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Docket ID NRC-2014-0109
COMMENTS ON: Fermi 2 Nuclear Power Plant Draft GEIS Supplement 56

The NRC's rejection of solar power as a viable alternative to nuclear power is both erroneous and based on obsolete standards.

(From p. 2-13 of Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Supplement 56 Regarding Fermi 2 Nuclear Power Plant, Draft Report for Comment):

Solar PV resources in the ROI and across Michigan range from 4.0 to 4.5 kilowatt hours per square meter per day (kWh/m2/d) (NREL 2013c). Economically viable solar resources are considered to be 6.75 kWh/m2/d and greater (BLM and DOE 2010).

Let's see just how wrong the GEIS is. Solar power in Germany consists almost exclusively of photovoltaics (PV) and accounted for an estimated 6.2 to 6.9 percent of the country's net-electricity generation in 2014. *(From "Solar Power in Germany" article in Wikipedia).*

Out of its total 13,041 MW of electric generating capacity in 2005 (1.22% of the U.S. total), DTE Energy produces 61.3% from coal, 16.4% from natural gas, 11.7% from oil, 9.3% from nuclear, and 0.2% from biomass. DTE Energy owns power plants in Alabama, California, Illinois, and Michigan; 95.5% of the company's generating capacity comes from power plants in Michigan. *(From "DTE Energy" article in Wikipedia)*

Just by searching on the internet for "solar insolation world map," you will see that Germany has significantly less sunlight to work with than does Michigan. For instance, from http://solargis.info/doc/_pics/freemaps/1000px/dni/SolarGIS-Solar-map-DNI-World-map-en.png, you can see that Germany is closer to 3 kWh/m2/d than to 4 to 4.5 kWh/m2/d. This should mean that, if the equivalent of Germany's 2014 PV panels were installed in Michigan, they would have generated between 8.2% to 10.3% of Michigan's electrical power. That is roughly the same percentage of power now provided by Fermi 2.

It will no doubt be pointed out that solar panels do not provide "baseload" power the way a nuclear reactor does. This is true. solar panel output is very closely matched with peak power demand. When solar panels provide predictable peak power, the need for baseload power is greatly reduced. Again, Germany is an excellent example of how solar panels can be integrated with the electrical grid, and the need for nuclear power can be eliminated entirely.

In other words, Germany is making solar work for them, although they have significantly less sunlight to work with. It would be easier for Michigan to make solar work. Germany is not the only country of which this is true. The examples of practical use of solar power to supply a modern electrical grid are well known. The NRC has chosen to ignore these examples.

Now, using a figure from 2010 for the intensity of sunlight required for PV panels to be "economically viable" is just absurd. The price of solar panels has dropped precipitously in the last 5 years, while the efficiency of the average commercial panel has increased. The fact is, solar panels today are approximately at grid parity with steam-generated electricity, and the price of solar panels will continue to improve in coming years. These facts and figures are also well known. The NRC has chosen to ignore them, too.

In short, solar power IS a viable alternative to nuclear power. The NRC is completely wrong to dismiss it.

Yours, Art Myatt

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Docket ID NRC-2014-0109
COMMENTS ON: Fermi 2 Nuclear Power Plant Draft GEIS Supplement 56; declining electrical demand

In the environmental impact statement for Fermi 3 licensing, just published in 2013, there is an entire section (Section 8) entitled "Need for Power." It discusses power planning in Michigan, power demand and power supply, giving references with specific projected figures out to 2025. Surely, specific figures for projected electrical demand is just as relevant for re-licensing Fermi 2 as it is for licensing Fermi 3, but there is no such section in the Fermi 2 GEIS Supplement.

According to data published by the US Energy Information Administration, the amount of electricity actually generated in Michigan over the 10 years from 2005 to 2014 has actually declined by roughly 1% per year. It's a 0.985% average annual decline over this period, if you want a more exact figure. There are other ways of looking at the data which would, for instance, show a even steeper decline over the last 7 or 8 years. (Detailed figures are shown at https://athf3.wordpress.com/2015/12/16/michigans-electricity-industry/.)

If this declining current trend were to continue through 2025, the difference between electricity generated in 2014 (the last year for whch the EIA has data) and 2025 would be 21 million megawatt-hours. To make this unambiguously clear - the amount of electricity generated in 2025 would be 21 million megawatt-hours less than was generated in 2014. As it happens, 19-21 million megawatt-hours is the combined annual generating capacity of both Fermi 2 and the proposed Fermi 3, using capacity factors of 80% to 90%. The straightforward conclusion is that, by 2025, neither Fermi 2 nor Fermi 3 will be needed to generate electricity.

I understand the NRC relies on "other agencies" to calculate future demand for electricity in the region. You should specify which other agencies and which of their studies you do rely on, and we can then evaluate whether those projections are in line with reality. If the demand for more electrical generating capacity does not exist in the actual future, then it will make much more sense to close Fermi 2 when its original 40-year license expires than to continue operating it for an additional 20 years.

Yours,

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