

Testimony

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Maine needs to pass LD 342, 343 and 601

I have been in the Nuclear Industry for greater than 48 years

I started operating reactors on nuclear submarines and retired last year after performing the function of Chief Nuclear Officer, VP Nuclear and Site VP at NB Power for 8 years.

I am presently spending some time teaching Nuclear courses at MMA as a contractor and lobster fish so I am concerned with the environment

Renewables have a role, but Renewables only produce when conditions allow them too. All renewables need to be backed up by dispatchable power. Power when you need it.

It's unreliable to rely on power from Canada when you really need it

Battery storage for grid scale energy is not feasible. They can perform the function of Frequency modulation and minor peaking control

Electrification requires carbon free power generation. Recent studies are calling for 3X nuclear generation by 2050

Nuclear power is the safest means of generating energy. Safer than wind. From ground to decommissioning (google it)

New Nuclear SMRs, gen 4, are different than their gen 2 counterparts. They are engineered to be "walk away safe". They shutdown on loss of power and require no water or backup generators and passively cool themselves.

- Modularized to control cost - ensure quality – increase production
- Small size to decrease capital cost – target is <10 cents/KWH – competitive for life of the plant 60 years
- Can bundle them for any size necessary
- Some SMRs are designed recycle used fuel from older reactors
- High temperature – support water, hydrogen, ammonia generation.
- Available 24/7/365
- Built to withstand extreme external hazards (weather)
- Excellent load following capabilities – compatible with renewables

EXAMPLES

1. Arizona, Louisiana, Indiana, Michigan, Pennsylvania, Maryland, NY, Texas, Washington state, Wyoming and UTAH are all exploring and/or supporting new nuclear projects – They need the clean power and see the economic benefits
2. Amazon, Google and Microsoft are all supporting nuclear projects.

3. Maritime industry with partnerships being created with Core power, Glosten, Mobile Nuclear, American Bureau of Shipping, USC and MMA are under way

Maine needs to pass these nuclear bills to allow looking forward at the opportunity that nuclear can provide and send a message that we are open for new business while maintaining our unique character. SMRs would be a good fit for Maine.

4. Wyoming is the Sodium reactor – Terra Power – Bill Gates is funding and has started infrastructure building is based on EBR-2. (30 years recycled its own fuel) The environment approval process has passed and will start construction of the plant next year.
5. Google is supporting the Kairos reactor
6. Amazon is supporting x-energy SMR – Energy North West HTGR in Washington state
7. Microsoft – 20 year agreement with Consolidated Energy TMI -1 restart
8. Also Restarting Palisades plant in Michigan, Potential restart Duane Arnold PP in Iowa
9. Tennessee – nuclear hub for SMR development at Oak Ridge and Clinch River – 154 companies including Amazon and Google are involved
10. Texas A&M nuclear hub for SMR development in Texas
11. TEXAS Tech Also looking at leading a MSR for desalinization project
12. OKLO SMR is partnered with Idaho National Laboratory

The National Association of State Energy Officials has announced an initiative to support the deployment of advanced nuclear reactors through cost-cutting measures, optimized permitting processes, coordinated procurement and expanded financing options. Led by 10 states, including New York, Pennsylvania and Wyoming, the Advanced Nuclear First Mover Initiative will provide a platform for collaboration between state officials, industry stakeholders and technical experts