

**QUESTIONS TO ASK STATE AGENCIES IN REPORT TO LEGISLATURE
MANDATED BY HR1146
October 30, 2014 -- REVISED**

HR1146 was enacted by the Illinois House on May 28th, 2014. It is a Resolution designed to support the continued operation of currently unprofitable nuclear power plants in Illinois, all owned and operated by Exelon Corporation.

It was rushed through the Environment Committee after standing permanent members of the Committee were temporarily replaced by House Speaker Madigan. With unanimous vote in an altered Committee, it went to the House floor, where little if any meaningful debate occurred before its passage.

The Resolution's "findings" are fraught with errors, inaccuracies, and unsubstantiated assumptions. However, it calls upon four State Agencies to conduct studies into matters relating to the "premature closure" of Illinois nuclear power plants (NPPs), and to report back to the Legislature after the November 2014 elections.

The Resolution states conclusions prior to the completion of the mandated studies, calling into question both the motivation for the Resolution, and the validity of the results that will come from the agencies' studies. These agencies are being asked to make a case for the continued operation of a private industry run by Exelon Corporation, with studies paid for at public expense.

If the taxpayers of Illinois are to truly get any benefit from this expense -- a subsidy for a private industry -- the Agencies involved should:

- Answer questions that the public and other elected officials truly need to know
- Provide balance and context for their respective scopes of study
- Provide a complete, not cherry-picked analysis, examining not only the assumed positive benefits, but also the resulting liabilities the continued operation of the nuclear industry produces in Illinois, and presents these in a fair, complete cost/benefit analysis
- Extend the same kinds of rigorous analyses to the OTHER low-carbon means of producing electricity in Illinois -- mainly wind and solar power

We ask that our elected officials in the Legislature and State Government to submit these and other pertinent questions to the four State Agencies, and request that they include their answers in the mandated study due out in November, as well as in writing in direct response to you.

QUESTIONS TO ASK STATE AGENCIES IN REPORT TO LEGISLATURE MANDATED BY HR1146

I. Mandating the pre-determined outcome; pre-judging the data and findings

RESOLVED, That we urge the **United States Environmental**

13 Protection Agency (EPA) to immediately adopt rules that treat
14 low-carbon resources, like nuclear power plants [NPPs], equally,
15 regardless of age or fuel source; provide flexibility to the
16 State; and require actions to secure the continued operations
17 at Illinois' nuclear power plants as a compliance mechanism to
18 meet any new federal GHG regulations and, further, to adopt
19 rules that allow the State to offset and balance emissions from
20 fossil fuel electric generation with emissions-free nuclear
21 generation; and be it further

QUESTIONS TO RAISE:

- 1.) What would be the impact on the environment and health of citizens in the event of an accident or terrorist attack on electric generating facilities in Illinois that are lower-carbon emitters like nuclear or emissions-free like wind and solar? How long might it take for the impact on the environment and health of citizens to be fully realized for each of these electric generators once an accident or terrorist attack occurs? How long would it take for the full recovery from an accident or terrorist attack at each of these electric generators? How long does the EPA believe it is safe to store nuclear waste from nuclear power generators in spent fuel pools and above ground casks?
- 2.) Why should the State ask a Federal Agency to order the State of Illinois to, “require actions to secure the continued operations at Illinois’ nuclear power plants,” whether as part of compliance, or for any other reason? What is the factual necessity already known that would prompt this federal interference in State energy policy decisions?
- 3.) How does the State asking a Federal Agency to order the State of Illinois to, “require actions to secure the continued operations at Illinois’ nuclear power plants,” comport with the operation of “market-based solutions,” required elsewhere in this Resolution?
- 4.) Doesn't the State asking a Federal Agency to order the State of Illinois to, “**require** actions to secure the continued operations at Illinois’ nuclear power plants,” eliminate the necessity of the 4 expensive and resource intensive State Agency reports, since the outcome is already mandated, and the conclusion reached in advance of the results of the Reports? What is their purpose, if the outcome is already mandated? What if the Reports find evidence contrary to this imposed Federal mandate?
- 5.) Who actually benefits, and who pays for the 4 expensive and resource intensive State Agency reports, since the outcome is already mandated, and the conclusion reached in advance of the investigation and results of the Reports? How does the Illinois ratepayer/taxpayer – who is bankrolling the completion of the reports – benefit from the information, if the conclusion has already been reached in advance? If Exelon is the beneficiary of the results of the studies, why are they not charged for the use of State staff and resources?
- 6.) The EPA states that the purpose of their rules is:

“This rule, as proposed, would continue progress already underway **to lower the carbon intensity of power generation** in the United States (U.S.). Lower carbon intensity **means fewer emissions of CO₂**, a potent greenhouse gas that contributes to climate change.”

--“Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units,” U.S. EPA, June 18, 2014. (emphasis ours)

How does requiring the State to, "...adopt rules that allow the State to offset and balance emissions from fossil fuel electric generation with emissions-free nuclear generation," serve the EPA's purpose of fewer emissions of CO2? In other words, wouldn't an emissions offset/credit coming from nuclear plant operation that permits the continued operation of the most CO2 intensive sources of generation – coal plants – subvert the purpose of the EPA rule?

DRAFT

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II. Illinois Commerce Commission

RESOLVED, That we urge the Illinois Commerce Commission to
15 *prepare a report examining the State's and grid operators'*
16 *ability to expand transmissions to allow Illinois to transport*
17 *clean electricity to other parts of the nation, as well as any*
18 *legislative impediments, and the impact on residential,*
19 *commercial, and industrial electric rates from the premature*
20 *closure of Illinois' nuclear power plants;*

QUESTIONS TO RAISE:

1.) Since the ICC is ordered to examine expansion of transmission to transport “clean electricity” to outside of Illinois, the Report would be incomplete if the ICC did not examine this capability for ALL clean electricity sources, including but not limited to: solar, wind, and biomass. It would also be remiss and incomplete to not take into account and fully examine the different types of possible grids (e.g., AC vs. DC; micro vs. macro), and which are optimally suited for which energy resource.

2.) There are many ways leading to “premature closure of Illinois’ nuclear power plants;” but all are exclusively unique to nuclear plants, as opposed to coal, gas or renewable energy sources, as are their effects. They are:

- Corporate unilateral decision, such as then-ComEd made at the Zion NPP in 1997; and hinted it might do in late 2013
- NRC ordering a NPP to be closed for cause, such as failing to be in regulatory compliance
- Natural disaster, such as excessive flooding, as occurred at Fort Calhoun, NE in 2012, and
- Nuclear catastrophe, such as occurred at Three Mile Island, PA; Chernobyl, Ukraine; Fukushima, Japan; Windscale England; Santa Suzanna, CA, Fermi-1 in MI, etc.

The ICC report would be remiss and incomplete not to include an examination of the various causes of closure; their differing effects, and their complete costs on rates. It would also be remiss to not point out that several of the various causes for closure are 1.) out of control and predictability of the utility and government; and 2.) different in their period of evolution, i.e., some will occur abruptly, while others will evolve more slowly over time, affecting the cost to ratepayers in differing ways.

Please provide an analysis that takes these unique nuclear plant factors into consideration.

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III. the Illinois Power Agency

RESOLVED, That we urge the Illinois Power Agency to prepare
22 *a report showing how the premature closure of existing nuclear*
23 *power plants in Illinois will affect reliability and capacity*
1 *for the Midwest region; and be it further*

QUESTIONS TO RAISE:

- 1.) Does the IPA have either the authority or expertise to make such an analysis for the entire “Midwest Region,” which is undefined in HR1146? The IPA report will need to articulate specifically what area(s) of the Midwest are included in its analysis; why those regions are included, and others not.
- 2.) When ComEd closed its twin Zion reactors in 1997, the region lost 2,170 mWe (gross electrical capacity) of power generation in the region. The NRC reports, “The licensee is maintaining the turbine-generators as synchronous condensers to support grid stability.” Any report from the IPA needs to examine the ability for Exelon to utilize similar hardware adjustments at any of the reactor sites it chooses to close, and their cost and effects on regional grid stability and reliability.
- 3.) Would either NRC or FERC permit unilateral utility or corporate action that would result in serious grid impairment or failure?

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IV. Illinois Environmental Protection Agency

RESOLVED, That we urge the Illinois Environmental

3 *Protection Agency to prepare a report showing how the premature*
4 *closure of existing nuclear power plants in Illinois will*
5 *affect the societal cost of increased GHG emissions based upon*
6 *the EPA's published societal cost of GHG;*

QUESTIONS TO ASK:

1.) The U.S. EPA's published societal cost of GHG not only addresses expected calculated health effects stemming from temperature changes, but the environmental consequences stemming from those changes. We ask the IEPA to examine public health and public welfare impacts that result not only from premature closure of existing nuclear power plants, but their continued operation in a climate disrupted world, including:

- Effects of water use by nuclear plants, especially during expected drought or extreme weather conditions, since nuclear reactors use more water than other forms of electric power generation
- Effects of nuclear power operation on aquatic systems under expected climate disrupted conditions
- Susceptibility of nuclear plants to the various predicted extreme weather events, and the effects this susceptibility would have on public health and welfare
- Reduced power production from nuclear plants under expected hotter water temperature conditions and its effect on societal costs and the public health and welfare
- Positive societal benefits of reduced radiation emissions, and reduced radioactive waste production, storage, treatment, transportation and disposal stemming from reactor closures

2.) The statement assumes without proof that GHG emissions would increase with nuclear plant closures, without examining the possibility that energy efficiency and non-GHG renewable energy sources like solar and wind would or could replace it, and what those resulting societal costs and benefits would be. Please provide this comparative analysis, assuming that EE and RE sources replace nuclear plants, not fossil fuel sources.

3.) What would be the societal cost impacts on the environment and health of citizens in the event of an accident or terrorist attack on electric generating facilities in Illinois that are lower-carbon emitters like nuclear or emissions-free like wind and solar? How long might it take for the impact on the environment and health of citizens to be fully realized for each of these electric generators once an accident or terrorist attack occurs? How long would it take for the full recovery from an accident or terrorist attack at each of these electric generators? How long does the EPA believe it is safe to store nuclear waste from nuclear power generators in spent fuel pools and above ground casks?

4.) What would be the societal cost to Illinois of storing the increased amount of radioactive wastes resulting from the continued operation of nuclear reactors beyond their 40 year lifespan? Beyond their 20 year planned life extensions? What is the societal cost effect if an increasing amount of this radioactive waste is "high-burnup" spent reactor fuel?

5.) With the Federal Government considering creating "centralized interim storage" (CIS) facilities to take radioactive wastes from around the nation pending the creation of its final disposal facility sometime after 2047, and Illinois being designated a prime candidate for the first facility, what will be the societal cost for adding **an additional 9,000 mT** of spent reactor fuel for transport in and out of Illinois and 34+ years of storage in the State resulting from siting such a CIS facility here?

QUESTIONS TO ASK STATE AGENCIES IN REPORT TO LEGISLATURE MANDATED BY HR1146
V. Department of Commerce and Economic Opportunity

RESOLVED, That we urge the **Department of Commerce and**
8 Economic Opportunity to prepare a report showing how the
9 premature closure of existing nuclear power plants in Illinois
10 will affect jobs and the economic climate in the affected
11 areas;

QUESTIONS TO RAISE:

1.) While job loss of any kind is a serious problem resulting in other negative economic effects, these disruptions are also the inevitable result of the creation of “company town” situations, without proper future planning for eventual closure of a large-scale employer of any kind.

Since all nuclear power plants have a finite life span and will close eventually, please provide some suggestions as to how such negative economic effects can be planned for in advance, and programs put in place in advance to mitigate them. (e.g., mandated and escrowed “severance” funds for affected communities for job training and transition, emergency tax-base and governmental essential services relief funds, etc.).

2.) While providing information on these effects for nuclear plant closures is useful, the numbers are meaningless without context and comparisons. Please provide the following additional analyses:

- The same economic effects for the loss of the 20,00 direct and 73,000 indirect jobs in the renewable energy and energy efficiency sectors
- The economic effects, direct and multiplier, of a planned replacement of unprofitable nuclear plants by accelerated implementation of the State’s Renewable Energy Portfolio Standard and Energy Efficiency Standard

3.) What would be the impact on the economic climate and jobs in Illinois in the event of an accident or terrorist attack on electric generating facilities in Illinois that are lower-carbon emitters like nuclear or emissions-free like wind and solar? How long might it take for the impact on the economy and job market to be fully realized for each of these electric generators once an accident or terrorist attack occurs? How long would it take for the full recovery from an accident or terrorist attack at each of these electric generators? Precedent exists for such an event; please rely on the economic experiences of Ukraine, Belarus and Japan after their nuclear disasters in formulating your answers to this question.

4.) What is the cost-per-capita to RETAIN these time-limited (i.e., gone when the reactors have their licenses terminated for any of 5 reasons) jobs at the plants Exelon intends to close (Quad Cities, Clinton, Byron)? How does this cost compare to retaining other more stable, non-time limited jobs in Illinois (e.g., Chrysler Belvedere; John Deere; Caterpillar; the renewable energy sector; SPI Global; Allied Tube & Conduit, etc.)?

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VI. Unsubstantiated assumptions

RESOLVED, That we urge the findings in those reports to
13 *include potential market-based solutions that will ensure that*
14 *the premature closure of these nuclear power plants does not*
15 *occur and that the dire consequences to the economy, jobs, and*
16 *the environment are averted;*

QUESTIONS TO RAISE:

- 1.) The Resolution assumes without evidence of any kind that such market-based solutions do exist that would prevent the premature closure of nuclear plants. What if they do not?
- 2.) Since the Illinois EE/RE sector employs roughly 4 times the number of people in Illinois, please suggest market-based solutions that will insure their survival and growth.
- 3.) What if the complete and aggregated consequences of closing nuclear reactors are not “dire”?
- 4.) Is it the function of State government to “ensure” the continued operation of unprofitable corporations? Does the State currently seek market-based solutions for blacksmiths and buggy whip manufacturers?