Review of: "[Commentary] Fallacy of Abundant Cheap Nuclear Energy"

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Potential competing interests: No potential competing interests to declare.

1. The article presents a quite innovative approach towards the myth behind nuclear energy generation.
2. As mentioned in the abstract, “fusion nor fission could solve the energy problem of the world in the future,” what could then be the possible solution for the energy crisis as faced by countries worldwide, mainly because fossil fuels cannot be used to an extent that they get exhausted? Comment expected from the author.
3. As per many other literatures, one current possibility is deuterium-tritium fuel. This fuel reaches nuclear fusion reaction conditions at lower temperatures than other elements and releases more energy than other fusion reactions. Future commercially feasible fusion plants would need a robust supply chain for both hydrogen isotopes. Can the author justify the fallacy to which he had referred in the article in the context of the above theory?
4. Can power plant designs be automated in such a way that such a high energy input can be reduced to a minimal level so that the energy generated can be justified? Comments, please.
5. “A fuel is real fuel or not is to determine whether the fuel has a positive net energy yield (energy-return), i.e., the fuel produces greater amounts of energy when it is used than the energy investment in extracting the fuel from basic raw materials and making, processing, transporting, as well as disposing of residues of the fuel.” Is this the only criteria to judge the efficacy of a fuel?
6. 177 metric tons of uranium is needed to provide a steady 1GW of power for 1 year. The current annual global production of 40,000 metric tons of uranium could provide 40,000/177=226GW continuously for 1 year, sufficient to provide 15% of today’s consumption, or 5% of the expected demand in 2050. Comments, please.
7. Moreover, nuclear power plants, however, do not increase the greenhouse effect and do not damage the ozone layer, which is the need of the hour. How can this be justified with fossil fuels?
8. Overall, the study is quite interesting; however, it needs to be justified as few aspects are still controversial.