APPENDIX O1 – SUMMARY OF IRP STAKEHOLDER ENGAGEMENT

Our plans for the future of our integrated system impact five states, millions of customers, thousands of employees, and hundreds of communities. We understand the interest and desire for stakeholders to be involved and help shape the future of our system. In light of this interest, we developed our Integrated Resource Plan through a robust external stakeholder process. This includes holding stakeholder workshops, engaging third party consultants, participating in studies that evaluate the impact of plant retirements on host communities, and working with the labor unions to ensure smooth transitions for our impacted employees. Below we discuss our stakeholder work to date in more detail.

I. STAKEHOLDER WORKSHOPS

The Company made a concerted effort to work with stakeholders in developing the Resource Plan, through both workshops and one-on-one meetings. We sent email invitations to over 300 individual stakeholders or organizations and held 13 public workshops that provided a forum for productive dialogue and education. Our goal was to educate stakeholders on the resource planning process and our Upper Midwest system – as well as gather stakeholder feedback and perspectives for incorporation into our Resource Plan. We also wanted to increase accessibility to our subject matter experts and the supporting data while enhancing collaboration. The meetings also revealed stakeholders' desire for additional, deeper discussions about our system, our Resource Plan, and the broader context of statewide decarbonization pathways.

Our meetings covered a variety of topics and featured external speakers and stakeholders including Chris Clack with Vibrant Clean Energy, Jesse Jenkins with Massachusetts Institute of Technology,[1] MISO, the Center for Energy and Environment, the Coalition of Host Communities, and Community Power. Table 1 below lists the Workshops we hosted.

[1] Now at the Harvard University Center for the Environment.

Table 1: Stakeholder Workshops

Workshop Topic	Date
The Evolving Integrated Planning Process	6/26/19
The Evolving Electric System - Part 1	8/22/18
The Evolving Electric System - Part 2	8/28/18
Economic and Technical Considerations – Part 1	9/10/18
Economic and Technical Considerations – Part 2	9/24/18
Recap 9/10 Workshop Webinar (Economic and Technical Considerations – Part 1)	10/5/18
Preliminary Results – Part 1	10/22/18
Preliminary Results – Part 2	10/23/18
Demand-Side Management, Storage and Q&A Panel	12/14/18
Modeling Inputs & Assumptions Webinar	2/11/19
Host Community Considerations	2/12/19
Xcel Energy Non-Technical Overview Session	4/2/19
E3 Modeling Results	4/17/19
Xcel Energy Preliminary Preferred Plan	5/20/19

We also filed all supporting documents and presentations from the workshops in Docket No. E002/RP-15-21.

As this Resource Plan contemplates the long-term resource mix for five states, as discussed in the Planning Landscape section, we have also had discussions with various regulatory agencies in multiple jurisdictions to hear and understand their needs and concerns and incorporate those where possible.

As a result of all of this stakeholder collaboration, we made changes to several inputs and modeling approaches and also kept this in mind as we prepared the narrative supporting our proposed plan. For instance, in response to input from energy efficiency stakeholders and using the results from the *Minnesota Energy Efficiency Potential Study*,[2] we modeled energy efficiency as a supply side resource for the first time in this Resource Plan, an innovation that led to significantly more energy efficiency being selected than in prior plans. We also changed the source for our renewable pricing assumptions in response to stakeholder feedback. And in response to stakeholders' strong interest in electrification as a possible pathway to accelerate progress on the State's greenhouse gas goals, we created a load forecast sensitivity exploring the potential energy and peak demand impacts on our system of a scenario with aggressive electrification of transportation, water heating and space heating. We

[2] *Minnesota Energy Efficiency Potential Study: 2020–2029*. Conservation Applied Research and Development (CARD) FINAL Report. Prepared for the Minnesota Department of Commerce, Division of Energy Resources, by Center for Energy and Environment, Optimal Energy and Seventhwave. December 2018.

appreciate the time and input stakeholders have provided to date and believe the proposed plan—and this filing— has benefitted from it. We look forward to continued discussions as this process progresses.

II. EXTERNAL CONSULTANTS

We engaged a national expert on energy policy and economics, Dr. Susan Tierney with Analysis Group, to facilitate and host our Resource Plan stakeholder workshops as well as several smaller stakeholder meetings. Dr. Tierney not only brought a national perspective into the conversation but was also an independent third party that helped facilitate engaging and productive dialogue with stakeholders.

We also retained a consultant, Energy and Environmental Economics, Inc. (E3), to perform independent modeling and analysis of our system in order to ensure transparent work and access to the data and models for stakeholders. E3 is a recognized industry-leading firm based in San Francisco and consults extensively with utilities, developers, government agencies, and environmental groups on clean energy issues. E3's experience analyzing the impacts of deep decarbonization on utility systems in other parts of the country was very valuable to us in evaluating the impacts of decarbonizing our Upper Midwest System. E3 used three types of models to provide perspective on our Resource Plan:

- The RESOLVE model, which evaluates and optimizes the least-cost portfolios of resources to meet system demand considering carbon and other constraints,
- The RECAP model, which evaluates the reliability of electric energy and system capacity of the optimized resource portfolios over thousands of simulated weather years, and
- The PATHWAYS model, an economy-wide representation of infrastructure, energy use, and emissions within a specific jurisdiction used to create emissions accounting scenarios and model energy and climate policies. PATHWAYS was used in this project to evaluate scenarios for meeting Minnesota's statutory goal of 80 percent economy-wide reduction in greenhouse gases below 2005 levels by 2050.

E3's independent modeling results, which were generally consistent and supportive of our Strategist modeling results, were presented to, and discussed with, stakeholders in a workshop, and the results were made publicly available via the eDockets filing system after the stakeholder workshops. In addition, their completed RESOLVE and RECAP reports are also included with this Resource Plan submission as Appendix P2.

Working with E3 on their PATHWAYS to model scenarios to achieve Minnesota's 80 percent economy-wide greenhouse gas reduction goal provided a broader context for our Resource Plan, exploring the potential not only to decarbonize the statewide electricity system but also spread the benefit of low-carbon electricity to other economic sectors. E3's PATHWAYS Report is provided as Appendix P3. E3 modeled two mitigation scenarios – High Electrification and High Biofuels – and three sensitivities, as summarized in Appendix F4. Stakeholder feedback, both in the September 23 and October 24, 2018 stakeholder workshops and in individual meetings, informed the assumptions and modeling approach. In addition, the Company and E3 met with the Minnesota Pollution Control Agency (PCA) and Minnesota Department of Transportation (MnDOT) during the modeling process to acquire state-specific emissions, transportation, and econometric data, discuss assumptions and methodology, and present results. We offered to make the PATHWAYS model, now calibrated for Minnesota, available to the State for future analyses supporting the statewide greenhouse gas goals. As an immediate outgrowth of this effort, MnDOT is now working with E3 in the Pathways to Decarbonizing Transportation project, where E3 is using PATHWAYS to model strategies for reducing greenhouse gas emissions from the transportation sector.[3] Analyses for other sectors may follow.

III. HOST COMMUNITY WORK

The Company is participating in a study overseen by the Center for Energy and Environment (CEE) that will examine the impacts of the large baseload generation plants in Minnesota on the host communities. The other participants in the study include the Coalition of Utility Cities, Minnesota Power, and the Prairie Island Indian Community. The study will consist of a quantitative and qualitative component. The quantitative component of the study is similar to the study we conducted for Sherco 1 and 2 in our last IRP. For the qualitative component, CEE will engage with host community residents and business to gauge awareness, opinions and concerns around potential power plant closures. Efforts on both components are underway and we will supplement this IRP filing when each component is completed. As this docket progresses, we expect to be able to incorporate further findings and hold additional discussions incorporating the finalized report outcomes. Further discussion of the scope and status of this study is included as Appendix O2.

In addition, we also worked with the Nuclear Energy Institute (NEI) to evaluate the impact of our nuclear fleet on the Minnesota Economy. Our nuclear plants employ approximately 1,400 staff in and around the Monticello and Redwing communities,

[3] See http://www.dot.state.mn.us/sustainability/pathways.html.

which translates into an estimated 4,200 additional jobs in other industries across Minnesota. The plants are also important sources of tax base for their host communities, resulting in a combined total of approximately $42 million in state and local taxes annually. In total, Xcel Energy's nuclear operations contribute approximately $1 billion in annual economic benefits throughout the state. These and other benefits area summarized in NEI's April 2017 report titled "The Impact of Xcel Energy's Fleet on the Minnesota Economy," which looked at data from 2014-2016[4] and is attached as Appendix O3.

We acknowledge the role our plants play in the communities in which they are located and look forward to working with these stakeholders on transition plans as this Resource Plan progresses and plant closure dates draw nearer.

IV. LABOR

We are also working closely with labor unions and that work has resulted in support from the Infrastructure Union (LIUNA) for our preferred plan. LIUNA has stated that they appreciate and acknowledge that Xcel Energy has provided high-quality jobs that have sustained families and communities for generations and appreciate our commitment to supporting communities and employees through this energy transition.

Moving forward we will continue to work with local unions and set a course to negotiate multiskilling for the plants that are impacted by this Resource Plan. This skill set will position our employees for other job opportunities within Xcel Energy. As we get closer to plant closure dates, temporary work force will be utilized to back-fill impacted employees who have moved to other positions within the Company. This strategy lessens the burden and stress for impacted employees to find positions, as plant near closure dates.

In addition, plant management, Work Force Relations and Human Resources will work together with other business organizations within Xcel Energy to help coordinate interviews for affected employees.

[4] The 1,400 staff and $42 million in state and local taxes referenced above reflects updated information as through 2018.

V. CONCLUSION

We understand the interest and desire for our stakeholders to be involved and help shape the future of our system. We have put forward a concerted effort to engage these stakeholders at the outset and believe we have done a good job at doing so—but this work is just beginning. As this process unfolds and the plant closure dates approach, we will continue our successful track record of engaging parties, transitioning our workforce, looking for new investments, creating new jobs, and working with impacted communities and employees on transition plans.