DESIGNING ALASKA'S FUTURE: Removing Energy Gridlock

Opening Alaska for Electrical Competition through Legislative Action

Special House Committee on Energy
February 5, 2015

Duff Mitchell
Executive Director, AIPPA

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WHO IS AIPPA?

The Alaska Independent Power Producers Association is comprised of Alaska Native Corporation and private Alaska energy developers and operators in Alaska's wind, hydropower, ocean/ river kinetic and combined heat & power sectors.

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AIPPA Members

Members include incumbent utilities, private Alaska energy developers, construction contractors, self-generating power producers (SGPPs) Alaska Native Corporations, and independent power producers (IPPs).

FISHOOK RENEWABLE, LLC

ALYESKA RESORT

What is an Independent Power Producer?

Independent Power Producer
A corporation, person, agency, authority, or other legal entity or instrumentality that owns or operates facilities for the generation of electricity for use primarily by the public, and that is not an electric utility.

Source: Federal Energy Regulatory Commission
http://www.ferc.gov/help/glossary.asp#I

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Competitive IPP role vs. Utility role in America

- ***Utilities Role***- Provide reliable service, billing, maintenance to ratepayers either producing **or purchasing** the lowest cost power available. **LOW or NO RISK. All Costs are passed onto ratepayers.**

- ***IPP Role***- An IPP developer assumes the development, permitting, financing, construction and operating risks. Develops electrical generation with private investment and risk to produce electricity at the most economical and reasonable possible price… **ALL RISK**. **Development costs are paid for by investors.**

These Roles are well defined and work everywhere in US, but Alaska legislation and regulations discourage IPP development and utility relationship.

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Historical Background on Independent Power Producers (IPP's)

Prior to the US Public Utility Regulatory Policies Act (PURPA)of 1978, IPP's were rare, and the few that existed were seldom able to provide energy to utilities and other public customers even at no cost to the utility. Section 210 of PURPA now requires utilities to purchase energy from IPP's which qualify (qualifying facilities) at the utility's avoided cost. This allows IPP's to receive a reasonable price for the energy they produce and insures that energy generated by small producers won't be wasted.

Source-Association of Energy Engineers

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WHY ALASKA LEADERS MUST REMOVE GRIDLOCK

ALASKA ELECTRICAL CHALLENGES

- Challenge #1 Alaska has the 2nd Most Expensive Electricity in the Nation
- Challenge #2 Alaska non-oil Industry is Energy Intensive
- Challenge #3 Alaska High cost power has social costs
- Challenge #4 Government "energy fix" monies are dwindling or nonexistent
- Challenge #5 Alaska's In-state energy potential is untapped
- Challenge #6 Alaska is ranked last in Competitive Energy Environment
- Challenge #7 Legislation is holding us back from some solutions.

THE HIGH COST OF ELECTRICITY IS IMPAIRING ALASKA'S ECONOMY AND COSTING ALASKAN'S JOBS

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Challenge #1. Alaska ranks 2nd in the highest electricity costs in America

From Alaska EIA Average Retail Price by Sector, May 2014

	AK 2014 cents/kWh	US 2014 cents/kWh	% difference Alaska higher over US
Average Retail Price (cents/kWh)			
Residential	17.88	12.84	**39%**
Commercial	14.93	10.51	**42%**
Industrial	16.82	6.76	**149%**
Total	16.33	10.04	

U.S. Energy Information Administration, Form EIA-861, "Annual Electric Power Industry Report."

Alaska has the 2nd Highest Rates of Electricity in the U.S.

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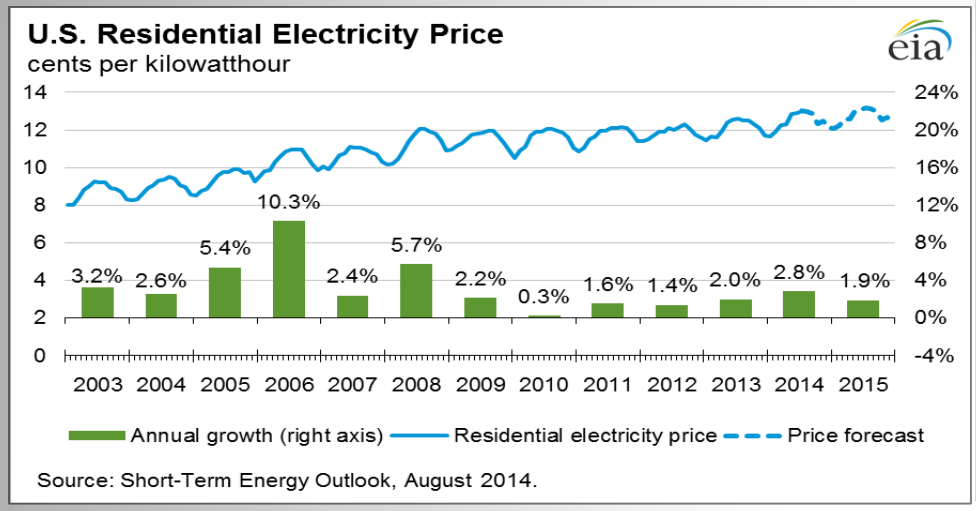
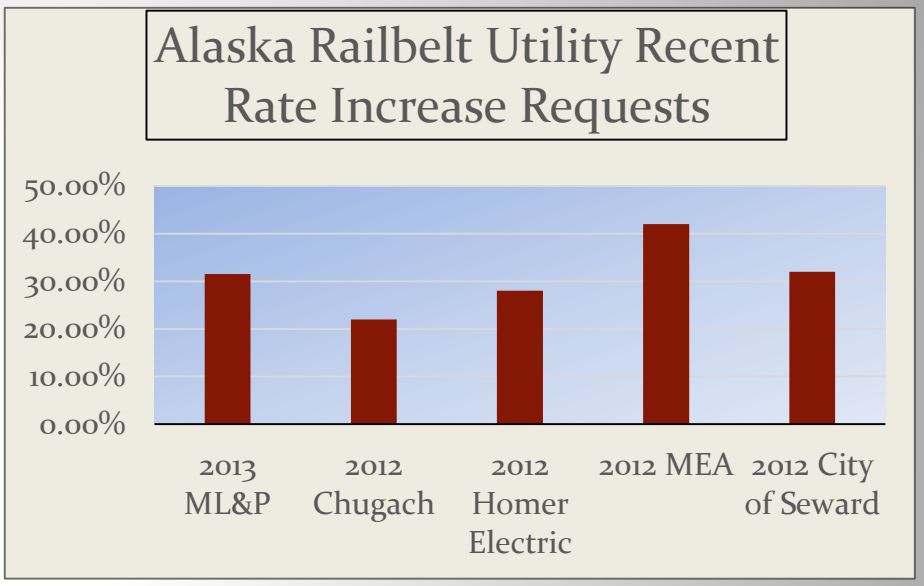
Alaska Electric Rate Growth vs. US Electric Rate Growth





Source: RCA U 13-007, U 13-187 Regulatory Affairs and Public Advocacy (RAPA) Alaska Dept. of Law

http://www.law.alaska.gov/department/civil/rapa/rapa.html

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Challenge #2. ALASKAN "non-oil" industries are electricity intensive

- **Alaska Mining Industry** Electricity is **up to 50%** of a mine's Operating Cost
- **Alaska Seafood Processing Industry**- Electricity **is up to 35%** of a seafood plants Operating Cost
- **Timber Mills 7.5%** and Biomass up to **25%** Operating Cost
- **Hotel, lodging and Tourism Industry 15%+**
- Hospitals and Universities-Government and Military Bases all have electricity in their operating costs

Electricity Rates IMPACT every Alaskan and every Alaskan Employer

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Challenge #3 High Cost Electricity has social costs in Alaska

- **Eat or Heat Dilemma facing some Alaska families**
- Stagnant Rural Alaskan Economies. High Electricity costs = No Jobs & Foreclosures
- High unemployment compounds additional problems: alcoholism, suicide rates, and other social problems.
- High Cost Electricity has created a legacy of dependency on governmental subsidy programs.
- **"Energy Refugees"- Alaskans move from high energy cost communities to lower cost communities with jobs.**

High Cost Electricity creates a negative downward spiral affecting all Alaskans

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Challenge #4 State of Alaska no longer has the $$$ to solve Alaska's In State Energy needs

- Susitna Watana **$5.2 B?**
- Fairbanks In State Gas Trucking **$350 Million**?
- Railbelt Intertie Maintenance **$900 Million**+?
- Southeast Intertie **$400 Million**?
- Unmet Rural Community Energy Projects >**$?**
- Gas Lines A, B, or C **$?**
- In next 15 years 67% of existing generation will need to be replaced or upgraded…requiring **$9 to $19 billion dollars** (RIRP-2010).

More Demand on Government resources than $$ exists for next 20 years.

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Challenge #5 Alaska 's Energy Potential is virtually untapped

- Potential Hydropower in Alaska is 40% of U.S. untapped hydropower (192 billion kWh energy potential)-*ACEP- Alaska Center for Energy and Power*
- Alaska is blessed with a phenomenal Wind Power Potential based on our enormous coastline.
- Tidal and wave – over 90% of the total US tidal and wave resource-*NREL- National Renewable Energy Laboratory*
- Biomass – over 20% of the total US Resource-*NREL*

"We have more energy potential than just about anywhere in the world."

U.S. Sen. Lisa Murkowski, R-Alaska

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Challenge #6 Alaska Ranks Last in IPP Competitive Power Generation

U.S. Energy Information Administration

Electricity

State Electricity Profiles

Data for 2012 | **Release Date:** May 1, 2014 | **Next Release:** May 2015

Alaska Electricity Profile 2012

Table 1. 2012 Summary Statistics (Alaska)

Item	Value	U.S. Rank
NERC Region(s)		--
Primary Energy Source		Natural Gas
Net Summer Capacity (megawatts)	**2,119**	**48**
Electric Utilities	1,946	39
Independent Power Producers & Combined Heat and Power	172	50
Net Generation (megawatthours)	**6,946,419**	**49**
Electric Utilities	6,361,802	39
Independent Power Producers & Combined Heat and Power	584,618	50

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Alaska is ranked last in IPP electrical generation percentage

EIA Table 1.6.B Net Generation by State, by Sector, Year-to-Date through June 2014 and 2013 (Thousand Megawatthours)

				Electric Power Sector				
Census Division and State	All Sectors			Electric Utilities		Independent Power Producers		Independent Power Producers
	June 2014 YTD	June 2013 YTD	Percentage Change	June 2014 YTD	June 2013 YTD	June 2014 YTD	June 2013 YTD	Percent of total Generation
Alaska	**2,994**	**3,154**	**-5.1%**	**2,720**	**2,918**	**126**	**125**	**4.2%**
U.S. Total	2,010,193	1,959,358	2.6%	1,182,108	1,142,203	752,428	738,895	37.4%

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Alaska Ranks 50th out of 50 States for percentage of independent power production- Source EIA June 2014

How empty is theory in the presence of facts
-Mark Twain

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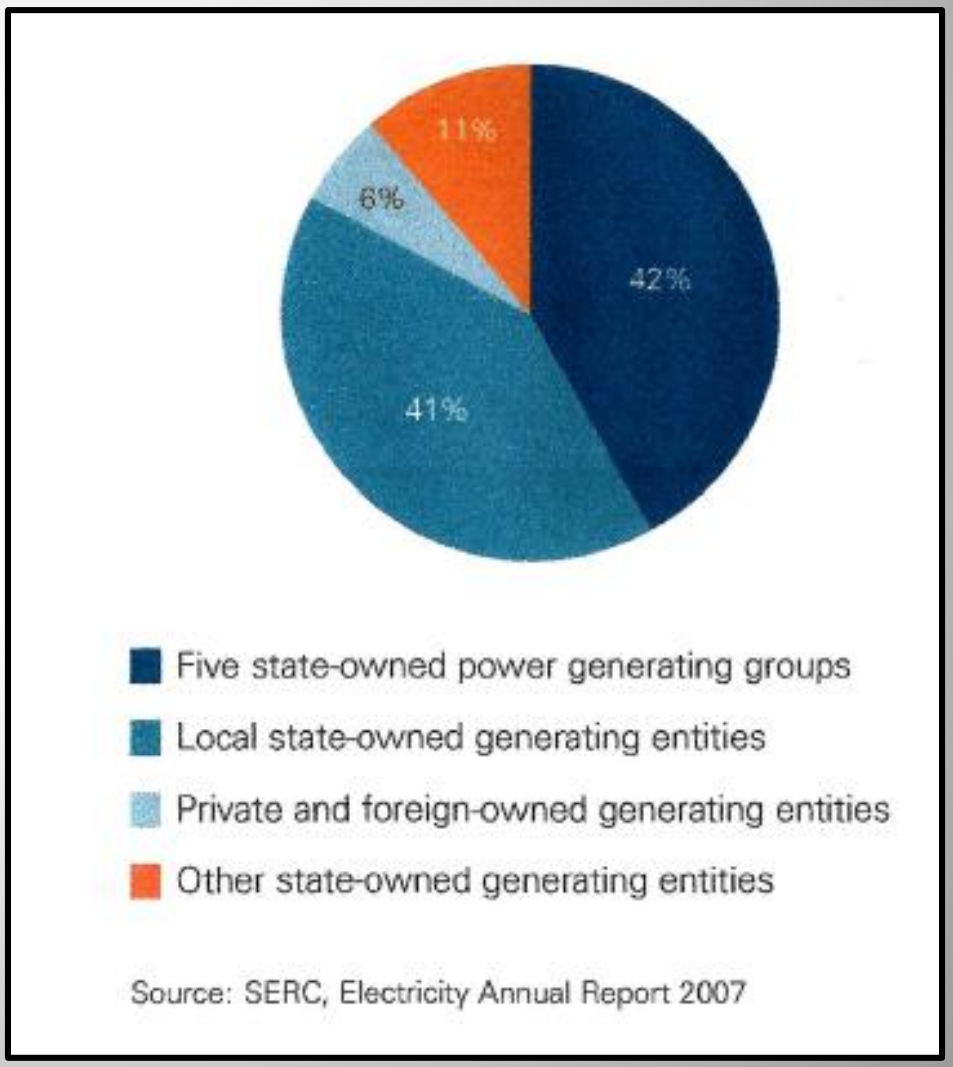
Comparatively 6% of China's electricity is supplied by Independent Power Producers

The Chinese, State Energy Regulatory Commission (SERC) is increasingly supportive of privately funded IPP projects as a means to increase competition, to lower energy costs and to develop renewable energy technologies.



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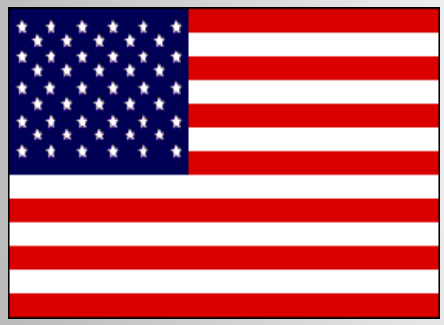
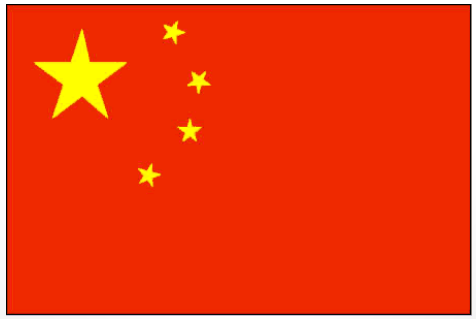
China promotes IPP electrical competition and has a more open electrical market than Alaska

IPP GENERATION AS A PERCENTAGE OF MARKET





37.4% vs 6% vs 4.2%

Unfortunately, Alaska has less electrical competition than Communist China

Source EIA 2014, SERC China 2007

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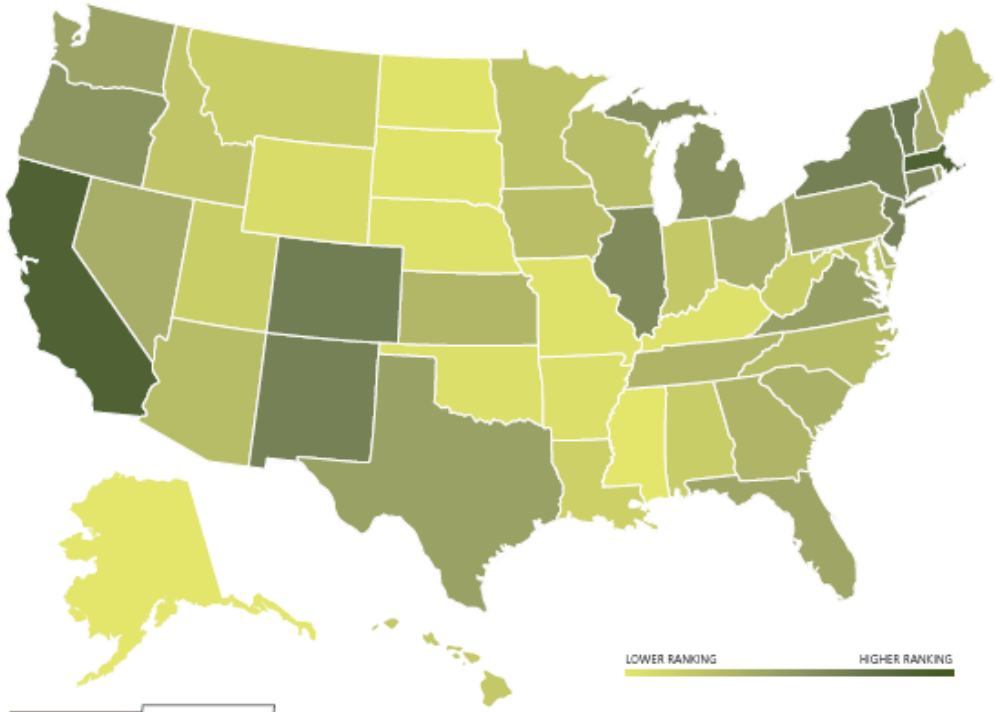
In this report, Alaska is **last** in attracting Private Capital Clean Energy Investment

ENERGY FOUNDATION
building a new energy future

WELLS FARGO
Wells Fargo

CAPITAL



RANK	STATE	LEADERSHIP SCORE
1	Massachusetts	87.8
2	California	86.6
3	Vermont	71.3
4	Colorado	68.2
5	New York	66.3
6	New Mexico	64.5
7	New Jersey	64.3
8	Connecticut	62.1
9	Illinois	60.1
10	Michigan	55.6
11	Oregon	53.1
12	Virginia	45.8
13	Rhode Island	45.6
14	Texas	45.4
15	Pennsylvania	44.0
16	Washington	43.5
17	Florida	42.0
18	New Hampshire	40.6
19	Nevada	36.7
20	Ohio	36.6
21	Delaware	34.9
22	South Carolina	34.7
23	Georgia	33.3
24	Tennessee	33.0
25	Kansas	30.9
26	Maine	28.8
27	North Carolina	27.7
28	Arizona	27.5
29	Wisconsin	27.1
30	Iowa	25.8
31	Maryland	23.5
32	Minnesota	22.8
33	Idaho	21.8
34	Hawaii	19.8
35	Indiana	19.5
36	Alabama	16.8
37	West Virginia	16.3
38	Montana	16.2
39	Utah	16.0
40	Louisiana	14.6
41	Wyoming	6.6
42	Arkansas	4.9
43	Oklahoma	4.6
44	Kentucky	4.4
45	Nebraska	3.8
46	Missouri	3.5
47	North Dakota	3.3
48	South Dakota	2.9
49	Mississippi	1.1
50	Alaska	1.0

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Why is Alaska is lagging…last in so many metrics?

Our State regulations and utility practices are outdated, and discourage competition, competency and efficiency at the detriment of Alaskan ratepayers

- Alaska Wholesale Competition is legislatively and regulatory nonexistent
- Open Access transmission at non-discriminatory rates do not exist
- Market Forces are Nonexistent
- State money has historically provided infrastructure capital creating a perpetual Dependency Business Model vs. Competitive Business Model. Free $$ vs. Loans that must be paid back.
- Capital flight
- Alaska Legislation and regulations are **anti-competitive and "utility centric" rather than "market force centric".**

Alaska receives what it incentivizes

Challenge #7 Regulatory processes and statutes versus State Energy Policy & PURPA

- State Energy Policy "encourages" Private Investment and Private development of Alaska's energy resources (a good start).
- State Energy Policy calls for streamlining of regulations and government processes (as it should be).
- Aspirational vs. Directional (the problem arises).
- State Legislation and regulations for competitive power have not been modernized since *1982…yes, before computers, cell phones, mass adoption of the internet.*
- However, RCA is recognizing that Alaska is violating the **Public Utility Regulatory Policies Act** with the direction it is moving with R-13-002

Bottom-line: Alaska ratepayers pay too much with Alaska protectionist policies that are out of synch with delivering the lowest competitive cost to Alaska ratepayers.

What is PURPA's Purpose?

Public Utility Regulatory Policies Act § 210

Section 210 of PURPA "is designed to promote the development of alternative energy resources by overcoming the historical reluctance of electric utilities to purchase power from nontraditional facilities."

- *Consol. Edison Co. v. Public Serv. Comm'n of New York*, 470 U.S. 1075, 1076 (1985) (emphasis added).

Congress "directs FERC" to promulgate "rules requiring utilities to offer to … purchase electricity from qualifying cogeneration and small power production facilities."

- *FERC v. Mississippi*, 456 U.S. 742, 751 (1982) (emphasis added).

FERC's rules "shall insure that … the rates for such purchase … shall not discriminate against qualifying cogenerators or qualifying small power producers."

- 16 U.S.C. § 824a-3(b), (b)(2) (emphasis added).

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Where we took a wrong turn

- Alaska's 1982 APUC Docket U-81-35 Order No. 4 effectively stamped out competitive energy development and private capital investments removing Alaska from market forces. Even this order was supposed to be temporary until Alaska utilities were "sophisticated" enough to have competition.
- Now 32 years later…same **closed market anti-competitive system** that was supposed to be temporary.

What is that Avoided Cost Stuff?

PURPA and FERC Regulations

FERC regulations require states to ensure that utilities purchase power from QFs at a level that "equals" the utility's "avoided costs," unless the parties mutually agree otherwise.

- 18 C.F.R. § 292.304(b)(2).

"[E]ach State regulatory authority shall … implement such rule … for each electric utility for which it has ratemaking authority."

- 16 U.S.C. § 824a-3(f)(1) (emphasis added).

Under both PURPA and FERC regulations, **"avoided costs" are defined as the "incremental costs to an electric utility of electric energy or capacity or both** which, but for the purchase from the qualifying facility or qualifying facilities, such utility would generate itself or purchase from another source."

- 16 U.S.C. § 824a-3(d); 18 C.F.R. § 292.101(b)(6).

What is R-13-002?

- On January 28th, RCA provided a status report on a docket that asked for justice on:
- Avoided Cost Definition
- Integration Costs
- Curtailment of power
- Open Bidding Process and Mediation

- Expensive Docket

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R-13-002 Next Steps

- February 11, 2015 RCA will present draft regulatory amendments
- Revise Definition of Avoided Cost
- Revise Determination of Avoided Cost Rates
- Revise Utilities obligation to purchase from QF's
- Legally Enforceable Obligation
- Allocation of integration costs
- Revise QF interconnection requests
- Compile records to provide Avoided Cost information
- Modify standard offer for QF's under 100 KW

R-13-002 Unknowns & Risks

- Docket was heavily protested by Utilities and Alaska Power Association in RCA filings.
- Draft RCA language amendments is unknown-could be effective…or not.
- Public comment period will be provided
- After comment period, RCA will decide <u>or not</u> to implement draft amendments.
- RCA has until August 23, 2015 to issue an order

Legislators Legislate- Regulators Regulate

- Legislation provides directional language
- Legislation establish Alaska values, regulations implement values
- Directional vs. Aspirational
- Do we require Competition and Market Forces? Or is the status quo working and we continue with more of the same
- R-13-002 will not resolve the CIRI Fire Island debacle… legislation will
- Legislation leads, regulation follows

What Alaska Competitive Energy Act does that R-13-002 does not

- ACEA Opens and "legislatively" mandates wholesale electric generation competition
- ACEA institutes market forces and migrates Alaska statutes from "utility centric" to "market centric"
- Requires RCA to promote competition consistent with the State Energy Policy.
- Streamlines Regulatory Proceedings
- Establishes clear rules and timely non-discriminatory Open Access with similar costs for all users of transmission
- Establishes "reasonable compensation" and "reasonable integration charges"
- Establishes RCA authority to investigate and correct discriminatory and anti-competitive behavior
- Limits the types of costs that public utilities can pass onto ratepayers
- Allows IPP's to sell to mines and other industrial buyers outside a utility service area without regulation
- Updates Alaska regulations to be consistent with the rest of the country
- Lays the ground rules for any future ISO, USO or TRANSCO
- Embraces & Promotes Alaska Values

How ACEA Legislation Helps Alaskans

Helps RCA legislatively codify and reinforce objective for the limited scope of R-13-002

ACEA provides regulatory certainty, credibility and reliability to attract private capital and to expand Alaska's electrical generation and transmission infrastructure for our future economy while motivating competitive forces to lower Alaskan electricity rates

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
- 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.

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Alaska Competitive Energy Act

- Introduced by Rep. Tammie Wilson, co-sponsored by Rep. Cathy Munoz.
- Helps RCA legislatively codify its limited scope of R-13-002.
- ACEA provides regulatory certainty, credibility and reliability to attract private capital and to expand Alaska's electrical generation and transmission infrastructure.
- Instills Alaska Values to lower Alaskans electrical rates.
- ACEA has NO FISCAL NOTE. Too easy

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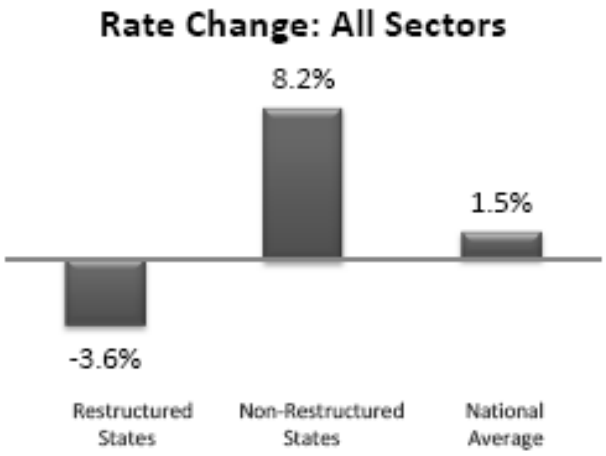
States with Restructured Electricity Markets Post Lower Rates of Change

Comparison of Rate Changes Across Electricity Markets – 1997-2013

*Restructured States vs. Non-Restructured States**

COMPETE

Electricity Competition Drives Innovation and Consumer Benefits



* Restructured States include CA, CT, DE, IL, MA, MD, ME, MI, MT, NH, NJ, NY, OH, PA, RI, TX, and DC (17 states). These reflect states with active retail choice programs (15 states) and states with inactive/suspended retail choice programs but large portions of generation provided by Independent Power Producers (2 states). CA and MT fall in the latter category with less than 50% of net generation provided by electric utilities in 2010.

Results were calculated using price information from the U.S. Energy Information Administration (EIA) and a Consumer Price Index of Urban Consumers (CPI-U) of 45.1% for the calendar years 1997 through 2013. (Sources: EIA and The Bureau of Labor Statistics)

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