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[Handwritten signatures and initials: JLA, JLG]

STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

VERIFIED PETITION OF INDIANAPOLIS)
POWER & LIGHT COMPANY, AN INDIANA)
CORPORATION, FOR APPROVAL)
PURSUANT TO IND. CODE §§ 8-1-2-42(a), 8-1-)
8.8-11 AND TO THE EXTENT NECESSARY 8-)
1-2.5-6 OF A RENEWABLE WIND ENERGY)
PROJECT POWER PURCHASE AGREEMENT)
WITH LAKEFIELD WIND PROJECT, LLC)
INCLUDING THE TIMELY RECOVERY OF)
COSTS THROUGH RATES AND)
CONFIDENTIAL TREATMENT OF POWER)
PURCHASE AGREEMENT PRICING AND)
RELATED CONFIDENTIAL INFORMATION.)

CAUSE NO. 43740

APPROVED: JAN 27 2010

BY THE COMMISSION:
David E. Ziegner, Commissioner
Angela Rapp Weber, Administrative Law Judge

On July 17, 2009, Indianapolis Power & Light Company (“Petitioner” or “IPL”) filed its Verified Petition with the Indiana Utility Regulatory Commission (“Commission”) for approval of a Renewable Wind Energy Project Power Purchase Agreement (the “Wind PPA”) with Lakefield Wind Project, LLC (“Lakefield”), including timely recovery of the associated costs through rates. On July 31, 2009, IPL filed its case-in-chief. On August 3, 2009 IPL filed its Motion for Protection and Nondisclosure of Confidential and Proprietary Information, through which protection from public disclosure was sought for certain Confidential Information. On August 14, 2009, the Presiding Officers issued a Docket Entry determining that the Confidential Information should be held as confidential by the Commission on a preliminary basis.

Pursuant to notice and as provided for in 170 IAC 1-1.1-15, a Prehearing Conference and Preliminary Hearing in this Cause was held in Room 222 of the National City Center, 101 West Washington Street, Indianapolis, Indiana at 9:00 A.M. on August 21, 2009. On September 3, 2009, the Commission entered a Prehearing Conference Order, which among other things, established a procedural schedule in this Cause. On October 5, 2009, Petitioner filed its submission of proofs of publication of notice in accordance with Ind. Code § 8-1-2.5-6(d). In accordance with the Prehearing Conference Order, the Office of Utility Consumer Counselor (“OUCC”) prefiled testimony on November 10, 2009. On November 20, 2009, IPL filed its rebuttal testimony.

Pursuant to notice as required by law, proof of which was incorporated into the record by reference and placed in the official files of the Commission, a public Evidentiary Hearing in this Cause was held at 9:30 A.M. on November 30, 2009 in Room 222 of the National City Center, 101 West Washington Street, Indianapolis, Indiana. At the hearing Petitioner and the OUCC appeared by counsel and offered their respective prefiled testimony and exhibits, which were admitted into evidence without objection. No members of the general public were present at the hearing.

Based upon applicable law and evidence presented herein, the Commission now finds as follows:

1. **Notice and Jurisdiction.** Due, legal, and timely notice of the Evidentiary Hearing in this Cause was given and published by the Commission as required by law. Proofs of publication for legal notices made by IPL were offered and admitted into evidence.

Petitioner is a “public utility” under Ind. Code § 8-1-2-1 and an “energy utility” providing “retail energy service” as defined in Ind. Code §§ 8-1-2.5-2 and 8-1-2.5-3, and is subject to the jurisdiction of this Commission in the manner and to the extent provided by the Public Service Commission Act, as amended, and other pertinent laws of the State of Indiana. Petitioner requests relief pursuant to Ind. Code §§ 8-1-8.8, 8-1-2.5-6 and 8-1-2-42(a). Accordingly, the Commission has jurisdiction over Petitioner and the subject matter of this proceeding.

2. **Petitioner’s Characteristics and Business.** Petitioner is a public utility corporation organized and existing under the laws of the State of Indiana and has its principal office at One Monument Circle, Indianapolis, Indiana. Petitioner is engaged in rendering electric utility service in the State of Indiana and owns, operates, manages, and controls, among other things, plant and equipment within the State of Indiana used for the generation, transmission, distribution, and furnishing of such service to the public. Petitioner is a “public utility” under Ind. Code § 8-1-2-1 and an “energy utility” providing “retail energy service” as defined in Ind. Code §§ 8-1-2.5-2 and 8-1-2.5-3, and is subject to the jurisdiction of this Commission in the manner and to the extent provided by the Public Service Commission Act, as amended, and other pertinent laws of the State of Indiana. The Federal Energy Regulatory Commission (“FERC”) regulates IPL’s wholesale rates and services, as well as its transmission business. Pursuant to the Commission’s order dated December 17, 2001 in Cause No. 42027, IPL has transferred functional control of its transmission facilities to the Midwest Independent Transmission System Operator, Inc. (“Midwest ISO”). IPL is a member of Reliability *First*.

IPL provides electric service to approximately 470,000 retail electric customers located principally in and near the City of Indianapolis, Indiana, and in portions of the following Indiana counties: Boone, Hamilton, Hancock, Hendricks, Johnson, Marion, Morgan, Owen, Putnam, and Shelby Counties. IPL owns, operates, manages, and controls electric generating, transmission and distribution plant, property, and equipment and related facilities, which are used and useful for the convenience of the public in the production, transmission, delivery, and furnishing of electric energy, heat, light, and power.

3. **The Wind PPA and Relief Requested.** IPL is seeking approval of the Wind PPA between IPL and Lakefield, whose sole member is enXco Development Corporation (“enXco”), the owner of a wind project under development in Southwestern Minnesota, near the City of Lakefield (the “Lakefield Wind Park”) (the “Project”). The Wind PPA provides for the sale of an approximate 201 megawatt (“MW”) nominal share of its electrical output and environmental attributes for twenty years.

IPL requests that the Commission approve the Wind PPA and find the Lakefield Wind Park to be a “renewable energy resource” as that term is defined in Ind. Code § 8-1-8.8-2. As such, the Project would be eligible for certain incentives under the law, including, but not limited to, timely cost recovery. With regard to cost recovery, IPL requests that the costs incurred

pursuant to the Wind PPA be recovered on a timely basis through retail rates over the term of the agreement. IPL requests that the Commission authorize IPL to recover the Wind PPA costs, from retail customers through the full term of the agreement through a rate adjustment mechanism in accordance with Ind. Code §§ 8-1-2-42(a) (“Section 42(a)”) and 8-1-8.8-11 and to defer all associated Midwest ISO administrative costs as a regulatory asset. IPL proposes this recovery be accomplished through the tracking provision of Section 42(a) by treating the energy cost of the Wind PPA as a cost to be recovered in a fashion similar to the fuel adjustment charge (“FAC”) mechanism, where the cost is recovered based on the estimated cost for a particular quarter and trued-up in a subsequent quarter. IPL proposes to seek recovery of the Wind PPA costs in conjunction with and contemporaneously with its quarterly FAC proceedings. Although IPL proposes to have the cost recovery administered through its FAC, this cost recovery would not be subject to the Section 42(d)(1) test or any FAC benchmarks, including the Benchmark approved by the Commission in Cause No. 43664. Rather, IPL requests the Commission make a definitive finding in this Cause that the Project, Wind PPA, and associated costs are reasonable and necessary so that IPL will be presently authorized to recover those costs over the full term of the Wind PPA.

4. Statutory Framework. Ind. Code § 8-1-8.8-2 concerns the development of alternative energy sources, including a renewable “energy project.” Ind. Code § 8-1-8.8-10 defines “renewable energy resource” to include energy from wind. Pursuant to Ind. Code § 8-1-8.8-11, an energy project is eligible for timely recovery of costs. This framework thus provides the basis for the requested Commission assurance of purchased power cost recovery through the full twenty-year term of the Wind PPA. Ind. Code § 8-1-2-42(a) also authorizes recovery of purchased electricity.

This is not a case of first impression. The Commission’s Orders in Cause Nos. 43097, 43259, 43328, 43393, and 43485 granted relief to Indiana electric utilities comparable to what IPL seeks here.¹ In these cases, and pursuant to Ind. Code §§ 8-1-2-42(a) and 8-1-8.8, the Commission found that the wind purchased power agreements were a Renewable Energy Project and authorized the timely recovery of the cost incurred over the full contract term through a rate adjustment mechanism to be administered within the FAC proceedings (or successor mechanism). The Commission further found that the cost recovery was not subject to the Section 42(d)(1) test or any benchmarks.

5. Summary of Petitioner’s Evidence. The evidence in support of IPL’s Petition includes the testimony of Ken Flora, Director of Regulatory Affairs; John E. Haselden, Principal Engineer; Herman N. Schkabla, Director, Markets and Risk; and Dewayne Boyer, Director, Energy Supply.

¹ *Verified Petition of PSI Energy, Inc. (Ind. Util. Reg. Comm’n, Cause No. 43097, Dec. 6, 2006)* [hereinafter Duke Proceeding]; *S. Ind. Gas and Elec. Co. (Ind. Util. Reg. Comm’n, Dec. 15, 2007, Cause No. 43259)* [hereinafter Vectren Proceeding]; *Ind. Mich. Power Co. (Ind. Util. Reg. Comm’n, Cause No. 43328, Nov. 28, 2007)* [hereinafter I&M Proceeding]; *Verified Petition of N. Ind. Pub. Serv. Co. (Ind. Util. Reg. Comm’n, Cause No. 43393, July 24, 2008)* [hereinafter NIPSCO Proceeding]; and *Verified Petition of Indianapolis Power & Light Co. (Ind. Util. Reg. Comm’n, Cause No. 43485, Oct. 1, 2008)* [hereinafter IPL’s Hoosier Wind Park Proceeding].

Mr. Flora provided an overview of IPL's case in this proceeding. He described IPL's interest in increasing the role of renewable energy in its generation portfolio and the impact of recent regulatory and legislative actions. Mr. Haselden discussed in detail the Request for Proposal ("RFP") process, the terms associated with the Wind PPA, transmission access, and IPL's proposed treatment of Renewable Energy Credits ("RECs"). Mr. Schkabila discussed how the Wind PPA fits into IPL's capacity resource plan and why it is an economic choice for meeting the needs of IPL and its customers. Mr. Boyer explained the proposed treatment of the Wind PPA as it relates to the Midwest ISO Energy and Operating Reserves Market. A summary of their testimony follows.

(a) Ken Flora.

Mr. Flora explained that IPL entered into a Wind PPA to purchase a nominal 100 MW of wind from Hoosier Wind Park on March 25, 2007, as approved by the Commission in IPL's Hoosier Wind Park Proceeding. He stated the Hoosier Wind Park project, also owned by enXco, is currently expected to be in commercial operation by October 31, 2009. He stated that IPL has the benefit of parent company AES Corporation's ("AES") strong wind generation experience. Mr. Flora noted that AES entered the wind market in 2004 in the United States and quickly gained scale and experience and that AES currently operates more than 1,200 MW of wind facilities in five states and has another 6,000 MW of wind projects in various stages of development in some of the fastest growing markets for wind energy in the world. He noted that AES is pursuing wind opportunities in the United States, Europe, China, India, Pakistan, and Central and South America. In addition, AES is currently securing leases for a recently announced large-scale wind farm in central Indiana.

Mr. Flora described IPL's interest in adding additional wind energy to its generation portfolio. He stated that wind energy is a non-emitting electricity source that would further diversify IPL's generating portfolio. With the addition of the Lakefield Wind Park, and including the energy from the Hoosier Wind Park, energy from renewable resources would still only represent 7% of IPL's 2008 retail KWh sales. He stated that adding a modest amount of wind energy to the portfolio allows IPL to decrease its dependence on coal-fired generation, with a relatively small impact on customers' overall electricity bills. Mr. Flora described recent developments in the regulation of greenhouse gases ("GHG"). He stated that on April 24, 2009, the Administrator of the Environmental Protection Agency ("EPA") proposed to find that GHG in the atmosphere endangers the public health and welfare of current and future generations. He stated as the federal regulation of GHG appears imminent, it is important to develop an emission strategy that will comply with reasonably anticipated regulations through the use of emission free generation. In addition, committing to wind resources now is a reasonable and economic hedge against the cost of potential GHG regulation, particularly given that promulgated legislation would likely increase both demand and prices for renewable resources. Mr. Flora stated the proposed federal energy bills also include a renewable energy requirement and noted that a renewable energy mandate would put even more pressure on the price of utility-scale renewables.

Mr. Flora described recent actions regarding renewable legislation. He stated that on June 28, 2009, the House of Representatives passed the American Clean Energy and Security Act ("ACES legislation"), sponsored by Rep. Henry A. Waxman, Chairman of the House Energy and Commerce Committee, and Rep. Edward J. Markey, Chairman of the House Select

Committee on Energy Independence and Global Warming. He noted the following key provisions:

- Requires electric utilities to meet 20% of their electricity demand through renewable energy sources and energy efficiency by 2020.
- Calls for \$190 billion in new clean energy technologies and energy efficiency, including energy efficiency and renewable energy (\$90 billion in new investments by 2025), carbon capture and sequestration (\$60 billion), electric and other advanced technology vehicles (\$20 billion), and basic scientific research and development (\$20 billion).
- Mandates new energy-saving standards for buildings, appliances, and industry.
- Requires reductions in carbon emissions from major United States sources by 17% by 2020 and over 80% by 2050 compared to 2005 levels.

Mr. Flora noted that twenty-nine states and the District of Columbia have set mandatory standards specifying that electric utilities generate a certain amount of electricity from renewable sources and five states have non-binding renewable goals. He also noted that most of these requirements take the form of Renewable Portfolio Standard (“RPS”), which requires that a certain percentage of a utility’s energy sales be produced by renewable sources by a given date. Mr. Flora stated that the definition of renewable energy and the percentage of renewable energy required vary among the standards set thus far.

Mr. Flora stated that policies that support technology development with assured recovery of reasonable investments might more effectively promote the utilization of renewable energy resources and that compliance with GHG legislation and mandatory RPS at the federal or state level could require substantial capital investment. Mr. Flora stated that acquiring those assets, or a portion of them, now could significantly reduce the risk of holding out until the form of GHG legislation or state/federal RPS legislation is known and quantifiable. He stated that particularly with wind assets—currently the most viable large-scale renewable technology—the best sites are rapidly being secured. He stated that the best sites include locations where the community welcomes wind-farm development, where wind-resources are strong and produce high capacity factors, and where the transmission system either has excess capacity or where upgrades are already in progress. In addition, it is likely that the heightened demand for wind turbines over time could also drive the investment cost higher.

Mr. Flora described other environmental rules or legislation being considered that would make wind an even more attractive resource option. He stated that EPA is currently under a court mandate to issue new rules that will require additional reductions for nitrogen oxide (“NO_x”) and sulfur dioxide (“SO₂”). In addition to NO_x and SO₂, EPA is also under a court mandate to re-issue new rules requiring the reduction of mercury emissions. He stated while the mercury emission reduction requirements were initially issued in 2005 and vacated by the court, EPA has indicated it will be reissuing mercury emission reduction rules in the near future that would require coal fired units to significantly reduce mercury emissions by installing the maximum achievable control technology, which is available to meet the new requirements. Mr. Flora also stated that EPA recently promulgated new requirements for cooling water intake

structures requiring existing systems to meet “the best technology available” to minimize aquatic impacts and that these regulations will likely require expensive retrofits in the next five years for existing coal fired facilities. Mr. Flora stated that while wind farms do not withdraw water from rivers or lakes and are not subject to the cooling water requirements, all of these new environmental restrictions would increase the cost of electricity generated from coal and make wind energy more competitive.

Mr. Flora explained that IPL and its customers benefit from the inclusion of renewable resources in a manner that balances the higher cost of that power with the benefits of further diversification. He also stated that by supporting emission free generation, IPL can meet anticipated environmental regulations in a cost effective manner.

Mr. Flora described the process IPL followed as it considered whether to enter the Wind PPA. He stated that similar to the process followed with IPL’s wind PPA with Hoosier Wind Park, on December 19, 2008, IPL issued a RFP seeking bids from resources that would be able to provide IPL long-term electric capacity and energy supplies from developers of renewable energy projects and that IPL has made the strategic decision to add an additional 201 MWs of wind power to its supply portfolio at this time. He stated that IPL considered the level of renewables reasonably available in the region, the impact on customer rates of adding more renewables, and the need for more renewables in the capacity resource plan developed by IPL to meet the needs of its customers. He stated that adding an additional 201 MW through the Wind PPA is an important and cost effective step for IPL to prepare for GHG and/or renewable energy requirements.

Mr. Flora stated that responses to the RFP were evaluated and reduced to a short list of bidders and that after negotiations over the terms, conditions, and price, IPL executed the Wind PPA for the purchase of approximately 201 of wind power at a competitive price. Mr. Flora stated that Lakefield Wind Park may begin initial delivery of power as early as December 31, 2010, or as late as June 30, 2011, and will supply the electrical output and environmental attributes of the Wind PPA to IPL for a period of twenty years and that the Wind PPA provides that IPL will receive the RECs that may be produced by the Lakefield Wind Park. Mr. Flora stated that IPL estimates that it will reduce carbon dioxide emissions by approximately 1.2 million tons annually when both the Hoosier Wind Park and Lakefield Wind Park are in service.

Mr. Flora stated that should IPL become subject to a renewable energy standard or GHG regulation in the future, the RECs will be maintained and likely will count toward IPL’s compliance with those regulations.

Mr. Flora explained why IPL selected a wind project from outside of Indiana. He stated that while cost was a significant factor in the selection of this project from Minnesota, other factors were considered, including the Project’s proximity to transmission facilities (that should help to mitigate the risk for excessive transmission congestion charges), the higher capacity factor of Minnesota wind facilities, and the Project is in a later stage of development (which enhances the likelihood that the project will be successfully completed and will enable IPL to receive wind energy in a more timely manner). He stated that the Lakefield Wind Park is located in the Midwest ISO footprint near the transmission network and explained that the Lakefield Wind Park will be interconnected to the Midwest ISO system at Interstate Power & Light Company’s (“Interstate”) Substation.

Mr. Flora discussed the costs of the Wind PPA. He stated that the energy costs incurred by IPL under the Wind PPA will be somewhat higher than the average energy costs of IPL's existing generating resources but that the Wind PPA costs were developed through a competitive process and are typical of the costs found for this kind of renewable resource in this region. He stated that IPL requests that the costs incurred pursuant to the Wind PPA be recovered on a timely basis through retail rates over the term of the Wind PPA and authorization to recover the Wind PPA costs, from retail customers through the full term of the agreement via a rate adjustment mechanism in accordance with Section 42(a) and Ind. Code § 8-1-8.8-11 and to defer all associated Midwest ISO administrative costs as a regulatory asset. Mr. Flora stated that IPL proposes this recovery be accomplished through the tracking provision of Section 42(a) by treating the energy cost of the Wind PPA as a cost to be recovered in a fashion similar to the FAC mechanism, where the cost is recovered based on the estimated cost for a particular quarter and true-up in a subsequent quarter. He stated that IPL proposes to seek recovery of the Wind PPA costs in conjunction with and contemporaneously with its quarterly FAC proceedings. Mr. Flora stated that although IPL is proposing to have the cost recovery administered through its FAC, this cost recovery should not be subject to the Section 42(d)(1) test or any FAC benchmarks, including the Benchmark approved by the Commission in Cause No. 43664. Mr. Flora stated that essentially, IPL proposes the same recovery mechanism as the Commission previously approved in IPL's Hoosier Wind Park Proceeding.

Mr. Flora stated that along this line, IPL requests that the Commission find the Lakefield Wind Park to be a renewable energy project, as that term is defined in Ind. Code § 8-1-8.8-2, as it did for the Buffalo Ridge and Barton developments found by the Commission to be a renewable resource project in the NIPSCO Proceeding. As such, it would be eligible for certain incentives under the law, including, but not limited to, timely cost recovery, which can be accomplished by authorizing the cost recovery proposed by IPL in this Cause.

Mr. Flora explained IPL's plan to allocate the Wind PPA costs. He explained that wind generated energy is significantly different in terms of availability than that provided by IPL's generating units. He explained that wind is also limited in that it does not always blow when electricity is needed or consistently in the same geographical location at all times of the year and that the resultant capacity value is therefore limited. He stated that the Wind PPA includes no capacity charges and that IPL proposes to treat the Wind PPA costs in the same manner as other energy costs embedded in purchased power costs, i.e. volumetrically. Mr. Flora noted that this is the same treatment received by all energy passed through the FAC or related trackers and is transparent, simple, and fair.

Mr. Flora concluded that the Wind PPA is reasonable and in the public interest. He explained that the Wind PPA produces real benefits for IPL, its customers and the environment noting that it diversifies IPL's generation portfolio, supports a domestic renewable resource, encourages economic development, and meets the increasing interest of customers in the use of more renewable resources. He also explained that the Wind PPA also provides an opportunity for IPL and its customers to learn more about the use of renewable resources as a means for serving their energy needs and that adding wind energy to IPL's generation portfolio reduces IPL's dependence on fuels that produce GHG.

Mr. Flora explained why IPL is seeking expedited review. He stated that IPL's request is consistent with Ind. Code § 8-1-8.8-11, which requires such requests to be considered within 120

days from IPL's filing of its case-in-chief. In addition, IPL and enXco recognize this is a dynamic time in the industry where change is certain to continue at a rapid pace. He stated that both parties believe that their risks are mitigated if the regulatory process is completed in an efficient manner, as was the case in IPL's prior wind PPA proceeding. Mr. Flora stated that either party may terminate the Wind PPA if final regulatory approvals cannot be obtained by March 8, 2010. He noted that given the thirty-day time period to appeal a Commission decision IPL must receive an order from the Commission by February 6, 2010. He stated that expeditious approval may enable Lakefield to begin deliveries to IPL by December 31, 2010.

(b) John E. Haselden.

Mr. Haselden described the process followed by IPL that led to the execution of the Wind PPA, discussed how IPL will integrate the Wind PPA into IPL's and the Midwest ISO operations, discuss the viability of wind energy resources generally, and outlined the terms of the Wind PPA, including IPL's rights to the production and environmental attributes of the wind energy project and the benefits associated with the environmental attributes in the form of RECs. Mr. Haselden sponsored the Wind PPA (Petitioner's Exhibit JEH-2).

Mr. Haselden stated that to meet the future needs of IPL's residential, commercial, and industrial electric customers, on December 19, 2008 IPL issued an RFP seeking bids from all resources that would be able to provide IPL long-term electric capacity and energy supplies from developers of renewable energy projects. He stated that the RFP attracted proposals for wind and biomass projects that IPL evaluated and reduced to a short list of proposals, which were further evaluated. Mr. Haselden stated that in the RFP process, IPL solicited proposals for both an equity investment in the projects by IPL and/or a PPA between the sponsor and IPL. He stated that IPL simultaneously negotiated for a PPA with three developers of five wind energy projects and that after completion of negotiations over the terms, conditions and price, IPL executed the Wind PPA for the total purchase of nominally 201 MWs of wind power from the Lakefield Wind Park. He stated the RFP is part of IPL's strategy to diversify its current generation assets with zero emission generation technology so as to mitigate the risk of possible future regulation of GHG emissions and to encourage the development and construction of generating facilities that use new technologies.

Mr. Haselden stated that his involvement was to assist in writing the RFP and ensure the process conformed to IPL's intent to competitively bid and secure additional electric energy and capacity in the amount needed to serve IPL retail customers in the future, and to assure that the process was conducted in a fair and transparent manner. He stated that IPL also retained the services of Global Energy Concepts to assist in writing the RFP and evaluating the proposals. He explained that wind is a renewable, indigenous, and clean energy source; wind energy projects do not use fossil or nuclear fuel in operation, which means no mining or drilling for fuel, no radioactive or hazardous wastes and no use of water for steam or cooling, and operate without emitting any GHG or other pollutants; absence of fossil or nuclear fuel also means the price of wind power does not fluctuate with these commodities; use of wind energy promotes national security by providing a source of energy that is not dependent on supply from beyond the borders of the United States; the United States is already heavily dependent on imported oil to meet its energy needs and has been turning to liquefied natural gas, another imported fuel source, to meet natural gas demands; and wind energy will not be interrupted by events or acts outside the United States' borders like some of these other fuel sources.

Mr. Haselden explained that geographical location impacts the capacity and energy available from wind energy projects. He stated that the Lakefield Wind Park is located in a region of Minnesota with high average wind speeds and is home to several other wind projects. He stated this wind resource correlates to higher capacity factor values for these wind energy projects, which leads to more competitive pricing for the wind energy produced because the fixed costs of such projects are spread over more MW hours (“MWh”). He stated that the Lakefield Wind Park’s proximity to transmission lines that have sufficient capacity was also a consideration. Mr. Haselden stated that for these reasons, and with advances in wind technology in areas such as wind turbine availability, efficiencies in wind turbine and tower design and size, and wind mapping and site identification, wind energy has become a viable source of renewable energy resources on a per MWh basis.

Mr. Haselden noted that the Indiana State Utility Forecasting Group published a report in September 2008 entitled *2008 Indiana Renewable Energy Resources Study* wherein the economic and technical potentials of various renewables are discussed.² He noted that according to this study, specifically regarding wind, there are only a few counties in Indiana that have moderate wind resources. Mr. Haselden stated that Benton County is one of those counties and is home to four projects either operating or under construction. He stated that IPL is aware that there are more viable sites under development in Indiana but they are not yet mature enough to make definitive proposals or were not competitive with the Lakefield Wind Park project. He stated IPL is continuing to discuss projects with some respondents to the RFP and IPL will continue to monitor the developing Indiana market. He stated the factors that led to selection of the Lakefield Wind Park project were its pricing, capacity factor, proximity to transmission, its estimated completion date, and its likelihood of reaching commercial operation without delays.

Mr. Haselden stated that there are other facts that impact the development of the Lakefield Wind Park project. He stated that the Minnesota Public Utility Commission must issue both a Certificate of Need and a Site Permit and that enXco is responsible for obtaining this and any other permits which will be sought concurrently with the relief sought by IPL in this Cause. Additionally, the Project is dependent on the Federal Production Tax Credit, which was recently extended for three years and should have no impact on the project’s timeline.

Mr. Haselden stated that although the RFP indicated a preference by IPL for an equity investment, most bidders were reluctant to quote such a structure. He stated that some bidders that quoted projects that were early in the development process offered IPL an equity position but that these projects were not sufficiently developed to make the short list of projects. He stated the preference of all the bidders on the short list was to enter into a PPA. Mr. Haselden stated that similar to IPL’s experience in its 2007 RFP, it appears that there is still a strong interest in the developers of wind projects to retain ownership of the projects and only contract for the energy. He stated that enXco has been in the business of developing, constructing, and operating wind farms throughout the United States continuously since 1987 and that enXco either owns, operates or maintains over 2,000 MW of wind capacity which includes fourteen projects in the Midwest. In addition, enXco provide contract operations and maintenance services to third parties, serving more than 5,000 wind turbines. He stated that IPL has

² This report can be readily accessed at https://engineering.purdue.edu/IE/Research/PEMRG/SUFG/PUBS/2005_Renewables_Final.pdf.

previously contracted with enXco for power to be received from the Hoosier Wind Park, which is currently under construction in Benton County, Indiana.

Mr. Haselden stated that the Lakefield Wind Park is located in southwestern Minnesota near the town of Lakefield. Mr. Haselden explained that the Project will consist of 134 General Electric 1.5 MW turbines on eighty meter towers for a nominal nameplate capacity of 201 MW and is expected to produce more than 700,000 MWhs per year. He continued that the Lakefield Wind Park will be interconnected to the Midwest ISO system at Interstate's Lakefield Junction Substation. He stated that Xcel Energy has developed a Wind Transmission Infrastructure Improvement plan (425 and 825 MW Outlet Plan), which includes the Lakefield substation and the connecting high-voltage lines to deliver wind energy towards load centers in Sioux Falls and Minneapolis/St. Paul. This work has now been completed. The Lakefield Wind Park Interconnection Agreement was originally with Interstate and the Midwest ISO. ITC-Midwest has acquired the transmission assets of Alliant, the parent company of Interstate, including the Lakefield Junction substation, and has assumed the Interconnection Agreement. He stated that given the status of its Interconnection Agreement, the Lakefield Wind Park will have access to these transmission upgrades making it likely that power can flow easily from the wind park to load. He stated the combination of high capacity factors for wind in southwestern Minnesota along with these transmission-line upgrades made the Lakefield Wind Park an attractive candidate for a power purchase agreement.

Mr. Haselden explained that the Wind PPA is a long-term agreement of twenty years with fixed annual pricing that escalates each year. Mr. Haselden stated that there are no capacity or other fixed payments provided for in the Wind PPA and that IPL will receive all environmental attributes from the Lakefield Wind Park, including the RECs. Mr. Haselden stated that upon mutual agreement, the term of the contract may be initially extended by five years and may subsequently be extended an additional five years under the same terms and conditions. He noted that enXco has signed an Interconnection Agreement with Interstate and the Midwest ISO, subsequently accepted for filing by the Federal Energy Regulatory Commission, for Energy Resource Interconnection Service that will be assigned to Lakefield Wind. He noted that network upgrades to the Interstate transmission system will be paid for by Lakefield. Mr. Haselden stated that IPL has reserved the option, with the cooperation of Lakefield, to change the Lakefield Wind Park to a Designated Network Resource in the future if justified. He stated that depending on construction conditions and the timeliness of approvals, the Lakefield Wind Park may begin initial delivery of power as early as December 31, 2010, or as late as June 30, 2011.

Mr. Haselden described the RECs that IPL will obtain in conjunction with the Lakefield Wind Park. He explained that as defined in the Wind PPA, the term "Renewable Energy and Environmental Credits" means any and all environmental air quality credits, carbon offsets, other offsets or other benefits related to the generation of energy at the facility. This includes RECs and is also intended to capture any changes in governmental rules, regulations or laws, or changes to registration systems put in place over the term of the Wind PPA. Mr. Haselden stated that RECs are tradable credits corresponding to each MWh of electricity generated by a qualified renewable energy resource and that IPL anticipates the RECs it will receive pursuant to the Wind PPA will be tracked through the North American Renewables Registry ("NARR") or the Midwest Renewable Energy Tracking System ("M-RETS"), a database that tracks relevant information about renewable energy produced and delivered in the Midwest ISO footprint in

certain states such as Minnesota, to verify for subscribers in states with a mandatory or voluntary RPS or verifies for utility and other participants the RECs made available to them through REC purchases and sales. He stated that M-RETS will track the ownership of RECs and generation attributes that result from the generation of renewable electricity. He stated the NARR is a sister organization to M-RETS that performs the same function as M-RETS except in states that do not have an RPS, such as Indiana. The NARR is a new project and it is expected that change in both M-RETS and the NARR protocols will occur prior to the completion of the Lakefield Wind Park and therefore the decision as to which system is appropriate will be made at a later date.

Mr. Haselden stated that IPL proposes to either hold the RECs for future use in complying with RPS requirements, sell them and use the proceeds as a credit to offset the cost of the Wind PPA, or in some other manner as the Commission may permit in the future.

Mr. Haselden stated that IPL needs the nominal 201 MWs of electric energy made available through the Wind PPA and that the Wind PPA plays a role in satisfying IPL's electric planning goals and objectives.

Mr. Haselden stated that the Project is located in the Midwest ISO footprint and therefore accounting for the wind energy would be greatly simplified. He explained that Lakefield has an interconnection agreement with Interstate and the Midwest ISO, which allows the Lakefield Wind Park to interconnect with the Midwest ISO transmission facilities. The Midwest ISO marketplace allows participants to avoid the difficulties and inefficiencies of requiring each buyer to arrange physical delivery of generation to their load. He stated that IPL will be the market participant and will make the energy available in the Midwest ISO energy market for the Lakefield Wind Park's actual output. He stated that IPL will be paying Lakefield the contract price per MWh and will count this wind energy as used in the IPL system and that IPL will "settle" the sale price for the wind energy sold into the Midwest ISO against the price paid for the wind energy. He stated that IPL offers its generation and bids its load into the Midwest ISO energy markets daily, along with other sales and purchases, in the end "settling" the costs against revenues. Mr. Haselden stated that the Midwest ISO currently treats wind energy projects as intermittent resources, enabling IPL to avoid real-time Revenue Sufficiency Guarantee and Uninstructed Deviation charges assessed under the Midwest ISO Open Access Transmission and Energy Markets Tariff ("TEMT").

Mr. Haselden stated that IPL would not initially be able to designate the Lakefield Wind Park as a Designated Network Resource under the Midwest ISO Tariff but explained that Under the TEMT, the Lakefield Wind Park is classified as an energy resource only. This was determined by the Midwest ISO in the interconnection evaluation process for the Lakefield Wind Park. Mr. Haselden noted that this may change once the Lakefield Wind Park gains actual operating experience and if it is determined that it is economically desirable for IPL to take the steps necessary to classify this project as a Designated Network Resource.

Mr. Haselden concluded that the Wind PPA represents a prudent, valuable, and reasonably priced renewable energy resource for IPL.

At the hearing held in this Cause, the Presiding Officers asked questions concerning IPL's choice to purchase wind from a state other than Indiana. Mr. Haselden testified that IPL use five criteria when it evaluates Wind PPAs: 1. Price; 2. Location (i.e. is a wind development located in Midwest ISO's territory, thus making the transportation of the wind to IPL easier?); 3.

Stage of the Wind Develop (i.e. when will the wind development be online and ready for production?); 4. Wind Developer's Reputation; and 5. Wind Resource's Capacity Factor. He stated that as a result of its RFPs, IPL received a total of eighteen responses. Five responses were from Indiana wind farms and nine responses from non-Indiana wind farms. Four responses were from biomass producers; three of the four biomass responses were from Indiana.

Mr. Haselden explained that although bids from Indiana wind developments met IPL's RFP requirements, they were in various stages of development, the capacity factors were lower, and the bids were more expensive than those bids received from out-of-state developments. Specifically, Mr. Haselden testified that the Lakefield Wind Park's price was the lowest priced response. He stated that the Indiana wind farm prices were approximately 20% higher than the Lakefield price. Mr. Haselden explained that the price differential is primarily due to the differences in capacity factors of the resource. The Lakefield site has a significantly higher expected capacity factor, and therefore, should produce more energy, which results in a lower price per unit.

(c) Herman N. Schkabila.

Mr. Schkabila discussed how obtaining purchased power from the Lakefield Wind Park will meet IPL's resource planning needs and is a reasonable economic choice for helping to meet the resource needs of IPL's jurisdictional retail customers.

Mr. Schkabila explained IPL's need for the Wind PPA is driven by two factors. First, IPL will likely be required to supplement its portfolio of renewable resources to comply with future Renewable Energy Standards requirements. He stated that with the addition of the 201 MW Lakefield Wind Park to the existing nominal 100 MW Hoosier Wind Park, IPL's renewable energy generation will represent approximately 7% of its actual 2008 retail KWh sales. He noted that this is still well short of the 20% requirement contained in the current ACES legislation recently passed by the United States House of Representatives, and the 15% proposed in the current Bingaman Bill currently being debated in the United States Senate. Second, IPL desires to diversify its generation portfolio to address the inevitability of future GHG reduction requirements. Mr. Schkabila stated that as a utility that currently relies almost exclusively on coal-fired generation to meet its customer's energy requirements, it is in IPL's customers' best interests to add non-carbon emitting resources to IPL's generation portfolio. He stated that assuming that the wind generation from the Lakefield Wind Park displaces coal-fired generation, CO₂ emissions would be reduced by about 830,000 tons per year. He noted that when combined with the coal-fired generation displacement potential provided by the Hoosier Wind Park, the total CO₂ emission reduction is approximately 1,200,000 tons per year.

Mr. Schkabila stated that the Lakefield Wind Park meets these needs in a reasonable least cost manner. First, the RFP process was open to all renewable resources and was not limited to wind. He stated the evaluation process stressed lowest cost to customers. He stated that wind has clearly surfaced as the top resource alternative in this region for meeting RES while at the same time providing a non-carbon generating resource to address the need to reduce GHG emissions.

Mr. Schkabila stated that with the addition of the 201 MW Lakefield Wind Park, IPL will exceed the level of wind generation represented in its 2007 IRP Reference Case Expansion Plan by about 100 MW.

Mr. Schkabla testified that since the IRP was developed in 2007, the political landscape has shifted considerably in the direction of favoring non-carbon emitting generation resources. He stated State and Federal legislation incorporating specific Renewable Energy Standards targets and CO₂ reduction targets have proliferated and the high likelihood of needing to meet these targets in the not too distant future justified the increased commitment by IPL to renewable generation at this time. Mr. Schkabla stated the opportunity to lock in wind generation at a relatively attractive price will benefit IPL's customers and it is highly likely that when RES and CO₂ requirements become law, the increased demand for renewable generation will result in a significant increase in the cost of those resources.

Mr. Schkabla testified the Lakefield Wind Park costs are consistent with the Hoosier Wind Park costs when adjusted to reflect the higher capacity factor associated with the Lakefield Wind Park project. He stated IPL was also able to validate that the Wind PPA pricing is generally consistent with the overall \$/KW installed cost assumptions used by IPL for wind generation in its most recent IRP.

Mr. Schkabla stated that absent the Production Tax Credit, a CO₂ reduction requirement, or an RES requirement, wind generation would not be competitive with new fossil fired generation, however, IPL's analysis indicates that wind generation would breakeven with fossil fired generation at a CO₂ emission credit or a renewable credit of about \$25/MWh. He stated this CO₂ cost is in line with current estimates of likely future CO₂ allowance prices and also represents the "Alternate Compliance Payment" for falling short of the mandated RES requirements contained in the ACES legislation.

Mr. Schkabla testified that while additional Demand-Side Management ("DSM") or Energy Efficiency ("EE") programs may result in lowering the amount of renewable generation required for compliance with currently proposed RES requirements, it will not be of a sufficient magnitude to replace the need for the renewable energy associated with the 201 MW Lakefield Wind Park. He stated that if IPL's proposed DSM programs are approved by this Commission (pending in Cause No. 43623), IPL estimates that an approximate 1% reduction in annual kWh sales will result by the end of 2012. He stated the ACES legislation would permit up to 5% of the 20% RES to be met with increased energy efficiency, while the Senate proposal would permit 4% of the 15% RES to be met with increased energy efficiency. Mr. Schkabla stated that even assuming full utilization of the energy efficiency provisions, the net RES requirements of 15% and 11% in the two bills still exceed the 7% achieved by IPL by the addition of the proposed Lakefield Wind Park to the existing Hoosier Wind Park.

Mr. Schkabla testified it is reasonable to assume that IPL will consider additional DSM and EE programs going forward. He stated that in addition to the traditional DSM programs noted previously, IPL is aggressively pursuing the development of new initiatives, which include "smart grid" technologies, time-of-use pricing options, and customer-owned distributed renewable generation. He stated these programs, along with the Lakefield Wind Park and the Hoosier Wind Park renewable generation, will be key components in addressing our customers' future resource requirements.

(d) Dewayne Boyer.

Mr. Boyer stated that he is responsible for managing IPL's participation in the Midwest ISO energy market, including participation at the Midwest ISO Market Subcommittee and

oversight of IPL's strategy and execution for load bids and generation offers. He explained the proposed treatment of the Wind PPA as it relates to the Midwest ISO Market.

Mr. Boyer stated that the Lakefield Wind Park will be interconnected with Interstate at Interstate's Lakefield Junction Substation. IPL will take power from the Lakefield Wind Park at a metering point located at Interstate's Lakefield Junction Substation and pay Lakefield the agreed upon Wind PPA price. He stated that consistent with IPL's Hoosier Wind Park Proceeding, IPL will be the market participant for the Lakefield Wind Park for Midwest ISO financial settlement purposes and offer the wind generating units into the Midwest ISO energy markets. Thus, the wind park will be treated like other generating units owned by IPL and offered into the Midwest ISO energy markets. Mr. Boyer stated that at this time IPL plans to offer the wind generating units as must-run resources in the day-ahead market at the expected daily output of the plant. Also, under current market rules, the Midwest ISO will treat the wind generating units as intermittent resources, allowing them to receive dispatch instructions equal to their output in the previous State Estimator solutions, to be exempted from Uninstructed Deviation penalties and thus enabling IPL to avoid real-time Revenue Sufficiency Guarantee charges since the actual output of the wind resource can not be accurately estimated in the day-ahead market unlike other types of generating plants that have a more predictable output.

Mr. Boyer stated under the Wind PPA the Lakefield Wind Park will provide IPL with information concerning outages and derates to facilitate IPL's offers of this generation into the Engineering and Operating Reserves Market ("EOR Market") and to ensure accurate information exists in the Midwest ISO outage scheduler. He stated that the Midwest ISO real-time energy market will be used to true-up the day ahead offers with the actual production output of the wind generating units and that through a rate adjustment mechanism jurisdictional customers will be charged the contract price for all MWh of energy received from the Wind PPA in addition to any day ahead and/or real time Midwest ISO revenue credits or charges. He stated that all Locational Marginal Price ("LMP") revenues associated with sales of this power received from the Midwest ISO Day EOR Market will be credited to jurisdictional customers.

6. Summary of OUCC's Evidence. The OUCC presented the testimony of Ronald L. Keen, Greg A. Foster and Anthony A. Alvarez.

(a) Ronald Keen.

Mr. Keen discussed RPS and their current applicability in Indiana. He addressed legislative initiatives in general and House Bill 2454 specifically at the federal level, which could potentially mandate a federal RPS on Indiana utilities. Finally, Mr. Keen recommended reporting requirements the OUCC believes should be in place should the Commission approve the Wind PPA.

Mr. Keen stated that an RPS is a regulatory requirement that requires the use of energy produced from renewable energy sources, such as wind, solar, and biomass. He stated the same concept is also known by other common names such as RES.

Mr. Keen stated that generally speaking, an RPS/RES mechanism requires suppliers of energy to obtain and/or produce a specific fraction of the electricity they supply to customers from renewable energy sources. He stated Certified Renewable Energy Generators ("REG") earn a certificate for each unit of electricity they produce; they can sell these along with the

electricity to provides, investor-owned utilities, municipalities, and cooperatives. He stated these providers use the certificates to demonstrate compliance with regulatory obligations before governing and/or regulatory bodies. He stated that because the RPS is a market mandate, the concept relies almost entirely on the private market for implementation.

Mr. Keen stated that currently, twenty-six states have RPS, while four states have Alternative Energy Portfolio Standard and five states have a Renewable or Alternative Energy Goal. He stated these states have set standards specifying electric utilities generate a specific amount of electricity from renewable or alternative energy sources and most require a certain percentage of capacity or generation to come from those renewable or alternative energy sources by a given date. He stated that standards range from modest to ambitious and qualifying renewable energy sources vary from state to state. He noted that some states also include carve-outs—a requirement that a specific percentage of the portfolio be generated from a specific renewable energy source—or other incentives to encourage the development of particular resources.

Mr. Keen testified that thirteen states, including Indiana, have not yet adopted a renewable or alternative energy portfolio or standard at this time. However, as early as 2006, a bill was introduced into the Indiana legislative session to enact an RPS standard for the state. Although it did not pass, it was held over for committee study and re-introduced into the 2007 session as H.B. 1122. Although H.B. 1122 also did not pass, RPS legislation has been introduced into each subsequent legislative session, including the 116th session. Mr. Keen stated that he was not aware of any RPS initiatives for the upcoming 117th state legislative session.

Mr. Keen testified that while there are a number of proposed legislative actions in both the U.S. House of Representatives and Senate, House Bill 2454 (“H.B. 2454”), the ACES legislation, passed the House on June 26, 2009 and is now under consideration in the Senate. Mr. Keen stated the ACES legislation amends the Public Utility Regulatory Policies Act of 1978 to establish a combined efficiency and renewable electricity standard that requires utilities to supply an increasing percentage of their demand from a combination of energy efficiency savings and renewable energy (6% in 2012, 9.5% in 2014, 13% in 2016, 16.5% in 2018, and 20% in 2021-2039). In essence, ACES requires large utilities in each state to produce an increasing percentage of their electricity (detailed above) from renewable resources. Qualifying renewable resources include wind, solar, geothermal, biomass, marine and hydrokinetic energy, biogas and biofuel derived exclusively from eligible biomass, landfill gas, wastewater-treatment gas, coal mine methane, hydropower projects built after 1992, and some waste-to-energy projects.

Mr. Keen recommended that the Commission approve the Wind PPA and require IPL to submit specific reports to the Commission and the OUCC including:

(1) Quarterly updates on any remaining or new future Midwest ISO studies, which discuss or impact the Lakefield Wind Project, including but not limited to studies pertaining to any type of facility required for congestion relief, interconnection, etc. and any timetables that are associated with required upgrade or construction of facilities;

(2) Quarterly reports with each FAC listing the hourly congestion cost components of LMP for the Lakefield Wind Project; and

- (3) Annual reports showing the actual wind energy delivered on an hourly basis.
- (b) Greg A. Foster.

Mr. Foster provided the Commission with the OUCC's analysis of IPL's request for approval of the Wind PPA, specifically outlined the current status of wind generation in the United States, and supported the choice of wind power as a reasonable component of a diversified portfolio.

Mr. Foster testified that as of June 27, 2009, the total national power capacities for wind generation of existing projects was 31,109 MW, with another 5,567 MW under construction. He stated that more than half of the existing generation comes from four states: Texas, Iowa, California, and Minnesota (which is where Lakefield is located). He stated that good selection of a wind turbine site is critical to economic development of wind power. Mr. Foster stated that aside from the availability of wind itself, other factors include the availability of transmission lines, value of energy to be produced, cost of land acquisition, land use considerations, and environmental impact of construction and operations. He stated that wind power density ("WPD") is a calculation of the effective power of the wind at a particular location and that a map showing the distribution of wind power density is a first step in identifying possible locations for wind turbines. Mr. Foster stated that in the United States, the National Renewable Energy Laboratory classifies WPD into ascending classes with the larger the WPD at a location, the higher it is rated by class. He stated that wind power Classes 3 (300-400 W/m at 50 m altitude) to 7 (800-2000 W/m at 50 m altitude) are generally considered suitable for wind power development.

Mr. Foster stated that Minnesota ranks fourth in the United States with 1,805 MW of existing wind capacity with another 60 MW under construction and that Indiana ranks 16th in the United States with 531 MW of existing wind capacity with 604 MW under construction. He noted that although Minnesota has a significant level of Class 4 wind, Indiana possesses viable wind resources (Class 3) in limited pockets scattered across the northern half of the state.

Mr. Foster stated that IPL did consider Indiana wind projects. He noted that IPL issued a RFP seeking bids from all resources that would be able to provide IPL long-term electric capacity and energy supplies from developers of renewable energy projects. Mr. Foster stated that there are factors that must be considered when pursuing out-of-state wind. He stated that the emerging wind industry in Minnesota and the Upper Midwest could be inhibited by the cost of connecting to high-voltage transmission lines if a proposal by the organization that controls the Midwest's power grid is approved by FERC. He stated the Midwest ISO is an Independent System Operator and the Regional Transmission Organization ("RTO") that provides open-access transmission service and monitors the high voltage transmission system throughout the Midwest and Manitoba, Canada. Mr. Foster stated that recently the Midwest ISO proposed changing the way costs are shared for new transmission lines. He stated that it wants to put 90% of the cost on energy generators, including the wind farms springing up across the Dakotas and Southwestern Minnesota. He stated that previously, the cost has been split fifty-fifty between energy generators and transmission-line owners, typically utilities. He noted that although this particular wind PPA will not be affected by this proposal, the proposed change in how costs are shared for new transmission lines could impact the development of future wind projects and corresponding wind PPAs.

Mr. Foster stated that Indiana does not currently have a RPS, or otherwise require utilities to include renewable energy as part of a utility's generation portfolio, however, the risk of Indiana establishing RPS or carbon legislation requirements for Indiana utilities is very real. He stated that currently, twenty-nine states have established RPS requirements and Congress is reviewing and debating the ACES legislation.

Mr. Foster discussed IPL's pursuit of wind energy as a source of power. He stated that in finance, a portfolio is a reasonable mix or collection of investments held by institutions or a private individual. He stated that holding a portfolio is part of an investment and risk-limiting strategy called diversification. By owning several generating assets, certain types of risk can be reduced. Mr. Foster stated that portfolio management involves deciding what assets to include in the portfolio, given the goals of the portfolio owner and changing economic conditions. He stated that selection involves deciding what assets to purchase, how many to purchase, when to purchase them and what assets to divest.

Mr. Foster stated there are at least three prior cases in which the Commission has authorized other Indiana utilities to include wind power as a component of a utility's generation portfolio.³ Mr. Foster noted that IPL proposes to hold the RECs for future use in complying with RPS requirements, sell them, and use the proceeds as a credit to offset the cost of the Wind PPA, or in some other manner as the Commission may permit in the future. He testified the OUCC is supportive of any use of RECs that directly benefits the ratepayer.

Mr. Foster concluded that portfolio management, if used prudently, is a valuable tool to mitigate risk. He stated that after reviewing the above factors, IPL's petition for approval of the Wind PPA is a reasonable step toward diversification of its generation portfolio. Mr. Foster recommended the Commission approve the Wind PPA and allow IPL to recover reasonable costs through the appropriate cost recovery mechanism.

(c) Anthony A. Alvarez.

Mr. Alvarez described transmission system congestion and its effect on the transmission grid condition; LMP as a mechanism which signals the presence or absence of congestive grid conditions; explained that transmission system congestion vary by time and location cause differentials in LMP ("LMP Differential") and the effect of LMP Differential in the final energy price settlement; and described the significant issues addressed in the ABB Generator Interconnection and Alliant Energy Facility Study Reports which may alleviate potential system limiters for the Lakefield Wind Project to deliver power to the grid.

Mr. Alvarez briefly described transmission system congestion and its effects on the transmission grid condition. He stated that transmission system congestion occurs when there are impositions and restrictions in the efficient and reliable flow of electric energy in the grid. He stated the electrical, physical, and operational restrictions or impediments may be imposed by transmission constraints, such as, but not limited to, transmission line and equipment capacities. He stated that primarily, transmission system constraints limit the transfer of energy from generating sources to the load centers. Secondly, these constraints limit the scheduling and real-time transfer of electric energy. Finally, transmission system constraints creates unwanted

³ Duke Proceeding, Vectren Proceeding, I&M Proceeding.

constrained-in area (“load pocket”) and constrained-out area (“generation pocket”). He stated the manifestation of these congestive grid conditions is indicative of the impact of transmission system congestion.

Mr. Alvarez stated that a good example of where transmission system congestion might occur is when generators are dispatched to meet the load, and the transmission line capacity has reached maximum (or would reach a maximum given a contingency, “N-1”, security constrained dispatch), thereby limiting the ability to use the least expensive generation. He stated once this situation arises, the power from those generators cannot be sent out to the particular load pockets. At this point, load pocket and generation pocket are created with the resulting condition is known as transmission congestion.

Mr. Alvarez stated that to relieve congestion and reduce loadings on congested transmission lines, other generators, which are out of merit order, are called upon to operate and dispatched. This means that the least expensive generation, in the merit order, is constrained out. He stated that once dispatched, the more expensive generation will carry some of the load and/or relieve some of the load burden of the congested transmission lines. He stated this may free up, in this case, transmission line capacity for the previously constrained-out least expensive generation to service load. However, dispatch of the more expensive generators called upon to operate generally becomes the clearing price for energy.

Mr. Alvarez stated there are costs associated with transmission system congestion. He stated that when constraints prevent delivery of energy from less expensive sources, energy that is deliverable from more expensive sources must be used instead. Added to that are the costs associated with operational and transmission constraints. He stated a simple analogy of these costs is offered by PJM in its LMP-101 Online Training, and it states that it will cost more to travel during rush hour due to traffic (i.e. congestion) than during light traffic. Moreover, to alleviate congestion in the long-term, the costs associated are typically the costs of building new infrastructure such as transmission lines, substations, and other facilities.

Mr. Alvarez stated that the cost of congestion is reflected in the energy markets through shadow prices. Shadow prices can signal the presence or absence of congestive grid conditions. As an example, the shadow price of a constraint on a path (i.e. transmission line) or interface (i.e. facility) is a direct indicator of congestion on that path or interface. The shadow price of a constraint is a measure of incremental change in operating cost as a result of an incremental change in the constraint limit. Simply said, as transmission line capacity or transformer capacity gets used up (constrained) the cost to send energy through the constrained path (transmission line) or constrained interface (transformer) is higher. It is this cost that is captured and reflected in the energy market.

Mr. Alvarez stated that if the path or interface in focus is not congested, then the shadow price on that path or interface is zero. On the other hand, if congestion is present in the path or interface, then the shadow price on that path or interface will be of a certain value or magnitude. In general, the magnitude of the shadow price is indicative of the level of congestion. The higher the magnitude of the shadow price the higher the level of congestion. The shadow price of a transmission constraint on a path or interface is a direct indicator of congestion on that path or interface. Mr. Alvarez stated that the shadow price corresponding to a nodal balance constraint is a nodal shadow price. The nodal shadow price is indicative of the presence of congestion at

that particular reference node. In the energy markets, this nodal shadow pricing scheme is known as LMP. Most of the markets in the Eastern Interconnect, such as the Midwest ISO, PJM and ISO New England Inc., are based on LMP.

Mr. Alvarez explained that LMP is the pricing mechanism for the wholesale power in the energy market. LMP is the pricing method used to price energy purchases and sales in the energy markets. It is a method of calculating the marginal price for energy, including congestion and losses, at all points on the grid. LMP is the mechanism signaling congestive grid condition. LMP is used to price transmission congestion costs to move energy within an RTO's or an ISO's footprint, as well as a pricing method to price losses in the bulk power grid. He stated that in an unconstrained transmission system and network with no losses and congestion, all LMPs would be equal in a given RTO or ISO footprint. However, it is the congestion and loss factors that cause LMPs to differ by time and geographic location. As the congestion and loss factors of nodes vary and differ by time and location, so does the LMPs of the respective nodes. Inversely, in the absence of congestion, the magnitude and value of the LMP will only reflect the cost of energy.

Mr. Alvarez stated that generators are paid at their respective generator bus or source LMP. Loads pay for their energy use at their respective load bus or sink LMP. Bilateral Transactions pay differential in source and sink LMPs. In the Midwest ISO, LMP is calculated at the Elemental Pricing Nodes ("EPNode"). There are three types of EPNode: generation, load, and non-injection/non-withdrawal. LMPs however, are published at the Commercial Pricing Node ("CPNode"). CPNode may be comprised of a single or many EPNodes. There are four types of CPNode: resource (generation), load zone, hub, and interface. A generator's EPNode is also its CPNode. Financial settlements are conducted at the CPNode. Meanwhile, Transactions are contracts between parties for the transfer of energy and financial responsibility for energy from suppliers to consumers. In the Midwest ISO these transactions are known as Bilateral Transactions.

Mr. Alvarez stated that the OUCC is interested in analyzing the LMP data set of the relevant CPNodes to determine their characteristics in terms of congestion. The relevant CPNodes were identified by IPL in its RFP as its final three options: (1) GRE.LKFLGR6 ("GRE"), (2) NI ("NI") and (3) IPL4 ("IPL4") which are all generation type nodes, and (4) IPL.IPL, which is the sink node. GRE is the closest to Lakefield. Meanwhile, NI and IPL4 are located in Indiana and are geographically in closer proximity to the sink node IPL.IPL. The OUCC looked into the data set at a greater level of granularity to better contrast the characteristics of the different generation source nodes, and the identified sink node. The OUCC's interest is equally focused on all four CPNodes in the way they behave in terms of congestion by looking into the LMP Differential of each of the three generation nodes against the sink node.

Mr. Alvarez stated the source of the relevant LMP raw data used by OUCC in its analysis is the Midwest ISO website. The OUCC looked into the CPNodes' historical real time LMP data between 2007 and 2009. He explained that this is the same data set that IPL used in its analysis of its final three RFP options. However, the OUCC was able to include data up to September 2009, while IPL included up to the end of May 2009. The OUCC is in agreement with IPL in the use of the historical real-time LMP data set because they found that the real-time LMP data set provides them with an accurate picture of the characteristics and how the relevant CPNodes

behave in terms of congestions given real-world loading conditions. He stated that this position may seem in contrast with previous OUCC testimony contending the use of one year of historical LMP data may be inadequate. However, with a better understanding of real-time LMP, analysis of a three-year period of historical data, and the critical link between LMP and congestion, the OUCC is better able to see the picture LMP paints in terms of the behavior of a particular CPNode under real-time real-world loading conditions and congestion. Mr. Alvarez stated that the OUCC is in agreement with IPL in the use of historical real-time LMP data from the Midwest ISO.

Mr. Alvarez stated that in a PPA, such as the one in this Cause, the purchaser (in this case, IPL) contracts the seller (in this case, Lakefield) for a certain amount of energy at a contract price. Lakefield generates the energy and then credits that energy to IPL, which obligates IPL to pay for the energy generated, as stipulated in the Wind PPA. At this point, the energy generated by Lakefield is now owned by IPL through this transfer of ownership (energy generated by Lakefield and credited to the IPL). Once that energy is delivered to the grid at a pre-destined delivery point or generator bus, there is an LMP attached to that generator bus or source CPNode. IPL, which now has ownership of that delivered energy, becomes a market participant in the energy market and would be poised to receive payment based on the CPNode LMP from the corresponding ISO or RTO in whose footprint that generator bus or source is located.

Mr. Alvarez stated that once IPL withdraws that energy from its particular withdrawal point or load bus CPNode, there is also an LMP attached to that load bus or sink CPNode. IPL is now liable to make payment based on the CPNode LMP to the corresponding ISO or RTO in whose footprint that load bus or sink is located. In summary, IPL pays Lakefield the PPA contract price for the contracted energy generated by Lakefield. Ownership of the very same energy is then transferred to IPL and once delivered to the source bus, IPL is poised to receive payment from the ISO/RTO based on the LMP of the said source bus CPNode. Once IPL withdraws the same amount of energy from its particular sink, IPL makes payment to the ISO/RTO based on the LMP of that sink CPNode.

Mr. Alvarez stated that the actual energy cost to IPL is the sum of the PPA contract price plus the price differential between the LMPs of the source and sink CPNodes. If the LMP Differential is a positive value (the source LMP is greater than the sink LMP), IPL gets to subtract that value from the PPA contract price, resulting in a lower energy cost. However, if the LMP Differential is a negative value (the source LMP is less than the sink LMP), IPL gets to add that value to the PPA contract price, thereby increasing the energy cost. That is how the LMP Differential impacts the final cost of energy in a PPA.

Mr. Alvarez stated the OUCC took notice of the higher GRE LMP values against IPL. IPL LMP values during the 2007 time period that resulted in a positive LMP Differential, which, if duplicated in the future, would play favorably to IPL's favor, and ultimately to its customers. Mr. Alvarez explained that the main concern with a negative LMP Differential is that it has an adverse effect on the final energy price settlement. The magnitude or value of the negative LMP Differential may be substantial and this will add-on to the PPA contract price, which may potentially result in a higher pricing. A negative LMP Differential is a liability because it drives up the final cost of energy by the magnitude or value of the differential.

Mr. Alvarez stated that IPL's investment in the Lakefield PPA will not have a negative impact on the ratepayers. He stated that from the three years he analyzed, even at the most negative LMP Differential, this energy investment is still a good investment for the Indiana ratepayers in terms of not only environmental benefits and portfolio diversity but also economically.

Mr. Alvarez stated that under Section 3.9 (b) Curtailments of the Wind PPA, IPL will notify Lakefield of an "Economic Curtailment" when the LMP on its nodes "day-ahead energy market" is negative. A negative LMP is a price signal by the Midwest ISO to the generators in a particular node not to generate. It is basically saying that a generator has to pay the Midwest ISO in order to generate but that would not be an issue under this PPA. He stated that the OUCC is cognizant of the fact that IPL included in the provisions of the Wind PPA an economic curtailment clause thereby mitigating the cost effect of a negative GRE LMP. By mitigating the cost effect of a negative GRE LMP, IPL likewise lowered the magnitude of its effect on a negative LMP Differential.

Mr. Alvarez explained the ABB Generation Interconnection Study technical report, Project No. G 1641-37229-01 is a system impact study undertaken by ABB for Midwest ISO, the Interconnection Provider, with the intent to assess the impact of interconnecting 200 MW of wind based generation to the system. Meanwhile, the Alliant Energy Facility Study determines system reinforcements and the associated costs required to facilitate the interconnection of the wind project to the transmission system. The facility study report outlines the required facility and system reinforcements needed to physically and electrically interconnect the Lakefield Wind Project to the transmission system. The costs associated with the generator interconnection to the transmission system are borne by the Lakefield Wind Project.

Mr. Alvarez stated there were significant Network Impact issues raised by both the Interconnection and Facility Study Reports. There were new and pre-existing overloads associated with the interconnection of the wind project. The addition of new overloading and exacerbation of pre-existing overloaded facilities and transmission lines due to the interconnection of the wind project may add to the congestion and thereby limit the ability of the project to inject power to the grid. However, the study noted that these overloads are generally localized in the vicinity of the point of interconnection. Also, the study calls for a review of operating procedures to look into resolving new overloads that may result from simultaneous outages of any two transmission system branches within the vicinity of the wind project ("N-2" contingency analysis). Furthermore, the study looked into and evaluated the impact of the transfer capability between specific sources and sinks.

The study found that the wind farm may incrementally impact the transfer capability of the North Dakota Exchange ("NDEX") interface, which is a critical interface in the transfer of less expensive power from the North Dakota coal fields, by exceeding the minimum allowable transfer capability threshold of that interface. The transfer capability threshold of a facility is set by its power transfer distribution factor ("PTDF"), which is an expression of the percentage of a power transfer that flows on a transmission facility. As stated earlier, an interface is considered significantly impacted should its PTDF be greater or equal to its minimum PTDF threshold. By exceeding the minimum PTDF threshold of this critical NDEX interface, it may impose limitations on the transfer of less expensive power from North Dakota to the demand centers in Mid-America Interconnected Network and the Twin Cities (Minneapolis and St. Paul). Lastly,

the study also pointed out the need to put in place the necessary transmission facility upgrade by XCEL Energy.

Mr. Alvarez stated that IPL informed the OUCC that the Midwest ISO has already considered the issues raised by the generation interconnection study and the facility upgrades identified by the generation facility study that are necessary to interconnect the Lakefield Wind Project to the grid. Also, XCEL Energy has completed all the work under its Wind Transmission Infrastructure Improvement Plan (425 MW and 825 MW Outlet Plan) which includes the Lakefield Substation and connecting high-voltage lines necessary to deliver energy to designated load centers. He stated that there were potential congestion issues that were raised by the studies. The new overloads, the exacerbation of pre-existing overloads, and the incremental impact on the transfer capability of one of the critical interfaces are all indicative of potential congestion issues raised in the studies. However, all these issues can be mitigated with the Midwest ISO ensuring that all the necessary system reinforcements, upgrades and operating procedures are in place, as prescribed by the studies, prior to physically and electrically interconnecting the Lakefield Wind Project to the grid.

Mr. Alvarez concluded that based on its analysis, the OUCC supports and recommends that the Commission approve the Wind PPA.

7. **IPL Rebuttal.** To address the reporting requirements recommended by OUCC witness Keen, IPL filed the rebuttal testimony of Mr. Haselden. In his rebuttal testimony, with regard to the first reporting recommendation, IPL agreed to submit quarterly reports of information that IPL receives or becomes aware. IPL proposes to make these reports in the form of a letter referencing this Cause. With regard to the second reporting recommendation, IPL agrees to include the hourly congestion cost components of LMP for the Lakefield Wind Project in the audit packet provided to the OUCC in each quarterly FAC filing. With respect to the third reporting recommendation, IPL agreed and was ordered to provide an annual reporting of wind energy delivered on an hourly basis for a period of three years relative to its first wind PPA for the output from the Hoosier Wind Park in Cause No. 43485. IPL recommended that reporting of this information again be limited to three years in this Cause. IPL proposed to make these reports in letter form referencing this Cause.

8. **Commission Discussion and Findings.** IPL requested to recover the purchased power costs incurred under the Wind PPA over its full twenty-year term and the prudence of the Wind PPA and associated costs would not be subject to any future review. Petitioner stated that the cost recovery of the Wind PPA should be administered through its FAC proceedings (or successor mechanism) and not be subject to the Section 42(d)(1) test or any FAC benchmarks. This relief is consistent with Section 42(a) and Ind. Code § 8-1-8.8-11. A review of Ind. Code § 8-1-8.8 *et seq.* demonstrates, and we find, that the Lakefield Wind Park satisfies the statutory definition of “energy project” defined in Ind. Code § 8-1-8.8-2 in that the Project will develop alternative energy sources, including renewable energy. We further find that the Project also qualifies as a “renewable energy resource” as defined by Ind. Code § 8-1-8.8-10. Ind. Code § 8-1-8.8-11 provides that renewable energy projects, such as IPL’s Wind PPA with Lakefield, are eligible for incentives, including timely recovery of costs and financial incentives, if such projects are found to be reasonable and necessary.

There is substantial evidence in the record of this proceeding supporting a finding that the relief requested herein should be approved. The evidence indicates the Wind PPA produces real benefits for IPL and its customers and further diversifies IPL's generation portfolio. Notwithstanding the evidence herein, the Commission is cognizant that the benefits of portfolio diversification are attained at a price premium. The balance of the price premium with the value of diversification is not static and becomes more difficult to attain as the contribution of the resource type increases. The evidence in this proceeding suggests that approval of the wind resources will meet 7% of IPL's energy needs. The necessary wind contribution is defined when a given amount is required by statute, but notably no such mandate presently exists. We must therefore refine the level of contribution in which we have sufficient confidence in the reasonable and necessary balance of price and diversity. The Commission acknowledges this need and accordingly directs its technical staff to set a course, outside this immediate proceeding, to establish a process that the Commission may utilize to comprehensively review future requests to purchase renewable energy and to determine whether an appropriate balance is being achieved.

The record establishes that the Wind PPA is the result of a thorough RFP process and quantitative and qualitative evaluation of the RFP responses. The record further demonstrates that the terms of the Wind PPA were reached after arms-length negotiations. IPL will only pay for the energy it receives at a fixed price per MWh with fixed annual adjustments. IPL will own all of the environmental credits, including RECs, from the Wind PPA. Lakefield retains the responsibility for construction, ownership, operation, and maintenance of the plant. While there is a slight cost premium for this wind power compared to IPL's average forecasted energy costs, this premium is reasonable compared to the market forecast for purchased power. Furthermore, this premium is reduced when the potential carbon constrained operational environment is taken into account. Overall, the record demonstrates that the slight current premium is offset by the environmental, economic, and other benefits created by this renewable energy project. Like the Hoosier Wind Park PPA previously approved, this Wind PPA represents a reasonable addition and diversification of IPL's capacity portfolio, which may serve to mitigate the volatility of prices from other energy sources, and this renewable energy opportunity will be available independent of fuel price volatility or increased environmental emissions, restraints, and costs. Substantial evidence of record demonstrates that IPL's cost per MW of energy under the Wind PPA is within the bounds of reasonableness and we so find. We further find that the terms of the Wind PPA are reasonable.

The Commission notes that its preference is for Indiana utilities to purchase renewable energy from Indiana renewable energy developments. The evidence indicates that as a result of IPL's thorough RFP process, several Indiana wind farms and biomass producers submitted bids, which IPL considered and compared to the out-of-state bids received. As explained by Mr. Haselden, the bids from Indiana wind developers were approximately 20% higher because of the lower expected capacity factors from wind turbines located in Indiana. The Commission encourages IPL to first pursue and consider purchases of renewable energy from Indiana producers in the future.

The incentive treatment requested by IPL may present the opportunity for additional off-system sales profits. Accordingly, the Commission conditions its approval of the requested treatment on IPL implementing a mechanism that credits IPL's jurisdictional fuel costs for the

off-system sales profits made possible because of the energy received from the Wind PPA. We view this condition consistent with that ordered in Cause No. 43393.

Accordingly, based on the evidence, the Commission finds that the recovery of all of the purchased power costs related to the purchase over the full twenty-year term of the Wind PPA should be approved as requested herein. We further find that IPL should be authorized to recover via a rate adjustment mechanism the costs of the Wind PPA on an accrual basis in accordance with Section 42(a) and Ind. Code § 8-1-8.8-11 contemporaneously with the processing of IPL's FAC proceedings (or successor mechanism). Although IPL is proposing to have the cost recovery administered through its FAC proceedings, we clarify that this cost recovery is not be subject to the Section 42(d)(1) test or any FAC benchmarks.

In addition, the Commission finds that as a condition of this Order, IPL shall submit to the Commission a Compliance Filing every five years from the date of this Order for the full term of the twenty-year Wind PPA. The Compliance Filing shall include the following: 1. the wind capacity factors achieved, 2. the cost of the wind per MWh compared to the cost of other fuel purchased by IPL as of the date of each Compliance Filing, and 3. any other information the Commission may require.

9. Confidential Information. On August 14, 2009, the Presiding Officers made a preliminary finding that certain designated information marked "Confidential and Protected Material" as requested in Petitioner's Motion for Protection and Nondisclosure of Confidential and Proprietary Information should be treated as confidential in accordance with Ind. Code § 5-14-3-4 and that confidential procedures should be followed with respect to this Confidential Information. Upon review of the Confidential Information submitted pursuant to the Presiding Officers' preliminary determination, the Commission confirms its prior preliminary finding and concludes that the information for which Petitioner sought confidential treatment contains confidential, proprietary, competitively sensitive trade secret information that has economic value to Petitioner and to Lakefield from neither being known to, nor ascertainable by, its competitors and other persons who could obtain economic value from the knowledge and the use of such information; that the public disclosure of such information would have a substantial detrimental affect on Petitioner and Lakefield; and that the information is subject to efforts of Petitioner that are reasonable under the circumstances to maintain its secrecy. Accordingly, the Confidential Information submitted to the Commission, including that contained in Petitioner's Exhibit JEH-2 (Protected) is exempt from the public access requirements of Ind. Code §§ 5-14-3-3, 8-1-2-29, and 24-2-3-1 and shall continue to be held as confidential by the Commission.

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

1. IPL's request for approval of a Renewable Wind Energy Project Power Purchase Agreement with Lakefield Wind Project, LLC shall be and hereby is approved.
2. IPL shall be and hereby is granted the accounting authority requested herein.
3. IPL's Wind PPA with Lakefield Wind Project, LLC, or its assigns or successors, shall be and is hereby authorized as a Renewable Energy Project.

4. IPL is hereby authorized to recover the costs incurred under the Wind PPA over its full twenty-year term pursuant to Ind. Code §§ 8-1-2-42(a) and 8-1-8.8, to be administered within its FAC proceedings (or successor mechanism). This recovery shall not be subject to any FAC benchmark review or tests.

5. For a period of five (5) years from the date of commercial operation of the Lakefield Wind Park, IPL shall submit the reports requested by the OUCC as described in Paragraph 7 above.

6. If IPL chooses to monetize RECs associated with the wind purchase, IPL shall use the revenues to first offset the cost of the Wind PPA and next to credit the jurisdictional ratepayers through the FAC proceedings.

7. IPL shall file with the Commission under this Cause a Compliance Filing five (5), ten (10), fifteen (15), and twenty (20) years from the date of this Order and in accordance with Finding Paragraph 8.

8. IPL's request for confidential trade secret treatment is hereby granted, and such Confidential Information shall be excepted from public disclosure.

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

HARDY, ATTERHOLT, GOLC, LANDIS AND ZIEGNER CONCUR:

APPROVED: JAN 27 2010

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



**Brenda A. Howe
Secretary to the Commission**