Consideration of a Railbelt Electric Independent System Operator
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February 5, 2014

The interconnected Railbelt electric system is in transition. Legacy agreements are coming to an end. New generating facilities are being built. New and upgraded transmission lines are needed but are not being constructed. Commonly accepted rules of the road are needed for the transmission network, along with a means of enforcing them. Non-utility power providers want access to the grid. And above all, studies by the Alaska Energy Authority have shown that ratepayers in the Railbelt could save significant amounts of money each year if the most efficient generating units could be dispatched first – and if there were not transmission bottlenecks restricting their output.

These conditions, and the potential benefits to Railbelt electric consumers, illustrate the need to consider a new business model for the region. Years ago, similar circumstances caused regulators to create a series of Independent System Operators (ISOs) to improve grid operations across the Lower 48. It is time to consider whether a similar approach would be beneficial for the Railbelt.

Currently, six different electric utilities provide retail service to customers throughout the region. For decades, Chugach Electric Association provided centralized planning, construction and operations of generation and transmission facilities to meet the electrical requirements of much of the region. Chugach was in this role because it had wholesale contracts to meet the needs of customers of three other utilities in addition to providing for its own retail base.

Now we have reached a time when two of those contracts are ending, and the subject Southcentral utilities have and are building new power plants to serve their customers. These plants need to be connected to the grid and operated in a way that does not cause harm to other users. Additionally, through the Alaska Energy Authority, the State owns both generation and transmission assets that are part of the Railbelt system. Existing and prospective non-utility generators also want to be able to promote projects and gain grid access.

The benefits of coordinated planning and dispatch extended northward after the State constructed the Alaska Intertie between Willow and Healy. This 170-mile segment of transmission line connected the Southcentral and Interior grids. The intertie made it possible for power to flow between the two regions. For more than 20 years Interior customers have seen lower bills because power generated with Cook Inlet natural gas has moved north over the intertie. Chugach actively planned and managed the fuel supply, generation and transmission assets necessary to make these sales. After the original gas supply contract ended, Chugach secured additional supplies to continue these sales. Interconnection with the Interior provides security and reliability benefits to Southcentral utilities as well.

When it comes to grid operations, customers are best-served by a system where the most economic generation runs most of the time and power can flow efficiently from where it is made to where customers need it. In order to do this, an entity must be empowered to direct the incremental use of the most efficient generating units. Currently no single entity has this ability, leaving individual utilities to make their own decisions from a more-limited list of generating choices. Eliminating duplication of dispatch services is another area where an ISO could achieve savings.

It is also vitally important that the grid remain reliable. Some entity must set and enforce interconnection standards that ensure the reliability of the transmission system. At present that authority is not clearly recognized within the Railbelt. Absent any other alternative, the Intertie Management Committee (a committee comprised of the majority of Railbelt electric utility operators) has adopted and applied to the Railbelt interconnection and reliability standards from the North American Electric Reliability Corporation. While this was both reasonable and necessary, a long-term solution is needed. An ISO should be given the specific authority to address these issues in the future.

In fairness, organizations up and down the Railbelt have made investment decisions based upon circumstances and rules in effect at the time. In considering a transition to a new business model, it is important that utilities and others be able to recover the costs of existing and under-construction infrastructure. Existing contracts must also be honored.

It is not necessary for one organization to own all of the transmission facilities in the Railbelt in order to achieve the benefits of a unified grid. However, there do need to be operating agreements between the ISO and transmission owners so the facilities may be used for the good of the interconnected region. The transmission-owning entity must also be made whole for its costs. The best approach would be for the ISO to create a unified tariff for the transmission system. In other words, add up all the annual costs of the component parts of the Railbelt transmission system and apportion them across the region as a single transmission rate. This would allow a prospective generator or purchaser to negotiate a sales contract knowing they would have one entity to deal with for interconnection rules and a uniform transmission rate.

Creating an organization to take a regional approach is probably the only realistic means to build out a fully functional grid for the future. Currently much of the discussion of new transmission has focused on only two models: either have the State grant fund all new transmission or have it funded by utility customers. Each of these has its limitations. The State has constraints on its capital budgets and individual utilities are challenged to pass on the cost of regional activities to the customers of their defined service territories. An independent ISO however, can consider what improvements are necessary, cause them to be built, and recover the cost through a unified tariff.

The ISO would not be unconstrained however. The development of a Regulatory Compact would be critical to this business model. This would be an agreement with the

Regulatory Commission of Alaska that system improvements consistent with a regional plan would be guaranteed rate recovery. The Compact would provide guidelines for the ISO as it worked to expand and strengthen the grid.

Creating an ISO for the Railbelt will ensure a more rational approach to future planning, investment and operations. It will provide a regional approach to grid planning. That is increasingly difficult for individual utilities to undertake when they are focused within their respective service territories.

Fortunately for Alaska, we are not the first to confront this issue. Throughout the Lower 48, federal and state regulators over the past 15 years have taken actions to address similar concerns on a much larger scale. The creation and use of independent, non-asset-owning ISOs has created a way to more rationally plan, operate and finance generation and transmission systems. It is time to seriously consider whether a similar approach – modified if necessary to fit the Railbelt – would provide similar benefits for Alaska's most populous region.

Examples from the Lower 48 provide a path forward. The Legislature should pass legislation directing the Regulatory Commission of Alaska to identify statutory changes necessary to permit utilities to submit implementation plans to create an ISO that meets certain requirements. Once identified, proceed with introduction of appropriate legislation that allows the RCA to oversee creation of an ISO.