ENERGY & POWER

MARQUETTE 2049 CLIMATE CHANGE LEARNING CIRCLE
Wednesday, November 6, 2024

Circle Overview

The Marquette 2049 Learning Circle series is intended to encourage people in our community to engage in proactive planning in anticipation of the likely consequences of climate change. Participants of this circle examined critical electrical energy needs, identified key individuals and organizations necessary to continuing conversation, and shared ideas for a long-term planning process to deal with energy-related issues.

What is Our Ideal Vision For the Future?

During this learning circle, the participants were asked to share their ideal future for energy and power within Marquette County over the next 25 years. These are the main themes that characterize the participants' "ideal vision" for the future:

Accessible and affordable energy for all: All members of our community should have access to affordable energy. Manufacturers might need to carry a larger portion of the cost in order to ensure affordability for all residents. Accessible renewable energy that is easy to develop and maintain is important in this future scenario. Ideally, energy would be more cost effective and the average household will have a lower energy demand because of greater household efficiencies.

A diverse and resilient power system: Different energy sources allows for adaptability in the power grid when there is an outage or extreme weather event. A regional energy plan should include multiple types of power and a timeline or targets for transitioning from fossil fuel-based energy to renewable sources. Ideally, with rapidly evolving technology, the future energy system will be better able to adapt to changing community needs.

Adequate renewable energy infrastructure: With advancements in energy storage technology, renewable energy production will increase across the County. Additionally, advancements in the infrastructure to support electric vehicles will improve accessibility for all community members. Other infrastructure improvements include a recycling facility for batteries, solar panels, and other mineral-based materials to help achieve sustainable life cycle manufacturing within a closed-loop system.

Energy independence: To achieve energy independence we will need to develop a multi-phase plan outlining a variety of opportunities for renewable energy production. A future scenario might include a combination of community and rooftop solar systems as well as distributed generation at rural households. To gain energy independence there will be an increase in innovation and energy research, as well as training for a workforce that will support the future of renewable energy and energy independence for the County.

What Key Issues Might Impact Our Shared Vision?

Participants discussed a variety of issues and struggles our community might need to navigate in order to reach the proposed vision for energy and power production in our region.

Polarizing Opinions: Attitudes about local policy related to energy systems might be a barrier to innovation within the County. There is already a diverse range of views about what types of energy citizens want and where they want it produced. If residents do not participate in the discussion or have misinformation on energy systems it might be more difficult to work together toward a shared vision for the future.

Cultural Shift: Along with polarizing viewpoints, a community cultural shift might be necessary to actualize the ideal energy vision for the future. Currently, consumer habits drive the need for more energy, and those habits and conveniences will need to shift if we want to lower energy consumption as a whole.

Funding: In most cases, renewable energy production and installation is initially more expensive, despite federal funding available, there is uncertainty about how long and how reliable this funding will be available. This is similar when thinking about innovation and research that is needed to implement renewable energy sources. Currently, the majority of the power used in the Upper Peninsula power is generated in Wisconsin. What would it cost to build a local energy grid?

Current Lack of Infrastructure and Technology: Due to the Upper Pennsisula's energy grid connection to Wisconsin, the region is lacking infrastructure to support large energy generation systems. When creating these energy sources, it is important to think about what the physical environment can support. Is there enough materials to develop these systems? Will there be enough energy to support the heating needs of the Upper Peninsula? What about heat and geothermal pumps that demand electricity? The participants noted dozes of concerns related to developing new infrastructure and technology. For example, what will happen to battery and solar panels when they've reached their end-of-life? How do we add infrastructure if we do not know when there is a demand for the infrastructure (i.e. electric vehicle pumps)? A lot of pre-planning to develop infrastructure and technology relating to energy and power in Marquette County needs to be developed.

What Can We Do Today?

Conversation and Collaboration: To continue the conversation about energy sources for the community, there should be a plan outlining the steps for a renewable energy transition. A designated task force or committee that includes representatives from our utilities, policy officials, community members, and the next generation of residents could help guide this plan. Having diversity within the conversation is important and builds trust among the wider community.

Education: Everyone can learn more about different aspects of renewable energy. Education specifically about local units of government (LUGs), zoning, and Inflation Reduction Act (IRA) direct pay options can make solar panels more affordable to install. Public education about how solar panels work in the winter, and how to help households generate their own renewable energy may create more buy-in for community members.

Data and Research: Research on renewable energy systems in the Upper Peninsula is important. Finding money for different research projects that focus on this region and the most affordable, sustainable, and efficient land use options for energy generation will help build confidence in our community. If data is tailored to this region's community needs and grid characteristics it will be useful as we make plans to meet our ideal vision for the future.

Energy Efficiency and Conservation Upgrades: Taking advantage of current initiatives and incentives to build with renewable energy and energy efficiency is important. Helping educate the community on the importance of energy conservation, and to guidge them to state, federal, and local programs is something that can be done today to work toward the key aspects of the shared vision discussed. Expanding funding for programs to upgrade and retrofit residential housing and commercial buildings in the Upper Peninsula is a feasible next step.