

Fermi3CEm Resource

From: Art Myatt [almyatt@yahoo.com]
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To: Fermi3COLEIS Resource
Subject: Comments on DEIS for Enrico Fermi Unit 3; report number: NUREG-2105

Comments on the Draft Environmental Impact Statement for Combined License (COL) for Enrico Fermi Unit 3; report number: NUREG-2105

Gross errors in the probability of a severe accident:

Fukushima is mentioned only once in this entire Statement. The disaster at Fukushima is not discussed at all in the report, but the word does appear in the title of another document listed on 5-160 of Volume 1. The mention is the following citation: "U.S. Nuclear Regulatory Commission (NRC). 2011. Recommendations for Enhancing Reactor Safety in the 21st Century: The Near-Term Task Force Review of Insights from the Fukushima Dai-Ichi Accident. July 12, 2011. Washington, D.C. Accession No. ML111861807." This is a list of documents in 5.14 References, which starts on 5-144.

Chernobyl is first mentioned in a comment on page D-80 (Appendix D) of Volume 2 of the DEIS. Chernobyl shows up as a word a total of 11 times in Appendix D comments.

In table 5-36, it says the impacts of postulated severe accidents would be small, because "Probability-weighted consequences of severe accidents would be lower than the Commission's safety goals and probability-weighted consequences for currently operating reactors." This is clearly a false statement.

We all know, based on the experiences of Chernobyl and Fukushima, that the consequences of severe accidents are not small but are horrendous, requiring large areas around the accident site to be completely evacuated for decades or possibly for centuries. The weasel wording here is supposed to be justified by the idea that the probability of a severe accident is so small that, for practical purposes, we can assume no such accident will happen. The calculation of probability is not even close to correct.

In round figures, there are 400 large nuclear power reactors in the world. The very first nuclear reactor was first operated in 1944, so the history of nuclear reactors is less than 70 years. In that time, 4 large reactors (1 at Chernobyl and 3 at Fukushima) have had severe accidents. This is not counting deadly accidents at smaller experimental or military reactors, but only those at reactors roughly comparable to the proposed Fermi III. It is not even counting the less severe malfunctions experienced in this country at Fermi I or at Three Mile Island.

Counting just the severe accidents that have occurred at large commercial reactors resulting in huge uncontrolled releases of radiation and radioactive contaminants, there have been 4 in less than 70 years. Assuming the approximately 400 of this type of reactor has existed for the entire period would give us 28,000 reactor-years with 4 severe accidents. The odds for a severe accident at a random reactor calculated on this basis would be 1 chance in 7000 for each year, or 1 chance in 100 over a 70-year lifetime.

Now, the above is just a very rough calculation based on the actual history of nuclear reactors. It is not realistic, because most reactors have not been in existence for 70 years. A more realistic calculation would give even greater chances for a severe accident. It is not realistic because it does not include as a severe accident one that reduces the value of a completed reactor to less than zero, even though two of these have occurred in the United States and one of these two has occurred right here in Michigan (Fermi I). The real probabilities of a very damaging accident are GREATER than 1 in 100.

This simple calculation is enough to show that the extreme low probability assigned for a severe accident in this Draft Environmental Impact Report is completely unrealistic. The report is simply wrong, and this is the type of wrong that can ruin people's lives, or end them. In real life, nuclear power reactors are far more dangerous than this report says.

We are told that this Fermi III would be a new and better (experimental, untested) design. It won't need outside electricity for active cooling to prevent a meltdown for a whole three days after a loss of station power - if all goes as planned. All did not go as planned at Chernobyl, At Fukushima, at Three Mile Island or at Fermi I. We have no guarantee that all will go as planned here.

For decades, the people of Japan were told nuclear power is safe; there's no reason to worry about it. That was a flat-out lie. Now, the NRC Environmental Impact Report is repeating the same lie to us. We are not stupid enough to believe it.

Gross errors in demand for electricity:

The Energy Information Administration (EIA), a division of the United States Department of Energy, tracks and publishes data on energy use in the United States. In particular, they publish figures on how much electricity was consumed each year in the state of Michigan, and how much was generated. According to the EIA, in 2006, 108,018 million Kilowatt-hours of electricity was consumed (sold at retail) in Michigan. For 2007, the figure was 109,927; for 2008, 105,781; for 2009, 98,121. Data for 2010 is not included in their table, available at http://www.eia.gov/state/seds/hf.jsp?incfile=sep_use/tx/use_tx_MI.html&mstate=Michigan.

The Fermi III Draft Environmental Impact Report, in section 8, relies on a study done by the Michigan Public Service Commission (MPSC) for an estimate of demand for electricity in Michigan. The MPSC study says that demand for electricity in 2006 was 112,183 million Kilowatt-hours, and that they expect demand to increase exponentially by 1.3% every year thereafter. Their formula projects a demand for 115,548 million Kilowatt-hours in 2007; 119,015 in 2008; and 122,589 in 2009.

I have compared the MPSC projections with the reality (according to the EIA) that we know about so far in the table below:

YEAR	ACTUAL DEMAND	MPSC PROJECTION	ERROR (%)
2006	108,018	112,183	03.9%
2007	109,927	115,548	05.1%
2008	105,781	119,015	12.5%
2009	98,121	122,589	24.9%

The error for 2006 comes from the fact that the MPSC used an estimate of the amount of electricity generated in the state instead of the figure for the amount actually consumed. The ever-increasing errors are caused by the fact that their simple formula did not and could not anticipate the global financial crisis which showed up in 2008 and which is not yet resolved.

We can't say with any certainty when or even if the financial crisis will be resolved. We can't say when or if the pattern of growth in demand for electricity that was normal for the 20th Century will be resumed. There is a logical case that says it will not be resumed, but that's far outside the scope of comments to be made here.

What we can say with certainty is the projection for electrical demand is already showing a great deal of error. By 2025, it is likely to be even more grossly wrong. It is so demonstrably inaccurate that it cannot provide a legitimate basis for building Fermi III.

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