02/19/15 PRESENTATIONS: COLLABORATIVE APPROACH TO UNIFIED SYSTEM OPERATION FOR THE RAILBELT REGION - NATURAL GAS DISTRIBUTION BUILD-OUT

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Xcel Energy®

COLLABORATIVE APPROACH TO UNIFIED SYSTEM OPERATIONS

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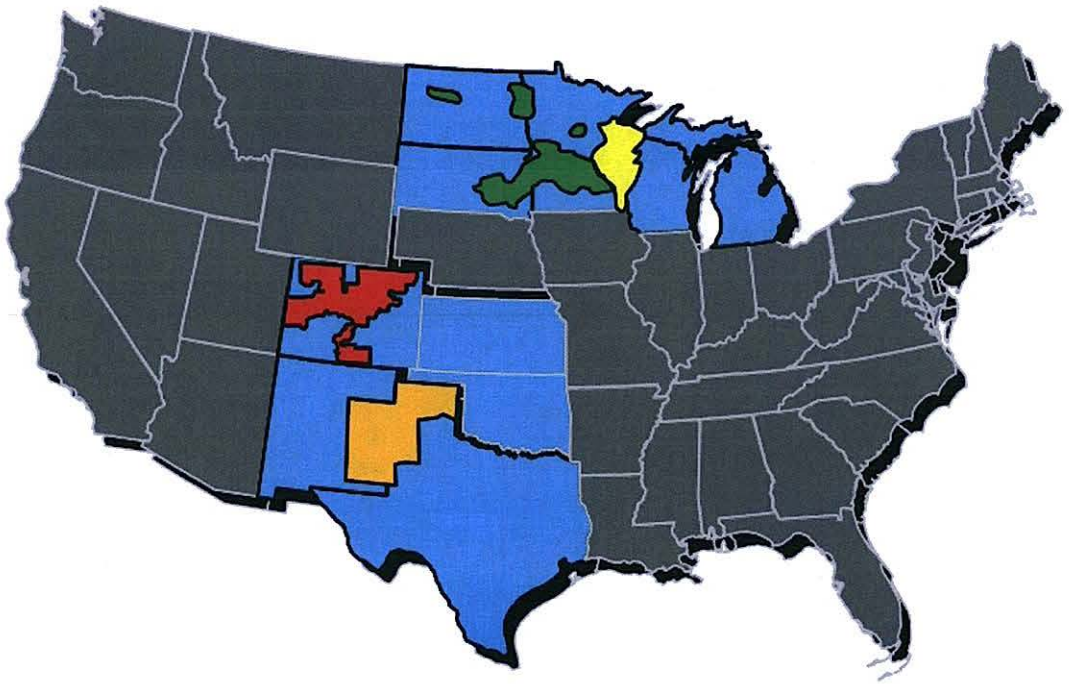
2/19/15

XCEL ENERGY INC.

- Major integrated utility
  - Generation
  - Transmission
  - Distribution
  - Gas
- No. 1 wind energy provider
- Top 5 in Energy Efficiency programs
- Industry-leading voluntary emission reductions



XCEL ENERGY TRANSMISSION

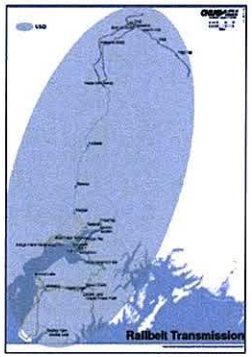
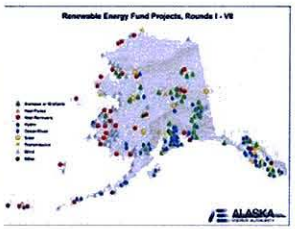
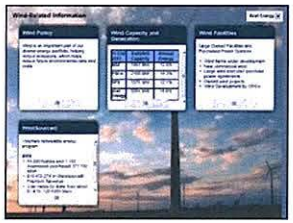
- Industry leader in transmission
- 19,000 transmission line miles
- 1,200 substations
- Assets in 10 states
- 2 RTOs (MISO & SPP); Non-RTO west
- 3 NERC Regions
- $4.5 billion investment 2015-2019

- Maintain in-house capability to execute all phases of a transmission project
- Frontline control and ownership of project risk to achieve the Best Value Delivery Model
- Extensive experience in delivering major transmission build outs
- Safety woven into everything we do

JOURNEY TO ZERO

ALASKA & XCEL ENERGY

The right partnership based on common values & experiences

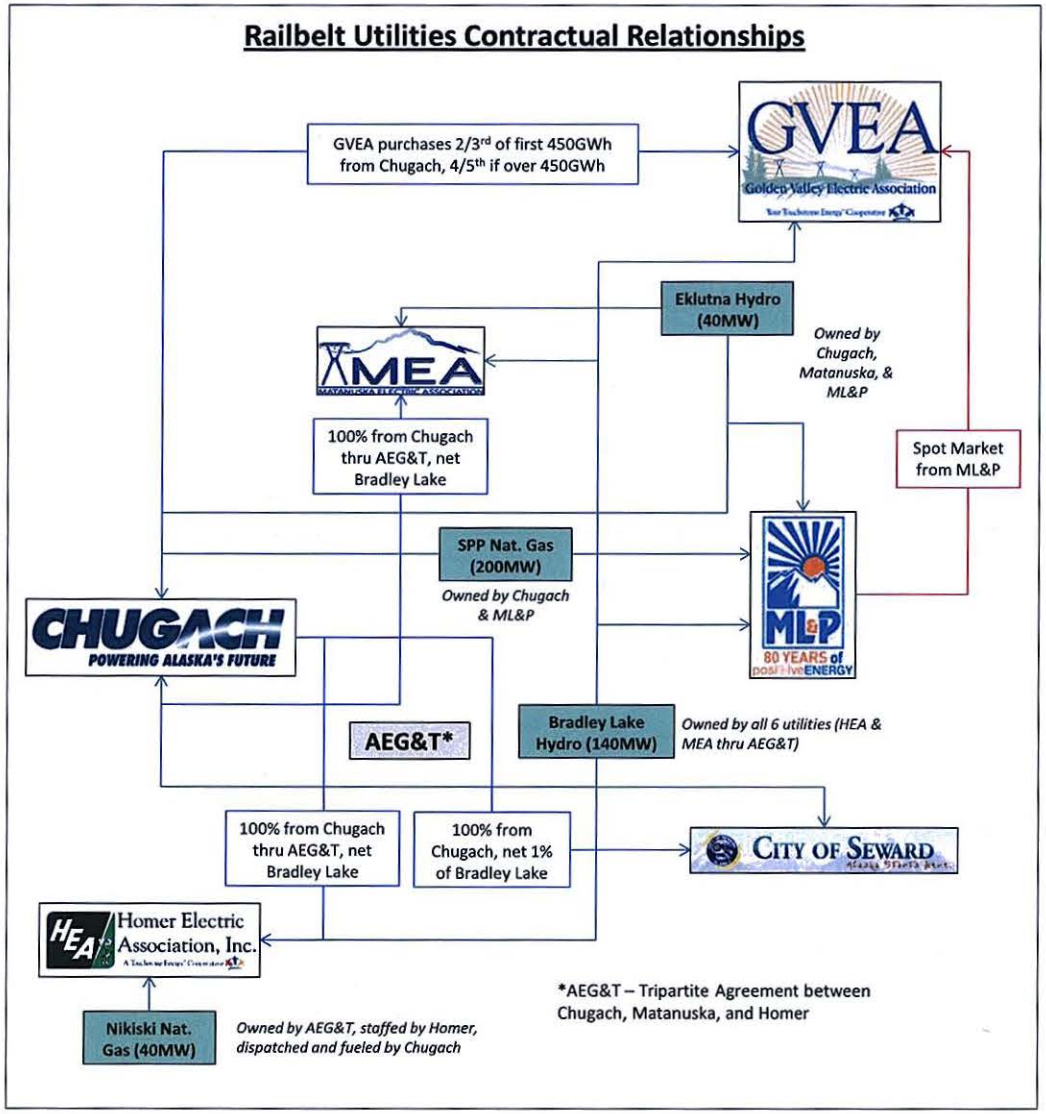
Examples	1. Establish Independent System Operator	2. Major Transmission Build Out Programs	3. Generation Diversification	4. Renewables Integration	5. Conservation & Community
	 *In the process of creating the Unified System Operator*	 *Railbelt projects identified to date + USO future recommendations*	***Senate Bill 138 – Alaska Affordable Energy Strategy*** *Plan and recommendations to the Legislature on infrastructure needed to deliver affordable energy to areas in the state that do not have direct access to a North Slope natural gas pipeline. Due: January 1, 2017* Planning for EPA's Clean Power Plan	 *Railbelt USO implementation and System Build Out needed to support significant renewable integration*	ALASKA ENERGY EFFICIENCY PARTNERSHIP  • *Goal - Reduce per capita energy use by 15% by 2020* • *Energy Assessments* • *Weatherization Programs* • *Home Energy Rebates* • *Energy Assistance*
Xcel Energy® RESPONSIBLE BY NATURE®	MISO SPP Southwest Power Pool MAPP *Deep experience in the details of forming and working within independent system operator (ISOs)*	 *CapX2020; SE New Mexico Oil Patch; ~$1B in annual capital spend*	MERP COLORADO Clean Air–Clean Jobs *Legislative supported major emission reduction programs while maintaining a balanced generation portfolio*	 *Advanced forecasting system to manage the integrations of ~5,300 megawatts of wind; Max Hourly % Load reached **60.5%** (PSCo)*	REBATES Xcel Energy® AVAILABLE  • *Energy efficiency program goals are set annually* • *Since 1992, we have been able to avoid more than 16 medium base-load power plants (250MW)* • *Xcel Energy offers over 90 electric and gas programs across our states*

ALASKA RAILBELT DISCUSSION

ALASKA RAILBELT DISCUSSION

Our understanding

- Current state system result of individual utility system planning
- Multiple contractual relationships in-place between the Alaskan Railbelt utilities
- Utilities have added generation reserves to address the lack of transmission
- Customers have energy cost concerns
- Regional transmission plus economic dispatch are needed to lower electricity costs, increase reliability, and enable energy supply options



ALASKA RAILBELT DISCUSSION

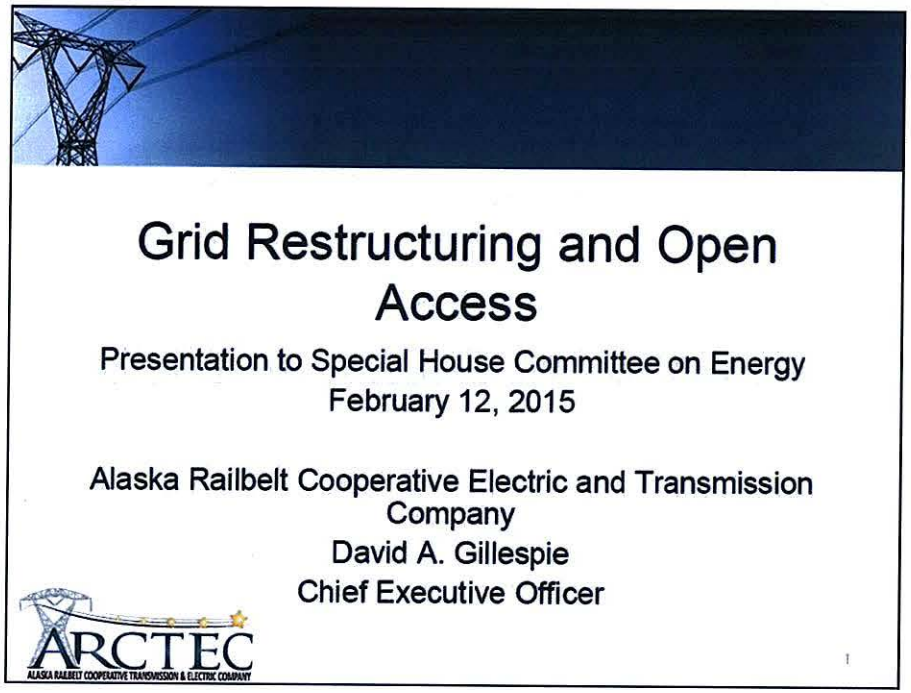
Our understanding

- Utilities, through ARCTEC, appear to have made good progress to organize and set the groundwork to form a Unified System Operator (USO)

- Guiding principles have been set & are sound:
  - Governance based on a stakeholder process
  - Regulatory Commission of Alaska jurisdiction / regulatory compact
  - Nationally recognized reliability standards
  - Set interconnection standards
  - Plan system upgrades
  - Non-discriminatory access and service
  - Economic dispatch
  - Respects existing agreements and investments

  Source: Grid Restructuring and Open Access presentation to Special House Committee on Energy

- Independent system operator is needed to deliver the full economic benefits of a unified Alaska system



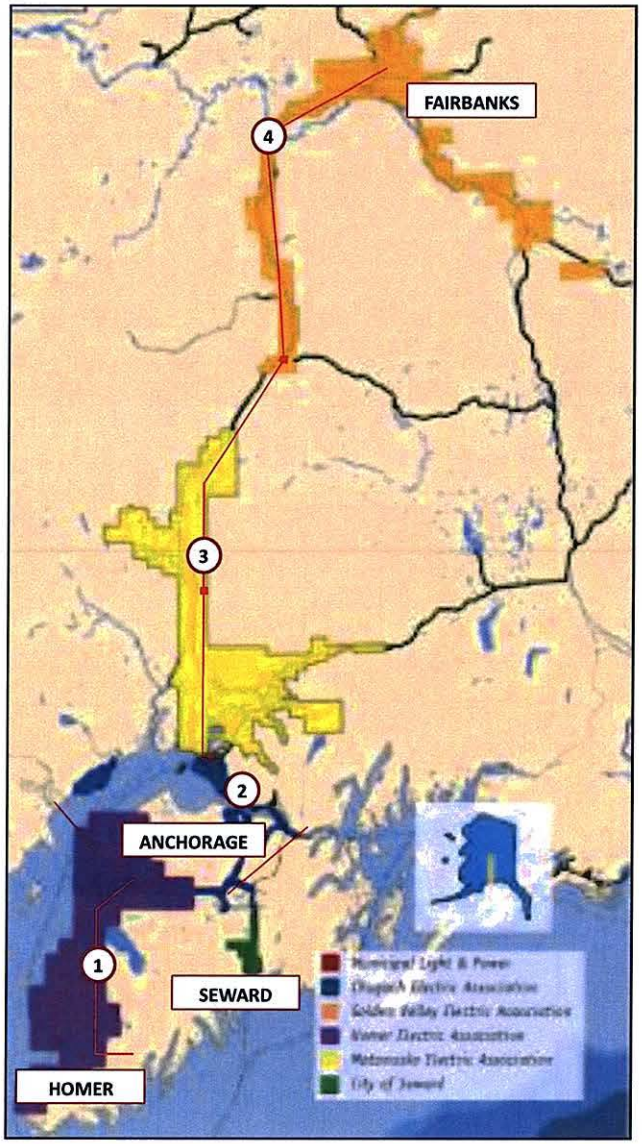
ALASKA RAILBELT DISCUSSION

Our understanding

- Study efforts have identified projects to begin to address the Railbelt transmission needs
- Railbelt Transmission Integration Plan is one solution and consists of $903M in transmission projects:

PROJECT	CAPITAL ESTIMATE	BENEFIT/ COST RATIO
1. Kenai-Anchorage Transmission	$389M	2.9
2. South Central Alaska Reliability	$21M	1.2
3. North Intertie - A	$368M	4.1
4. North Intertie - B	$113M	3.7

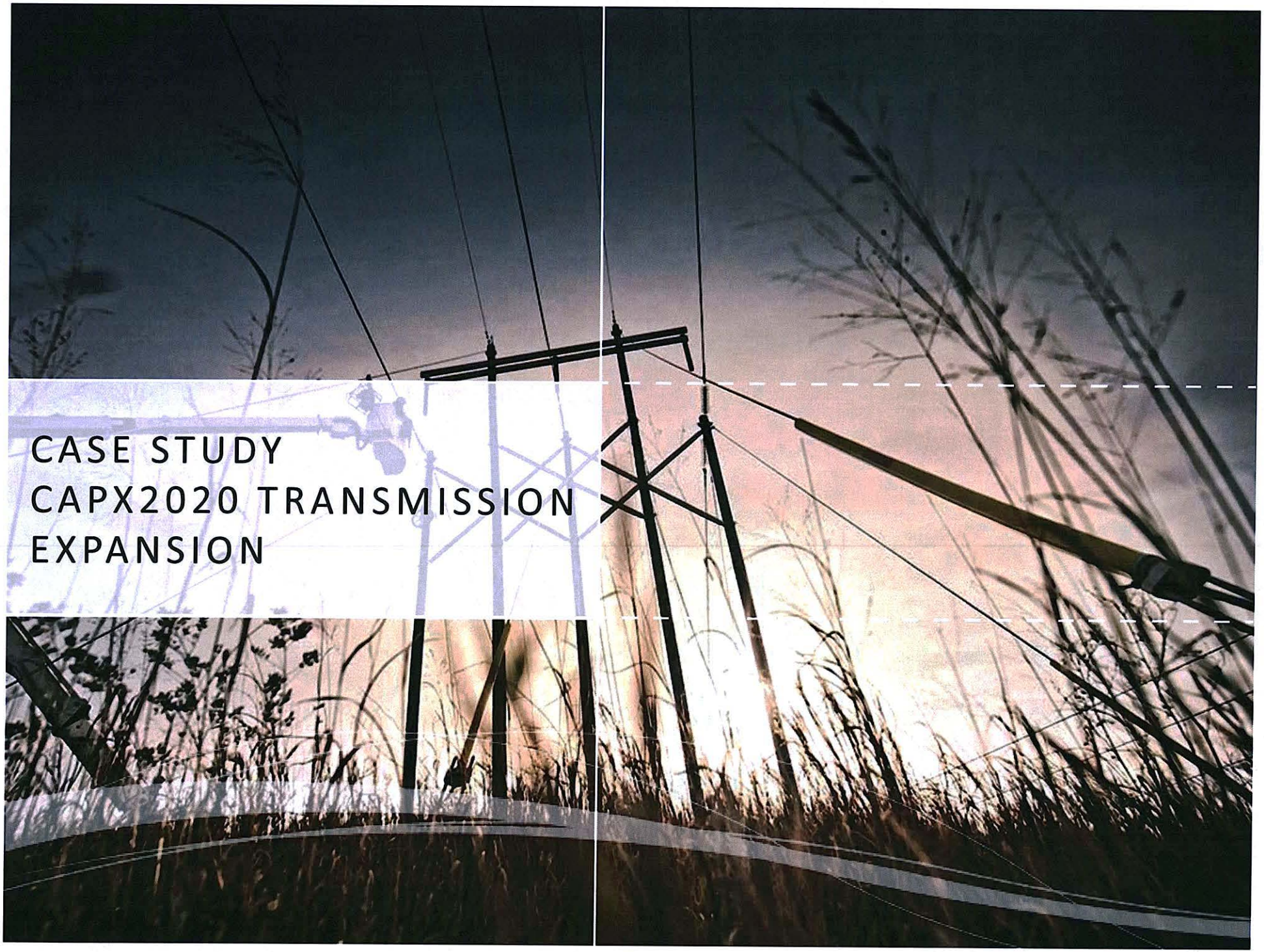
- Projects provide significant increases in economic benefit, future reliability development, and energy supply options



ALASKA RAILBELT DISCUSSION

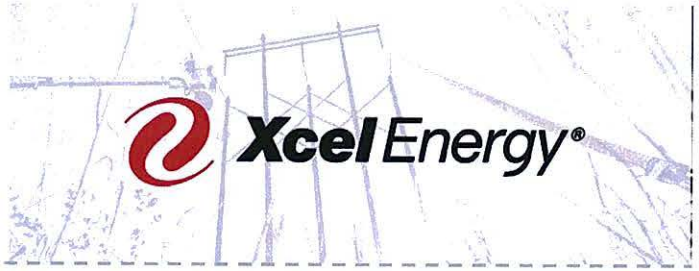
Key considerations for Legislature

- Successful transmission build outs & establishment of a USO need support from policy makers, state leaders, and regulators
- Ensure the RCA is empowered with clear regulatory authority
- Support non-traditional financing approaches
- Encourage transparent cost recovery to attract capital investment
- Industry lessons learned



CASE STUDY
CAPX2020 TRANSMISSION EXPANSION

CAPX2020 TRANSMISSION EXPANSION



Situation

- Region's utilities had experienced 10+ years of failed attempts to get "organized" for transmission development (e.g., Transco, ISO)
- Uncertain revenue recovery froze transmission investment
- The transmission system continued to be stressed
  - Business development and area growth
  - Generation diversification through long term planning and state policy
  - Increasing system congestion and area reliability problems over a large geographic footprint
- State and Federal policies continued to evolve

Xcel Energy and area utilities along with the state and other interested stakeholders recognized that a new approach was needed...

CAPX2020 TRANSMISSION EXPANSION

Xcel Energy®

Shared vision & commitment

- Formed Spring 2004 to address system concerns
- Collaborative approach to grid expansion
- Started with 4 utilities, grew to 11
  - Electric cooperatives
  - Municipal G&Ts
  - Investor-owned utilities
- Incorporated lessons learned from past attempts
- Serving MN and portions of WI, ND and SD

CapX2020
Delivering electricity you can rely on

Otter Tail Power Company
Xcel Energy℠
Great River Energy
Dairyland Power Cooperative
rpu — we pledge, we deliver
MPA
Missouri River Energy Services
minnesota power — An ALLETE Company
Southern Minnesota Municipal Power Agency
WPPI energy
Minnkota Power Cooperative, Inc. — Your Touchstone Energy® Partner

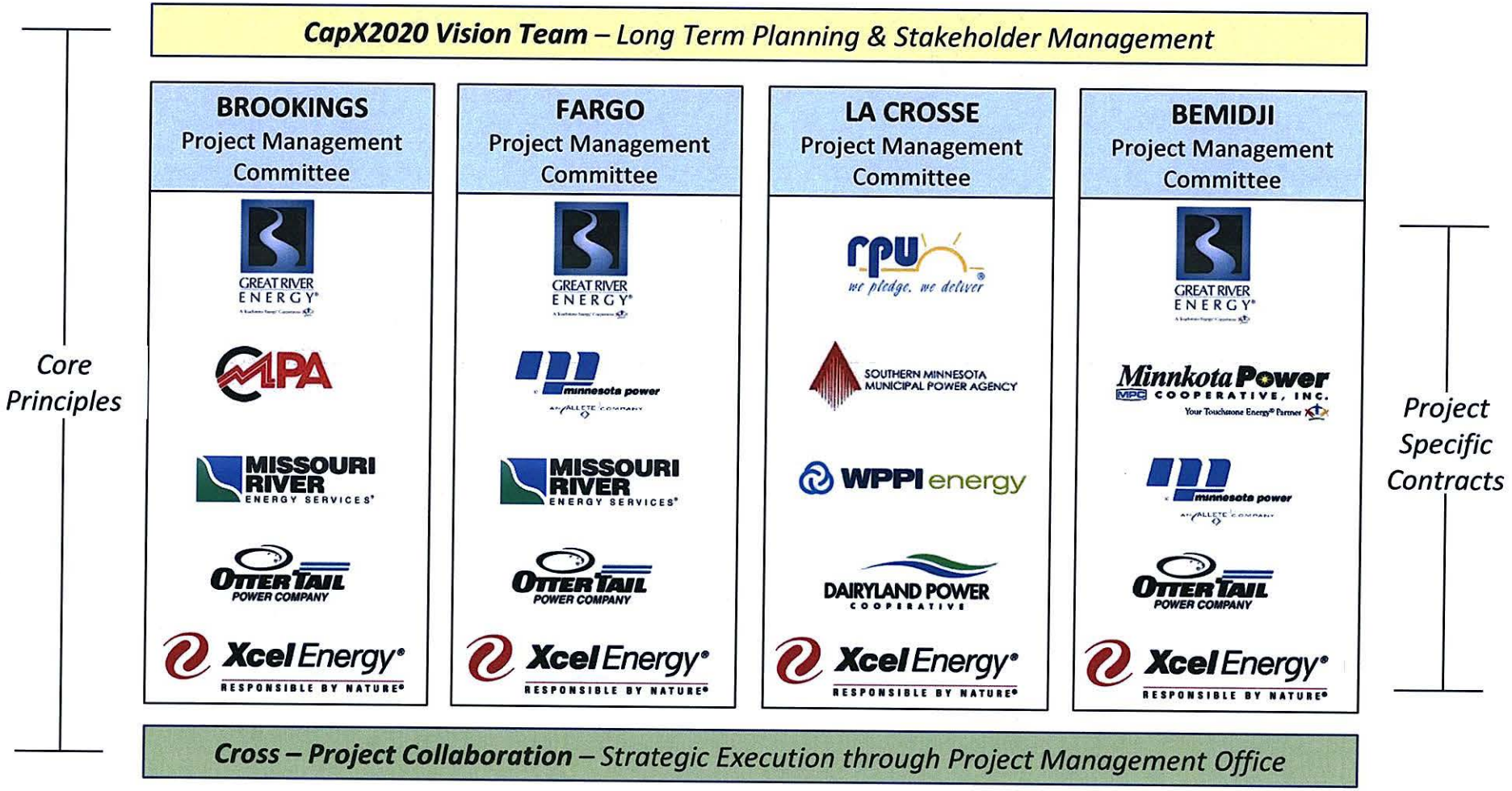
CAPX2020 TRANSMISSION EXPANSION

Build what is right for the region

- $2 billion investment by the 11 partner utilities
- 700 miles of 345 kV transmission; 70 miles of 230 kV transmission
- Key alignment with regulators and policy makers
- Projects critical as foundation for future transmission
- Provide needed transmission capacity to support energy supply options and implement energy policies

CAPX2020 TRANSMISSION EXPANSION

Projects structured for collaboration



CAPX2020 TRANSMISSION EXPANSION

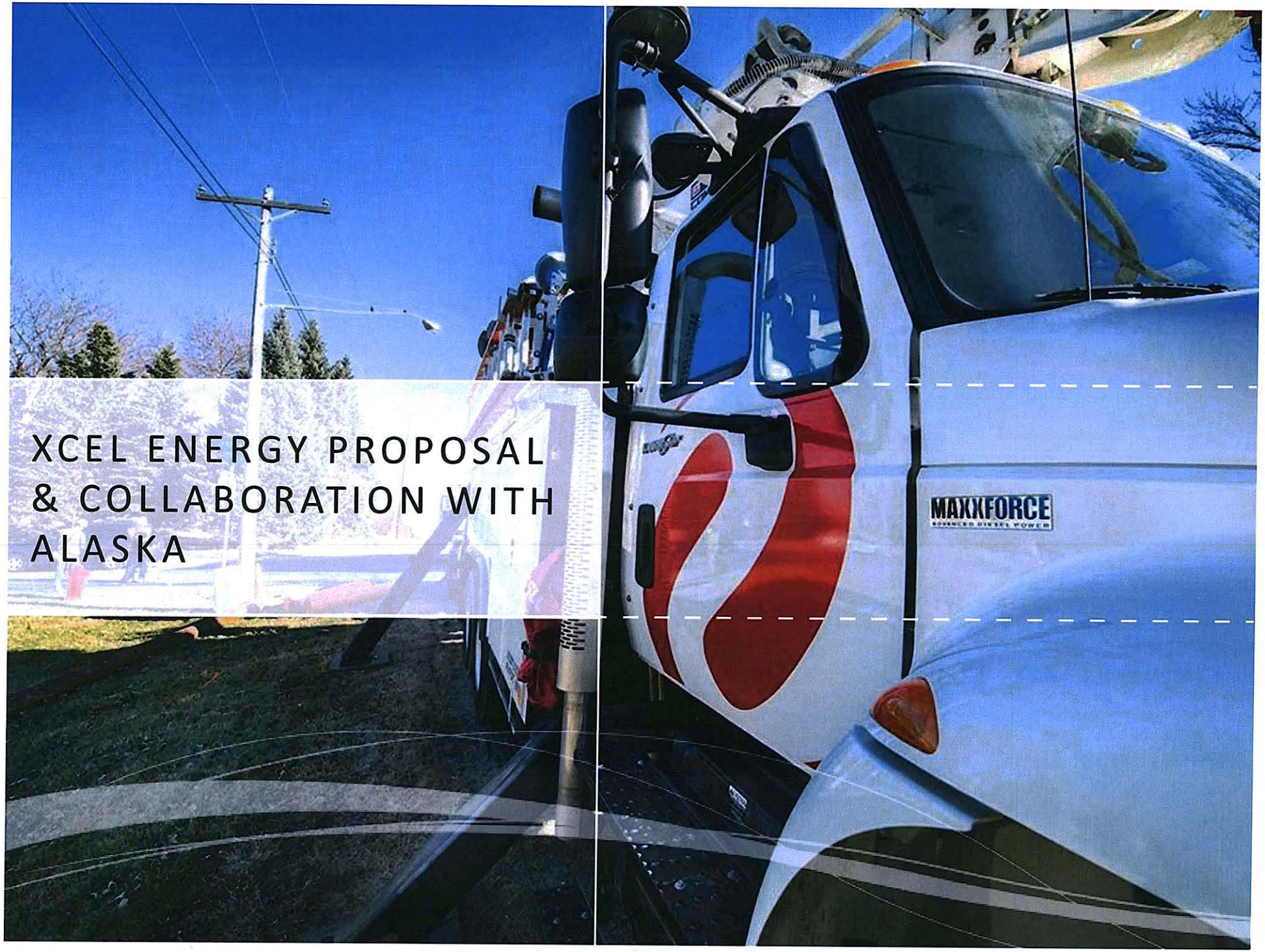
Xcel Energy®

Key success factors

- Alignment with regulators and policymakers to enact enabling legislation
- Collaboration through all phases with all stakeholders - *Utilities, Regulators, Legislators, Environmental groups, & Landowners*

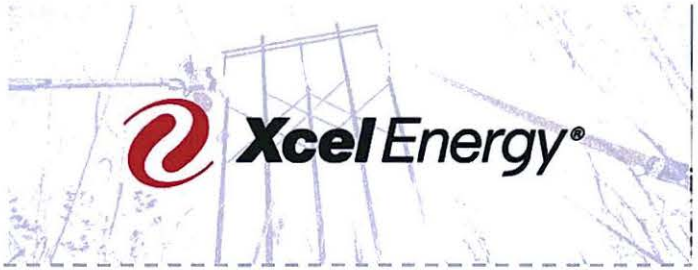
Results

- CapX2020 Phase 1 implementation is nearing completion
- Total regional economic impact estimated at $4B - *Study performed by University of Minnesota Duluth School of Business*
- CapX2020 partner relationships remain strong and continue to collaborate to address regional challenges



XCEL ENERGY PROPOSAL & COLLABORATION WITH ALASKA

XCEL ENERGY PROPOSAL



- Long term partnership with Alaska utilities and stakeholders to **collaboratively transform** the transmission system to lower customer costs, increase reliability and set the foundation for future growth

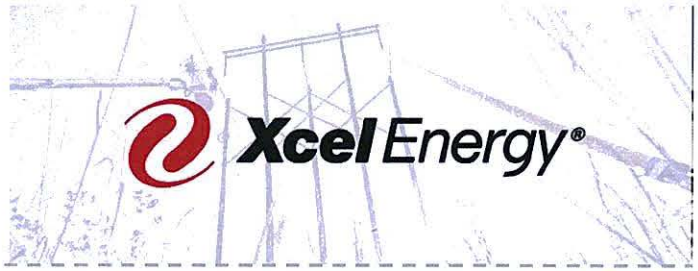
  - Leverage Xcel Energy's extensive experience in developing independent system operator organizations to **speed the implementation** of the Alaska USO

  - Invest with Alaska utilities to **construct transmission facilities** identified by current study efforts (and by future USO) helping to alleviate state budget and utility balance sheet constraints

  - Own transmission **with the Alaska utilities** (as they are willing and able)

  - Facilitate improvements in system operations – increasing reliability & **reducing the cost of service**

ROADMAP TO IMPLEMENTATION
ROLES BY ENTITY



LEGISLATURE — Alaska Energy Policy Maker

RCA — Alaska Energy Policy Implementer

USO — Independent Power System Operational Oversight and Control

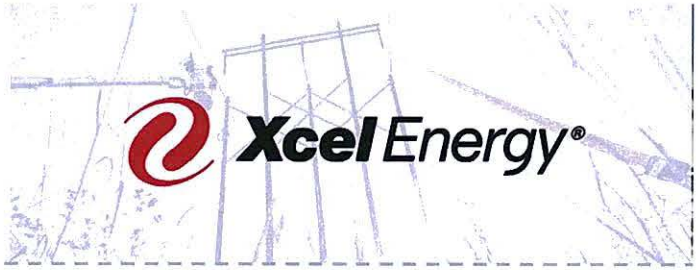
TRANSMISSION OWNERS

Invest in Transmission Assets and Run Day-to-Day Operations

GENERATION OWNERS

Provide Energy Supply Options to Buyers

ROADMAP TO IMPLEMENTATION
TASKS BY ENTITY



LEGISLATURE
- Define desired model for Railbelt electric system based on June 25th report
- Clarify the RCA's authority to implement desired model
- Incent utility participation

RCA
- Define specific attributes and implementation of USO organization
- Validate and adopt Railbelt Plan
- Set resource planning requirements
- Set reliability standards

USO
- Economic generation dispatch
- Unified transmission tariff
- Revenue requirements administration
- Generator interconnection process
- Regional transmission planning process

Xcel Energy can provide RTO/ISO experience to speed implementation

TRANSMISSION OWNERS
- Construct, operate, and maintain transmission grid in accordance with applicable requirements
- All utilities keep assets and have role in future transmission ownership

Xcel Energy collaboratively invests in Railbelt transmission with Alaskan utilities

GENERATION OWNERS
- Negotiate PPAs with buyers; become "network resource"
- Utilize grid; pay single unified transmission tariff to deliver
- Respond to real-time dispatch instructions from USO


THANK YOU
Xcel Energy®
RESPONSIBLE BY NATURE®

ENSTAR Natural Gas Company

Senate Energy Committee

Development of a Natural Gas Distribution Utility

February 19, 2015

AltaGas

AltaGas utilities

Pacific Northern Gas Ltd.

Heritage Gas

SEMCOENERGY GAS COMPANY

ENSTAR Natural Gas Company

Inuvik Gas Ltd.

Agenda

ENSTAR Natural Gas Company

- Overview and principles of Utility Rate Regulation for investor owned utilities
- Overview and highlights of the development of Heritage Gas
- Overview of ENSTAR's recent community expansions
- Questions

Principles of Utility Rate Regulation for Investor Owned Utilities

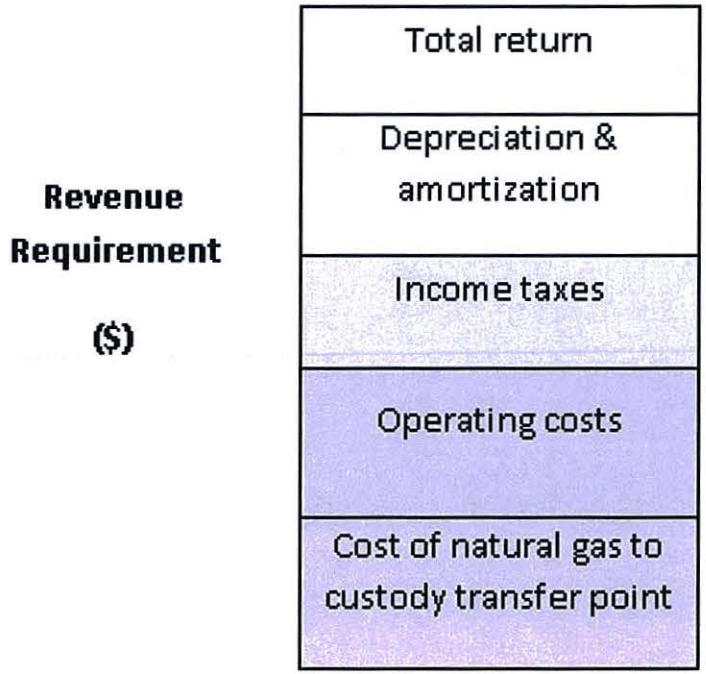
ENSTAR Natural Gas Company

- Franchise certificate = Exclusive rights to distribute = Monopoly = Regulatory Commission approval of customer tariff
- Regulatory Commission Responsibility
  - Set just, fair, and reasonable rates
  - Regulate the service and safety of utility operations
- Regulatory Compact
  - Provide an investor owned public utility an opportunity to earn a fair return on its investment

Economics of a Rate-regulated Utility for Investor Owned Utilities

ENSTAR Natural Gas Company

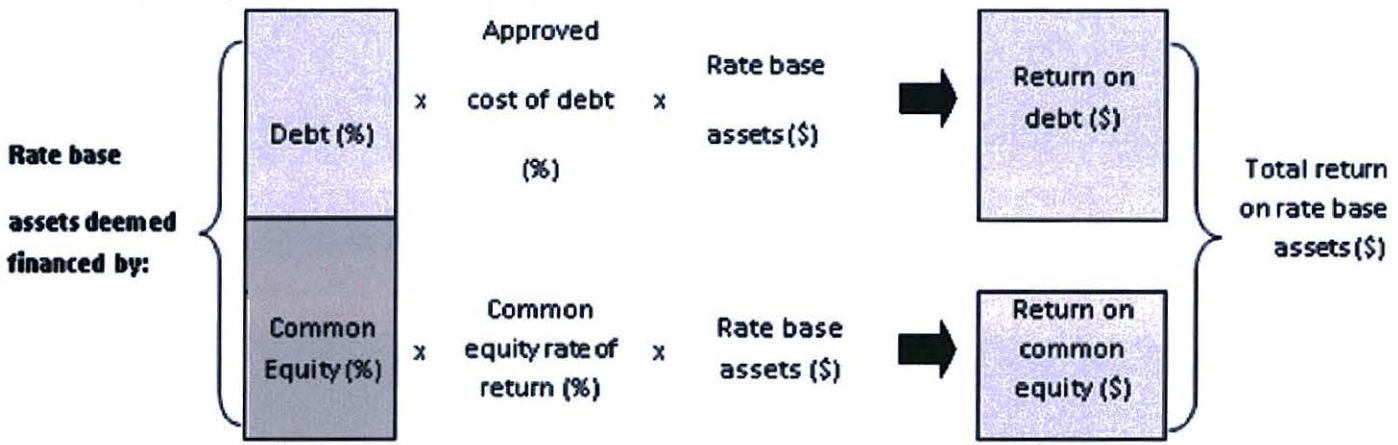
- Revenue is limited to:
  - Recovery of prudently incurred costs
  - Recovery of capital investment over time
  - Fair return on capital invested



Economics of a Rate-regulated Utility for Investor Owned Utilities

ENSTAR Natural Gas Company

- Total Return:
  - Rate base is the investment upon which the utility is allowed an opportunity to earn a return
  - Rate base (the investment) is deemed to be financed in a fashion that an entity with a similar business risk profile would be capitalized



Tariff Setting for Investor Owned Utilities

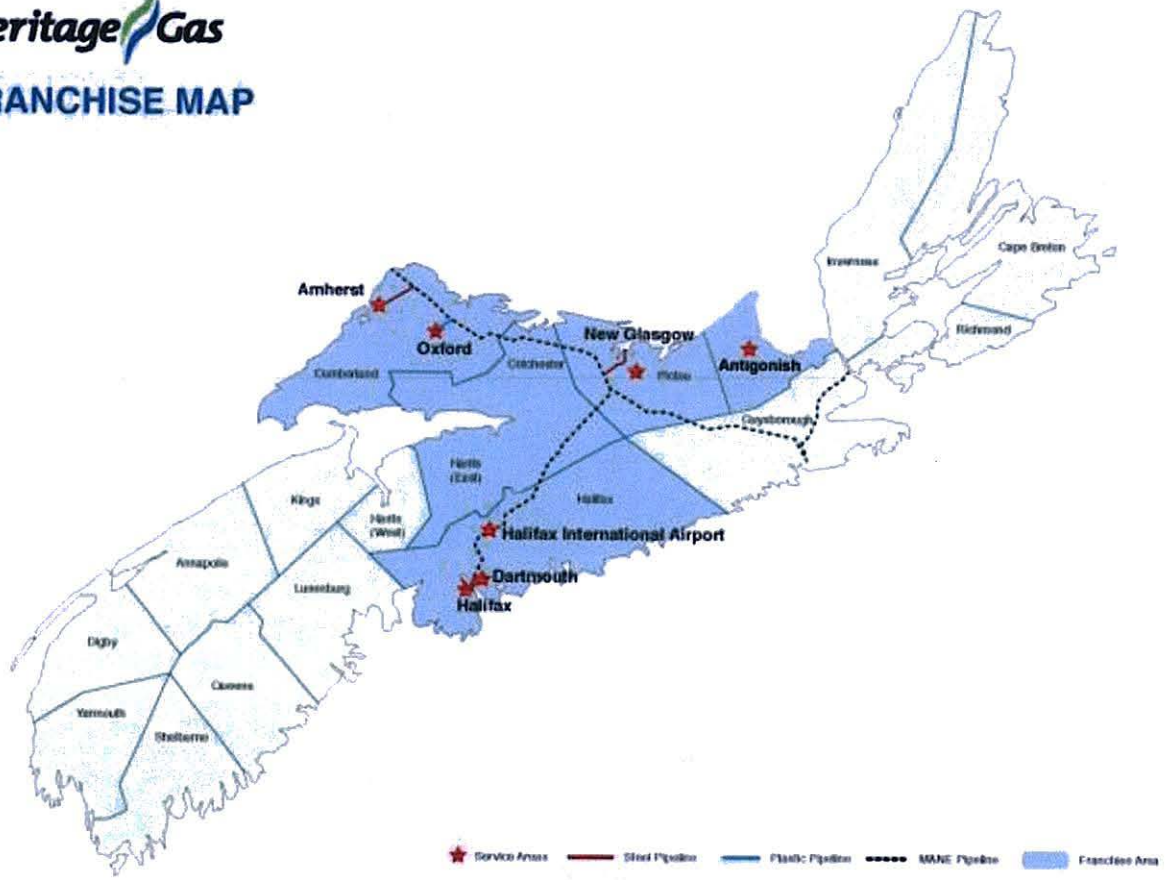
ENSTAR Natural Gas Company

- Setting customer tariff:
  - The utility's annual revenue requirement is split amongst its customers based on "cost causation"
    - Transmission capacity, mains, service lines, meters, administrative
  - Allocation of the revenue requirement for infant utilities can be burdensome on early customers
    - Revenue deferral mechanisms can protect the early customers from high early tariffs

Heritage Gas

Heritage Gas

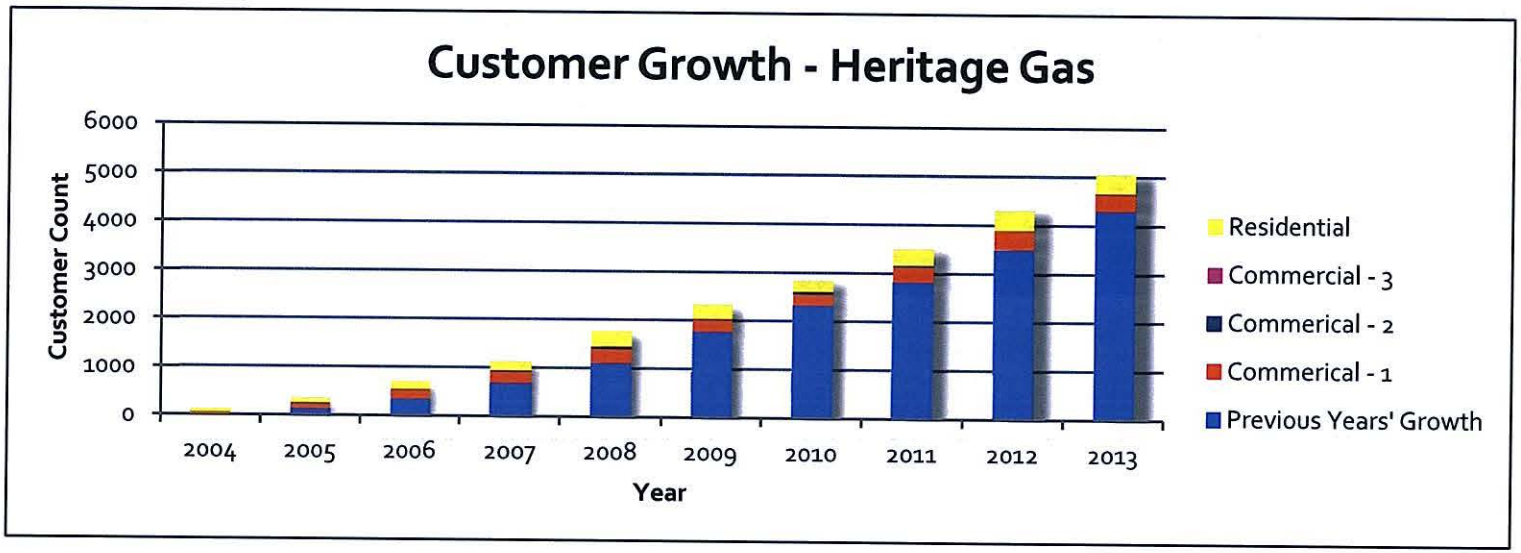
FRANCHISE MAP



Heritage Gas

- Franchise awarded: 2003
- Total customers 2013: 5,057
- Total mains pipeline infrastructure 2013: 420 km (261 miles)
- Total potential customers with direct access to mains 2013: 11,000
- 2013 Heritage Gas rate base: $220 million
- 2013 Volume: 6.2PJ (~6.6 bcf)
- 2013 Heritage Gas customer savings: $73 million and 200,000 tonnes of greenhouse gas emissions
- Nova Scotia Population: 940,592

Customer Growth



Penetration rates (%)	2013	2012	2011
Activated residential	37	32	29
Activated commercial	60	54	46
All customers	46	40	37

Heritage Gas

- Residential Customer Tariff (February 2015):
  - Fixed monthly: $21.87
  - Distribution charge: $8.615/GJ ($8.04/Mcf)
  - Cost of gas: $12.00/GJ ($11.20/Mcf)

*Note: 1.0 GJ = ~ 1.071 Mcf

Compressed Natural Gas (CNG) Business

- Currently serves industrial customers
- Expanding to Antigonish in 2015, with 313 customers expected during first phase. ($2.75/GJ rate rider for this CNG service)

ENSTAR Recent Expansions

ENSTAR Natural Gas Company

- Homer
  - 22.7 mile trunk Line
  - Utility Special Assessment District (USAD)
  - 1,315 customers connected with 486 more customers signed up

ENSTAR
Natural Gas Company

Questions?