

MINUTES
JOINT INTERIM COMMITTEE ON ENERGY
Room 171, State Capitol
Little Rock, Arkansas
Tuesday, August 29, 2017

The Joint Interim Committee on Energy met at 9:00 a.m. Tuesday, August 29, 2017, in Room 171 at the State Capitol in Little Rock, Arkansas.

Committee members present: Senators Scott Flippo, Vice-Chair; Cecile Bledsoe, Alan Clark, Linda Collins-Smith, Stephanie Flowers, and Eddie Joe Williams. Representatives Rick Beck, Co-Chair; Ken Henderson, Vice-Chair; Bob Ballinger, Ken Bragg, Justin Gonzales, Kim Hendren, Monte Hodges, Steve Hollowell, Robin Lundstrum, Matthew Shepherd, James Sorvillo, Danny Watson, and Jeff Williams.

Alternate members present: Representatives Charlotte Douglas, Ron McNair, Matthew Pitsch, Jeff Wardlaw, David Branscum, and Mark McElroy.

Also attending: Senators Linda Chesterfield and Trent Garner. Representatives Marcus Richmond, Jim Dotson, Trevor Drown, Vivian Flowers, Kenneth Ferguson, Charles Blake, Fredrick Love, Stephen Meeks, Austin McCollum, and Laurie Rushing.

Representative Beck called the meeting to order.

Dr. Donald R. Bobbitt, President, University of Arkansas System, noted the committee is hearing about new approaches dealing with nuclear generation. Although this is a difficult project, it is not impossible. The project and the cost of the energy that may be derived from it could benefit regions of the state.

U of A has the ability to educate and train. U of A partners with institutions in state and is in every county through county extension agents. It has the ability through the community college system and the U of A system across the state to educate and train for these types of positions.

MOLTEN SALT REACTORS

Mr. Robin Rickman, Vice President of Business Development for Terrestrial Energy, Inc. (TEI), noted this is a Canadian company, funded through private investment and is a reactor technology vendor. He provided information on the company's management team and TEI's product, an Integrated Molten Salt Reactor (IMSR), which is a liquid-fueled reactor system (generation IV reactor) that can provide base-load electrical generation, and is naturally a load-following reactor. This reactor is in the second stage of U.S. Department of Energy (DOE) (invitation only) loan guarantee program (\$1 billion) for construction of the United States' first commercial project nuclear reactor plant.

[POWERPOINT 1]

TE-USA is an affiliate company with its sole objective being to license and deploy TEI's technology, the IMSR, in the United States. TEI's reactor has a seven-year design life and is the only generation IV reactor being developed globally that utilizes less than 5% uranium. The company chose a technology that utilizes what is available in the market place today.

MODULAR LIGHT WATER REACTORS

Mr. Chris Colbert, Chief Strategy Officer, NuScale Power, noted all work done to date has been a cost share with the U.S. DOE, and the award was given to NuScale in 2014 for \$217 million.

The transportable power modules are 15' X 75' tall and can be transported by rail, truck or barge. A 12-module facility could have a 100 acre footprint, providing 600 megawatts of electricity. The high-level of reliability of the plant allows for dedication for specific purposes such as electricity generation or other heat processes. Mr. Colbert noted that with the design approval process, they expect their product to be on the market by 2021. Considering construction, it would be 2026 before actual operation of a plant. **[POWERPOINT 2]**

Mr. Paul Means, Manager, Public Affairs, Entergy Arkansas, Inc., noted that Entergy has diversity its generation mix among coal, natural gas, hydro, and nuclear power to maintain a cost effective and reliable resource supply. Solar is soon to be added. Moving forward to a Gen IV reactor might be something Entergy would want to add to that diversity.

Entergy, as a buyer, views new technology with the following criteria:

- Reliability = what has worked for 20-30 years.
- Cost = upfront cost to build and to operate for 20-30 years.
- Risk = a subjective judgment, but to have confidence of the new source generation's reliability and understand the costs and how it balances with the generation mix.

Currently the only technology approved by the NRC is the AP1000. So as a buyer, Entergy has one choice.

Entergy would like to see several technologies licensed by the NRC. It could then put out for bids and have companies come show what is available in terms of competition of costs and reliability, giving Entergy the chance to get the best deal for Arkansas. The obstacle for Entergy is having only one technology approved by NRC. **[HANDOUT 1]**

Mr. Kurt Castleberry, Director of Resource Planning, Entergy Arkansas, Inc., noted the White Bluff and Independence plants will be going until about 2030, and at that time they will be about 50 years old. Right now, he noted natural gas is a viable option because of the cost, and the technology is efficient. As they do their integrated resource plan (done every three years and filed with Arkansas Public Service Commission), they have seen the cost of renewables dropping to become an economical source for customers. If Gen IV technology becomes economical, Entergy will include that in the mix.

Mr. Castleberry noted that Entergy's objective is to continue to keep rates low, be competitive, and continue to have rates that will attract economic development prospects. At this time, the rates are below regional and national average by a fair amount, but there are things outside Entergy's control such as the cost of natural gas, cost of coal and other costs.

Senator Williams asked if Arkansas has an energy policy, and should the legislative body play a more active role because it represents the people?

Representative Beck replied that Arkansas does not have an energy policy.

OTHER BUSINESS

With no further business, the meeting adjourned at 11:10 a.m.