

# Nuclear energy is **NOT** a climate solution.

## **Fact #1: Nuclear energy has a large carbon footprint.**

- Uranium mining, milling, plant construction, fuel enrichment, waste storage, and plant decommissioning are energy-intensive processes.
- The carbon footprint of the entire nuclear fuel chain is two to six times that of sustainable energy sources, from geothermal and solar photovoltaic (2X), to wind and hydro (6X). Promoting nuclear as “clean” energy because it emits relatively little carbon at the point of power generation is nothing more than industry greenwashing.

## **Fact #2: Nuclear energy is not clean. It is toxic and dangerous.**

- Radiation is routinely released into the air and water as part of operations. Despite industry claims to the contrary, consistent exposure to low levels of radiation can cause cancer and birth defects.
- Really bad accidents happen: Three Mile Island. Chernobyl. Fukushima.
- There is no safe, environmentally just, permanent solution for the isolation of over 80,000 metric tons of high-level radioactive waste for the hundreds of thousands of years that it will remain lethal.
- Nuclear facilities and waste storage sites are vulnerable to acts of terrorism.

## **Fact #3: Nuclear energy’s demands on water are not compatible with a warming planet.**

- Under global warming conditions, water is fast becoming a precious commodity. Reactors consume billions of gallons of water daily for cooling and return heated water to rivers and oceans, undermining waterways and destroying aquatic life.
- During droughts and heatwaves, the already warm water cannot cool the reactors adequately, requiring nuclear plants to generate less power or shut down altogether.
- Water levels are rising. Many nuclear plants located along waterways will eventually become submerged, making them inoperable and the radioactive waste stored on site even more vulnerable.

## **Fact #4: We need to develop flexible, distributed systems of power generation that can accommodate many sources of power. Nuclear power cannot adapt to this model.**

- Nuclear generates relatively large amounts of “baseload” power when plants are operating. They must shut down periodically for months at a time for refueling and maintenance.
- New nuclear reactor designs in development (e.g. small modular reactors, thorium reactors) are being touted as exciting new additions to the energy mix well before they have actually been proven safe, efficient, and cost-effective. And they create radioactive waste.

## **Fact #5: Nuclear energy is too expensive.**

- Nuclear energy is at least three times as expensive to produce as solar or wind, and the price of renewables continues to drop while the cost for nuclear continues to rise.
- The nuclear industry is able to survive only because of huge taxpayer subsidies.

## **Fact #6: Nuclear energy impedes the development of renewable energy.**

- The nuclear industry draws needed resources away from renewable energy expansion. Government funding should go toward research for what to do with radioactive waste, and not to subsidize nuclear power generation or to bail out failed nuclear projects.

## **Fact #7: Given the climate crisis, we can’t wait.**

- We need to move rapidly to an efficient, low-cost, sustainable energy system. Nuclear power plant construction takes 10-20 years to complete, and huge cost overruns are common. Solar and wind projects take just 2 to 5 years to come on line.



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