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Measure for hydroelectric plant near Penrose clears committee

■ Keith Swerdfeger's bill goes to House floor.

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By PATRICK MALONE | pmalone@chieftain.com |

DENVER — A House committee on Monday passed a bill that could pave the way for a \$1 billion hydroelectric storage and generation operation near Penrose.

Its sponsor, state Rep. Keith Swerdfeger, R-Pueblo West, told the House Agriculture, Livestock and Natural Resources Committee that HB1083 could foster up to 300 construction jobs and between 20 and 30 permanent positions to the area if TransCanada's proposed South Slope project is developed.

Swerdfeger's bill would give the Public Utilities Commission authority to treat hydroelectric as a source of renewable energy and allow developers of hydroelectricity to sell their product to utility companies. The committee unanimously supported the bill.

"These kinds of energy projects would be good for not only the investment of the utility, but for the ratepayers of Colorado," Swerdfeger told the committee.

Hydroelectric generation sites such as the proposed South Slope project create energy through an exchange of water between an elevated lake and a lower reservoir. They are capable of generating energy quickly and storing energy from sources like wind, solar and traditional power plants when they produce a greater load than is necessary.

University of Colorado engineering professor Frank Barnes testified that hydroelectric storage and generation can greatly benefit utilities by capturing the excess energy they produce and releasing it at times when productivity is low.

That becomes a greater consideration as utilities increasingly rely on renewable energy sources like wind and solar, which ebb and flow at times depending on the availability of the natural resource, Barnes said.

Only two mechanisms for storing surplus energy exist, according to Barnes: compressed air and pumped hydro. Just two compressed-air energy storage sites exist, one in Alabama and one in Germany. In America alone, more than 120 hydro-pump plants exist, and the technology to operate them has been patented since 1917.

“It’s a well-proven technology,” Barnes said.

The reason hydro operations are not more prevalent is that dams to accommodate them have been built sparingly because of the high up-front cost of constructing them.

“You’ve got a large capital cost to get started, even though this turns out to be the cheapest way to store energy over the long haul,” Barnes said. It sometimes takes 20 years or more to reap the financial benefits of the initial investment.

“Venture capitalists that want their money back within five years, this isn’t where they are going to invest it,” Barnes said, making the South Slope project unique in that a suitor already is in place.

He said about a half-dozen sites in Colorado are suitable for hydro-pump stations, the proposed South Slope location among them. Barnes’ former student, engineer Jonah Levine, testified that the location has ample transmission options to make it a viable site.

Swerdfeger assuaged concerns from some committee members that hydro projects would injure downstream senior water-rights holders. He said projects such as South Slope would be one-time fills fed by negotiated water rights, and that water would be reused. The only water losses, he said, would be to evaporation and seepage.

An amendment was added to the bill Monday that guards against water diversion under the guise of hydroelectricity production.

Groups that testified in support of the bill included the Pueblo Board of Water Works, Black Hills Electric and the Colorado River Water Conservation District.

Wildlife conservation and environmental groups that traditionally have opposed hydroelectric proposals because of their impact on fish populations added their support to the bill when it was amended Monday to direct the PUC to consider those impacts in issuing a decision on proposed hydro projects. Levine testified there are no pollutant emissions associated with hydroelectric stations.

Next, the bill faces debate on the House floor.

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