

November 30, 2020

Dear Chairman Barrasso, Ranking Member Carper, and Members of the Committee:

We write in opposition to S. 4897, the American Nuclear Infrastructure Act of 2020, which is scheduled for mark-up on December 2, 2020. The provisions in this bill would misdirect vital government, financial, and industrial resources to an uneconomical, environmentally unjust and harmful set of technologies. If 2020 has taught us anything, it is that we must marshal our national resources to address structural inequities and injustices that undermine our safety, health, economic security, and sustainability.

Nuclear Power is Not a Climate Solution: Nuclear energy amplifies and expands the dangers of climate change, and the measures proposed in S. 4897 would not change that basic reality. Nuclear power is too dirty, too dangerous, too expensive, and too slow to address climate change, and it is rooted in environmental injustice and human rights violations. The nuclear fuel chain relies on the extraction, processing, generation, and proliferation of vast amounts of radioactive and toxic wastes. By the time a single pound of nuclear fuel goes into a reactor, the production chain has produced more than 5,000 pounds of long-lived radioactive waste, which is either dumped in piles or ponds, or (in the case of depleted uranium) stored in cylinders or barrels in the open air.

The operation of nuclear power plants generates a myriad of radioactive wastes, and every pound of the fuel becomes an immense environmental hazard for which there is no solution. The eventual decommissioning of nuclear power plants then results in a vast pile of radioactive and toxic rubble, soil, metals, and liquids. The vast majority of uranium mines, mills, production facilities, reactors, and waste dumps are located in communities that are disproportionately rural, Indigenous, Black, People of Color, and low-wealth.

S. 4897 promotes this technology without mitigating any of these impacts, and by making some of them worse, with significant environmental justice, climate justice, economic justice, and nuclear weapons proliferation impacts.

Environmental Justice: S. 4897 seeks to expand uranium mining in the U.S. through creation of a domestic uranium reserve. While the bill does restrict procurement of uranium for the reserve from mines that are not located on Indigenous peoples' lands, it does not prohibit mining on those lands entirely. Companies could still mine uranium on Indigenous lands and sell it on the global market, or sell it to nuclear power plant owners directly. Neither does the bill prohibit procurement of uranium for the reserve quota from mines and mills that impact *other* environmental justice communities. And just as significantly, it does nothing to require federal agencies to mitigate the well-established environmental harms of uranium mining and milling practices, nor to require prompt and thorough reclamation and cleanup of mines, mills, and uranium processing facilities.

The provision allocating \$1 billion for cleanup of abandoned uranium mines (AUMs) on Indigenous lands is a welcome recognition of the issue. However, it is completely inadequate to the scope of the problem: the Navajo nation alone is burdened with over 500 AUMs, and it has cost at least \$1 billion to remediate a handful of them. Just as we cannot hope to prevent the

worst scenarios of global warming without action on the scale of the problem, we cannot rectify the impacts of uranium mining by throwing a small fraction of the necessary resources at it. There are over 15,000 AUMs nationwide, which have been leaking radioactive and toxic waste into groundwater, and releasing radioactive dust and gases, in most cases, for decades. This is a national crisis and must be treated as such.

Climate Justice: We need to invest in a transition to efficient, renewable, clean energy technologies that can scale up as rapidly as possible, as affordably as possible, to reduce emissions as aggressively as possible. Nuclear energy does not meet any of these criteria. New reactors have proven a waste of time and money since the 1980s. The record has worsened over time. In the first wave of nuclear reactor construction (from 1960-1990), about 50% of planned reactors were canceled. From 2005 to 2014, U.S. companies proposed to build 30 new nuclear reactors. All but two of them have been canceled or shelved, despite vast financial supports offered by federal and state governments. The only two reactors under construction – Vogtle 3 and 4, in Georgia – were proposed in 2008, were supposed to be online in 2017, and are now more than five years behind schedule. Their projected cost is now \$28.5 billion, double the original cost. The project has not reduced fossil fuel generation by a single kilowatt-hour; rather, massive production of concrete and steel for construction has generated significant greenhouse gas emissions.

The climate opportunity costs of nuclear investments are immense, and have dire consequences for communities on the frontlines of hurricanes, sea-level rise, flooding, drought, and wildfires. Had Southern Co. invested in renewable energy and energy efficiency starting in 2008, its customers' bills would be lower, and it would have started generating emissions reductions years ago. S. 4897 proposes to repeat this mistake, wasting even more time and money on uneconomical and impractical nuclear energy schemes. Several provisions of the bill promote new reactor designs that would not be commercially available for decades, if any of them ever proved economically and technically feasible. The provisions to curtail environmental and licensing reviews are short-sighted, reducing up-front costs while short-circuiting democratic protections against nuclear safety and environmental impacts.

Economic Justice: One provision of S. 4897 would create a ten-year subsidy program for about half of the nuclear reactors in the country – so-called “merchant reactors,” which sell electricity in competitive wholesale power markets. The bill directs the Environmental Protection Agency, in consultation with the Department of Energy (DOE), to establish a program to award “credits” to nuclear reactors that their owners claim would be shut down without federal financial support. The bill does not cap the cost of the program, the number of eligible reactors, or the prices of the “credits”. It authorizes expenditures from the Treasury in whatever amount DOE awards to qualified reactors. The bill does not require independent verification of nuclear corporations' claims about the emissions impacts of potential reactor closures. It does not consider states' renewable energy and energy efficiency targets and programs, with which these subsidies could interfere. It does not consider alternatives, such as whether renewable energy would be more affordable. It is short-sighted, awarding subsidies to old, uneconomical nuclear reactors in two-year increments. It does not provide for any planning on how to phase out and replace nuclear reactors with renewable energy sources by the time the program expires in 2030. And, because it only considers the profitability of individual nuclear power plants, it does not protect U.S.

taxpayers from being fleeced to pay uneconomical subsidies when cheaper alternatives and more strategic investments are available.

Nuclear Weapons Proliferation: S. 4897 seeks to prioritize the introduction of other harmful nuclear fuel production technologies, including nuclear waste reprocessing and commercializing the production of more highly enriched uranium (so-called, high-assay low-enriched uranium, or HA-LEU, with the concentration of uranium-235 increased to between 5.0% and 19.99%). Both reprocessing and HA-LEU present nuclear weapons proliferation risks by commercializing technologies for higher-grade enrichment and plutonium processing. Commercial HA-LEU production would normalize the use of civilian enrichment technologies to achieve higher grades of uranium enrichment, demonstrating the potential for their use in producing bomb-grade uranium. Reprocessing has produced immense environmental contamination and complicated nuclear waste management in the U.S. and everywhere else it has been implemented. For instance, after 45 years and billions of dollars spent, we are still decades and billions of dollars from completing cleanup of the first commercial reprocessing plant in the US, at West Valley, NY, which only operated for six years.

What is more, the provision of S. 4897 that requires DOE to produce an annual report on inventories of spent (irradiated) fuel does nothing to mitigate the environmental crisis posed by that waste. We have a growing stockpile of nearly 90,000 tons of commercial irradiated fuel, which will be hazardous for more than 1 million years, and no viable means to safely manage it. While S. 4897 would require DOE to provide cost estimates for what that might entail, it does not require DOE to take the legal steps necessary to reinstate the statutorily mandated payments by the nuclear industry to the Nuclear Waste Fund, which were suspended by court order in 2014 because DOE lacked a credible estimate of the cost. Meanwhile, the current inventory of irradiated fuel is growing by 2,000 tons per year, and already exceeds the statutory limit of the first proposed repository—Yucca Mountain—which has been canceled because the site has proved unsuitable.

Nuclear Disaster Risks: S. 4897 does nothing to make nuclear power safer for climate change, while compromising the nation's ability to address either. Nuclear power is not being regulated for climate change and other known dangers. As this committee saw in 2019, the Nuclear Regulatory Commission (NRC) has adopted regulations making it optional—not required—to address verified vulnerabilities to flooding and earthquakes. NRC has similarly failed to address other major disaster risks. A National Academy of Sciences panel in 2006 identified the industry's practice of packing irradiated ("spent") fuel pools to maximum density as a major national security threat, yet NRC has refused to acknowledge the danger and allowed high-density racking to continue at virtually all operating reactors.

NRC's habit of relaxing safety requirements has only worsened during the pandemic. NRC has refused to take any actions to protect nuclear workers from COVID-19, nor even to require its licensees to provide any reporting of infection, testing, and hospitalization rates among their workforces. The few publicly available reports through news media indicate evidence of massive problems, with hundreds of workers infected at multiple sites. On top of that, NRC has canceled hundreds of required, scheduled safety inspections, security drills, and emergency preparedness exercises, for up to two years. The report required by S. 4897 does not even fill the data gaps that

NRC's inaction has created, much less protect nuclear workers and their communities from infection.

Congress must not continue enabling NRC and the industry it regulates to put short-sighted economic interests ahead of human lives, racial justice, the health of our environment, and safe drinking water. We cannot perpetuate false solutions to the climate crisis that perpetuate our reliance on dirty energy industries, and have any hope of ending the climate and environmental justice crises those industries bring about. We hope we can count on you to reject S. 4897 and embrace policies that will truly support a just and equitable transition to safe, clean renewable energy.

Sincerely,

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