Energy Security Program Definition

Vision: "Don't Bury It! Recycle!"

Build a Joint/PPP (Public-Private-Partnership) Center and National Laboratory for Nuclear Fuel Cycles and Center for Carbon Free Energy Research, Development, Test and Evaluation on the Nevada National Security Site (NNSS) to:

1. **Provide** spent nuclear fuel recycling engineering and testing capabilities to replace the $100+ Billion, million-year, obsolete repository plan for Yucca Mountain Lab;
2. **Convert** wasteful U.S. spent fuel storage costs, unnecessary litigation expenses and current funds into investments to build a world class facility for temporary holding and recycling on the NNSS-- the best global site for nuclear safety testing;
3. **Establish** a Nuclear Fuel Cycle National Laboratory on or near the NNSS to design, reprocess, recycle, develop, manufacture and service advanced nuclear fuels; and
4. **Create** a Joint/PPP Park for design, engineering; licensing, systems integration, and testing of fixed and transportable power systems that employ microgrids; advanced reactors; internal power generators and other carbon free/renewable energy components for water purification, desalination and hydrogen fuels production.

Desired Operational Capabilities: Establish the NNSS Joint/PPP Engineering and National Laboratory with associated Carbon Free Energy Business Park to:

1. **Implement** Argonne Lab-Developed Pyroprocessing and other technologies to recycle 95+% of used nuclear fuel into reusable, advanced nuclear products;
2. **Use** Yucca Mountain tunnels for temporary disposition of impenetrable glass disks containing the very small (3%) quantities of residue from the recycling processes;
3. **Exploit** the convenient access to the new fuels and available large research park land areas in Nye County to expedite results from the designs, pilot testing, production line manufacturing, power distribution and field support of advanced nuclear reactor powered systems to create massive economic benefits for NV; and
4. **Assist** U.S. companies with special testing and NRC licensing of highly robust and secure, leased, MicroGrid controlled, advanced reactor power systems featuring sealed internal cooling and EMP and cyber protections in fixed and transportable versions for resilience against natural and human threats.
5. **Enable Carbon Free modular nuclear power systems to operate unrefueled for up to 30 years; produce power 24/7/365; protect against terrorist, EMP and cyber threats; be pollution-free, walk-away safe and proliferation-proof while providing turn-key, onsite services for civilian, national security, FEMA and global customers**.