| From: | John Brian Driscoll <driscolljohn37@gmail.com></driscolljohn37@gmail.com> |
|--------------|---|
| Sent: | Monday, July 15, 2024 5:43 PM |
| То: | TerraPowerEnvironmental Resource |
| Subject: | [External_Sender] Comment: Confronting Climate Change |
| Attachments: | Confronting Climate Change.pdf |

For planning purposes (concept paper attached) I need to know:

1. The annual metric weight of high level waste produced by each replica of this 345 MW plant;

2. The amount of water expected to be annually drawn from the Naughton Reservoir;

3. A description of plant's the load-following or load-balancing characteristics; and

4. Physical space required for one to five reactors.

John B Driscoll Candidate Montana U.S. House District 2 30 South Davis Street Helena, MT 59601

| Federal Register Notice: Comment Number: Mail Envelope Properties | | 89FR49917 9 (8550A5B5-9607-4E82-B1AB-95D2A4055867) | |
|---|-------|--|--|
| | | | |
| Created By: | drisc | colljohn37@gmail.com | |

Recipients:

"TerraPowerEnvironmental Resource" <TerraPowerEnvironmental.Resource@nrc.gov> Tracking Status: None

| Post Office: | gmail.com | |
|--------------------------------|--------------------|--|
| Files MESSAGE | Size 490 | |
| Confronting Climate Change.pdf | | |

| Options | |
|----------------------|--------|
| Priority: | Normal |
| Return Notification: | No |
| Reply Requested: | No |
| Sensitivity: | Normal |
| Expiration Date: | |

Date & Time 7/15/2024 5:43:44 PM 34917

Confronting Climate Change

Since the late 1980's when I first participated in discussions at the Electric Power Research Institute about National Academy of Sciences reports on human-caused Global Warming, I've known climate change to be an undeniable reality. Today I'm suggesting a response for us here in Montana that will preserve and create jobs to support our communities and families. The process will start this summer with a July 16 scoping of the Environmental Impact of the modular nuclear electricity generating plant under construction in Kemmerer, Wyoming and publication of a new National Electricity Transmission Plan to move clean electricity to where it's needed.

Moving electricity from where it's generated to where it's needed is a complex endeavor. Right now electricity moves across Montana, north and south, east and west. Going west the lines are jammed and going east there's a frequency change seam, roughly a line south from Fort Peck Dam to Miles City, where the Alternating Current (AC) of our western states' network comes up against the AC of the rest of our mid-continental states, except for Texas. This requires changing to Direct Current (DC) and then back to a different AC frequency. The U.S. Western Area Power Administration (WAPA) AC-DC- AC inter-tie is tucked below Signal Butte next to the interstate. That inter-tie can move 200 Megawatts (MW) west or 150 to 200 MW east.

The generating facilities at the Bureau of Reclamation's 250 MW Yellowtail Dam can move either way across the seam, as might the generating facilities at the Army Corps of Engineers 185 MW Fort Peck Dam if the electricity transmission lines were not so constrained in either direction. There is a new 525 MW High Voltage DC line by an independent developer out of Houston, Texas being planned to span 415 miles east to Center, North Dakota, from Colstrip, Montana.

As your one of your Congressional Representatives I'd work with WAPA, which owns 17, 293 miles of transmission lines and 57 power plants serving 613 long-term firm customers, to extend and upgrade the WAPA power line from both sides of Fort Peck Dam to the Bonneville Power Administration Con Kelley Sub Station at Columbia Falls, and upgrade transmission on both sides of the WAPA inter-tie west from Miles City. The Hi-line would be to collect wind energy from

1

along the Canadian Border and to electrify the BNSF railroad from the North Dakota Border to as far west

as Seattle-Tacoma. Additional required electricity in 345 MW increments could come from WAPA- owned Modular Nuclear Plants at Miles City, transmitting east or west. Causing the railroad to electrify might happen by ending the automatic pass through of diesel fuel costs, but I would like to work in a more coordinated way with BNSF representatives. The nature of electricity is such that it forces people to sit down and talk to each other about their respective piece of a complex machine operating at the speed of light. If we do that we could be successful.

Should any or all of the five petroleum refineries now processing 220,000 barrels of oil daily along the rail line at Billings, Laurel and Great Falls choose to manufacture hydrogen, I would sit down with them and do my best to assist making the necessary changes. Since high temperature electrolysis is 23 percent more energy efficient it's likely that modular nuclear reactors or solar concentrating towers would be located at or near the refineries.

Since nuclear plant is already being planned for construction in Wyoming, I already am encouraging a high-level nuclear waste repository to be located in Montana. It would track closely with the first repository in world history, expected to be opened this summer, at Oakala, Finland, to safely store for 100,000 years the operating life waste of five nuclear plants.

Forbes magazine just predicted, "Four million rail cars full of coal and 70,000 rail cars full of oil are going to disappear from America's railroad tracks," which could, but doesn't have to, mean the disappearance of jobs. It's time to break out the history books.

My seat mate in the Legislature, Joe Brand, was a Milwaukee locomotive engineer, and a fellow Butte story-teller, Kevin Shannon, worked his entire life for the Butte, Anaconda and Pacific Railroad. Both were strong union men and both swore by the far greater operational efficiency of electrified railroads over oil-fired diesel-electric.

If Montana's five oil refineries change over to making hydrogen the railroad will be in position to repurpose rail tanker cars for hauling

2

water for electrolysis and returning salt brine to the sea. The modular nuclear plant, once licensed will cost far less, and if built by a federal entity like WAPA, with a high debt ratio, will charge ratepayers less than half the rates of an investor-owned utility. New electricity plants, high temperature nuclear or solar processing plants, an electrified railroad and a high level nuclear waste disposal facility translate to good long-term jobs for a trained workforce force, high-paying union jobs.

I'll appreciate a good word from you to your friends.