

Regulatory Flexibility Committee

Indiana's Future: Affordable, Cleaner Energy

September 6, 2012

Indiana's Future: Cleaner and Low Cost Energy

- Impact of Wind Development on Indiana
- Improvements to Voluntary Clean Energy Portfolio Standard
- Affordable Electricity through Improvements to Energy Procurement Process

Impact of Wind Development on Indiana

WIND DEVELOPMENT IN INDIANA

WIND PROJECTS

Currently online: 1,342 megawatts (MW)
Added YTD 2012: 2 MW
Under Construction: 201 MW
Wind projects in queue: 11,366 MW

GENERATION AND POTENTIAL

Percentage of Indiana power provided by wind in 2011: 2.7%
Equivalent number of homes Indiana wind farms now power: 325,000
State wind resource: 148,228 MW (at 80 meters)
Indiana's wind resource is ranked 15th in the US and according to resource assessment from the National Renewable Energy Lab, Indiana's wind resource could provide over 400 percent of the state's current electricity needs.

16 Indiana companies feed the wind supply chain



Blue counties have wind projects.
Green dots are online wind energy manufacturing facilities.
Yellow dots are announced wind energy manufacturing facilities.

SOURCE: American Wind Energy Association, Fact Sheet on Indiana

Wind and Transmission Result in . . .

Lower LMPs

Illinois found wind energy lowered LMPs in IL by \$1.30/MWh

If amount of wind in MISO was tripled, LMPs would drop approx. \$14/MWh

Lower Rates

Lower LMPs saved Illinois ratepayers approx. \$177 M in 2011

. . . which results in avg residential customer saving \$63 to \$147 per year

SOURCES: Illinois Power Agency, "Annual Report: The Costs and Benefits of Renewable Resource Procurement in Illinois" (2012); Synapse, "The Potential Effects of Wind Energy and Transmission in the MISO Region" (2012)

The Economic Benefits of Wind In Indiana

Rural Resources

Benton County

260,038 acres

Population
8,854

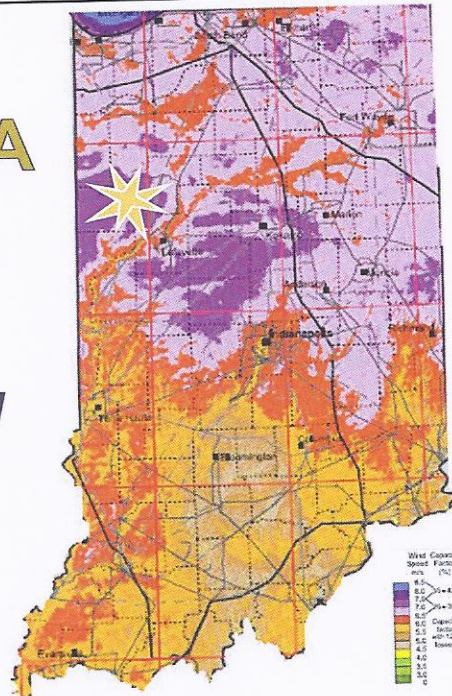
White County

323,351 acres

Population
24,643

INDIANA Wind

1,339 MW
Installed
Capacity

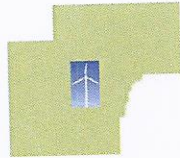


Indiana Wind Development



Benton County

495 Turbines/838 MW



White County

303 Turbines/501 MW

Land Use

	County Acres	Wind Farm	Acreage Claimed
BENTON County	260,038	63,500	280
WHITE County	323,351	68,264	259

Wind Investment

BENTON
County

WHITE
County

Capital

\$1.5
Billion

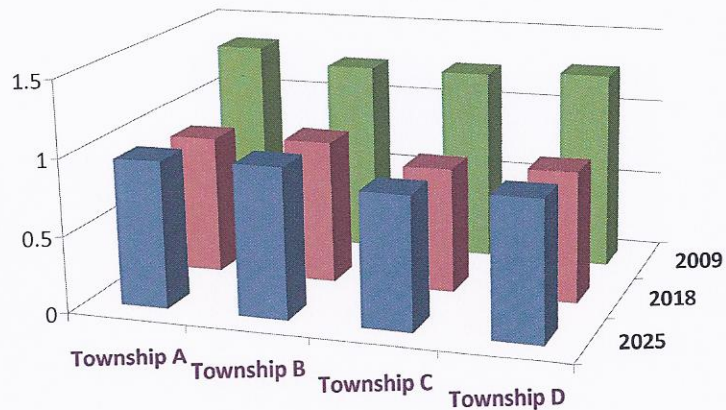
\$1.1
Billion

ED Payment

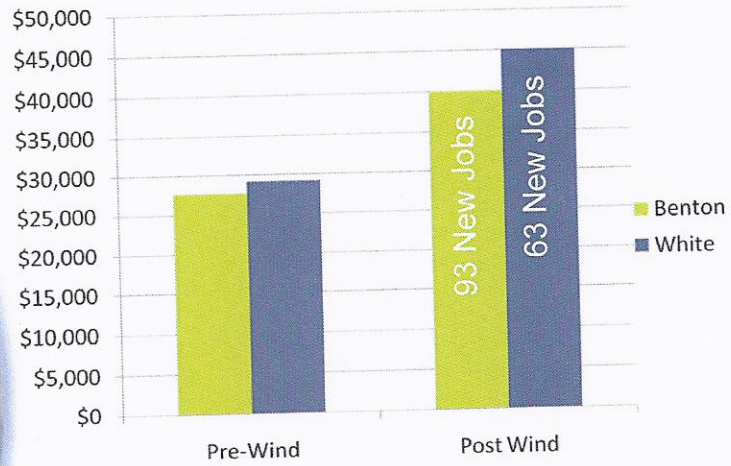
\$18
Million

\$10.7
Million

Property Tax Impact



Workforce Earnings



Thank You

Kelly Kepner

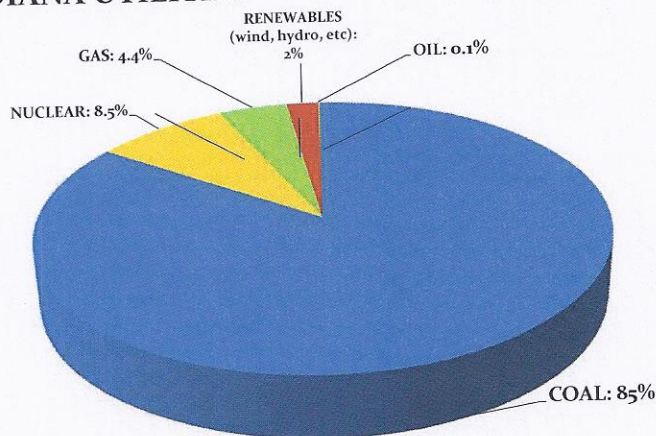
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Improvements to the Voluntary Clean Energy Portfolio Standard

ENERGY GENERATED FOR HOOSIER CUSTOMERS by INDIANA UTILITIES



SOURCE: 2011 IURC REPORT TO REG FLEX COMMITTEE

CHANGES to the VOLUNTARY CLEAN ENERGY PORTFOLIO STANDARD

*To increase the development of local and cleaner energy sources
the following changes should be made to VCEPS:*




- Only clean energy procured after the effective date of Clean Energy Portfolio Standard can qualify
- 70% of Clean Energy Portfolio to come from Renewable Resources

VCEPS – The Following Resources Should Receive Greater Emphasis to Foster Local, Cleaner Energy

- Wind
- Solar
- Photovoltaic cells & panels
- Crops for energy production
- Geothermal
- Organic waste biomass
- Waste Heat recovery -- used for heating or generating electrical or mechanical work

Alternative Energy Sources

whose use in VCEPS should be limited

- Existing hydropower  • Already part of utilities existing energy portfolio
 - Fuel Cells, energy storage  • Should be limited to storage of energy from a renewable resource
 - Solid waste conversion
 - Coal bed methane
 - Industrial byproducts
 - Demand Response and Energy Efficiency  • Only EE & DR that isn't already mandated by IURC should count toward goal
- Emissions from burning

Clean Energy Credits

ISSUE

VCEPS allows a utility to use clean energy credits (CECs) affiliated with energy produced prior to start of VCEPS.

- Thus creating no change in a provider's operation or generation portfolio, nor reduction of regulated emissions and effluent.

SOLUTION

Limit qualifying CECs to clean energy generated after the start date of the Clean Energy Portfolio Standard - 1/1/2012.

*Affordable Electricity
through Improvements to the
Energy Procurement Process*

INDIANA ELECTRIC UTILITIES

- Approx. 95% of all electricity comes from generation owned by the IOUs

Utility	Total Resources (MW)	Owned Resources (MW)	PPA Resources (MW)	% Owned Resources
AEP	5,279	5,012	267	94.9%
Duke	6,830	6,722	108	98.4%
IPL	3,353	3,053	300	91.1%
NIPSCO	3,422	3,322	100	97.1%
Vectren	1,498	1,288	210	86.0%

SOURCE: 2011 Utilities IRPs

INDIANA REGULATORY PROCESS

- Indiana currently has a high barrier to entry for the competitive generation sector.
- Currently there is no “free market” for procurement of energy and resources.
- An independent, binding request for proposal process would help balance the conflict between providing lowest cost resources to the ratepayer and profits for the shareholder.
- Currently, utilities develop integrated resource plans which identify supply needs for customers. A balance needs to be struck between the shareholder returns and the impact on ratepayers.
- Utilities fulfill capacity shortfall through request for proposals and the utility typically choose themselves
 - Self build options don't always take into account all transmission and interconnection costs.
 - Risk of cost construction delay and cost overruns are not accounted for in self build options.

RATEPAYER COSTS BETTER BALANCED WITH SHAREHOLDER RETURNS

Utility Self-Build – approx. 600 MW Thermal Plant (excludes operating costs)	
\$2,980,000,000	Resource Investment
8%	Rate of Return
\$3,218,400,000	Revenue Requirement
\$238,400,000	Total Return

Current structure leads to inefficient outcomes

Power Purchase Agreement – 600 MW Plant - \$48/MWh Levelized Cost of Energy for 20 years (40% capacity)	
\$2,018,304,000	Purchase Agreement Cost
0%	Rate of Return
\$2,018,304,000	Revenue Requirement
\$0	Total Return

Alternative Procurement – Utilized Wind PPA	
\$2,018,304,000	Resource Investment
8%	Rate of Return
\$2,179,768,320	Revenue Requirement
\$161,464,320	Total Return

Ratepayer Savings:
\$1,038,631,680

ENERGY PROCUREMENT

Colorado

Acquire NEW utility resources (i.e., energy contracts or building new facilities) through a competitive bidding process that compares **all new resources** to determine a cost-effective resource plan.

Michigan

Acquire Renewable Energy through competitive bidding:

- building a utility owned facility;
- purchasing an existing renewable energy facility;
- purchasing renewable energy from third party

At least 50% of renewable energy to come from third party producers

Alternative Option

Acquire NEW utility resources (i.e., energy contracts or building new facilities not in IRP) through competitive bid process that compares **all resources**

- Selection based on bid price
- Cost overruns assumed by bid winner
- Energy purchased from third parties can be included in rate base as if a utility asset

COLORADO PROCUREMENT METHODOLOGY

Colorado has two procurement processes. The most common is a **competitive bidding process** (all-source solicitation). The utility may also propose an **alternative plan** for acquiring and meeting a portion of its resource need.

- **All-Source Plan:** A utility's competitive bidding process meets resource need by comparing **all new resources** to determine a cost-effective resource plan.
 - The all-source plan affords all resources an opportunity to bid, and all new resources will be compared to determine the most cost-effective resource planning available.

- **Alternative Plan:** If a utility proposes to meet a portion of its need through an alternative plan, it must:
 - Identify specific resources to be procured and
 - Identify why those resources could not be acquired through the all-source plan
 - Provide a cost-benefit analysis of how the alternative plan serves the public interest
- If the alternative plan includes new renewable or supply-side resource:
 - The utility will simultaneously file a CPCN application
 - File detailed cost of proposed facility, alternatives studied, costs of alternatives, and criteria used to eliminate those alternatives

Source: Code of CO Regulation: 4 CCR 723-3



September 6, 2012

Competitive Procurement Lessons Learned in Colorado

Presentation of
**Nicholas G. Muller, founder of the
Colorado Independent Energy Association**



- CIEA was formed in 1991 to represent non-utility power producers of all types, and soon after that the Colorado PUC put in place a mandatory IRP-driven RFP process. CIEA members now include most IPPs who have PPAs in Colorado.
- IPPs provide most of the renewable generation and much of the gas-fired generation for electricity delivered by Xcel to its Colorado ratepayers, as a result of this competitive procurement process.



- IPPs are able to deliver power on a very cost effective basis by engaging in competitive bidding all over the country and providing innovative and creative energy solutions.
- IPPs have been operating reliably in Colorado for 25 years, and have contributed to the dependability of the regional electric system.
- Under the current bidding rules at the Colorado PUC, plants that are 30MW or more must be bid out in an IRP/ERP driven RFP process.



- An IPP includes in its bid the interconnection costs with the utility and the cost of any new transmission needed for its project.
- The interconnection and transmission costs attributed to the bid by the utility handling the RFP, and the bid price inputted into the utility's model (such as Strategist) can sometimes be manipulated by the utility to favor its competing self-build bid.



- To help assure fairness in the bidding process in Colorado, CIEA recently got legislation passed (HB1262) that required the Colorado PUC to implement bidding rule changes to improve transparency in the bidding process.
- It is important to have open, transparent bidding at the wholesale level to help assure a robust bidding process, which helps hold down costs for the ratepayer.



- CIEA is fuel-neutral and has members that provide generation with all types of renewable and non-renewable energy projects, both large and small. So CIEA advocates generation and transmission policies that are non-partisan and non-discriminatory.
- Energy legislation passed in recent years in Colorado, such as SB100, HB1150, HB1001, HB1262 and HB1365 provided support for renewables and also for competitive procurement managed by the Colorado PUC.



- The Colorado PUC's bidding rules require an independent evaluator, and focus on the need for the ratepayers to have cost-effective, environmentally-sensitive generation and transmission.
- Colorado investor-owned utilities cannot collect their 10.5% return on PPAs that they can collect on the equity they put into self-build projects, so there is a built-in bias against PPAs that the Colorado PUC and the independent evaluator must be prepared to counter.



- Robust competition at the wholesale level depends on a careful handling of the RFP process, including with potential bids from the utility or its affiliates. If handled properly this process helps hold down costs for ratepayers.
- It is helpful if bids from the utility or its affiliates are required to have a cost cap to protect the ratepayers, just as IPPs provide fixed prices under PPAs.
- IPPs don't want preferential treatment, just to be held equal on a level playing field.

MICHIGAN PROCUREMENT METHODOLOGY

Michigan requires every energy provider to comply with the renewable energy standard. Every energy provider submits a renewable energy procurement plan to the Public Service Commission and that plan is reviewed every two years. Progress is monitored through submission of annual reports.

Utility Compliance with Renewable Energy Standard:

- A utility can either [a] use renewable energy from a facility they build and own; [b] use renewable energy from a facility they buy; [c] procure renewable energy from a third party; or [d] procure renewable energy credits.

Utility Procurement:

- The utility uses a competitive bidding process for:
 - Contracts to build a facility.
 - buying a renewable energy facility.
 - procuring renewable energy from a third party.
- The Public Service Commission is to review and determine whether credits without the associated energy is reasonable and prudent.

Source: 2008 Act 295 Sec. 21 to 51

ALTERNATIVE PROCUREMENT METHODOLOGY

- Lowest cost selection would be performed by successful bidder at the fixed offer, any budget overage would be the risk of the successful bidder.
- Lowest cost resource would lead to more efficient price to ratepayer and incent selection of most prudent resource to meet needs.
- A third party, non-utility proposal is successfully selected by the independent entity through the process. In order to balance the savings to ratepayers and perceived reduction in utility rate base/return, a purchase power agreement with a third party would be treated similar to a utility self-build in order to avoid the bias toward utility self-build outcome to maximize shareholder return.
- The utility would be allowed to treat the agreement as though it were an asset and receive a return on the agreement.
- This practice should allow for a level playing field between the competitive generation community and incumbent utilities.

CONCLUSION

- We are seeking an alternative procurement method which will focus on competition to align shareholder returns and the impact on ratepayers.
- We are NOT restructuring the regulatory process; we are asking to increase competition and market diversity.
- We are not looking for preferential treatment, just an opportunity to compete on a level playing field to develop energy resources for Hoosier ratepayers.
- We look forward to coordinating with the utility sector to balance the utility shareholder interests with the ratepayer's desire for low cost energy.
- We propose increasing the amount of electricity from cleaner generating resources by reducing the use of alternative resources that have emissions and effluent and only allow utilities to meet the VCEPS goals with clean energy or clean energy credits generated after the start of the energy portfolio standard on 1/1/2012.

THANK YOU

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