



Electrical Energy Workshop Summary
Citizens League Summer Policy Series (Minneapolis)
June 21, 2012
1.5-hour workshop
Participants: 22

Discussion comments

- Modern economy and social fabric are dependent on electricity.
- What would happen if electricity wasn't as available and cheap as today?
- People close to generation, distribution, and extraction are physically impacted.
- Minnesota is investing \$2 billion in transmission infrastructure.
- Even at a tenth of a percent of total costs, electrical costs can be really high for some businesses and have a big impact on their profitability.
- Our importing of energy creates jobs and taxes elsewhere when we should be creating that here.
- Most problems are political. You have to convince people to change.
- We have siloed thinking. We think about electrical energy separately from heating and cooling, etc. It's all energy.
- What if we had a water heater and building heat on every block, rather than in every basement.
- Impossible change: find out sea animals generate electricity, and how we can harness that.
- How much energy do we really need?
- One of the people here says that her home is as efficient as it can get, yet she's not being rewarded for that.

Written comments (general)

- The agreement on discussed subjects among us, both at our table and as a group.
- Great to sit at table with different viewpoints – a challenge!

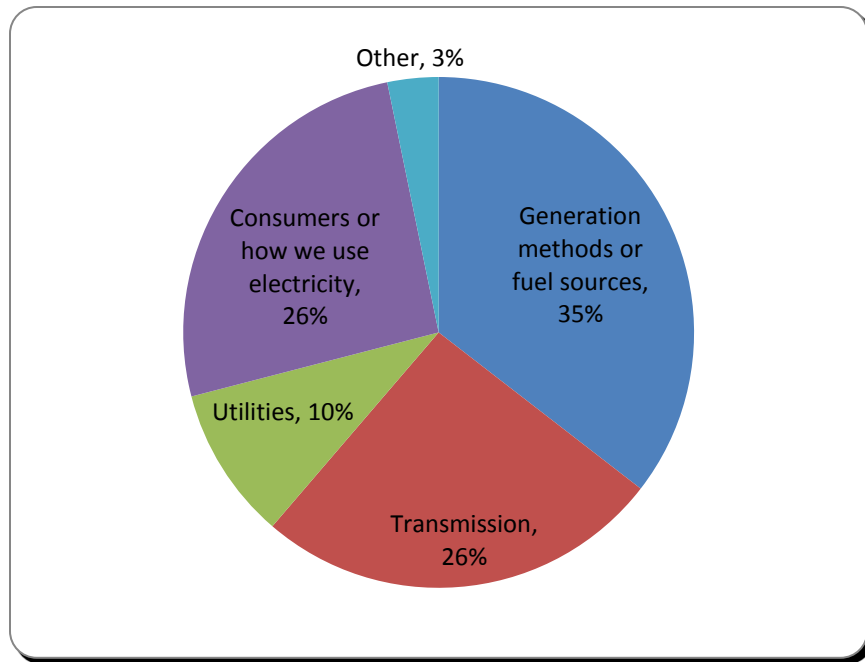
Workshop activities

Who/what is impacted by electricity in Minnesota?

- | | |
|---|---|
| • Business, industry and employers | • Energy supply chain and industry workers |
| • Health and environment | • Government |
| • Citizens/residents/families/employees | • Schools |
| • Commuters | • National security |
| • Economy/jobs | • Modern social fabric |
| • Culture/community | • Those proximal to generation, distribution, energy mining |
| • Household | • Vulnerable populations (e.g. elderly) |
| • Policy makers/regulators/politicians | |
| • Taxpayers | |
| • Utilities | |

Transformational Change

What did your transformation deal with? Choose up to 2.



Other

- Most solutions to problems of this scale and application are political. Convincing the policy makers and public of the “greater good” even though not profitable, most comfortable. As with Question 3, I choose government, resistance to change, economic shifts

Written descriptions:

- Distributed generation (co-location, reduce transmission and distribution losses, power storage, small renewable power generation)
- Zero-waste electrical system
- 100% renewables
- Public/political attitudes
- System uses no dirty, dangerous, or finite resources
- Harvesting storm energy
- New generation technologies (e.g. figure out how animals generate electricity and apply to scale)

What makes it difficult/impossible?

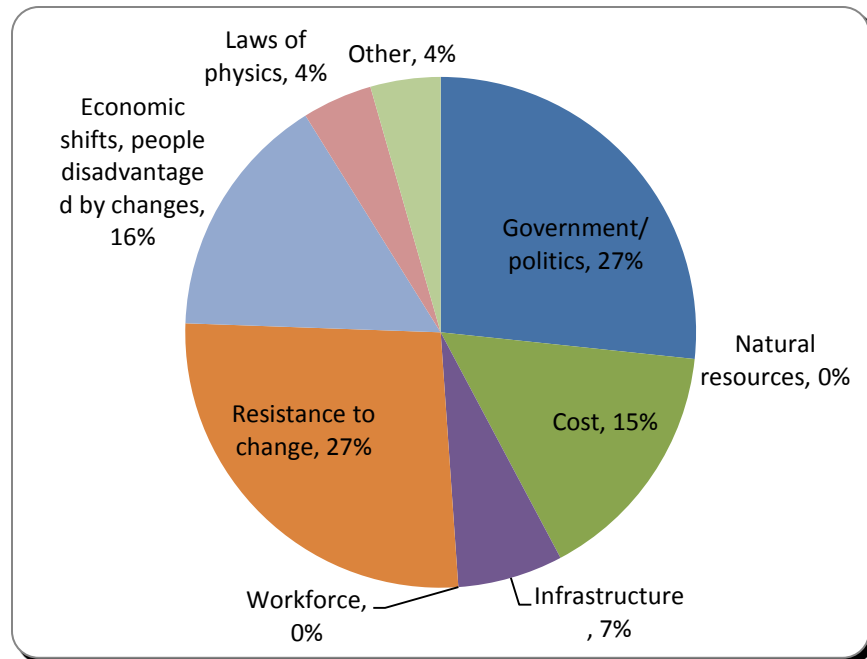
- Public/political attitudes
- Technology (generation, storage, variable nature of renewables)
- Costs
- Fuel sources/production capacity
- Infrastructure, incl transmission capacity
- Siloed regulation
- Profit/losses/lack of incentive/requires rethinking profit model
- Lifestyle change
- Less reliability
- Lack of redundancy
- Physics

Incremental Change

Written descriptions:

- Distributed generation/co-location of generation/capture waste industrial heat/small renewable generation
- Variable pricing
- Increased renewables
- Efficiency
- Increase price/include externalities in price
- Create policy framework that's amenable to incremental change
- Grants/loans for "infant industry" are necessary (good or bad)
- Go against public opinion for the public good
- Benchmarking based on utility data
- Rethink "need" (consumer, PUC statement of need)
- Feedback to consumers (e.g. amount, costs trends, costs)
- Rethink decoupling, adjust for low-income

What barriers did your idea face? Choose up to 3.

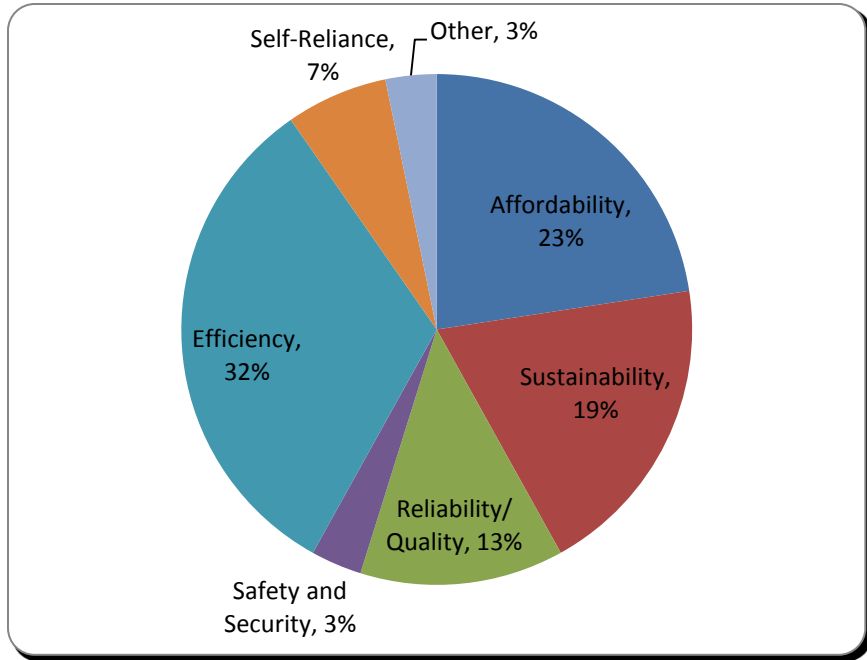


What makes it difficult?

- Public and political attitudes and resistance/lack of a crisis
- Cost
- Narrow self-interest/money in current structure
- Regulation inhibiting policy improvement
- Privacy concerns
- Lack of transparency
- Lack of crisis

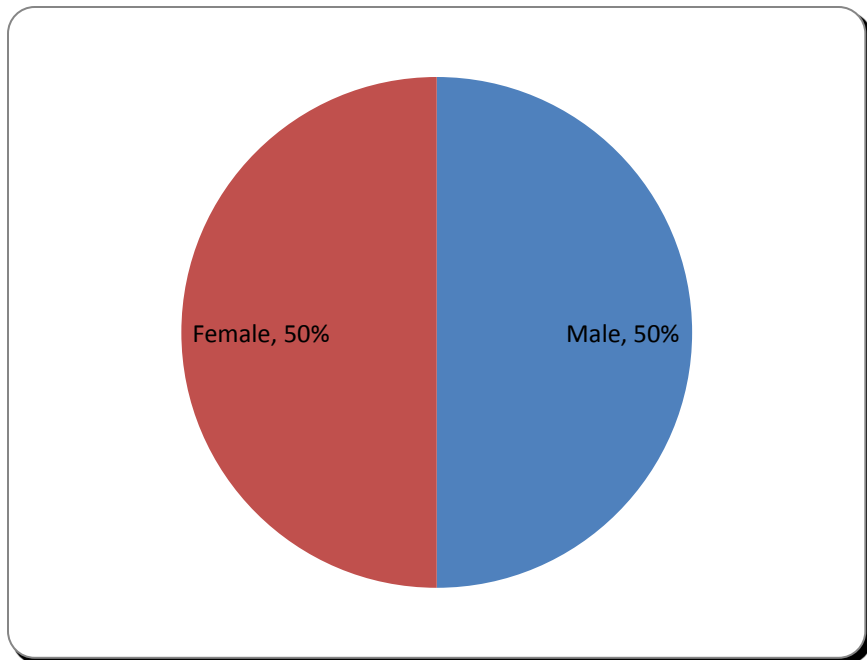
Top Priority

Moving forward, what do you think is the most important outcome to address? Choose up to 2.

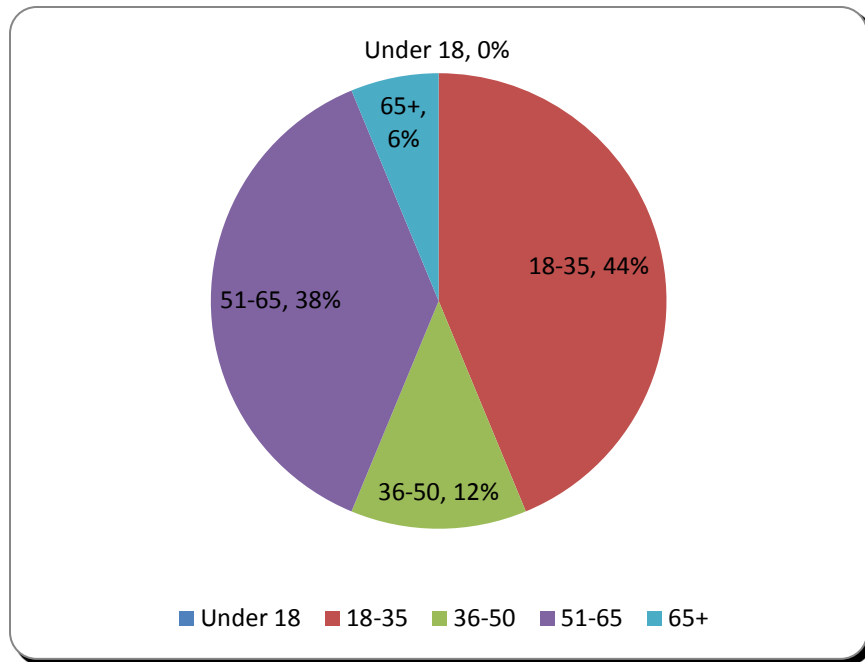


Demographics

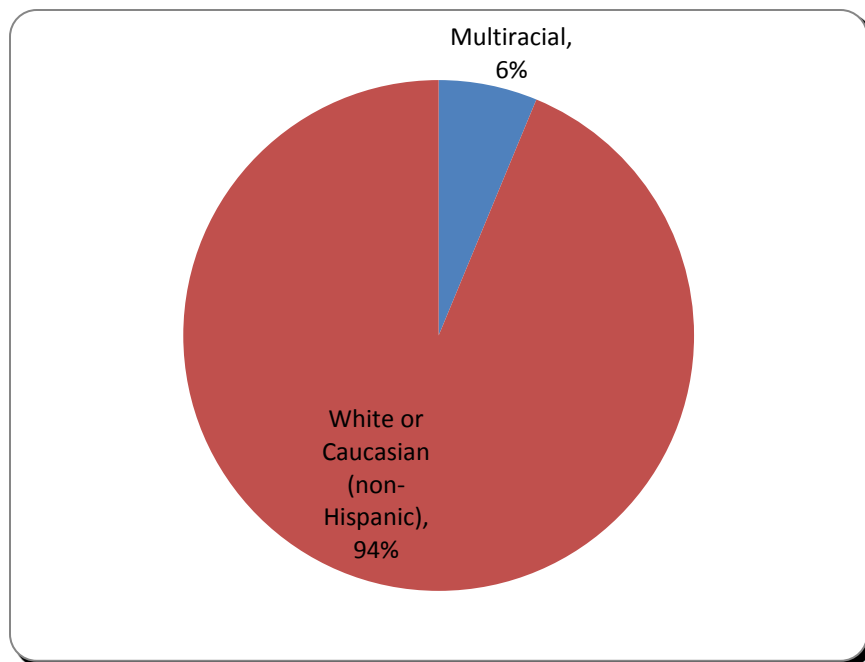
What is your gender?



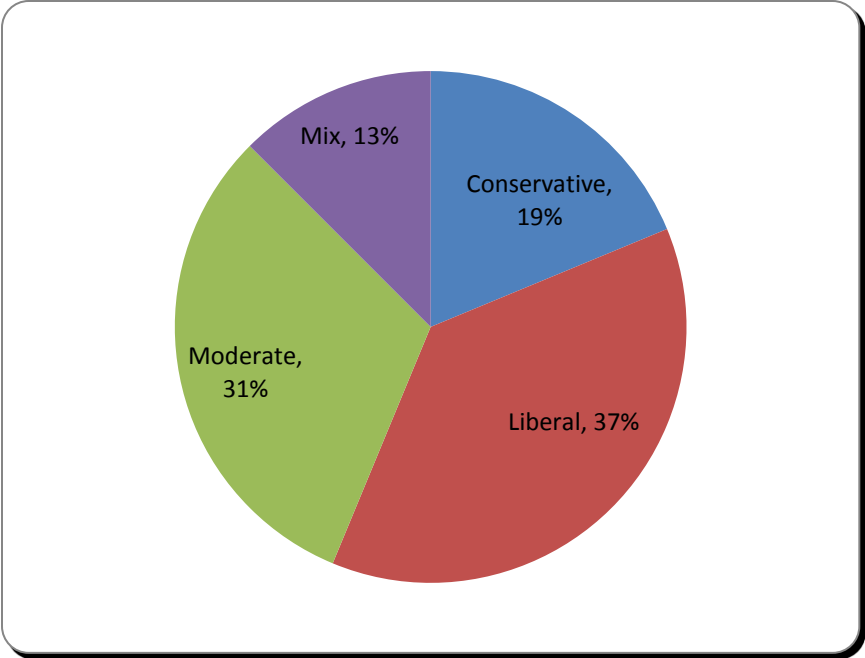
How old are you?



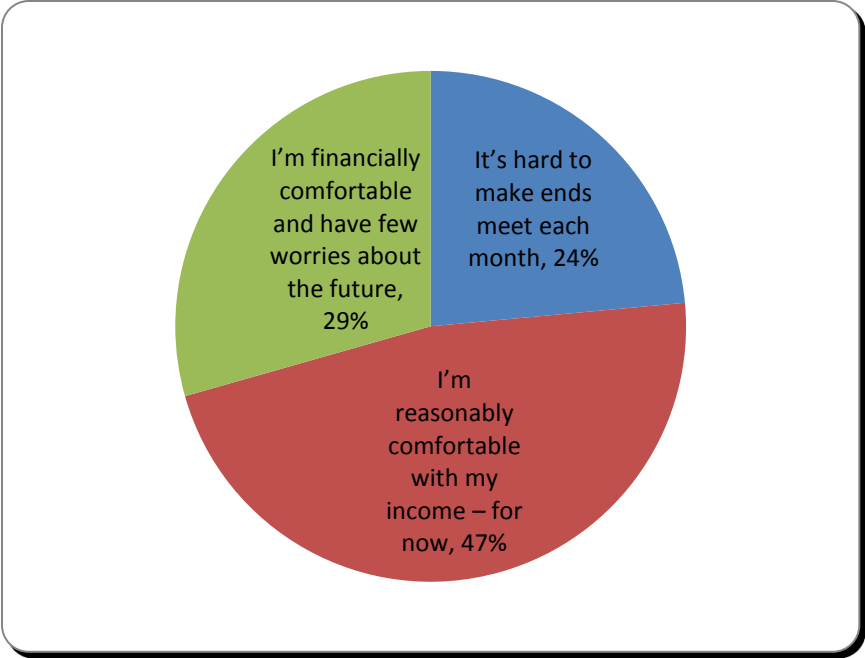
What ethnicity best represents you?



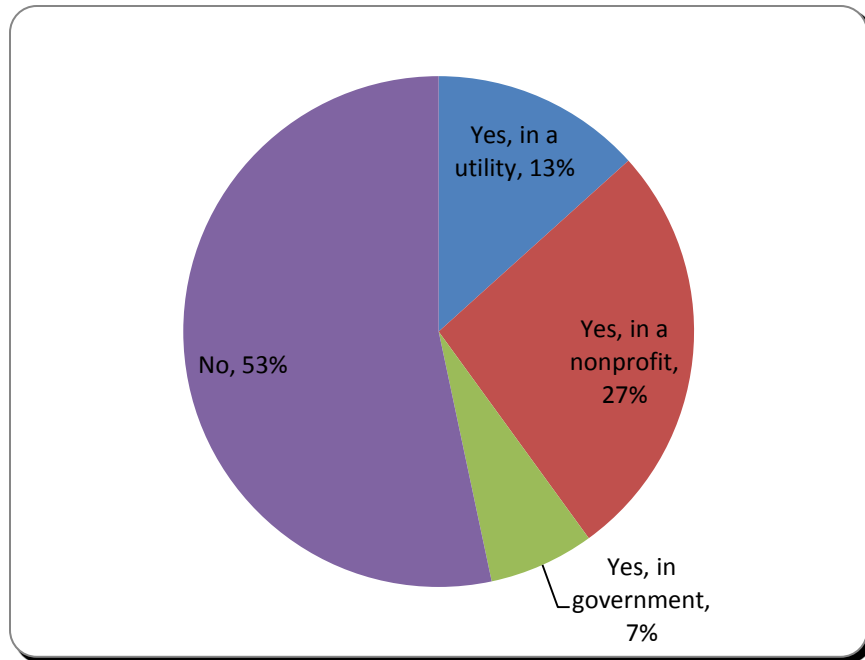
What best describes your political leanings?



Which of these statements about income best represents you?



Are you or have you ever been employed or a volunteer in the energy field? Choose all that apply.



**Participant Evaluation of Workshop
(Average of all participant surveys)**

1.) Did you enjoy participating in today's discussion?



2.) How much did you learn from the information presented today?



3.) How much did the table discussion help you think through the issues?

