Unconventional Energy Researched by Alaska, DOE

DAN JOLING, Associated Press

ANCHORAGE, Alaska (AP) — The U.S. Department of Energy and the state of Alaska will collaborate on future research of unconventional energy resources in the Arctic, including abundant reservoirs of methane hydrate.

The DOE's acting assistant secretary for fossil energy, Christopher Smith, and Alaska Department of Natural Resources Commissioner Dan Sullivan announced the agreement Tuesday and spoke to reporters from Houston, Texas, where they are attending LNG 17, a natural gas conference.

Smith said the memorandum of understanding builds on previous, less formal collaboration and gives both parties a framework under which they can have better communication about unconventional energy.

"It ensures us that we have a vehicle to make us more aligned and help us to do our work in a way that's more effective," he said.

It also increases accountability by creating a framework for recording milestones, Smith said.

Methane is the main ingredient in natural gas. Methane hydrate is gas trapped in a lattice of ice. Methane is released when the hydrate is warmed or depressurized. The "frozen gas" is not commercially viable, but the Energy Department has conducted research to find ways to improve the economics.

By signing the agreement, the Department of Natural Resources will assist researchers with access to state lands, and with permitting and logistical issues.

Smith said the president's budget includes a line item for preparing future tests for methane hydrate, which is found in the Arctic and in deep water in the Gulf of Mexico.

"We would see Alaska as the ideal place to do that field work, that type of testing," Smith said.

The DOE; ConocoPhillips; and Japan Oil, Gas and Metals National Corp. completed field work on a nearly $29 million experiment to extract methane hydrate. The research focused on an extraction technique developed by ConocoPhillips and the University of Bergen in Norway in which researchers injected carbon dioxide into methane hydrate. The carbon dioxide molecules swapped places with methane molecules, freeing the methane to be harvested but preserving ice in the reservoir.

Analysis of the data continues, Smith said, and future projects could spring from what researchers find out.

Unconventional energy also includes heavy oil and shale oil. Sullivan said both are abundant in Alaska and critically important to the state's future, and he's eager to tap into DOE resources to aid in their extraction.

"What's exciting from our perspective is having the backing, collaboration, and to be perfectly honest, the brainpower of some of the best scientists in the world," Sullivan said.

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