

Monday, April 14, 2008

Reid Eyes Backing Bill To Encourage Thorium Fuel In Nuclear Power

Senate Majority Leader Harry Reid (D-NV) may add his support to a bill that would encourage the use of thorium fuel in nuclear power reactors as a way to promote an expansion of nuclear power while addressing nonproliferation concerns. Proponents of a thorium fuel cycle argue it is a superior fuel choice to currently used uranium because it is resistant to weapons proliferation, produces far less radioactive waste, and breaks down weapons grade plutonium to produce power. Thorium fuel advocates are also highlighting these attributes to the environmental community, in hopes of getting support from organizations that have been wary of expanded nuclear power.

A spokesperson for Reid said the senator has communicated with Sen. Orrin Hatch (R-UT), who reportedly has drafted potential legislation. Although final decisions have not been made on the content of a Reid-Hatch bill, Sen. Hatch has a specific proposal in mind which may provide the basis for a plan that Reid would support.

“Reid, at Sen. Hatch's urging, is generally considering supporting legislation to promote the use of thorium instead of uranium,” the spokesperson said. “No decisions have been reached on possible introduction, content or timing.”

Congressional sources say that a thorium fuel cycle is particularly appealing to Reid because the reduced radioactive waste could ease pressure to open the Yucca mountain repository, which is located in Reid's home state of Nevada. Reid has long fought efforts to develop the storage site.

Sen. Hatch has drafted legislation that would direct the NRC to craft regulations for a thorium fueled nuclear reactor. Separate offices would be created at both the NRC and the DOE to regulate the thorium facilities. The offices would also develop recommendations on how the Secretary of Energy could encourage domestic and foreign power providers to use thorium in reactors, thereby taking the place of uranium fueled reactors which produce plutonium that can be used for nuclear weapons.

In addition, the draft bill calls on the Department of Energy's Idaho National Laboratory to carry out various projects that would demonstrate thorium fueled nuclear power generation.

A source in Hatch's office says the bill does not necessarily create incentives for the use of thorium, but rather opens the door for the fuel if commercial forces want to deploy it. “It could be the future for nuclear power,” the source said. A thorium fueled reactor has four advantages over a reactor operating with uranium. It requires plutonium to trigger the initial reactions and thereby acts as a non-proliferation agent. Unlike uranium reactors, thorium fueled reactors don't produce plutonium that can be used in weapons. The draft bill notes that thorium resources are

also more available than uranium. Finally, a thorium fueled reactor produces about one third the waste produced from a similar uranium fueled reactor, easing storage and disposal concerns.

An industry source who supports the Hatch proposal said he requested that Reid delay introduction of any bill in order to buy time to court the environmental community, which tends to oppose federal subsidies for nuclear power. The source hopes the benefits of thorium will bring environmentalists on board.

A source with the Natural Resources Defense Council said that a thorium cycle is preferable to a uranium cycle for the non-proliferation and waste reasons, but was not aware of any pending legislation.

The industry source views the Hatch proposal as one that would ensure that the NRC is adequately staffed and has the ability to license a reactor fueled with thorium. The CANDU reactor, which is used in Canada and abroad typically uses uranium but can switch to thorium fuel without major changes to the reactor. However, reactors in the United States would need to be modified to use thorium. The source believes that were thorium to be used in the U.S., existing reactors would be modified before dedicated thorium reactors would ever be built.