RISKS

Not "new": On paper for decades, none of the SMNR designs have solved fundamental safety issues such as fires and explosions, and cannot demonstrate they are accident-proof.

Multiple failures: The purpose of SMNRs is to have multiple units at one site. With many identical units, a flaw in one could mean a flaw in all. This could cause a cascading accident.

Reduced safety measures: To save money, SMNR owners want one control room for multiple units. Containments are also smaller and weaker and designers are pushing for fast-track licensing. But cutting corners risks public safety.

Nowhere to run: Since SMNRs are "small," owners want the evacuation zone reduced to the property fence line. But this supposes that only one reactor at a time will fail. This would leave local first responders unprepared for a radiological emergency. The public beyond the boundary would not be protected.

More radioactive waste: SMNRs still produce radioactive waste. If there are multiple units at one site, the volume of waste will be higher. With no disposal solution for reactor waste, it will remain on site indefinitely.

A land lost: An accident could contaminate the surrounding landscape for decades or more. This would harm people and animals for generations.

The weapons connection: SMNRs are ideal for producing plutonium needed for nuclear weapons. Documents show that meeting the need for trained personnel for the nuclear weapons sector is a prime motivator behind the push for SMNR development.

HEALTH

Harm to our families: Exposure to ionizing radiation released by reactors causes cancers and other health problems. SMNRs are not immune from leaks and spills. These risks will remain.

THE CLIMATE CRISIS

Nuclear power is too slow and too expensive to help with climate change. SMNRs are even less useful given their small output. We can reduce carbon emissions sooner, faster, and cheaper by investing in renewable energy and energy efficiency.

ENERGY ALTERNATIVES

Renewable energy is the fastest growing energy source in the world. Wasting time and diverting funding to SMNRs takes away from what is really needed — decentralized, cheaper, safer renewable energy technologies, combined with energy efficiency measures and conservation.

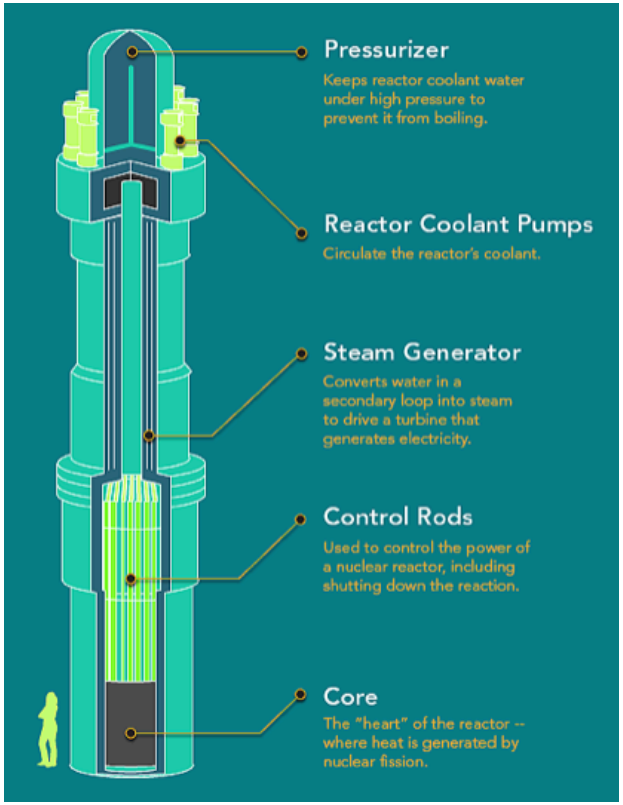
WHAT WE COULD LOSE

Protecting nature: Nuclear construction of any size means noise, dust, light and traffic, even before the radiological risks. That will disturb and drive away wildlife. Reactors must be built on or near bodies of water which will be irreparably harmed by thermal and radiological discharges released after fissioning.

FURTHER READING

Go to http://www.beyondnuclear.org/fact-sheets/ for more detailed information about small modular nuclear reactors.

The false promise of small modular nuclear reactors



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WHAT IS A SMALL MODULAR REACTOR?

More properly called a small modular *nuclear* reactor (SMNR), the concept has been around on paper for decades. There are at least five basic SMNR designs each with multiple variations. None has proven it is inherently safe under all accident conditions.

WHAT IS SMALL?

Small means 300 MW or less but smaller is not necessarily safer. (The Rolls Royce design is 450MW, so not really small at about half the size of a traditional reactor.) SMNRs are only small in power per unit generated but are physically not much smaller than a regular sized reactor.

WHAT IS MODULAR?

Modular means that a group of small reactors at a single site could variably come on and off the grid as demand dictates. But the cost of this load flexibility would be far higher than the cost per kilowatt of electricity produced by factory-produced solar and multi-turbine wind farms, which are already modular, are not inherently dangerous like reactors and produce no lethal long-lasting waste.

Wind and solar are already "modular"

THE JOBS ILLUSION

No immediate jobs: Despite the hype, there are no orders for SMNRs, so any job expectations would not be realized in the immediate future and could be years away. We can't afford to delay meaningful employment projects while waiting for an SMNR.

Fantasy figures: SMNRs will be manufactured in factories elsewhere and only assembled on site. The job figures will be far lower than SMR publicity suggests and mostly short-term.

New nuclear jobs are far in the future and likely far fewer than promised. (Photo: DOE)

Killing local businesses: SMNRs promised for impoverished or rural areas may not be the panacea they seem. Small local businesses depend on experienced local workforces that may be "lured away" by the promise of "high paid" jobs at the nuclear site, depriving these independent business of key workers and threatening their survival.

GOOD JOBS INSTEAD

Responsible elected officials should support long-term economic opportunities that make sense for their communities, not waste time and money on new nuclear plants.

- Solar and wind energy can bring on far more jobs far faster than new nuclear power.
- Renewable energy promises long-term and safer jobs than the mainly temporary local jobs that new nuclear plants could deliver.
- In the US, solar and wind energy provide more jobs than nuclear, oil, gas and coal power combined.
- Some communities may be better suited to other forms of job stimulus, such as tourism, or supporting home-grown businesses.

COSTS

Costs keep rising: The nuclear industry routinely underestimates the costs of new nuclear plants, and these costs keep rising. Any estimates today will be under-estimates tomorrow.

Poor economies of scale: An SMNR factory requires a huge upfront investment. Hundreds if not thousands of units would need to be produced before a factory becomes cost-effective.

The industry won't pay: Whether through consumer-funded schemes, or government subsidies, private corporations can't pay for their SMNR projects. Ratepayers will end up funding profit-making for companies like Rolls Royce.