Alexander-Webb – Clean Energy Act of 2009

To create the business and regulatory environment to double nuclear production in 20 years and establish 5 Mini-Manhattan projects to make advanced clean energy technologies effective and cost-competitive

1. Carbon-Free Electricity Loan Guarantees
   - $100 Billion for technology-neutral carbon-free electricity loan guarantee program.
   - CBO estimates cost at $10 billion (may cost less).
   - Secretary Chu has suggested doubling the $18.5 billion available today for nuclear power.
2. New Reactor Designs
   - $200 million per year for five years to enable the Nuclear Regulatory Commission (NRC) to review new nuclear reactor designs such as Generation IV or small modular reactors. (Would not impact NRC review of potential sites for nuclear power plants.)
   - Reaffirm the federal government's commitment to dealing with spent nuclear fuel.
3. Nuclear Workforce
   - $100 million per year for ten years for education, workforce development and training to ensure a supply of nuclear engineers, operators and craftsmen such as welders and pipefitters.
4. More Power from Existing Reactors
   - $50 million per year for ten years for nuclear reactor lifetime-extension and effiency research.
   - Increased efficiency and longer lifetimes for existing 104 reactors could equal the production of 20-30 new reactors.
5. Five Mini-Manhattan Projects for Clean Energy R&D ($750 million per year for ten years)
   - Clean Coal: to make carbon capture and storage a commercial reality ($150 million per year)
   - Advanced Biofuels: clean fuels from crops we don't eat ($150 million per year)
   - Advanced Batteries: for electric vehicles ($150 million per year)
   - Solar Power: to make solar power cost competitive ($150 million per year)
   - Recycling Used Nuclear Fuel: ($150 million per year)
     - Support Secretary Chu's Blue-Ribbon Panel on what to do with used nuclear fuel.
     - Decide upon the best way to recycle used nuclear fuel.
       i. Proliferation-resistant (no pure plutonium).
       ii. Reduce radioactive lifetime of final used fuel product by 99.97%.
       iii. Reduce volume and mass of final used fuel by 97% of what it is today.
     - Develop Generation IV reactors that will consume recycled nuclear fuel.

Total 20 year cost would be no more than $20 billion.

**While the loan guarantee program is scored at 1% for nuclear loans and 10% for other program participants, this proposal uses a 10% score for all loan guarantees.*