Minnesota Energy Efficiency Potential Study: 2020 – 2029

Utility Reporting Tools Guide

<u>Overview</u>

The utility reporting tool enables results of the potential study to be examined in more granular detail, including by:

- Individual utility (Both electric and natural gas)
- Building segment
- End use
- Measure

Note that the modeling inputs for this potential study were varied by model region when supported by available data, but many assumptions were statewide. See the "Derivation of Utility-Level Estimates" section below and Appendix A: **Methodology and Data Sources** for additional detail.

<u>Key filtering options</u>

The reporting tool provides for several ways to view and filter results. Key filtering options are explained in more detail here:

Potential type – the tool allows you to view any of the three types of energy efficiency potential: Economic, Maximum Achievable and Program. Most users will want to leave this set at the default of Program potential, since this reflects the most realistic assumptions about what could be achieved by utility programs.

Savings view – you can choose to view incremental or cumulative potential. Incremental potential shows first-year impacts associated with each year's program accomplishments. Cumulative potential combines the first-year impacts of the current year with those for all prior years in the 2020-2029 analysis window. [Note that per CIP policy, potential incremental impacts from certain behavioral measures are divided by three for reporting here; for cumulative impacts, these impacts are shown in their entirety.]

Select utility view – choices here allow you to select how results are combined and shown:

- "Utility type" rolls up results to three types of utilities: investor-owned, cooperative and municipal.
- "Potential model" rolls up results according to the seven groupings that were used in the actual modeling. [Note: this option is not available for natural gas results.]
- "Utility group" combines cooperative and municipal utilities according to the power-marketing membership organizations to which they belong.
- "Utility" shows results at the level of individual utilities

Utility – allows you to filter results to one or more individual utilities

Sector and **segment** – provide for the ability to filter results more specifically to certain types of utility customers; three broad customer sectors (residential, commercial and industrial) and 21 more detailed customer segments that were defined for the study.

Enduse – provides for the ability to restrict the results to one or more of the 21 end uses that were defined for the study.

Measure – this filter allows you to restrict the results to one or more individual energy efficiency measures considered by the study.

Derivation of utility-level estimates

The study itself was conducted using seven models oriented around groupings of electric utilities (three investor-owned utility models, and four models for northern and southern groupings of both cooperative and municipal utilities). See Appendix A: **Methodology and Data Sources** for additional detail about the models and the way the study was implemented.

The tool goes one step further and divides the model-level estimates among individual utilities represented in each grouping. This was done by allocating the model-based savings potential in proportion to each utility's fraction of sales as determined in the sales-disaggregation portion of the study, which was implemented at the utility level. For example, if, the sales-disaggregation analysis showed that a utility represented five percent of total electric sales for lighting in the small-office segment, then five percent of the total energy efficiency potential for all lighting measures in small offices would be allocated to that utility.

The utility-level results thus represent semi-customized estimates of energy efficiency potential for customer-owned utilities that were modeled in groups rather than individually. On the one hand, the potential estimates are customized to utility-specific estimates of customer composition and load. On the other hand, the estimates derive from common assumptions about per-unit savings, market penetrations and other factors that were developed for the four customer-owned utility models.

Utility-level estimates for the state's natural gas utilities are slightly more complicated. Because the overall modeling was done based on electric-utility groupings, gas utility results were often split across models. For example, the service area for Minnesota Energy Resources spans several of the seven electric-utility models. The sales disaggregation analysis tracked these proportions at the customer-segment and end-use level, which then allowed utility-level allocation of the gas results from each model in the manner described above. In this respect, the gas-utility estimates are somewhat more customized than the electric-utility results in the sense that they capture climate and geography differences inherent in the model groupings.

It should also be noted that incremental potential for residential behavioral measures in the reporting tool are, per CIP policy, adjusted by dividing by a factor of three. Cumulative savings are not adjusted in this way.