



STATE OF ALASKA
DEPARTMENT OF
COMMERCE
COMMUNITY AND
ECONOMIC DEVELOPMENT

Bill Walker, Governor
Chris Hladick, Commissioner
Robert M. Pickett, Chairman

Regulatory Commission of Alaska

June 30, 2015

The Honorable Kevin Meyer
President of the Senate
Alaska State Senate
716 W. Fourth Avenue, Suite 500
Anchorage, Alaska 99501

The Honorable Mike Chenault
Speaker of the House of Representatives
Alaska House of Representatives
145 Main Street, Loop, Suite 223
Kenai, Alaska 99611

Dear Senator Meyer and Mr. Chenault:

Subject: Regulatory Commission of Alaska Recommendation to Legislature

The 2014 Alaska Legislature directed the Regulatory Commission of Alaska (RCA or Commission) to provide a recommendation on “whether creating an independent system operator or similar structure in the Railbelt area is the best option for effective and efficient electrical transmission.” Concerns about the fragmented, balkanized and often contentious Railbelt utilities have been raised numerous times over the past 40 years. Several efforts have been made to reform and reorganize the Railbelt electrical system, but none have succeeded.

Significant investment totaling approximately \$1.5 billion has been made in new Railbelt electrical generation over the past five years. This level of capital expenditures by the four cooperative electric utilities, one municipally owned electric utility and one independent power producer is unprecedented. To realize the maximum benefit from this investment, the Railbelt electrical transmission system and generation must be operated in the most effective and efficient manner possible. The key question is does the current institutional structure allow the maximum benefits to be realized? Is there evidence to believe the current system is not optimal? If the electrical system in the Railbelt has opportunity for improvement, what are the options and how do we best get there?

A limited \$250,000 capital appropriation was made available to the RCA for this project in the FY 2015 Capital Budget. In July 2014 the RCA initiated an agreement with the Alaska Center for Energy and Power (ACEP) to secure the advisory services of Dr. Antony Scott and access to economic and power system modeling services. The RCA in its scope of work with ACEP considered the efficient transmission of electrical energy to include both the short-term operation of existing assets (including generation assets), and the efficient planning and construction of new-build assets. One broad task area included modeling that identifies potential consequences of reforming Railbelt grid institutions, identifying the benefits available from more efficient operation of the system as it exists today. Assessing the degree to which new transmission assets

may unlock new efficiencies and value was also included in this first task. The second broad task area analyzed the policy options for Railbelt reform, with a critical assessment of a range of potential mechanisms that might be pursued, including costs and feasibility, in the Railbelt context.

If the Railbelt electrical system were a blank slate today and the current institutional facts on the ground didn't exist, a single utility owning and operating all of the generation, transmission, and distribution assets would probably be the most efficient and effective system. That is not the situation we have today. It is not realistic to believe some form of a public power entity will be created with public dollars to purchase the Railbelt electric utilities' assets. Purchase of all the Railbelt electric utilities' assets by an investor-owned utility is also unlikely given the various governing structures and debt encumbrances. The State of Alaska's serious financial constraints make significant State contributions to the Railbelt's unfolding electric transmission needs a highly improbable scenario. Our recommendation to the Legislature has been shaped by a clear view of our current reality and by a desire to identify a path forward that is actually attainable and that benefits ratepayers in the Railbelt.

A key weakness in the current Railbelt electrical system is the lack of an institutional structure to finance significant transmission assets crossing the service areas of several utilities. In 2014 the Alaska Energy Authority released the Alaska Railbelt Transmission Plan, prepared by Electric Power Systems (EPS) Consulting Engineers. This report included the findings of the Pre-Watana and Post-Watana studies completed to determine the future needs of the Railbelt transmission system. The prioritization of the pre-Watana projects was also included. Priority transmission system projects totaling an estimated \$900 million were identified. Annual projected savings from these projects was estimated to be between \$146 and \$241 million. Funding and financing mechanisms for these transmission priorities were not addressed in the EPS report.

The RCA and ACEP reviewed the modeling and assumptions underlying the EPS report. After critically assessing the EPS modeling work, new model runs were developed to address several key questions:

1. What are the key factors that drive the benefits of economic dispatch?
2. What are the benefits of economic dispatch, as separate from the benefits of relieving transmission constraints in the Railbelt?
3. Who would win and who might stand to lose under a system of economic dispatch?

In contrast to the EPS modeling, the new modeling done for the RCA legislative report developed and incorporated reasonable, indicative postage-stamp rates for transmission (for both the existing system and the new-build transmission). The annual reports of the Railbelt electric utilities were analyzed to determine a reasonable approximation of net book value, operating expenditures (OpEx), and expected remaining life of current transmission assets. A standard rate base rate of return model then incorporated these inputs.

The RCA legislative report needed to answer several key questions:

1. What does an economically efficient electrical system look like?
2. Is there reason to believe that the Railbelt is not a fully efficient system?
3. What can we learn from the previous efforts at reform?
4. What are the ranges of generic policy instruments to move towards greater efficiency in the Railbelt?
5. What are specific examples of Independent System Operator (ISO)/Transco models, and how applicable are they to the Railbelt situation?

A critical component of developing the RCA's recommendation to the Alaska Legislature is the public process used, with input from a wide range of interested parties. A robust record was established, with numerous opportunities provided for presentations, suggestions and criticisms. A preliminary PDF version of the record is attached to the electronic version of this letter. The complete hard copy of the record will be provided upon completion of its preparation.

At a Special Public Meeting on Monday, June 29, 2015, the Commission made the following findings and recommendations.

Finding No. 1: The present Railbelt electrical transmission system requires institutional reform. The balkanized ownership of transmission assets and the system's evolution under legacy power purchase agreements constrain and limit the effective and efficient operation of the Railbelt grid. The Commission believes that no significant state funding will be available for Railbelt transmission replacement and upgrades. No institutional structure currently exists that is capable of providing significant capital for transmission projects that cross the service territories of several Railbelt utilities.

Recommendation No. 1: An independent transmission company should be created to operate the transmission system reliably and transparently and to plan and execute major maintenance, transmission system upgrades, and new transmission projects necessary for the reliable delivery of electric power to Railbelt customers. This independent transmission company should be certificated and regulated as a public utility under AS 42.05. The RCA should be granted siting authority for new generation and transmission, and granted explicit authority to regulate integrated resource planning in the Railbelt electrical system. A mandatory report on the status of the current efforts to develop an independent Railbelt electric transmission company shall be filed with the Commission no later than September 30, 2015. A second report on transmission restructuring shall be filed with the Commission no later than December 31, 2015. Failure to file these reports will be construed as a failure of the current voluntary efforts to develop an independent Railbelt electric transmission company. If voluntary efforts fail, the Commission will work with the Legislature and the Administration to develop and implement specific legislation and to prioritize actions necessary to create an independent Railbelt electric transmission company.

Finding No. 2: Although short-term bilateral economy energy transactions occur in the Railbelt electric market, true economic dispatch of generation units on a system-wide basis does not occur. The Railbelt electric system does not deliver the maximum benefit possible to ratepayers, who will be paying for approximately \$1.5 billion for new generation. The various ISOs existing in the lower 48 are appropriate in very large, fully restructured, unbundled markets. This ISO model in the Railbelt electrical system is an overly complex institution for a limited number of generation units and relatively small loads. Other models may be more appropriate for the Railbelt grid. Non-discriminatory access to the grid, open and transparent system-wide transmission pricing, and economic dispatch of generation by an independent entity are key principles that must guide the transformation of the Railbelt electrical system.

Recommendation No. 2: System-wide merit order economic dispatch of the Railbelt's electrical generation units will bring the maximum benefit to ratepayers. The Commission should use all the regulatory and statutory authority it currently has to strongly promote economic dispatch, and seek new statutory authority as needed to promote this goal. Voluntary efforts by the utilities to utilize loose power pools should be encouraged as an interim step towards a tighter power pooling system. As actual data is generated concerning costs, benefits and other outcomes of voluntary power pooling strategies, quarterly reports shall be filed with the Commission. These reports will be analyzed and reviewed to assess the organizational and governance structure needed for an independent consolidated system operator. The first report shall be for the fourth quarter of 2015 (October 1, 2015 through December 31, 2015) and shall be filed no later than January 30, 2016. Quarterly reports shall be filed with the Commission throughout 2016, due no later than 30 days after the end of the applicable reporting quarter. Failure to file these quarterly reports will be construed as a failure of voluntary efforts to move towards system-wide merit order economic dispatch. If voluntary efforts fail, the Commission will work with the Legislature and the Administration to develop and implement specific action steps to institutionalize system-wide merit order dispatch.

Finding No. 3: Many past efforts to reform and rationalize the Railbelt electrical system have failed. Substantial time and money has been expended on consulting reports, endless meetings, legislative hearings, and many frustrating hours in the RCA's East Hearing Room. A great deal of skepticism exists about the ability of the electric utilities to voluntarily reform and restructure the Railbelt grid and move towards true merit order economic dispatch. Non-utility independent power producers and larger institutional customers have complained about the current structure, and insist that a level playing field is needed. A lack of trust and continued reliance upon state legislative appropriations for transmission has contributed to this dysfunctional history.

Recommendation No. 3: Though history strongly indicates that the current voluntary transmission restructuring and economic dispatch efforts by the utilities may fail, the Commission believes the utilities must be given the opportunity to succeed. The timelines

outlined in Recommendations 1 and 2 allow for this potential success. Failure of the voluntary efforts and initiatives will trigger the compulsory steps identified in Recommendations 1 and 2.

Finding No. 4: Reliability standards for the Railbelt electrical grid are voluntary and not all electric utilities have adopted the same standards. The Intertie Management Committee (IMC) formally adopted the Railbelt Operating and Reliability Standards at its meeting on November 1, 2013. The IMC includes the Alaska Energy Authority and the Participating Utilities (Chugach Electric Association, Inc.; Golden Valley Electric Association, Inc.; Matanuska Electric Association, Inc.; and the Municipality of Anchorage dba Municipal Light and Power). The IMC voluntarily filed its Reliability standards with the Regulatory Commission of Alaska on January 27, 2014. On December 9, 2014, Homer Electric Association for itself and on behalf of Alaska Electric and Energy Cooperative voluntarily filed with the RCA the Reliability Standards of the Railbelt Reliability Committee as Modified and Adopted by Homer Electric Association.

Recommendation No. 4: Enforceable and consistent Railbelt operating and reliability standards are necessary for consistent, safe, reliable, and efficient operation of the Railbelt electric system. The RCA strongly encourages the IMC and Homer Electric to resolve their differences and develop a common Railbelt operating and reliability standard. In January 2016 the RCA will initiate a process to determine if it should adopt regulations concerning Railbelt operating and reliability standards.

Finding No. 5: The first four RCA recommendations above will be challenging and time consuming. Full implementation of the proposed Railbelt electrical system structural changes will likely take five to ten years. Many obstacles remain to be overcome. The time critical recommendations identified above are a start, but many additional, concrete building blocks must be identified in the months ahead. Many different parties must cooperate or this effort will fail. The Legislature, the Administration, Railbelt utilities, independent power producers, the RCA, Department of Law, Regulatory Affairs & Public Advocacy, and most of all the ratepayers have much at stake. RCA resources will be stretched and stressed as the structural reform of the Railbelt electrical system progresses.

Recommendation No. 5: The RCA will be hugely impacted by these proposed Railbelt electric system changes. The initial action steps will need to be implemented within existing RCA resources. The Commission is self-supporting through regulatory cost charges (RCCs), and does not rely upon state undesignated general funds. If the RCA receives the necessary Administration and Legislative support, the FY 2017 RCA budget will require the necessary RCC funded resources to implement these proposed recommendations.

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Each of the findings and recommendations were voted upon individually at the June 29, 2015, RCA Special Public Meeting and all were passed unanimously. These recommendations are respectfully submitted to the Legislature for its review and consideration. Upon request, the Regulatory Commission of Alaska will assist the Legislature in developing solutions addressing these critical issues. Thank you for the opportunity to provide this information to you.

Respectfully,

A handwritten signature in black ink, appearing to read "Robert M. Pickett". The signature is written in a cursive, somewhat stylized font.

Robert M. Pickett
Chairman

cc: The Honorable Bill Walker, Governor
Commissioner Chris Hladick, DCCED

By e-mail with preliminary PDF version of the record