



# Nuclear Energy Information Service

*Illinois' Nuclear Power Watchdog since 1981*

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## Potential Subversion of the Illinois Renewable Energy Portfolio Standard, Sec.9-220.3 of the Public Utilities Act by Removal of the Illinois Moratorium on Nuclear Reactor Construction

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### I. Impacts of Repeal of the Illinois Nuclear Reactor Construction Moratorium

#### The Moratorium: A Review

Since 1987 Illinois has prohibited the construction of new nuclear reactors in Illinois, pending a demonstrated and State approved method by the Federal government for the permanent disposal of high-level radioactive wastes – otherwise known by the misnomer, “spent [reactor] fuel”:

(c) After the effective date of this amendatory Act of 1987, no construction shall commence on any new nuclear power plant to be located within this State, and no certificate of public convenience and necessity or other authorization shall be issued therefore by the Commission, until the Director of the Illinois Environmental Protection Agency finds that the United States government, through its authorized agency, has identified and approved a demonstrable technology or means for the disposal of high level nuclear waste, or until such construction has been specifically approved by a statute enacted by the General Assembly. [Public Utilities Act, 220 ILCS 5/8-406, from Ch. 111 2/3, par. 8-406, Sec. 8-406.(c)]

This common-sense law was enacted to prevent the possibility that Illinois would become a *de facto* high-level radioactive waste dump, a situation which would in effect remove pressure on the Federal government to honor its pledge and legal obligation to construct an environmentally suitable high-level radioactive waste disposal repository. This principle of “cradle-to-grave” responsibility for both the production *and final disposal* exists for other hazardous materials. It made sense for it to exist for long-lived radioactive wastes. Thus, Illinois electric utilities could not create more wastes until a demonstrated solution exists for the wastes already created. Similar statutes were enacted in numerous other states (e.g. Connecticut, Kentucky, Maine, Massachusetts, Minnesota, Montana, New Jersey, Oregon, West Virginia, Wisconsin), and most notably California, which defended this position successfully before the U.S. Supreme Court, albeit on economic grounds, not environmental concerns.

The U.S. Department of Energy has stated that no disposal facility is likely to exist before the year 2020 – and more likely, some time even farther in the future. Thus any and all waste created will have to remain onsite where it is created.

#### Impacts of Repealing the Moratorium:

At present no concrete plans exist for a new reactor to be constructed in Illinois. Exelon Corporation has filed an “early site permit” application for a possible new reactor with the Nuclear Regulatory Commission (NRC) at the site of the Clinton NPP near Bloomington/Normal/Decatur. This is not a firm commitment to build; merely a regulatory “space-saver” should Exelon decide to build a nuclear “merchant plant” in the future.

Also at present only two new reactor designs have been approved by the NRC, with four additional designs under review. The electric power ratings for these designs range from 1100 mW to as high as 1700 mW. Until a utility formally submits an application there is no way to conclusively determine the size and output of a proposed new reactor. That said, this range provides sufficient information on which to build our analysis.

It can therefore be assumed that, in the event of a repeal of the Illinois nuclear construction moratorium, somewhere between 1100 to 1700 mW of new nuclear power electric generation capacity would be introduced as a “merchant plant” in Illinois. It should also be noted that new nuclear reactor capacity is being considered in Missouri at the site of the Calloway NPP, with a potential electric capacity of between 1600-1700 mW. These potential reactors are located in a region that currently enjoys a surplus of electric generation capacity. The significance of this will become apparent below.

It is of primarily environmental concern that the situation that prompted the original nuclear construction ban – namely, no place exists for the permanent disposal of high-level radioactive wastes in the U.S. – not only persists 21 years after enactment of the ban, that problem is worse now than then, and grows worse annually. Introduction of yet another reactor in Illinois only makes this situation worse still. Yet, another concern exists with perhaps an equal if not greater impact.

Introduction of an additional 1100+ mW of nuclear-generated power into a region already experiencing a surplus creates a glut of power, which should theoretically lower its market price. Smaller power producers – namely renewable-based power generators – will be forced to compete in this environment. Of additional concern would be the effect on available private investment capital in such a market region. New nuclear construction costs are spiraling stratospherically – the most recent Wall Street-based estimates are coming in at \$7000+/1000-mW – roughly \$7.7 billion for the construction of an 1100 mW plant.

These two factors will place nascent renewable generators – which by their very nature are incremental in size and implementation – at a practical competitive disadvantage with single large-scale nuclear reactors for both 1.) market share, and 2.) increasingly scarce construction investment capital. It is this concern that leads us to believe that repeal of the moratorium will result in a *de facto* sabotaging of the 2007 Renewables Portfolio Standard legislation.

## **II. Sabotage of the RPS:**

Without sufficient market share for renewables, economies of scale – vital to reducing the per-unit costs for renewable generated electricity – will either be delayed or simply not occur. This will inhibit the construction of new renewable generation capacity.

Similarly, trouble raising investment capital by having to compete with extraordinarily expensive new nuclear reactors will delay or prohibit new renewable energy construction. The renewables are already suffering from the Congress' schizophrenic caprice at renewing the production tax credits, resulting in a screeching halt to private investment in all renewables. This double hit could stop new capacity construction altogether.

Sec. 9-220.3(c)(3) of the 2007 Renewable Portfolio Standard (RPS) revision to the Public Utilities Act (PUA) becomes the worrisome section in such a scenario. This section of the PUA allows utilities to escape their obligation to procure renewable-generated electricity if such power is found to not be “cost effective,” a term defined as an amount that would

...limit the estimated average increase due to the cost of these resources included in the amounts paid by retail customers in connection with electric service to no more than 0.5% of the amount paid by such customers during the preceding calendar year, with such limit increasing by 0.5% in each of the 3 years 2009 through 2011, for a maximum cap on the allowed estimated average increase due to the cost of these resources of 2.0%. The maximum cap on the allowed estimated average increase due to the cost of these resources is 2%.

Our concern is that under the situations described above, and the market skew provided by new nuclear construction, utilities would easily escape their mandate through invocation of this section of the PUA. Granted, the facts that 1.) the PUA requires the Illinois Commerce Commission to review the situation no later than June 30, 2011; and 2.) no reactors could possibly be built before then in Illinois tend to reduce the *immediate* impact on renewables construction. Yet, the threat would exist and come into full bloom at a later date, and at a time when no ICC review is explicitly called for by this PUA revision.

These three conditions – 1.) loss of economies of scale through loss of market share; 2.) trouble raising increasingly scarce investment capital; and 3.) loss of required customer base made possible by the RPS through invocation of Sec. 9-220.3(c)(3) -- would then result in a final and total collapse of the intended RPS program in Illinois.

## **III. NEIS' Recommendations:**

Albert Einstein once observed that a clever person solves a problem, but a wise person avoids it. We at NEIS believe that this scenario is a problem that can and should be avoided at all costs, for both economic and environmental reasons. This is a scenario that NEIS firmly opposes, and will resist. We urge our elected officials to be wise, not merely clever, and take action to prevent it from occurring. Hence, in our view:

- 1.) the nuclear construction moratorium should NOT be repealed; and
- 2.) the PUA should be *strengthened* to mandate that NO new construction permits for other kinds of non-renewable generation capacity (as defined in the RPS enabling act paragraph (b)) will be issued by the ICC until the targets set forth in the RPS are fully met by actual construction of renewable energy capacity.

It is said that Business likes – even needs -- certainty. This is as certain as one can get as to what kinds of generation capacity must and will be built between now and 2025.