JOINT MEETING MATERIALS

MINNESOTA POWER 2020 IRP
JOINT STAKEHOLDER MEETING #1

MARCH 9, 2020

MEETING PRE-READ

GREAT PLAINS INSTITUTE | Better Energy. Better World.

Meeting Date & Time:

March 9th, 2020 from 10:00am – 4:00pm
(Optional breakfast and networking starting at 9:30am)

Meeting Location:

Timberlake Lodge
144 SE 17th St,
Grand Rapids, MN 55744

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JOINT MEETING 1 LOGISTICS

Dress Code: Business casual to casual. You can think of this event as an all-day retreat. Please dress comfortably. Jeans are acceptable.

Meeting Room: The main meeting room will be the Hickory Room and breakout sessions will be held in the Maple Terrace, Aspen, and Board rooms.

Meals: There will be a continental breakfast starting at 9:30am and we will be providing a buffet lunch at noon.

Hotels:

- Timberlake lodge
- AmericInn
- Country Inn & Suites

Questions: For any logistics questions beforehand or en-route, please contact Kate Sullivan at ksullivan@gpisd.net, 612-400-6296

JOINT MEETING 1 AGENDA

9:30	Continental Breakfast & Networking (optional)
10:00	Plenary Welcome
10:20	Small Groups Session 1
12:00	Lunch
1:00	Shift and Share
2:15	Small Groups Session 2
2:45	Break
3:00	Small Group Presentations
3:15	Plenary Discussion
4:00	Adjourn

INTRODUCTION TO JOINT MEETINGS

Minnesota Power's 2020 Integrated Resource plan is uniquely at the convergence of serious potential impacts to the state's economy, communities, and environment.

In order to discuss these impacts and discover potential solutions, Minnesota Power is funding a series of meetings with stakeholders from across its service territory and from its regulatory proceedings to come together for a set of conversations that can support honest dialogue, build mutual understanding, and potentially surface solutions that no single party would be able to develop on their own.

These meetings will merge multiple groups of stakeholders who have already been attending separate meetings to better understand the context and considerations for Minnesota Power's 2020 IRP. These joint meetings will focus heavily on dialogue between stakeholders rather than presentations from experts.

In these meetings, Minnesota Power staff will be participating as stakeholders in order to be part of the discussion.

Third-party facilitators from the Great Plains Institute, Center for Energy and Environment, and Lasky Consulting will be convening the group, facilitating conversations, taking notes, and managing meeting materials.

Thank you for offering your time, thoughtful engagement, and unique perspective on these challenging issues!

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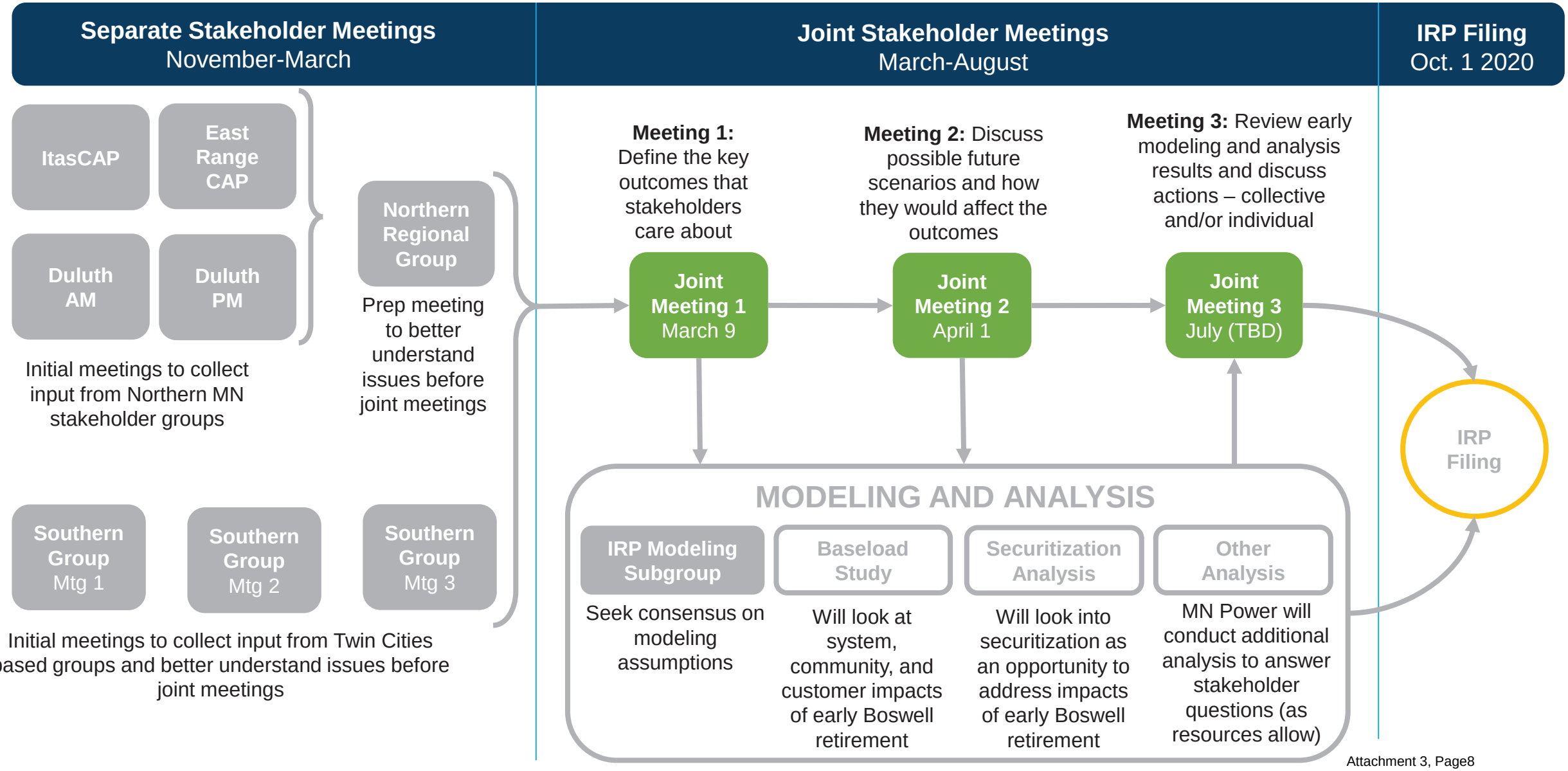
OBJECTIVES OF THE JOINT MEETINGS

A. **Build a shared understanding** of the diversity of stakeholder perspectives, priorities, and concerns with regard to Minnesota Power resource planning, including customer, community, and environmental concerns.

B. **Enable collaboration** among stakeholders to identify key challenges and potential solutions for Minnesota Power's service territory that relate to resource planning.

C. **Inform considerations** for the 2020 IRP and review and provide feedback to an early draft of the plan.

MINNESOTA POWER 2020 IRP JOINT STAKEHOLDER MEETING PROCESS



NOTE: Dates and topics are subject to change to meet the needs of the stakeholder group

JOINT MEETING 1
What we optimizing for?

Minnesota Power's 2020 IRP touches on a wide range of stakeholder considerations/concerns.

In this first joint meeting, small groups will work to define a set of key issues or areas of concern in four categories – customer considerations, host community considerations, environmental considerations, and utility considerations.

For each issue/concern, participants will be asked to define what a "best possible" and "worst possible" situation might look like (and in between).

Importantly, the small groups are asked to be the stewards of their issue area on behalf of the larger group – they're not the only people in the room who care about those issues, but have indicated they have knowledge, experience, or perspective to help think constructively about their respective issue area.

These issues/areas of concern will be consolidated into a framework that will be used as a tool for discussion in Joint Meeting 2, where we'll explore a handful of future resource planning scenarios, and what impacts each scenario might have on key areas of concern.

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GROUND RULE 1: Respect the Time

Your time together is limited and valuable, so please be mindful of the time and of others' opportunity to participate.

- Please help us to start and end meetings on time. Come prepared and ready to engage in the meetings.
- Practice sharing of limited time – make space for everybody to contribute their unique perspective and experiences.
- Multi-tasking with phones, tablets, etc. during meetings and calls is strongly discouraged. Facilitators will work to ensure that meetings are productive and efficient, and they request your focus in return.
- Be recognized by the facilitator to speak or when speaking.

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GROUND RULE 2: Respect Each Other

Help us all to uphold respect for each others' experiences and opinions, even in difficult conversations.

- In listening and responding to others, consider how you would like others to receive your ideas and suggestions.
- Talk about issues, not people.
- Assume best intentions and ask questions to better understand anything that is unclear or troubling.
- Each of you has an equal voice, regardless of the position or title you hold. Use of first names is requested, even if you still choose to use someone's title later in a different setting as a matter of custom and respect.
- Limit side conversations.
- Limit acronyms or jargon.

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GROUND RULE 3:
Share your perspective and help others share theirs

We need everyone's wisdom for the greatest results.

- Share your views and concerns in the room. Show each other courage and respect by having the tough conversations that need to be had directly.
- Practice openness and honesty. No hidden agendas.
- Enable candor by sharing what was said, but not who said what. To foster trust and encourage exploration of new ideas and options, participants are asked not to attribute specific comments or proposals to particular individuals or organizations outside of these meetings. Facilitators will adhere to this in meeting documentation.
- Silence is assent (NOTE: only to be used during certain parts of meetings) – silence at the time of a group decision shall be interpreted as your approval of that decision.
- Members agree not to record, take videos or photographs without consent from all parties in the room.

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PARTICIPANT LIST (organized by issue area for small groups):

Customer Considerations

Name	Organization
Annie Levenson-Falk	Citizens Utility Board
James Hietala	Western Lake Superior Sanitary District
Craig Wainio	City of Mountain Iron
Benjamin Stafford	Clean Energy Economy Minnesota
Andrew Moratzka	Large Power Intervenors
Chad Asgaard	Cleveland Cliffs
Sandy Karnowski	Cleveland Cliffs
Lora Wedge	Ecolibrium3
Jeff Hart	Hibbing Public Utilities
Howard Hedstrom	Cook County/Grand Marais Economic Development Authority
Greg Chandler	UPM Blandin Paper

Environmental Considerations

Name	Organization
Andrew Twite	Fresh Energy
Alex Jackson	City of Duluth
Jessica Tritsch	Sierra Club
Mindy Granley	Duluth Energy Plan Commission
Peder Mewis	Clean Grid Alliance
Jay Brezinka	Department of Military Affairs
Lori Ruff	Minnesota National Guard - Camp Ripley
Ashley McFarland	Dovetail Partners
Erik Boleman	Barr Engineering
Jenna Yeakle	Sierra Club
Evan Mulholland	Minnesota Center Environmental Advocacy

PARTICIPANT LIST (organized by issue area for small groups):

Host Community Considerations

Name	Organization
Bree Halverson	BlueGreen Alliance
Max Peters	City of Cohasset
Robert Mattei	City of Grand Rapids
Jeff Stollenwerk	Duluth Seaway Port Authority
Elissa Hansen	Northspan
Jeff Walker	Itasca County
Ed Zabinski	Zabinski Consulting, LLC
Bud Stone	Grand Rapids Area Chamber of Commerce
Tamara Lowney	Itasca Economic Development Corporation
Kevin Pranis	Laborers' International Union of North America
Michelle Rosier*	Minnesota Public Utilities Commission

**Observer*

Utility Considerations (Minnesota Power Staff)

Julie Pierce	John Christensen
Analeisha Vang	Jennifer Peterson
Eric Palmer	

Facilitators

Name	Organization
Kate Sullivan	Great Plains Institute
Trevor Drake	Great Plains Institute
Randy Lasky	Lasky Consulting
Audrey Partridge	Center for Energy and Environment
Brian Ross	Great Plains Institute

EXPECTATIONS FOR PARTICIPATION

1. In order to keep the group to a manageable size and maintain continuity, facilitators are not allowing new participants to enter the group. Minnesota Power is willing to meet outside of these meetings with anybody who would like to provide input for the 2020 IRP.
2. Participants are asked to make every effort to attend all joint meetings, though facilitators acknowledge that conflicts will arise with a group of this size. If you're unable to attend a meeting sending a proxy, please brief that person in advance to avoid having to revisit previous discussions unnecessarily.
3. Please RSVP to meetings in a timely manner to help staff with planning and avoid unnecessary expenditure of funds.
4. Participants are asked to focus discussion on the stated objectives of the joint meetings, rather than rehashing past positions and actions. Discussion that looks backward should do so for context and in order to understand the present situation and help guide future strategies.
5. Participants may be approached by the media about the process and their involvement, and they are encouraged to be responsive to reporters' questions. However, to protect the spirit and candor of the process, participants are asked to avoid specific reference to or representation of the positions or views of other organizations or individuals involved.
6. Lunches will be provided to all participants as part of meeting attendance. Attendees that are subject to Minnesota's Campaign Finance and Public Disclosure Board gift ban (e.g., public officials) will need to either pay for the amount of their individual meal or bring their own meal/make arrangements to eat elsewhere.

INFORMATION RESOURCES

- **All Participants:** Resources from all stakeholder meetings are available online here (NOTE: does not work well with Internet Explorer): https://airtable.com/shr4JBdhlw41n5Cib
  - NOTE: This database includes a list of acronyms, the MN statute on utility resource planning, and the survey results from the Northern MN stakeholder groups.
- Selected topical resources are on the following slides
- **Host Community Subgroup:** Please read the Cohasset section of the CEE Host Communities Study (page 18-26): https://www.mncee.org/MNCEE/media/PDFs/Host-Communities-Study-Report-FINAL_2-24-20_updated.pdf

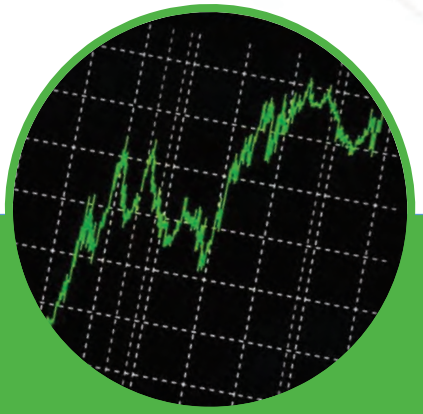
The Year Ahead With MPUC

Integrated Resource Plan

- Evaluate 15-year outlook
- Identify how MP will serve customers
- Determine size, type and timing

Baseload Study

Thoroughly evaluates and includes a plan for the early retirement of Boswell 3 and 4, individually and in combination



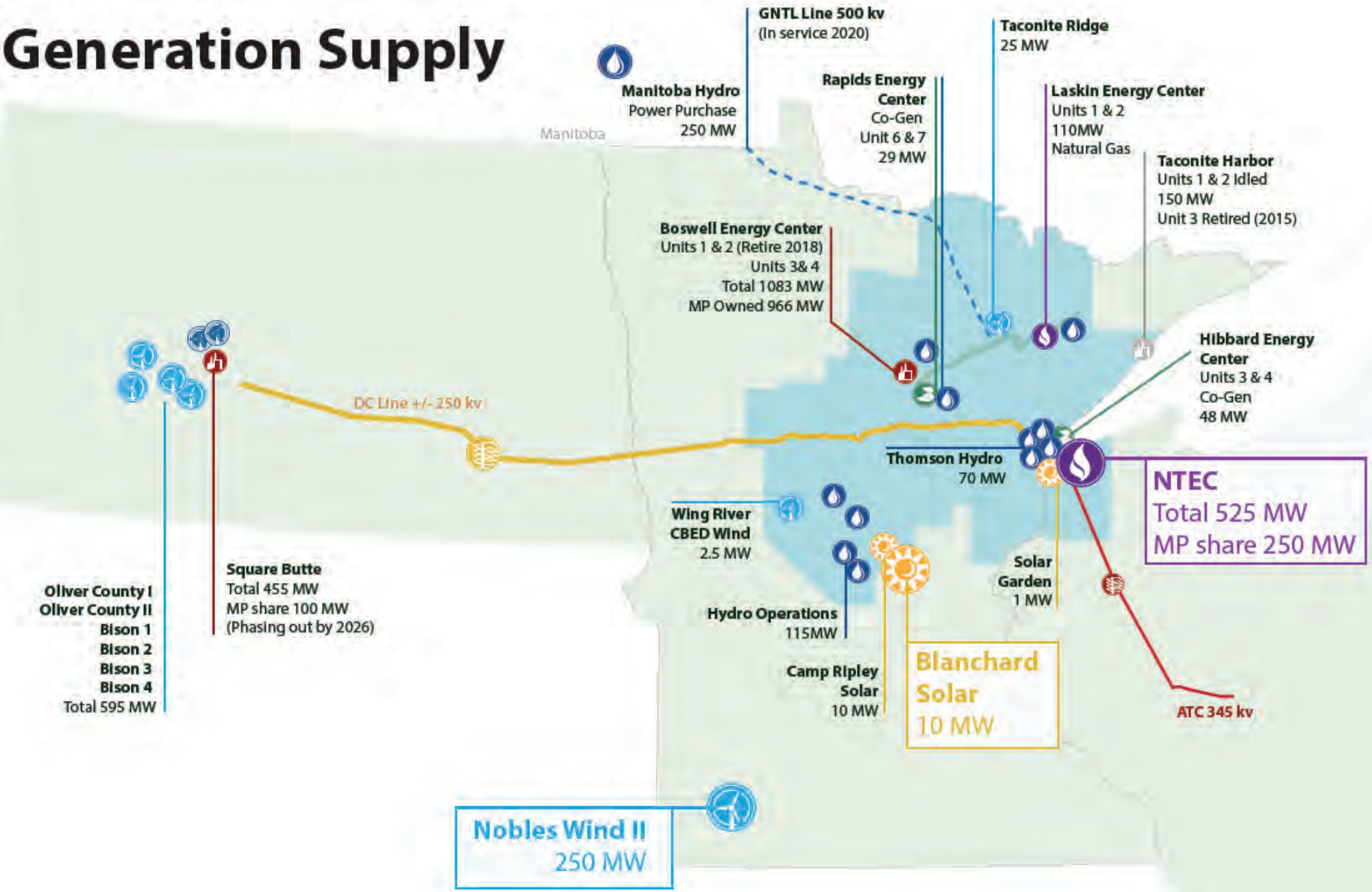
Securitization Plan

Could be used to mitigate potential ratepayer impacts associated with an early retirement of Boswell 3 and 4

October 1, 2020

MN Power System Map

Generation Supply



WE ARE UNIQUE

minnesota power
AN ALLETE COMPANY

Duluth, MN	Headquarters
26,000	Square-miles
145,000	Customers
13%	Residential sales
74%	Industrial sales
15	Municipalities
13th lowest	Electric rates*
$1.1 million	Donated in 2018

*Source: Edison Electric Institute

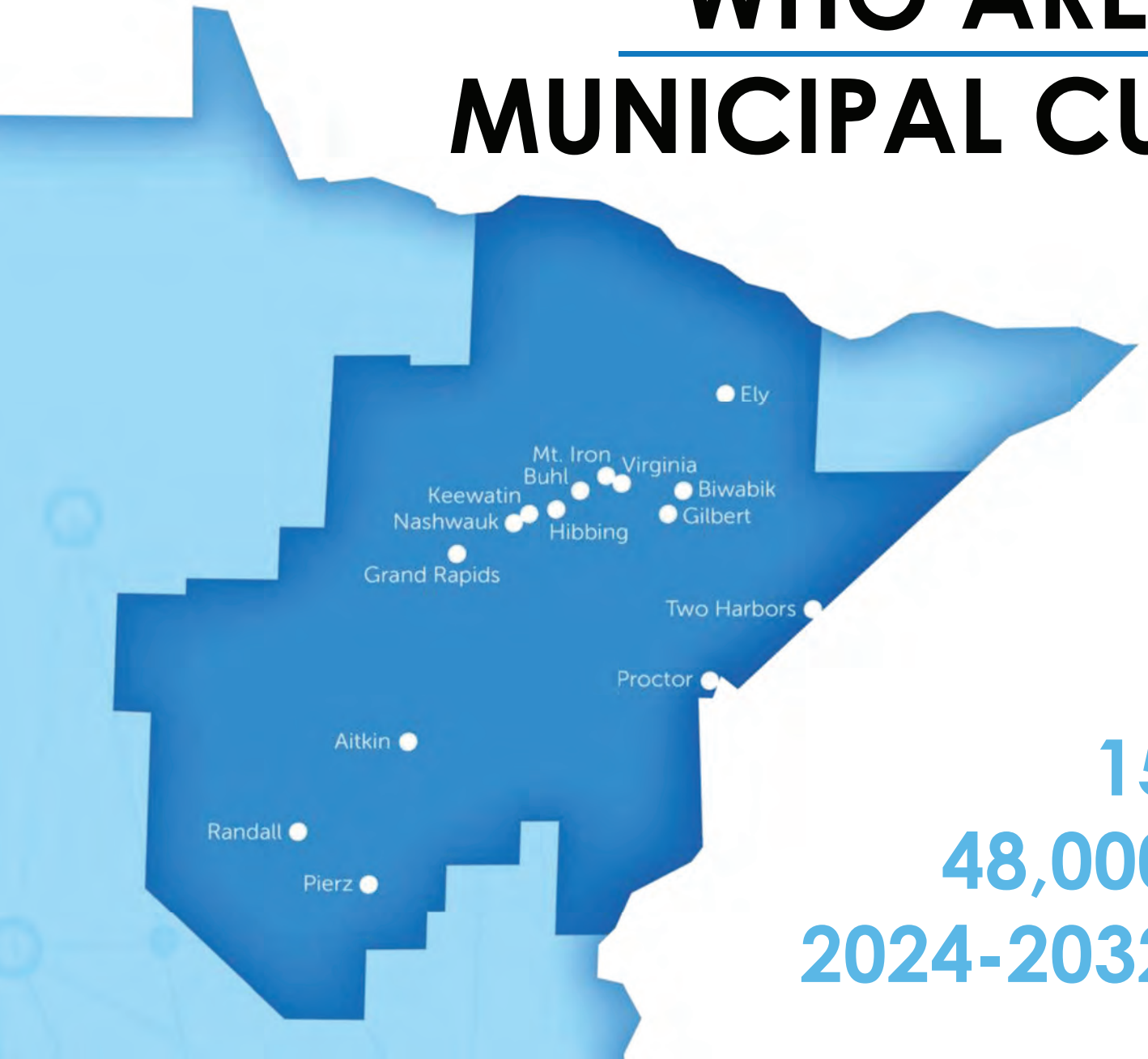
MP's Unique Customer Mix

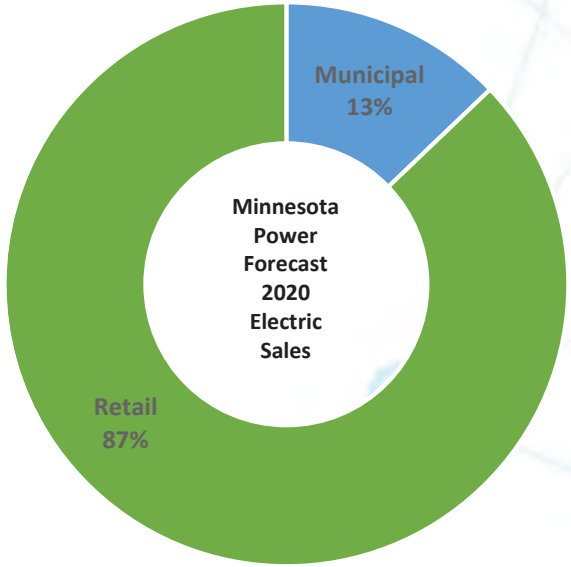
- MP's taconite customers produce 85% of all domestic iron – only one other iron mine in the nation (Michigan)
  - MN taconite is the cleanest and our miners are the safest in the world
- Taconite is largest industry in northern MN and 30% of regional economy
  - Generates $3 billion in GRP and $200 million in tax revenue each year
  - 4,500 direct jobs, 11,500 indirect jobs
- Forest products industry has $9.1 billion impact in Minnesota
  - MP's paper customers create approx. 2,000 jobs

MP Serves 11 EITE Customers

ArcelorMittal-Minorca Mine
Blandin Paper Company
Boise Paper Company
Hibbing Taconite Company
Magnetation (Bankruptcy in 2015)
Mesabi Nugget (Idled in 2015)
Mining Resources (Idled in 2015)
Sappi Cloquet
United States Steel Corporation
United Taconite/North Shor Mining Company
Verso Corporation

WHO ARE OUR MUNICIPAL CUSTOMERS

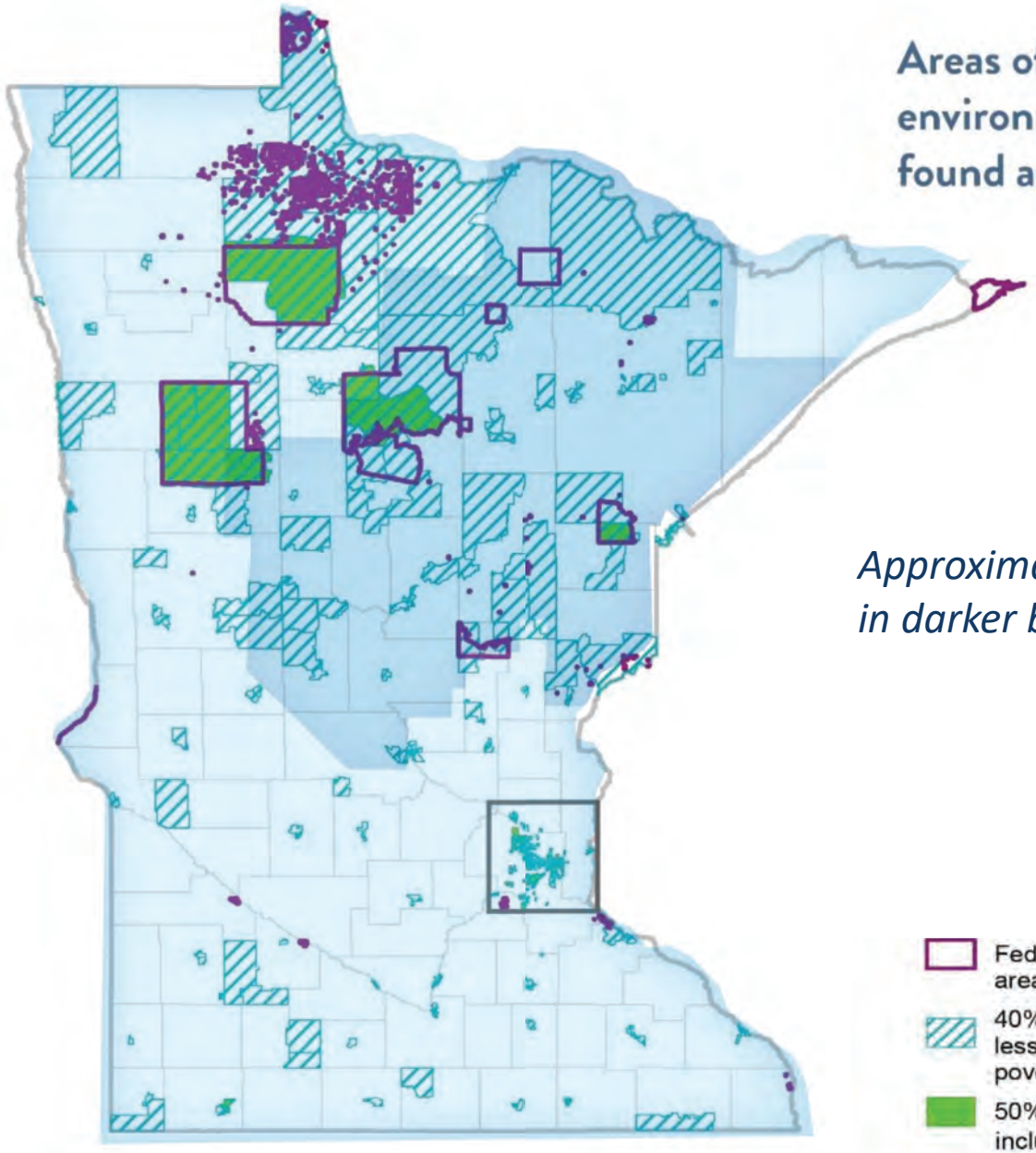




15 MN Municipalities within MP Retail Territory

48,000 Additional Electric Customers

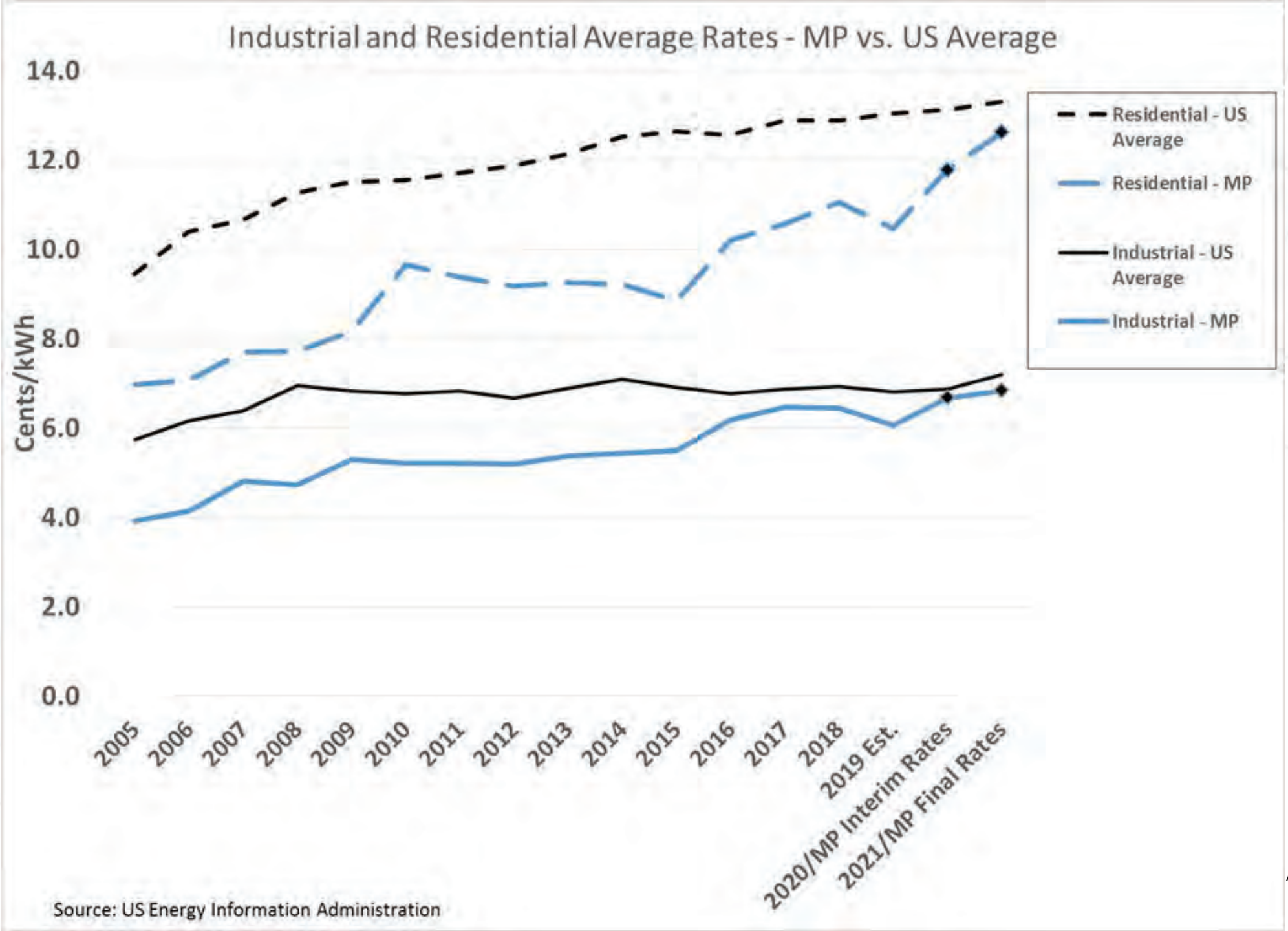
2024-2032 Contract Term Expiration Dates



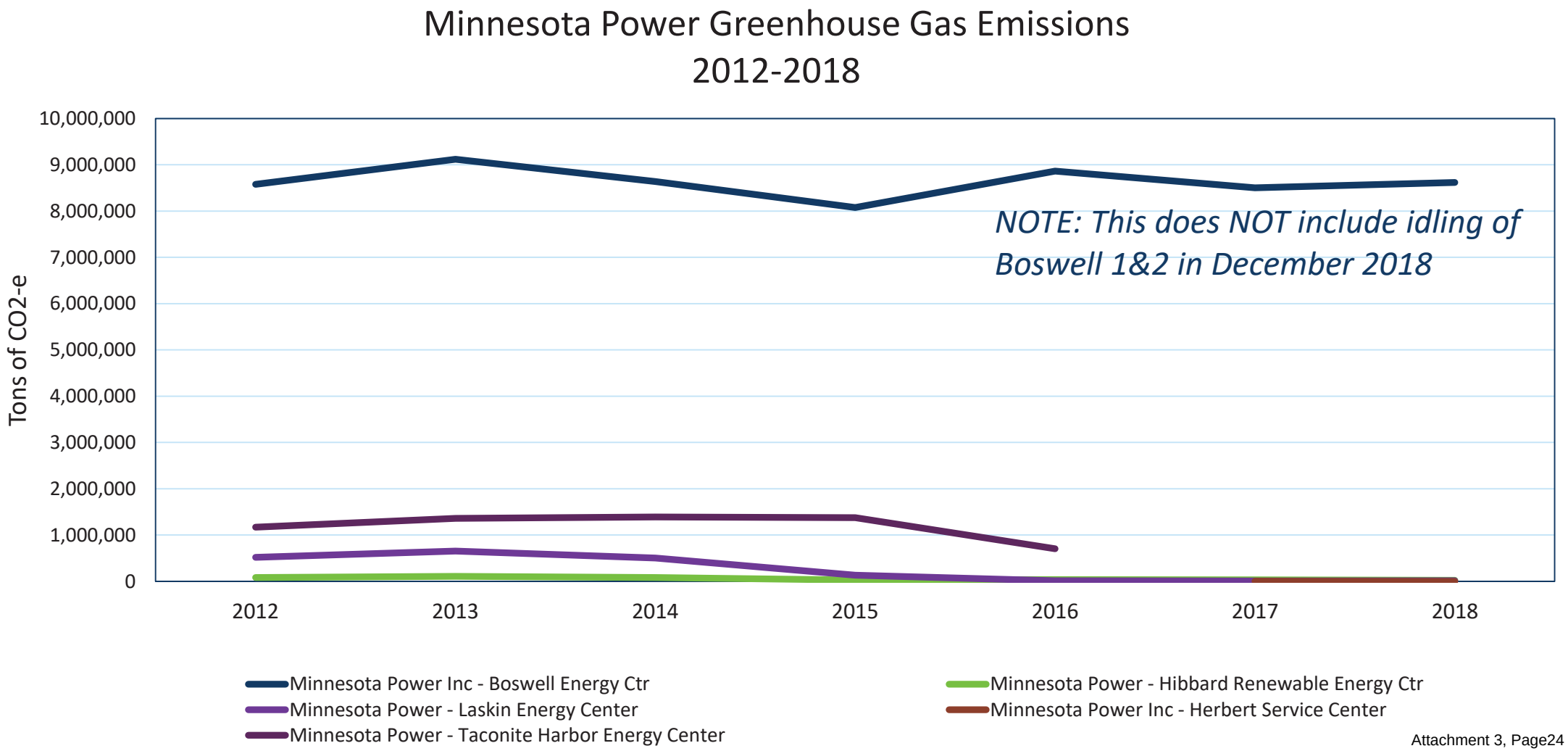
Areas of concern for environmental justice are found across the state

Approximate MN Power territory in darker blue shading

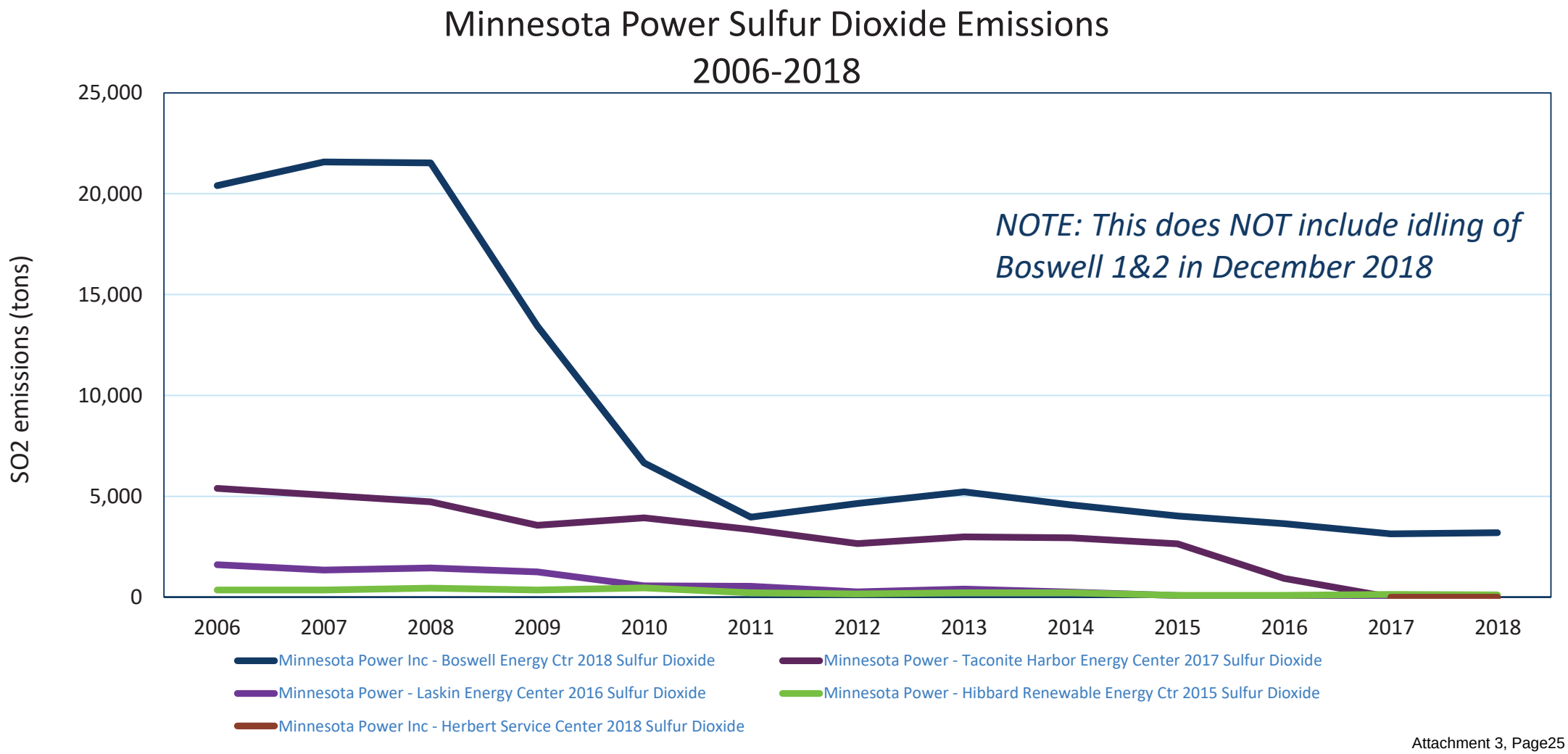
- Federally recognized tribal areas
- 40% or more report income less than 185% of federal poverty level
- 50% or more people of color, including indigenous people


Industrial and Residential Average Rates - MP vs. US Average
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
Cents/kWh
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019 Est.
2020/MP Interim Rates
2021/MP Final Rates
Residential - US Average
Residential - MP
Industrial - US Average
Industrial - MP
Source: US Energy Information Administration

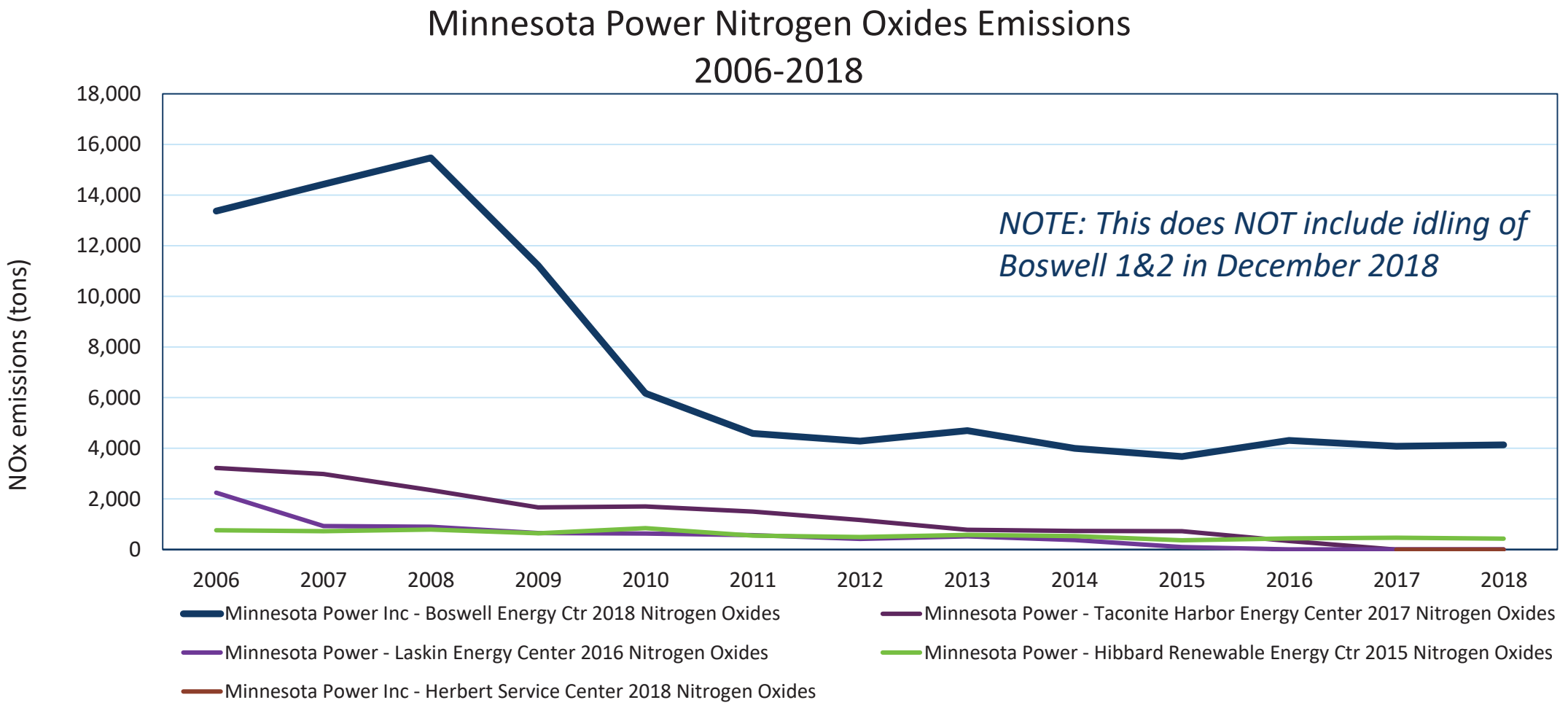
Minnesota Power Emissions



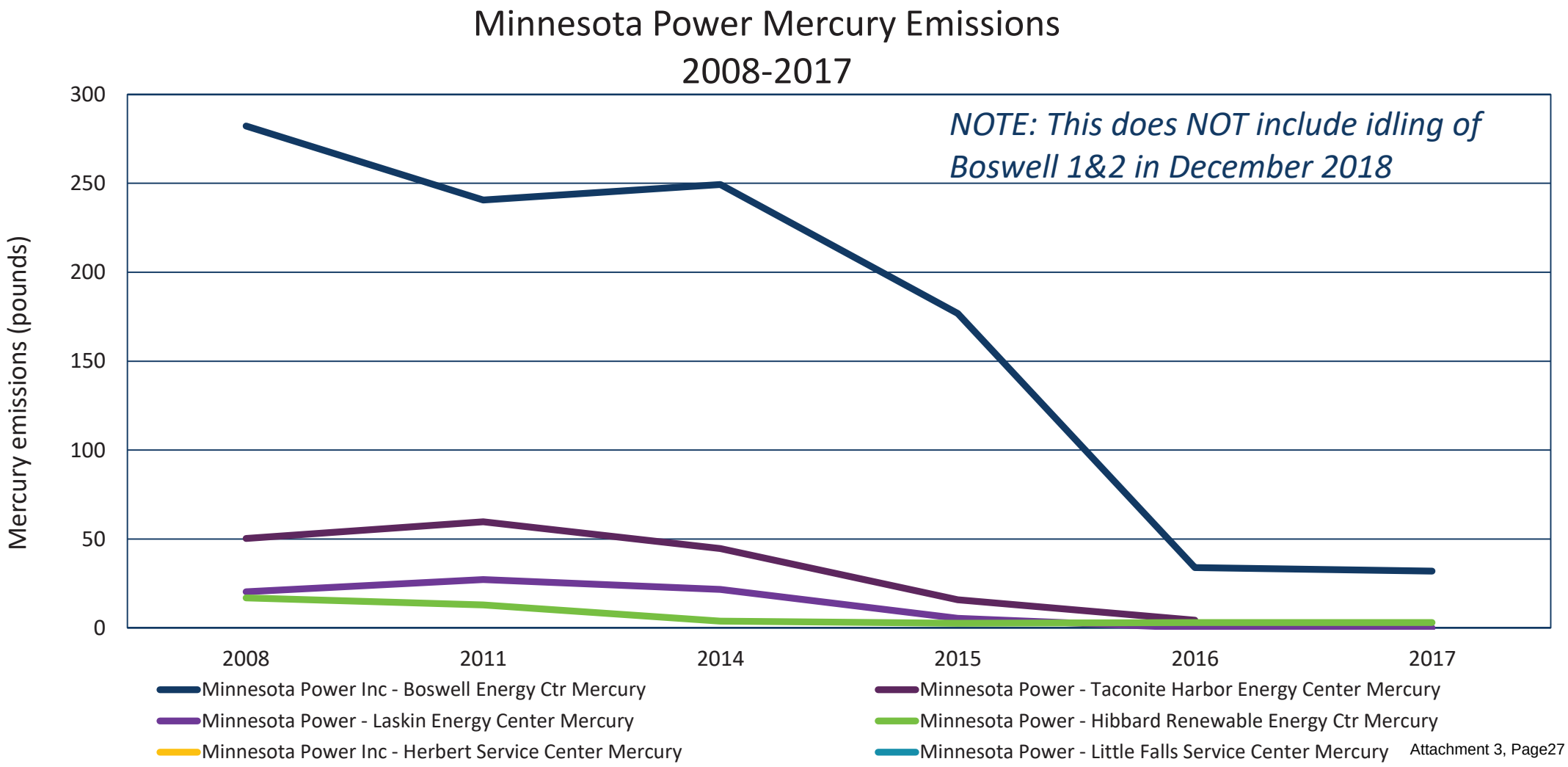
Minnesota Power Emissions



Minnesota Power Emissions



Minnesota Power Emissions



MINNESOTA POWER IRP JOINT MEETING ATTENDANCE

TOTAL			39	49	44	47	57
First Name	Last Name	Organization	Meeting 1 3/9/20	Meeting 2 7/31/20	Meeting 3 8/21/20	Meeting 4 9/29/20	Meeting 5 11/17/2020
Alex	Jackson	City of Duluth	X	X	X	X	X
Alissa	Bemis	Great Plains Institute		X	X	X	X
Allen	Gleckner	Fresh Energy		X		X	X
Ana	Vang	Minnesota Power	X	X	X	X	X
Andrew	Twite	Fresh Energy	X		X		
Anne	Rittgers	Minnesota Power			X		
Annie	Levenson-Falk	Citizens Utility Board		X		X	X
Ashley	McFarland	Dovetail Partners	X	X			
Audrey	Partridge	Center for Energy and Environment	X	X	X	X	X
Bart	Johnson	Itasca Community College		X	X	X	X
Becky	Li (presenter)	Rocky Mountain Institute					X
Ben	Levine	Minnesota Power		X			
Benjamin	Stafford	Clean Energy Economy MN	X	X	X	X	X
Bethany	Owen (presenter)	Allete					X
Bree	Halverson	BlueGreen Alliance	X	X	X	X	
Brian	Edstrom	Citizens Utility Board		X	X	X	X
Brian	Ross	Great Plains Institute	X				
Bud	Stone	Grand Rapids Area Chamber of Commerce	X	X	X	X	X
Chad	Asgaard	CLEVELAND-CLIFFS INC.		X			
Craig	Wainio	Minnesota Power	X			X	X
Curt	Antilla	East Range Joint Powers Board		X			
David	Posner (presenter)	Rocky Mountain Institute					X
Doug	Scott	Great Plains Institute					X
Dr. Eric	Enberg	Duluth Citizen's Climate Lobby	X			X	X
Drew	Moratzka	Stoel Rives (Large Power Intervenors)	X	X		X	X
Ed	Zabinski	Zabinski Consulting	X	X	X	X	X
Elissa	Hansen	Northspan	X	X	X		
Eric	Palmer	Minnesota Power		X	X	X	X
Erik	Boleman	Barr Engineering	X	X			X
Evan	Mulholland	MN Center for Environmental Advocacy		X	X	X	X
Greg	Chandler	UPM, Blandin Paper				X	X
Howard	Hedstrom	Hedstrom Lumber	X	X	X		
James	Hietala	WLSSD	X			X	X
Jay	Brezinka	Department of Military Affairs	X				
Jay	Eidsness	MN Center for Environmental Advocacy		X	X	X	X
Jeff	Stollenwerk	Duluth Seaway Port Authority	X	X	X		X
Jeffrey	Walker	Mountain Iron	X		X	X	
Jenna	Yeakle	Sierra Club - Minnesota Chapter		X	X	X	X

Jennifer	Peterson	Minnesota Power	X	X	X	X	X
Jess	McCullough	Minnesota Power			X		X
Jessica	Burdette	MN Department of Commerce		X			X
Jessica	Tritsch	Sierra Club - Minnesota Chapter		X	X	X	X
John	Christensen	Minnesota Power	X	X			
John	Reynolds	MN Chamber of Commerce		X			
Julie	Kennedy		X				
Julie	Pierce	Minnesota Power	X	X	X	X	X
Kate	Sullivan	Great Plains Institute	X	X	X	X	X
Kelsey	Johnson	Iron Mining Association	X	X	X	X	X
Kevin	Pranis	Laborers' International Union of North America				X	
Kristin	Renskers	IBEW31		X	X	X	X
Laura	Wedge	Itasca County	X				
Laurie	Williams	Sierra Club - Minnesota Chapter	X				X
Lori	Ruff	Department of Military Affairs	X		X		
Lucas	Giese	Ecolibrium3		X	X	X	X
Lucas	Franco	Laborers' International Union of North America		X	X		X
Max	Peters	City of Cohasset	X	X	X	X	X
Michelle	Rosier	MN Public Utilities Commission	X				
Mike	Birkeland	Minnesota Forest Industries			X	X	X
Mike	Bull	Center for Energy and Environment		X		X	X
Mindy	Granley	City of Duluth	X	X	X	X	X
Peder	Mewis	Clean Grid Alliance				X	X
Pintain	Chen (presenter)	Rocky Mountain Institute					X
Randy	Lasky	Lasky Consulting	X	X	X	X	X
Rick	Blake	Grand Rapids City Council/Public Utilities Commission		X	X	X	X
Riley	Conlin	Stoel Rives (Large Power Intervenors)			X		
Rob	Mattei	City of Grand Rapids	X	X	X		X
Sandy	Karnowski	Cleveland-Cliffs Inc.	X	X	X	X	X
Sean	Stalpes	MN Public Utilities Commission			X	X	X
Stephanie	Fitzgerald	MN Center for Environmental Advocacy					X
Shane	Zarht	Coalition of Utility Cities		X	X	X	X
Steve	Giorgi	RAMS	X		X	X	X
Stine	Myrah	Minnesota Public Interest Research Group		X	X	X	X
Tamara	Lowney	Itasca Economic Development Corporation	X	X		X	X
Thor	Underdahl	Minnesota Power		X		X	X
Tony	Shoberg	Barr Engineering				X	
Trevor	Drake	Great Plains Institute	X	X	X	X	X
Uday	Varadarajan (presenter)	Rocky Mountain Institute					X
Wayne	Dupuis	Fond du Lac Band of Lake Superior Chippewa			X		
Will	Kenworthy	Vote Solar	X	X		X	X

MN Power IRP Stakeholder Process

Joint Meeting 1 Agenda

March 9, 2020

10:00AM - 4:00PM CT

Timberlake Lodge, Grand Rapids, MN

Meeting Goals:

1. Build a shared understanding of the stakeholder process.
2. Define the key outcomes that stakeholders care about in the areas of:
    a. Customers
    b. Host Community
    c. Environmental
    d. Utility
3. Define a rating scale for assessing the state or condition of each issue within the issue map.
4. Build a shared understanding among small groups on each issue and rating scale. Refine as needed.
5. Identify the top uncertainties that would have the biggest impact on the issue areas.
6. Build a shared understanding around each issue are and identify key questions from stakeholders in the other groups.

Agenda:

9:30 AM	Continental Breakfast & Networking (optional)
10:00 AM	Plenary Welcome
10:20 AM	Small Groups Session 1
12:00 PM	Lunch
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4:00 PM	Adjourn

MN Power 2020 IRP Stakeholder Process

Joint Meeting 1 – Process Reflection

March 9, 2020

Today's Goal: define key outcomes that stakeholders care about

Key themes from topical groups:

CUSTOMERS

- Three issue areas all interact.
- Demand response opportunities for all customer classes
- How do current decisions impact long-term pricing and short-term pricing and how is that reflected in billing?
- Identified tipping point for reliability and affordability
- Coaching questions:
    - Make some distinctions in scale for outages for industrial and residential – how to do it?
    - Tie between outage/reliability and correlation to cost/affordability
        - Cost? Duration? Etc.
    - Large industrial relationship to choice (compared to residential)
    - Affordability – consider inequity between LP/commercial & residential rates
    - Energy efficiency in the choice GVEA not clear – should be a priority for all/most customers
    - What is "micro grid?" – resiliency
    - What lessons can we learn from Xcel – competitiveness for large power users
    - Possible to have a high penetration of renewables with storage to avoid black out?
    - Thought about using advance metering data to ___ decisions
    - Expectations for customer engagement for choices? Care?
    - How is MP/extent considering large industry rates. Subsidizing other users (both sides of it)
    - To what extent at the MP load is stable (ie residential) or brittle (ie industry) in business pan?
    - Industry interest in price or demand response? Interest or what would help that?
    - How does the relationship of/between cities – affect affordability?
    - What is the relationship between affordability – reliability? (how to balance and prioritize)
    - Know how difficult it is to work with politicians and regulators to meet their aims
    - Reliability a priority for residential heating in winter
    - Power provider – longer term outlook
    - No reference to where electricity comes from

- Consider customer preferences for risk levels – actions
- How does choice of power by type of generation affect mwh levels

HOST COMMUNITY

- Number of years
  - Need more guidance from MP regarding a realistic timeline
  - Need more info about what can be accomplished regarding jabs and tax base replacement timeline
- #4 - Community impact – "social fabric" includes volunteerism, philanthropy, charity
  - 9 dimensions of a healthy community
- #4 – we are concerned with existing 12 industrial customers – keeping affordable and reliable power for them
  - And hopefully enough reliable affordable power to attract new industries
- Notes on rating scale:
  - Tax base: sustain and grow tax base necessary to support a healthy city, county, school district, and taconite assistance area.
  - Jobs: sustain and grow high-quality jobs in the community – sustain and grow sufficient number of jobs in diverse sectors
  - Large industry: support regional 12 existing and potential large customers to grow
  - Community impacts: sustain and grow a healthy, vibrant community (local business, non-profits, community orgs, social fabric)
- Coaching questions
  - What is impact of unreliable power on ability to attract other businesses?
  - What other jobs could help diversity the economy?
  - If you eliminate fossil fuel jobs, can you replace them with renewable jobs?
  - Is Cohasset/area a "coal town" or an "energy town"?
  - What else could Boswell do?
  - What is difference between "unlimited" growth vs. "sustainable system" growth?
  - What are effects of multiple cities in multiple industry in TAA?
  - How do we increase collaboration between Duluth & Iron range?
  - What pulls those pieces of NE Minnesota apart?
  - Have you considered MN's 2036 retirement date in your discussions?
  - How do you consider/factor interests of MP employees who are not customers?
  - What are impacts of hosting energy storage facilities in Cohasset?

ENVIRONMENTAL

- Want measurable indicators – currently don't have good measurables for many of these, but they should not be ignored.
- Status quo as "poor" performance – climate change is occurring and that is bad
- Standards that went beyond MP, how to capture global/national effects in MP's plan
- Can we have clean AND cheap AND reliable? – there is tension between them
- Importance of the 12 largest users to the criteria

- Recognize successes that have already been achieved
    - SOCS, NOCS, and the closing of coal plants
- Coaching questions
    - State standards – what does MP need to do?
    - What are the costs of retiring plants early – benefits relative to costs and rate structure?
    - Interconnected impacts are difficult to understand
    - Measuring the interconnected is confusing, seems to be contradictory or just to be difficult
    - Interconnected vs. local GHG some tension in this
    - Strides that MP has accomplished – cleanest coal plant in the world
    - Innovation such as carbon capture battery storage, many aren't contemplated
    - Weather impacts are creating stresses on electrical system
    - MP specific or economy-wide?
        - Why does MP have to take responsibility? Why can't they work in partnership to achieve goals
    - What does carbon negative mean?
    - Top 10% → locally? Nationally? Globally?
    - Consider what has already been done by MP – lots of reductions that should be recognized
    - "Direct" structure is applied to the climate standards
    - Imported GHG emissions drive industry away, net import goes up, even if MP goes down
        - Interconnected to capture this?
    - "Climate" and "direct" → why are they separate?
    - Interconnected is good, but a challenging category. Important to recognize
    - Perhaps missed energy efficiency in thinking through benefits
    - Pressure on cities, corporate to meet their goals
        - This is important too, working in partnership
    - Climate and interconnected seem to be very different – how did the group mesh them?
    - Environmental impact of renewables?
    - Status quo was only poor? Not acceptable?
    - Where are health and justice issues?
    - What are the best indicators for interconnected?
    - Lots of things on this list are difficult to measure – how do you measure climate change?
    - Environmental impact from importing energy? Is that part of the criteria?
    - Are we looking at the negatives of renewables and alternatives to traditional fossil fuels?
    - Utilities role of meeting economy wide goals, such as the 80%
    - Economy wide or utility specific?
        - maybe more specifically for MP

- Is there already a built-in incentive for MP to make investments that lead to good/best
- Status quo is poor? Should we look to an industry standard rather?
    - Assigning value rather than “status quo”
- Global or MP?

UTILITY

- Distinguish between customer types – how does the service to each customer differ
- Distinguish between when and how shareholders factor into this process
    - Specific projects are not being proposed in this plan and as such, there is not much conversation with shareholders
- Benchmarking and metrics in rates and services
- Cost concerns
- Interest in clarifying and measuring satisfaction
- Notes from flipcharts:
    - Customer satisfaction
        - Reliability
        - Power quality
        - Customer service
        - Products and service offerings
    - Among other things
        - Regulatory and environmental req’s
        - FERC, NERC, Army Corps, EPA, SEC…
        - MPUC, MPCA, DNR, OSHA
        - City county
- Coaching questions
    - Can you help customers better understand the regulatory and environment req’s and how you’ve met them? how do these impact costs?
    - How do shareholders factor into this, and how do you balance customers and regulatory requirements?
    - How can MP be proactive and forward thinking?
    - Can MP provide certainty/predictability around future costs to customers?
    - How do you define a “customer?”
        - Are all voices equal?
    - Energy retrofit/CIP – instrumental to customer satisfaction
    - “customer” is too broad of a category for MP
        - Need municipal, industrial, residential
        - Who are your customers? Each different
    - Can you consider national and international benchmarks in what makes the customer happy? (i.e. price)
    - Are there ways to measure this? Noted, acceptable metrics?
        - What is “contentious and cumbersome?” how to measure success?
    - Does products and services include incentives for business?

- Expand “brown outs/black outs” – define cause
- Have you developed a strategy to inform regulators/lawmakers about what customers want?
- How do you work with customers on demand reduction/AMI?
- Are the company’s financial incentives aligned with moving beyond meeting requirements and doing what customers what and need?
- Environmental and reg seem separate, why are they combined?
- How does MP view the reg & enviro column, sep?
- Where are rates in operation and stability?
- How do/where do rates fit?
- What in environ. Is not covered in the environmental group?
- How is MP meeting the increased demand from beneficial electrification? Where does that fit?
- How does the utility look at economic development?
- How does MP equitably support load growth?
- Does the regulatory framework or established metrics/indicators exist to support meeting best case scenarios?
- Where do shareholders fit into this model? How does it inform this process?
- How will you measure your ROI going forward?
- How does the well-being and sustainability of your workforce factor into decision – making?
    - Where is their voice in this process?
- How do the different classes of customers come into play? Do they have equal value?
- What does “very satisfied” mean and how would you measure that?
- In a worse case scenarios, how would you supply the power?
- What type of power supply/mix pushes from a 0 to 4?
- What effect does MISO have on all of this?

INSIGHTS FROM THE DAY/FINAL COMMENTS

- There is a lot that needs to be balanced
- It will be difficult to reconcile these ideas and impressed that MP leadership is willing to go through this stakeholder process
- It is good to have many perspectives
- Liked the pre-read for the host community group to come in with a shared understanding
- Boswell is integral to Cohasset and there are many aspects of the city that would not be possible without MP

REFLECTIONS

- The day was well structed and keep things moving
- It was great to bring diverse stakeholders together to get the broad cross section

MN Power IRP Stakeholder Process

Joint Meeting 2 Agenda

Friday, July 31st 2020

8:30 AM – 12:00 PM CT

Via Zoom – Meeting ID: 964 1593 5908

Register HERE in advance of the meeting

Meeting Goals:

1. Check-in on the overall stakeholder engagement process and timing.
2. Review and refine the rating scales for the “environment” and “customers” issue areas, including consideration of the following:
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MINNESOTA POWER 2020 INTEGRATED RESOURCE PLAN

Joint Stakeholder Meeting #2

July 31st, 2020

8:30 – 12:00 CT

Via Zoom

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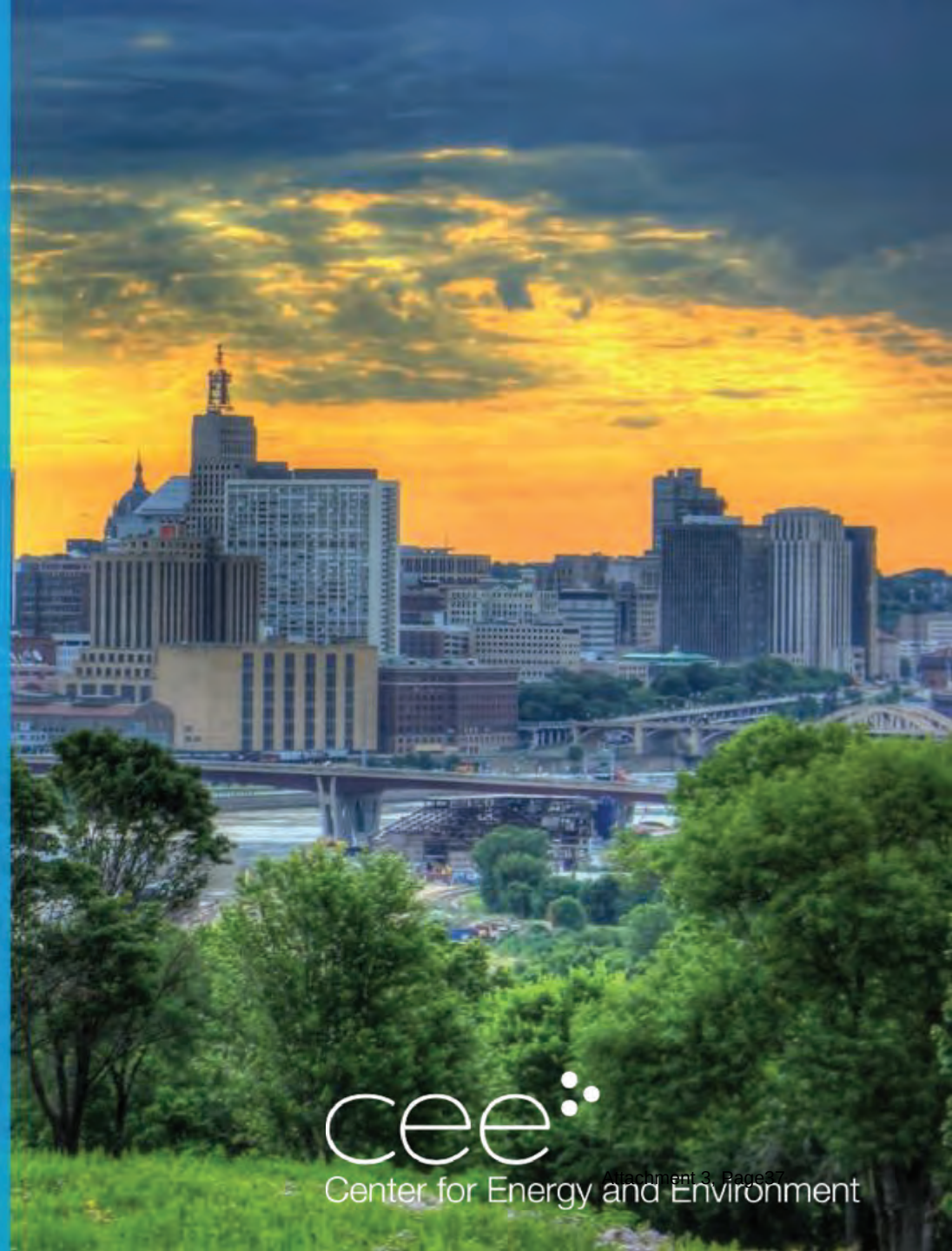

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Virtual Meeting Guidelines

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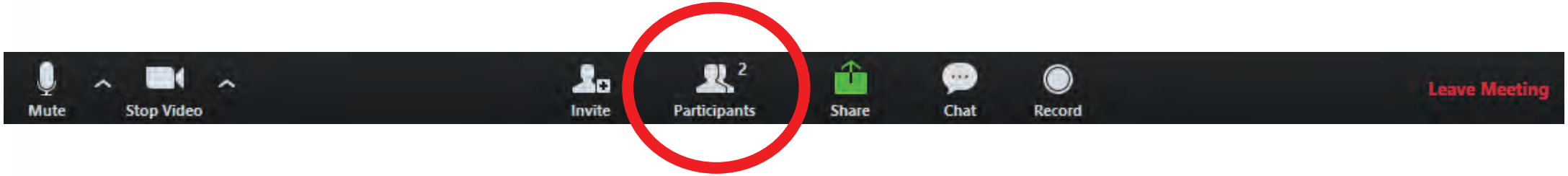
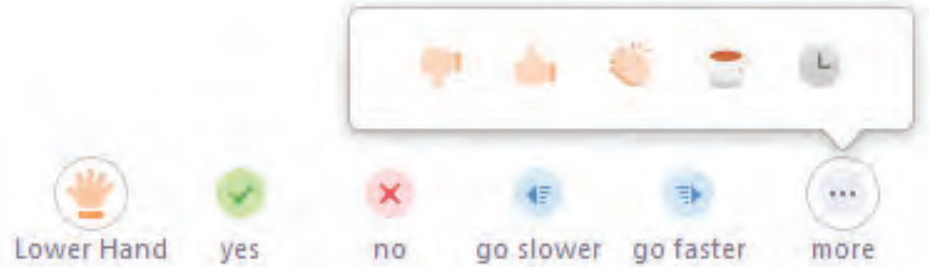
MEETING CONTROLS

1. Click “Participants” at bottom of screen



2. Non-verbal feedback buttons



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OBJECTIVES OF THE JOINT MEETINGS

A. **Build a shared understanding** of the diversity of stakeholder perspectives, priorities, and concerns with regard to Minnesota Power resource planning, including customer, community, and environmental concerns.

B. **Enable collaboration** among stakeholders to identify key challenges and potential solutions for Minnesota Power's service territory that relate to resource planning.

C. **Inform considerations** for the 2020 IRP and review and provide feedback to an early draft of the plan.

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We need everyone's wisdom for the greatest results.

TENTATIVE Process Going Forward

Step 1: Revise issue map and rating scales

Mtg 1: July – Environment, Customers

Mtg 2: August – Community, Utility

Step 2: Establish 2-4 future scenarios and discuss how each would impact the issue map:

Mtg 3: September – Establish scenarios

Mtg 4: October – Discuss scenarios

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Mtg 5: November

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Issue Mapping

What is most important to stakeholders?

What do you want Minnesota Power to optimize for?

What are the benefits you want to create, and the drawbacks you want to avoid?

Where are there potential trade-offs, real or perceived?

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EXAMPLE: Trevor owns a very old house and maintenance is a challenge

What are the best possible and worst possible conditions for this issue/concern?

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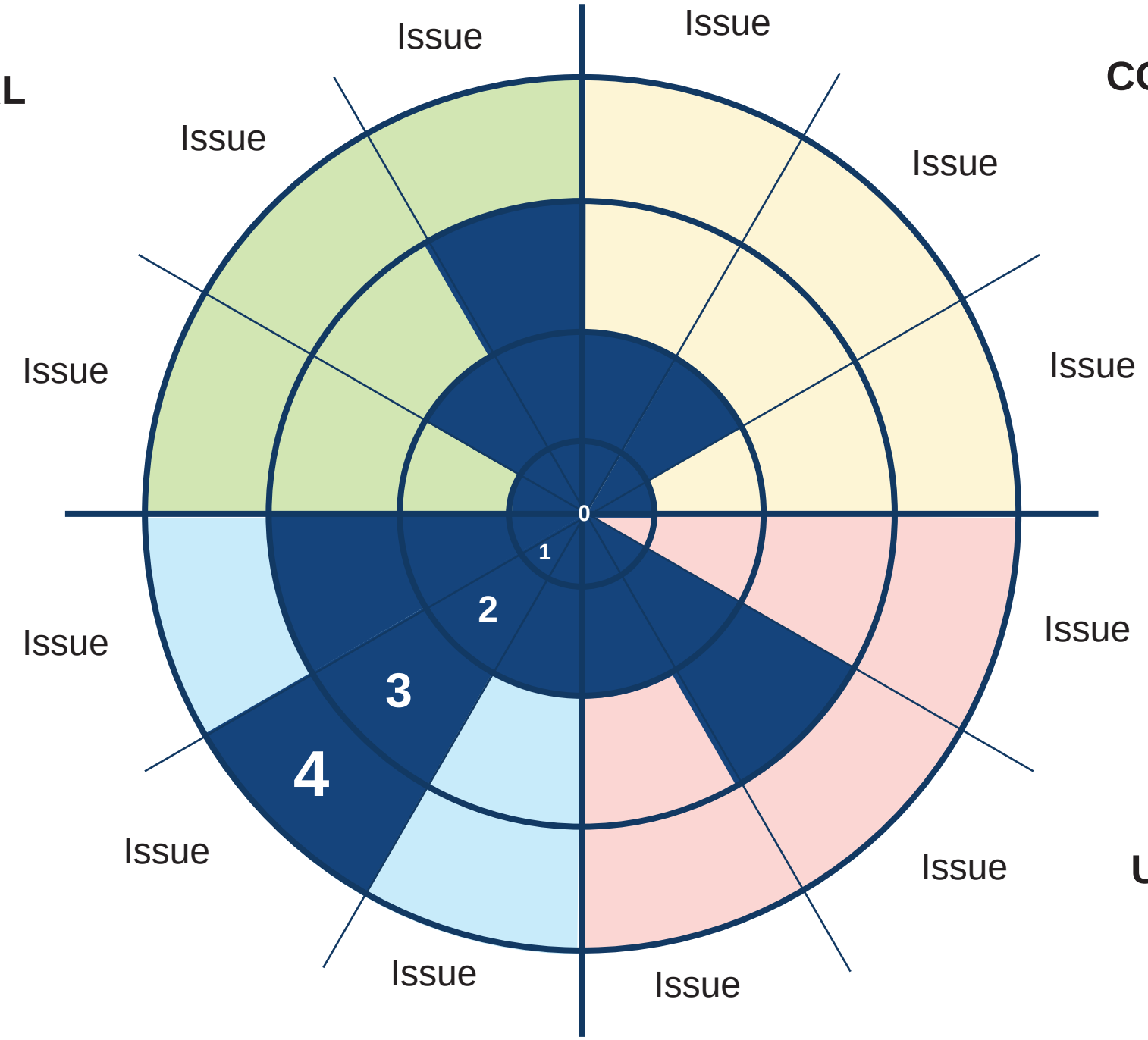
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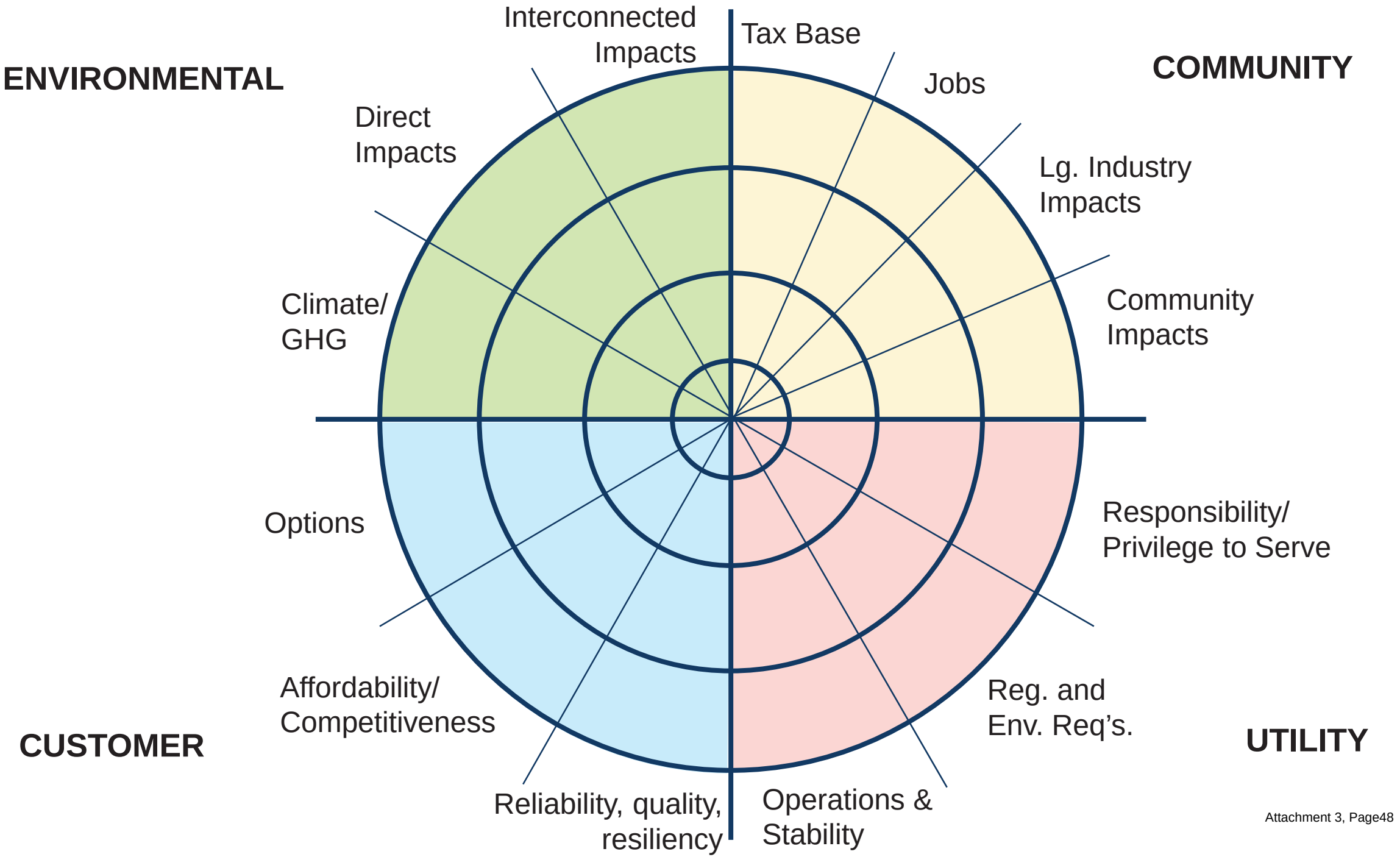
ENVIRONMENTAL
Interconnected Impacts
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Affordability/ Competitiveness
Reg. and Env. Req's.
CUSTOMER
UTILITY
Reliability, quality, resiliency
Operations & Stability

Review Environmental Issue Sheet

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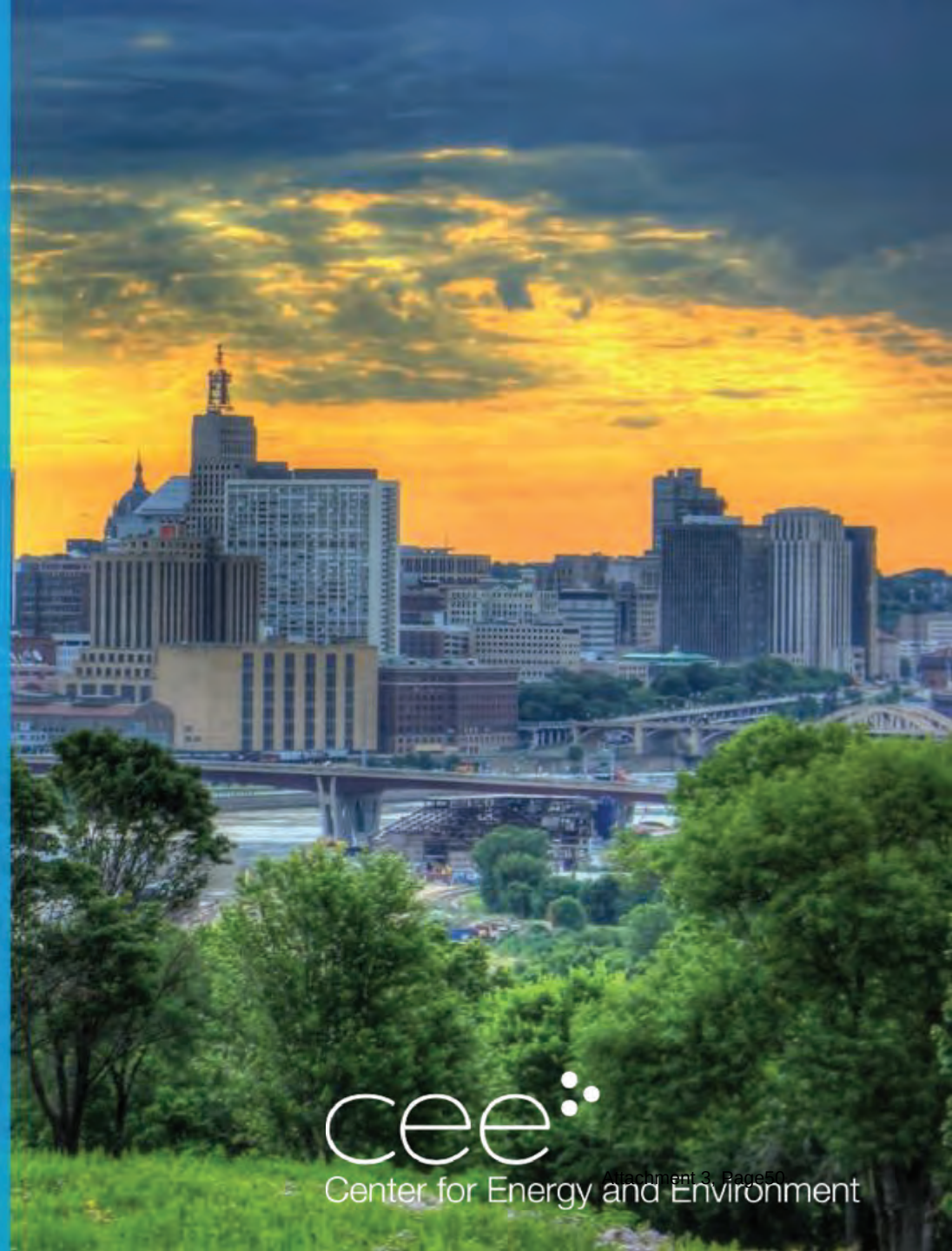
MINNESOTA POWER 2020 INTEGRATED RESOURCE PLAN

Break: Return at 10:30



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Review Customer Issue Sheet

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MINNESOTA POWER 2020 INTEGRATED RESOURCE PLAN

Joint Stakeholder Meeting #2

July 31st, 2020

8:30 – 12:00 CT

Via Zoom

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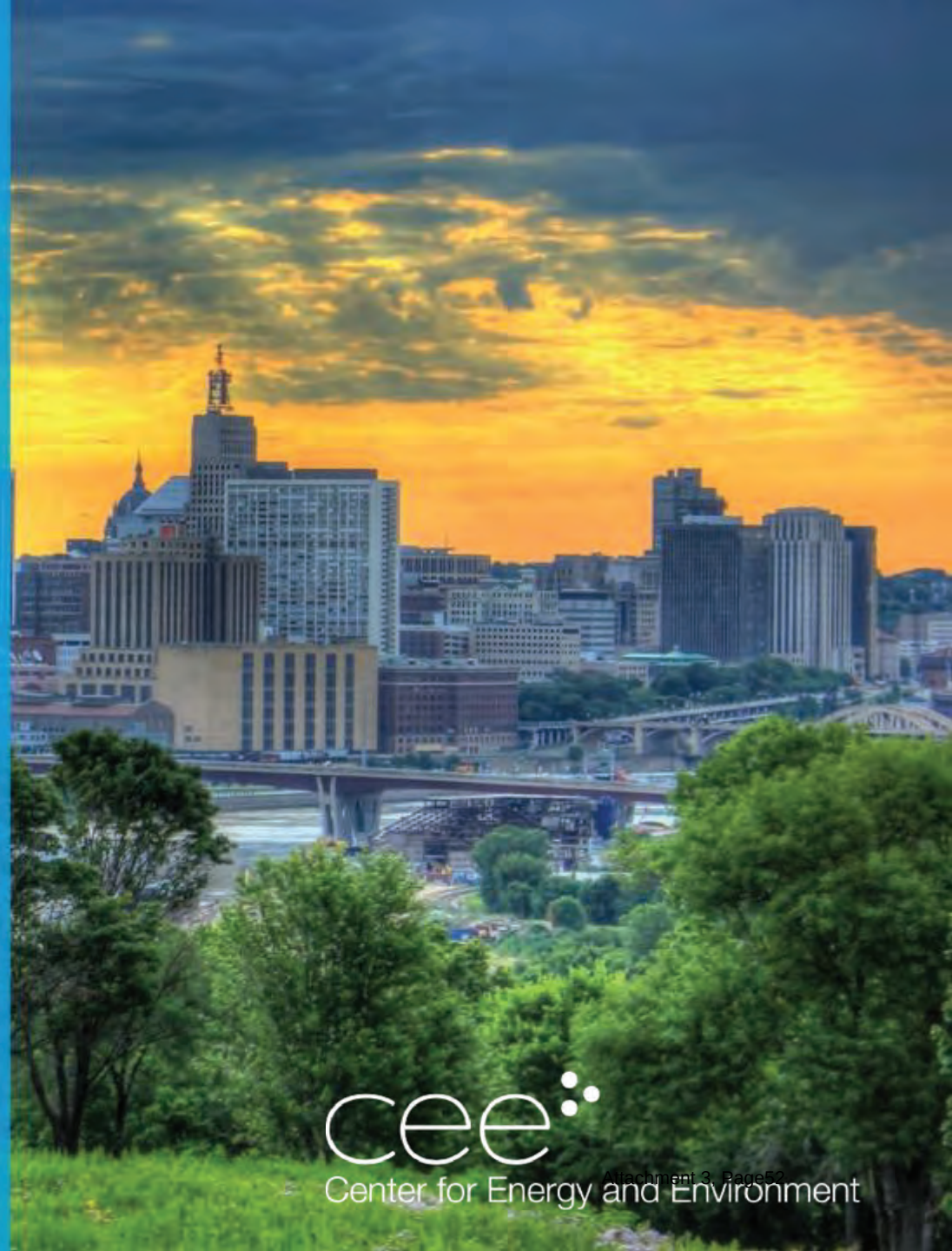

MN Power IRP Joint Stakeholder Meeting #2

July 31st, 2020
8:30 am – 12:00 pm CT
Via Zoom

IRP Extension Request: new deadline is February 1st – will update timeline as needed

**These notes supplement the on-screen line edits that were made to the issue sheets during the meeting*

Environment Issue Sheet

- Cost of upgrades for the environmental rating scale are captured in other areas of the rating scale
- Direct Impacts:
    - Those who were at the March meeting think this accurately reflects the previous conversations
    - This rating scale seems removed from impacts on people – this idea is partly captured in the interconnected impacts (if not we should return to this)
    - This topic is more about regulatory compliance rather than risk assessment
- Interconnected Impacts:
    - Generally, this staying true to what was discussed at the March meeting
    - This does incorporate the concerns about impacting people, but it could still be better captured in the direct issues.
    - In the third category of impact – it is trying to get at the social impacts and trying to show how it affects populations different
        - Can we explicitly list “economic, social and health impacts”
        - Can we explicitly list “low-income and communities of color”
    - This section is more about opinions and less about metrics
        - Co-benefits: not just the resource itself, but also the way the site is managed – is there some way to bring about benefits?
        - The metrics are out there, we just don’t normally use them
        - This tool can measure things that don’t have quantitative measurements, the question to ask is “is there enough here” to show that concerns/questions from stakeholders are addressed
    - Statement saying “impacts are not easily measured” isn’t completely accurate
    - Add an environmental justice component
        - Don’t have a clear definition of EJ which can lead down a rabbit hole
        - Add a definition of this to the appendix
        - Interconnected impacts are EJ impacts – rename the section? Or add EJ into the rating scale?
        - Follow up with conversations offline

    - What is the difference between environmental and environmental justice impacts?
        - EJ impacts are a specific thing – the “interconnected” language gets at this issue
        - Example: Mercury pollution in lakes = environmental (affects us all) whereas Mercury accumulating in fetuses of Indigenous women = Environmental Justice impact (disproportionally affects a group)
- Climate / GHG emissions
    - Interconnected is intended to capture “supply chain emissions outside MP’s control” this section is meant to capture emissions within their control
    - There is no point about making sure the grid is reliable – but that would be captured in another category
        - Risk of setting goals that are unattainable for MP’s overall goal
    - For best possible – shoot for 2035 to be the goal for full decarbonization
    - Why limit yourself to just conservation programs that limit kWh?
        - Difference between energy and capacity
        - Target total emissions, not just emissions from kWh
- Resources:
    - Book: Irresponsible Pursuit of Paradise by Jim Bowyer
    - List of EJ books: https://therevelator.org/environmental-justice-books-june-2020/

Customer Issue Sheet

- Customer Options
    - Affordability for all customers
    - Clean energy and demand response options
    - Adding in an issue related to energy efficiency?
        - Change language to “rate and program options”
    - Question of what “value-focused” means
        - Cost and “all other things considered”
        - Focused on consumers values – what consumers value in their energy service or what value proposition could be put before consumers
    - Clarifying “best possible”
        - Doesn’t address optionality as was discussed at the March meeting
        - Don’t want to talk about cost allocation but rather outcome for customers
- Affordability and Competitiveness
    - Large power (LP) customer are so different from everyone else which is why they’re separate
    - Residential customers are more concerned with their bill than their rate
    - Want more info on how the numbers in the LP and muni rating scale were decided
        - Includes EITE
        - EITE: energy intensive trade exposed – MN passed a law that allowed MP to seek approval for an EITE rate –statement that its the state energy policy to have competitive rates
            - Paper and forestry products
            - Taconite mining

    - In this scale, compliance with state law is the “best possible” unlike the environmental section where state law is the “barely acceptable”
        - It’s okay that they are a little off – but it is something to think about going forward
    - Average industrial customer rate averages from the US Energy Information Administration: https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_5_6_a
    - There are no LP customers currently in “best possible” area currently
    - What percentage of income is being used to pay bills shouldn’t increase faster than the rate of inflation
        - Whatever metric is used has to consider use – for example if someone buys a electric car their use will jump up
        - 3% benchmark – 3% of a household income as a consideration for affordability (anything above 3% is considered “energy burdened”)
    - Need to connect more offline about this rating scale
    - Iniquities shouldn’t exist in the best possible – in the good category utilities are addressing them
    - Do we lay out what is aspiration and what is realistic in the document?
        - Not really – but don’t tie this to today because the IRP is looking out 15 years
- Reliability, Quality, and Resiliency
    - The rating scale in this category combines two (reliability and cost)
    - Power outages every 2-3 months is not good
        - Does the duration matter? – depends on customer, power surges can damage equipment
    - Better define reliability, quality, and resiliency
    - Remove the rates piece (in rating scale and text)
        - If you remove the cost, you are also removing the quality piece
        - Would it help to define power quality?
        - Need to connect more offline on this topic
    - Take out affordability piece and leave that to the other issue area
        - Take out reference to rates knowing that is referenced in the other scale

Follow Up / Next Steps

- Have follow up conversations related to rating scales
    - Customer: Define and include all three (Reliability, Quality, and Resiliency) - Think more carefully about “best possible”
    - Environment: Environmental justice
    - Customer: Competitive rates
    - Customer: Residential and small business
- Send out follow up including date for the next meeting (last Friday in August)

MN Power IRP Stakeholder Process

JOINT MEETING 3 Agenda

Friday, August 21, 2020

8:30 AM – 12:00 PM CT

Via Zoom – Meeting ID: 992 0970 1010

Register HERE in advance of the meeting

Meeting Goals:

1. Review and refine the rating scales of the “Community” and “Utility” issue areas, including consideration of the following:
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MINNESOTA POWER 2020 INTEGRATED RESOURCE PLAN

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August 21st, 2020

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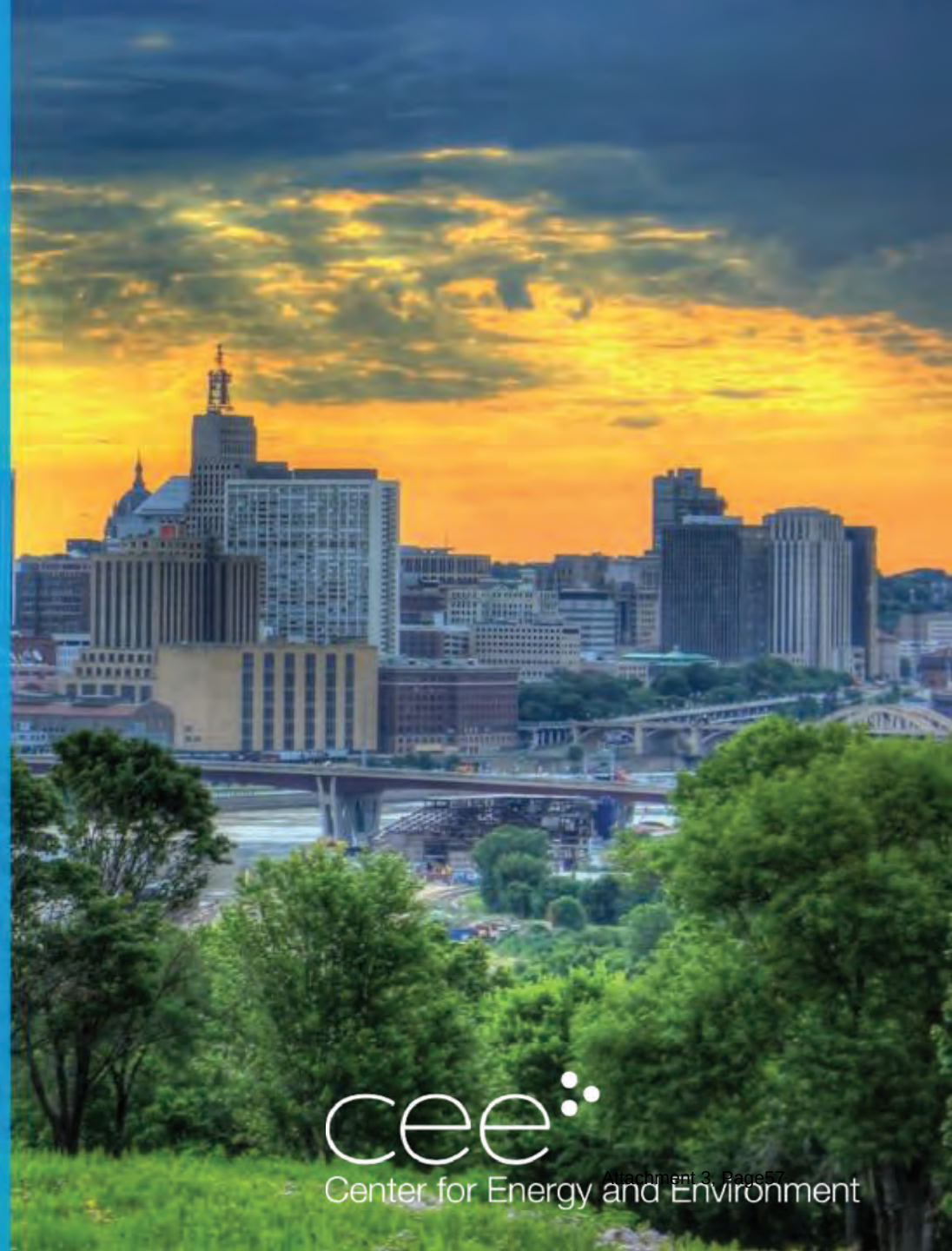

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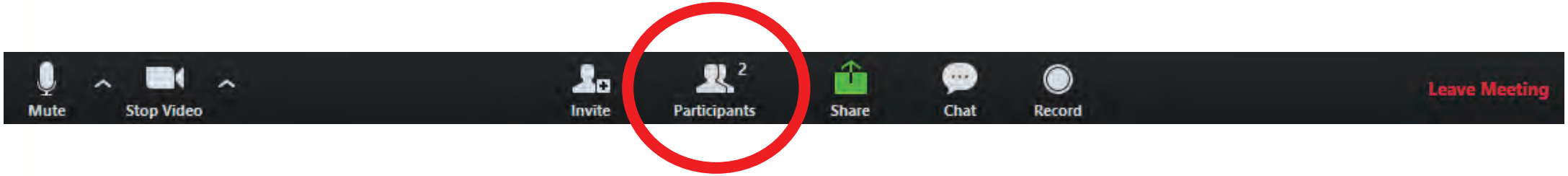

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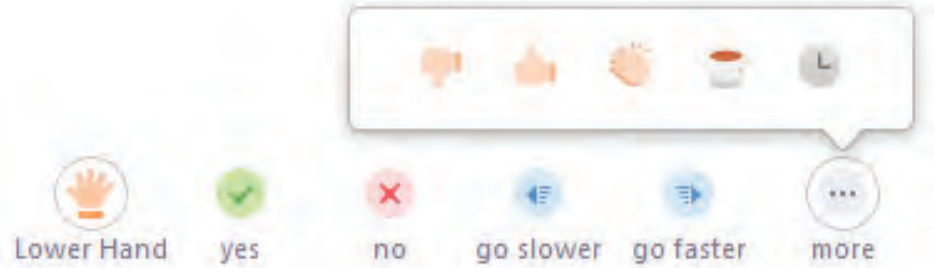

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Step 3: Identify conclusions and actions

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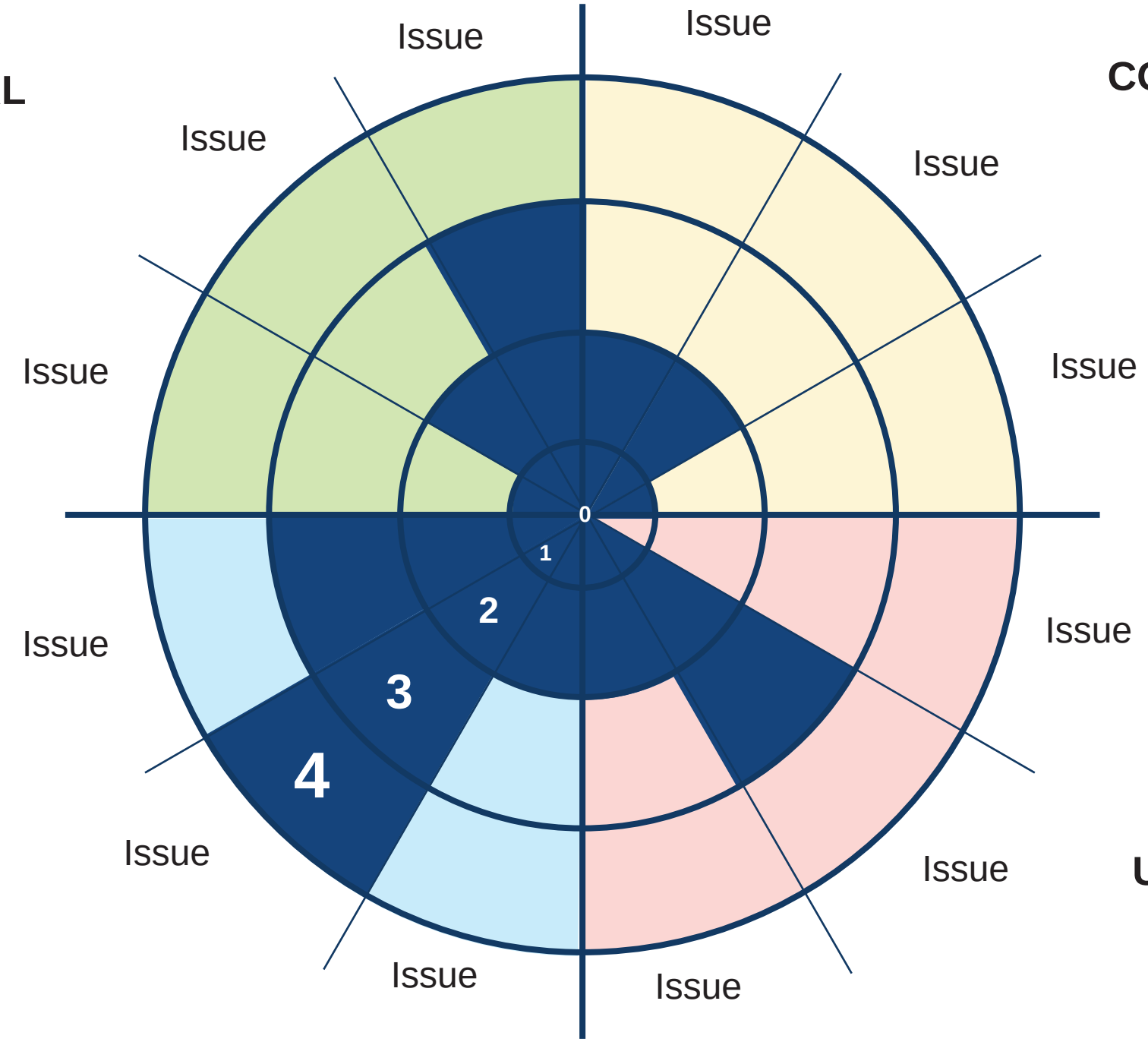
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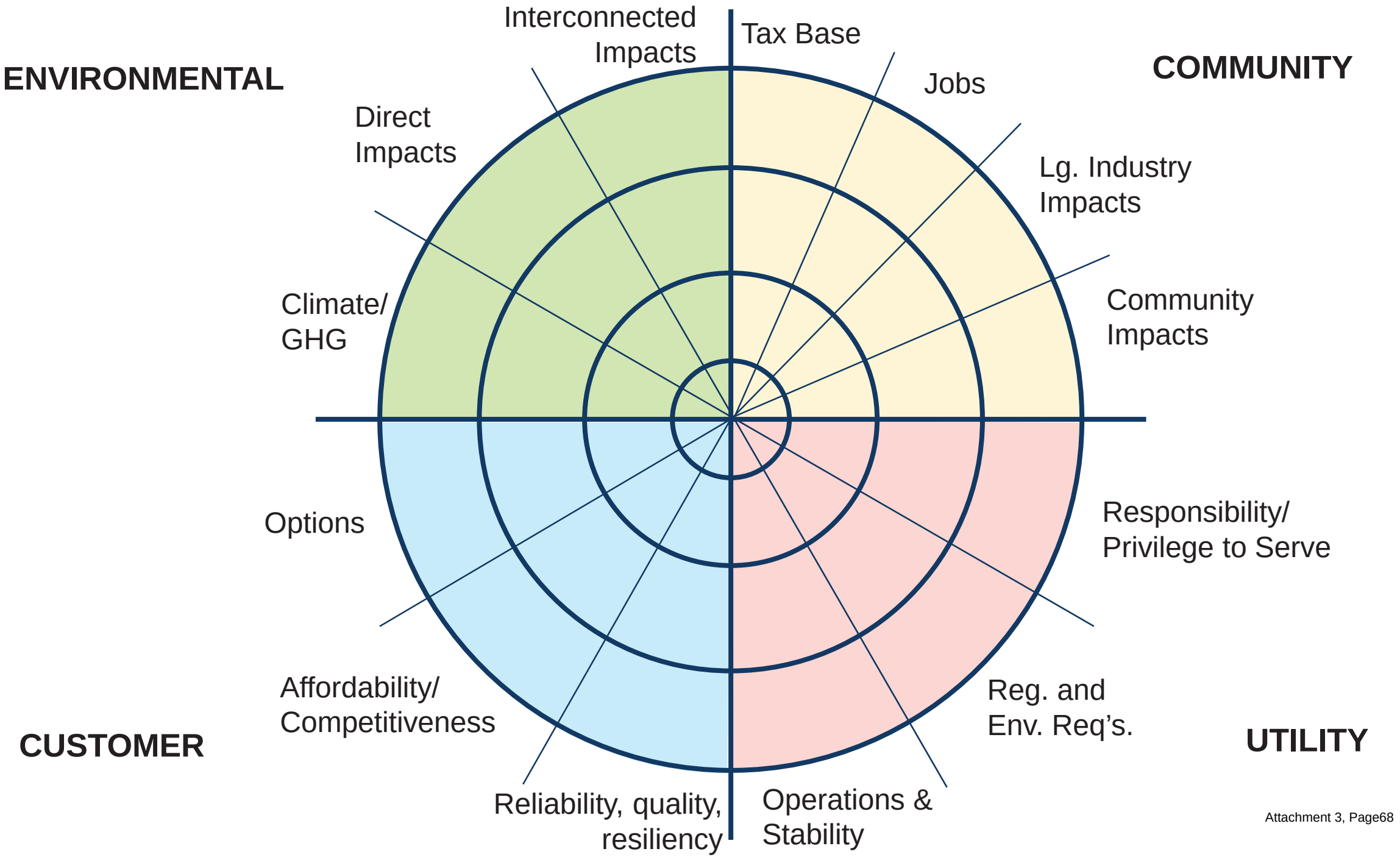
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Reliability, quality, resiliency
Affordability/ Competitiveness
Options
Climate/ GHG
Direct Impacts

Review Community Issue Sheet

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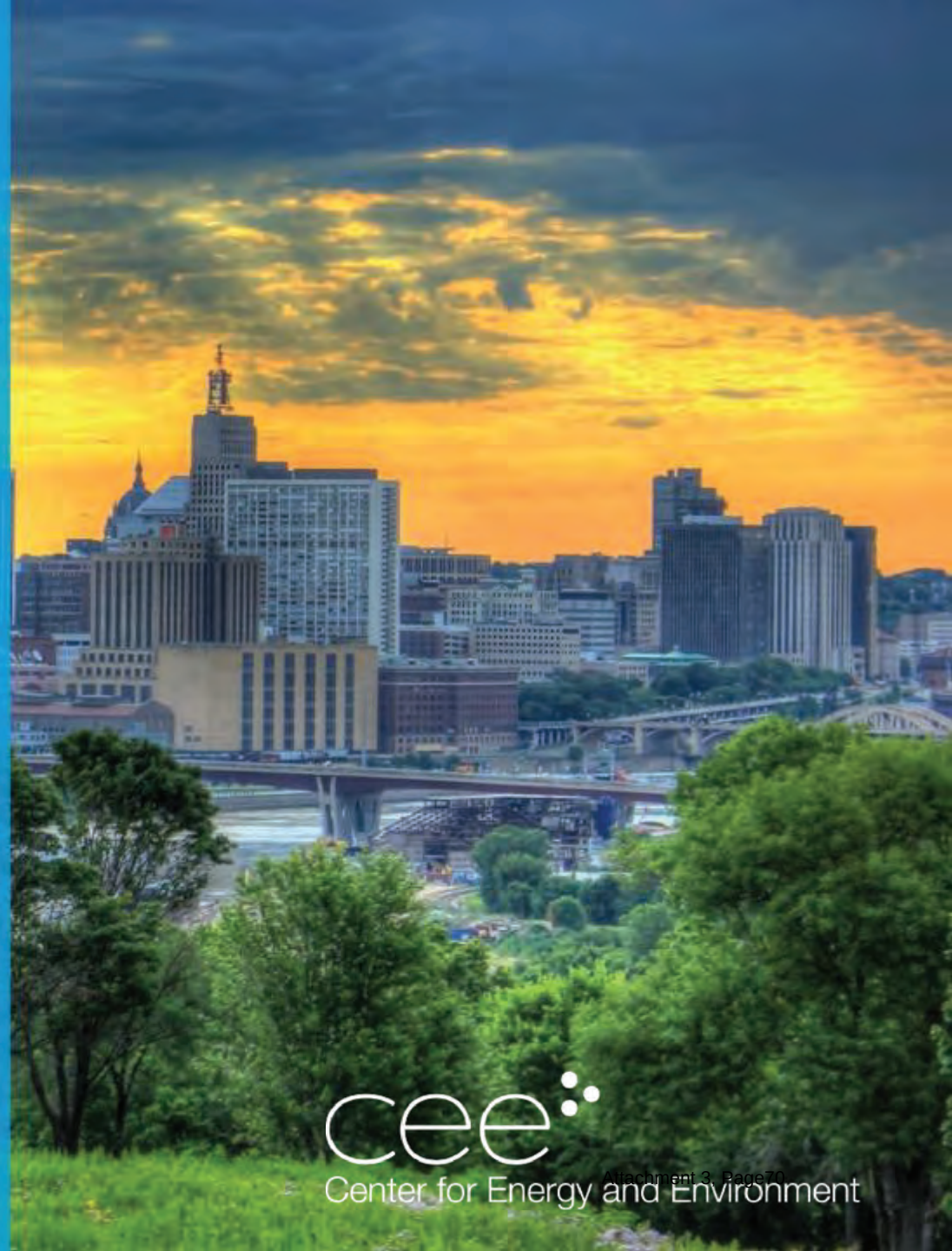
MINNESOTA POWER 2020 INTEGRATED RESOURCE PLAN

Break: Return at 10:50



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MINNESOTA POWER 2020 INTEGRATED RESOURCE PLAN

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August 21st, 2020

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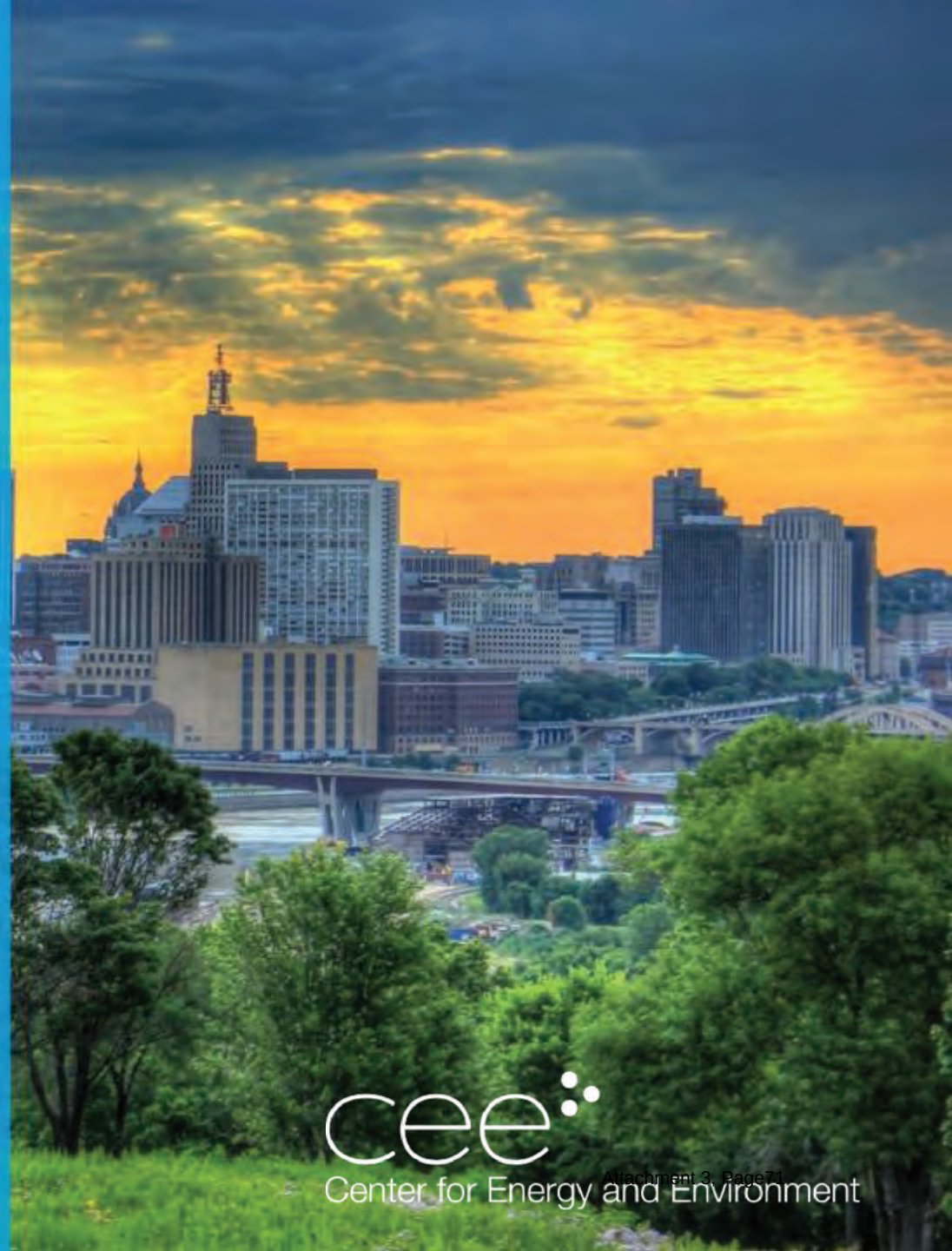

MN Power IRP Stakeholder Process

JOINT MEETING 4

Tuesday, September 29, 2020

8:30 AM – 12:00 PM CT

Via Zoom – Meeting ID: 945 2227 1441 Passcode: 526990

Register HERE in advance of the meeting

Meeting Goals:

1. Continue reviewing and refining the Host Community issue sheet.
2. Review, refine, and discuss other parts of the issue map (see questions below)
3. Check in briefly on next steps for the process

Agenda:

8:30 AM Welcome and introductions

8:45 AM Review and refine Host Community Issue Sheet

10:15 AM BREAK

10:30 AM Review and discuss overall Issue Map, including…

- Answering clarifying questions about the rating scales.
- Identifying and seeking understanding around any disagreements with the rating scales for different issues.
- Identifying and discussing which issues MP has control over for the IRP, and which ones it doesn't.
- Identifying and discussing trade-offs between the issue areas.
- Identifying collective conclusions and remaining questions from the rating scale exercise.

11:45 AM Check in on process next steps

12:00 PM ADJOURN

MINNESOTA POWER 2020 INTEGRATED RESOURCE PLAN

Joint Stakeholder Meeting #4

September 29, 2020

8:30 – 12:00 CT

Via Zoom

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Virtual Meeting Guidelines

- **Use your video camera if you feel comfortable**
- **Eliminate distractions**
- **Please speak up!**
- **Use the “raise hand” and other non-verbal buttons**
- *If having connection issues, try turning off camera OR switching audio between phone and computer*

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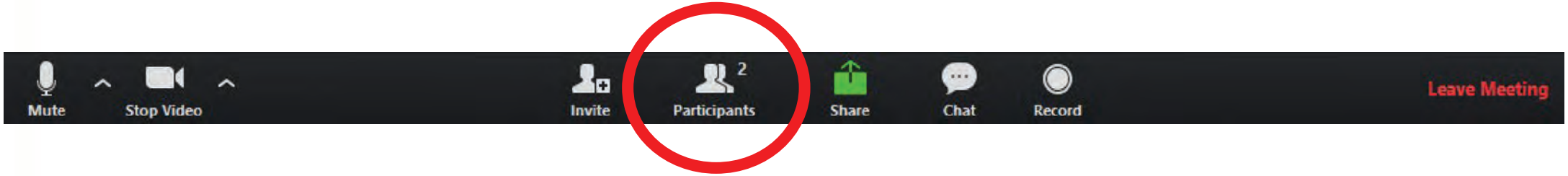
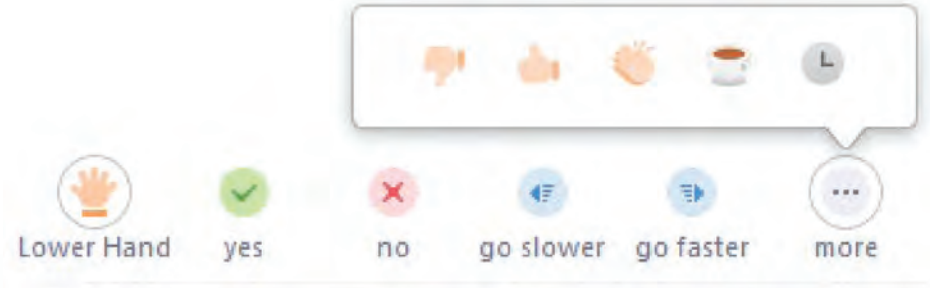
MEETING CONTROLS

1. Click “Participants” at bottom of screen



2. Non-verbal feedback buttons



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OBJECTIVES OF THE JOINT MEETINGS

A. **Build a shared understanding** of the diversity of stakeholder perspectives, priorities, and concerns with regard to Minnesota Power resource planning, including customer, community, and environmental concerns.

B. **Enable collaboration** among stakeholders to identify key challenges and potential solutions for Minnesota Power's service territory that relate to resource planning.

C. **Inform considerations** for the 2020 IRP and review and provide feedback to an early draft of the plan.

AGENDA

8:30AM	Welcome & Introductions
8:45AM	Review & Refine Host Community Issue Sheet
10:15AM	Break
10:30AM	Review & Discuss Overall Issue Map
11:45AM	Process Next Steps
12:00PM	Adjourn

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Goals for Today

1. Continue reviewing & refining the Host Community issue sheet.
2. Review, refine, and discuss other parts of the Issue Map.
3. Check in briefly on next steps for the process

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Review
Host Community
Issue Sheet

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MINNESOTA POWER 2020 INTEGRATED RESOURCE PLAN

Break: Return at 10:30AM

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JOINT MEETING 1
What we optimizing for?

Minnesota Power's 2020 IRP touches on a broad set of stakeholder concerns, including possible impacts to customers, communities, and the environment.

In this first joint meeting, participants will be asked to define their key values or areas of concern, including what a "best possible" and "worst possible" situation might look like for each (and in between).

These areas of concern will be consolidated into a framework that will be used as a tool for discussion in Joint Meeting 2, where we'll explore a handful of future resource planning scenarios, and what impacts each scenario might have on key areas of concern.

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Review & Discuss the Issue Map

- Answering clarifying questions about the rating scales.
- Identifying and seeking understanding around any disagreements with the rating scales for different issues.
- Identifying and discussing which issues Minnesota Power has control over for the IRP, and which ones it doesn't.
- Identifying and discussing trade-offs between the issue sheets.
- Identifying collective conclusions and remaining questions form the rating scale exercise.

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Process Next Steps

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MINNESOTA POWER 2020 INTEGRATED RESOURCE PLAN

Joint Stakeholder Meeting #4

THANK YOU!

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MN Power 2020 IRP Stakeholder Process

JOINT MEETING 4 – PROCESS REFLECTION

September 29, 2020

BACKGROUND

During the fourth joint meeting, facilitators called on every participant, one-by-one, to state their top take-away and top remaining question from the process so far. Participants were also given the opportunity to pass if they so desired. The comments from this exercise were captured live on-screen during the meeting so that participants could ensure their comments were adequately captured and ask for edits where needed.

This document presents these comments exactly as they appeared on screen in the meeting, but re-organized by facilitators into general themes.

WHAT IS YOUR TOP TAKE-AWAY FROM THE PROCESS SO FAR?

1. **Take-aways that express a deeper understanding of diverse perspectives, the interrelatedness of issues, and the complexity of the challenge at hand:**
    a. Surprised and impressed with magnitude and depth of conversation.
    b. Impressive piece of work, and illustrates the complexity of the challenge.
    c. Impressed with everybody seeking understanding of different viewpoints.
    d. Value of relationship building and deeper understanding of perspectives, including common ground across parties.
    e. Issue map helps with balancing different issues and identifying needs for give and take across parties.
    f. Appreciate opportunity to hear from multiple host community stakeholders.
    g. Massive difference between what's happening on the range, and what's happening in the rest of MP's territory.
    h. Issues are very interrelated – like a game of pickup sticks (impacting one affects many others). Hopeful to have a conversation about solutions that can have positive impacts on multiple issues.
    i. Enjoyed getting to know different stakeholders, and educated around jobs and property tax implications.
    j. Importance and value of electric service in community health, success, vitality, and ability to thrive and be sustainable. Encouraged by the time, talent, and expertise of this group.
    k. Cannot discount concerns of any individual or group, just because their concerns are not ours, and in doing so we would risk alienating the decision-makers. Have learned to take others' concerns seriously.

l. Significance and magnitude of how important Boswell is to Cohasset and northern MN.
m. Jobs and tax base are part of the social fabric of communities, and so is the environment – environmental impacts also have health and economic impacts.
n. Steel industry is moving to a lower carbon footprint, and doing that requires having competitive electric rates.
o. We have to think long and hard and be innovative to find scenarios that have wins around the issue map.

2. **Take-aways that express a desire for host community and industrial solutions:**
    a. Common desire for best possible outcomes for MP's service territory and communities.
    b. Need for state or federal policy to help power plant host communities facing this transition. Requires a broader public interest policy shift that goes beyond the utility and its ratepayers.
    c. Appreciate thoroughness, but shouldn't lose sight of efforts MP has undertaken since '05 to transition its electric system. State or federal policy needs to be in place before dramatic decisions are made that could exacerbate impacts to industrial customers, or it might be too late to address the issue.
    d. Northern MN group has broad and good understanding of potential socioeconomic impacts if resource planning is done too quickly, without plans and readiness in place.
    e. Need to consider work that has been done to date on MP's system, and costs related to that work. In next 20 years, need to incentive businesses to relocate to this region.
    f. Sheer magnitude of threat to both Boswell host communities and large industry in the region, and need to mitigate that.
    g. Challenge is coming one way or another, so the focus needs to be on transitioning successfully. Minnesota has a strong planning context to support this.
    h. Hope the conversation accurately reflects the issue map, which has a heavy weighting on socioeconomic issues and cost concerns, especially for rural communities.
3. **Take-aways that express disappointments in the process:**
    a. Process has upheld status quo and deepened divisions. Easy to pit jobs against environment. Sees utility continuing to control narrative. Need to focus on local opportunities.

b. Concerned that climate was not a priority in discussions, because issues were separated out.
c. We talk about balancing a choice between fossil fuels and the outcomes we desire, but don't think it is a choice. We need to do something, and waiting is not a choice. Wish we'd talked more about how to do that transition. Major disappointment.
d. Trying to reach understanding between groups can stifle conversation that needs to take place.

4. **Other take-aways:**
    a. Technology can advance rapidly – keep that in mind.
    b. Hope this will have long lasting positive outcomes.
    c. Need solutions, and acknowledge those are in the control or purview of different levels and agencies of government.
    d. Impressed by devotion of time to this effort, including folks for whom this is not their day job. Economic development is a marathon, not a sprint.
    e. There is a lot of overlap with environmental, social, governance issues.

WHAT REMAINING QUESTIONS DO YOU HAVE?

1. **Questions about how the process will be captured, utilized, or have influence:**
    a. How will these be captured and utilized?
    b. How will this process be perceived and received by regulators and the state? How will it be utilized? Concerned about this creating division, rather than creating solutions.
    c. How will this influence the IRP filing?
    d. Will this have an impact, or just be put on a shelf somewhere?
    e. How we do translate our concerns into a document that will help decision-makers deal with enormity of possible outcomes?
    f. Interested in more on how the IRP process works, and if this process stands alone, or if there's an opportunity to comment on this document?
    g. How do we continue to carry forward the voices of those for whom this is not their job?
2. **Questions around what actions different parties will take in the future, or how to address challenges and opportunities:**
    a. How will MP stay vested and part of communities as plan moves forward? Both as community partner and economic engine.
    b. How are we all (not just MP) going to work together as a region and a state to advance the kind of economic development communities need now and into the future?
    c. Can MP and the community transition Boswell into the green economy, while meeting the desired host community outcomes?

d. How will MP engage to lift up workers and communities in its IRP?
e. How are we going to incentivize more businesses to use MP's 50% renewable energy sources in the future, and how do we continue to incentive our current industries to maintain and grow operations, without outsourcing to other nations?
f. How will the communities impacted be engaged in trying to prepare themselves for this change?
g. How do we start creating a forward-looking plan today?

3. **Questions about the issue map specifically:**
    a. What in the rating scales is within the purview of the PUC, given its regulatory authority?
    b. Do the unusual times we're in ask us to prioritize some areas of the issue map over others?
    c. Are there different weights to different parts of the issue map?
    d. How do you begin to prioritize and weight the issues, in context of the changes that have been made in MP's system in the last 15 years? And what is the right timing?
    e. Who will MN Power be working with to look into the issues?
4. **Other questions:**
    a. Where is Blackrock (utility investor community) in this process? Should have invited them.
    b. Can this stakeholder process be expanded, both within, but also beyond this IRP process, and can we expand beyond the two "camps" of Duluth environmentalists and large power customers?
    c. Who is responsible for paying the costs of solutions?
    d. We didn't talk about electrification as a strategy.
    e. How does this process overlap with MN Power's environmental, social, governance efforts?
    f. How are we going to address the opportunities and challenges that fall outside the authority of the PUC in the IRP process?

MN Power IRP Stakeholder Process

JOINT MEETING 5

Tuesday, November 17, 2020

9:00 AM – 11:00 AM CT

Via Zoom – Meeting ID: 933 1443 9635 Passcode: 108648

Register HERE in advance of the meeting

Meeting Goals:

1. Build a shared understanding of securitization as a concept, and feasibility considerations for Boswell.
2. Check-in on final steps for the stakeholder process.

Agenda:

9:00AM Welcome

- Bethany Owen, President and CEO of ALLETE

9:10AM Presentation and Q&A: Securitization at Boswell (Rocky Mountain Institute)

- What is securitization?
- Feasibility considerations for Boswell

10:40AM Process Final Steps

- Next steps (MN Power)
- Final summary, including issue map (GPI, CEE, Lasky Consulting)

11:00AM ADJOURN

MINNESOTA POWER 2020 INTEGRATED RESOURCE PLAN

Joint Stakeholder Meeting #5

November 17, 2020

9:00 – 11:00 CT

Via Zoom

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GOALS FOR TODAY

1. **Build a shared understanding of securitization as a concept, and feasibility considerations for Boswell.**

2. **Check-in on final steps for the stakeholder process**

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AGENDA

9:00AM **Welcome**

9:10AM **Presentation and Q&A:**

- Rocky Mountain Institute: Securitization at Boswell

10:40AM **Process Final Steps**

- Minnesota Power: Next steps
- GPI, CEE, Lasky Consulting: Final summary, including issue map

11:00AM **Adjourn**

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WELCOME

Bethany Owen, President & CEO of ALLETE

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PRESENTATION AND Q&A:

Securitization at Boswell (Rocky Mountain Institute)

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November 17, 2020

Minnesota Power Securitization Study

Phase 1 Update at the IRP Stakeholder Meeting

Uday Varadarajan, Principal
Becky Li, Senior Associate
Rocky Mountain Institute

Analytical Team: Becky Li, Rachit Kansal, Sam Mardell, Jon Rea, Pintian Chen, Ben Serrurier, David Posner, Catalyst Cooperative

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1 Project Context

2 Introduction to Securitization

3 Preliminary Feasibility Assessment of Securitization for Minnesota Power

4 Appendix

Project Background

Ordered by the Minnesota Public Utilities Commission, RMI is conducting a study to answer the following questions for Minnesota Power:

1. How can securitization be used to facilitate the closure of facilities with large undepreciated balances? → *Explained in detail in the Phase 1 Report*

2. What is the feasibility of securitization in Minnesota and for Minnesota Power? → *Discussed qualitatively and assessed via historical comparables in Phase 1 Report, deeper quantitative analysis in Phase 2*

3. What are the obstacles to securitization and how can they be resolved? → *Discussed qualitatively and assessed via historical comparables in Phase 1 Report, deeper quantitative analysis in Phase 2*

4. How can securitization be used to balance the interests of ratepayers and shareholders as they apply to the Boswell Energy Center? → *Discussed qualitatively and assessed via historical comparables in Phase 1 Report, deeper quantitative analysis in Phase 2*

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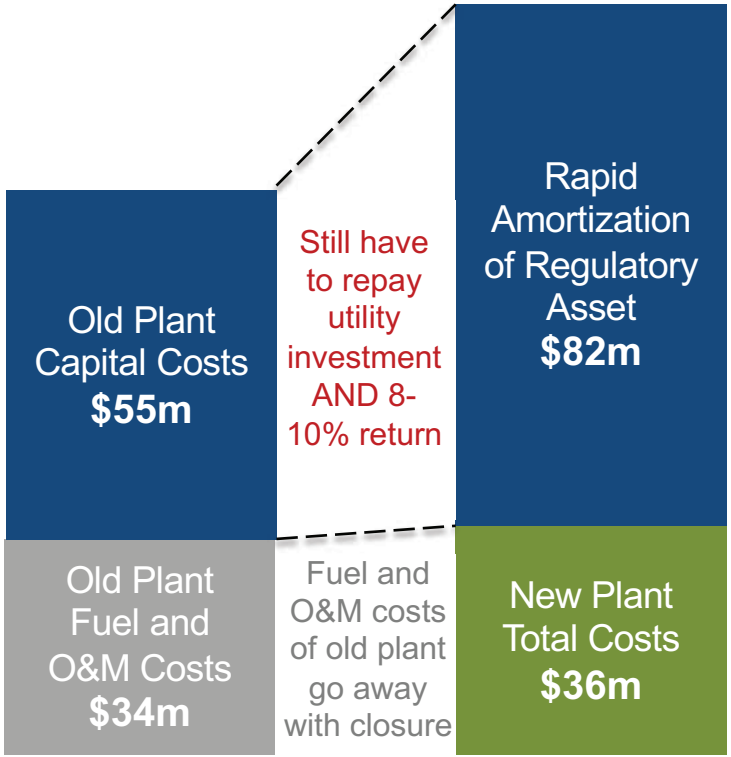
Accelerated phaseout of generation assets can result in long-term benefits, but poses risks and challenges for utilities, customers, and impacted communities

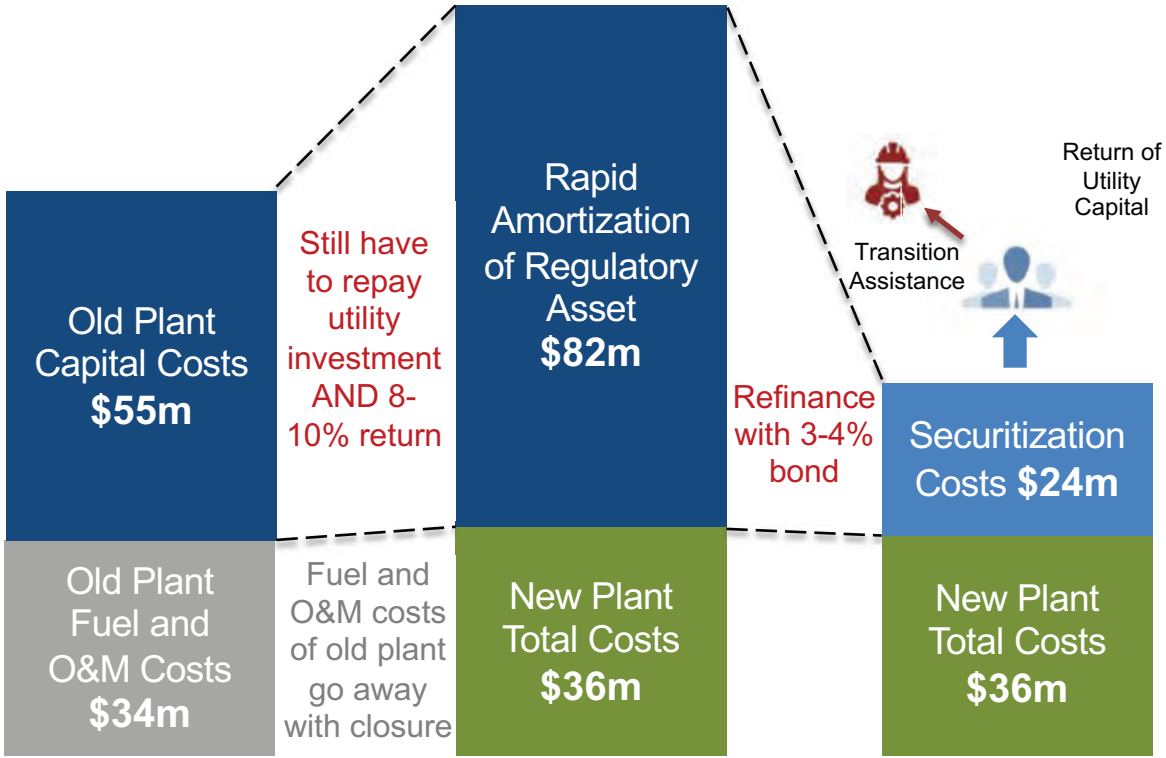
	 Utilities	 Customers	 Communities
Challenge	Rate base and earnings erosion	Near-term rate shock	Jobs and tax revenue losses
Boswell Units	$784 million unrecovered plant balance	15 years of remaining accounting life	~160 employees, provides 70% of Cohasset's tax revenue
Solution	Reinvest capital in clean energy	Low-cost debt refinancing of capital recovery via securitization	15% of savings from securitization for transition assistance

With traditional utility financing, customers often won't see immediate savings from a transition to cheaper generation – and may instead see their rates spike



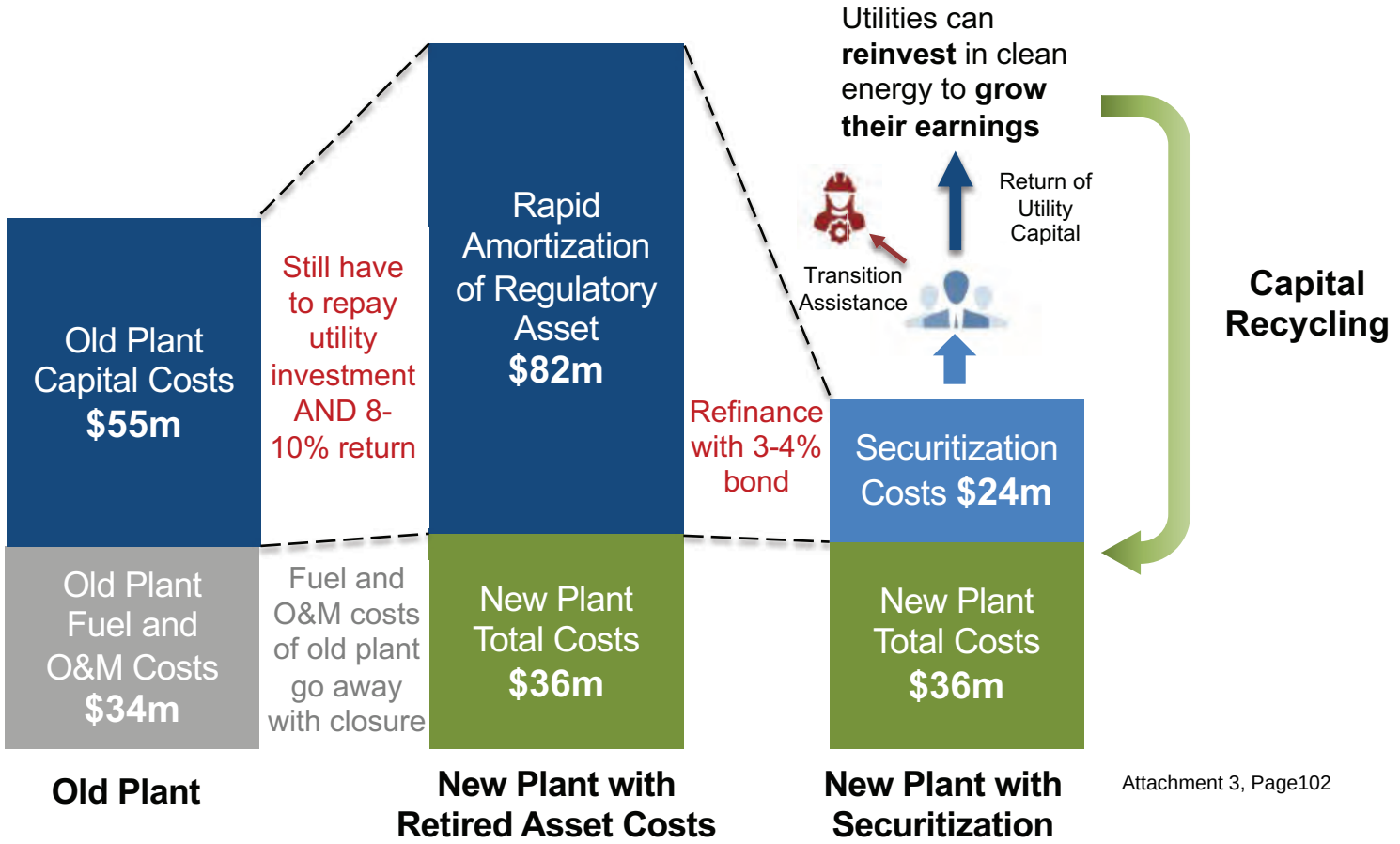
Note: Example based on results for a coal plant owned by a Midwest utility.

Securitization – financing capital recovery and transition assistance with a bond repaid in rates – can help mitigate rate shock and finance community transition



Note: Example based on the actual analysis results for a coal plant owned by a Midwest utility.

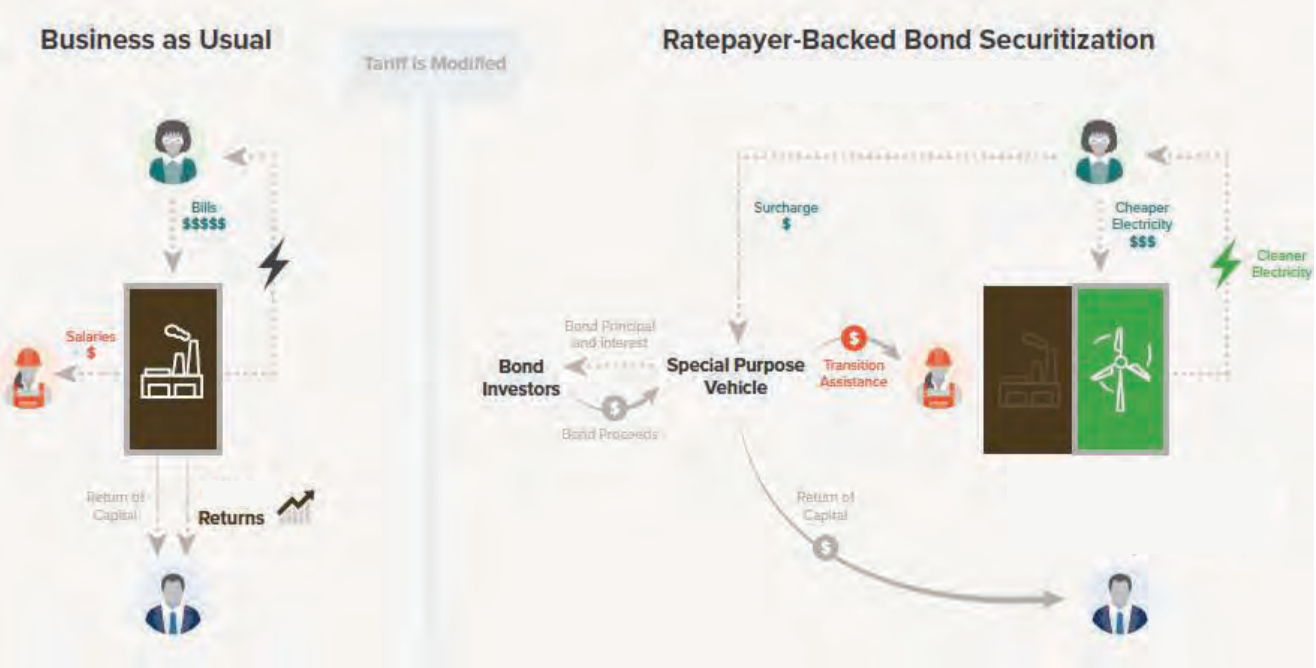
…and utility reinvestment in clean energy can allow utilities and their investors to contribute to the transition



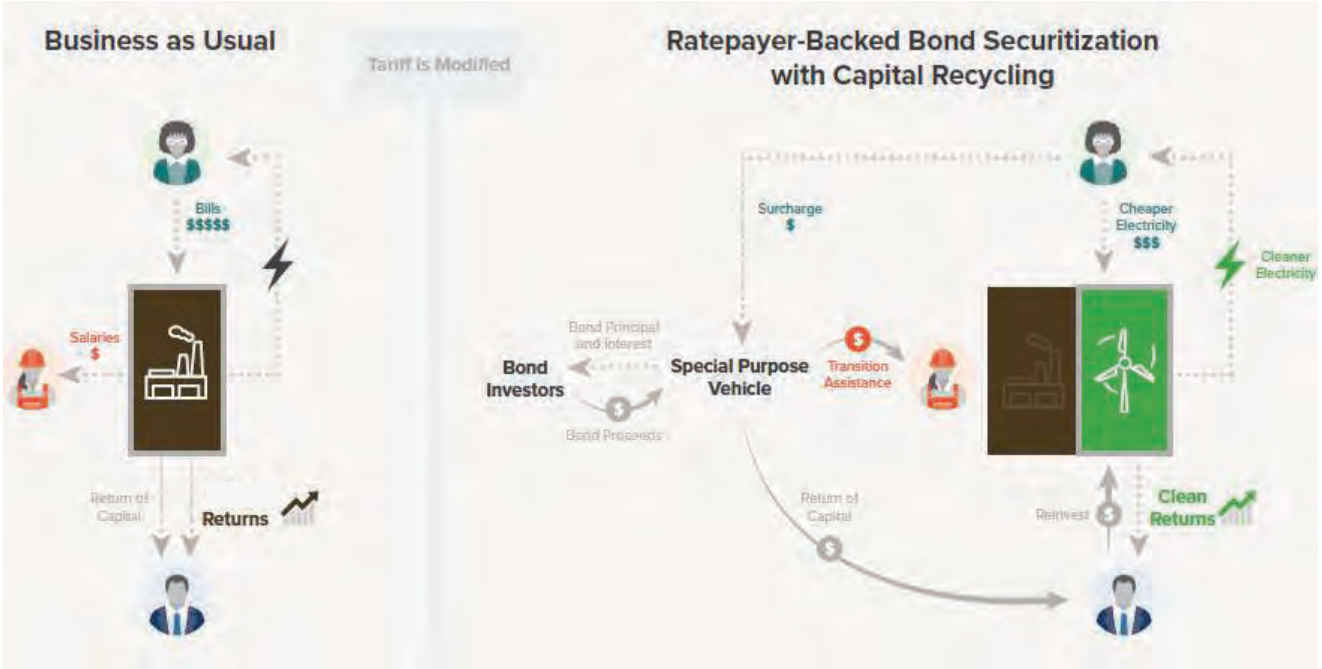
Note: Example based on the actual analysis results for a coal plant owned by a Midwest utility.

So, how does securitization work in practice?

Securitization mitigates rate shock by replacing utility equity and debt with low-cost debt repaid through a dedicated surcharge



Utility reinvestment (“capital recycling”) allows utility investors to replace returns from older assets with clean returns



Relative to other accelerated phaseout options, securitization better balances the short and long-term interests of customers…

	Impacts on UTILITY		Impacts on CUSTOMER	
NO Capital Recycling	Credit	Equity	Short-Term	Long-Term
Disallowance (from 0-100%)	XX	XX	✓✓	--
Vary Allowed Return (from Debt Only to WACC)	X	X	✓	--
Accelerate Depreciation (to 4-10 Years)	--	--	XX	--
Full Utility Finance (Full WACC, No Accel)	✓	✓	X	X
Securitization	--	X	✓	✓

So… does securitization bail out the utility's shareholders? No.

It reduces rates	Refinances ratepayer obligations at lower cost
	Legislation REQUIRES savings for tool to be used
It helps regulators	Allows mitigation of impacts of past decisions
	Does so with least harm to ratepayers
It reduces utility earnings	Without capital recycling, reduces ratebase
	Is NOT likely of interest to utilities alone…

Capital Recycling, however, gives the utility the opportunity to be a part of the solution

With capital recycling	Fills in the earnings hole from securitization
	Creates opportunity for accretive growth

With capital recycling, securitization can also be earnings-accretive to utility shareholders as well as mildly credit positive for utility debt

	Impacts on UTILITY		Impacts on CUSTOMER	
with Capital Recycling	Credit	Equity	Short-Term	Long-Term
Disallowance (from 0-100%)	X	X	✓✓	--
Vary Allowed Return (from Debt Only to WACC)	--	--	✓	--
Accelerate Depreciation (to 4-10 Years)	✓	✓	XX	--
Full Utility Finance (Full WACC, No Accel)	✓✓	✓✓	X	X
Securitization	✓	✓	✓	✓

Securitization and utility reinvestment (capital recycling) can work together to provide a win-win-win for all stakeholders

	Utilities	Customers	Communities
Challenge	Rate base and earnings erosion	Near-term rate shock	Jobs and tax revenue losses
Boswell Units	$784 million unrecovered plant balance	15 years of remaining accounting life	~160 employees, provides 70% of Cohasset's tax revenue
Solution	Reinvest capital in clean energy	Low-cost debt refinancing of capital recovery via securitization	15% of savings from securitization for transition assistance

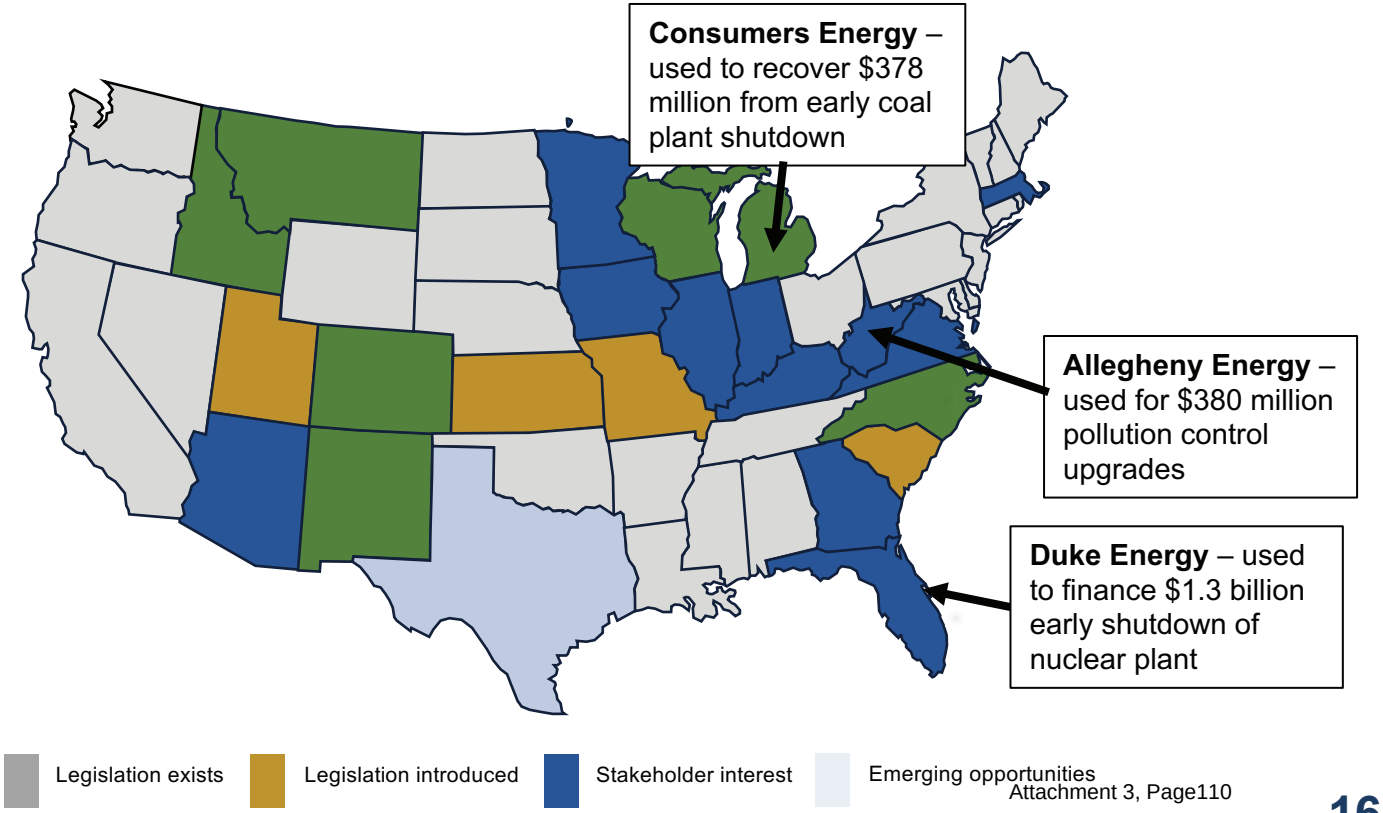
Note: Boswell results to be analyzed in Phase 2.

Securitization has been used for utility transition in the last three decades, and coal plant retirement cost refinancing is an emerging use of proceeds

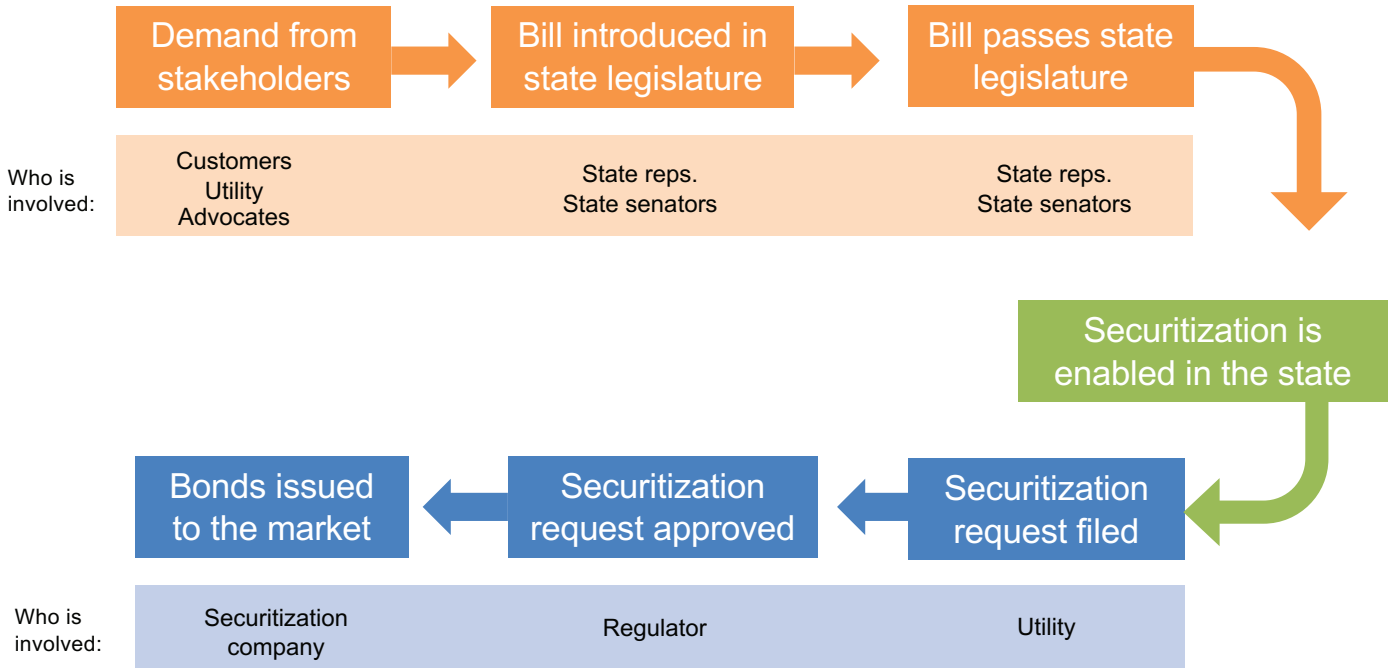
Recent Progress:

- NM PRC authorized Public Service Company of New Mexico's (PNM) a $361 million securitization to allow for recovery of costs associated with the early retirement of San Juan Generating Station and provide $60m in transition assistance to affected communities, as well as 1 GW of renewables and storage all while saving customers $7/month.

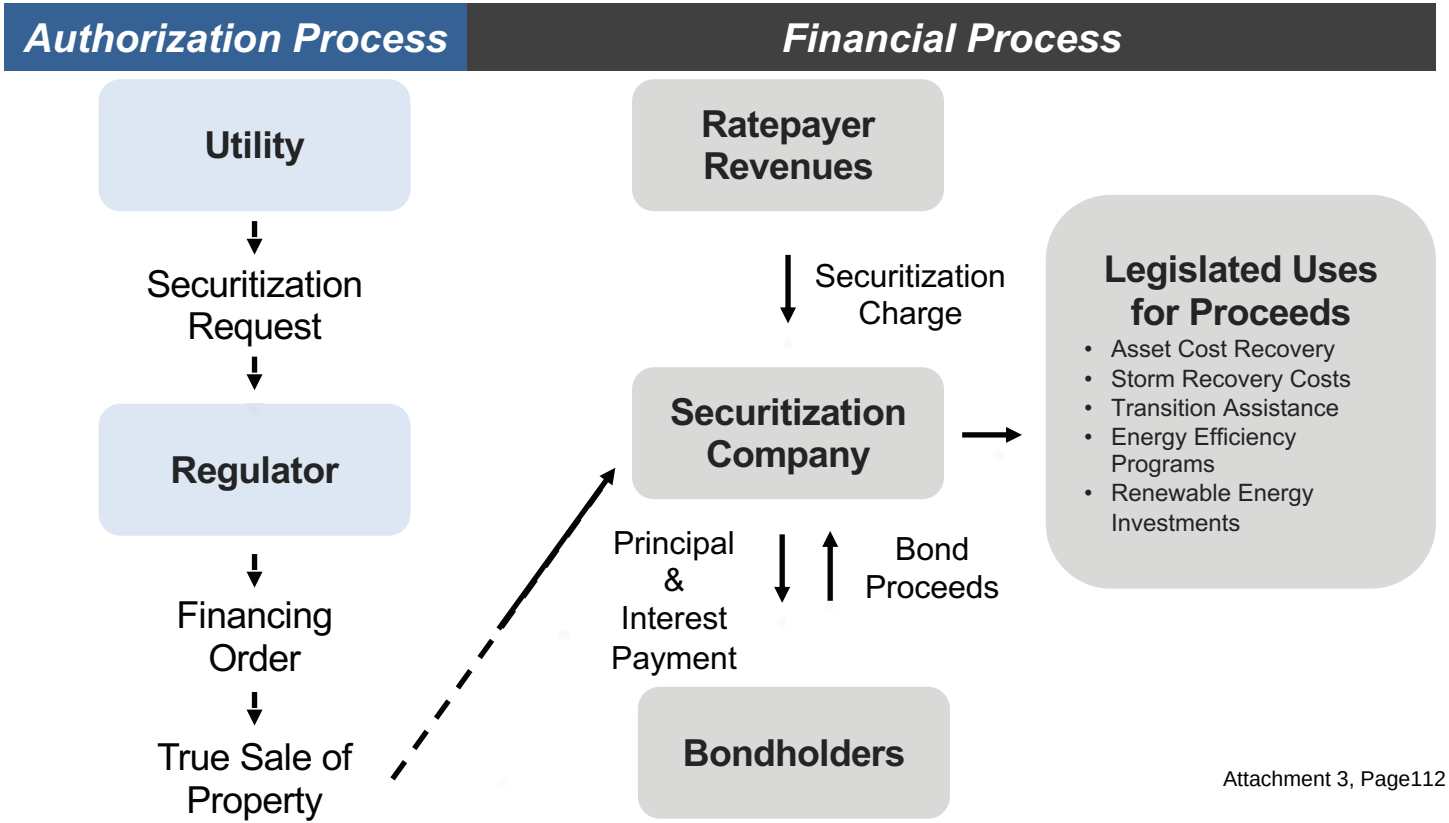
- WI PSC authorized Wisconsin Electric Power Company (WEC) to securitize $118 million in unrecovered costs from the accelerated retirement of the Pleasant Prairie coal plant.



Securitization must first be **enabled by legislation** in regulated states that did not restructure - then utilities must use it with **approval from regulators**



What is the process for actually using securitization in more detail?



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Securitization can mitigate many (but not all) transition costs and risks…

	Key Insights	Key Considerations
Flexibility	Securitization can be timed, sized, and executed independently of asset retirement.	As a purely financial transaction, securitization does not need to be either sized or timed to coincide with plant retirement; and can be used before or after plant retirement to cover some or all costs.
No impact on state, local, utility credit ratings	Securitization is not a municipal or state obligation, and therefore does not impact state or local credit ratings. If appropriately structured, it can be mildly credit positive for the utility.	Relies on legislative and regulatory guarantees from a securitization bill and financing order respectively to achieve low costs.
Source of Savings	Securitization savings are generated through refinancing the utility debt and equity associated with the remaining balance of the retired plant solely with low-cost debt.	Make sure the associated savings are positive both in the near term and on a net present value basis over future years.

…But it can also introduce new challenges and risks that need to be efficiently managed

	Key Insights	Key Considerations
Trade-off between flexibility and costs	Customers benefit by trading lower flexibility in future rates for reduced current and future costs	The reduced flexibility will be apparent in future rate case proceedings, where rate design proposals will need to consider the surcharge amount when determining the all-in impact of a rate change on customer bills.
Distribution of Savings	The distribution of savings among ratepayers depends on both the current allocation of unrecovered costs among ratepayer classes and the design of the surcharge	Assess quantitatively any potential shift in costs between ratepayer classes that may result from the combination of the reduction in rates associated with the removal of unrecovered capital costs from rates and the imposition of the surcharge.
Potential Additional Risks	Securitization *reduces* the rate impact of economic cycles, but it also limits regulatory flexibility to delay or disallow those obligations Securitization is mildly credit positive, but reduces future earnings and introduces reinvestment risks	Comprehensive resource and financial planning helps mitigate utility transition risks and maximize benefits to customers

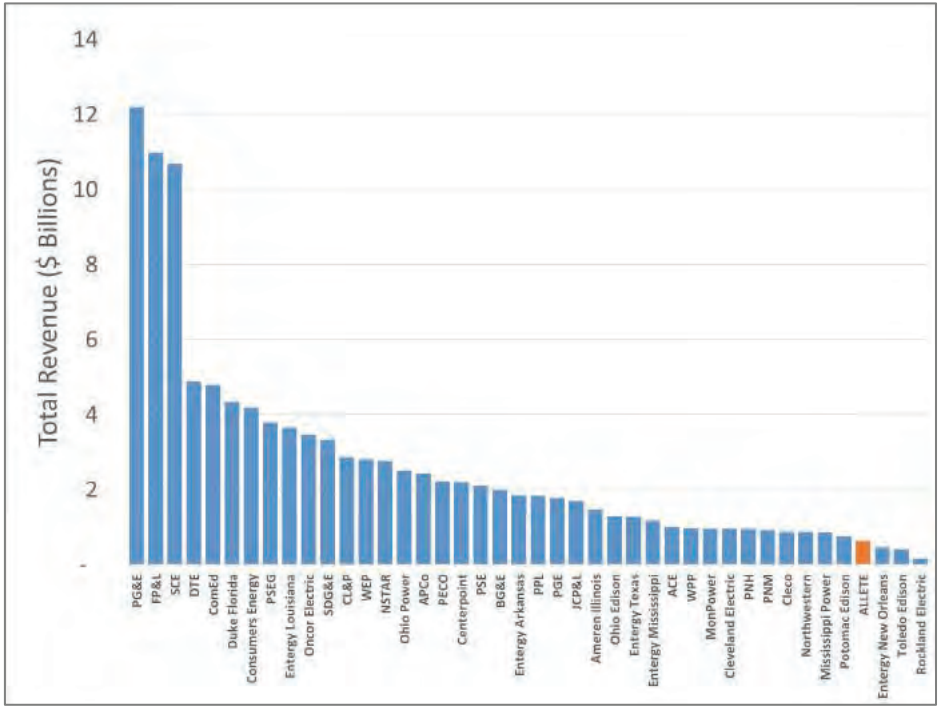
When assessing a securitization transaction, credit rating agencies look for factors that provide legal and regulatory stability of future revenue streams

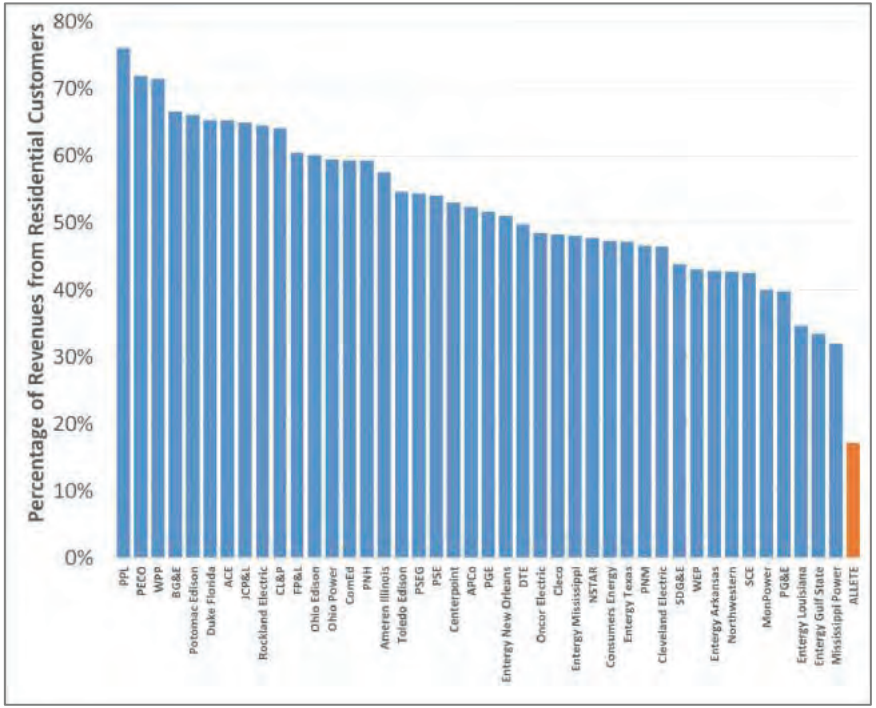
Customer Breakdown	Revenues from C&I customers tend to be more volatile due to business risks
	Minnesota Power is facing this risk with high concentration of C&I customers

True-up Mechanisms	Review and adjust the special tariff annually Excessive volatility can lead to further risks

Relative Bond Size	Credit agencies specify hard (20%) or soft limit on the relative size of the bond payment vs. total revenue collected
	Economic fundamentals and “bill affordability” are the key considerations

But this could be challenging for Minnesota Power, which is a small utility with a high C&I share relative to its peers…

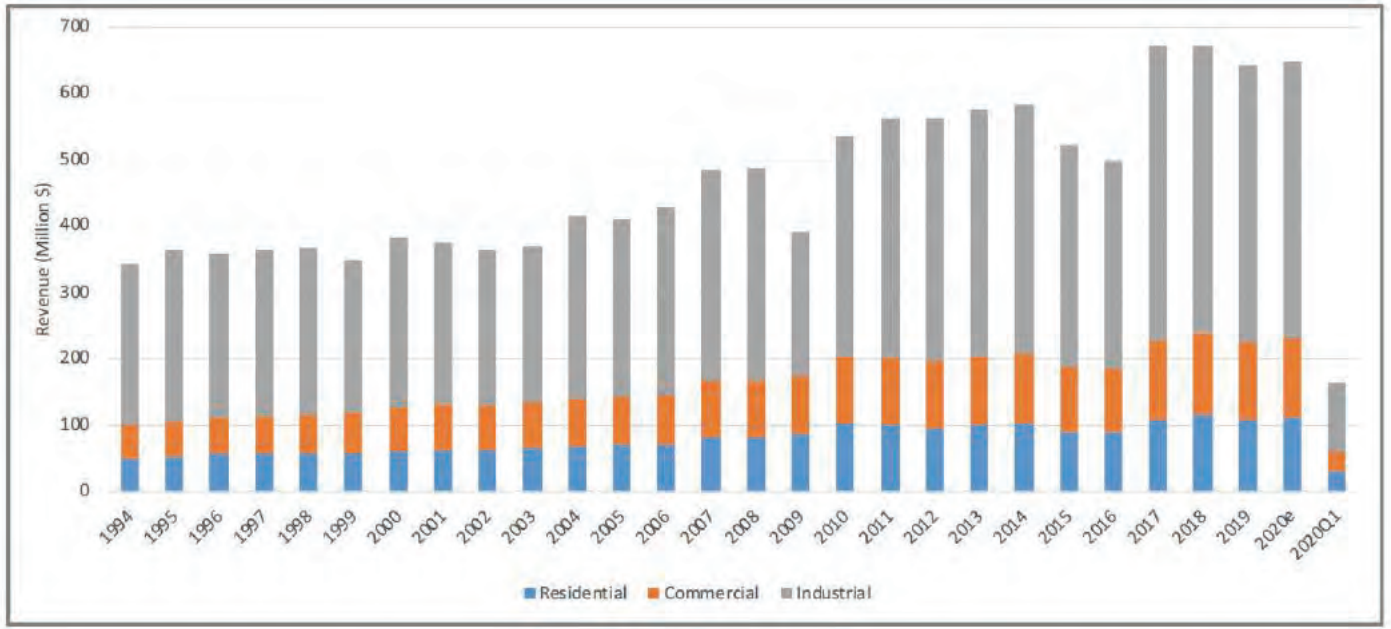




Data Source: RMI analysis of 2019 FERC Form 1 data.

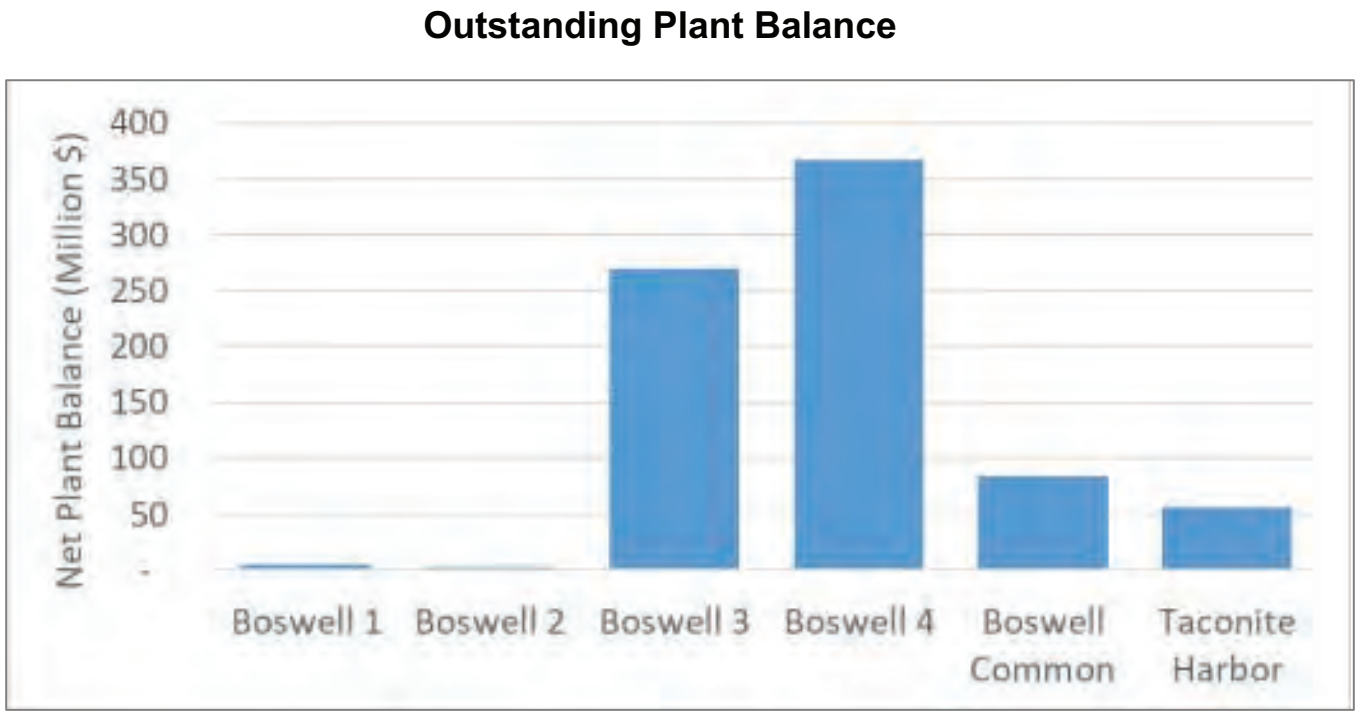
…with a resulting history of volatile revenues that are strongly correlated with economic cycles

Minnesota Power's Historical Revenue Breakdown



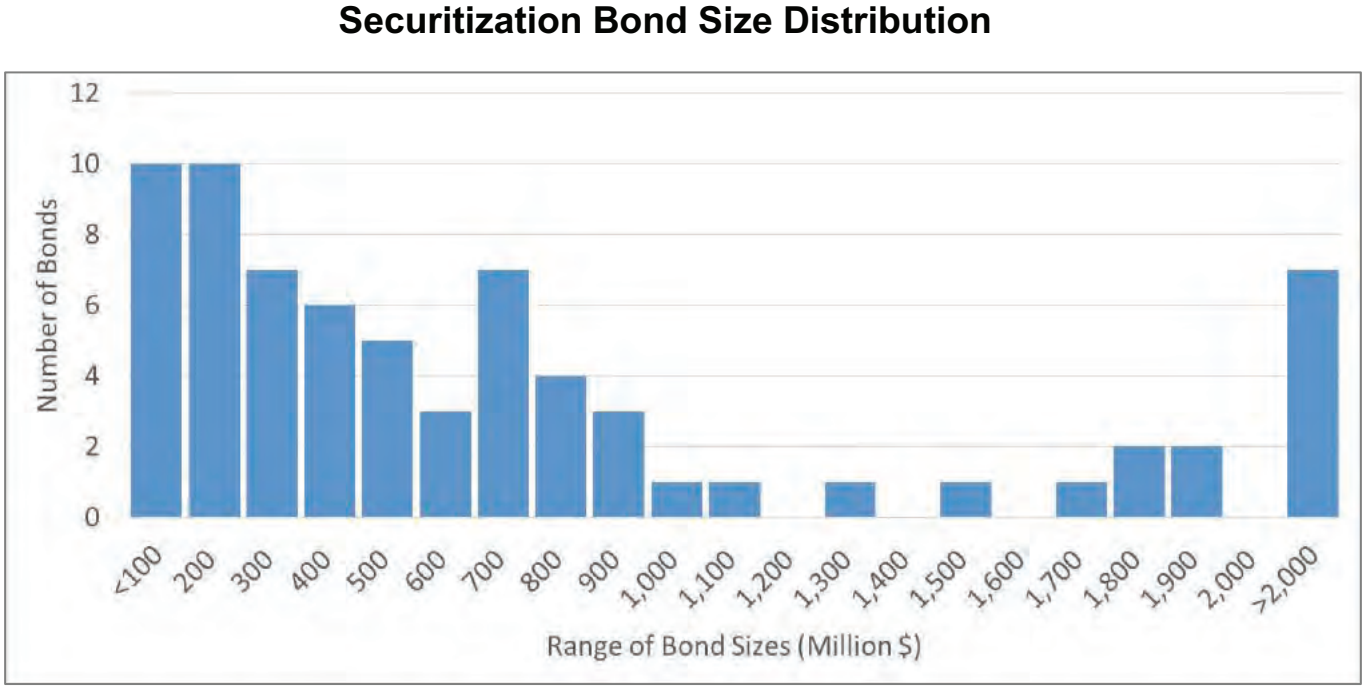
Data Source: RMI analysis of 2019 FERC Form 1 data.

Minnesota Power currently has significant unrecovered costs associated with its fossil generation units – roughly $784 million…



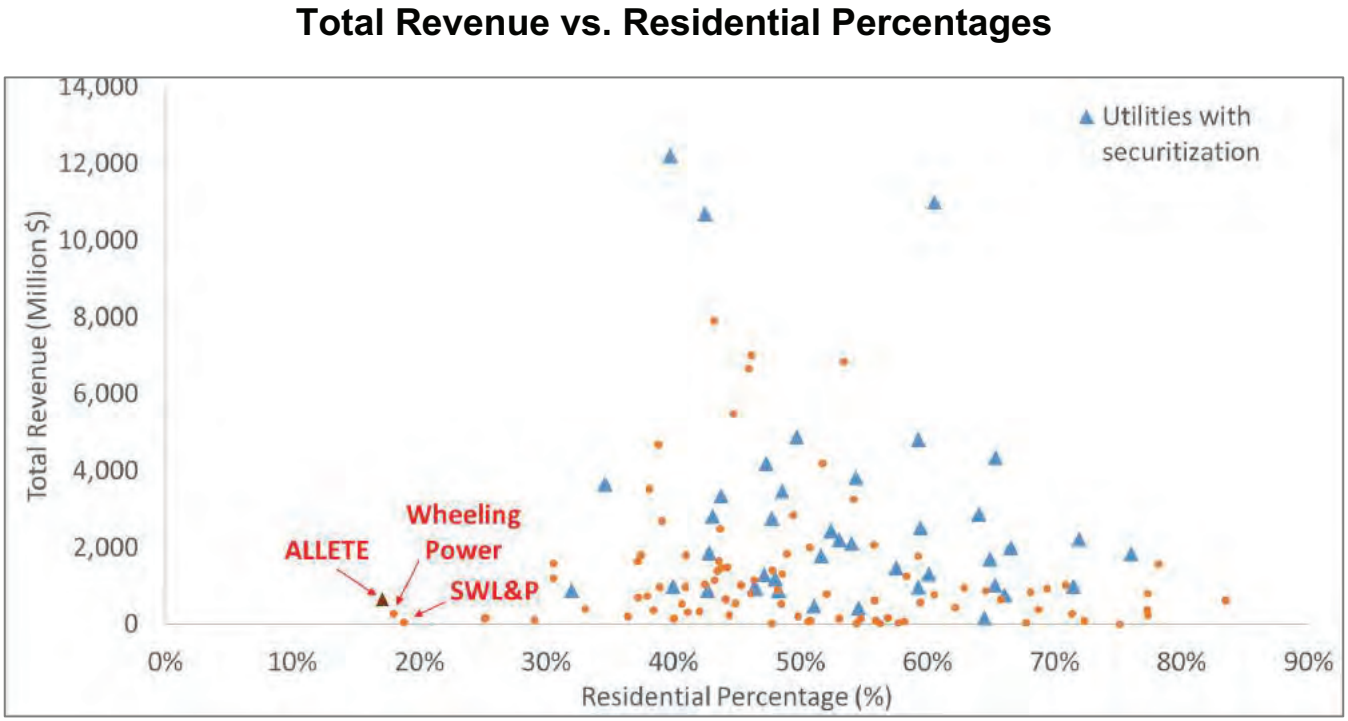
Data Source: Minnesota Power depreciation filing in Docket No. E015/D-20-701.

If all of this were securitized in a single transaction, it would put such an issuance among the top 30% of utility securitizations by size



Data source and notes: Original data from Saber Partners, with additional information collected by RMI team through S&P.

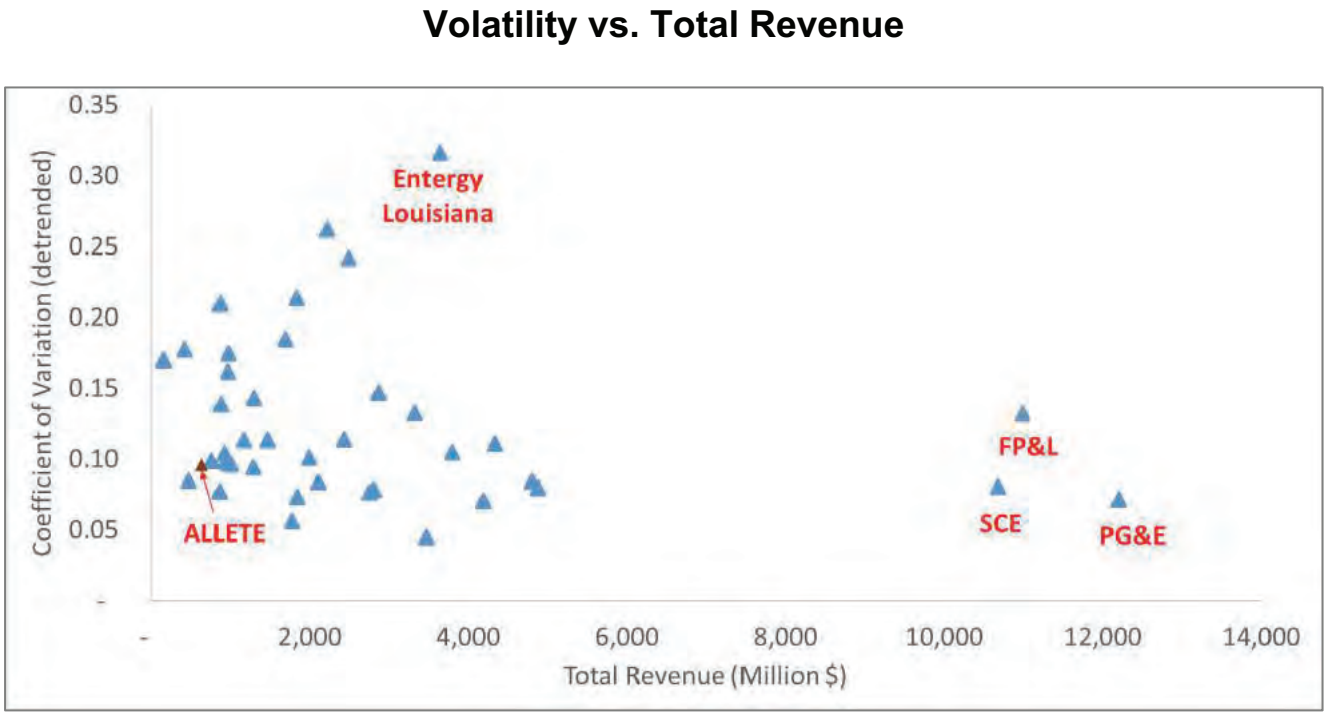
Key Takeaway 1: Relative to other utilities that have used securitization, MN Power is smaller and has a higher concentration of C&I customers



Data Source: RMI analysis of 2019 FERC Form 1 data.

Attachment 3, Page121

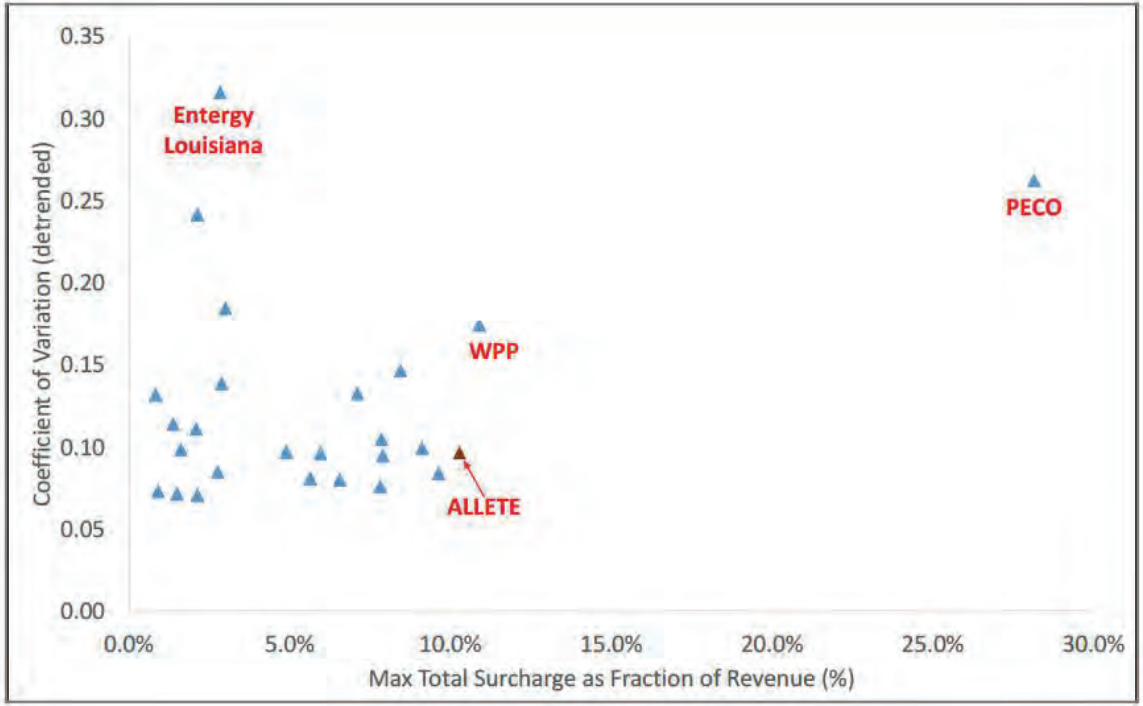
Key Takeaway 2: However, MN Power's revenue volatility is in line with the observed historical volatility of utilities that have issued securitization bonds



Data Source: RMI analysis of 2019 FERC Form 1 data.

Key Takeaway 3: But, if MN Power were to securitize all of its $780m in coal balances, the resulting surcharge relative to its overall revenues would be on the higher end, as compared to most historical securitization transactions

Volatility vs. Maximum Total Surcharge as Fraction of Revenue



Attachment 3, Page123

Data Source: RMI analysis of 2019 FERC Form 1 data.

MN Power can address these challenges and successfully execute a securitization transaction by employing one or more risk mitigation strategies

Structure securitization terms and sizes carefully	- Set longer securitization terms as long as it's aligned with stakeholder interests - Design the bonds with multiple tranches
Explore alternative revenue adjustment mechanisms	- Limit the cost shift across different customer classes through constraints on true-ups, etc.
Explore alternative rate design for the securitization surcharges	- Explore different rate design mechanisms and evaluate the impact on revenue volatility under different scenarios
Ratemaking and business model reforms	- Revenue decoupling or performance-based ratemaking mechanisms help mitigate the financial risks for the utilities

Data Source: RMI analysis of 2019 FERC Form 1 data.

In summary, we suggest that securitization could be a feasible and attractive strategy for Minnesota Power if the following key criteria are met

Key Criterion 1	- The overall ratepayer cost reduction from securitization should outweigh the transaction costs.
Key Criterion 2	- The bond issuance should be structured to balance cost reductions and risks (e.g., to ratepayer classes, existing shareholder, and bondholders).
Key Criterion 3	- The bond should not cause significant cross-subsidization; intergenerational impacts, both direct and indirect, should be explicitly addressed and, to the extent possible, quantitatively modeled.
Key Criterion 4	- Legislative and regulatory processes needed to allow the use of securitization and to achieve a AAA rating should be executed in a coordinated and timely fashion.
Key Criterion 5	- All stakeholders should be clearly aligned on the costs to be borne, benefits to be received, and roles expected from each other.

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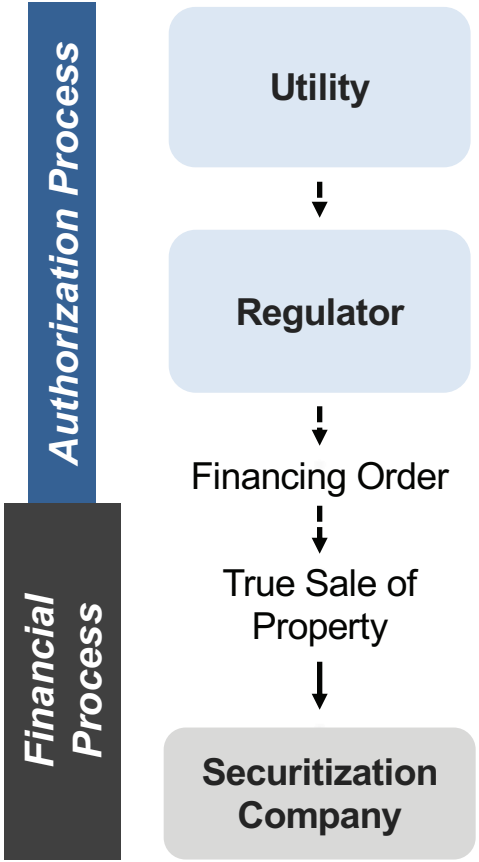
2 Introduction to Securitization

3 Preliminary Feasibility Assessment of Securitization for Minnesota Power

4 Appendix
- Securitization Process Overview
- Key Considerations of Securitization Execution

Process Overview: Approving the Securitization



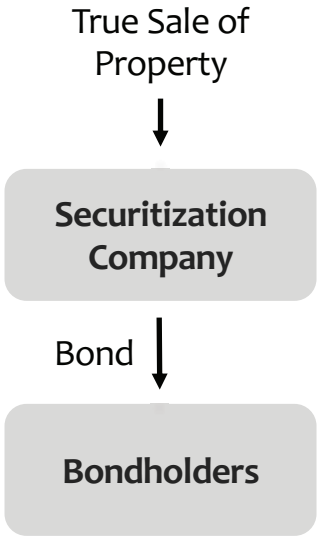
Generally starts with utility filing to regulator – The utility files an application with its regulator and a financing docket is opened. The regulator reviews the case as it would any other, though criteria and a timeline for this process may be outlined in the legislation.

If approved, a financing order is issued – The order approves the ratepayer charge, the transfer to the securitization company, and the issuance of the bond. Its authority to issue such orders is included in the text of the legislation.

True sale of charges to securitization company – Finally, if the utility is recognized as having a property right to customer charges in the jurisdiction, the utility must transfer this property right to the bond company via a “true-sale”.

Process Overview: Issuing the Bonds

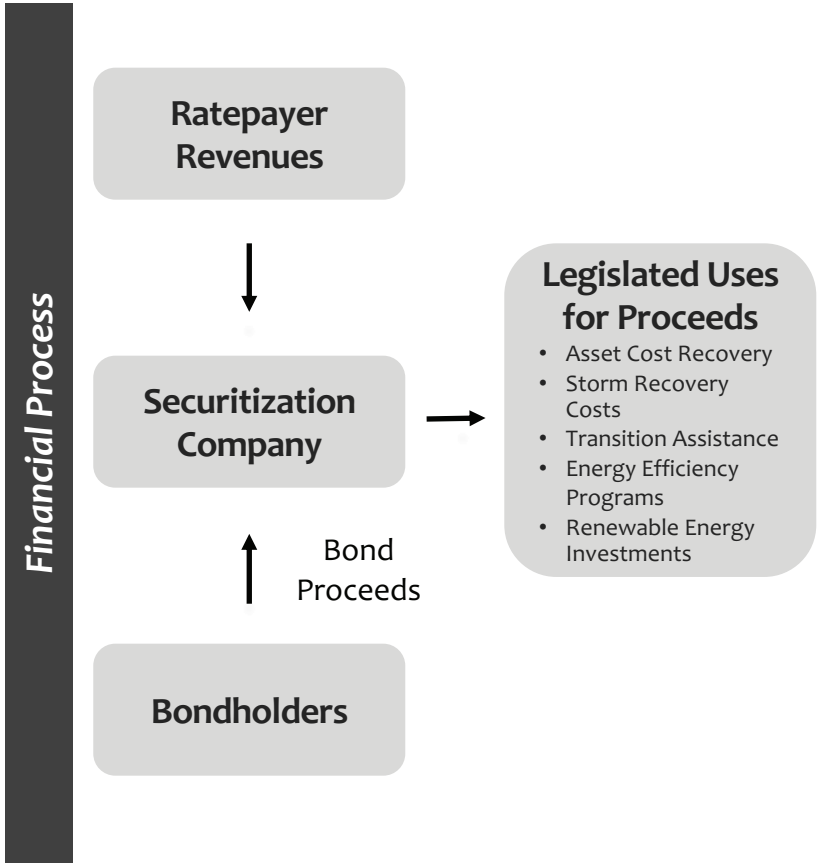
Financial Process



The securitization company issues the bonds. Once the utility transfers the property right to the securitization company, the securitization company issues a bond on the market.

The bond is usually a AAA, amortizing bond with a tenor of up to 20 years and a 3-4% interest rate. This bond is usually an amortizing bond with a tenor of up to 15-20 years and an "interest rate" (or coupon) of roughly 3-4%, depending on prevailing interest rates and the credit rating assigned by credit rating agencies (in almost all cases initially the highest rating, AAA).

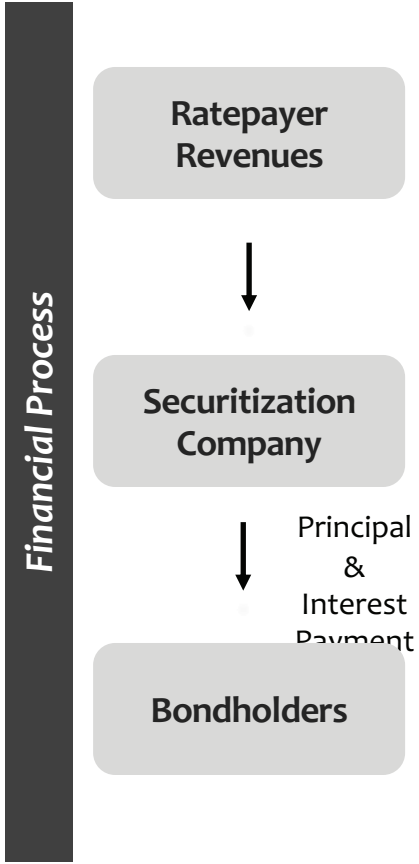
Process Overview: Returning Capital and Funding Programs



Proceeds from the sale of the bond can be used for any number of legislatively authorized purposes, such as:

- **Utility asset cost recovery** in the event of **early plant retirement**
- Recovery of costs related to **storm damage** or other unanticipated events
- **Transition assistance** and **financing of distributed energy resources or energy efficiency**, as legislated

Process Overview: Paying Bondholders



Monthly securitization charge on ratepayer bills – Each month a charge is included on the ratepayer's bill. These funds are sent to the securitization company to make required payments to bondholders.

Charges adjusted as needed to make bond payments – As stipulated by the legislation, these charges are subject to a true-up, to ensure they are adequate to maintain the securitization company's debt service account and administrative costs.

Charges removed once bond is paid off – Once obligations to the bondholders are met, the charge is removed from customer bills and their obligations to the bond company end.

Legislation Key Elements: The Property Right

Property rights must be independent of utility – the right to collect the ratepayer charge cannot be used by utility or treated as an asset of the utility in the case of bankruptcy.

Transferred via "True Sale" to the securitization company – The legislation must require a "true sale" of the ratepayer charges to a securitization company, completely transferring rights to the asset away from the utility if the jurisdiction otherwise assigns the rights to any ratepayer charge to the utility.

The securitization company only uses those charges for issuing and servicing the bond – This company is a "Special Purpose Vehicle" (SPV) that has the sole purpose of issuing and servicing a bond backed by the future ratepayer revenues it owns. It is bankruptcy remote from the utility, meaning its assets will not be considered as part of any bankruptcy proceedings. The company will act as the administrator of the bond throughout its life.

Legislation Key Elements: Adequate Revenue Collection

Required Component	Description	Function
Non-bypassable Charge	Prevents current and future rate-payers from opting out of paying the securitization charge which covers the ratepayer backed bonds.	Ensures an adequate number of participants pay into the debt service account.
Accounting True-Ups	A provision calling for the regulator to "true-up" the ratepayer charge on at least an annual basis.	Ensures the bond company maintains adequate funds to meet the obligations of the bonds, including administrative costs on a short-term basis.
State Pledge of Enforcement	State pledges the right to bill and collect charges will remain in place so long as any bonds remain outstanding.	Enforces all of the above and provides a long-term protection against legislative or regulatory changes unforeseen at the time of issuance

Legislation Key Elements: Variations and Optional Features

Use of proceeds up to legislators and regulators
Once the key elements of the legislation are in place, law makers can tune the legislation to achieve public policy goals and address any state specific legal requirements.

Need to avoid clauses or utility that could impact credit ratings
While this portion of the legislation varies significantly state to state, law makers should remain conscious of how these sections of the bill may impact the credit ratings of the rate-payer backed bonds.

Type	Examples
Allowable Uses of Securitization	• Retirement of uneconomic plants • Reducing ratepayer shocks from unforeseen events • Removing regulatory assets
Application Process Requirements	• Requirements for applications, such as grid or cost modelling • Time restrictions on regulatory responses to applications
Constraints on Approval	• Requirement of ratepayer savings • Environmental impact requirements
Constraints on Utilization of Funds	• Ratepayer savings • Special purpose funds (transition assistance, energy efficiency) • Specified utility investments

Key Considerations: Alternative design choices can have different impact on ratepayer cost distribution

Options	Description	Assumptions
Option 1	Option 1-1: Allocation as any other general cost and can be implemented as volumetric charges.	Assume the recovery of costs through the combination of revenue shares and energy consumption in each class and the classes with more revenues benefit more from securitization.
	Option 1-2: Allocation as any other general cost and can be implemented as fixed charges.	Assume the recovery of costs through the combination of revenue shares and customer numbers in each class.
Option 2	Allocation as consumption-based and can be implemented as volumetric charges.	Assume the recovery of costs through total energy consumption of all classes.
Option 3	Allocation based on cost causation as demand charges.	Assume the recovery of costs through demand charge shares and the capital costs are peak demand related.

Key Insight:
In order to make sure the benefits are allocated to balance fairness and risk mitigation, utilities may need to change functional rate design and allocation across different customer classes to mitigate significant changes to the distribution of rate impacts across customer classes from the use of securitization.

PROCESS FINAL STEPS

Next Steps (Minnesota Power)

Final Summary (GPI, CEE, Lasky Consulting)

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cee Center for Energy and Environment

MINNESOTA POWER 2020 INTEGRATED RESOURCE PLAN

Joint Stakeholder Meeting #5

THANK YOU!

GREAT PLAINS INSTITUTE | Better Energy. Better World.

MN Power IRP Joint Stakeholder Meeting #5

November 17th, 2020
9:00 – 11:00
Via Zoom

RMI Presentation: MN Power Securitization Study

Project Context

Ordered by the MN PUC, RMI is conducting a study look at the following questions in 2 phases

- How securitization can be used to facilitate closure of the facilities with large undepreciated balances?
- What is the feasibility of securitization for MP?
- What are obstacles and solutions to securitization?
- How can securitization be used to balance the interests of ratepayers and shareholders?

Introduction

Accelerated phaseout of generation assets that are driven by various reasons present challenges and opportunities

- Challenge
  - Utilities: rate base and earnings erosion
  - Customers: near-term rate shock
  - Communities: jobs and tax revenue losses
- Boswell Units
  - Utilities: $784 million unrecovered plant balance
  - Customer: 15 years of remaining accounting life
  - Communities: around 160 employees and provides 70% of Cohasset's tax revenue
- Solutions
  - Utilities: reinvest capital in clean energy
  - Customer: low-cost debt refinancing of capital recovery via securitization
  - Communities: 15% of savings from securitization for transition assistance

With traditional utility financing, customers often won't see immediate saving s from a transition to cheaper generation – and may instead see their rates spike

- Costs associated with the old plant:
  - Capital costs
  - Fuel and operating & maintenance cost
- Costs associated with the new plant and retired asset costs
  - Fuel and O&M costs go away and are replaced with the costs of the new plant
  - The capital costs still have to repay utility investment and 8-10% return (rapid amortization of regulatory asset)
  - If a plant is retired early, there is pressure to recover return faster

- New plant with securitization
    - Securitization is an attempt to address this challenge (it is a financing challenge)
    - Refinance with 3-4% bond (replaces what looks like 8-10% capital with 3-4%)
        - Better balancing the needs of current and future ratepayers
    - New plant costs remain the same
    - Utility gets return of capital immediately
    - Provides immediate financing of transmission assistance
    - Utilities can reinvest in clean energy to grow their earnings (capital recycling)

Questions:

- What is the new plant cost considering? Is it a number of different renewable facilities?
    - In this example it is a mix of solar/wind (as it is appropriate in this region)
    - New plant total costs are constructed based on a market assessment of renewable that is needed to have the same capacity as the current generation
    - The new plant costs can be a portfolio of resources needed to replace current generation
- Does it include infrastructure needed to transmit the energy?
    - This is a simplified example based on another Midwest utility – the numbers are meant to be illustrative
    - In phase 2 there will be a more detailed assessment of what is included in these numbers and what is not
- Is capital recycling the same as spending capital on new projects? What is the effect of this kind of scenario on ALLETE shareholder dividends?
    - Yes, there is some level of recycling – the utility's future and current earnings would be reduced due to lower rates, if the utility consider capital recycling in the securitization process they can grow their earning through other assets (could call it earnings replenishment)
    - Note: Minnesota Power is one of several companies that contribute to the overall ALLETE share prices/dividends, including ALLETE Clean Energy and Superior Water Light and Power.
- The utility, by law, has to have some return to investors, would the additional revenue needed have to come from the customer base?
    - The utility return is not required by law. The return regulation requirements are about a return commensurate with attracting investment. If restructuring helps to do that, it's consistent with the principle
- Who issues the bond upon securitization? Are there filings made with the Securities and Exchange Commission upon/prior to securitization?
    - Answered later in the presentation

How does Securitization actually work?

- Business as usual: Plant pays salaries, provides returns, and is paid by customer bills
- Securitization:
    - A special purpose vehicle is created (may or may not be a subsidiary of the utility)
    - They own dedicated surcharge which is used to pay bond investors who have purchased bonds from the special purpose vehicle

        - Investors are usually institutional investors
        - Generally, the bonds are AAA rated so they are usually oversubscribed
    - The bonds can be used for immediate transition assistance or immediate return on capital
    - The retiring assets is removed from the rate base – doesn't actually have anything to do with the asset (even it is still running) – asset ownership is still owned by the utility, not the special purpose vehicle
- Relative to other accelerate phaseout options, securitization better balances the short and long-term interests of customers <*see slide for comparison tables with and without capital recycling*>
    - Disallowance – indicative of something that has gone wrong
    - Vary allowed return
    - Accelerated depreciation (4-10 years) – creates rate shock
    - Full utility finance (full WACC, No Accel) – intergenerational equity issues
    - Securitization – better balance of short- and long-term impacts for customers
- Securitization is not a bail out of the utility's shareholders
    - The fundamental goal is to reduce rates
    - It helps regulators by providing them flexibility to mitigate the impact of past decisions
    - It reduces utilities earnings without capital recycling
    - With capital recycling it allows utilities to fill in some of the gap
- Securitization has been used for utility transition in the last three decades, and coal plant retirement cost refinancing is an emerging use
    - Consumers energy: used to recovery $378 million from early coal plant shutdown (used after the fact)
    - New Mexico: NM PRC authorized PNM a $361 million securitization to allow for recovery of costs allocated with the early retirement of San Juan Generating Station and provide $60 million in transition assistance as well as 1GW of renewables with storage while saving customers $7/month
    - Wisconsin: PSC authorized WEC to securitize $118 million in unrecovered costs from the early retirement of Pleasant Prairie coal plant
    - Allegheny Energy: used for $380 million in pollution control upgrades
    - Duke Energy: used to finance $1.3 billion in early shutdown of nuclear plant
- Securitization must be enabled by legislation in regulated states and then utilities must use it with approval from regulators
    - Demand from stakeholders → bill introduced into state legislature → bill passes which enables securitization in the state → securitization request is filed → securitization request is approved → bonds are issued in the market
    - Authorization and financial process: <see slide 17 for more detail>
        - Utility requests securitization
        - Regulator puts out financing order
        - The true sale of property goes to the securitization company
        - Ratepayer revenue, through the securitization charge goes to the securitization company
        - Bond proceeds go from the bondholders to the securitization company while principles & interest payments go from the securitization company to the bondholders

        - The profit from the securitization company goes to legislated uses

Questions:

- Without capital recycling, would securitization have no effect on a Utility's credit?
    - It can be mildly credit positive
    - On balance from the viewpoint of a debt investor, getting the debt recovery reduces risk of not getting it back in the long term
    - It reduces near term risk for the debt investor
- Does securitization replace the return from lost financing charges with a return from new generation assets?
    - If done without capital recycling, then no – if there is capital recycling, than yes
- What does this mean for customers and their cost?
    - Generally no, securitization reduces near and long term cost – there could be an increase in cost if the replacement asset is more expensive than the retired generation, but in that case it is unlikely that they would go forward with securitization because the goal of securitization is to reduce customer costs
- Do you have specific examples where customers rates are not left with increased costs?
    - Will return to this question with the example of New Mexico (note that it is still in progress)
- What is a SPV?
    - A financing company (could be called a bond company)
    - It has one job and one asset – the only purpose is to issue bonds to investors and pay back the surcharge (collecting revenue and paying bond principles)
    - Low administrative costs – some transaction costs (which will be looked at in phase 2)
- If the SPV cannot make bond payments for some reason, could utility, SPV, or investors somehow seek to recover funds from ratepayers to pay the bonds?
    - Depends on the legislation – for the surcharge to get the AAA rating, the amount of the surcharge is adjusted periodically to ensure it can be covered (no more and no less)
- Who or what determines the amount of bond proceeds dedicated to transition assistance?
    - Determined by legislative authority
- How can securitization be incorporated into a capacity expansion model?
    - In principle, one could append the use of securitization in various ways
    - The use of securitization is amended by legislation
    - Could look at different costs or impacts of scenarios to prioritize different pathways
    - *<missed some comments>*

Preliminary Feasibility Assessment of Securitization for MP

Securitization can mitigate many transition costs and risks

- Flexibility: it can be timed, sized, and executed independently of asset retirement however
- No impact on state, local, utility credit ratings since it is not a municipal or state obligation

- Sources of savings are generated through refinancing utility debt and equity associated with the remaining balance of the plant solely with low-cost debt

But it can also introduce new challenges and risks that need to be efficiently managed

- Trade-off between flexibility and costs: customers benefit by trading lower flexibility in future rates for reduced current and future costs
- Distribution of savings among ratepayers depends on current allocation of unrecovered costs among ratepayers as well as the design of the surcharge
- Potential additional risks: securitization reduces the rate impact of economic cycles, but also limits regulatory flexibility to delay or disallow those obligations. It also may be credit positive, but reduces future earnings and introduces reinvestment risk

When assessing a securitization transaction, credit rating agencies look for factors that provide legal and regulatory stability of future revenue streams

- Customer breakdown: revenues from commercial and industrial customers tend to be more volatile due to business risks – MP is facing this risk with concentration of industrial customers
- True-up mechanisms: review and adjust the special tariff annually – excessive volatility can lead to further risks
- Relative bond size: credit agencies specify hard or soft limits on the relative size of the bond payment vs. total revenue collected – economic fundamentals and “bill affordability” are key considerations

For MP:

- This could be challenging for MP (a small utility with a high industrial load relative to its peers)
- With MP’s high industrial load, there is a history of volatile revenues that are strongly correlated with economic cycles
- MP currently has significant unrecovered costs associated with its fossil generation units (roughly $784 million)
- If this were securitized in a single transition, it would put such an issuance amount the top 30%

Key takeaways:

- Relative to other utilities that have used securitization, MP is smaller and has higher concentration of commercial and industrial customers
- MP’s revenue volatility is in line with observed historical volatility of utilities that have issues securitization bonds – it is on the lower end of the average
- If MP were to securitize all of its $780 million in coal balances, the resulting surcharge relative to its overall revenues would be on the higher end, as compared to historical securitization transactions – over 10% of revenue

MP can address these challenges and successfully execute a securitization transaction by employing one or more risk mitigation strategies *<see slides for more detail>*

- Structure securitization terms and sizes carefully

- Explore alternative revenue adjustment mechanisms
- Explore alternative rate design for securitization surcharges
- Ratemaking and business model reforms

Summary: Suggest that securitization could be a feasible strategy for MP if the following key criteria are met:

- Overall ratepayer cost reduction from securitization should outweigh transaction costs
- The bond issuance should be structure to balance cost reductions and risks
- The bond should not cause significant cross-subsidization; intergenerational impacts, both direct and indirect, should be explicitly address and quantitatively modeled
- Legislative and regulatory processes needed to allow to use of securitization and to achieve a AAA rating should be executed in a coordinated and timely fashion
- All stakeholders should be clearly aligned on the costs to be borne, benefits to be received, and the roles expected from each other

Questions:

- Related to risk, the initial presentation focused on 3-4% bonds for securitization, if the risk is higher, how would that compare to the existing cost of capital?
    - Would expect that any number of these mitigating options would address that issue
    - Probably wouldn't do this if you can't get close to AAA rating – need to have careful structuring of the legislation
    - Going to be looking at this deeper in phase 2
- What is the largest size of any bond you've seen so far through securitization?
    - A few big ones from larger utilities, some over 2,000
    - Mostly due to wholesale market restructuring back in the 90's and are not as relevant in this case
    - Relative bond size is more important than the absolute one
    - *<missed some comments>*
- Will RMI's role include helping the MN Legislature draft legislation?
    - What RMI aims to do is provide some discussion of legislative language to implement mitigation options – happy to talk to individuals about what they have seen previously

Process next steps:

- This is the last meeting before the filing on Feb 1st – reconvene the group after filing to talk about what MP is bringing forward and how they incorporated stakeholder feedback
    - The goal of this group was to help guide MP, there is not time ahead of the filing to review a draft plan
- MP is open to continual feedback
- GPI is working on final stakeholder report
    - Will allow stakeholders to review this
    - Will include issue maps and context around these discussions

ITASCA ECONOMIC DEVELOPMENT CORPORATION - ITASCA COUNTY HIGHLIGHTS

As referenced under the *Communities Issues Area* of the final report.

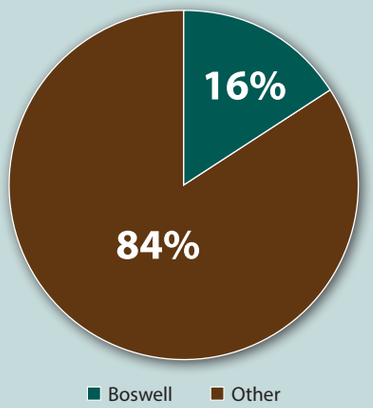
IEDC
Itasca Economic Development Corporation

Itasca County Highlights

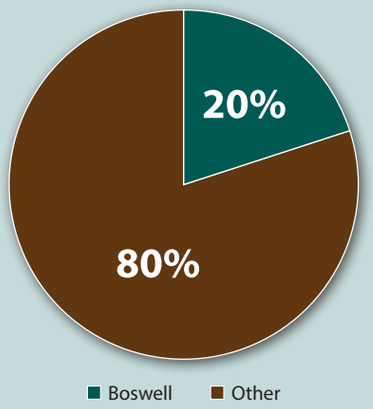
BOSWELL IMPACTS

Itasca County has 45,000 residents that grew up along with the natural resources, manufacturing and utility industries that form the backbone of the northern Minnesota economy. These industries provide an important base, and offer jobs that support families and sustain communities.

ITASCA COUNTY TAX CAPACITY



INDEPENDENT SCHOOL DISTRICT #318 TAX LEVY



ITASCA COUNTY FEDERAL EDA GRANT DATA

Itasca County's economy has experienced multiple shocks over the past 20 years. Between 2015-2018, 1800 workers were laid off in industrial related positions. In early 2019, Itasca Economic Development Corporation (IEDC) was granted $190K in funds designated for developing Itasca County as a "Preferred Place to Do Business" based on the recent impacts of worker layoffs.

IEDC is tasked with diversifying our industries and economic development by engaging industry experts to create an in-depth Business Retention & Expansion Program, performing an Industry Cluster Analysis, and utilizing the research to determine growth and business recruitment strategies in the future.

In 2015, in Itasca County, jobs in the Natural Resources, Mining, Construction, Manufacturing, and Energy Production Industries accounted for:

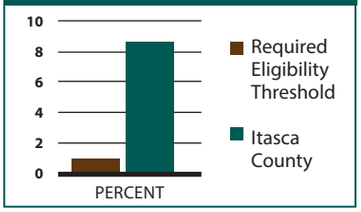
20.5% OF **EMPLOYMENT** & **34.5%** OF **WAGES**

2015-2018 INDUSTRY LAYOFFS	
YEAR	WORKERS AFFECTED
2015	900
2016	558
2017	282
2018	60
TOTAL LAYOFFS	1800

The average wage for these industries paid more than 1.6 times as much as the average wage in the county.

As a result, total wages paid in the county were $47 million less in 2017 than in 2015.

CIVILIAN LABOR FORCE ELIGIBILITY



For a region our size the eligibility threshold for threatened or dislocated workforce is 1% of the Civilian Labor Force.

Itasca County has a population of about 45,000 and a 2017 American Community.

The 1,800 workers covered by the State Dislocated Worker Program since 2015 represent 8.4% of the Civilian Labor Force. Survey Civilian Labor Force of 21,503.

IEDC
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FIND US ON