Imagine Duluth 2035
Energy & Conservation Focus Group
First Meeting – Thursday, February 9th, 2017 – 5:00 PM
Room 303, Duluth City Hall

1. **Welcome & Introductions**

2. **Brief overview - Timeline & Process**
   Community Planning Manager Adam Fulton gave an overview of all the focus groups and the comp plan process.

3. **Review implementation strategies that have been completed or partially completed from 2006 Comp Plan to determine if the strategy is still relevant**
   2006 comp plan thin on energy issues – mainly a land use plan. It does include:
   - Water/wetlands protection
   - Clean air (prioritize)
   - Support innovative initiatives
   - Support for emerging economic sectors

   Focus group participants asked why energy and conservation for the 2016 comp plan update?
   - Critical to future of Duluth
   - Duluth is an energy/transportation/production hub for the country
   - High level of energy poverty in Duluth
   - Transportation of energy big, but energy not very localized (No stored energy locally)
   - National policies/regulations – pending changes (is Duluth prepared?)
   - Aging infrastructure (Some of our infrastructure @ end of lifespan
   - Climate change
   - City uses energy - huge part of everyday life (expenses) homes, businesses
   - Local entities in this area influencing policy
   - Diversify energy production (helps/hurts bottom line)
   - High carbon footprint, but community dedicated to reducing it – how can we live our values?

- Sustainability – preservation of natural resources
- Cold climate = more $$
- Capture waste heat

Overview of past energy related plans:

- City's greenhouse gas (GHG) inventory + forecast report
  - Inventory completed in 2011
  - Trends
  - Staff will put report and link to map on focus group website
- Duluth shines – map of solar potential
  - Staff will put link to map and report on focus group website

4. **& 5. Review research questions for the Imagine Duluth 2035 process Do other topics need discussion or further research? Review preliminary data gathering / identify other potential resources**

Focus group participants were asked to for questions the City missed and critiques of the draft questions. (numbered draft questions are included on the last page of this summary)

- Jobs per 1,000 ton/ what is the job opportunity per kilowatt saved?
- Clarity of measurement of GHG (be consistent with previous studies to see trends)
- Revisit recommendations from 2012 study (list of policies regarding renewable energy)
- Find previously adopted goals (to reduce GHG by some amount by 2030?)
- Is there value in identifying individual (large) emitters?
  - Could help find ways to reduce their emissions
  - Don't want to demonize large emitters – use context – efficiency of their operations compared to peers
  - Can't address GHG emissions unless you measure + identify
- Level of energy poverty?
  - Spending 6% or less of income on energy/utilities is energy affordability, more than that is energy poverty
- Metric per energy unit savings per widget
- Production related to GDP – economic output/energy produced or consumed
- Efficiency measurements – amount of energy consumed per sq ft of building space
  - Which homes/business are most efficient? What can we learn from them?
  - Benchmarking (Comfort Systems, EPA)
  - City has inventoried all its facilities for efficiency
- How to capture economic boom in solar + wind industries (job demand)
- Something like q4 (about electricity) for gas usage and for other energy sources
- Local vs regional sources (where are the jobs located?)
  - Distributed generation (how much is happening here?)

- Q13 replace “low cost” with “economical”
- What is our trajectory for electric vehicles?
  - Do we have the infrastructure to support that?
  - What are/would be the sources for increased electrical use
- Q15 add residential uses
- WLSSD – creating more efficient systems
  - Could they use compost for energy production? (methane capture)
  - Could we increase composting city-wide (use as a resource)
- What about systems that are huge energy uses (ex: water pumping, treatment of water?)
- Waste stream analysis (cost of transportation, potential cost of composting)
- Micro turbines @ output of water towers/ reservoirs? Is microgeneration worth it? Is it cost effective?
  - If worked into capital plan as infrastructure improvements are completed, it could be cost effective
  - It could increase amount of electricity needed to push water through turbine
  - Could be done with storm water or wastewater pipes that are already running downhill
- Efficiency as a resource (potential savings)
  - How widely are efficiency programs used?
  - What are the efficiency opportunities we have?
  - What are our opportunities to gain efficiency?
- Revenue bond for PACE like program?
- Other bonding/credit resources for programs?
  - Tax incentives?
  - Carbon credits?
- Expansion of energy efficiency programs (from city)
  - For low income people
  - Considering water conservation
- Liz Bieter of Comfort Systems offered to share water data with Community Planning staff to put on the website.
- Light pollution?
- How does local economy benefit from renewable energy supply chain? + how could it?
- Resilience in our energy sector
  - Emergency centers – where are they located?
- Peer-to-peer energy exchange?
- local/regional collaboration?
  - Transportation/commute
  - How do we partner on energy issues?

6. **Discuss any other emerging issues for this section of the Comp Plan Update**

Focus Group participants were asked to brain storm emerging issues in energy and conservation.

- Multi-modal transportation
  - Public transit
  - Trails
- Maintenance of renewable energy sources
- Partnering with institutions (UMD, energy center)
- Rapid tech dev timeline
- Distributing energy production + energy storage
- Shifting relationship to earth, more shared relationship, shifting attitudes, promotion, education, not just thinking about what we can take from the earth
- Viral aspect of shift (1 neighbor puts up solar panels and others follow)
- Shifting incentives/ transition for the future

7. **Wrap-Up & Next Steps**

Neighborhood meetings happening again in the spring

Future focus group meeting objectives:

- Finalizing the questions and conducting research
- Policy development

Energy and Conservation – Draft Research Questions

The energy and conservation component of the Comprehensive Plan update will provide an in-depth review of local energy production. It will establish a baseline of local energy production, including methods of production and the levels of emissions associated with those methods, and establish policy direction for future energy production, pollution and emissions reduction goals, and environmental conservation. Specific questions that we're considering include:

1. What is the corporate City's current greenhouse gas (GHG) output? Carbon output?
2. What is the overall City's current GHG output? Carbon output? Per person?
3. Where in the City are the largest GHG emitters? Carbon emitters? For the largest carbon emitting employers, how many jobs per 1,000 tons CO2 emitted?
4. What is the total electrical usage by all users in the City? What are the major uses?/Who are the major users?
5. What are the sources used for electricity production in the City? What % of these sources are renewable?
6. What structures are part of the district heating & cooling system? Could this be expanded or could there be sub-districts?
7. What are the emerging best practices for sustainable energy for homeowners?
8. Can we quantify the benefits of natural resources to the city, and its value to us? How does this relate to urban conservation? How will this change as the climate changes?
9. Can the City shift the overall picture of regional energy production?
10. What are the specific sources of pollution resulting from our energy use, and what are the impacts of this pollution on the city/region?
11. How does our water and gas production and use compare to peer cities? What are operational and technical best practices?
12. How much waste heat is emitted in this city? What are the major generators? What percentage is being captured and reused and if not, why not?
13. How much residential and commercial energy could be saved through low cost conservation measures and what are best practices for implementation?
14. How does our electricity production and use compare to peer cities? What are operational and technical best practices?
15. How much of the Steam Plant GHG emissions are from corporate City use? How much are from commercial uses? How much are from industrial uses?
16. How could we reduce the emissions from the Steam Plant?
17. What are best practices we could use to reduce transportation and industrial GHG emissions?