



NUCLEAR ENERGY IS NOT A PANACEA

Without doubt, climate change is the most urgent threat of our time. However, careful examination will show that nuclear power is not the way to reduce greenhouse gasses or to provide reliable energy for the future of California.

Building more nuclear plants will not alleviate climate change or reduce our dependence on oil because its impact is limited to the electric sector. Approximately three percent of oil consumed in the United States is used to fuel electric power plants. (U.S. Energy Information Administration, *Electric Power Generation by Fuel Type*, 2004, <http://www.eia.doe.gov/fuelelectric.html>) Transportation by motor vehicle accounts for two-thirds of our total oil consumption of about 13 millions barrels a day. (“Peaking of World Oil: Impacts, Mitigation and Risk Management,” Hirsch et al, Science Applications International Corporation, Department of Energy, http://www.netl.doe.gov/publications/others/pdf/Oil_Peaking_NETL.pdf, February 2005) Nuclear reactors produce electricity, but since we do not use the electric grid to power our motor vehicles, nuclear power development would not substantially diminish our use of oil – or our release of CO₂ emissions.

In addition, the process of mining, milling, and enriching uranium ore to bring it up to fuel-grade requires large amounts of electricity and produces ozone-destroying ChloroFluoroCarbons.

Nuclear power plants are not cost competitive with other electricity generating alternatives. According to DOE’s Energy Information Administration, “new [nuclear] plants are not expected to be economical.” (Annual Energy Outlook 2005, Energy Information Administration, <http://www.eia.doe.gov/emeu/plugs/plfeb05.html>) Standard & Poor’s Ratings Services found that “an electric utility with a nuclear exposure has weaker credit than one without and can expect to pay more on the margin for credit. Federal support of construction costs will do little to change that reality.” (“Credit Aspects of North American and European Nuclear Power,” Standard & Poor’s, January 9, 2006)

Nuclear power plants create waste that remains highly dangerous for hundreds of thousands of years. To date, no long-term storage solution has been found. The United States Government has been pursuing a repository at Yucca Mountain in Nevada for over 20 years. Despite the years of study and the expenditure of billions of dollars, the future

use of this site is questionable. The DOE's current target date of 2017 is a "best-achievable schedule." (Statement of Edward F. Sproat, III, Director for the Office of Civilian Radioactive Waste Management, U.S. Department of Energy, Before the Subcommittee on energy and Air Quality, Committee on Energy and Commerce, U.S. House of Representatives, September 13, 2006, http://www.ocrwm.doe.gov/info_library/program_docs/testimonies?SPROAT9-13Testimony_FINALpdf) Furthermore, the capacity of the proposed Yucca Mountain site – even if licensed – is not adequate to hold all the waste generated from existing nuclear reactors. License extensions and new construction will only exacerbate the problem.

Should the radioactive wastes be transported at some future date, California citizens and business will be subjected to the risks inherent in transferring the radioactive waste to containers to go on trains, trucks or barges, according to the DOE. The high stakes in the event of accident or sabotage during transportation, and the costs of not only transporting but guarding this deadly cargo and training personnel to deal with accidents would be an additional cost.

In testimony on February 16, 2005, before the Select Committee on Intelligence in the U.S. Senate, FBI director Robert S. Mueller stated, "Another area we consider vulnerable and target rich is the energy sector, particularly nuclear power plants." (<http://www.fbi.gov/congress/congress05/mueller021605.thm>)

Despite this government position, the U.S. Nuclear Regulatory Commission (NRC) on January 29, 2007, adopted a new Design Basis Threat rule that does not require protection by plant operators against attacks by airplanes or from the sea, nor against more than a small number of attackers on the ground.

The "spent" fuel pools are the most vulnerable part of a nuclear reactor, not protected by the containment dome. The rods are densely packed, and the loss of coolant could result in a fire with a catastrophic release of radioactivity. Storing the rods in dry casks, such as those planned for Diablo Canyon, minimizes the risk of fire, but these casks are not designed to resist a terrorist attack.

The California Energy Action Plan (www.energy.ca.gov/energy_action_plan/index.html) was created jointly by the California Energy Commission, the California Public Utilities Commission, and the California Power Authority. This very readable document addresses the "overarching goal ... for California's energy to be adequate, affordable, technologically advanced, and environmentally-sound." A combination of strategies to reach this goal is outlined in this "Roadmap for Energy Policies".

And nuclear is not the answer.

By Jane Swanson and Jill ZamEk of San Luis Obispo Mothers for Peace, April, 2007