STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

IN THE MATTER OF THE COMPLAINT OF MORTON SOLAR AND WIND, LLC	)	
RESPONDENT: SOUTHERN INDIANA GAS AND ELECTRIC CO. D/B/A VECTREN ENERGY DELIVERY OF INDIANA	)	**CAUSE NO. 44344**

INTEVENOR SUBMISSION OF DIRECT TESTIMONY

of:

JOSEPH JANCAUSKAS

On Behalf of:

Inovateus Solar LLC

January 21, 2014.

DIRECT TESTIMONY OF JOSEPH JANCAUSKAS
FOR THE INTERVENOR INOVATEUS SOLAR LLC

Q: PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A: Joseph Jancauskas, 19980 State Line Road, South Bend, In 46637.

Q: BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A: I am the Vice President of Operations for Inovateus Solar LLC

Q: WOULD YOU SUMMARIZE YOUR BACKGROUND AND EXPERIENCE?

A: I have over twenty eight years of an electric power engineer working with power plants (including coal, nuclear, natural gas, hydro, solar and diesel) as well as experience working with transmission and distribution facilities.

Q: ARE YOU A REGISTERED PROFESSIONAL ENGINEER?

A: Yes, I have been a Registered Professional Engineer in the State of Maryland since 1989, and am registered in eleven other states, including Indiana and Michigan.

Q: HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE INDIANA UTILITY REGULATORY COMMISSION?

A: Yes. I have testified in the Indiana Michigan Rate Case proceeding in Cause No. 44075. Additionally, I have followed an tracked several regulatory matters in many states in which Inovateus Solar has an interest as well as my prior experience in the state of Ohio while an employee of a public utility, addressing topics such as cost recovery of ancillary generation services and

bypassable vs. non-bypassable recovery of renewable generation investments.

Q: HAVE YOU TESTIFIED BEFORE ANY OTHER GOVERNMENTAL BODY, COMMISSION, OR COMMITTEE?

A: Yes, in addition to testifying before the IURC in Cause No. 44075, I presented to the Federal Energy Regulatory Commission in a closed door session on Cyber Security Compliance when my former employer utility was chosen to be representative of a "mid-size" utility. I have also been an expert technical witness in a legal dispute between a large Investor-Owned Utility and an Independent Power Producer.

INTRODUCTION

Q: WHAT DID YOU DO TO PREPARE FOR THIS TESTIMONY?

A: I have reviewed the various filings made in the present docket by both Morton Solar and Wind, LLC ("Morton Solar") and the Respondent Vectren, my attached supporting exhibits, certain data request responses, docket entries of the Indiana Utility Regulatory Commission ("IURC") and the materials associated with the Morton Solar's Consumer Affairs Division complaint. I also reviewed the IURC's Rules on interconnection in 170 IAC 4-4.3, Vectren's net-metering tariffs, as well as the recent Federal Energy Regulatory Commission's ("FERC") Notice of Proposed Rulemaking Order revising the pro forma Small Generator

Interconnection Procedures as additional background information. I also participated in several internal team meetings and discussions involving the development of Inovateus Solar's positions.

Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A: The purpose of my testimony is to:

1. Respond to some of the issues raised by Morton Solar in its case about the negative impacts of Vectren's handling of customer interconnections of renewable energy resources that Vectren claim are based on the Commission rules and regulations;
2. Discuss the critical need for a better and more streamlined interconnection processes to allow and encourage the diversification of generation through the support of customer installed and owned solar generation in Indiana and discuss some of the advantages of renewable energy generation given the environmental compliance and transition issues facing Vectren and other Indiana utilities,
3. Discuss other relevant industry issues and how the interconnection of viable, distributed renewable solar photovoltaic (PV) power can assist and address some of these industry developments; and
4. Discuss the greater benefits and transition stability provided by customer owned and interconnected PV solar generation.

I.

RENEWABLE ENERGY INTERCONNECTION PROBLEMS AND ISSUES

Q: MORTON SOLAR HAS PRESENTED COMPELLING TESTIMONY REVIEWING AND DISCUSSING SEVERAL PROBLEMS AND SHORTCOMINGS WITH THE ACTUAL APPLICATION OF THE COMMISSION'S INTERCONNECTION RULES. IS THIS SIMILAR TO YOUR EXPERIENCES?

A: Yes, gaining interconnection and access to the electric distribution system by small-scale distributed resources has been and continues to be a challenge. However, it is clear that the public benefits these resources, once interconnected can provide include increasing resource diversification, peak shaving, furthering innovation, easing transmission and distribution constraints, and expanding customer choice. Solar PV generating facilities reduce air emissions and achieve high efficiencies during peak periods when they are most needed. Moreover, renewable energy production has steadily improved in cost-effectiveness and performance and promises continued improvement. Renewable energy brings fuel diversity benefits and mitigates dependence on one type of fuel and further diversifies Indiana's mix of energy supplies, reduces dependence on imported fuels, and decreases environmental impacts. Indiana, through its participation in NARUC, recently submitted comments that supported the further development of the federal small generator interconnection procedures. In those supporting comments[1] NARUC stated that it, "…continues to agree that barriers to the effective use of

small-scale, distributed generating units should be minimized to the greatest extent possible to avoid increased costs for customers, marketers and developers, as well as to reduce administrative burdens on regulators and utilities." NARUC has also supported for many years the concerns and issues regarding the appropriate metering and interconnection requirements for net energy metering facilities, as well as addressing State and federal barriers to the implementation for small-scale, customer owned generation facilities. Indiana has both pursued and actively followed these paths as well through its own statutes, rules and regulations.

Q: DO YOU HAVE ANY CONCERNS WITH THE CURRENT INDIANA RULES AND REGULATIONS REGARDING INTERCONNECTION OF THESE SMALL, DISTRIBUTED CUSTOMER OWNED GENERATIONG FACILITIES?

A: Yes, my biggest concern is the fact that the IURC's interconnection rules were developed in 2005 and adopted in 2006. While at that time these interconnection rules were adequate and consistent with the general industry thinking at that time, eight years have passed and there have been many significant developments and changes over that period of time, many other states as well as FERC, as noted above, have forged ahead and revisited their interconnection procedures, some multiple times.

[1] Comments of the National Association of Regulatory Commissioners ("NARUC") filed in FERC Docket No. RM13-2-000, *Small Generator Interconnection Agreement and Procedures*, (June 3, 2013).

Q: WHAT DO YOU BELIEVE HAS CAUSED THE NEED TO REVIEW AND RE-EVALUATE THE SMALL GENERATOR INTERCONNECTION PROCESSES?

A: Although renewable energy generation resources like wind and solar were around in the 2005-06 timeframe, the technological advancements and corresponding installed cost declines over that eight year period has driven the demand and need for corresponding system interconnection up significantly. There is no arguing the fact that legislative and customer demanded support for alternative, renewable energy resources has played a major factor in this increase, but regardless, it likewise has caused a corresponding increase in the need for reviews of and demand upon the interconnection process. This Commission's own net metering rules that came about five years after the interconnection rules were adopted also have played a part. Finally, there is significant pressure on states from the federal level as FERC has weighed in once again to further explore, expand, encourage and press the small-generator interconnection process through its very recent December 3, 2013 Order in Cause No. RM13-2-000.

Q: WHAT SPECIFIC CONCERNS DO YOU HAVE REGARDING THE IURC INTERCONECTION RULES AND THEIR APPLICATION HERE IN INDIANA?

A: The experiences of the specifically identified 29 Morton Solar customers at the heart of this Complaint proceeding are not unique. Inovateus Solar has pursued and attempted to sell and install facilities for many interested

Indiana customers and have run into challenges from the incumbent investor owned utility.

Q: PLEASE EXPLAIN.

A: Although I cannot delve into specific customer situations due to competitive and proprietary concerns, the problem is a practical function of a competing interest concern on the part of the incumbent investor owned utility. On the one hand, there is a new mandate to provide for and encourage new and diversified, customer generation resources through net-metering. It is the law and Vectren, like all Indiana electric IOUs, has on its books a net-metering tariff. The problem, on the other hand, is that net metering customer scenarios result primarily in reduced kWh sales for the utility and thus reduced revenues. This was the same dilemma we faced twenty five years ago when demand side management programs came about. The utilities are thus facing a negative incentive in the form of lost revenues. The major shortcoming is in the somewhat antiquated interconnection procedures that allow Vectren (and potentially all Indiana IOUs) to game and indefinitely delay the interconnection process.

Q: DO YOU BELIEVE THAT VECTREN IS GAMING THE INTERCONNECTION PROCESS?

A: I do not know and cannot say that with certainty. However, the brief review of the actual experiences of and complaints by the 29 Morton Solar

customers involved in this docket seem to suggest that the process is certainly not as streamlined as should be the case – especially considering the interconnection rules have been in effect for eight years. Regardless, I want to point out what I believe to be the weaknesses that may allow and give rise to the problems we are seeing with the interconnection processes. First, it is always unwise to place the proverbial "fox in charge of the henhouse" as is the case under the present IURC interconnection rules. By this I mean that there is no accountability on the part of the utility for delayed, mishandled, or failed interconnection applications. There is, on the other hand, a clear disincentive and concern by utility employees for the loss of customer load and revenues as was illustrated through the example of Morton Solar customer noted in Petitioners Prefiled Exhibit BM-1. I am also very troubled by Vectren's seeming recognition of but disregard for[2] the strict timing obligations under the IURC rules to provide signed interconnection agreements.

Q: DO YOU HAVE ADDITIONAL CONCERNS WITH THE PRESENT FORM OF THE IURC INTERCONNECTION RULES?

A: Yes. While not an exhaustive list I do have three additional structural problems and observations about the interconnection rules under 170 IAC 4-4.3, et seq. First, under 170 IAC 4-4.3-11(b), each IOU is required to file an annual report with the Commission providing very limited details

[2] See Prefiled Testimony of Brad Morton, Page 12, Lines 21 – 26 (Petitioner's Exh. BM).

about customer-generator facilities. Whether the information provided in these annual reports is sufficient for the Commission to discharge its stated obligation to allow it to "…monitor the effectiveness of this rule…" is beyond my knowledge, but it appears Vectren's annual reports failed to alert the Commission to the Morton Solar problems that have apparently stretched on for several years now. This self-policing type arrangement, especially in light of the above described negative incentive, provides too inviting an opportunity for manipulation.

My next concern with these 2006 vintage rules relates to the lack of adequate and timely customer remedies. If, as was the case with Mr. Morton and his 29 Vectren customer clients, the utility just fails to respond, then the only options available to a customer is: (1) continue to spend valuable time calling, e-mailing and cajoling the IOU; (2) resubmit the interconnection request and application, and wait; or (3) file a potentially costly and time consuming Consumer Affairs Division complaint (170 IAC 4-4.3-12), which, as was the case herein, resulted in the matter being referred and transferred into a formal and even more costly docketed proceeding. All three of these customer remedy options fly in the face of the notion that this process should encourage the interconnection and facilitate development of new diversified, generation resources.

My final concern relates to the seemingly fluid nature of the required interconnection "process" by the utility – a process that is mandated under 170 IAC4-4.3-6(a), 7(a), and 8(a). Yet in application, it seems that in the instant case Vectren unilaterally decided that – at some point in dealing with Morton Solar it was time to just change or modify its "process" mid-stream, admitting as much in its September 11, 2013 letter to Morton Solar's counsel, which was prefilled as Petitioner's Exhibit BM-24. The current rules do not appear to nor does Vectren's own action suggest the required "process" must first be reviewed and approved by the Commission, and thus the rules apparently allow each IOU the ability to change the "process" as Vectren appears to have done, at any time.

Q: ARE THESE ALL OF YOUR CONCERNS RELATED TO THE INTERCONNECTION RULES?

A: No, absolutely not. I just raised these few examples as ones that may have given rise to and resulted in some of the actual bad experiences of the customers in this docket. My primary intention was to illustrate that the 2006 Interconnection Rules should and need to be revisited, revised, and updated to accommodate current needs, issues, and concerns that have arisen, evolved and developed on all sides of this issue – for the Commission, for the utility, and for customers, alike. I also note that this is not unique to Indiana. Mr. Morton raised in his prefiled testimony[3] the efforts by the Interstate Renewable Energy Council ("IREC") to address

[3] See Prefiled Testimony of Brad Morton, Page 20, (Petitioner's Exh. BM).

certain cost and procedural issues. These types of interconnection issues have become so prevalent across the country with some many of the state regulatory commissions that IREC has commissioned the drafting of and adopted a set of Model Interconnection Rules in 2013 of best practices which provide a great starting place to review and compare useful and workable practices from across many state regulatory commissions all aimed improving the interconnection process. IREC states in its prefatory statements to that report:

> State interconnection procedures are a critical component of a state's policy toolkit. They specify the technical requirements, timeframe, fees and process for connecting renewable energy systems to the utility grid. As a result, restrictive, costly procedures can significantly impede a state's renewable energy growth by discouraging otherwise feasible projects.
>
> As costs of renewable energy come down and more systems seek to connect to the grid, interconnection procedures developed over the last decade are increasingly under strain. They simply weren't developed to handle the number of applications now received by grid operators. Nor were they designed to address the technical issues posed by the technologies currently in demand.

While I cannot say that I have read and agree with each and every sentence and paragraph of the IREC Model Interconnection Rules, I believe it is the most recent and comprehensive review and report on this vital state renewable energy interconnection topic.

Q: WHAT BROADER INDUSTRY ISSUES ARE AT PLAY THAT BEAR UPON THE SMALL, RENEWABLE ENERGY GENERATOR INTERCONNECTION ISSUES?

A: My extensive experience in the design, operation and maintenance of both fossil fuel and nuclear generating facilities permits me to recognize that compliance with the latest environmental compliance and air regulations will become an increasingly difficult and high cost endeavor. While extending the life of current fossil fuel generating assets has historically focused on the proper maintenance which usually provided a least-cost path, now what we are seeing is the additional need to retrofit plants with sophisticated and very expensive environmental compliance control equipment. The era of fossil fuel generation is in decline and future regulations may have an even higher price tag than the very pricey current requests. In addition, with the currently constrained utility capital budgets resulting from very tight price margins across the US, it is unlikely that maintaining the aging infrastructure of the US coal fleet is viable or practical. I do appreciate and understand the challenges that Midwestern coal-dependant utilities and their engineering staffs face in trying to identify cost effective resources to meet their energy demands. I also know that there can be an internal short-term thinking bias that favors existing generation facilities, rather than taking a longer term objective look to determine what is in the best interest of the consumers and the company. What I submit should not be overlooked is the obvious scenario we have presented in this case – namely *customer paid for and provided* renewable generation resources. This particular type of

individual customer funded generation also provides the added advantage of it being *distributed* generation, adding further benefit and value to Vectren's (or any utility's) system.

Q: WE HAVE HEARD ALL ABOUT THE AGGRESSIVE ENVIRONMENTAL COMPLIANCE COSTS THAT ELECTRIC UTILITIES ARE FACING. DO THOSE SAME RULES, REQUIREMENTS AND OBLIGATIONS APPLY TO SOLAR PV GENERATION?

A: No. Out of the entire portfolio of generation fuel sources that are available, solar PV power is the only resource that has essentially no future cost volatility associated with it. Like coal, natural gas is subject to the more stringent air quality rules; nuclear and even hydropower have increasing regulatory burdens too. Unless Congress decides to tax sunlight, for solar PV, once you build it, the future costs are known.

Q: WHAT ARE THE OVERALL ADVANTAGES OF RENEWABLE ENERGY SOURCES LIKE SOLAR PHOTOVOLTAICS?

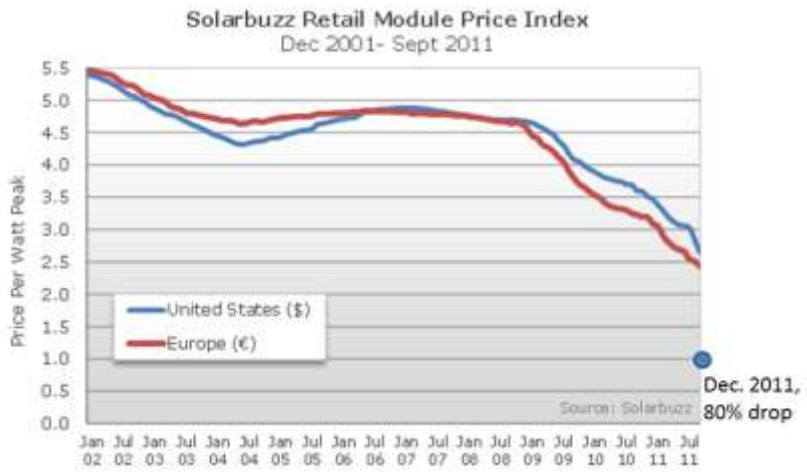
A: The advantages are primarily long-term sustainability with domestic resources that do not have the widely recognized negative environmental (and cost) impact of fossil fuels. Furthermore, they can be dispersed throughout a utility's distribution system – provided the interconnection process is sufficiently streamlined and other barriers are removed. This distributed generation aspect will only strengthen the overall system's integrity. Additionally, as noted above, solar PV capacity tends to peak at

the same time as a utility like Vectren would see its peak load: during a hot, sunny summer day.

Q: ARE RENEWABLE ENERGY COSTS REALLY HIGHER THAN MORE TRADITIONAL FOSSIL FUEL OR NUCLEAR GENERATION?

A: While advocates for each of all the respective generation industries will present a compelling case that their particular resource is the least cost, the true answer depends upon whether or not you factor in the full cost of externalities and what value that you place on those externalities. These days both the fossil fuel and nuclear advocates no longer question that renewable energy is now and should be "in the game" and part of any sensible, risk-mitigation generation portfolio because solar has the least externalities and minimal long term maintenance cost. The wholesale market players see this every day on the dispatch curves when wind and solar dispatch ahead of nuclear plants on an incremental cost of production basis. The coal advocates recognize that the technological advances in production costs result in ever-dropping costs of renewable energy, which are not burdened with the same escalating environmental costs. Accordingly, legitimate renewable generation like solar can no longer be summarily dismissed as "high cost" when the Commission is continuously subjected to requests for additional rate increases to address the spiraling environmental costs beginning to redefining what

truly is "high cost." The cost of solar has plummeted over the last 10 to 12 years:



Q: WHAT ARE SOME OF THE ADDITIONAL BENEFITS OF SOLAR PV?

A: From a cost perspective the largest long-term advantage that solar PV provides is a greater level of certainty in a time of significant uncertainty regarding environmental regulatory and rule changes. Solar PV also produces generation during the daytime when system electrical loads are highest, and the distributed nature of solar PV generation provides additional benefits of grid voltage/frequency support and deferred capital expenditures for transmission and distribution upgrades.

Q: ARE CONSUMERS ADOPTING AND EMBRACING RENEWABLE ENERGY TO MITIGATE EXPECTED HIGHER ENERGY COSTS?

A: Absolutely. We need look no further than the active customers involved in this case to see that. They represent a decent cross-section of the

individuals and small organizations that have now recognized not only the economic but the societal benefits of renewable energy. It is our hope that this same progressive thinking continues to grow in and thorough the regulatory integrated resource planning review process. It is also vitally important that the Commission's IRP review process examine more fully *all of the relevant costs* of production, including operation and maintenance – including the new and expanding environmental compliance costs. I am generally aware that this Commission is in the process of reviewing and possibly revamping its integrated resource planning review processes, which I thoroughly support, recommend, and commend. As stated above, the largest advantages that solar PV provide is a greater level of certainty in a time of significant uncertainty regarding environmental regulatory cost change. This Commission is well aware through the several recent IOU electrics cases filed that there are hundreds of millions to multiple billions of dollars involved with these added environmental compliance obligations. It is time to start investing in a sustainable future instead of putting it off until tomorrow. Long term electricity cost increases can be mitigated through encouraging resources like solar PV, both small distributed and large, utility scale generation that do not create emission, decommissioning, or waste product disposal issues like the older, large base-load fossil fuel facilities do.

Q: ARE YOU HERE TODAY PROPOSING THAT VECTREN AND OTHER INDIANA UTILITIES COMPLETELY REPLACE ALL OF ITS

GENERATING RESOURCES WITH RENEWABLE RESOURCES SUCH AS SOLAR PHOTOVOLATICS?

A: No, just like financial risk is mitigated by having a diversified portfolio of investment, a stable electricity future can be provided by having a fully diversified portfolio of generating resources. Renewable energy like solar PV has a larger, more important role to play in delivering that stable electricity future, but as an intermittent resource it cannot deliver the base portion of the generation mix. It is not practical to immediately shift to all, locally based renewable resources. However, having a balanced transition approach and longer range plan to broaden the focus away from a generation fleet that is so heavily dependent on fossil fuels that are subject to the expanding and increasing environmental scrutiny makes practical sense.

SOLAR VIABILITY IN INDIANA

Q: IS SOLAR PV GENERATION VIABLE HERE IN INDIANA?

A: Yes, the sun shines in Indiana. In other utility territories all that it has taken is relatively minor public support and/or incentives to spur the rapid growth in solar PV installations and drive down costs.

Q: WHAT ARE SOME OF THE LOCATIONS WHERE SOLAR PV CAN BE OF GREATEST BENEFIT?

A: As a distributed resource, solar can provide benefits at essentially any location. Whether close to population centers or in rural areas, the local generation that solar PV can provide also aids in voltage/frequency support and lower line losses. It is also the one renewable energy source that has the fewest siting difficulties.

Q: WHAT IS DISTRIBUTED GENERATION AND HOW IS THAT A POTENTIAL ADDITIONAL BENEFIT OF SOLAR PV FOR BOTH THE UTILTY AND ITS CUSTOMERS?

A: Throughout the 1960s and 1970s when electricity usage was doubling every ten years, the least cost solution to providing that electricity was ever larger centralized power plants. Nuclear veterans remember the unfortunate phrase of “too cheap to meter.” With a centralized system, when growth occurs in a new area, new power plants are built at existing locations and then the transmission and distribution system has to be enlarged from that source all the way out to where the new growth is occurring. If smaller, “distributed” generation is instead built as part of or where the growth is occurring, then much of the large capital costs involved with transmission and distribution system upgrades can reasonably be mitigated if not completely avoided. Distributed generation can also help stabilize voltage within acceptable levels in heavily loaded or rural areas.

Q: CAN ACCESSIBILITY AND AVAILABILITY OF INDIVIDUAL SOLAR PV SYSTEMS HELP TO MITIGATE SOME OF THE FUTURE RATE INCREASES SUGGESTED BY I&M THAT MAY RESULT FROM INCREASED ENVIRONMENTAL REGULATION?

A: Yes, any customer-owned solar PV generation could help to offset the need for Vectren and other electric IOUs to build new power plants or invest in costly retrofits to existing power plants. A quicker growth in renewables could also save customers money by allowing some of the older fossil fuel fleet to be retired quicker in advance of the timetable for implementing costly new environmental regulations. Even if the retirement of one fossil fuel unit was "year one capital cost neutral" to increased solar PV generation, the long term sustainable advantages of solar PV would clearly make it a preferred solution.

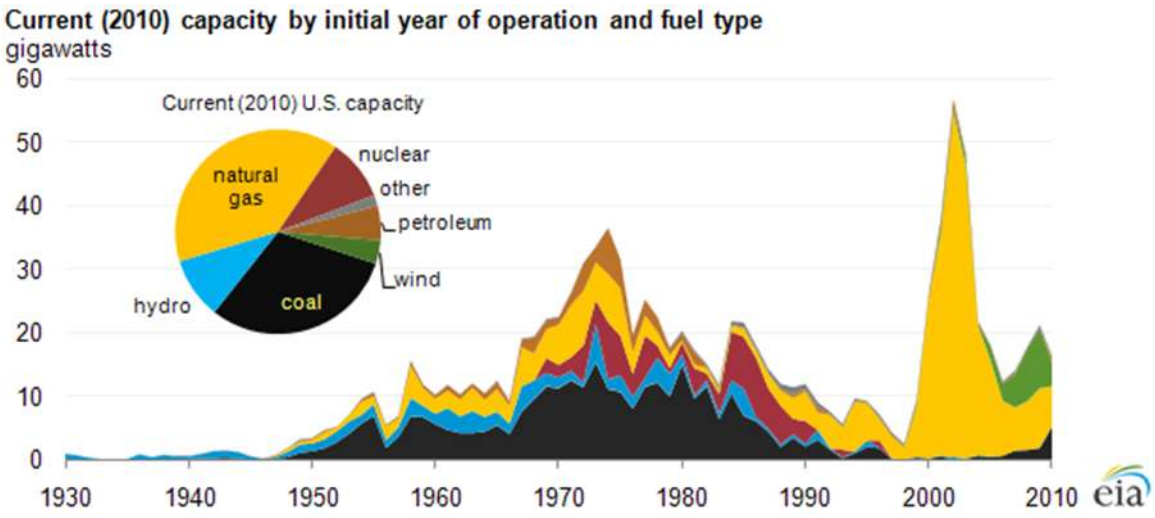
OTHER ELECTRIC INDUSTRY ISSUES

Q: WHAT ARE THE CURRENT PROJECTIONS BY INDUSTRY EXPERTS REGARDING THE CONTINUED VIABILITY OF SUSTAINABLE LOW COST FOSSIL FUEL GENERATION IN THE UNITED STATES?

A: As shown by the following charts and graphs from the U.S. Energy Information Administration ("EIA") in its 2014 Annual Energy Outlook early release overview report ("AEO2014"), gas will eventually eclipse coal so total dependence on traditional coal technology as the major generation source is likely at an end. Utilities and regulators need to best decide how to invest in the future, especially as EIA also recognizes and builds

into its future projections and analysis the reality of the impacts of additional environmental compliance costs and volatility of natural gas prices. The building of new coal generation is doubtful and thus cannot be relied upon to replace the aging 30+ year-old coal fleet. The long-term cost advantage that coal has enjoyed has now been eroded through the recognized environmental externalities now being addressed by regulations and is being replaced by natural gas units because of the new technologies in retrieving expanded gas reserves. However, even natural gas pricing is beginning to fluctuate, creating reason to pause and be careful not to recreate the current coal problem.

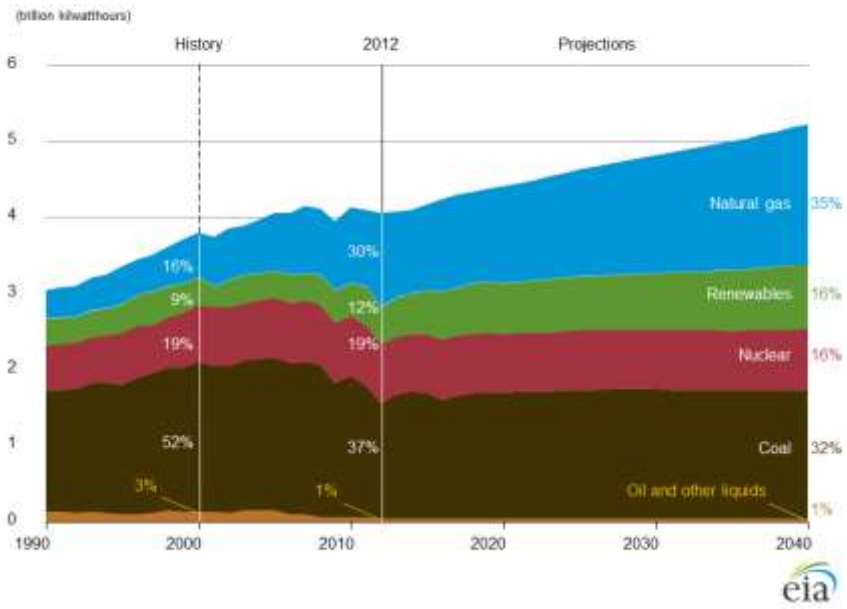
From EIA:



The EIA AEO 2014 projections indicate that there will be a further significant drop in future coal fired generation capacity due to application of EPA regulations. The Institute for Energy Research (IER) has predicted that actual

coal plant closure will be more than 34 GW. If the IER is correct, the coal share of electric power generation capacity will decrease even more than projected in AEO2014 and will need to be replaced by increased natural gas and renewables capacity. AEO2014 indicates that iincreased generation from renewable energy, excluding hydropower, accounts for 28% of the overall growth in electricity generation from 2012 to 2040 in its Reference case.

Figure 13. Electricity generation by fuel, 1990-2040



Q: WHAT ARE THE VIABLE TECHNOLOGIES TO ADDRESS THE GENERATION GAP THAT MAY COME ABOUT WITH SUCH A REDUCTION IN VIABLE, COST EFFECTIVE GENERATION IF EXISITING COAL GENERATING UNITS ARE TAKEN OFF-LINE?

A: As happened in the 1990s, the lowest cost capital source of baseload generation with the shortest construction time is simple-cycle gas turbines. The current low price of natural gas will also make the

construction of high efficiency gas-fired combined cycle units attractive. However, like what we are seeing now, becoming too dependent on one type of generation is ill-advised, especially with a very versatile fossil fuel like natural gas. A more balanced generation portfolio including other sources of generation, like solar, is in order.

Q: ARE RENEWABLES THE SOLUTION TO HIGHER ENVIRONMENTAL COSTS?

A: Renewables are definitely part of the solution. Now that renewable energy is becoming cost competitive with traditional fossil-fueled electricity sources, they have become the sustainable, low-impact benchmarks against which all other generation sources are now compared. This sort of dialog is why automatically extending the life of coal-fired units is not the obvious least-cost solution that it was a decade ago when renewable energy had not yet declined to the cost competitive point it is at today.

Q: WHAT ARE YOUR CONCLUSIONS AND RECOMMENDATIONS REGARDING THE ISSUES AND INTERCONNECTION PROCESS PROBLEMS HIGHLIGHTED BY THIS CASE?

A: It is a universally accepted technological fact that small scale residential solar and wind renewable energy projects at low "penetration levels" do not have an adverse impact on the grid. Vectren's illogical and misplaced technical concerns over these types of facilities are reminiscent of 1999

when these were truly emerging technologies. The concern and delays exhibited by Vectren appear to be the result of either an incredible technical backwardness amongst its engineering staff, or a calculated policy to prevent renewable integration onto its system, or both.

CERTAINTY OF PROCESS - IN THE CUSTOMER'S AND PUBLIC INTEREST

Q: WILL SOLAR PV STILL BE VIABLE IN TWENTY YEARS?

A: Yes. Installations put in 20 years ago are still operating today. It is likely that the low impact sustainability advantages of solar PV will be valued even more highly in 20 years.

Q: IS THERE A CURRENT DEMAND FOR PRIVATE SOLAR PV INVESTMENT IN INDIANA?

A: Yes, as has been demonstrated in this docket as well as in many other utility service territories. With the current still depressed state of the economy people have been naturally waiting for renewable energy incentives to appear, and when they do they are quickly oversubscribed.

Q: YOU HAVE MADE A FEW SUGGESTIONS ABOUT THE CURRENT SHORTCOMINGS OF THE 2006 INTERCONNECTION RULES. ARE THERE OTHER PROPOSALS THAT SHOULD BE CONSIDERED GIVEN THE INDUSTRY ISSUES YOU HAVE DISCUSSED AND ISSUES THE INDUSTRY IS FACING GOING FORWARD?

A: Yes, I believe the issues presented in this docket are symptomatic of the problems encountered across the state and throughout the country. For a

viable net metering/interconnection process to work, a more comprehensive and systematic review needs to occur. Opportunities for significant Indiana focused economic development, generation resource evolution, and customer cost mitigation is at stake.

CONCLUSIONS AND RECOMMENDATIONS

Q: WHAT ARE YOUR CONCLUSIONS AND RECOMMENDATIONS ON THE ISSUES YOU HAVE DISCUSSED IN THIS TESTIMONY?

A: It is understandable that past practice has guided Vectren to continue a trend of being primarily in opposition to and reactionary toward lost sales and revenues rather than spending time analyzing and proactively addressing the evolutionary steps in the changing electric industry. With all of the recent, significant environmental regulatory changes and the high probability of more regulations in the near future, it is clear that now is the time to recognize and address the need to encourage, rather than discourage, planning for and investing locally in a more diversified electricity future. Home-grown solar PV projects have a key, sustainable role to play as a larger part of the Indiana electric generation mix. The undeniable environmental benefits and long-term (near-zero) price stability of solar are advantages that should not be overlooked and have increasing investment value starting today. Higher electricity rates to pay for patching up old coal plants without any consideration of how to start

building a new electricity future is not a sustainable or advisable situation. While many incumbent utilities may indeed be considering and planning for a more stable electricity future, it is not evident in the non-responsive, short-term parochial thinking as hinted at in this Complaint docket. They should be encouraged to not just to claim compliance with the Commission Rules but more proactively show and support the fact that they understand that Indiana wants and needs a more diversified and locally focused renewable and sustainable energy portfolio to remain competitive.

Q: DOES THIS COMPLETE YOUR TESTIMONY?

A: Yes, it does.