

Clean Water Action Position on Carbon Capture and Storage/Geologic Storage

Position on the Role of CCS

Advocates of carbon capture and storage (CCS) for power plants see it as a way to continue to burn fossil fuels like coal while meeting restrictions on heat-trapping carbon dioxide (CO₂) pollution. Geologic Sequestration (GS) is the CCS technology on which the most effort has focused to date. A regulatory framework is being developed and pilot projects are underway.

The capture and storage processes pose very real challenges to water resources, and there are other natural resource and public health considerations. It is imperative that potential impacts of these processes are understood and that strict government policies are in place before commercialization of this technology.

Geologic storage has the potential to become a useful tool if the technology's significant environmental, health and cost considerations can be addressed. Especially in the event that other technologies fail to deliver, or advances in climate science require far deeper and faster CO₂ reductions than possible without it, GS could be used to help mitigate global warming emissions from a variety of stationary sources including but not limited to power plants.

To increase understanding of potential impacts and to determine the practicality of GS, Clean Water Action does not oppose limited near-term public investment in research and development of geological carbon storage technologies. Particular focus needs to be directed to developing methods of protecting underwater drinking water sources from adverse affects of well drilling and fluid storage and to limiting the water and energy usage and consumption from capture, transport and storage. Clean Water Action supports research for applications beyond coal power plants, including natural gas plants and industrial facilities.

Since it is unlikely that carbon capture and storage will be less costly or environmentally risky than other global warming solutions, Clean Water Action does not support public assistance to deploy GS technology commercially on a large scale. Limited taxpayer funds should go to solutions that will work fastest, which are the most economical and which have the least negative impacts on natural resources and public health.

Recommendations for Policy-Makers

- Limit public support to research and development and demonstration projects to test the real-world performance of Geologic Sequestration technologies. Ensure demonstrations of a wide-variety of capture technologies, especially natural gas plants and industrial processes, so that GS can be deployable if needed.
- Reject the construction of new coal plants, regardless of whether they are described as “capture ready.” The term has no meaning as retrofitting a plant to store carbon dioxide involves technical challenges and high costs; feasibility is likely to be site specific.
- Oppose explicit subsidies for the deployment of coal with carbon sequestration beyond demonstration and research projects. Examples of these public subsidies include adding GS to renewable or clean energy standards, providing production-based or investment tax credits, having the public pay to construct carbon transport and storage infrastructure and shielding industry from liability related to GS damages.
- Evaluate all costs related to power plant construction in regulatory proceedings including potential costs for CO₂ emissions if GS is not used, the initial cost to construct the plant, the ongoing operating costs and the cost of water usage.
- Ensure that state laws and permits for facilities incorporating GS technology take into

consideration the availability of water for the facility over its lifetime and ensure that withdrawals balance water needs for other uses including ecosystem health. Assumptions of water availability in the permitting process should take into consideration potential changes in water supply over the facility's life from drawing down aquifers and from climate change.

Avoiding Environmental Harms from Sequestration

It is critical that Geologic Storage activities not cause other environmental harms. While the geologies of oil and gas reservoirs and saline formations are relatively well understood, Clean Water Action opposes storage in basalts, coal seams, salt caverns or shale until further research demonstrates that these formations are suitable for large-scale commercial carbon dioxide storage.

Clean Water Action calls for strong federal and state regulations that require the following:

- Regulation and independent inspection of the capture, transport, injection and storage processes.
- Prohibition of storage at risky sites, especially those that could endanger communities served by a sole underground drinking water aquifer
- Ensuring that communities and public water systems have heightened role in the siting and operating process of carbon storage and transport facilities with prompt public disclosure of any leakage, groundwater impacts or other incidents.
- Procedures for oversight to ensure that injection pressure is never close to rock fracture pressure and require monitoring for geologic faults
- Creation of strict limits for contaminants in the CO₂ stream, including water, mercury and hydrogen sulfide.
- Capture, transportation and storage processes must be subject to all relevant state and federal laws including but not limited to the Resource Conservation and Recovery Act, the Clean Water Act and the Safe Drinking Water Act.
- Industry, not the public, must pay for monitoring of the storage site during and after injection and until there is affirmative evidence the CO₂ will remain permanently stored and the site is deemed closed.
- Site operators must be held liable for any damages caused or remediation needed from operation of a storage site. Liability should not be transferred to the public after injection is complete.
- Creation of a "superfund" through user fees from storage sites to pay for any necessary remediation if the site owner/operator no longer exists and to ensure timely remedial action.

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Spring 2011