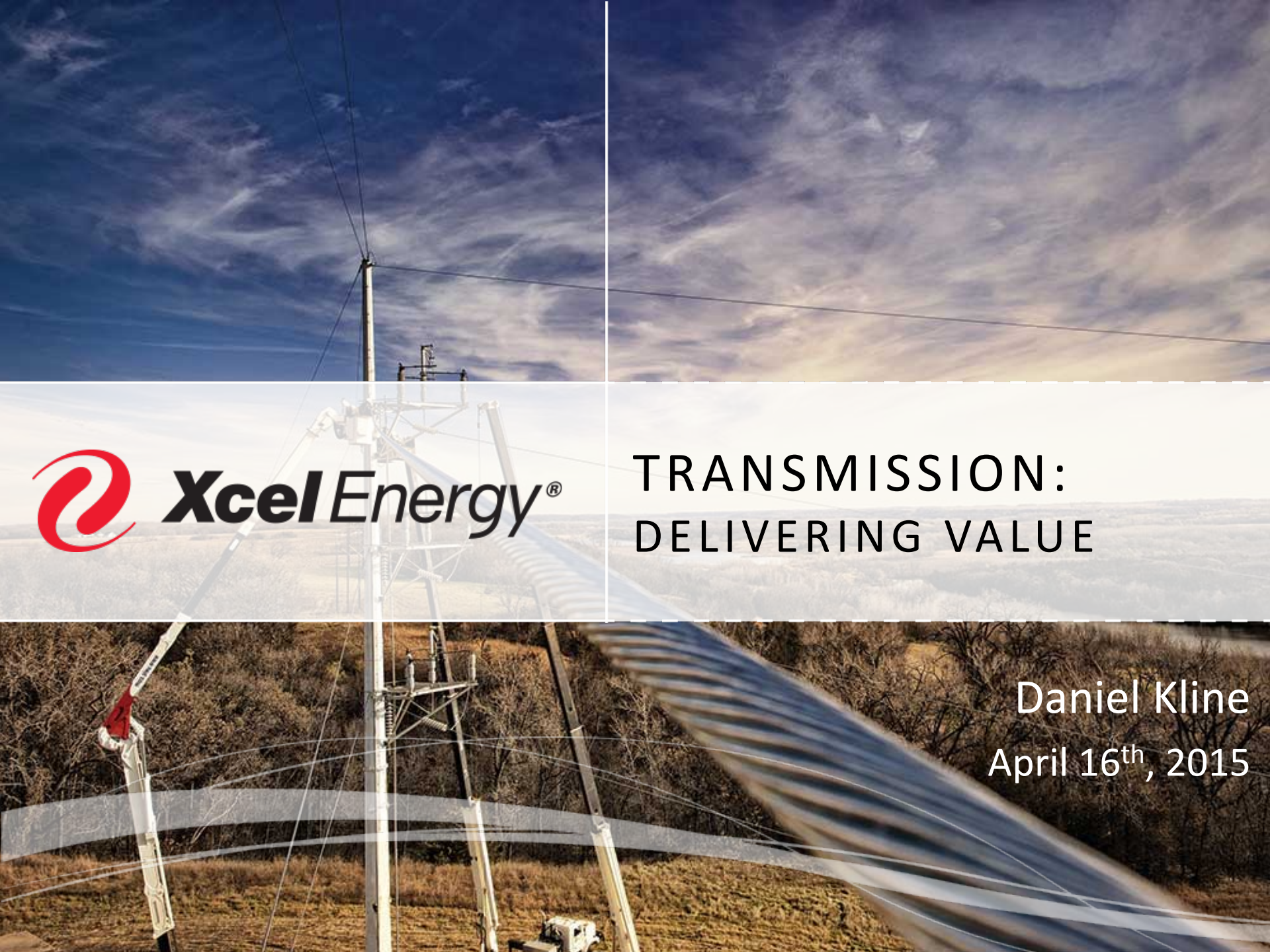


Xcel Energy®

TRANSMISSION:
DELIVERING VALUE

Daniel Kline

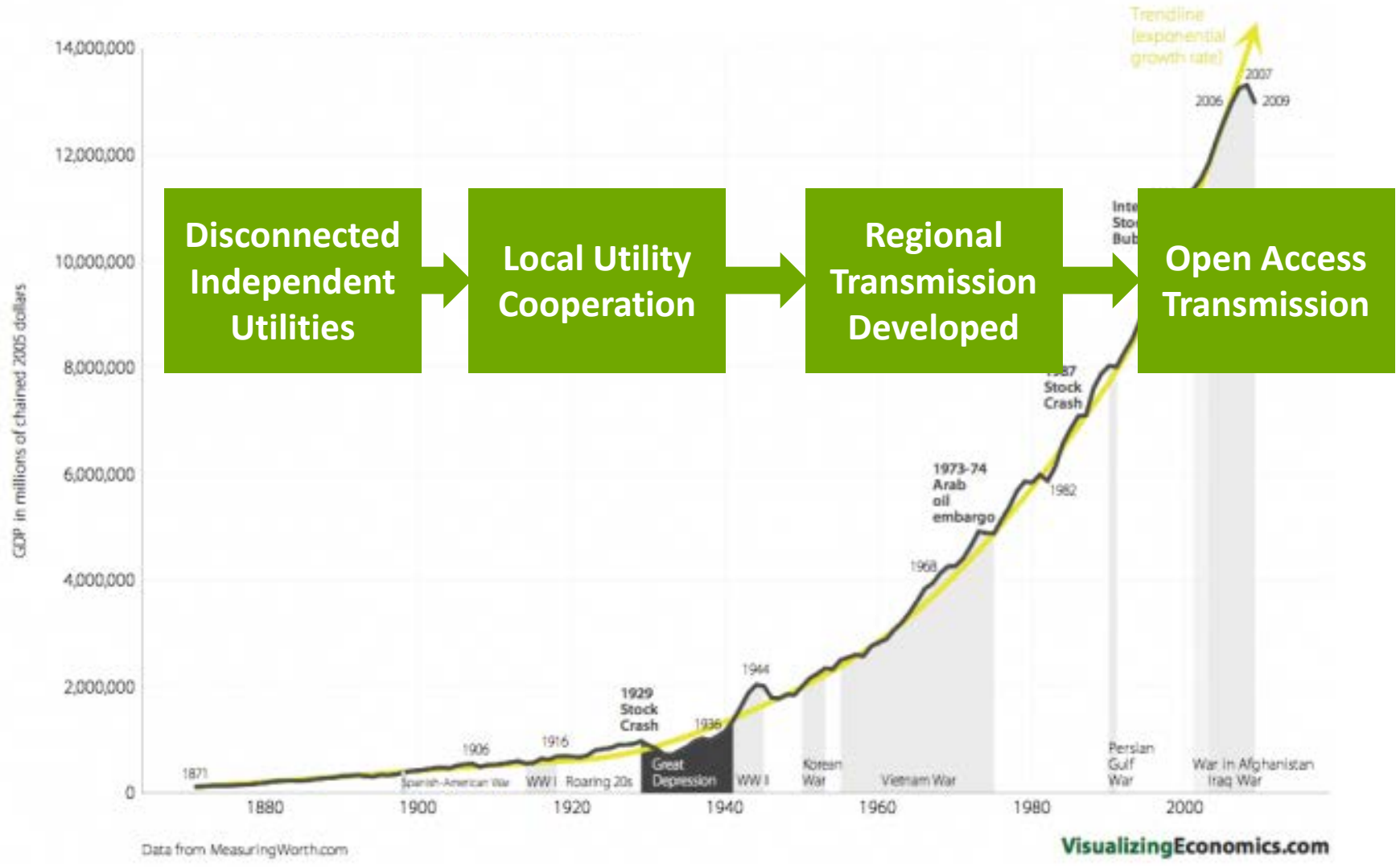
April 16th, 2015

AMERICA'S TRANSMISSION SYSTEM

"Greatest engineering achievement of the 20th century[1]"

[1]National Academy of Engineering

TRANSMISSION
ENABLING ECONOMIC GROWTH



ENERGY COSTS DRIVE BUSINESS DECISIONS

- Google, Microsoft, and Facebook have recently invested **billions in Iowa for new data centers**, due to the state's low cost of energy

- Aluminum smelters are attracted to lower electricity costs
- Alcoa, Rio Tinto, and other global aluminum producers have made substantial investments in Iceland due to the countries **wealth of natural resources and low cost of power**

- Major manufacturers are **shifting some manufacturing operations back to the US**, due to the recent benefits of lower energy prices, driven by the shale boom

ALASKA'S TRANSMISSION SYSTEM

Source: TD World, Quartz Creek

Railbelt Transmission faces challenges:

- Geographic hurdles
- Dispersed population
- Different regulatory framework

Contributes to:

- Amongst highest electricity prices in US
- Reliability concerns
- Limited economic development

ALASKA RAILBELT DISCUSSION

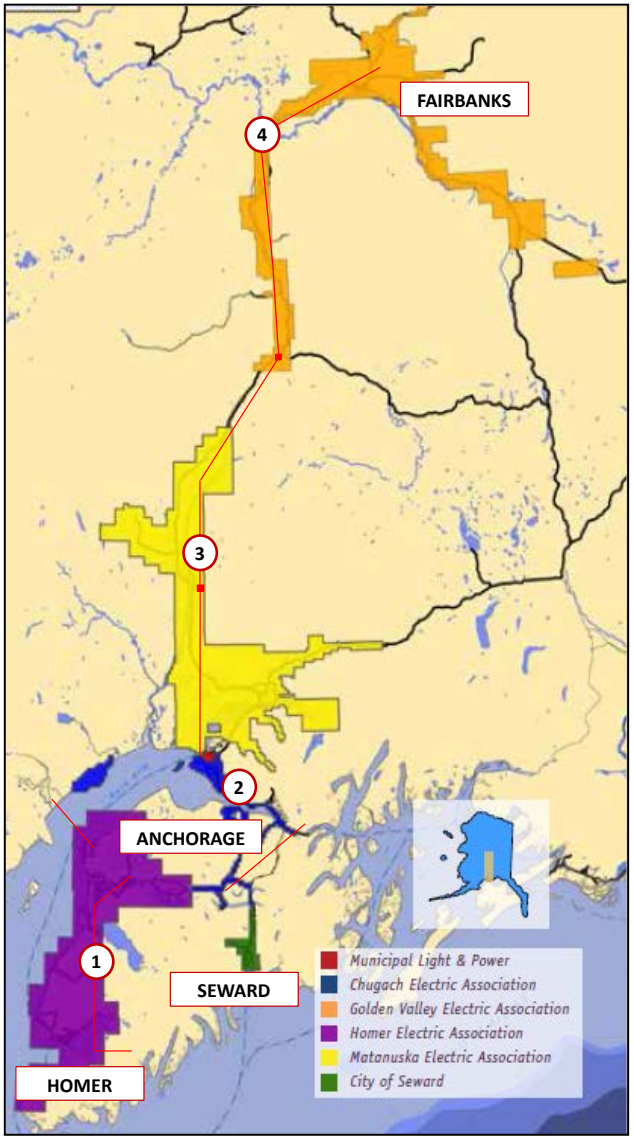
Our understanding

- 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



BENEFITS OF UNIFIED TRANSMISSION
ECONOMIC DEVELOPMENT


Source: alaskaminers.org

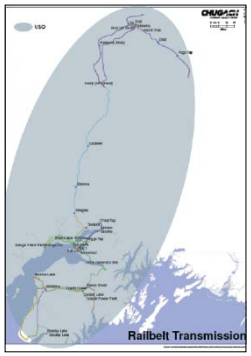
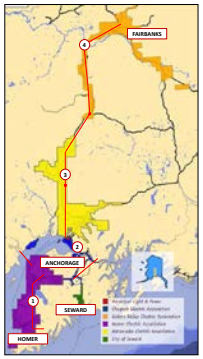
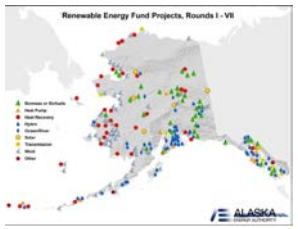
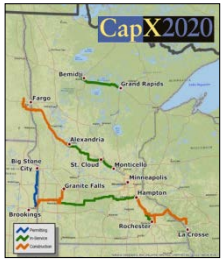
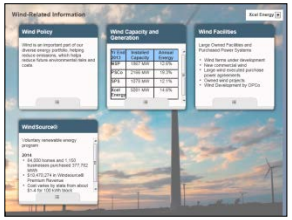

Source: alaskaminers.org

- Development areas are not geographically limited due to lack of local generation resources
- Large loads can be served more effectively (mining, gas, oil, etc.)
- Allows Alaska to process and manufacture resources within the state (vs. exporting natural resources to areas with lower cost or more reliable electricity)

XCEL ENERGY PARTNERING WITH ALASKA

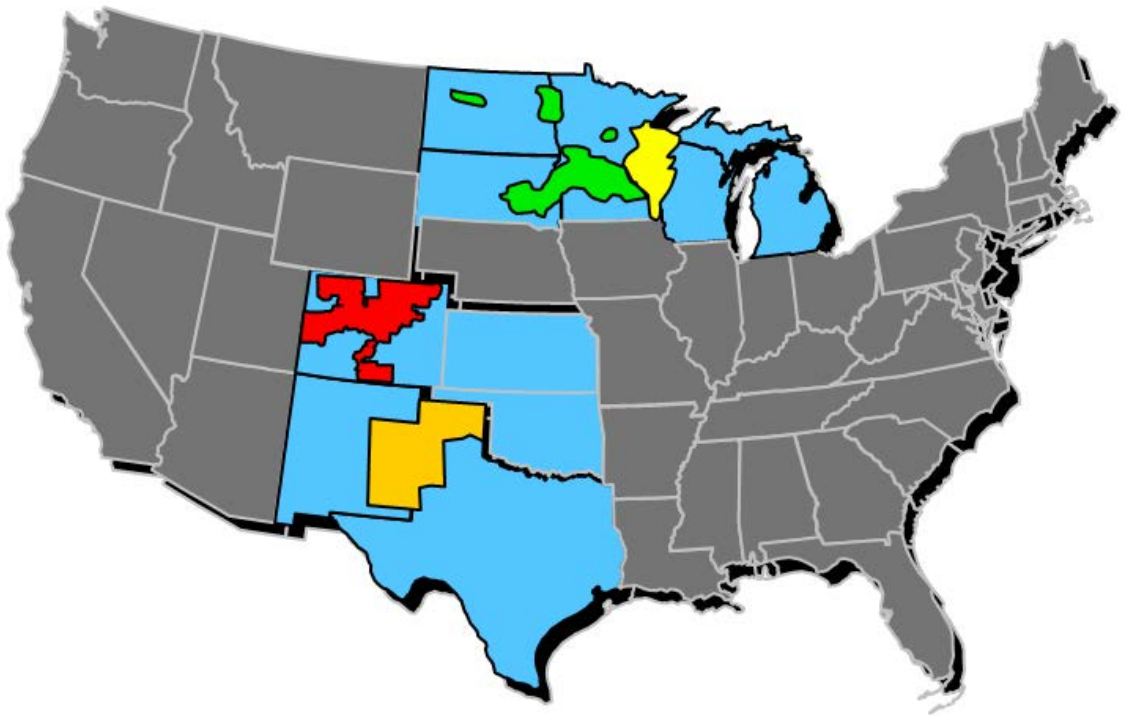
ALASKA & XCEL ENERGY

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
			***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*		ALASKA ENERGY EFFICIENCY PARTNERSHIP 
	In the process of creating the Unified System Operator	*Railbelt projects identified to date + USO future recommendations*	Planning for EPA's Clean Power Plan	*Railbelt USO implementation and System Build Out needed to support significant renewable integration*	• *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		MERP Minnesota KING REHABILITATION PROJECT COLORADO Clean Air–Clean Jobs		REBATE$ Xcel Energy® AVAILABLE 
	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*	*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)*	• *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*

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

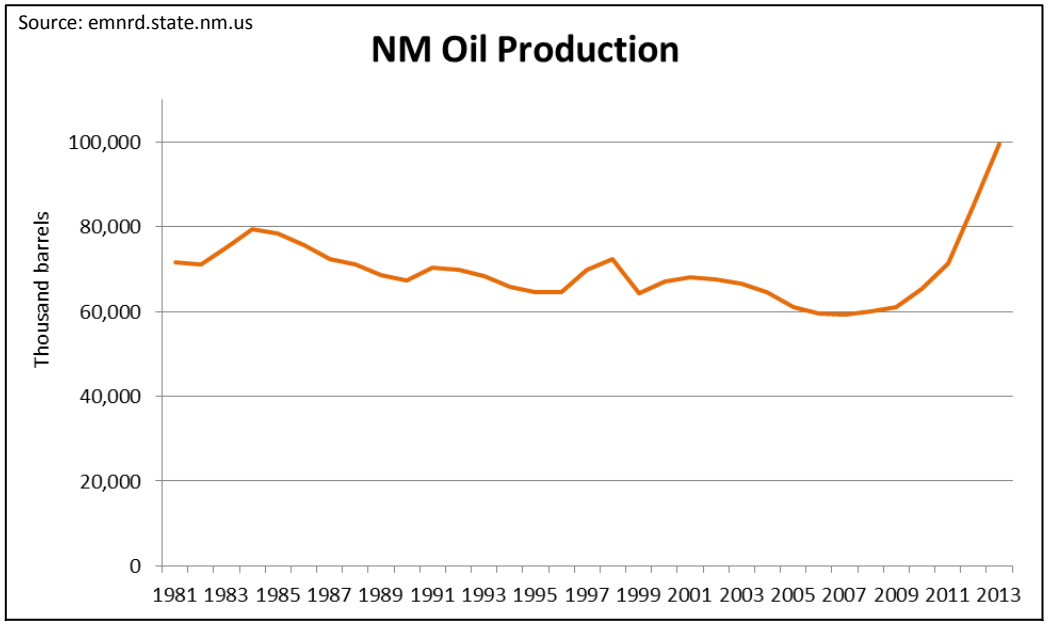
- Industry leader in transmission
- 19,000 transmission line miles
- 1,200 substations
- Assets in 10 states
- 2 RTOs (MISO & SPP); Non-RTO west
- 3 NERC Regions
- $4.5 billion investment 2015-2019

- 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

XCEL ENERGY TRANSMISSION: DELIVERING VALUE

NEW MEXICO OIL PATCH BOOM
ENABLED BY XCEL ENERGY TRANSMISSION



- $600M+ in transmission development planned for 2015-2020
- Supports 700MW of load growth to enable drilling, fracking, and mining activity
- Replaces expensive on-site diesel generation
- Mitigates low commodity prices by keeping operating costs low

WISCONSIN SAND MINES
ENABLED BY XCEL ENERGY TRANSMISSION


Source: jsonline.comg


Source: wisconsinwatch.org

- Xcel Energy transmission has enabled 28 new fracking sand mines & processing plants since 2010
- Presence of robust transmission system has enabled rapid growth of this industry in Wisconsin
- Customers are choosing Xcel Energy as their energy provider
  - Low cost of service
  - Trusted business partner
  - High level of service

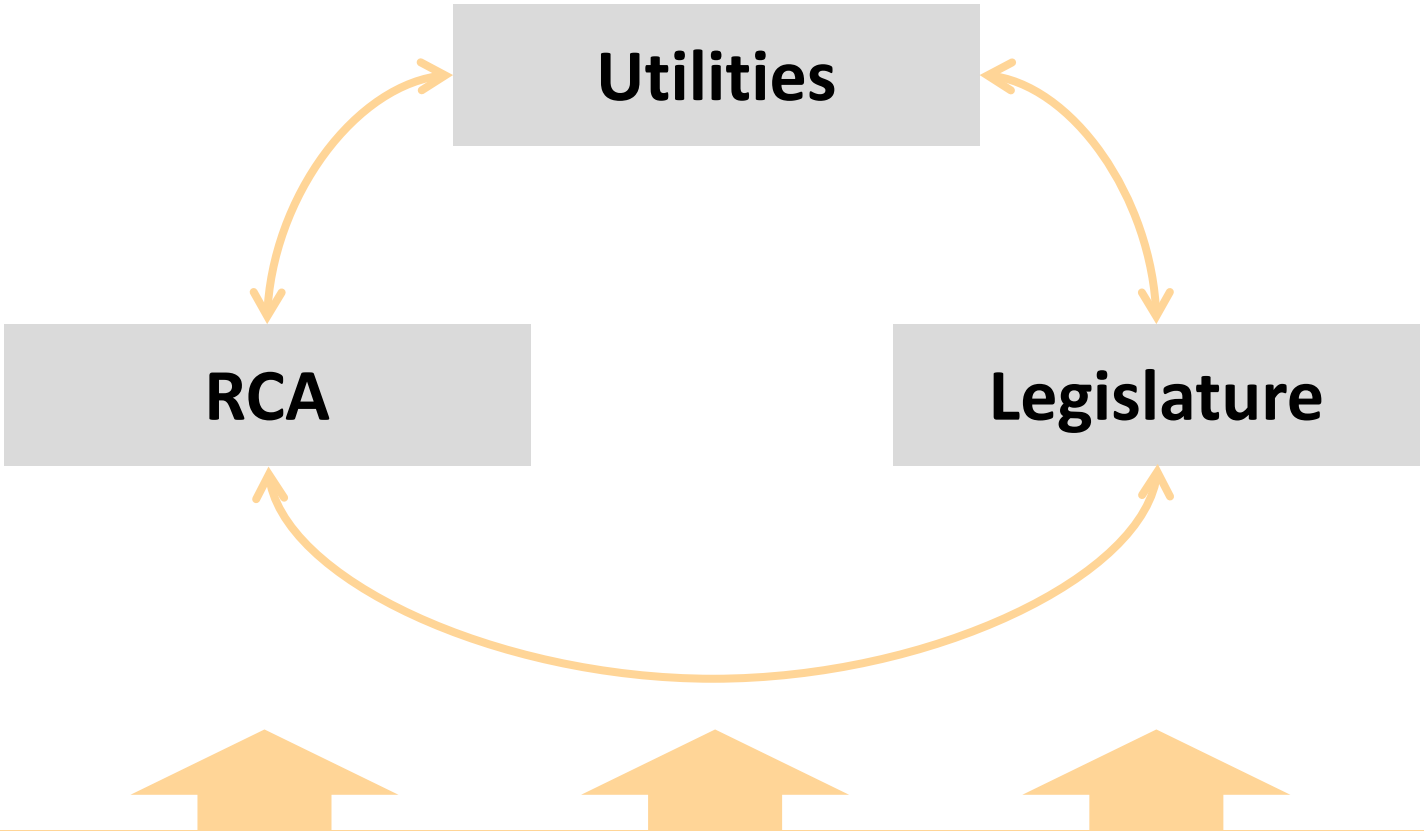
CAPX2020: ECONOMIC BENEFITS
SUPPORTING THE LOCAL ECONOMY

- Key Stats[1]
  - Nearly **10,000 jobs** created at construction peaks
  - $1.93 returned to economy for each dollar spent on construction activity
  - $3.4 billion in sales generated (w/ economic multipliers)
  - $49 million in state tax revenue
- From Local Construction Workers[2]:
  - *"Without this, I'd probably still be laid off"*
  - *"Xcel Energy is putting a lot of guys to work"*
  - *"How blessed it is to have a job"*

[1] University of Minnesota-Duluth's Bureau of Business and Economic Research, summer 2010
[2] StarTribune – "For Construction Sector, A Long Road Back", Dec 5th, 2010

NEXT STEPS

RAILBELT NEXT STEPS
INFORMING KEY DECISION MAKERS



THANK YOU

Xcel Energy®

RESPONSIBLE BY NATURE®