions or compliance with the Consent Decree.

5. Federal sulfur and nitrogen based pollutant emission standards. As explained by Mr. Hendricks (pp. 4-5), NO_x emissions are regulated under the Clean Air Act. Additionally, as discussed by Mr. Hendricks, further NO_x emissions requirements are anticipated to be part of various pending USEPA regulatory initiatives. Pet. Ex. 2 at 4-5. Accordingly, we find that federal emission standards have been appropriately taken into consideration.

6. The likelihood of success of the Rockport Unit 2 SCR Project. Mr. Pifer (p. 3-4) explained that SCR technology is currently being installed at Rockport Unit 1 and it has been successfully installed on other AEP units, including units similar in design to the Rockport units. He testified that AEPSC has a proven track record of successfully managing the design and construction of many major environmental retrofit projects and it is expected that the SCR installation at Rockport will be another success. *Id.* at 4. We find the likelihood of success of the proposed Project is high.

7. The cost and feasibility of the retirement of an existing generating facility. As discussed by Mr. Weaver (p. 50), the Company has set forth the relative cost and feasibility of a Rockport Unit 2 retirement (or, in this circumstance, return to Lessors) option and demonstrated that the cost of that alternative would likely significantly exceed that of the proposed Rockport Unit 2 SCR Project. Mr. Rutter's analysis confirmed the rate impact to customers of the retrofit option is lower than the alternative of terminating the Lease. Pub. Ex. 1 at 7-8; Attachment ETR-1.

Mr. Fisher asks the Commission to deny the requested CPCN and to require the Company to expediently file a plan for the replacement of the capacity and energy requirements otherwise met through Rockport Unit 2. JI Ex. 1 at 11. He argues that the certainty of terminating the Lease in 2019 at a known cost appears far more attractive. *Id.* at 49. We disagree.

Many of Mr. Fisher's statements were addressed to the long term use and value of Rockport Unit 2. See e.g. JI Ex. 1 at 6, 7, 26, 51. Yet, we are not now asked to make a decision regarding the potential use of Rockport Unit 2 beyond the original Lease term which expires in 2022. The question before us now is limited to whether or not the SCR should be installed. Both

Options 1A and 1B concern the SCR installation, and both retrofit options were shown to be economically superior to Option 2 under all commodity pricing scenarios evaluated, including I&M's "corrected" version of Mr. Fisher's analysis. Option 2 does not install the SCR, but rather returns the Unit to the Lessors by December 31, 2019 at an estimated cost of $715.7 million which would be incurred under the Lease. Pet. Ex. 4 (Weaver Direct) at 8. We find substantial evidence demonstrates that the retrofitting of Rockport Unit 2 with SCR technology by December 31, 2019 (via either Option 1A or Option 1B) is a reasonable and least-cost solution compared to the view that would not install an SCR but rather would terminate the Rockport Lease as of that same date and pay the Lessors a stipulated Lease Termination Value (Option 2).

In reaching this conclusion, we have considered Mr. Fisher's criticisms and analysis. In particular, we have considered the economic analyses with and without end-effects, which the Company transparently provided. While we disagree with Mr. Fisher's view that end-effects should be ignored, the Company's analyses support the SCR installation even when the end-effects are not considered. See Attachment SCW-4.

While there was an inadvertent error in the level of capital "tapering" in the modeling presented by I&M Witness Weaver, when the modeling is corrected, the proposed Rockport Unit 2 SCR Project remains the relative least-cost alternative. Pet. Ex. 1R at 23; Pet. Ex. 4R at 19-20. We find Mr. Weaver's correction renders Mr. Fisher's criticism moot.[9]

Mr. Fisher's criticism of I&M's treatment of ongoing capital costs, including the treatment of shared unit capital costs, was likewise shown to lack merit. Mr. Weaver explained during cross-examination that capital expenditures are required to achieve a performance upgrade or prolong the life of a generating asset. Tr. at C-22. He explained that recognizing that Unit 2 will be 56 years old in 2045, it is reasonable to draw those capital costs down, as the Company did in its analysis. Tr. at C-22. He said this is a reasonable approach because a utility would not want to have stranded costs on their books as they near the unit's retirement date. Tr. at C-28; C-45. We find I&M reasonably accounted for ongoing capital costs in its analysis.

Mr. Fisher asserted (JI Ex. 1 at 15) that the Company's analysis assumed that I&M would not pay for any ongoing maintenance of the units during the end-effects period, but the record shows this is not accurate. More specifically, Mr. Weaver explained during cross-examination that the Company's analysis took fixed O&M costs as of 2045 and applied perpetuity factors going forward. Tr. at C-23. In other words, the analysis incorporated the maintenance expenses that would be necessary to keep the units running in their original operating condition. Tr. at C-22-26. We find I&M reasonably accounted for ongoing maintenance costs in its analysis.

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[9] In his testimony, Mr. Fisher contended the Company has been "disingenuous" because it relied on "end-effects" and stated that in contrast the results from the core analysis period run counter the Company's findings. JI Ex. 1 at 6. The record demonstrates this inflammatory rhetoric is erroneous. Mr. Weaver defined and disclosed that he considered end-effects and presented the analysis with and without end-effects. Pet. Ex. 4 at 22 ("These life cycle costs through the 2045 modeled optimization period, along with applicable end-effects are then "present-valued" using a proxy of the estimated I&M-weighted average cost of capital, to create a CPW of Net Utility (Generation) Costs); at 22 FN 14 (defining end-effects); at 46 ("That relative CPW benefit is, on average, nearly $43 million per year—compared to an average per year advantage of nearly $9 million over the full modeled long-term optimization period, including end-effects."). Mr. Weaver's Attachments SCW 1, 2 and 6 clearly identified the use of end-effects and his Attachments SCW 4A through 4E presented the analysis both with and without end-effects.

The Fundamentals Forecasts reflected in Mr. Weaver's modeling was the most-up-to-date Fundamentals Forecasts available at the time the analysis was conducted. Pet. Ex. 5 at 3. While another forecast was issued contemporaneous with the Company's filing of its case-in-chief, this does not invalidate the Company's economic modeling. Generally, and except for adjustments due to the effects of actual weather in 2016 of weather-normalized values determined in 2015 (and noted above), the forecasts for Henry Hub natural gas, PRB coal and AEP Gen Hub on- and off-peak electric energy prices are similar in the two forecasts. *Id.* at 5. One notable difference, and the primary driver of the 2016 Fundamentals Forecast, was the approach taken to potential CO_2 mitigation policy. The 2015 Fundamentals Forecasts utilized a $15/metric ton CO_2 dispatch burden on all (new and existing) fossil fuel-fired generation units commencing in 2022. The 2016 Fundamentals Forecasts employed a delayed implementation (2024 vs. 2022) CO_2 dispatch burden on all existing fossil fuel-fired generating units in order to achieve national mass-based emission targets similar to those proposed in the suspended ("stayed") Clean Power Plan. We find the Fundamentals Forecasts used by Mr. Weaver are within a band of credibility that is supported by justifiable assumptions that are applicable today.

While Mr. Fisher focused on adjustments to the BASE forecast, we note that Mr. Weaver's analysis was not so narrow. An array of five (5) unique, long-term commodity pricing scenarios were utilized in the Rockport Unit 2 disposition analyses, consisting of a BASE view; two "price banding" sensitivity views; and two "CO_2/carbon" views. Pet. Ex. 4 at 36.[10] These analyses evaluated a broad range of plausible risks, including the potential for pricing to be higher or lower than the BASE, with varying magnitudes and probabilities and thus allow an assessment of the potential ramifications of those risks. As a result, it was unnecessary to re-do the analysis to reflect the subsequent forecast. Mr. Fisher's contention otherwise is neither practical nor in the best interest of customers. Pet. Ex. 5 at 3-4; Pet. Ex. 1R at 21-22.

Mr. Fisher failed to consider any sensitivity associated with future carbon/CO_2 "pricing" impacts, and the prospects that such carbon pricing could be reduced or even eliminated based on the changes in U.S. presidential administrations. Pet. Ex. 1R at Pet. Ex. 4R at 4. Ostensibly, such reduced carbon impacts would offer greater value to coal-fired generating resources, such as Rockport Unit 2, versus any gas-fired replacement resource. *Id.* Futures contract pricing is not intended to be a reliable forecast of future, weather-normalized, long-term energy market fundamentals. Pet. Ex. 5 at 12-17. Thus, we find the future market prices noted by Mr. Fisher do not invalidate the Company's use of its 2015 Fundamentals Forecasts.

Similarly, the Company's Fundamentals Forecasts is not intended to be a forecast of the PJM Base Residential Auction capacity prices. *Id.* at 17. Tr. at D-63. As Mr. Weaver explained at the hearing, I&M is not a participant in the PJM Capacity Auction up to this point and thus is indifferent to prior Auction results. Tr. at B-42. The record also shows that the current Auction results discussed by Mr. Fisher may not offer enough assurance to be reflective of long-term

[10] The "Higher Band" scenarios bounds the high-end of the BASE case with plausible fuels, emissions and energy pricing—with appropriate feedback for load response—and with such fuel prices varying by approximately a +1.0 standard deviation. *Id.* The "Lower Band" bounds the low-end of the BASE case with plausible fuel, emissions and energy pricing, with such fuels prices varying by approximately a -1.0 standard deviation. *Id.* The "No Carbon" price removes the proxy carbon tax from the suite of commodity pricing; while then adjusting for the correlative effects on other commodities associated with that removal. The "High Carbon" Price" increased the scale of the relative carbon tax by a magnitude of approximately 60% (to ~$25 tonne). *Id.*

capacity prices. Pet. Ex. 5 at 17. Accordingly, we find that differences between the Fundamentals Forecasts and the Auction results do not render the Company's use of its 2015 Fundamentals Forecasts unreasonable. *Id.* at 17-18.

The Company has actively assessed incremental energy efficiency, as well as both wind and solar resources as part of a process to ensure greater resource diversity; a process that was informed, primarily, by the evaluations performed within its IRP. Pet. Ex. 4R at 23-24; Pet. Ex. 4 at 31-32. The Company's modeling employed the most recent and pertinent renewable resource cost information available to the Company at the time to the modeling was conducted. Pet. Ex. 4 at 24-25. Among other things, Mr. Fisher's criticism fails to recognize that wind and solar resources can only be considered a viable capacity disposition alternative for Rockport Unit to a very limited degree. *Id.* at 25. We find that I&M has reasonably pursued and considered energy efficiency and renewable energy options and that Mr. Fisher's recommendation that I&M be required to "aggressively pursue" additional energy efficiency and renewable energy options is unnecessary. With respect to Mr. Rutter's recommendations regarding the modeling to be performed in I&M's 2018 IRP, we note that I&M has indicated it fully anticipates performing such an analysis as part of its upcoming IRP and that certain of the disposition analyses described by Mr. Rutter were performed as part of I&M's 2015 IRP. Pet. Ex. 4R at 7-8. We therefore decline to impose any further requirements with respect to I&M's 2018 IRP analysis.

Mr. Fisher's adjustments to the Company's analysis are admittedly "rough" (JI Ex. 1 at 24); isolated inputs are changed on an "a la carte" basis. Pet. Ex. 5 at 7. This rough analysis fails to recognize that the Fundamentals Forecasts components are "fitly joined" and synchronized. Pet. Ex. 5 at 7. The Company's price banding analysis reflected appropriate feedback for load response. (Pet. Ex. 4 at 36). As Mr. Weaver explained, a key component of any production cost modeling framework is to allow the model to dispatch the available generating units based on the unique sets of commodity prices offered. Pet. Ex. 4R at 31. In other words, each commodity pricing scenario should reflect a unique unit dispatch profile. Mr. Fisher failed to perform an appropriate "economic dispatch". He simply overlaid his self-determined natural gas prices and energy prices onto the Company's modeled dispatch profile (under the 'BASE' pricing scenario) that was created under an altogether difference set of commodity prices. *Id.* at 31. This is another significant flaw in Mr. Fisher's analysis. While the Company disagreed with the reasonableness of Mr. Fisher's pricing and litigation risk assumptions, Mr. Weaver showed that when the fundamental dispatch flaw is corrected, Mr. Fisher's "rough" pricing adjustments lend support for the installation of the SCR. Pet. Ex. 4R at 36-42.

We find Mr. Fisher's proposal to require I&M to file with the Commission a request to exit or renew the lease at Rockport at least one year prior to informing the Lessor to be unwarranted. The record shows that I&M has and continues to diligently address the Rockport Unit 2 Lease expiration, which is affected by numerous moving pieces as discussed above and in I&M's testimony. Pet. Ex. 1R at 4. The record also shows I&M proposes to keep the Commission and stakeholders informed of matters regarding the Rockport Unit 2 Lease. Pet. Ex. 1R at 27; Tr. at A-22-24; A-89-90. We find it is premature to determine what and when additional process should occur with the Commission and accordingly reject Mr. Fisher's proposal.

Finally, we find Joint Intervenors' lawsuit threat is speculative and does not warrant the denial of the Company's request for a CPCN for the SCR Project. The risk identified by Mr. Fisher is not supported by the Consent Decree language or record evidence. Mr. Fisher's discussion of the Lease omits key language and his analysis of the Lease risk is fundamentally flawed as a result.

Accordingly, we find the record reflects that the Company reasonably considered retrofit and retirement (*i.e.* return the unit to Lessor) options. We further find that the option to return the unit to the Lessor in 2019 and prior to the end of the original Lease term is not a reasonable or cost effective compliance option.

8. The dispatching priority for the facility utilizing the CCT. In accordance with § 8-1-8.7-3(b)(8) and as discussed by Mr. Weaver (p. 50), the Company has implicitly set forth that the dispatch priority of this proposed NO_x-controlled Rockport Unit 2 will not be adversely impacted based on the resulting variable cost profiles within the Company's economic analyses. Mr. Weaver stated it would be anticipated that the unit's annual capacity factor will not be significantly different from levels had this SCR retrofit not been installed. Pet. Ex. 4 at 50. The other party witnesses did not specifically address this particular issue. We find the record shows that the Rockport Unit 2 SCR Project is not expected to significantly change the dispatching order of the units.

9. Other factors. Other factors supporting approval of the Rockport Unit 2 SCR Project are discussed elsewhere in this Order.

(ii) Factors of Ind. Code § 8-1-8.7-4(b). We now address the four required findings in Ind. Code § 8-1-8.7-4(b).

1. Public convenience and necessity will be served by the construction, implementation, and use of CCT. The public convenience and necessity criterion is common in public utility matters and generally concerns whether the proposal is fitted or suited to the public need. Put another way, the Commission must be satisfied that there is a reasonable and apparent need for the Project. The record shows that the Rockport Unit 2 SCR Project will reduce NO_x emissions and this benefits the environment and furthers the public interest. The SCR Project is also required by the Consent Decree and consistent with anticipated environmental regulations. Moreover, as Mr. Hendricks explained in his rebuttal (p. 3) installing the SCR on Rockport Unit 2 will provide important compliance flexibility to I&M in the event there is an increase in market prices for allowances, a decrease in state ozone season NO_x budgets, or an increase in Rockport Plant ozone season NO_x emissions. Based on our review of the evidence and consideration of the other statutory factors, we find the public convenience and necessity will be served by the construction, implementation and use of the Rockport Unit 2 SCR Project.

2. Approval of Cost Estimate. Mr. Pifer provided the cost estimate, explained how it was developed, and discussed the Company's cost management process. The Commission did not request the Company to provide additional detail regarding the cost estimate. The Industrial Group recommended the Commission place a cap on the Project costs recoverable in the rider at I&M's current estimate. We decline to adopt the IG's recommendation. The statutory framework and Commission practice allow for ongoing review of a project's status and costs in the ongoing

rider proceedings. This process includes consideration of changes in the cost estimate. Based upon the record evidence, we find that the estimated cost of the Rockport Unit 2 SCR Project of $274.2 million (excluding AFUDC) should be approved. While this amount does not include AFUDC, the actual, accrued amount of AFUDC will be included as part of the approved cost.

3. Use/Non-Use of Indiana Coal. Rockport Unit 2 does not burn Indiana coal and the evidence shows the Rockport Unit 2 SCR Project is economically justified. The provisions of the state environmental statutes providing favorable regulatory treatment to projects using Indiana or Illinois Basin coal have been held to be an unconstitutional interference with interstate commerce, but severable from the rest of the statutes which remain valid. *General Motors Corp. v. Indianapolis Power & Light Co*., 654 N.E.2d 752, 763-64 (Ind. Ct. App. 1995); *Alliance For Clean Coal v. Bayh*, 72 F.3d 556 (7th Cir. 1995); see also *S. Ind. Gas and Electric Co*., Cause No. 41864, at 7 (IURC 8/29/2001); *N. Ind. Pub. Serv. Co*., Cause No. 42150, at 5 n.3 (IURC 11/26/2002); *Indianapolis Power & Light Co*., Cause No. 42170, at 5 n.1 (IURC 11/14/2002); *Indianapolis Power & Light Co.*, Cause No. 44242, at 30 n. 2 (IURC 8/14/2013). We will accordingly not rely upon such statutory provisions as a prerequisite for approval.

4. Ind. Code § 8-1-8.7-3(b). Our findings on each of the factors described in Ind. Code §8-1-8.7-3(b) are set forth above.

(iii) Ongoing Review. I&M requested ongoing review of the construction of the Project to be conducted annually as part of I&M's CCTR proceedings. Mr. Williamson explained that I&M will include progress reports of construction, updated cost estimates and any revisions to cost estimates for the Project in the CCTR filing. This approach allows for timely review of the construction and of any changes in the estimated project cost. Mr. Fisher recommended that the Commission require I&M to conduct an updated analysis and provide parties an opportunity to review and respond to that analysis; he further recommended that the Commission "maintain the ability to adjust the rider at any time prior to 2019" following the findings of this updated analysis. We find Mr. Fisher's proposal goes far beyond what is contemplated by the pre-approval and ongoing review processes and departs from Commission practice. I&M has submitted extensive economic analysis that utilizes a broad range of assumptions including long-term forecasts of I&M's energy requirements and peak demand, as well as the price of various generation-related commodities, including energy, capacity, coal, natural gas, and CO_2/carbon. The record shows that alternatives, such as retiring the unit and purchasing capacity and energy from the wholesale market, were also considered as part of I&M's strategic planning and associated IRP process. Pet. Ex. 1 at 5-6; Pet. Ex. 1R at 25. Based on the analysis presented in this proceeding, we have found that the Rockport Unit 2 SCR Project is reasonable and should be approved. Mr. Fisher's proposal to leave Commission approval open-ended is contrary to the governing statutory framework, which contemplates pre-approval of projects. Mr. Fisher's proposal would burden and cloud the SCR implementation and potentially delay construction such that the SCR would not be in-service by December 2019. Pet. Ex. 1R at 26. The protracted process that Mr. Fisher advocates is unreasonable and, therefore, should be rejected. Accordingly, we find I&M's proposal for ongoing review of the Rockport Unit 2 SCR Project is reasonable and should be approved.

B. Chapter 8.8 and Ind. Code § 8-1-2-6.7.

(i) Clean Energy Project. Ind. Code § 8-1-8.8-2(1)(B) defines "Clean Energy Projects" as projects "to provide advanced technologies that reduce regulated air emissions from existing energy generating plants that are fueled primarily by coal . . . " This statute expressly provides that the term "Clean Energy Project" includes SCR equipment. As discussed above, Mr. Pifer explained that the SCR technology will reduce regulated air emissions from Rockport Unit 2 and will allow I&M to continue to utilize this coal-fired generating asset. In Cause No. 44523, the Commission found (p. 20) the Rockport Unit 1 SCR to be a Clean Energy Project. The record shows the Rockport Unit 2 SCR is identical in design to the Rockport Unit 1 SCR that the Commission has already approved. Pet. Ex. 3R at 2. As discussed above, substantial record evidence also shows that I&M's proposal is to install a complete SCR system for Unit 2 that will effectively and immediately reduce NO_x emissions in the same way as the SCR approved for Unit 1. Pet. Ex. 3R at 5; Tr. at A-45; B-6. We therefore reject JI's contention that the SCR system is somehow "incomplete" or "substandard". Accordingly, we find that the Rockport Unit 2 SCR Project is a Clean Energy Project.

(ii) Timely Cost Recovery and Depreciation. Ind. Code § 8-1-8.8-11 provides that the Commission shall encourage Clean Energy Projects by creating financial incentives designated in the statute if the project is found to be reasonable and necessary. Our discussion above concludes that a CPCN under Ind. Code ch. 8-1-8.7 should be issued and thus demonstrates that the SCR Project is reasonable and necessary. Ind. Code § 8-1-8.8-11 identifies the timely recovery of costs and expenses incurred during construction and operation of a Clean Energy Project as one type of financial incentive that shall be used to encourage a Clean Energy Project.

I&M requested timely recovery of I&M's Ownership Share via annual CCTR filings as a Clean Energy Project and QPCP. Such request is consistent with that approved by the Commission for I&M's Rockport Unit 1 SCR in Cause No. 44523. The Industrial Group proposed that any cost recovery be conditioned on the SCR remaining used and useful to I&M customers after December 7, 2022. We find this condition to be contrary to the pre-approval process set forth in Chapter 8.7 and the legislative policy intended to encourage Clean Energy Projects like the Rockport Unit 2 SCR. The record shows the SCR retrofit is the reasonable least-cost compliance option even if it is only in service for the benefit of I&M customers through the end of the original Lease term. Pet. Ex. 4 at 9-10. The record also shows that retrofitting Rockport Unit 2 with the SCR, continues to provide customers with necessary capacity and energy, offers significant optionality and affords the ability to capitalize on significant relative value even for a brief three year period. Pet. Ex. 4 at 47; Pet Ex. 1R at 13. Given our determination herein that the Rockport Unit 2 SCR Project is reasonable and necessary, we find it unreasonable to impose the punitive conditions IG proposes.

The Commission also rejects Mr. Fisher's recommendation that I&M shareholders be required to "bear full responsibility" for any and all litigation fees and penalties resulting from any non-compliance with the consent decree and any breach of the Lease. We find this recommendation goes beyond the scope of this proceeding and essentially asks the Commission to decide two conjectural cases in advance of their existence. Pet. Ex. 1R at 27. We decline to do so. Similarly, we reject JI's proposal to restrict cost recovery to a fixed percentage deadband

around the cost estimate. This proposal is predicated on a hypothetical scenario involving future litigation. As discussed above, we have found JI's concerns over litigation risk to be fundamentally flawed. The ongoing review process approved herein should be used to review costs and changes (if any) in the capital cost estimate for the Rockport Unit 2 SCR. Pet. Ex. 1R at 28. Accordingly, there is no need to adopt JI's recommendations. .

The OUCC recommended that any decision regarding recovery of the value of under-depreciated plant as a result of early Lease termination should be fully investigated in a base rate case, not in a tracker or other abbreviated proceeding. We decline to impose such a requirement. The OUCC's concerns are hypothetical in nature and do not reflect the least-cost alternative as set forth in Option 1A. Furthermore, the OUCC's concerns go beyond the SCR Project and thus exceed the scope of this proceeding. We would also note their concerns are contrary to ratemaking practice. It has long been established that the remaining book value of investments that are once used and useful in the provision of service to customers are recoverable through the ratemaking process regardless of whether they are fully depreciated at the time of retirement. *See Citizens Action Coalition, Inc. v. Northern Ind. Pub. Serv. Co.,* 485 N.E.2d 610, 616 (Ind. 1985) (collecting cases) ("[T]hese cases establish a long - adhered to administrative interpretation of allowing amortization of abandoned plants, i.e. plants that were 'used and useful' property and then retired from service."). Moreover a base rate case may not be the only appropriate forum to consider such costs. *See, e.g., Indiana Michigan Power Co.,* Cause No. 44555 (IURC 9/10/2014) (addressing closure of Tanners Creek Plant, including its remaining net book value).

Our discussion and findings above support the conclusion that the SCR Project constitutes CCT and QPCP as those terms are defined in Ind. Code §§ 8-1-2-6.7 and 6.8. I&M's proposal to depreciate its Ownership Share of the SCR Project over ten years is consistent with Ind. Code § 8-1-2-6.7. We decline to adopt the Industrial Group's recommendation that the depreciation period for the Project be extended to 20 years. The record shows that while I&M believes Rockport Unit 2 will likely remain viable going forward, the reality is not certain given the potential for additional environmental regulations. The IG's proposal does not reasonably balance the uncertainty surrounding the useful life of the SCR given the potential for retirement upon non-renewal of the Lease. We do not find IG's arguments comparing I&M's requested depreciation rate to that in place for AEG to be persuasive. The AEG rate of depreciation shown in Attachment AJW-1 is based on the Unit Power Agreement, which is a FERC-approved agreement. Mr. Williamson testified that it was his understanding that there has not been a change to AEG's depreciation rate since the Rockport Plant was placed in service. Pet. Ex. 6R at 7. Further we find AEG's depreciation rate to be meaningfully different than I&M's request in this proceeding. The record shows I&M is requesting a rate that will be specifically applied to the SCR investment. Pet. Ex. 6R at 7. In contrast, the AEG rate is a group depreciation rate which is applied to AEG's gross plant investment balances, which include investments other than the Rockport Unit 2 SCR. This is no different than I&M's depreciation rates established in base rate case proceedings. *Id.* We find that depreciating the SCR Project over ten years strikes a reasonable balance between the ratemaking recognition of the SCR Project and the period over which it may be reasonably known to operate. This will reduce the potential impact should Circumstances determine the non-renewal of the Lease or the retirement of Rockport Unit 2 prior to installing a FGD system more reasonable alternatives. A ten year depreciation period is also consistent with that approved in Cause No. 44523 for the Unit 1 SCR.

With the exception of the proposed ratemaking treatment for any undepreciated asset that may happen as a result of early lease termination, the OUCC did not otherwise raise any concerns regarding I&M's proposed accounting and ratemaking proposals. Pub. Ex. 3 at 3-4. Mr. Fisher recommended that if the CPCN is approved, the Commission should require I&M to maintain separate accounting for the costs of the SCR and supporting balance of plant activities. Mr. Fisher does not elaborate on what is meant by this recommendation, or how it would be beneficial, and we find it to be vague and unsupported by the record. We therefore find that I&M's proposed accounting and ratemaking treatment for the Rockport Unit 2 SCR is in conformity with applicable rules and statutes. Further, the allocation of costs in the CCTR is supported by the testimony of Mr. Phillips and Mr. Williamson. Substantial record evidence demonstrates, and we find, that I&M's proposed accounting and ratemaking treatment, including a ten-year depreciation period and the allocation of fixed costs using a 6 CP method, is reasonable and should be approved.

C. Conclusion. Having considered the evidence in this Cause, we find that the Rockport Unit 2 SCR Project is reasonable and necessary as set forth above. Substantial evidence shows that the installation of SCR technology at Unit 2 is the reasonable least-cost alternative to meeting I&M's capacity and energy obligations. Accordingly, the Commission finds that a CPCN shall be granted to I&M for the Rockport Unit 2 SCR Project. As discussed above, I&M's proposed accounting and ratemaking treatment is reasonable and is hereby approved.

13. Confidentiality Findings. I&M filed a Motion for Protection and Nondisclosure of Confidential and Proprietary Information on October 21, 2016, which Motion was supported by affidavit showing documents to be submitted to the Commission were trade secret information within the scope of Ind. Code §§ 5-14-3-4(a)(4) and (9) and Ind. Code § 24-2-3-2. The Presiding Officers issued a Docket Entry on December 5, 2016 finding such information to be preliminarily confidential, after which such information was submitted under seal. There was no disagreement among the parties as to the confidential and proprietary nature of the information submitted under seal in this proceeding. We find all such information is confidential pursuant to Ind. Code §§ 5-14-3-4 and 24-2-3-2, is exempt from public access and disclosure by Indiana law and shall be held confidential and protected from public access and disclosure by the Commission.

IT IS THEREFORE ORDERED BY THE INDIANA UTILITY REGULATORY COMMISSION that:

1. Petitioner is hereby granted a Certificate of Public Convenience and Necessity for the construction, installation and use of the Rockport Unit 2 SCR Project pursuant to Ind. Code § 8-1-8.7-1 *et seq*. This Order constitutes the Certificate.

2. Petitioner's cost estimate for the Rockport Unit 2 SCR Project of $274.2 million (excluding AFUDC) is reasonable and is hereby approved. While this amount does not include AFUDC, the actual, accrued amount of AFUDC will be included as part of the approved cost.

3. The Rockport Unit 2 SCR Project is determined to constitute a "Clean Energy Project" under Ind. Code § 8-1-8.8-1 *et seq.* and the timely recovery of costs and expenses

through I&M's annual CCTR as proposed by I&M is approved. The annual CCTR filings shall be docketed as Cause No. 44523 ECR-[X].

4. I&M's request for ongoing review pursuant to Ind. Code § 8-1-8.7-7 is approved. I&M shall file the ongoing review reports as set forth in Para. 12(A)(iii) for the purpose of ongoing review.

5. I&M is authorized to add to the value of I&M's property for ratemaking purposes the value of the Rockport Unit 2 SCR Project as proposed by I&M. I&M shall add the approved return to its net operating income authorized by the Commission for purposes of Ind. Code § 8-1-2-42(d)(3) in all subsequent FAC proceedings.

6. I&M is authorized to depreciate I&M's Ownership Share of the Rockport Unit 2 SCR Project over a period of ten years as proposed by I&M.

7. I&M is granted accounting authority to implement its proposed ratemaking in accordance with this Order.

8. This Order shall be effective on and after the date of its approval.

ATTERHOLT, FREEMAN, HUSTON, WEBER, AND ZIEGNER CONCUR:
APPROVED:

I hereby certify that the above is a true
and correct copy of the Order as approved.

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Mary M. Becerra,
Secretary of the Commission

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