

MINUTES  
**SENATE STATE AFFAIRS COMMITTEE**

**DATE:** Wednesday, January 22, 2014

**TIME:** 8:00 A.M.

**PLACE:** Room WW55

**MEMBERS PRESENT:** Chairman McKenzie, Senators Davis, Fulcher, Hill, Winder, Lodge, Siddoway, Stennett and Werk

**ABSENT/ EXCUSED:** None

**NOTE:** The sign-in sheet, testimonies and other related materials will be retained with the minutes in the committee's office until the end of the session and will then be located on file with the minutes in the Legislative Services Library.

**CONVENED:** **Chairman McKenzie** called the Senate State Affairs Committee (Committee) to order at 8:02 a.m. with a quorum present and asked for a motion on the minutes.

**MINUTES:** **Senator Werk** moved, seconded by **Senator Stennett**, to accept the minutes of January 10th. The motion carried by **voice vote**.

**PRESENTATION:** **Idaho Governor's Office of Energy Resources presentation on electric transmissions and information/education on how Idaho fits into the grid.** **Chairman McKenzie** welcomed John Chatburn, Interim Administrator of the Idaho Office of Energy Resources. **Mr. Chatburn** introduced Jackie Flowers, Chair of the Idaho Strategic Energy Alliance (ISEA), to provide an update on the status of the ISEA.

**Ms. Flowers**, General Manager of Idaho Falls Power, explained that Governor Otter established the ISEA to develop long lasting responses to Idaho's energy challenges by developing a sound energy policy. The Energy Primer, an informational tool, is a resource for the legislative body and the Governor. It is also online. It can help the citizens of Idaho to better understand the energy landscape and the challenges faced by the industry.

The 2014 focus is on outreach and education on the state of Idaho's energy. Fact sheets on the various sources of energy such as geothermal and hydropower are being developed. There is a speakers bureau for specific topics and social media outreach to help raise the energy IQ. Reports on transmission and transportation are two big energy topics that are in progress. It is exciting to have a dialogue on transmissions within the state since it is so important to see the infrastructure that is in place, the needs going forward and how that impacts economic development.

**Chairman McKenzie** thanked Ms. Flowers for the contributions they have made to the State Energy Plan. The Legislature issued that plan and relied heavily on the Office of Energy Resources as well as the ISEA.

**Senator Siddoway** raised the question about the time frame for licensing before beginning construction. **Mr. Chatburn** asked to hold that question and that it would be answered during the presentation. He introduced Mitch Colburn and Jared Ellsworth, both from Idaho Power, who created the presentation on the transmission system that exists in Idaho.

**Mr. Colburn** explained that he and Jared Ellsworth are transmission planners with Idaho Power and engineers by trade. Components of electricity and the electrical system are amazing: There are over 3,000 electric utilities in the United States; millions of people consume electricity on a daily basis; an abundant supply of resources are required; and there is a large diversity across the country. This big machine that meets all of these requirements operates 99.99 percent of the time.

The North American electrical grid is made up of four parts. Idaho is part of the Western Interconnection which is one of those parts. The lines run across these grids by design and then the whole system is synchronized. The western system is the most geographically diverse and largest of all the interconnections. The 38 balancing authorities represent a collection of generation, transmission and load. Each is tasked with balancing supply with demand. They schedule out enough resource to meet the load at any given hour. If a balancing authority does not have enough supply to meet demand, transmission is available from a neighboring system since all of the systems work as one large machine operating in unison.

Three different entities govern this process and provide oversight: 1) The Federal Energy Regulatory Commission (FERC) regulates nationwide interstate transmission and has market and reliability authority over the electric system; 2) The North American Electric Reliability Corporation (NERC), appointed by FERC, develops and enforces reliability standards across the US; and 3) The Western Electric Coordinating Council (WECC) governs the western interconnection. An organization called the Peak Reliability Council, organized by WECC, monitors the western system. This big machine takes a lot of labour, oversight, coordination and planning.

The lines running across the landscape can be compared to the transportation system. Roads can be improved according to need and transmission is no different. The idea is to get power from a source to a load in the most efficient means possible. **Mr. Colburn** turned the podium over to Mr. Ellsworth to continue with the presentation.

**Mr. Ellsworth** explained that there are different classes of transmission measured by different levels of voltage:

- The lowest distribution of voltage generally operates at 12,500 volts (12.5 kV) serving about 2000 residential customers and the lines run along urban streets.
- The next level is 138 kV serving approximately 40,000 customers and transmits energy between substations.
- Transmission of 230 kV moves bulk voltage over long distances and carries power equivalent to 80,000 customers.
- The large lines seen crossing open country transmits 345 kV for long distances. They are used for bulk energy transmission. The power is equal to 300,000 residential customers.

There are many different power plants connected to the grid. Power goes from the power plant and is then stepped up to a substation; transmitted over long distances to a main grid substation which is generally located on the outskirts of town. The power is then stepped down to a more manageable voltage that can be brought into an urban area along road corridors where it again is stepped down to a distribution voltage. It is then delivered to the customer through residential distribution lines.

Chairman McKenzie passed the gavel to Vice Chairman Lodge.

**PASSED THE  
GAVEL:**

**Senator Werk** asked what kind of energy loss may occur. **Mr. Ellsworth** answered that the transmission system loss is about 3 - 4 percent. Those transmission systems that encompass 138 kV up to 500 kV are expected to lose about 5 - 6 percent of the power generated in the overall system. **Senator Werk** inquired about the nature of the loss; is it lost to heat or in the ground? **Mr. Ellsworth** said it was mostly heat because the lines are generally aluminum or copper. **Senator Werk** asked if there was a difference in loss between overhead and underground lines. **Mr. Ellsworth** stated that it was about the same.

**Senator Stennett** asked if the distance affects the amount of loss and efficiency. **Mr. Ellsworth** responded that the longer the line and the higher the voltage results in less efficiency; not as much power can be transmitted due to the losses.

**Mr. Ellsworth** discussed the types of generation that is brought into southern Idaho; the transmission capacity that is purchased and coming into Idaho; and the state of available transmission capacity (ATC). Currently, the ATC is at zero throughout southern Idaho with the exception of a small amount in the southeastern part of the state. This precludes the purchase of power from outside the State. Long distance transmissions have not been built in decades.

Permitting is a major issue in building a transmission line because of the many agencies involved in the process. Each agency has a different agenda and they do not always coincide with one another. Permitting of one long distance line can take upwards of ten years. This is partially due to limited corridors in which to site a new line. This is difficult because there can be a lot of changes over a ten year period. The cost can increase and cost recovery is an issue. Usually it is necessary to obtain partners to cover the huge costs involved.

**Senator Fulcher** asked for an explanation of the criteria used when making a decision to run a transmission line above ground. Is going underground considered and, if so, does cost or risk affect that decision? **Mr. Ellsworth** answered that cost is the main reason; it costs about ten times as much to build underground as overhead. Maintenance is much easier and less expensive with overhead lines. The smaller residential lines go underground because they are smaller and easier to maintain.

In summary, the power system is an exceptionally large, complex machine and Idaho is only one component of this machine. We work together with our neighbors to balance and match supply and demand on an instantaneous basis 24 hours a day, 7 days a week. Idaho has reached the limit and has run out of ATC. It is time to increase the transmission capacity which is a major challenge the entire industry is facing. Reliability, FERC, NERC and WECC are taken into consideration industry-wide as Idaho works to keep the lights on and operate a safe and reliable transmission system.

**Senator Winder** asked two questions:

1. Is there anything the Idaho legislature could do to improve the permitting process, i.e. reducing the timeframe and costs?
2. What is the actual working relationship between FERC and WECC in the whole process?

**Mr. Ellsworth** answered the second question. FERC is a very big governing body so they assign NERC to provide liability standards resulting in an audit process every few years to ensure compliance with those standards. **Senator Winder** asked if the working relationship is good between FERC, NERC and WECC. Does that interfere with your ability to function effectively? **Mr. Ellsworth** responded that they have people in place to ensure we follow the standards.

**Mr. Chatburn** explained that the largest amount of time spent on the permitting of a transmission project is due to the need/desire to cross federal land in order to have as low an impact on private property as possible. In doing so, it is necessary to deal with the National Environmental Policy Act (NEPA), and through it, all of the other acts of Congress that have been passed in the last 40-50 years. In answer to the first question, **Mr. Chatburn** said he wasn't sure. There have been attempts to streamline some of the process but that will have to come through Congress. The Idaho Legislature could encourage Congress to streamline the process for the licensing of generation. On the transmission side, FERC, NERC and WECC set the reliability standards, but they are not actively involved in the permitting process. Permitting is through a federal land management agency if a transmission line crosses federal land. If Congress chose to streamline the NEPA process, which many organizations in the West are recommending and asking for, it would be quite beneficial.

**Senator Siddoway** restated that it took ten years from inception to construction. What is the timeline from the initial petition to build a transmission line, keeping in mind different sizes and areas? **Mr. Chatburn** responded that interaction with federal land agencies will be the primary driver on delays. A new project of any distance would take ten years. **Mr. Chapman** named all the steps and studies it would take to get to and through the environmental impact studies and be ready for construction.

**Senator Siddoway** asked if it would it be easier to change an existing line by adding a tier of wires to increase transmission rates or add another line to an existing corridor rather than adding something new. **Mr. Chatburn** answered that when a line is considered there isn't an exact corridor designated. There is a study corridor but it goes away when the permits are issued. Any additional lines in that same area would have to go back through the process. **Mr. Ellsworth** responded to the addition of tiers. Double circuiting has issues placed on the industry by FERC, NERC and WECC and plans for the loss of a corridor must be added to avoid the simultaneous loss of two corridors at the same time.

**Senator Hill** stated that it is alarming to have reached capacity and then encounter all of the transmission constraints and the length of time it takes to get permits to add capacity. Are there some economic consequences that the State needs to be concerned about, or are the power companies looking far enough ahead so that it will not be a concern? **Mr. Ellsworth** answered that they began the permitting process for transmission lines in 2006-2007 not knowing it would take 10 plus years. There is still internal generation capabilities for serving additional customer growth since the new power plant, Langley Gulch, was built in New Plymouth. There is just not the ability to bring additional transmission energy into the area.

**Senator Hill** asked about the major power outages in eastern Idaho. Do they have to do with the transmission problems? **Mr. Ellsworth** stated it is a non Idaho Power utility. **Senator Hill** asked if the mayor of Idaho Falls would yield to a question. **Rebecca Casper**, Mayor of Idaho Falls, stated she would take the question. **Senator Hill** asked if there were similar capacity problems with Idaho Falls Power or do they have capacity for future growth. **Mayor Casper** stated that they face the same kinds of problems in terms of their ability to deliver in terms of the economic impact. Idaho Falls turned away opportunities because of these issues.

**Senator Werk** asked if it was possible to build two power lines, one above ground and one below. **Mr. Chatburn** said that high voltage transmission is harder to permit underground across federal land than overhead because of the amount of land disturbance. An overhead line has a much smaller footprint.

**Senator Stennett** referred to the fires in the Wood River Valley and how they impacted the transmission lines because there is only one corridor. They are examining the option of burying the lines because they are smaller. The costs goes back to the municipalities. What kind of process is involved to make that determination? **Mr. Ellsworth** agreed that it is a sensitive topic in the Wood River Valley. His understanding is that a second line would solve the problem going to Sun Valley. However, they would like to site that line overhead in another corridor. **Senator Stennett** asked what process the power company would have to initiate to get the local residents to agree with their plan. **Mr. Ellsworth** stated that they haven't reached the threshold of requiring a second line from a FERC/WECC standpoint because of lack of demand. The power company believes it is prudent to have a second line for their customers' purposes. They have taken the position to build the second line.

**Senator Stennett** said the power companies have, historically, conservation incentives to mitigate the use of energy by becoming more energy efficient. What is offered now to help alleviate the pressure? **Rich Hahn**, Idaho Power, responded to the question stating that they have demand response programs that run the full spectrum of residential, commercial, industrial and irrigation entities. The power companies do an Integrated Resource Plan every 2 years and look at projections 20 years in advance to determine resources and how they plan to serve the anticipated loads. Energy efficiency and conservation through demand response programs are part of that plan.

**Senator Siddoway** asked if modular plants, such as small gas plants, could be used. **Mr. Chatburn** answered that, yes, it is possible. He is a member of the Idaho Power Integrated Resource Advisory Committee, and as they put together the Integrated Resource Plan, all of the various generation sources are considered to see what is most cost effective. Each of Idaho's three investor owned utilities also serve customers in other states and must file a plan with each of those states.

**Vice Chairman Lodge** thanked Mitch Colburn, Jared Ellsworth and John Chatburn for their work and presentation, and Mayor Casper, John Williams from Bonneville Power, and Rich Hahn and Doug Docter from Idaho Power for their participation.

**ADJOURNED**

There being no further business, **Vice Chairman Lodge** adjourned the meeting at 9:15 a.m.

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Senator McKenzie  
Chair

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Twyla Melton  
Secretary