

Nuclear Subsidies (So Far) in the Climate/Energy Bills

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Nuclear Subsidies in House Climate Bill

- American Clean Energy and Security Act (HR 2454)
- Passed the House (219-212) on June 26
- Nuclear Subsidies include:
 - Clean Energy Deployment Administration (CEDA)
 - New nuclear excluded from RES baseline
 - Study on thorium fuel
 - Manufacturing Revolving Loan Fund Program
 - International technology deployment

Nuclear Subsidies in Senate Energy Bill

- **American Clean Energy Leadership Act (S. 1462)**
- **Passed Energy Committee (15-8) on June 17**
- **Nuclear Subsidies include:**
 - CEDA: Nuclear and coal slush fund version
 - New nuclear excluded from RES baseline
 - Sense of Congress stating the strategic role of nuclear power
 - Development of reprocessing and radiation standards
 - Commission on Radioactive Waste
 - Authorization of \$5.17 billion in nuclear energy R&D, incl. reprocessing
 - Reauthorization of Nuclear Power 2010
 - Nuclear workforce development and training
 - Increased DOE authority to enter into R&D, development contracts
- **Bill is be combined with Senate Climate bill (to be publicly released in September)**

Carbon Trading Will Benefit the Nuclear Industry

- **Any allowance allocation will likely result in windfall profits for merchant generators (those who produce and sell electricity at market rates) in deregulated markets.**
 - As CO₂-emission costs increase, the electricity price for the generator on the margin (highest price to meet load) increases
 - Therefore, the price for electricity for everyone is increased, leading to higher revenues for all generators.
 - Nuclear (as a “non-emitter”) would benefit more, because it does not have any cost increase (no allowances to buy)
- **Giving away allocation of allowances for free will increase these windfall profits.**

Carbon Trading Will Benefit the Nuclear Industry: Case Study

- Exelon estimates that carbon pricing “will add \$700 to \$750 million to Exelon's annual revenues for every \$10 per metric ton increase in the price of CO2 allowances.”
- At \$15 per metric ton of CO2, this is equivalent to a windfall of \$1 billion per year.

What is CEDDA?

- **Purpose:**
 - To “promote access to affordable financing for accelerated and widespread deployment” of clean energy, energy infrastructure, energy efficiency, and manufacturing technologies
- **Nuclear power and coal are eligible under “clean energy technology” in both the House and Senate versions**
- **Headed by an Administrator; Directed by a Board**
 - **House:** Board includes the Administrator, Secretaries of Energy, Treasury, Interior and Agriculture, and 4 members appointed by the President with consent of the Senate
 - **Senate:** Board includes the Administrator, DOE Secretary, and 7 members appointed by the President with consent of the Senate
 - 5-year staggered terms

What is CEDA? continued...

- **Establishes a Energy Technology Advisory Council**
 - **Purpose:** To develop a methodology for assessing energy technologies and advise the Board on the technological approaches to support CEDA
 - **House:** 8 members selected by the Board of Directors
 - **Senate:** 5 members selected by DOE Secretary and 3 members selected by the Board of Directors
 - 5-year staggered terms
- **Senate version merges existing Title XVII Loan Guarantee Program with CEDA; House version doesn't**
 - House version prohibits “double-dipping”

CEDA: House vs. Senate versions

- **Three most important differences:**
 - Senate allows for unlimited loan guarantees by exempting from Sec. 504(b) of Federal Credit Reform Act (FCRA)
 - House does not include this exemption; CEDA must get Congressional authorization
 - Senate allows one technology to get the lion's share
 - House caps at 30% of the value of CEDA
 - Senate does not include a greenhouse gas metric
 - House requires that projects reducing greenhouse gases cheapest and fastest get the priority

CEDA: Other Significant Differences

- **Senate version:**

- Fails to require greenhouse gas reduction
- Makes loan guarantees more risky for taxpayers (multiple loan guarantees on the same technology at the same time)
- Allows risky indirect financial schemes (securitization, lending on the security of debt, etc.)
- Fails to include risk management experience on Board
- Fails to require recusal in cases of financial gain
- Allows DOE to set the credit rating
- Supplies CEDA with \$10 billion without congressional appropriations

CEDA: Other Significant Differences, Continued...

- **House version:**

- Codifies “conditional commitments before licenses are obtained (requires licenses before guarantee is finalized)
- Requires prevailing industry wages to Administrator and 4 appointed Board members (higher than the Senate version)
- Requires public transparency, including an online database of projects, applications, financial transactions, annual reviews, etc.

CEDA: Increases Risk for US Taxpayers

- **Both House and Senate CEDA provisions:**
 - **Allow taxpayers to share subsidy costs with borrowers**
 - Subsidy cost: payment made in advance of a loan guarantee to cover the risk of default
 - Under current law, taxpayers OR the borrower must pay the subsidy cost
 - Calculating this risk is extremely difficult; more likely to underestimate risk than overestimate it
 - **Remove US taxpayers' right of first lien in the event of a default**
 - One important result: cooperatives will be able to obtain loan guarantees for new reactors

Nuclear in the Renewable Electricity Standard (RES)

- **RES = Mandate that a state produce X% of renewable energy by year Y**
- **Both the bills exclude NEW reactors from the baseline**
 - If a state produces 10,000 MW of energy, it has to produce 15% of energy from renewable, i.e. 1,500 MW
 - If this state build a 1,000 MW nuclear reactor, it would still only have to produce 1,500 MW from renewable energy

Senate Bill's (Non)Sense of Congress

- Nuclear power is a “clean and secure domestic energy,” essential for the production of electricity and reduction of greenhouse gases
- “Spent fuel and high-level radioactive waste should be stored in a limited number of secure, centralized facilities”
- Reprocessing “may” reduce the burden on geological repositories and “recycling and advanced reactors may further reduce the volume and radioactivity” of high-level waste
- “Reaffirms” the policy of the United States to support the use and expansion of nuclear energy and to fulfill the federal spent fuel obligation

Reprocessing in the Senate bill

- **Requires that DOE develop:**
 - Integrated process flowsheet for all steps involved in reprocessing
 - Characterize waste streams from all reprocessing steps
 - Develop waste stream processes and designs for disposal facilities for the waste streams
- **On completion, DOE must:**
 - Develop a generic environmental impact statement for reprocessing
 - Conduct design and engineering work sufficient to develop firm cost estimates
- Requires that NRC and EPA establish radiation standards for worker and public exposure to radiation from a reprocessing facility
- Directs the Nuclear Energy Advisory Committee and the NWTRB to evaluate and report on the readiness of the program

Nuclear Research & Development in the Senate Bill

- Authorizes \$5.17 billion over 4 years for nuclear energy research, development, demonstration and commercial application activities authorized in the 2005 Energy Policy Act, including:
 - **Nuclear Power 2010** (taxpayers pay part of the cost of certifying reactor designs and licensing new reactors)
 - **Generation IV** (research and development on new designs, including fast reactors)
 - **Reprocessing R&D**
 - **Nuclear science and engineering fellowships and grants**

Still to come: Senate Climate Bill

- **Senate Environment and Public Works Committee:**
 - Carper (D-DE), Cardin (D-MD), all of the Republicans, though many Rs have said that they will not vote for a cap-and-trade
- **Then to the floor for more amendments!**
- **What other nuclear subsidies could be added?**
 - Allocation \$ to CEDA/loan guarantees? Paid subsidy costs?
 - Nuclear defined at “renewable energy” in the RES?
 - Mandatory interim storage?
 - Mandatory reprocessing language?
 - More Production Tax Credits/Risk Insurance?
 - More R&D/Nuclear Power 2010 money?
 - Further “streamlined” licensing?
 - Subsidies for part manufacturing?
 - Transmission for new reactors?

What Can YOU Do?

- Read Mark Cooper's new study, The Economics of Nuclear Reactors, at [http://www.vermontlaw.edu/Documents/Cooper%20Report%20on%20Nuclear%20Economics%20FINAL\[1\].pdf](http://www.vermontlaw.edu/Documents/Cooper%20Report%20on%20Nuclear%20Economics%20FINAL[1].pdf)
- Meet with your Senators and Representative in August
- Meet with your Public Utility Commission, state elected officials, Governor, etc.
- Write to President Obama
- Organize sign-on letters, public meetings, house-parties, meetings with reporters/Editorial Boards
- Find new allies
- Participate in online discussions/blogs