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From: **Paula Chow** <[paulachow132@gmail.com](mailto:paulachow132@gmail.com)>

Date: Wed, Dec 2, 2020 at 11:05 AM

Subject: North Anna renewal license and safety concerns

To: Cathy Dyson <[cdyson@freelancestar.com](mailto:cdyson@freelancestar.com)>

Hi, Cathy,

I don't know if you or another staff are the environmental reporters. There is a serious issue that is not getting attention - the second license renewal for the North Anna nuclear power plants. I believe that there was an FLS Op-Ed sometime this year.

Unfortunately, the public comment deadline for this renewal was Nov. 23, 2020 and the hearing is set for Dec. 14, 2020.

We were alerted of the issue upon having Dr. Edwin Lyman, Director of Nuclear Safety and Security at the Union of Concerned Scientists present at a virtual webinar on Aug. 23, 2020. Below is the link to his presentation.

Dominion Energy Virginia has applied for the license renewal for their two nuclear reactor plants at North Anna. These reactors were originally designed to operate for 40 years. They began generating electricity in 1978 and 1980. The license was renewed for 20 years and will expire in 2038 & 2040. If the license is renewed another time (this 2020 application), the reactors will be 80 years old before they are retired.

Rappahannock Group Sierra Club (RGSC) is sounding the alarm to all residents within the 50 mile radius of the North Anna plants that the safety of the aging North Anna plants have not been verified.

The Nuclear Regulatory Commission (NRC) ordered nuclear reactor owners to conduct studies to revise and update the seismic hazard profiles at their sites in response to the 2011 Fukushima Daiichi triple-meltdown accident in Japan. After nearly a decade, the results are finally reported.

"On average, there is a one in 15,900 chance per year that an earthquake could cause a meltdown at North Anna." (1) This is the third most vulnerable reactor after the H.B. Robinson plant in Hartsville, SC and the Callaway plant in Fulton, Missouri. In spite of the reports "the NRC's Safety Goals\* are **non-binding targets and not regulatory requirements.**" (1)

"Following the Fukushima accident, the NRC required, among other things, that all US plant owners (1) develop plans and acquire emergency ("FLEX") equipment to provide backup power and cooling if power is lost for long periods; and (2) reevaluate the earthquake and flooding hazard profiles at their sites based on updated information and methods." (1)

"The hazard reevaluation studies that plant owners conducted found that nearly all



nuclear plants were vulnerable to more severe earthquakes and floods than they were prepared to withstand. However, **the NRC, inexplicably, has not required a single plant to upgrade its defenses in response to these findings despite having the regulatory authority and responsibility to do so.**" (1)

RGSC maintains that the **generic** Environmental Impact Statement originally used for the opening of North Anna should not be allowed, as North Anna became the first operating nuclear station in the U.S. to shut down because of a temblor in 2011 and the first to experience an event that exceeded its design basis. **Both reactors sit on top of a known fault line.**

The goal of RGSC and the VA Sierra Club Chapter is to require the NRC to perform their oversight with integrity, to do a current full and thorough Environmental Impact Statement which evaluates:

- The long-term storage of nuclear waste.
- The condition of the reactor foundation, liners, electrical cables, etc.
- Whether or not these aging reactors can withstand another earthquake.

Think about the implications of this: If the Lake Anna dam breaks, there's no water to cool the reactors. NRC needs to step up and examine that, along with many, many other safety issues, like core integrity after 40, 60, and 80 years, waste storage, buried electrical cables, evacuation plans, backup power, Fukushima safety recommendations that NRC has waived and not implemented, and a larger earthquake striking the site.

(1) Dr. Edwin Lyman, Union of Concerned Scientists Director of Safety & Security, Blog October 2020

This issue is not whether we are pro- or anti- nuclear; we are focusing this on NRC doing due diligence on **SAFETY** issues. There will be the opportunity to point to costs to keep nuclear power, versus other alternatives, later, if the EIS proves that it is safe to extend the plants' lives that far into the future.

RGSC is holding its annual Holiday Open House virtually on Dec. 6 at 3:00pm. Erica Gray who is VA Sierra Club Nuclear Issues Chair will present the North Anna safety issues information (about 3:15) after a few other program presentations. Below is the Holiday Open House flyer with the info to connect if you or FLS atff want to attend.

I am attaching some very interesting and alarming research documents that support our grave concerns and need for action. We want residents to contact their legislators - we can not afford a disaster, one that would make this pandemic a drop in the bucket in comparison.

Thank you in advance for consideration of reporting.

Paula Chow  
Rappahannock Group Sierra Club  
Programs Chair  
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Documents & Links:

The NRC link to the Federal Register Notice initiating the Public Opportunity to Request Intervention and NRC Hearing (deadline 12/14/2020) is: <https://www.federalregister.gov/documents/2020/10/15/2020-22790/virginia-electric-and-power-company-north-anna-power-station-units-1-and-2>

Union of Concerned Scientists Director of Safety & Security, Dr. Edwin Lyman's Aug. 23, 2020 presentation "Nuclear Energy in a Low Carbon Future."

<https://ucsusa.zoom.us/rec/share/xepIcorP-kIIRYnT5HH8A-OdR5y6aaa81ikXqaEOyknmolQVzb8w1DmUAhzY35Fv?startTime=1598206032000>

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Dr. Lyman's blog post from October also applies to North Anna with the link below:

<https://blog.ucsusa.org/edwin-lyman/earthquakes-and-h-b-robinson-plant>

"Spent Power & Reactor Fuel: Storage and Disposal Issues" Nov. 2020 by Robert Alvarez, Associate Fellow, Institute for Policy Studies

"What Congress Needs to know about Pending Nuclear Waste Legislation" Nov. 2020 by Diane Arrigo, Environmental and Energy Institute Radioactive Waste Project Director

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