

## Terrestrial Energy advances in DOE loan program; Hill to move SMR aid

**The U.S. arm of Terrestrial Energy announced Tuesday that the Energy Department has invited it to move to a second phase in its application for a DOE loan guarantee of up to \$1.2 billion to support the company's development of a planned 190 megawatt molten salt reactor.**

That announcement came a week after Ontario-based Terrestrial Energy announced that Duke Energy has joined its Corporate Industrial Advisory Board, a group of current and future nuclear operators that advises Terrestrial on design, construction and operational issues as the company designs its Integral Molten Salt Reactor (IMSR).

As the nation's largest electric utility and operator of six nuclear plants, Duke is an important partner for Terrestrial, one of a growing number of companies developing small modular reactors (SMR), which are generally designed to be safer and easier to deploy than larger reactors in operation today.

Those vendors could get a boost today when the House Ways and Means Committee is scheduled to consider legislation (HR 5879) that would extend an existing production tax credit for nuclear plants to make future SMR projects eligible. The legislation also would appear to extend a current deadline requiring new reactors to be in service by the end of

2020 to qualify for the tax credit, presumably also for the benefit of two large nuclear plant projects underway in South Carolina and Georgia that have fallen behind schedule.

On Tuesday, Terrestrial said DOE invited it to submit a "Phase 2" application for an \$800 million to \$1.2 billion loan guarantee to help finance licensing and construction of its IMSR reactor in the United States. Applicants who have submitted Phase 1 applications can only proceed to Phase 2 at DOE's invitation.

Federal loan guarantees can significantly shave borrowing costs and are being used by Southern Co. and the Municipal Electric Authority of Georgia in their project to build two large Westinghouse reactors in Georgia.

DOE expanded the program in 2014 to make SMRs eligible. It is not clear how many SMR vendors besides Terrestrial have applied, and DOE does not typically make such information available.

Terrestrial is developing a new version of the molten salt reactor, which uses fuel dissolved in molten fluoride or chloride salt, with the resulting liquid serving as both fuel and coolant. Because the fuel and coolant are one and the same, molten salt reactors are not vulnerable to loss-of-coolant accidents, in which coolant becomes unavailable to prevent fuel rods from overheating and burning—the pri-

mary safety concern with light water reactors.

Terrestrial has taken the unusual approach of seeking to license its reactor first in Canada, saying that Canada's "principles-based" and risk-informed approach to licensing is best suited for its design and other advanced reactors.

However, the company's U.S. arm, Terrestrial Energy USA, clearly plans to seek a U.S. license and to build one in the United States; the company says it has "identified a number of potential sites" but sees DOE's Idaho National Laboratory (INL)—the agency's lead lab on commercial nuclear power—as the "lead candidate site."

Terrestrial said Tuesday it "is working with Idaho National Laboratory to develop one of several...siting plans."

INL has already signed a preliminary agreement to host an SMR under development by Oregon-based NuScale, which is developing a pressurized water reactor SMR and appears on track to become the first SMR vendor to apply for U.S. Nuclear Regulatory Commission design approval.

Terrestrial Energy is already working with DOE's Oak Ridge National Laboratory to flesh out Terrestrial's version of the molten salt reactor and assist with pre-licensing in Canada. Oak Ridge developed the world's first operating version of the molten salt design, a 7.4 megawatt test unit that ran successfully at the Tennessee laboratory between 1965 and 1969.

## AEP selling four Midwest plants to private equity firms—reports

**American Electric Power is poised to sell Blackstone Group LP and ArcLight Capital Partners LLC four merchant power plants in Ohio and Indiana for \$2.1 billion, according to media accounts Tuesday.**

The deal, which AEP had not confirmed by press time, would be short of AEP's goals of selling its entire Midwest merchant power plant fleet, which is struggling due to weak demand and tough competition from feder-

ally subsidized wind power and low-priced natural gas-fired generation.

AEP's fleet totals about 5,000 megawatts of generation, including a handful of large Ohio coal plants that do not appear to part of the rumored deal with ArcLight and Blackstone.

*The Wall Street Journal* reported Tuesday that the private equity firms were preparing to buy AEP's coal-fired Gavin power plant in Ohio and three unnamed gas-fired plants in

Ohio and Indiana.

AEP is moving to sell its Ohio merchant fleet after failing to win approval from Ohio regulators for a plan to support its merchant coal plants with cost-based contracts that would be paid by the customers of AEP's Ohio distribution utilities. AEP said that keeping the baseload plants on line was important to stabilizing Ohio power prices and the regional grid.

Although Ohio regulators approved a slimmed-down version of AEP's proposed contracts, AEP abandoned the subsidy plan after the Federal Energy Regulatory Commission signaled it would review it.

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