Environmental Scoping Comments on FPL's Turkey Point Combined License Application
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My name is Mandy Hancock and I am the high risk energy organizer with Southern Alliance for Clean Energy. We are a regional non-profit organization with members here in Florida, in FPL's service region, and across the Southeast concerned about the impacts energy choices have on our health, economy and environment. Thank you for having this meeting.

We have serious concerns about FPL's push to build two new reactors here in Miami-Dade County that the Nuclear Regulatory Commission (NRC) must address as they prepare the draft environmental impact statement (DEIS). The uncertainties continue to escalate, putting ratepayers, taxpayers, and the environment at increasing risk. Turkey Point has a long history of infractions with the NRC, including three violations in its storage of radioactive nuclear waste just last month.[1] With vast amounts of radioactive waste already onsite, allowing more reactors to be built that will generate more waste is irresponsible when FPL cannot safely manage what has already been produced. Despite the NRC's Waste Confidence Rule, communities in South Florida do not have confidence in FPL's ability to manage this toxic waste.

The NRC should be aware that FPL ratepayers aren't happy about the tens of millions they have been forced to pay for in advance given the pre-payment scheme in place to finance new reactors in Florida. And FPL is again asking the troubled Florida Public Service Commission (PSC) for tens of millions more with hearings set for the end of August.

There are more affordable ways for FPL to meet energy demand while protecting the environment and tackling global warming. As Southern Alliance for Clean Energy and the Natural Resource Defense Council testified to the PSC in 2009, simply increasing energy efficiency goals by 1% could save enough energy to eliminate the "need" for new reactors, while saving ratepayers money.[2] Additionally, investing more resources in solar, wind and clean bio-energy instead of costly new reactors would benefit FPL and offer economic development opportunities for Florida, without draining our water resources or pocketbooks. The NRC must evaluate updated information using a combination of these sustainable energy choices, including energy efficiency, before allowing FPL to commit billions of dollars, billions of gallons of water, and nearly an entire decade or more to building these reactors when that time and money could be better spent on less risky options.

Energy efficiency measures preserve our water resources, save consumers money and also pose no health or safety risks to the public. Florida utilities have significant resources to tap in these areas as outlined in a recent extensive report, "Energy Efficiency in the South," by Georgia Tech and Duke University[3] and our report, "Yes We Can: Southern Solutions for a National Renewable Standard."[4]

Renewable energy technologies, such as solar and wind, do not require extreme manipulation of our precious water resources. The Environmental Report overlooks the potential for FPL to pursue a combination of wind and solar resources within its service territory and states that there is no renewable technology alternative that could mitigate the need for nuclear power.[5] The alternative analysis is based on the archaic assumption that base load power is needed. Last April, Federal Energy Regulatory Commission Chief Jon Wellington told the U.S. Energy Association that saying we need base load energy is like saying we need mainframe computers. The technology currently exists for distributed energy systems that negate the need for base load power.[6]

Further, the NRC must use updated information to reevaluate FPL's 2008 analysis for the new reactors in terms of the need for power given the economic downturn and significant reduction in demand.

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[1] Miami Herald, "Regulators Cite FPL Over Nuclear Waste Storage at Turkey Point." June 23, 2010. See: http://www.miamiherald.com/2010/06/23/1695022/regulators-cite-fpl-over-nuclear.html
[2] Florida Public Service Commission Docket 080407-EG, Document 06865-09. Amended direct testimony of William Steinhurst, p. 48, July 8, 2009.
[3] See http://www.seealliance.org/se_efficiency_study/full_report_efficiency_in_the_south.pdf
[4] See http://www.cleanenergy.org/images/files/SERenewables022309rev.pdf
[5] Florida Power and Light, Turkey Point COL Application, Rev. 0, p. 8.1-5, June 30, 2009.
[6] New York Times, "Energy Regulatory Chief Says No New Coal, Nuclear Plants May be Necessary." April 22, 2009. See: http://www.nytimes.com/gwire/2009/04/22/22greenwire-no-need-to-build-new-us-coal-or-nuclear-plants-10630.html

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Water Impacts

The NRC needs to acknowledge that this area is an extremely sensitive hydrological environment. The history of the Everglades and the current costly restoration projects illustrate the long-term shortsightedness that has scarred Florida's waterways. When comparing types of energy generation, nuclear power has higher rates of both water withdrawal and consumption than coal and natural gas and far more than renewable energy sources, such as wind and solar.[7] The April 2010 report I mentioned earlier by Georgia Tech and Duke University examined energy efficiency in the South and illustrated ways to substantially reduce energy needs, while simultaneously reducing water consumption. According to the report:

> "*In the North American Electric Reliability Council (NERC) regions in the South, 8.6 billion gallons of freshwater could be conserved in 2020 (56% of projected growth in cooling water needs) and in 2030 this could grow to 20.1 billion gallons of conserved water (or 45% of projected growth).*"[8]

Instead, we see FPL's projected figures for water demand in 2025 to include a 35% increase for public and commercial needs and a whopping 3224% increase for thermoelectric power generation.[9] The NRC needs to fully evaluate less water intensive energy alternatives—efficiency and renewables—including using a combination of these energy options. The NRC also needs to analyze the impacts such a drastic increase in water demand from the power sector could cause to this area.

Cumulative Impacts

As the NRC is aware, FPL already operates three reactors here in Florida and is proposing to build two more. FPL also proposes to build an onsite storage facility to deal with high level radioactive waste already over-flowing in the spent fuel pools. This amount of radioactivity clustered in such a population-dense, hurricane-prone area could create significant safety and health concerns for Floridians. The NRC must address these cumulative impacts to water resources and human health.

Miami-Dade County is an extremely dense population area with 1158 people per square mile.[10] Although FPL and Westinghouse state that the "probability of a severe accident is very low for the AP1000,"[11] this reactor design has never been built or operated anywhere in the world. Can they guarantee that an accident will never occur? Let's remember that the oil disaster Gulf communities are now grappling with was also supposed to be a very unlikely event. A recent technical report by Mr. Arnold Gundersen, a nuclear engineer with decades of industry experience, raises serious concerns about the safety of the AP1000 reactor design, concluding that the containment vessel is less safe than current reactors that have had a history of containment failures.[12] This concern, coupled with the high population density of the region, should be fully evaluated by the NRC. This is especially urgent in light of FPL's accident analysis scenarios, which assume that 95% of the population will be evacuated if an accident occurs.[13] In such a highly populated area, it seems unlikely that 95% of the population could be evacuated in a timely enough manner to avoid exposure in the event of a severe accident. Would this be possible if a serious storm or hurricane were threatening the area at the same time? I think not. A 1982 Congressional report estimated that if a meltdown occurred ***at just one*** of the existing Turkey Point reactors it could cause 29,000 peak early fatalities, 45,000 peak early injures, 4,000 peak cancer deaths, and $48.6 billion in property damage.[14]

In light of the ongoing, devastating BP oil disaster, the last thing Florida and this country needs is to approve another risky energy technology such as the proposed Turkey Point reactors. We demand that utilities utilize technologies to create an energy system that does not threaten public health and safety nor devour economic, environmental, and water resources. The inherent power in the Earth's environmental systems along with measures to reduce overall energy demand can provide the energy needed without degrading ecosystems and depleting life-necessary resources. There is an opportunity to do things differently and in smarter, non-radioactive ways. That opportunity must be seized for the sake of our communities and future generations.

Thank you.
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[7] Hoffmann, J., S. Forbes, T. Feeley, U.S. DOE, Estimating Freshwater Needs to Meet 2025 Electrical Generating Capacity Forecasts, June 2004.
[8] Brown, Marilyn A; Etan Gumerman; Xiaojing Sun; Youngsun Baek; Joy Wang; Rodrigo Cortes and Diran Soumonn, "Energy Efficiency in the South." p. vii, April 12, 2010. http://www.seealliance.org/se_efficiency_study/full_report_efficiency_in_the_south.pdf
[9] Florida Power and Light, Turkey Point COL Application, Rev. 0, p. 2.5-34, June 30, 2009.
[10] Florida Power and Light, Turkey Point COL Application, Rev.0, p. 2.5-1, June 30, 2009.
[11] Florida Power and Light, Turkey Point Application, Rev. 0, p. 7.2-21, June 30, 2009.
[12] See: http://www.cleanenergy.org/index.php?/Press-Update.html?form_id=8&item_id=168
[13] Florida Power and Light, Turkey Point Application, Rev. 0, p. 7.2-5, June 30, 2009.
[14] U.S. Congress, *Consequences of Reactor Accident (CRAC-2) Report*, Nov. 1, 1982. Figures based on 1982 dollars and 1980 population data. Available at http://www.nirs.org/reactorwatch/accidents/crac2.pdf.