



The California CCS Folly

by Gene Nelson, Ph.D. 07/31/23

Here's an example of wasteful subsidy-seeking in Saskatchewan, Canada. **This project is the only grid-scale carbon capture and storage (CCS) project in the world.** In 2014, SaskPower started with a 139 MW (electric) coal-fired power plant named Boundary Dam 3 (BD3). They upgraded it to 160 MW to burn more coal. Then, they fitted it with a problem-plagued carbon capture system that reduced the small plant's output to a mere 110 MW. (31.25% BD3 generation reduction to power the CCS system.)

The cost to capture a metric ton (Tonne) of CO₂ is about \$300 Canadian. A significant fraction of the carbon dioxide still goes up the smokestack. The captured carbon dioxide is piped to an oil field for enhanced oil recovery. There, about half of the carbon dioxide leaks to the atmosphere, doubling the capture cost per Tonne. This boondoggle cost at least \$1.5 billion Canadian, per http://sequestration.mit.edu/tools/projects/boundary_dam.html There have been significant operations and maintenance costs since September 30, 2016, boosting the carbon capture cost per Tonne.

BD3 Performance statistics are available at <https://www.saskpower.com/about-us/our-company/blog/2023/bd3-status-update-q1-2023> Promoters of coal-fired generation fondly speak of the *potential* of carbon capture and storage (CCS.) Despite poor BD3 performance and poor economics, millions are being allocated for CCS in California.

Safe, emission-free nuclear power such as produced by Diablo Canyon Power Plant (DCPP) (and the unnecessarily closed San Onofre Nuclear Generating Station [SONGS]) is far more cost-effective. Typical annual power production of both plants based on 2011 statistics was 36 TWh, where a TWh is a billion kiloWatt-hours.

Furthermore, the California Public Utilities Commission (CPUC) plan for reducing electricity generation sector emissions relies on regulatory sleight of hand, instead of relying on science. As CGNP's attached April 5, 2022 *Capitol Weekly* OpEd notes, the CPUC plan depends on the 2009 California legal euphemism, "Unspecified Imports" which mostly applies to out-of-state coal fired generation. The huge (approximately 40 TWh, about the same as SONGS's and DCPP's output) annual procurement will likely be the largest in CPUC history. The CPUC procurement, which for inexplicable reasons remains confidential, is likely a product of special-interest lobbying. Furthermore, with no scientific justification, the CPUC model artificially sets emission levels for unspecified imports to zero - despite most of the procurement being sourced by the most emission-laden means of power generation: Coal.

This flawed CARB CCS proposal should be rejected. Instead, California should follow the science instead of the lobbying dollars and 1. Keep Diablo Canyon running and 2. Re-commission SONGS.

/s/ Gene Nelson, Ph.D. CGNP Senior Legal Researcher and President
Californians for Green Nuclear Power, Inc. (CGNP)
1375 East Grand Ave Ste 103 #523
Arroyo Grande, CA 93420-2421
(805) 363 - 4697 cell
Government@CGNP.org email
<https://CGNP.org> website