

# THE PROBLEMS WITH SMALL MODULAR NUCLEAR REACTORS (SMNRs)

## *They are “fairy tales” at present:*

- None exist at commercial levels, and won't in meaningful numbers until well after 2030
- NRC has approved only one design of the 12 or so under consideration
- Performance claims are theoretical, often overblown (e.g. Transatomic), not demonstrated (running on radioactive waste), sometimes fraudulent

## *They are NOT a climate solution:*

- Won't be available in meaningful numbers until the mid-2030s, past the IPCC deadline of 2030 for transforming our entire energy system
- Experts agree: 2 former NRC Chairpersons, former heads of European energy agencies, energy analysts, economists and academics
- Threaten renewables goals in CEJA by competing for market share and transmission access

## *They will produce more dangerous high-level radioactive wastes:*

- More reactors means – **MORE** radioactive waste, with no disposal facility available.
- A Nov. 2022 study indicates they produce **MORE** radioactive waste (2 to 30 times more, depending on design) per unit of energy than do current large-scale reactors

## *They are not economical:*

- Not economical in cost/MWh compared to available, unsubsidized alternatives like renewables and efficiency (Lazards; Statista)
- Estimated costs have doubled even before a single construction shovel has hit dirt
- Costs currently estimated at 2-3 times greater than for renewables, and rising
- If current reactors are uncompetitive and require \$3 billion bailouts, adding **MORE** reactors will make the situation worse, requiring even more nuclear bailouts

## *They trade away safety for reduced costs:*

- Many designs being proposed with no safety containments, reduced or eliminated emergency planning zones, fewer onsite personnel, exemption from Price Anderson Act accident coverage
- Enormous increase in transportation volume from commercialization opens them up to accidents like the East Palestine train disaster.

## *They have environmental justice implications*

- Most uranium domestically and internationally mined on Indigenous Lands
- White House Environmental Justice Advisory Committee identifies nuclear power and waste as **NOT** being beneficial to communities

## *They have nuclear materials and weapons proliferation implications:*

- Currently have fuel (HALEU – higher enriched fuel) constraints, dependent on Russian imports
- Commercialization and export will result in essentially distributing “stationary dirty bombs” globally in cities, and in actual (Ukraine) or potential war zones (Taiwan)
- Leaders in USA, France and Britain have publicly stated that nuclear power and weapons are interdependent on each other for existence