Electrical Energy Workshop Summary
Morris
July 9, 2012
Participants: 11

Discussion comments

- Accessibility to the grid is a big issue now for producers. You can wait 10 years to feed into the grid. It directly impacts how successful you can be at self-reliance. MISO regulations are an impediment. Also deals with WAPA, FERC. No one is taking this issue on.
- A new trend is that people are producing their own energy or distributor generators. How is that going to impact the system, residents as generators and not just consumers?
- Economic development issues persist—farmers can't have irrigations systems that are supported by local systems, which means that farmers are forced to tap into the bigger system to be able to use their equipment.
- I wish the grid became more like the internet—more access, free market, not regulated.

Written comments

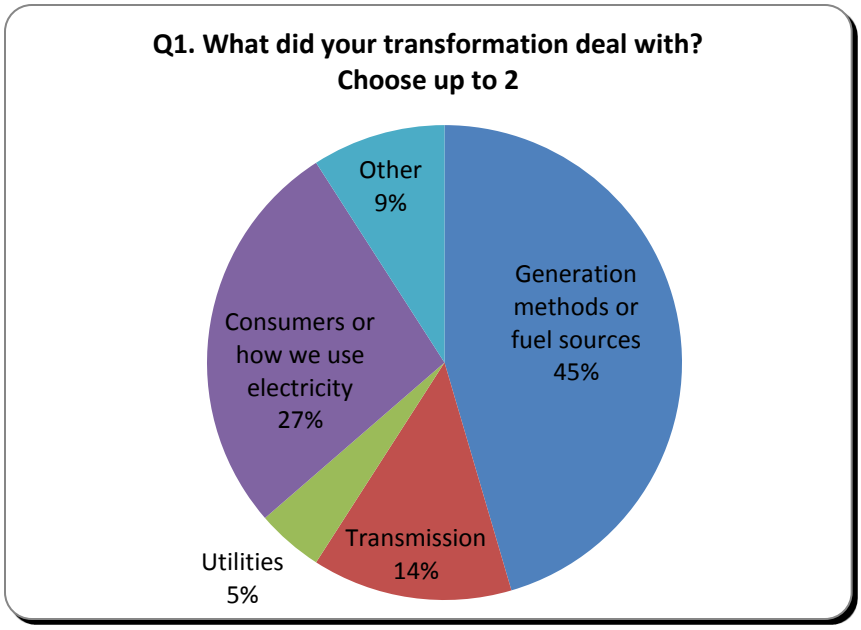
- I would like to see electrical energy products such as "MN Grown" electricity

Workshop activities

Who/what is impacted by electricity in Minnesota?

- Residential customers
- Industrial customers
- Regional economics, job providers
- Wholesale markets
- Land owners
- Environment: natural resources, lakes, animals
- Everyone
- Future generations
- Business: cost, access
- Rural communities
- Distributed generators
- Government: city/local
- Utilities, IOU equity holders, co-op members
- Researchers
- Nuclear waste
- Economics
- Water quality
- Rate payers

Transformational Change



Written descriptions:

- Make the grid open access
- Solar on every building, solar shingles on every roof
- Behavior change
- Peak power during peak demand
- Improve efficiency of power generation
- Fully account for costs
- Identify the processes to use wasted energy at current generation sites

What makes it difficult/impossible?

- Economic interests
- Business reasons
- Political will
- Infrastructure – new infrastructure needed
- Stakeholders vs. stockholders
- Smart grid – smart consumers
- Current regulations
- Regional power system favors big companies
- Managing consumers/producers
- Electricity prices are still very low- no push for citizens to produce lower
- What is the max we can use solar for?
- Grid challenges
- Cost: homeowners “the grid”- housing/infrastructure costs
- Utilities- objections?
- Public policy
- Sunk costs
- Location
- Demand

How would this change things for the people/things impacted by electricity?

- Reduce peak demands from utility- lower operating costs
- Change consumer behavior
- Better quality for producers/consumers
- Business opportunities for utilities
- Developing micro-grids
- Costs for homeowners/businesses
- Tougher for utilities to bill/manage meters
- Energy costs
- Profitability
- Power generation
- More energy, same cost
- Jobs hire installers to work with consumers
- Opportunities for entrepreneurs- new forms of green energy
- Rural income generation
- Lower peak demand price- lowers costs
- Management between the grid and consumers/producers

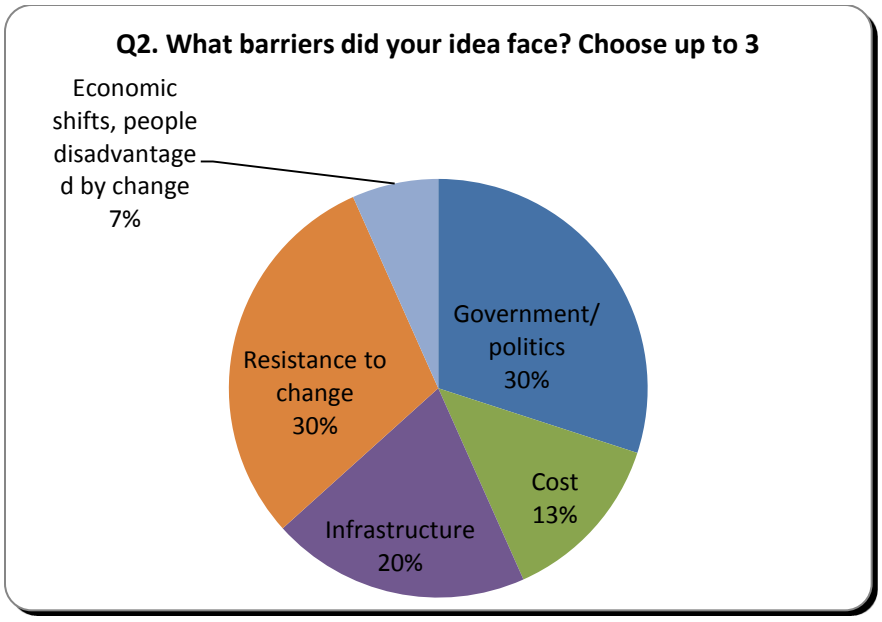
<u>Incremental Change</u>

Written descriptions:

- Identify other processes to use wasted energy at current generation sites
- Feed-in tariff – pays for kWh, not technology. Like how they do it in Germany
- Change net metering to 100% load. Strategic development of renewables to provide maximum benefit to consumers and energy providers.
- Change net metering laws. Use branded electrical energy (e.g. MN Grown electrical energy). Time of day pricing. Develop regulations in MISO that favor or streamline local energy generation and transmission. For transmission projects, carve out/assign a portion for Minnesota generators and consumers. Allow new energy companies to compete.
- Branding energy sources? Developing partnerships to promote efficiency/conservation (utility/non-profit)

What makes it difficult?

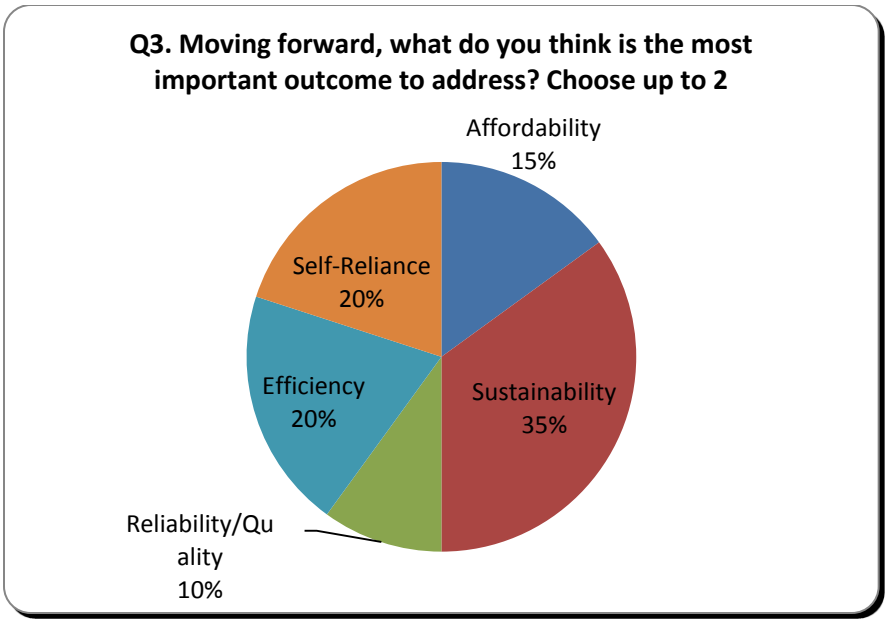
- Location, demand
- How to you regulate it? Regional power system favors big companies, etc. Politics (political will). Who will help manage consumer/producers, and how? Electricity prices in this area are still very low – no push for citizens to produce to lower. What is the max we can use solar for?
- Smart grid – smart consumers. Current regulations and net metering laws. Promote MN RECs; discourage out of state RECs.



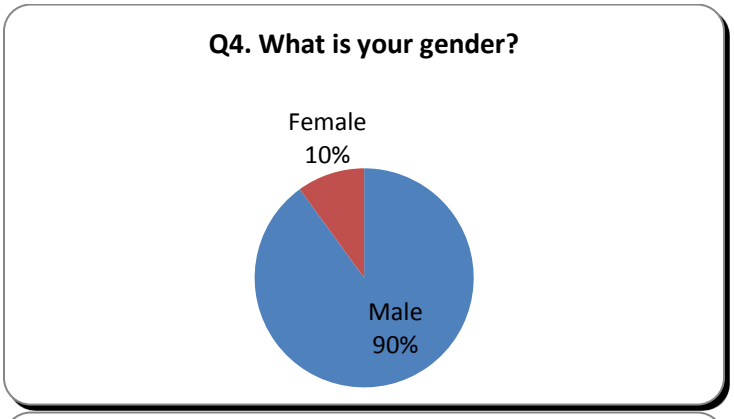
What are your top priorities for Minnesota's electrical system?

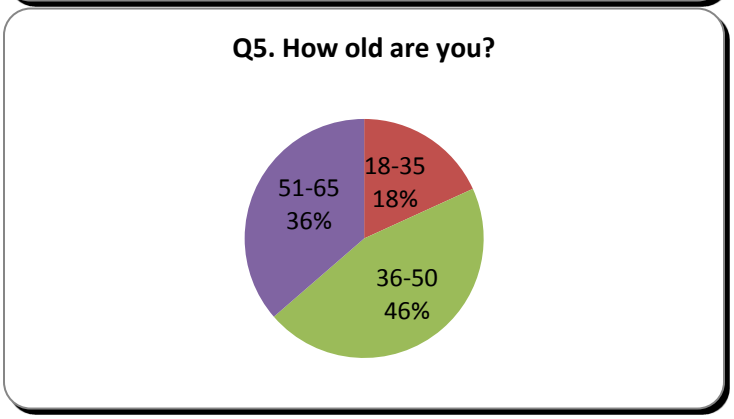
For this exercise, each table was given 15 poker chips to divide among no more than five possible answers.

	Option	Percentage
1	Keep the price of electricity low.	13%
2	Reduce the environmental impact of our electrical system.	20%
3	Make the bills we pay reflect more of the costs and benefits of the electrical system.	20%
4	Shift to electrical generation based on fuels that are not limited in supply.	40%
5	Maintain the quality and reliability of the electrical system.	0%
6	Ensure that the electrical system is safe for the people who work in it or live/work close to facilities.	0%
7	Ensure the electrical system is protected from disturbances, natural or man-made.	0%
8	Improve efficiency -- get the same results using fewer resources.	47%
9	Change our expectations about how much electricity we need.	20%
10	Produce more of our electricity using Minnesota resources.	40%
11	Give customers more information about the cost of electricity.	0%
12	Other	0%



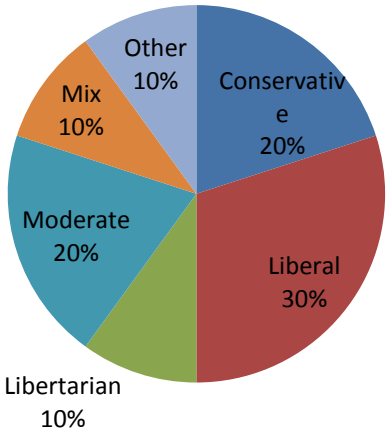
Demographics



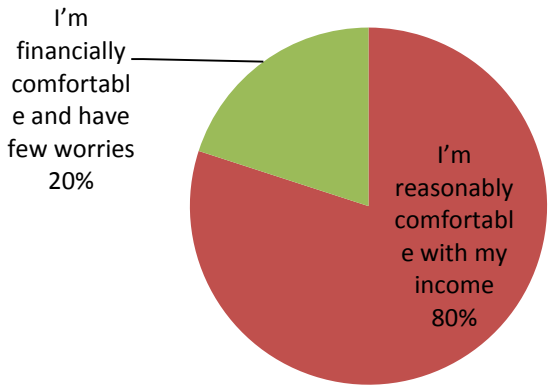


Q6. What ethnicity best represents you?

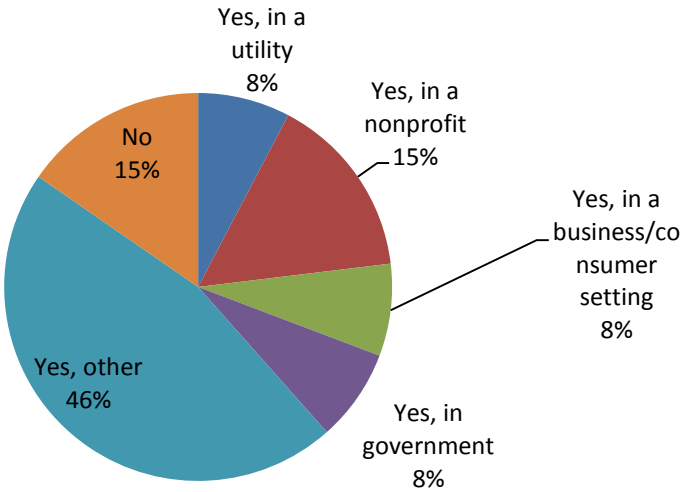
Q7. What best describes your political leanings?



Q8. Which of these statements about income best represents you?



Q9. Are you or have you been employed or a volunteer in the energy field?



Participant Evaluation of Workshop
(Average of all participant surveys)

1.) **<u>Did you enjoy participating in today's discussion?</u>**

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    1                     2                     3              3.8   4
    |---------------------------|---------------------------|---------------------X-------|
Not at all            A little              Somewhat           A great deal
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2.) **<u>How much did you learn from the information presented today?</u>**

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    1                     2                     3 3.1                4
    |---------------------------|---------------------------|--X---------------------------|
Not at all            A little              Somewhat           A great deal
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3.) **<u>How much did the table discussion help you think through the issues?</u>**

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    1                     2                     3           3.6      4
    |---------------------------|---------------------------|-----------------X------------|
Not at all            A little              Somewhat           A great deal
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4.) **<u>Please share any insights you gained from tonight's workshop.</u>**

- Different perspectives on energy production and consumption
- It was nice to get together to talk about energy and electricity with other interested folks
- It's a complicated issue