



Thursday, 15 October 2020

NUCLEAR REACTORS FOR SASKATCHEWAN?

The Saskatchewan Government's intention is to use taxpayer dollars to research and build small modular nuclear reactors (SMRs) in Saskatchewan.

NOT CLEAN! All nuclear reactors create toxic radioactive waste. Everything - "spent" fuel bundles, the reactor vessel, all metallic components and the concrete structure ultimately become radioactive waste.

NOT GREEN! Calling SMRs, or any other nuclear reactor, "green" ignores the massive footprint of greenhouse gases created in mining, milling, fuel fabrication, reprocessing, enrichment, transportation, decommissioning, and waste management. Routine radioactive pollution and toxic chemical effluents are emitted all along the nuclear fuel chain.

NOT SAFE! Emissions from the nuclear fuel chain, including from reactors, can negatively impact human health. High level nuclear waste contains numerous man-made fission products, some fatal to humans within minutes of unshielded contact. Nuclear reactor accidents contaminate the land, air & water.

NOT HEALTHY! All nuclear reactors routinely discharge radioactivity into the air and water. The KiKK study in Germany found that leukemia in children increased the closer a child lived to a nuclear power plant. Other studies indicate that neonatal deaths and cancers at all ages increase in the vicinity of nuclear power plants.

NOT SMALL! While internet images show a single module of a reactor on a truck, they do not depict a full SMR power facility. With the infrastructure – containment building, exclusion zone, shielding, steam generator, turbine, etc. it would be as large as any medium sized power plant.

NOT LIKE HOUSEHOLD GARBAGE! Nuclear reactor waste has been produced in Canada since our first experimental ZEEP reactor in 1945, 75 years ago. But Canada has still not established a permanent method for safely dealing with the waste. "Recycling" or "reprocessing" is not what it sounds like - even more toxic solid & liquid waste byproducts are created. "Recycling" or "reprocessing" nuclear waste to create plutonium-based fuel for SMRs produces even more toxic solid & liquid waste byproducts and make it even more difficult to prevent proliferation of nuclear weapons.

NOT NECESSARY! In addition to combined-cycle natural gas plants in the near term, Saskatchewan can meet its energy needs by increasing sustainable & renewable energy strategies & technologies including: conservation, wind, solar, geothermal, hydroelectric imports from Manitoba, run-of-the-river hydro systems, and others.

NOT COST-EFFECTIVE! All types of nuclear reactors have historically cost much more than their initial estimates. Nuclear's capital costs continue to increase dramatically while renewable energy costs are declining, as noted in an updated August 2020 report from the U.S. Energy Information Administration (EIA). Investing in renewables create more jobs, and produces energy sooner at less cost.

NOT ACCEPTABLE! For all of the above reasons and more - see links below - small modular nuclear reactors are not a viable choice for Saskatchewan. Let's not saddle taxpayers, present and future, with this speculative, untested, untried, risky, expensive, non-competitive and unnecessary technology.

References:

Not Clean

<http://www.cleangreensask.ca/sites/cleangreensask.ca/files/Pollution%20from%20the%20Nuclear%20Fuel%20Chain.pdf>

Not Green

https://www.pembina.org/reports/ClearingTheAir_Summary_final.pdf

Not Safe

<http://www.cleangreensask.ca/sites/cleangreensask.ca/files/RADIATION%20AND%20THE%20HUMAN%20BODY.pdf>

Not Healthy

<https://www.ianfairlie.org/uncategorized/new-french-study-on-childhood-leukemias-near-nuclear-power-plants/>

Not Like Household Garbage

http://www.ccnr.org/Hill_Times_GE&SO_Sept_21_2020.pdf

Not Necessary

<http://www.cleangreensask.ca/sites/cleangreensask.ca/files/Small%20Modular%20Reactors%20SMRs%20Sept%202020.pdf>

Not Cost-Effective

https://www.eia.gov/outlooks/aeo/assumptions/pdf/table_8.2.pdf

<http://large.stanford.edu/courses/2016/ph240/kountz1/images/f1big.png>

Not Acceptable!

Gordon Edwards et al: <https://www.wiseinternational.org/nuclear-monitor/883/small-modular-nuclear-reactors-%E2%80%93-case-wishful-thinking-bestEdwards>

video <https://www.youtube.com/watch?v=Z-L4QvN3QIA>

<https://wiseinternational.org/nuclear-monitor/872-873/small-modular-reactors-introduction-and-obituary>

<https://sppga.ubc.ca/news/professor-ramana-publishes-eyes-wide-shut-a-report-on-problems-with-small-scale-nuclear-plants/>

<http://www.cleangreensask.ca/sites/cleangreensask.ca/files/footprint%20poster%20with%20black%20background.pdf>

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