April 22, 2024 ~Filings – CIECP. 2024. & PHASE. Comments. DOE. HALEU DEIS

Comments of CIECP and PHASE

Re: Draft Environmental Impact Statement for Department of Energy Activities in Support of Commercial Production of High-Assay Low-Enriched Uranium (HALEU), DOE/EIS-0559 (published March 2024).

Mr. James Lovejoy

DOE EIS Document Manager

U.S. Department of Energy

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Dear Mr. Lovejoy:

We write to ask the Department of Energy (DOE) to **withdraw the Draft Environmental Impact Statement for Department of Energy Activities in Support of Commercial Production of High-Assay Low-Enriched Uranium (HALEU)**, DOE/EIS-0559, issued in March 2024 (DEIS). The reason is that the projects envisioned are not sufficiently ready for evaluation.

As the DOE itself acknowledges in the DEIS Summary:

“Many of the specifics associated with these activities are subject to factors beyond the scope of the Proposed Action. The fuel requirements for advanced reactors would be dependent not only upon which reactor designs are ultimately licensed and operated, but also to what extent the commercial operation of advanced reactors is successful. This in turn impacts both the type and number of fuel fabrication facilities needed and the ultimate disposal of HALEU fuel. Therefore, a detailed assessment of the impacts of these activities would be speculative and is not included in the EIS.” (DEIS Summary p 11)

DOE further notes the level of uncertainty with respect to cumulative effects impacts analysis:

“Because of the large number of activities and potential facilities evaluated in this HALEU EIS and the uncertainty of the numbers and locations of facilities, potential facilities evaluated in this HALEU EIS and the uncertainty of the numbers and locations of facilities, a cumulative effects analysis for most activities under the Proposed Action in this HALEU EIS would be speculative and not amenable to detailed analysis at this time. DOE expects that new or modified HALEU production facilities that would be licensed and subject to additional NEPA or equivalent state evaluation would include consideration of cumulative impacts by the NRC, an Agreement State, or other Federal agencies.” (DEIS, p 2-36)

Determination of cumulative for radioactivity uniquely mandates looking at the cumulative effects not only when added to other past and present actions, but looking into the future – which for radioactive materials is centuries to millennia. The ecosystem parameters are vast, because the danger of released long-lived isotopes which can harm living things will persist for a mindboggling long time.

Cumulative effects analysis necessarily involves a robust evaluation of the uncertainties, which DOE has failed to do. It has long been recognized that incremental harms not only add up, but have combined impacts which substantially exceed their added sums.

As articulated by the Council on Environmental Quality decades ago: “Evidence is increasingly demonstrating that the most devastating environmental effects may result not from the direct effects of a particular action, but from the combination of individually minor effects of multiple actions over time.” (White House CEQ: Considering Cumulative Effects Under the National Environmental Policy Act, Council on Environmental Quality Executive Office of the President, 1997. <https://www.energy.gov/nepa/articles/considering-cumulative-effects-under-national-environmental-policy-act-ceq-1997>, at p 1.)

Further, DOE may not legitimately cast aside its obligation to at least identify potential cumulative effects by nebulously pointing to the issuance of “some” past reports, especially since past reports disregarded actions and conditions which have transpired since and related to a world which is rapidly becoming more fragile, as climate change and numerous other human-influenced conditions and natural phenomena unfold.

Thus our key point is that there is not enough substance in the DEIS to truly inform the public about the program at the level of detail which is warranted for such a serious and costly program. This, in turn, deprives the public of adequate opportunity for comment.

We also urge the DOE to **support the No Action alternative**. The Proposed Action to initiate a program for the acquisition of HALEU would set the United States on an extraordinarily reckless course.

Every step of a HALEU program presents unacceptable level of environmental and public health risk.

The front end of the uranium fuel cycle, especially the mining step, has a long track record of despoilation of land and contamination of water. The front end also has a shameful history of damage to Native American tribal lands and impairment of the health and welfare of Indigenous People. Continuing this pattern by embarking on work to create an even more dangerous and radioactive nuclear fuel cycle would perpetuate extreme environmental injustice.

Throughout the DEIS, DOE explicitly adopts the assumption that regulations will result in avoidance of undesired events. For example, DOE states that regulations “would likely result in avoidance of earthquake and land subsidence prone locations, and locations with substantial wetland or flood plains” and that construction and operations at “all sites” would be conducted in compliance with all NRC and all other governmental regulations. (DEIS, p 3-2)

Such assumptions bring to mind the philosophy of all is best in the best of all possible worlds satirized by Voltaire in *Candide*. It would be nice for regulations to always embody perfect prescience, for politicians and agencies to be free from influence, for corporations to be unceasingly vigilant, for workers and vendors to unfailingly reliable and never subject to imperfection or corruption. In the real world, these attributes and conditions do not apply.

Instead of assuming every day will be a lovely one, the DOE owes an obligation to the public to present a candid and robust analysis of what can go wrong under a range of plausible very serious to worst case scenarios. That endeavor should begin with a strong overview of the many regulatory failures, corrupt practices, near-miss accidents, and unintentional spills and releases of hazardous materials – including over just the years of the current century. DOE should also fully apprise the public of all the factors which the NRC excises from licensing regulations, as well as the extent to which the NRC issues exemptions.

The post-mining operations contemplated would put the nation at risk of sabotage and terrorist attack.

Creating a HALEU fuel supply chain will elevate proliferation risk both directly, via manufacture of just-at-the-point-of-weapons-use fuel, and indirectly by placing the US in the posture of hypocrisy if we protest advancement of a similar program in other nations.

DOE notes the finding made by the National Academies of Science (NAS) in a 2023 report that “‘Expanding the global use of high-assay low-enriched uranium (HALEU) would potentially exacerbate proliferation and security risks because of the potentially greater attractiveness of this material for nuclear weapons compared with the low-enriched uranium used in light water reactors. The increased number of sites using and states producing this material could provide more opportunity for diversion by state or nonstate actors’.” (DEIS, p 3-34)

However, with a casual nod to the risk, the DOE simply dismisses it without bothering to present an even cursory discussion of the evolving risks: “DOE acknowledges that the widescale deployment of HALEU fuels in U.S. reactors, which could be facilitated by the Proposed action, does present different proliferation concerns than the use of LEU, but believes that (1) adequate controls are in place to reduce the proliferation concerns to acceptable levels and that (2) the benefits of use of HALEU in advanced reactors outweighs the potential proliferation risks.” (DEIS, p 3-34)

The lack of candor and discourse is an insult to the intelligence of the public.

A multitude of rapidly evolving threats to nuclear and other critical infrastructure is well within the realm of information in the public sphere. Growing risks which we currently face include evolving dual use technologies (e.g., AI, cyber, drones) and serious geopolitical and sociopolitical conflicts, as well as the rapidly growing spread of disinformation and misinformation in all manner of media.

In lieu of presenting analysis, DOE issues bland unsupported assurance that safeguards will be in place and the merits of HALEU (not particularly well elaborated in the DEIS either) outweigh proliferation and terrorism.

Hundreds of billions of dollars have already been spent by American taxpayers in support of uranium fuel production and nuclear energy. Uniquely, the costs continue to rise and despite 70 years of subsidization, the industry cannot stand on its own two feet.

There is no valid energy-related reason for embarking on what is, for all intents and purposes, a massive redistribution of money from the pockets of ordinary American taxpayers to private venture capitalists and multibillion dollar corporations for the purpose of gambling on speculative nuclear projects.

From a safety point of view, it is also most telling that the nuclear industry remains unwilling to commit to continuation without the unparalleled liability protection provided by the Price-Anderson Act – which, of course, was implemented in 1957 as a ‘temporary’ support for an industry in its infancy.

The cost and hazard of managing the nation’s existing inventory of spent fuel and other high-level, as well as the so-called “low-level” nuclear waste is already untenable. Adding to it with a hotter, more radioactive waste stream of new complexity is utterly irresponsible.

The climate crisis mandates solutions that will make a major difference within the current decade. Wide distribution of currently available renewable technologies backed by funding support for modernization of the grid, efficiency solutions, storage options, and development of battery backup systems are where dollars should be directed.

Renewable energy can be rapidly scaled up, but the signals to the marketplace need to be made strongly now. Nuclear is not only too slow and expensive, it is too inflexible to support a renewables-based grid.

The IPCC ranks nuclear far behind renewable energy and lower energy consumption under the Sustainable Development Goals due to nuclear’s high cost, problem of waste management, impact on water resources, pollution from uranium mines, difficulty of ensuring the full independence of regulatory authorities, and proliferation risks.

The question of America’s energy future should be addressed in the framework of a public debate informed by proper agency reports and full transparency. The HALEU DEIS does not serve this objective.

Michel Lee, Esq.

On behalf of

Council on Intelligent Energy & Conservation Policy (CIECP)

and

Promoting Health and Sustainable Energy (PHASE)

**Above**

**Sent via email Apr 22, 2024**

**From:** GMAIL LEE2 <lee2councilenergy@gmail.com>
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**Subject:** HALEU DEIS - Public Comment on DOE/EIS-0559