



Grid Restructuring and Open Access

Presentation to Special House Committee on Energy
February 12, 2015

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Company

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Agenda

- Who Am I / Who is ARCTEC?
- The Case For Action
- Unified System Operator: Principles, Objectives and ARCTEC's Role
- USO vs TRANSCO
- Financing Electric Infrastructure in a Budget Constrained World



Who We Are

- ARCTEC is a cooperative utility formed by four of the largest utilities in the railbelt: MEA, CEA, GVEA and the City of Seward
- Dave Gillespie, CEO
 - **20+ years utility experience; helped establish CAISO, ISO New England**
 - **10 years independent power experience; developed and managed 5000MW projects throughout lower forty-eight and Canada**
 - **Started up renewable biofuel company**
 - **4 Years CEO of Alaska Native Corporation**



The Coop Model

- Our sole mission is to deliver reliable, sustainable energy to our customers at the lowest possible cost.
- It is our obligation
- The sole purpose of the railbelt transmission system is to fulfill this mission.
- The buck stops at our members. There are no shareholders to create competing priorities



Case For Action

- Alaska Energy Authority has estimated **ANNUAL** costs to Alaska customers of **\$60M-\$140M** due to ***uneconomic dispatch.***
- It is difficult to build transmission projects that have ***regional*** benefit.
- Despite PURPA and RCA regulations, non-utility and renewable generation developers have no clear road map to get their projects built.
- Reliability standards are not uniformly adopted.
- Although individual utilities have long-term resource plans, there is no integrated long-term plan to ensure the most economic upgrades to the ***system.***



We Have Two Problems

- Part of the problem is physical: the cheapest available power can't get always get to where it is needed;
- Part of the problem is structural: the railbelt electric grid is planned and operated by six independent entities.



The Current Situation Stymies Development

- Coops have fiduciary obligation to their **members**, not the region as a whole
 - Patchwork transmission charges
 - Little system wide planning
 - Competing priorities
- The physical transmission system cannot deliver the **existing** generation, let alone **new** generation
- The electric system is technically complex, with issues that are sometimes only understood by engineers. This can create an atmosphere of mistrust



Alaska Values and Steps Forward*

- Recognize that competition is good and that IPP's play a vital role in lowering Alaskan's electrical rates.
- Recognize that our State Energy Plan was only a first goal setting step that directs fiscal and regulatory regime to support private energy development.
- Recognize that open access and non-discrimination is good and that anti-competitive behavior...is not.
- Next logical step is to collaborate, ~~hear and pass the Alaska Competitive Energy Bill HB 78~~
- Next logical step is to collaborate, propose model to RCA that has broad stakeholder support
- After ground rules are clear, fair and nondiscriminatory-then establish Railbelt Transmission System that is separate, independent from generation and that is not 100% subsidized by State of Alaska.
- Any ISO, USO, TRANSCO in Alaska should be open access, at the same cost to all participants, be non-discriminatory nor engage in anti-competitive behavior.
- Measure outcomes, not objectives.



Guiding Principles for a Unified System Operator

1. Stakeholder governance
2. RCA jurisdiction / regulatory compact
3. Nationally recognized reliability standards
4. Interconnection standards
5. Plans system upgrades
6. Provides non-discriminatory access and service
7. Economic dispatch
8. Respects existing agreements and investments



Our USO Objective

- To capture the economic benefits available through better grid integration
 - **Economic dispatch**
 - **More efficient use of transmission system**
 - **Better opportunities for IPPs**
- Coordinated planning
- More efficient use of capital
- To create a regulatory regime, overseen by the RCA, that delivers on our guiding principles



ARCTEC's Role

- Act as a catalyst for change
- To provide a forum to develop stakeholder consensus
- To develop a proposal to RCA for implementation that has broad-based support
- To provide services to the USO



USO vs TRANSCO

- The USO's role is to use a stakeholder based process to establish, implement and enforce a set of rules and procedures that are consistent with the guiding principles for delivering the lowest cost, most reliable, sustainable energy to railbelt consumers.
- The TRANSCO's role is to own and operate transmission assets, to attract and deploy capital, to create scale economies and to otherwise implement the USO's policies



USO vs TRANSCO

- **USO**

- Doesn't own assets
- Makes / enforces the rules
- Stakeholder governed
- Has an RCA regulated tariff
- Plans transmission system
- Non-profit

- **The USO is fundamentally a policy making body**

- **TRANSCO**

- Owns assets
- Follows / implements the rules
- Owner governed
- Has an RCA regulated tariff
- Implements transmission system plan
- Usually for-profit

- **The TRANSCO is fundamentally an operating body**



Electric Infrastructure Financing

- Historically, State has often “granted” the money for needed regional and local upgrades.
- As a result, coop balance sheets have remained small, incapable of supporting large new debt load.
- Coop generation construction programs exacerbate situation.
- State less able to fund capital requests due to short term budget issues.
- No one is responsible for projects that cut across multiple entities.



The Railbelt's Consumers Have Come to Rely on State Funding

- That the budget climate is difficult is understood.
- There are still projects to unconstrain transmission that should funded
 - **Powerline Pass to Indian**
 - **Hope Substation to Portage**
 - **Eklutna substation**
- Watana should be funded through licensing



Financing Alternatives

- The “Bradley Model” has been very successful
- TRANSCO owners bring private capital
- Restructure / refinance existing state assets
- Other public / private partnerships



In Conclusion

- We agree on far more than we disagree
- We need to implement a USO
- The Legislature should encourage a stakeholder driven process, presided over by the RCA
- ARCTEC would like to be the catalyst to bring the stakeholders together
- The Legislature should encourage State agencies to collaborate with stakeholders on innovative financing mechanisms



Guiding Principles

Features of a Restructured Railbelt

Appendix



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Stakeholder Governance

- Utilities
- Independent power producers
- End-use customers
- RCA (typically ex officio)
- Consumer advocates
- Wholesale / retail marketers
- Environmental / conservation community
- Members at large
- Economic Development Council / Chamber
- Others?



RCA Jurisdiction

- Use of ratemaking authority to encourage participation and compliance
- Regulatory compact ensures cost recovery, addresses potential stranded assets
- Direct RCA engagement in governance.
- RCA to preside over appeals process



Nationally Recognized Reliability Standards

- We are all interconnected, so everyone plays by the same rules
- No need to reinvent the wheel; NERC is the gold-standard
- Can tweak for unique Alaska circumstances
- See: “Railbelt Operating and Reliability Standards”



Interconnection Standards

- Creates a standard for studying and mitigating system impacts created by new projects
 - **Gives new generation projects clarity and certainty of how its project will be evaluated**
 - **Protects existing customers**
 - **Creates transparency**
- Defines and standardizes roles and responsibilities
- Fosters economic efficiency



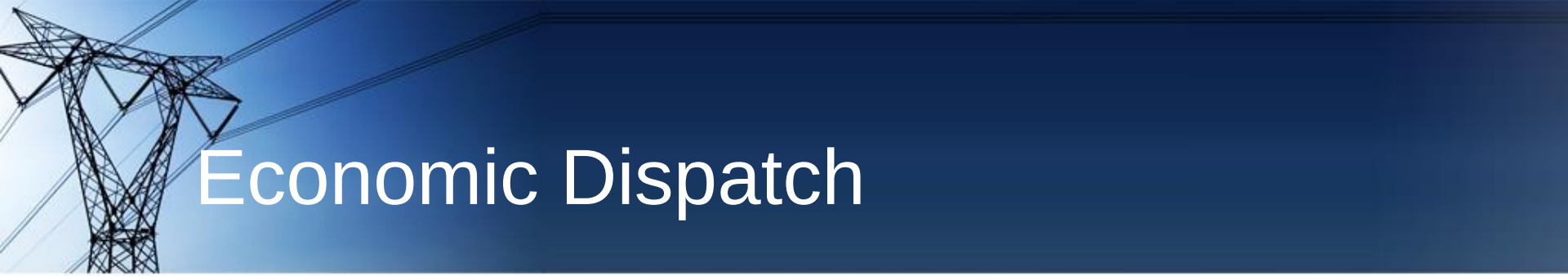
Plans System Upgrades

- Develops a comprehensive, long-term transmission plan
 - **Based on reliability**
 - **Based on economic efficiency**
- By looking at the grid as a whole, the projects with the most overall benefits can be prioritized
- Bottlenecks can be targeted to enhance economic dispatch
- Deploys capital more efficiently



Provides Non-Discriminatory Access and Service

- Transmission service provided to all users on same terms and price, regardless of facility ownership
- Removes rate “pancaking”, which distorts economic efficiencies by inhibiting economic dispatch
- Does not provide transmission owners with preferential access
- Encourages wholesale generation competition



Economic Dispatch

- The lowest cost generators run first
- The ability to deliver the most efficient generation to customers anywhere on the grid
- Reduces costs by “pooling” reserves



Single Control Area

- Simplifies oversight and reliability
- Reduces overhead
- Lowers operating costs
- Reduces accounting



Respect for Existing Agreements and Investments

- Recognizes that there are many existing agreements among stakeholders.
- Makes it easier to rationalize / modify existing agreements
- Recognizes that changing the terms of these agreements have real and meaningful implications
 - **To customer rates**
 - **To utility balance sheets and credit ratings**
- Provides appropriate phase-in tools to reduce shocks.
- ~~Does not~~ strand existing investments



We Will Be Most Successful When All Stakeholders Participate

- System is interconnected: reliability standards must be consistent
- Joint planning is necessary to ensure most economic deployment of capital
- System wide transmission tariff is necessary to eliminate rate pancaking and to allow economic energy dispatch
- Rules for interconnecting IPPS should be consistent regardless of where on the system they are located