

“NUCLEAR ILLINOIS” FACTS - 2013

Reactors:

- Illinois has more nuclear reactors than any other state -- 14 total; 11 operate, 3 are closed permanently (Dresden 1, Zion 1&2) due to contamination and facility degradation. All are owned/operated by Exelon Generation, the largest private U.S. nuclear power company.
- If Illinois were a nation, we'd be the 11th largest nuclear power in the world, behind Ukraine.
- Exelon Corporation formed in 2001 with the merger between Unicom of IL and PECO of Pennsylvania -- putting 22 of 103 U.S. reactors under one large, extended corporate umbrella. Exelon now owns and operates 17 of these; 5 others are permanently shut. In 2012 Exelon merged with Constellation Energy, adding an additional 5 reactors to the company's inventory, representing >19,000 MW of nuclear generated power.
- Exelon's Dresden 2 & 3, and Quad Cities 1 & 2 reactors are the same design and slightly older than the 4 GE reactors that blew up and melted down in Fukushima Daiichi, Japan.
- Exelon has announced plans to build new nuclear reactors in Illinois and Texas, if given permission by government regulators. They have been granted “early site permits” from federal regulators for the Clinton reactor site near Urbana/Champaign; and the Victoria, Texas site. Both may be canceled. Poor nuclear economics argues against building them.
- Exelon has received 20-year rubber-stamp extensions of the operating licenses for its aged, decrepit Dresden 2&3 and Quad Cities 1&2 reactors – historically among the oldest, most fined, poorest performing reactors in the nation; and plans to seek extensions for others in 2013, 2015 and 2017.
- At normal airliner cruising speeds, Illinois reactors (and their much more vulnerable “spent” fuel pools) are between 6-28 minutes from O'Hare Field - the world's 2nd busiest airport – a significant fact in the post-9/11 world.
- In case of a serious nuclear power accident *anywhere* in the U.S., Illinois reactors could be assessed as much as \$140 million/year for 7 years to finance resulting liability payments.
- Illinois reactors have been fined by the NRC over 100 times, for nearly \$8.5 million for violations of federal regulations and poor operating practices.
- According to a December 3, 2003 report by the GAO, Exelon's Dresden 1 and Zion 1&2 Illinois reactors may not have sufficient funds accrued in trust to cover “expected baseline” costs of closure (reactor “decommissioning”). Five of Exelon's non-Illinois reactors will have insufficient funds. If economic forecasts are wrong, Dresden 2&3 and Quad Cities 1&2 may also have insufficient funds. Taxpayers and ratepayers -- *beware!*
- According to *Crain's Chicago Business*, because of utility de-regulation in the late 1990s, Illinois nuclear utilities received \$6-\$11 billion in “stranded cost” recovery payments because of *excessive* nuclear reactor construction.
- While ComEd lobbyists fought *for* such “stranded cost” recovery in the Illinois Legislature, they *bitterly and repeatedly opposed* legislation to establish an Illinois “renewable energy portfolio standard” (RPS); and after joining a voluntary state RPS program in 2004, ComEd/Exelon withdrew in 2005. They blocked important state wind

power legislation in 2010; and opposed renewal of the wind production tax credit at the federal level in 2012, which was making wind power cheaper for customers than power generated from Exelon's nuclear plants.

- ComEd/Exelon received a rate increase in 2007 of ~24%; and in 2010 requested \$396 million. By buying electricity from its affiliate Exelon Nuclear, some of this money will be used to support new reactors.
- In 2007 Exelon announced plans for the early “decommissioning” – tear-down and removal -- of the two shuttered, contaminated Zion nuclear reactors on the shore of Lake Michigan. The economic collapse put this plan on hold; but work began in 2011. Three years after starting work, the parent company of the subsidiary Exelon chose to perform its “model decommissioning,” is near bankruptcy, has changed three CEOs and 2 CFOs in the past 2 years, and has yet to have an auditor in place for the \$860 million project. No independent public review of expenditures exists.

Radioactive Wastes:

- Illinois produces more “spent” nuclear fuel (“high-level” radioactive wastes, HLRW) each year than any other state. Exelon reactors have produced >8,000 tons of “spent” fuel to date, all stored onsite at each reactor.
- The Fukushima Daiichi nuclear catastrophe showed how vulnerable the spent-fuel pools – built above ground -- are for that design, also used at 4 Illinois reactors.
- Illinois has the only de facto HLRW storage site in the country -- the General Electric Morris Operation in Morris, Illinois, which holds 772 tons of “spent” nuclear reactor fuel.
- The Zion NPP decommissioning project will leave over 1,000 tons of HLRW containing >203 million curies of radioactivity in 2,303 fuel assemblies onsite in 61 dry-cask canisters, costing ~\$1 million each to construct. Over 4 million ft.³ of LLRW will be shipped by train to Clive, Utah for disposal.
- Illinois is usually among the top 5 US producers of so-called “low-level” radioactive wastes (LLRW) each year. Annually over ~99.3% of the radioactivity from LLRW generated in Illinois comes from Illinois’ 14 nuclear reactors.
- On July 1, 2008 the nation’s only operating LLRW facility at Barnwell, SC, closed operation to out-of-state customers, potentially causing a future LLRW storage crisis.
- In 2007 General Electric and Argonne National Laboratory bid on contracts to “reprocess” irradiated (“spent”) nuclear reactor fuel as part of the federal government’s now-defunct Global Nuclear Energy Partnership (GNEP) program.
- Radionuclides are migrating underground from burial trenches onsite at a closed low-level radioactive waste dump at Sheffield, IL.
- According to a 2009 DOE report, if “spent” reactor fuel shipments had begun to the cancelled and flawed Yucca Mt., Nevada radioactive waste repository, Chicago would have seen 25% of all rail shipments (~2,400 casks on ~800 trains) and 54% of all truck shipments (>1,400 trucks) pass through the area.

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