

MN CIP Cost-Effectiveness Advisory Committee (CAC)

Meeting 2

May 4, 2022
10:00 a.m. – 12:00 p.m.

Type of Meeting: Microsoft Teams Meeting

Attendees:

Name	Organization	Name	Organization	Name	Organization
Adam Zoet	MN Dept. of Commerce	Jamie Stallman	Great River Energy	Lisa Beckner	Minnesota Power
Amalia Hicks	Cadmus	Jason Grenier	Otter Tail Power	Martin Kapsch	CenterPoint Energy
Anna Roberts	Otter Tail Power	Jon Vesta	Frontier Energy	Martin Kushler	American Council for an Energy-Efficient Economy
Anthony Fryer	MN Dept. of Commerce	Joseph Dammel	Fresh Energy	Matt Wisnefske	Cadmus
Audrey Partridge	Center for Energy and Environment	Joseph Reilly	Minnesota Energy Resources Corporation	Michelle Rosier	Minnesota Public Utilities Commission
Becky Billings	Xcel Energy	Josh Mason	Rochester Public Utilities	Nicholas VanDuzee, Jr.	CenterPoint Energy
Chris Baker	Willdan	Kathy Baerlocher	Great Plains Natural Gas	Peter Scholtz	Office of Minnesota Attorney General
Christopher Davis	MN Dept. of Commerce	Katie O'Rourke	Minnesota Energy Resources Corporation	Rachel Sours-Page	The Mendota Group
Cory Hetchler	Connexus Energy	Kevin Lawless	The Forward Curve	Russ Landry	Center for Energy and Environment
Courtney Lane	Synapse Energy Economics	Kristine Anderson	Greater Minnesota Gas	Tim Woolf	Synapse Energy Economics
Ethan Warner	CenterPoint Energy	Kurt Hauser	Missouri River Energy Services	Tom Sagstetter	Elk River Municipal Utilities
Gregory Ehrendreich	Midwest Energy Efficiency Alliance	Kyle Schleis	Connexus Energy		
Grey Staples	The Mendota Group	Laura Silver	MN Dept. of Commerce		

AGENDA

- Introduction and purpose of these discussions
- Background
 - NSPM five-step process
 - The role of energy policy goals
 - Primary and secondary tests
- Discuss relevant energy policy goals
 - High-level cost-effectiveness directives
 - Detailed energy policy goals
- Next steps
 - Next workshop
 - Homework assignment

NOTES

Meeting Began: 10:03 a.m.

- Grey Staples begins meeting, then turns it over to Tim.

Slide 5

Purpose of These Workshops

The Advisory Committee is tasked with providing input on cost-effectiveness:

- The primary cost-effectiveness test
 - Electric utilities
 - Gas utilities
 - Efficiency fuel switching
 - Load management
- Secondary cost-effectiveness tests
- Based on the process recommended in the National Standard Practice Manual (NSPM)

Commerce is seeking both verbal input during the meetings and written input after them.

This input will be used by Commerce to determine the tests to apply in the 2024-2026 IOU Triennial Plans

- Receive verbal input during the meeting and written input after the meetings.
- No one is committing to any points of view. Will not hold you to those comments. Want free flowing conversation.
- Framed in terms of DERs.

NSPM: Fundamental BCA Principles

1. Recognize that DERs can provide energy system needs and should be compared with other energy resources and treated consistently for BCA.
2. Align cost-effectiveness test with jurisdiction's applicable policy goals.
3. Ensure symmetry across costs and benefits.
4. Account for all relevant, material impacts (based on applicable policies), even if hard to quantify.
5. Conduct a forward-looking, long-term analysis that captures incremental impacts of DER investments.
6. Avoid double-counting through clearly defined impacts.
7. Ensure transparency in presenting the benefit-cost analysis and results.
8. Conduct BCA separate from Rate Impact Analyses because they answer different questions.

NSPM: Process for Developing a Jurisdiction's Primary Test

<p>STEP 1 Articulate Applicable Policy Goals Articulate the jurisdiction's applicable policy goals related to DERs.</p>
<p>STEP 2 Include All Utility System Impacts Identify and include the full range of utility system impacts in the primary test, and all BCA tests.</p>
<p>STEP 3 Decide Which Non-Utility System Impacts to Include Identify those non-utility system impacts to include in the primary test based on applicable policy goals identified in Step 1:</p> <ul style="list-style-type: none"> • Determine whether to include host customer impacts, low-income impacts, other fuel and water impacts, and/or societal impacts.
<p>STEP 4 Ensure that Benefits and Costs are Properly Addressed Ensure that the impacts identified in Steps 2 and 3 are properly addressed, where:</p> <ul style="list-style-type: none"> • Benefits and costs are treated symmetrically. • Relevant and material impacts are included, even if hard to quantify. • Benefits and costs are not double-counted. • Benefits and costs are treated consistently across DER types.
<p>STEP 5 Establish Comprehensive, Transparent Documentation Establish comprehensive, transparent documentation and reporting, whereby:</p> <ul style="list-style-type: none"> • The process used to determine the primary test is fully documented. • Reporting requirements and/or use of templates for presenting assumptions and results are developed.

- Step 2. Include all utility system impacts. Is “fundamental”.
- Step 3 is a big one. Anything that is not a utility system impact should be included if it is consistent with the state's policy goals. Define goals in Step 1 and then link them to Step 3.
- Step 5. Document the process. Too many states are picking a test off the shelf. These conversations are what make the jurisdiction-specific tests relevant.

Overview of This Process

Workshop (May 4)

- Step 1: Identify and discuss Minnesota applicable policy goals

Workshop (May 18)

- Step 2: Identify all utility system impacts to include in BCA tests
- Step 3: Determine which non-utility system impacts to include in the primary test
- Step 4: Ensure costs and benefits are properly addressed
- After this workshop Synapse will prepare a Straw Proposal for discussion

Workshop (early June)

- Discuss Straw Proposal
- Discuss additional topics, e.g., secondary tests, discount rates
- Step 5: Ensure transparency

- Have 3 workshops planned. Next workshop is scheduled for May 18.
- Big one is third. Early June.
- After workshop, will prepare straw proposal. Purpose is to facilitate this conversation. Put something in writing helps focus the conversation. Third workshop will discuss this. With time, can discuss secondary tests, discount rates.
- Need to make decisions about how this will be documented. Straw proposal will be developed into a proposal from the group. Where people don't agree, will break those out.
- **Anthony:** Process is largely in preparation for next Triennial period for IOUs. Also have muni and coop representatives. Welcome to listen. Will be working with the COUs on a separate track to figure out what to do for them.

Energy Policy Goals

Policy Goals come in many forms:

- Statutes
- Commission orders
- Energy plans
- Executive orders
- Statutory goals sometimes require interpretation
 - First by stakeholders, ultimately by the Commission
 - Statutes sometimes do not address issues that need to be resolved for BCA purposes
- Policy goals can evolve over time
 - For example, the ECO Act changed some of the Minnesota EE goals
- Need to be sure we're focused on the energy-specific, directly related to energy policy goals. Are myriad of other goals that could be considered. Let us know if we have missed any.
- Heard a lot about the country about equity ... also resiliency. Do your best at a point in time. Important to revisit the goals and the test.

Policy Goals Determine Which Non-Utility System Impacts to Include in the Primary Test

Type	Societal Impact	Description
Participant	Participant	Costs and benefits to participants (including non-energy impacts)
	Other Fuels	Fuels that are not provided by the utility implementing the program
	Low Income: Participant	Health, safety, energy burden
	Water	Impacts on water consumption from the program
	GHG Emissions	GHG emissions created by fossil-fueled energy resources
Societal	Other Environmental	Other air emissions, solid waste, land, water, and other environmental impacts
	Economic and Jobs	Incremental economic development and job impacts
	Public Health	Health impacts, medical costs, and productivity affected by health
	Low Income: Society	Poverty alleviation, environmental justice, reduced home foreclosures, etc.
	Energy Security	Energy imports and energy independence

- May also have fuels that are not being provided by the relevant utility. "Other fuels".
- Low-income: impact on the participants themselves. Impacts on society as well.

Primary and Secondary Tests

Primary test answers the key question:

- *Which resources have benefits that exceed costs and therefore merit utility acquisition or support on behalf of their customers?*

Secondary tests answer different questions:

- *How much will utility bills on average be reduced? (Utility Cost Test)*
- *How much will cost-effectiveness change if an additional policy goal is added or removed from the primary test?*
- Difference between primary and secondary. Just because something is cost effective based on the test, doesn't mean utility has to do it. May be other reasons shouldn't do it.
- Primary test informs the go, no-go decision.
- Utility test is an important secondary. All cost/benefits that affect revenue requirements. Can use this to determine how much bills will go up or down. If passes, bill will go down.
- Can use to see how much the cost-effectiveness will change with introduction of another policy goal.

Example: New Hampshire

Type	Impact	Previous Practice	Granite State Test	Secondary Test	Secondary Test
Utility System	Utility System	partially	✓	✓	✓
Participant	Participant costs	✓	x	x	x
	Participant benefits	partially	x	x	x
Other fuels	Other fuels	✓	✓	✓	x
Water	Water	✓	✓	✓	x
Low-income	Low-income	✓	✓	✓	x
Societal	GHG emissions	x	x	✓	x
	Other environmental	x	x	x	x
	Public health	x	x	x	x
	Macroeconomic	x	x	x	x
	Energy Security	x	x	x	x
	Energy Equity	x	x	x	x

- Example: New Hampshire. “Granite State Test”.
- Different test in NH. No mention of societal test. Fuel switching allowed, more or less. Participant impacts – sticky one. Include all participant costs but only include some of the participant benefits. Didn't include all the benefits ... doesn't adhere to the principle of symmetry.
- Were some utility system impacts not included that should be.
- “General-sensus” of the group was not to include NEBs. So, also excluded costs.

- Lots of discussion around GHGs. Half of the group felt that GHGs should be included – pointed of bills. Other half said that bills aren’t done.
- Secondary test – only difference was addition of GHGs.
 - Next time NH utilities file their EE plans, they report both the tests. Can see the results. When having a discussion about whether to include GHGs.
- Utility cost test is still secondary test.
- See how quickly things can change. Proposed by WG. Given to the PUC. They approved it. A year later, new Commission. Sep. 2021 Order – diminished EE programs. Rejected performance incentives, Granite State test. Then, Legislature responded with law that supported the Granite State test.
- **Adam:** Interested to hear if any state has done a rigorous comparison of costs and benefits.
 - Tim knows of 10 states that have accounted for NEBs and costs into test. Usually use proxies as adders about NEBs. Based on professional judgement. Blunt and simple. Don’t come close to magnitude of impacts. MA and RI have quantified these and put them into \$ values.
 - Many states that provide details on how to calculate. Can’t transfer info from one state to another. Can’t take something off the shelf and drop it in.
 - **Adam:** Good to hear about case studies from other states. Know what the proxy values are.
 - **Tim:** Will do for next workshop. Trickiest impacts to make decision on. Legislature don’t think about things the way we do. May say, should account for benefits to participants. Different from including in test.
- **Marty from chat:** *Situations where participant costs are included, but participant benefits are not included or only partially included is a common and classic example of a test not being “symmetrical”, which is a violation of the third NSPM fundamental principle, as you listed on slide 6.*
- **Ethan:** System benefits/impacts. In some jurisdictions. Have simple adder approach. How does that square with simple environmental impacts? Pollutant releases related to water. Talk about points-level analysis ... how gets implemented on a policy basis. Also, comment on lifecycle and non-lifecycle analysis.
 - **Tim:** Use “study period”. Full costs/benefits. Should be study period of, say 20 years. Lifecycle benefits can continue beyond lifecycle. Ideally, account for these, but don’t always.
 - If should be in the test, put it in. May find out a year later that no value. Once figure out what’s in the test, need to get the inputs. Avoided energy, capacity ... risks and resilience. Not clear how big these are. Have to spend a lot of \$ to come up with reasonable inputs.
- **Matt Wisnefske:**
 - Adder vs. more specific definition. WI include dollarization of GHGs and economic benefits. Not a flat percentage (e.g. 8%). Has a secondary test with lots of NEBs. How “valid” has a set adder percentage been considered?
 - **Tim:** Different levels of confidence in NEBs. Getting into quantification. Most who accept a proxy for NEBs. In NSPM. Is better to include a rough number that isn’t great. Better than 0 (because know 0 is wrong). Participant NEBs. If can’t accept proxies, then take out costs and benefits.
- **Audrey:**
 - Idea of risk. Capacity costs. Future energy system. Now we value capacity costs based on costs are now. when model carbon goals. When get to 2050 milestone,

capacity costs increase. How one evaluates that future capacity build and include that in calcs?

- **Tim:** Should be forward-looking ... if 20-30 years, should reflect a forecast for those 20-30 years. Energy and capacity. Risk. National efficiency screening project. Group that put out NSPM. Methods, tools and resources for determining the inputs of DERs. Answers many of these questions. Chapter on risk and how to account for it. Not a straightforward process. Ideally, should be done, but not usually done well.
- **Audrey:** Escalate avoided capacity costs over time. From G21. In carbon constrained world, costs go up more than just using escalation. Maybe something to think about.
- **Audrey from chat:** *We escalate costs of avoided capacity over the term of the analysis, but we don't use a carbon constraint to show the increased utility costs of meeting carbon goals and how EE helps avoid that.*
- **Kevin L in chat:** *From a public health standpoint are there any examples where states are thinking about including the impacts of improved/changed ventilation on COVID or other airborne diseases?*
- **Ethan in chat:** *I am not sure my follow-up is worth discussing, but I completely understand and am with Tim on talking about whether something should be in the test is a separate question from quantification. However, I am still a little unclear about how this works when my understanding is that analytically the researchers I know would say their impact analysis methods are not meant for statewide flat adders or potentially even flat adders for a region/utility territory. Maybe I just need to learn more about this space and what is feasible/reasonable.*

Slide 13

Distinguish the Tests and the Inputs to the Tests

The primary test should include impacts based upon:

- All utility system impacts
- Other impacts dictated by policy goals
- Regardless of the magnitude or how difficult the impacts are to calculate

The inputs used in applying the primary test depend upon:

- The likely magnitude. Will it have a material impact?
- The priority of the impact.
- The costs required to develop reasonable inputs.

Minnesota's Historical (Pre-Eco) Practice: Cost-Effectiveness Tests

Minnesota utilities historically calculated results for:

1. Societal cost test:
 - The societal cost test is the primary test for cost-effectiveness screening.
2. Utility cost test:
 - This functions as a secondary test.
 - This test is also used to determine utility CIP performance incentives.
3. Ratepayer impact measure test
 - This functions as a secondary test but is not used for cost-effectiveness screening.
4. Participant cost test
 - This functions as a secondary test but is not used for cost-effectiveness screening.

ECO Act: EFS Cost-Effectiveness: Electric Utilities

A fuel-switching improvement is deemed efficient if... the improvement meets the following criteria, relative to the fuel that is being displaced:

- (1) results in a net reduction in the amount of source energy consumed for a particular use, measured on a fuel-neutral basis;
- (2) results in a net reduction of statewide greenhouse gas emissions... over the lifetime of the improvement.
- (3) is cost-effective, considering the costs and benefits from the perspective of the utility, participants, and society; and
- (4) is installed and operated in a manner that improves the utility's system load factor.

- *Minn. Stat. § 216B.241, 11(d)(1) and (2)*

- EFS cost effectiveness. 3/15. Not sure why Commerce applied RIM to gas utilities?
 - **Anthony:** Was legislated as part of ECO Act.
- Societal test is direction we're getting based on precedent.

ECO Act: EFS Cost-Effectiveness: Gas Utilities

A Minnesota public gas utility may propose one or more programs to install electric technologies that reduce the consumption of natural gas by the utility's retail customers as an energy conservation improvement.

The commissioner may approve a proposed program if the commissioner determines that

- The electric technology meets the criteria established under section 216B.241, subd. 11(d)(1) and (2); and
- The program is cost-effective, considering the costs and benefits to ratepayers, the utility, participants, and society.

- *Minn. Stat. § 216B.241, subd. 12(a).*

Commerce 3/15 ECO Decision: EFS Cost-Effectiveness

- Electric and natural utilities... should include cost-effectiveness evaluations based on the Societal Test, the Utility Test, and the Participant Test (natural gas utilities shall also include the Ratepayer Impact Test in their evaluations). (page 45)
- The primary cost-effectiveness determinant regarding whether an EFS measure is deemed "efficient," according to the ECO Act, will be whether it passes the Societal Test, unless or until the Department updates the primary test Minnesota utilities will use to evaluate demand-side programs. (page 45)
- Utilities implementing an EFS improvement for customers whom they do not provide either the beginning or the ending fuel shall, nonetheless, include the avoided (and increased supply as may be the case) costs for the non-served fuel in their cost-effectiveness calculations. (page 46)
- EFS cost-effectiveness will be reviewed and approved at the program level. (page 45)
 - High-level cost-effectiveness directives.
 - **Audrey in chat:** *My understanding is that the RIM test was included for EFS for NG because fuel switching because there is concern about increasing gas rates as people electrify.*
 - **Audrey:** Concern is that, as people electrify that rates will increase. Customers left on the system who have to pay for full natural gas system.
 - **Tim:** Extremely helpful. He thinks should also look at electric rates.

High-Level Cost-Effectiveness Directives

Program	Reference	Society	Utility	Participants	Ratepayers
General	Minn. Stat. 216B.241, Subd. 1c(f)	✓	✓	✓	✓
Load Management	Minn. Stat. §216B.241, Subd. 13(b)	✓	✓	✓	✓
Fuel Switching: Electric	Minn. Stat. §216B.241, Subd. 11(d)(3)	✓	✓	✓	
Fuel Switching: Gas	Minn. Stat. §216B.241, Subd. 12(a)(2)	✓	✓	✓	✓
Fuel Switching	Commission Decision on ECO Act (p. 45)	primary			

- Not all perspectives need to wrap into a single test. Participant test is often not used to screen programs. Can use it and apply it to design programs. Don't need it to pass it.
- **Audrey in chat:** *I agree! Maybe the RIM test can look at overall energy rates per customer.*
- **Tim:** RIM is not good for screening. To account for rate impacts, increased or reduced, should be addressed in a separate rate/bill analysis. Reason for looking at them separately. Muddy results.
- Rate, bill analysis can produce information you're looking for. Importantly, can tell which customers participate in the program ... which receive bills impacts and reductions. Can comply with statutes without running RIM test. If get to point that people are arguing whether a program will go forward based on rate impacts. Should do a rate impact analysis, not use RIM test. Can explore in future workshop.

Summary of Minnesota Energy Policy Goals (Part I)

Policy	Citation	Policy Impacts Reflected in Policies						
		Least Cost	Fuel Diversity	Risk	Reliability	Low-Income	Customer Choice	Environmental
Energy savings policy goal	Minn. Stat. § 216B.2401	X	X					X
Legislative findings	Minn. Stat. § 216B.01	X			X			
Next Generation Energy Act of 2007, general provisions	NGEA § 2, subd. 1		X	X	X			X
Next Generation Energy Act of 2007, per capita fossil fuel use	NGEA § 2, subd. 2		X					X
Greenhouse gas emissions control, GHG emissions-reduction goal	Minn. Stat. § 216H.02, Subd. 1							X
Energy conservation improvement, peak demand deficit	Minn. Stat. § 216B.241, subd. 1a (d)			X	X			
Energy conservation improvement, energy-savings goals	Minn. Stat. § 216B.241, subd. 1c (b)	X	X					X
Energy conservation improvement, cost-effectiveness	Minn. Stat. § 216B.241, subd. 1c (f)	X	X					X
Energy conservation improvement, technical assistance	Minn. Stat. § 216B.241, subd. 1d (a)				X			
Energy conservation, free choice of measures and installers	Minn. Stat. § 216B.241, subd. 2(a)						X	
Energy conservation improvement, less expensive than new supply	Minn. Stat. § 216B.241, subd. 2(b)	X						
Energy conservation improvement, Department decisions	Minn. Stat. § 216B.241, subd. 2(e)					X	X	
Energy conservation improvement, low-income programs	Minn. Stat. § 216B.241, subd. 7(a)					X		

- Showing table from the 2018 study for MN.
- Environmental, fuel diversity come up a lot. Least cost is foundational.

Summary of Minnesota Energy Policy Goals (Part II)

Policy	Citation	Policy Impacts Reflected in Policies						
		Least Cost	Fuel Diversity	Risk	Reliability	Low-Income	Customer Choice	Environmental
Reasonable rate	Minn. Stat. § 216B.03	X						
Renewable energy objectives, eligible energy objectives	Minn. Stat. § 216B.1691, Subd. 2		X					
Renewable energy objectives, local benefit	Minn. Stat. § 216B.1691, Subd. 9	X	X		X			
Resource planning, resource plan filing and approval	Minn. Stat. § 216B.2422, Subd. 2(c)	X	X					
Resource planning, long-range emission reduction planning	Minn. Stat. § 216B.2422, Subd. 2c							X
Resource planning, environmental costs	Minn. Stat. § 216B.2422, Subd. 3(a)		X					X
Resource planning, preference for renewable energy facility	Minn. Stat. § 216B.2422, Subd. 4		X		X			
Distributed energy resources, generation projects	Minn. Stat. § 216B.2411, Subd. 1 (b)	X					X	X
Minnesota's 2025 Energy Action Plan	Report, page 7	X		X	X			X
Climate solutions and economic opportunities	Report, page 3							X
ECO Act: Efficient Fuel Switching	Minn. Stat. § *	X	X					X
ECO Act: Load Management	Minn. Stat. § *	X						X

- This list is not exhaustive. It's an initial list.
- **Greg:** Why wouldn't load management get a tick for reliability?
- **Ethan:** If drawing implications. ECO also has implication for low-income.
- **Kevin:** State has a policy on EVs. Key part of fuel switching. Should that be included here?
 - **Tim:** Yes. Should be added.
 - *Michelle provide cite in chat: <https://www.revisor.mn.gov/statutes/cite/216C.05>*
 - **Kevin:** Last table showing different tests. In practice, DOC has decided that Societal test is primary test for EE and CIP. Statutes don't dictate that but is the case in practice.
- **Michelle in chat:** EV policy has come out of PUC orders (17-787?) and Clean Cars Rulemaking at MPCA. Feb. 1, 2019 Order (17-879) is PUC findings but no mention of 20% EVs goals.
- <https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={10BBAA68-0000-C413-9799-DF3ED0978E75}&documentTitle=20192-149933-01>
 - **Tim:** Could include it. Table is work in progress. Does not have all the columns would like to have. Environmental but not all societal impacts. Discussion will be shorter here than in other states. If have received direction from Department to do societal test ... makes it easier. If keep societal test, theoretically, includes all societal impacts. May choose to only include some.
- **Marty in chat:** Note that the Eco Act also specifically articulates "reduce the economic burden of fuel imports" as well as "create more energy-related jobs". It seems those should be included in any assessment of MN's policy objectives.
- **Joe Dammel in chat:** There are throughput and GHG policy goals in the Natural Gas Innovation Act that affects electrification and efficiency policy.
- **Audrey:** GHGs, 216H.02, Subd. 1. We don't look at the GHG as the primary goal and figure out how to do that cost-effectively. Should be the overarching key objective?
 - **Tim:** Moves to slide 27. Societal environmental impacts and compliance environmental impacts. Are different. Compliance are built into the costs already.

- May have cap and trade programs. Buy allowances to comply. Is a utility-system impact. Passed onto customers, affects their bills. If talking about SO₂ emissions. utility has paid for these. Might still be emissions from power plants.
- **Tim:** If looking at rate impacts. Will only be affected by compliance costs and not externalities.
 - **Tim:** GHGs. If MN has statute that says must reduce GHGs by 2030. Utility has to do it. Environmental compliance cost. If still additional environmental impacts beyond those. Will be in the societal category.
 - **Audrey:** Not sure we're capturing that. Include externality values. Don't do analysis or modeling to figure out what it costs the utility to get to that reduction – to include in the benefits that EE can provide.
 - **Tim:** May be the case.
 - **Audrey:** Do compliance costs show up in utility cost test?
 - **Tim:** Yes.
 - **Michelle R. in chat:** PUC sets externality and regulation costs for CO₂ for electric planning. MN DOT, MPCA, et al is who set the 20% EV by 2030 goal. <https://www.dot.state.mn.us/sustainability/docs/mn-ev-vision.pdf>
 - **Greg E in chat:** Minn. Stat. § 216B.2401(a) - "optimizing the timing...used by energy consumers to manage energy use" - time value of EE should be a consideration
 - **Kevin:** If have SW goals. Not explicit in terms of what utility needs to do. Have GHGs. Also on other forms of electrification. Will need to reflect those in what comes out of this process. Don't have homework in place to figure out what values are today. Should set this up for the future.
 - **Tim:** Asking folks to fill in the table. What costs are currently being accounted for. Statutes might provide economy-wide goal but not specific to individual utility systems. Without economy-wide goal ... need to have something from Commerce. If goal is x for economy-wide ... what should it be for electric, what should it be for gas?
 - **Marty in chat:** Thinking about a MN test. ECO Act has two elements related to economic goals. Create more energy-related jobs. Reduce the economic burden of fuel imports. MN imports virtually all the fossil fuels it uses. Thinks should be part of the table.
 - Tim agrees.
 - **Audrey in chat:** I agree with Marty! Those are important additional policy goals.

Which Non-Utility System Impacts Should be Included in the Minnesota Primary Test?

Type	Impact	Current Practice	Policy Goals	Primary Test
Participant	Participant costs	✓	?	?
	Participant benefits	partially	?	?
Other fuels	Other fuels	partially	?	?
Water	Water	x	?	?
Low-income	Low-income	✓	?	?
Societal	GHG emissions	✓	?	?
	Other environmental	✓	?	?
	Public health	x	?	?
	Macroeconomic	x	?	?
	Energy Security	x	?	?
	Energy Equity	x	?	?

- Which non-utility system impacts should be included in test?
- Current practice column. Include any NEBs?
 - **Grey:** No
- Participant benefits could be bill savings. when do participant cost test. Include bill savings. TRC, Societal cost tests ... don't include participant bill savings.
- CenterPoint does include other utility bill savings, other than for CP.
 - **Ethan:** Do water savings. usually electric savings for gas measure.
 - **Audrey:** Way savings are included. Prorate project costs. 20% of savings are
 - **Ethan:** Don't use the other benefits in the BENCOST. Not filed anything.
- Other fuels? Water?
 - Common to include costs and benefits. Unsure about these.
- Low income. How account for these?
 - **Audrey:** Don't do things differently for low-income customers. Don't require those programs to be cost-effective.
 - **Tim:** Another way to handle it. "blunt tool". Warrants a check because accounting in some way.
 - Audrey thinking that they quantified NEBs in Colorado. She can check with Xcel.
 - **Becky Billings:** Was done in CO but was not adopted.
- **Kevin:** How much of the residential should be apportioned to low-income but never did the background work to figure out what that goal should be. Usually pick a number.
- **Chris Davis:** PUC-approved externalities are based on damage studies. Some health impacts are included in those. Those externality values cross-cut. Health and emissions impacts.
- **Audrey in chat:** *The MN Potential Study considers the savings potential for LI customers. But I don't think it looks at additional NEI benefits for LI.*
- Other environmental bucket? Anything. Criteria pollutants, water emissions. etc. land use.
- Macroeconomic. No.
- Energy equity. No.

- In column for Policy goals.
 - Take a few minutes to get initial reactions?
 - Not include low income or GHGs?
 - Other fuels?
 - ECO Act is clear on this. Other fuels should be accounted for.
 - **Jason:** Would like to see specific statutes or policies to connect to the policies.
 - For our HW. As we update this table. Think through the column headings.
 - **Jason:** Can we expand “other environmental” to see what’s in that?
- **Chris Davis in chat:** *Going back to NEBs, is Tim familiar with the EPA model COBRA that quantifies NEBs?*
 - Tim is familiar with it. Trick with NEBs (term is used broadly). Likes to distinguish participant from societal NEBs. Some consider all of the items on this list as “societal NEBs”. He likes breaking them out.
 - Participants are improved safety in the home and business. Property values go up in the home or business.
 - COBRA doesn’t address participant NEBs at all. Public health. Very helpful at societal. Has convenient cost/kWh values can apply.
 - **Greg in chat.** *BPK - benefits per kWh*
- Will return to this in the next workshop.

Slide 23: Next Steps

Slide 24

Follow-Up Workshops

Workshop (May 4)

- Step 1: Identify and discuss Minnesota applicable policy goals

Workshop (May 18)

- Step 2: Identify all utility system impacts to include in BCA tests
- Step 3: Determine which non-utility system impacts to include in the primary test
- Step 4: Ensure costs and benefits are properly addressed
- After this workshop Synapse will prepare a Straw Proposal for discussion

Workshop (early June)

- Discuss Straw Proposal
- Discuss additional topics, e.g., secondary tests, discount rates
- Step 5: Ensure transparency
- Provide comments to Adam by May 11. Fill in the table. This won’t be submitted as evidence.
- Should they add rows? Yes, can include “other”.
- “Other environmental” row. Do that and send out tomorrow. Fill out a new table.
- Questions on HW assignment? None.
- Slide 24. Anything missing? This is for you all. If see something as missing. Can add now or in comments.

Homework Assignments

Provide responses to today’s discussion.

- Fill in table of which impacts to include in the primary test.
- To facilitate the discussion in the next workshop.
- Please provide to Adam Zoet by May 11

Review the following to prepare for the next workshop.

- Synapse MN NSPM Report, Chapter 5, pages 31-38
- NSPM for DERs, Sections 4.2 and 4.3

Provide input on utility system impacts

- Fill in the table on the next slide.
 - To facilitate the discussion in the next workshop.
 - Please provide to Adam Zoet by May 11
- Another HW. Any reports you may have.

Homework Assignment #1 Which Impacts to Include in the Primary Test?

	Impact	Include In Primary Test?	Reasons / Comments
Participant	Participant costs		
	Participant benefits		
Other fuels	Other fuels		
Water	Water		
Low-income	Low-income		
Societal	GHG emissions		
	Other environmental		
	Public health		
	Macroeconomic		
	Energy Security		
	Energy Equity		
	Resilience		

Homework Assignment #2 Utility System Impacts Currently Included: Electric Utilities

		Xcel	Otter Tail	Minnesota Power
Generation	Energy			
	Capacity			
	Environmental Compliance			
	RPS Compliance Costs			
	Market Price Effects			
Transmission	Transmission			
Distribution	Distribution			
General	Financial Incentives			
	Program Administration			
	Utility Performance Incentives			
	Credit and Collection			
	Risk, Reliability, Resilience			
Other	Other (specify)			

- Did include an “other” row.

Homework Assignment #2 Utility System Impacts Currently Included: Gas Utilities

		Xcel	Center Point	Greater MN Gas	Great Plains	MN Energy Resources
Commodity / Supply	Fuel					
	Capacity and Storage					
	Environmental Compliance					
	Market Price Effects					
Transportation	Transportation					
Delivery	Delivery					
General	Financial Incentives					
	Program Administration					
	Utility Performance Incentives					
	Credit and Collection					
	Risk, Reliability, Resilience					
Other	Other (specify)					

- **Lisa B. in chat:** When we talk about primary test, are we referring to test for all?
- Tim says should be consistent across different tests. His recommendation is to have single primary test for all efficiency programs – EE, load management, EFS. People may disagree.
- **Marty in chat:** think the NGIA is sufficiently different from ECO that EFS under NGIA should be different than EE under ECO
- **Marty in chat:** Where possible, core assumptions should be consistent, but there are justifiable differences
- May be some elements that affect tests differently. Not prejudice.

- Tim says, point taken. Where one statute might be different. Provide info in HW assignment responses.

At: 10:08 a.m. Finished up slides.

- **Adam:** Next steps. Summary notes to folks. next steps and Word version that is easy to fill in with the tables that Tim is sending (*provided here as Attachment A*).
- Tim. Have it all in one place.

Minnesota CIP Advisory Committee

Application of NSPM

Homework Assignments for Workshop #2

Reading

Review the following to prepare for the next workshop.

- Synapse MN NSPM Report, Chapter 5, pages 31-38
- NSPM for DERs, Sections 4.2 and 4.3

Response to Workshop #1 Discussion

- Fill in table of which impacts to include in the primary test.
- To facilitate the discussion in the next workshop.
- Please provide to Adam Zoet by May 11

Which Impact to Include in the Primary Test?

Type	Impact	Include in Primary Test (Yes, No, Maybe)	Rationale / Comments
Participant	Participant costs		
	Participant benefits		
Other Fuels	Other fuels		
Water	Water		
Low-Income	Low-income		
Societal	GHG emissions		
	Criteria air emissions		
	Solid Waste		
	Water Impacts		
	Land Impacts		
	Other environmental		
	Public health		
	Macroeconomic		
	Energy Security		
	Energy Equity		
Resilience			
(Specify)	Other (specify)		

Input for Workshop #2 Discussion

- Fill in the table on electric utility system impacts.
- Fill in the table on gas utility system impacts.
- To facilitate the discussion in the next workshop.
- Please provide to Adam Zoet by May 11

Which Utility System Impacts are Currently Included in Electric Utility BCA Tests?

Type	Impact	Xcel	Otter Tail	Minnesota Power
Generation	Energy			
	Capacity			
	Environmental Compliance			
	RPS Compliance			
	Market Price Effects			
	Ancillary Services			
Transmission	Capacity			
	Losses			
Distribution	Capacity			
	Losses			
General	Financial Incentives			
	Program Administration			
	Utility Performance Incentives			
	Credit and Collection			
	Risk			
	Reliability			
	Resilience			
(Specify)	Other (specify)			

Which Utility System Impacts are Currently Included in Gas Utility BCA Tests?

Type	Impact	Xcel	Center Point	Greater MN Gas	Great Plains	MN Energy Resources
Commodity / Supply	Fuel					
	Capacity & Storage					
	Environmental Compliance					
	Market Price Effects					
Transportation	Transportation					
Delivery	Delivery					
General	Financial Incentives					
	Program Administration					
	Utility Performance Incentives					
	Credit and Collection					
	Risk					
	Reliability					
	Resilience					
(Specify)	Other (specify)					