**PROJECT TITLE: Partnerships with municipal and cooperative utilities**

**I. PROJECT STATEMENT**

We propose to develop a three-year **research engagement platform** for university and non-profit experts to partner with diverse cohorts of municipal and cooperative utilities (“munis” and “co-ops”). The purpose of the project will be to build the internal capacity of Minnesota munis and co-ops and help them drive the modernization of our electric system. With cohorts of three to four munis and co-ops selected once per year for three years, we will work with utilities to develop targeted clean energy solutions that will help Minnesota meet its environmental goals.

Utilizing a system of “participatory action research,” where utilities co-create research questions and action strategies, experts will lead targeted studies in collaboration with the utility cohorts, leveraging existing expertise across our organizations and training student researchers through coursework and research assistantships. The combined expertise of the University of Minnesota, project partners, and utility participants will put us in an ideal position to generate new objective insights that are likely to be seen as credible and actionable. We also plan to host annual regional workshops with munis and co-ops to build and strengthen networks among the utilities, sharing our action-oriented findings to a broader audience.

This proposal is grounded in current necessity. The electricity sector is undergoing profound changes, including increasing pressure to reduce environmental impacts while offering consumers choices and keeping costs low. Minnesota’s 169 munis and co-ops provide electricity service to over 40% of Minnesotans and already lead some aspects of the energy system’s changes, but there is a substantial need for translation, amplification, and new research to reach all munis and co-ops in their particular local needs. Therefore, a broad perspective of the whole state is needed to address these challenges to allow utilities to develop sustainable business models to respond to these challenges.

This project works with municipal and cooperative utilities in their current regulatory framework to address those challenges. This is important because munis and co-ops do not see the same state or federal regulations as investor-owned utilities. For example, the state’s renewable energy standard set different targets for munis and co-ops. But as the state looks to reduce its electricity-sector carbon emissions and to electrify the transportation and thermal sectors to meet environmental goals, munis and co-ops and will need to be equipped to respond to external and internal pressures with sustainable solutions.

Each year’s cohort of utilities will address distinct questions to build a portfolio of solutions applicable to a wide range of Minnesota munis and co-ops. Research questions will focus on the organizational management and program design challenges of utilities but will leverage complementary engineering and other expertise as needed. Example research questions could focus on, (1) financial models to expand clean energy choices while keeping costs reasonable, (2) opportunities for beneficial electrification and the integration of new electricity demand, such as electric vehicles, (3) alternative rate designs that vary prices by time of day and season to use existing resources as efficiently as possible, (4) opportunities for on-bill financing to make residential energy efficiency more affordable, (5) analysis of power supply contracts to enable procurement of more supply and demand strategies that lower emissions, and (6) potential to integrate storage and load management technologies to increase renewable adoption and mitigate expensive peak power.

**II. PROJECT ACTIVITIES AND OUTCOMES**

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| **Activity 1: Participatory Action Research Teams***Annually in June of each year, a diverse cohort of 3 to 4 municipal and cooperative utilities will be selected as partner utilities. Research teams composed of graduate students, faculty, and staff from interdisciplinary backgrounds will work with utilities to co-develop a targeted problem-driven research question. Research teams will perform principal research activities in July to May each year, pulling in additional expertise and resources from across the University of Minnesota and the research team’s broader network of state and national experts. The main outcomes of the project will be delivery of targeted research products (reports, briefings, and presentations) for the partner utilities each year. Products will be delivered by May of the project year. Research results will be made publicly available on a dedicated website.***ENRTF BUDGET: $448,991 (divided approximately equally across three years)** |

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| **Outcome** | **Completion Date** |
| *1. Targeted research outcomes (report, briefing, and presentation) for three to four muni and co-op partners in each of three years* | *Annually on May of each year* |
| *2. Website to disseminate research outcomes* | *May, 2021* |

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| **Activity 2: Annual Regional Workshops***Annual regional workshops will highlight the research outcomes of the previous year with a broader set of muni and co-op partners. Cited in or near the communities where the work takes places, workshops will help convey the key research findings developed with the previous year’s cohort, holding up these muni and co-op leaders with their peers, and drawing connections to the challenges and opportunities faced by other munis and co-ops in the state.***ENRTF BUDGET: $7,500 (divided equally across three years)** |

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| **Outcome** | **Completion Date** |
| *1. Annual workshops in each of three years* | *Annually by June of each year* |

**III. PROJECT PARTNERS AND COLLABORATORS:**

The University of Minnesota Humphrey School will be the lead partner in this effort. Within the University, the Clean Energy Resource Teams (UMN Extension) and the Energy Transition Lab (Institute on the Environment) will join as partners in this project. Outside of the university, the Great Plains Institute will provide additional expertise and facilitation. We will engage a broader network of experts to provide additional (unpaid) input.

Already there is experience and appetite for this proposal. Over the past two years, the Humphrey School has led an effort to interview over 50 senior decision makers in Minnesota munis and co-ops. We recently released a report summarizing this work (<https://chan-lab.umn.edu/municoop>), which will serve as background research for our current proposal for direct engagement with munis and co-ops. Following the release of the report, we convened 35 executives from Minnesota munis and co-ops to solicit input for this project proposal. From this input, we developed this proposal’s core concept of developing a participatory engagement platform that places munis and co-ops as project partners with our team at each step of the program, from question formation through research execution, and even as the co-messengers of research findings to their peer utilities.

**IV. LONG-TERM IMPLEMENTATION AND FUNDING:**

As the costs of clean energy continue to decline and policies and research and development continue to lower the cost of energy technologies, munis and co-ops in Minnesota can create new opportunities to meet the state’s and nation’s environmental targets while maintaining their community focus. The results of this work will directly engage three to four utilities per year but will develop insights that are more broadly applicable to utilities across the state and region through publicly accessible research reports and briefings and an annual workshop open to all munis and co-ops.