

**State of Minnesota
Before the Public Utilities Commission**

Katie Sieben	Chair
Valerie Means	Commissioner
Matthew Schuerger	Commissioner
Joseph Sullivan	Commissioner
John Tuma	Commissioner

In the Matter of a Petition by Citizens Utility
Board of Minnesota to Adopt Open Data Access
Standards

Docket No. E,G-999/M-19-505

In the Matter of a Commission Inquiry into
Privacy Policies of Rate-Regulated Energy
Utilities

Docket No. E,G-999/CI-12-1344

Comments of the Citizens Utility Board of Minnesota

The Citizens Utility Board of Minnesota (“CUB”) respectfully submits these comments in response to the Notice of Comment Period issued by the Minnesota Public Utilities Commission (“the Commission”) in this docket on February 11, 2022.

CUB is a nonprofit organization that advocates on behalf of residential ratepayers for affordable, clean energy and consumer protections in utility service. In addition to advocating for consumers before the Commission and at the Minnesota Legislature, CUB provides Minnesotans with information on how to reduce their utility bills and the environmental impacts of their home energy use and answers utility-related questions for Minnesotans across the state.

These comments have been informed by our conversations with utilities and other parties. Recognizing that this is a complex and wide-ranging topic, CUB had in-depth discussions with more than 15 anticipated parties to the docket prior to writing these comments. While we have not reached consensus on several issues, we found these discussions helpful in expanding our understanding of the present topic and tradeoffs inherent in it. We suggest several adjustments to the Open Data Access Standards (“ODAS” or “the Standards”) in these comments. We look forward to further discussion with parties and remain open to additional modifications to allow for third-party data access while protecting customer privacy.

CUB appreciates the Commission’s deliberate approach to data access to date. The topic of data access is evolving quickly – in the energy sector and across the economy – and CUB believes that this will continue to be a “living” docket, revisited periodically as warranted by technological advances and public policy goals.

We believe that the implementation of the Standards, allowing for third-party access to aggregated and anonymized customer energy use data, is the appropriate next step in this process. State policy goals, the urgency of the need for action to reduce greenhouse gas emissions, and the increasing

demand for data regarding energy use necessitate such access. Moreover, the advancement of time-of-use (“TOU”) rates, widespread deployment of advanced metering infrastructure (“AMI”) on the horizon, and electrification all require an understanding of customers’ energy usage than can only be gleaned from the granular customer energy use data (“CEUD”) provided by the Standards. Fortunately, in advancing data access, Minnesota now has the benefit of learning from the experience of states that have adopted similar standards and from those local utilities who have been providing similar data access for years.

With the changes proposed herein, CUB respectfully requests that the Commission implement the Open Data Access Standards in their entirety.

I. Background

A. Procedural history

In 2012, the Commission opened an inquiry into the privacy policies of rate-regulated energy utilities.¹ In that docket, the Commission recognized that allowing access to CEUD could serve the public interest, and that “the choice to limit access to CEUD may limit the ability to achieve these objectives.”² The Commission also recognized that third-party access to CEUD must be done under appropriate protections to avoid disclosing information about individual customers’ households, businesses, or behaviors.

As CUB summarized previously in this docket,

In its January 19, 2017 order in the data privacy docket, the Commission took a cautious “wait-and-see” approach to energy data access. The Commission ordered that “[a] utility shall not disclose CEUD without the customer’s consent unless the utility has adequately protected the anonymity of the CEUD,” but declined to impose any single data aggregation standard or to define what was required to adequately protect customer anonymity.³ Instead, the Commission opted to allow each utility to set its own aggregation standards, if they chose to do so. The Commission acknowledged the importance of tracking and learning from utilities’ standards, and the possibility of revisiting its decision. The order states: “*At this time* the Commission will not specify any one technique or procedure a utility must follow to adequately protect a customer’s anonymity. Instead, the Commission will direct utilities to file their practices with the Commission.”⁴

In November 20, 2020, the Commission took a measured step forward in utility data access, adopting Open Data Access Standards in response to a CUB petition. The Standards establish rules by which utilities share customer energy use data with qualifying third parties, addressing “the collection and sharing of data in two formats: (1) the collection of energy use data of customers within defined

¹ *In the Matter of a Commission Inquiry into Privacy Policies of Rate-Regulated Energy Utilities*, Docket No. E,G-999/CI-12-1344 (“data privacy docket”).

² *In the Matter of a Commission Inquiry into Privacy Policies of Rate-Regulated Energy Utilities*, Docket No. E,G-999/CI-12-1344, Order Governing Disclosure of Customer Energy Use Data to Third Parties, Requiring Filing of Privacy Policies and Cost Data, and Soliciting Comment (January 19, 2017, “Jan. 19, 2017 Order”) at 17.

³ *Id.*, Order Point 2.

⁴ *Id.* at 8. Emphasis added.

geographic areas aggregated into single points (aggregated CEUD), and (2) individual sets of interval use data, anonymized and grouped within defined geographic areas (anonymized CEUD).⁵ Specifically, the Commission's Order stated:

The Commission approves the Open Data Access Standards ... for electric and natural gas utilities. The Open Data Access Standards will be implemented in a multi-step process. At this time the Commission will apply the standards to whole building aggregated customer energy use data (CEUD) for building owners and benchmarking purposes.⁶

The Commission is implementing the Standards in a multi-step manner in order to allow for further record development on a number of questions while putting the Standards to work to “help advance the state’s energy goals, including potential energy savings and reductions in greenhouse gas emissions ... at little risk to customer privacy.”⁷ The Commission identified six questions for further comment; those questions form the basis of the present Notice of Comment Period.

The Commission also requested that the Commissioner of Commerce seek authority to incur costs to retain an independent expert to provide advice on these and other issues.⁸ On February 26, 2021, the Commission hosted a technical conference, in which the Regulatory Assistance Project (“RAP”) presented on approaches to Open Data Access Standards in other states. RAP’s presentation and an associated issue brief were filed in this docket.⁹

B. Purpose of Open Data Access Standards

Customer energy use data will be crucial to the state’s goals regarding energy efficiency and conservation,¹⁰ greenhouse gas reductions,¹¹ just and reasonable rates,¹² affordable and competitive rates,¹³ and equity in utility regulation.¹⁴ As CUB wrote in our November 5, 2019 reply comments in this docket:

⁵ *In the Matter of a Petition by Citizens Utility Board of Minnesota to Adopt Open Data Access Standards*, Docket E,G-999/19-505, Citizens Utility Board of Minnesota Notice of Petition to Adopt Open Data Access Standards (Aug. 6, 2019) at 1.

⁶ *In the Matter of a Petition by Citizens Utility Board of Minnesota to Adopt Open Data Access Standards*, Docket No. E,G-999/M-19-505, Order Adopting Open Data Access Standards and Establishing Further Proceedings (Nov. 20, 2020, “Nov. 20, 2020 Order”) Order Point 1.

⁷ *Id.*, at 6.

⁸ *Id.*, Order Point 5.

⁹ *In the Matter of a Petition by Citizens Utility Board of Minnesota to Adopt Open Data Access Standards*, Docket No. E,G-999/M-19-505, The Regulatory Assistance Project, Open Data Access Standards: Approaches in Other Jurisdictions (Feb. 26, 2021, filed Sep. 7, 2021, “RAP Issue Brief”).

¹⁰ Minn. Stat. § 216B.2401, 216B.241, and 216C.05

¹¹ Minn. Stat. § 216H.02, Subd. 1

¹² Minn. Stat. § 216B.03

¹³ Minn. Stat. § 216C.05

¹⁴ For example, the Commission’s website states: “The Minnesota Public Utilities Commission is committed to addressing diversity, equity, and inclusion in its workplace and in the energy industries we regulate” (<https://mn.gov/puc/about-us/equity-inclusion/>). The Commission has acted on that commitment in recent dockets: e.g. Xcel’s Integrated Resource Plan, requiring Xcel to take specific steps to “focus on disadvantaged populations - populations that may have not received appropriate attention in the past” and “solicit input from members of these historically disadvantaged communities” (*In the Matter of the 2020–2034 Upper Midwest*

Nearly all parties that filed initial comments in this docket recognize that, as Clean Energy Economy Minnesota (“CEEM”) stated, “[c]onvenient access to customer and system data is critical to enabling the development of a modern electricity grid.”¹⁵ Parties cited the value of such data in enabling third parties to evaluate and demonstrate the benefits of time-of-use rates;¹⁶ enable beneficial electrification, demand response, and energy efficiency;¹⁷ benchmark energy use for effective energy management;¹⁸ monitor and advance local government energy goals;¹⁹ and more.²⁰

Similarly, the Commission found:

Data regarding customer energy use can help people – including people other than the customers in question – identify opportunities to pursue energy efficiency, conservation, and economic competitiveness, and to measure the effectiveness of those efforts. This data may be helpful in permitting greater use of electricity from renewable sources and reducing greenhouse gas emissions.²¹

Many local and regional governments across Minnesota rely on aggregated CEUD to develop strategies to achieve their climate and energy goals and to measure progress in achieving those goals. Greenhouse gas inventories informed by utility CEUD enable local governments to prioritize strategies to reduce emissions, including taking advantage of energy efficiency offerings through utility Conservation Improvement Programs as well as efforts initiated by the local governments and their partners. For example, informed by the finding that the use of electricity and natural gas in the building sector accounts for 58% of the community’s greenhouse gas emissions,²² the City of St. Louis

Integrated Resource Plan of Northern States Power Company d/b/a Xcel Energy, Docket No. E-002/RP-19-368, Order Approving Plan with Modifications and Establishing Requirements for Future Filings (Apr. 15, 2022) at 30); and approval of an Xcel pilot program to increase workforce participation “by women and members of the Black, Indigenous, and people of color (BIPOC) community who are historically underrepresented in the building trades” (*In the Matter of the Petition for Approval of a Workforce Training and Development Program Pilot*, Docket No. E-002/M-21-558, Order Approving Framework and Setting Additional Requirements (Feb. 22, 2022) at 2).

¹⁵ *In the Matter of a Petition by Citizens Utility Board of Minnesota to Adopt Open Data Access Standards*, Docket No. E, G-999/M-19-505, Clean Energy Economy Minnesota Initial Comments (Oct. 15, 2019) at 2.

¹⁶ *In the Matter of a Petition by Citizens Utility Board of Minnesota to Adopt Open Data Access Standards*, Docket No. E, G-999/M-19-505, Fresh Energy, National Housing Trust, and Natural Resources Defense Council Initial Comments (Oct. 15, 2019, “Fresh Energy et al Oct. 2019 Initial”) at 3.

¹⁷ *In the Matter of a Petition by Citizens Utility Board of Minnesota to Adopt Open Data Access Standards*, Docket No. E, G-999/M-19-505, Minnesota Large Industrial Group Initial Comments, (Oct. 15, 2019, “MLIG Oct. 2019 Initial”) at 10. Fresh Energy et al Oct. 2019 Initial at 3.

¹⁸ *In the Matter of a Petition by Citizens Utility Board of Minnesota to Adopt Open Data Access Standards*, Docket No. E, G-999/M-19-505, Department of Commerce, Division of Energy Resources Initial Comments (Oct. 15, 2019) at 9; Center for Energy and Environment Initial Comments (Oct. 15, 2019, “CEE Oct. 2019 Initial”) at 2; Fresh Energy et al Oct. 2019 Initial at 4.

¹⁹ *In the Matter of a Petition by Citizens Utility Board of Minnesota to Adopt Open Data Access Standards*, Docket No. E, G-999/M-19-505, City of Minneapolis Initial Comments (Oct. 15, 2019, “Minneapolis Oct. 2019 Initial”) at 1.

²⁰ *In the Matter of a Petition by Citizens Utility Board of Minnesota to Adopt Open Data Access Standards*, Docket No. E, G-999/M-19-505, CUB Reply Comments (Nov. 5, 2019, “CUB Nov. 2019 Reply”) at 2.

²¹ Nov. 20, 2020 Order at 3.

²² St. Louis Park [Climate Action Plan](#) (Feb. 2018) at 10.

Park adopted an Efficient Building Benchmarking Ordinance, requiring reporting of whole-building energy use by certain large buildings.²³ Similarly, informed by aggregated CEUD, the City of Minneapolis has found that electricity and natural gas account for nearly three-quarters of greenhouse gas emissions in the city.²⁴ With this knowledge, Minneapolis has adopted ordinances requiring building energy benchmarking and time-of-sale and time-of-rent energy disclosure²⁵ and has directed City resources towards efficiency through programs like one that provides cost share for energy efficiency projects.²⁶ Many government entities have worked with their utilities to gain access to much of the data that they need to conduct these inventories. However, as will be discussed below, access to privacy-protected CEUD can be inconsistent, and obstacles persist for organizations that seek to use CEUD in furtherance of the public interest.

Aggregated and anonymized CEUD can also inform greenhouse gas reduction by the Commission and other decision makers at the utility or state levels. For example, by analyzing anonymized CEUD from Illinois utility Commonwealth Edison's ("ComEd") AMI, the Citizens Utility Board of Illinois ("CUB Illinois")²⁷ identified the marginal greenhouse gas ("GHG") emissions of ComEd customers with six distinct usage profiles, suggesting that load management and energy conservation strategies tailored to each customer type could have the equivalent benefit of taking 160,000 cars off the road.²⁸ A further analysis found that climate change will lead to ComEd customers consuming 3.9 TWh additional electricity by 2050, at a cost to customers of nearly \$11 billion.²⁹

Privacy-protected CEUD is also essential to understanding and addressing inequities in utility rates and programs – a topic that has emerged with increasing frequency in Commission dockets. Class-level data or data about a utility's "average" residential customer hides severe disparities in affordability, inequities in rate design, and program delivery disparities that likely align with Minnesota's deep racial disparities. In employment, poverty, homeownership, educational attainment, and more, the disparity between the states' white residents and residents who are Black, Indigenous, or People of Color ("BIPOC") is among the most egregious in the nation.³⁰ Such disparities extend to energy as well: it is well documented that BIPOC consumers more often have trouble affording energy bills³¹ and are likely to have higher energy burdens than the average household.³²

²³ St. Louis Park City Code § 6-301.

²⁴ City of Minneapolis, [2020 GHG Emissions Update](#) (Nov. 4, 2021).

²⁵ City of Minneapolis Code of Ordinances § 47.190 and 248.75.

²⁶ City of Minneapolis Energy Efficiency Programs, <https://www2.minneapolismn.gov/government/programs-initiatives/environmental-programs/green-cost-share/energy-efficiency>, accessed May 17, 2022.

²⁷ Created by Illinois statute in 1983, CUB Illinois is wholly independent of the Citizens Utility Board of Minnesota.

²⁸ Jeff Zethmayr and Ramandeep Singh Makhija, "[Using electricity customer profiles to combat GHG emissions: New evidence from ComEd AMI data](#)," *The Electricity Journal* 34 (2021).

²⁹ Citizens Utility Board (Illinois), "The Impact of Climate Change on Future ComEd Electricity Demand and Costs: New Evidence from Advanced Metering Infrastructure Data," Working paper, available at <https://www.citizensutilityboard.org/wp-content/uploads/2021/06/Cost-of-Climate-Change-Paper.pdf>, accessed May 17, 2022.

³⁰ Randy Furst and Maryjo Webster, "[How did Minn. become one of the most racially inequitable states?](#)" *Star Tribune* (Sept. 6, 2019).

³¹ Sasha Ingber, "[31 Percent of U.S. Households Have Trouble Paying Energy Bills](#)," National Public Radio (Sept. 19, 2018).

³² Ariel Dreihobl et al, "[How High are Household Energy Burdens? An Assessment of National and Metropolitan Energy Burdens across the U.S.](#)," American Council for an Energy-Efficient Economy (Sept. 10, 2020).

Native American households in Minnesota spend 45% more of their income than white households on energy costs, Black households spend 43% more, and Hispanic households spend 20% more.³³ However, analysis of racial and ethnic disparities in Minnesota utilities' rates and programs – and the other demographic characteristics along which disparities align – is limited by the fact that Minnesota utilities do not generally collect demographic information on their customers.

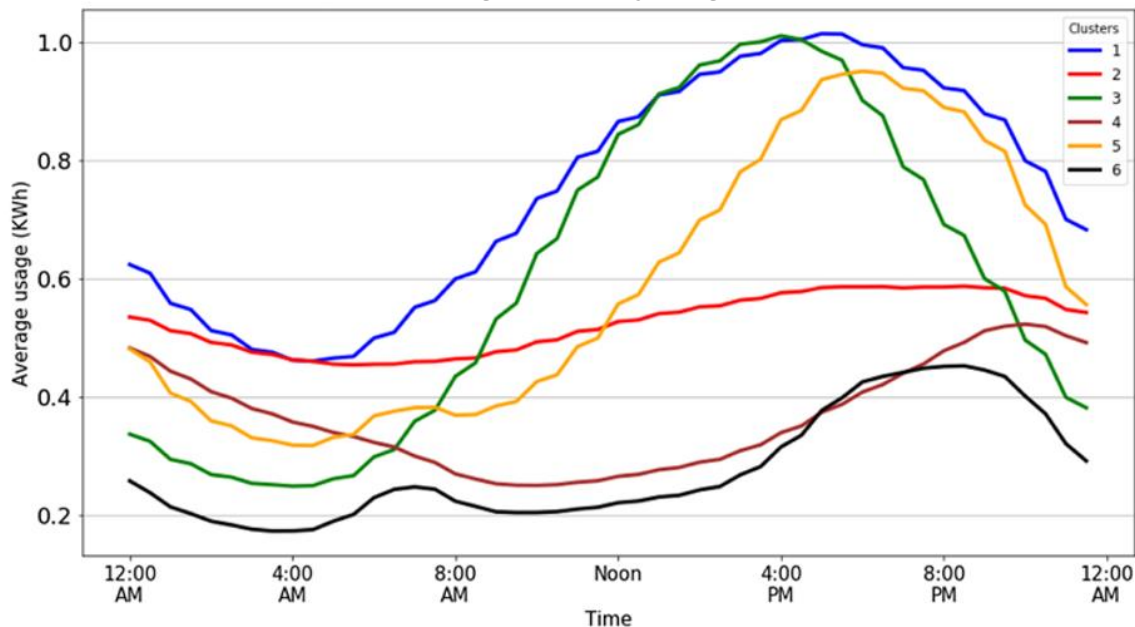
Privacy-protected CEUD can fill this information gap, illuminating the nature and, to a significant degree, causes of these disparities. This is illustrated clearly by a 2019 CUB Illinois analysis that found that low-income households, on the whole, paid more than their fair share for their electricity service, subsidizing their higher income neighbors. CUB Illinois analyzed the anonymized CEUD of more than 2.5 million Illinois households. The analysis found that customers generally fall into one of six typical load shapes, ranging from nearly flat loads (indicating that customers use about the same amount of electricity 24 hours a day) to high-use, very peaky loads (customers who use a lot of energy overall, and especially during peak demand hours in the late afternoon and early evening). Then, the analysts looked at where customers in each of the six clusters lived and correlated those locations with demographic data from the U.S. Census. They found that low-income customers were far more likely to use less energy during peak hours, which they attributed largely to households living in apartments without central air conditioning. (Low-income households fell most often into Cluster 2 and Cluster 4 in the chart below.) In other words, low-income customers in the study area generally use less of the expensive, on-peak electricity than the average residential customer. That means that low-income customers paying typical flat electricity rates generally pay more than the cost of providing their electricity. The study concluded:

[T]his cross-subsidization has particularly harmful consequences, considering low-income households already pay a higher proportion of their income on utility bills. This finding should encourage utilities and utility commissions to adopt a wider offering of dynamic rate designs that may more accurately reflect customers' cost of service, reducing this cross-subsidization.³⁴

³³ Christine McCormick, "Energy Inequity in Minnesota," forthcoming from CUB.

³⁴ Jeff Zethmayr and Ramandeep Singh Makhija, "[Six unique load shapes: A segmentation analysis of Illinois residential electricity customers](#)," *The Electricity Journal* 32 (2019) at 7.

Six Unique Load Shapes of Illinois Households: Average Electricity Usage³⁵



It is quite possible that an analysis of anonymized electricity usage in central or southern Minnesota – areas with widespread central air conditioning – would illuminate similar inequitable rates. If so, such an analysis may suggest regulatory actions to comply with the statutory mandate for “just and reasonable” rates.³⁶

Third-party access to privacy-protected CEUD is especially important as widespread deployment of AMI is around the corner. Consistent access to usable data generated by AMI is commonly identified as a critical component of the benefit-cost calculation that supports AMI investment.³⁷ Xcel Energy alone is planning to invest \$564 million in AMI and the related field area network (“FAN”)³⁸ and to have rolled out AMI meters for all customers by the end of 2024.³⁹ Minnesota Power is scheduled to complete its AMI deployment by the end of 2023.⁴⁰ The much more granular CEUD that will be available through this updated metering technology must be used for public-interest analysis such as the examples cited above, and Open Data Access Standards are needed to grant third parties access to privacy-protected data from these meters. Such analysis is especially timely as Minnesota utilities

³⁵ Id. Fig. 2 at 3.

³⁶ Minn. Stat. § 216B.03

³⁷ See, e.g., *In the Matter of Xcel Energy's 2019 Integrated Distribution Plan*, Docket No. E002/M-19-666, CUB Initial Comments, “Review and Recommendations for the Xcel Energy Integrated Distribution Plan,” prepared by Strategen Consulting at 15-16.

³⁸ *In the Matter of Northern States Power Company d/b/a Xcel Energy's Petition for Approval of the Transmission Cost Recovery Rider Revenue Requirements for 2021-2022, and the Resulting Adjustment Factors by Customer Class*, Docket No. E002/M-21-814, Xcel Initial Petition, Attach. 4, (Nov. 24, 2021) at 55.

³⁹ *In the Matter of Xcel Energy's 2021 Integrated Distribution System Plan and Request for Certification of Distributed Intelligence and the Resilient Minneapolis Project*, Docket No. E002/M-21-694, Xcel Integrated Distribution Plan, Appendix A4 (Nov. 1, 2021) at 4.

⁴⁰ *In the Matter of Minnesota Power's 2021 Integrated Distribution System Plan*, Docket No. E002/M-21-390, Minnesota Power 2021 Integrated Distribution Plan (Oct. 25, 2021) at 17.

move toward time-of-use rates, which have the potential to substantially alter some customers' bills.⁴¹ Further, as CUB stated previously in this docket, "[i]t has become clear that electrification, while it has the potential to help reduce electricity costs and emissions if properly implemented, could put great strain on utility grids and customer bills if it is not well managed.... All of these developments will require data access beyond what is required today in order to maximize ratepayer benefits and minimize potential negative impacts."⁴²

C. Protecting ratepayer privacy

Of course, utility customers have a reasonable expectation of privacy with respect to their CEUD. As noted, the Commission has determined that utilities "should refrain from disclosing CEUD without the customer's consent unless the utility has adequately protected the customer's anonymity."⁴³ Even when a customer's identity is not provided, it may be possible for a third party to re-identify a customer included in a data set based on other known characteristics of that customer, such as their location and business characteristics.

For that reason, the Standards rely on nationally accepted methods for protecting privacy to minimize any risk that a customer's CEUD would be discoverable. Under the Standards, requests for aggregated or anonymized CEUD must include a minimum number of customers, and no single customer can exceed a minimum portion of the energy use within the data set. Recognizing the more sensitive nature of anonymized data, the Standards set a stricter screen for anonymized CEUD. Further, privacy screens are an industry-standard method of protecting customer anonymity. In developing its issue brief for the Commission, RAP reports that researchers "reviewed the record from more than a dozen state PUC proceedings investigating policies for third party access to aggregated or anonymized CEUD" and "[t]he issue of privacy screens features prominently in every case we reviewed."⁴⁴ Privacy screens have been in use by Minnesota utilities since at least 2014.⁴⁵ The Standards further protect customer privacy by allowing data requests only by set geographic boundaries, to reduce geographic overlapping that might allow a third party to reverse engineer a data set and identify any included customers, and by allowing utilities to deny any request that would jeopardize customer privacy.

The Commission recognized that large industrial facilities have "unique privacy concerns" and requested further record development in this comment period in order to determine how to appropriately apply the Standards to these customers.⁴⁶ Recognizing that that large customers were unlikely to be sited in multi-unit buildings and so would likely be unaffected by the implementation of the Standards for building benchmarking purposes, the Commission adopted the request of the Minnesota Large Industrial Group to exempt customers with peak demands greater than 5 megawatts

⁴¹ Minnesota Power is moving to a default time-of-day rate over the next five years ([Notice of Change to Residential Rates](#), Oct. 1, 2021). Xcel has an ongoing time-of-use rate pilot (*In the Matter of Xcel's Residential Time of Use Rate Design Pilot Program*, Docket No. 17-775).

⁴² *In the Matter of a Petition by Citizens Utility Board of Minnesota to Adopt Open Data Access Standards*, Docket No. E,G-999/M-19-505, CUB Initial Comments (Oct. 15, 2019, "CUB Oct. 2019 Initial") at 3.

⁴³ Jan. 19, 2017 Order at 2.

⁴⁴ RAP Issue Brief at 20.

⁴⁵ The September 15, 2014 report of the CEUD Workgroup in Docket E, G-999/CI-12-1344 notes that Xcel Energy applied a 15/15 rule to aggregated data as a "corporate-wide policy and practice" (at 47).

⁴⁶ Nov. 20, 2020 Order at 6.

and requested further comment on that issue in its February 11, 2022 Notice of Comment Period.⁴⁷ As Commissioner Schuerger stated in the Commission's July 16, 2020 hearing, "we're only starting with whole building aggregated [CEUD] today, [so] we have time to work on that."

D. Summary of the Standards

The Standards, as adopted by the Commission, apply to "investor-owned electric or gas public utilities with greater than 50,000 customers within the state of Minnesota."⁴⁸ Pursuant to the Standards, qualifying third parties may request, and utilities generally must provide, CEUD that has been privacy protected – so that no single customer's energy usage can be identified within the data set – by one of two means: either aggregated, by combining the energy use data of multiple customers within defined geographic areas into single data points, or anonymized and grouped within defined geographic areas.

Pursuant to the Standards, CEUD is sufficiently aggregated when a data set contains at least four customers and no single customer accounts for more than 50 percent of the energy use in the data set (the "4/50 screen" or "4/50 standard").⁴⁹ Anonymized data sets must include at least 15 customers with no single customer whose energy use accounts for more than 15 percent of energy use in the data set (the "15/15 screen" or "15/15 standard").⁵⁰ Data sets that violate these screens may only be provided upon the written consent of the affected customers.⁵¹ Notwithstanding the above, the Standards preserve a utility's right to "refuse to provide aggregated or anonymized CEUD when it reasonably believes the data release would allow the third party to re-identify customers, violate the terms of the contract ..., or otherwise use the data in violation of these standards."⁵²

The Standards further provide the types of entities that may request aggregated⁵³ or anonymized⁵⁴ data, the geographic boundaries by which data may be requested;⁵⁵ contractual requirements for the provision of anonymized data;⁵⁶ rules regarding the type, format and delivery of data;⁵⁷ and fees that may be charged to prepare and supply CEUD.⁵⁸

As has been discussed:

The proposed standards recognize that a utility may not have the ability to provide all of the data that a third party could request, and do not demand utilities provide data that they do not have or that would be unreasonably onerous to produce. The standards lay out a method by which third parties may request CEUD that utilities collect. They do [not] guarantee that a

⁴⁷ Id.

⁴⁸ Standards I.A.

⁴⁹ Standards III.B(1)(i).

⁵⁰ Standards III.B(2)(i).

⁵¹ Standards III.B(1)(ii) and III.B(2)(ii).

⁵² Standards III(C).

⁵³ Standards III(B)(1)(iv).

⁵⁴ Standards III(B)(2)(iv).

⁵⁵ Standards III(B)(1)(iii) and III(B)(2)(iii).

⁵⁶ Standards III(B)(2)(v) and III(B)(3).

⁵⁷ Standards IV and V.

⁵⁸ Standards VI.

utility would have all data a third party may request nor require utilities to collect or generate new forms of data.⁵⁹

i. Example data sets

Some examples may be helpful to illustrate the types of data under discussion. The Standards, as written, are not prescriptive regarding the procedure by which a utility would accept and fulfill data requests or the format in which data would be provided (though CUB offers a suggestion regarding format below), so we offer the following examples for illustrative purposes only.

Xcel's Community Energy Reports provide a useful example of aggregated CEUD. (These reports include information on revenues billed, generation type, greenhouse gas emission intensity, program participation, and other information not covered by the Standards. The below examples include only energy consumption data covered by these Standards.)

Xcel Community Energy Report: City of Belle Plaine Energy Consumption, 2020⁶⁰

Electricity	Number of Customers	Energy Consumption (kWh)	Customers Removed from Dataset
Business	286	13,580,118	1
Residential	2,641	22,901,572	0
Street Lighting - Metered	n/a	13,959	-
Street Lighting - Non-Metered/Customer Owned	n/a	13,861	-
Street Lighting - Non-Metered/Xcel-Owned	n/a	254,182	-
Total:	2,927	36,763,692	

Xcel Community Energy Report: City of Burnsville Plain Energy Consumption, 2020

Electricity	Number of Customers	Energy Consumption (kWh)	Customers Removed from Dataset
Commercial	1,010	38,435,583	0
Industrial	267	56,211,489	0
Residential	5,817	39,008,097	0
Street Lighting - Metered	n/a	79,292	-
Street Lighting - Non-Metered/Customer Owned	n/a	25,048	-
Street Lighting - Non-Metered/Xcel-Owned	n/a	239,033	-
Total:	7,094	133,998,542	

⁵⁹ CUB Nov. 2019 Reply at 9.

⁶⁰ Xcel Energy Community Energy Reports, available at https://www.xcelenergy.com/community_energy_reports. In the Belle Plaine report, the commercial and industrial class CEUD has been combined into the "business" category, and one customer was removed from the reported data in order to comply with Xcel's privacy screen. This topic will be discussed further in these comments, below.

Two fictitious examples, below, illustrate possible formats for providing anonymized data. This data is not generally available in Minnesota currently; the below examples are based on reporting formats used by the Illinois utilities ComEd and Ameren.⁶¹

ComEd data presentation, 5-digit ZIP file: The half-hourly interval columns show the amount of energy used between each meter reading and continue to the right all the way to the hour 2500 meter reading (accounting for daylight savings time). In this example, the data was requested by five-digit ZIP code.

ComEd Anonymized Data Presentation, 5-digit ZIP

ID	ZIP	Date	Total kWh	0030 kWh	0100 kWh	0130 kWh	0200 kWh	0230 kWh	0300 kWh	... kWh
001	60525	1/1/19	2.75	.0234	.0234	.0234	.0234	.0234	.0234	...
002	60525	1/1/19	2.63	.0235	.0235	.0235	.0235	.0235	.0235	...
003	60525	1/1/19	2.84	.0236	.0236	.0236	.0236	.0236	.0236	...

Ameren data presentation, 9-digit ZIP: The Ameren files have the same basic structure as the ComEd files, with the differences being separate columns for county, municipality, and ZIP code digits, and hourly meter reading as opposed to half-hourly. In the below example, the data was requested by 9-digit ZIP. However, the (fictitious) ZIP code reported violated the 15/15 screen at the 9-digit and 8-digit ZIP code granularities, so their ZIP codes are provided to 7 digits.

Ameren Anonymized Data Presentation, 9-digit ZIP

ID	County	Muni.	ZIP digits 1-5	ZIP dig. 6	ZIP dig. 7	ZIP dig. 8	ZIP dig. 9	Date	Total kWh	0100 kWh	0200 kWh	... kWh
001	Sangamon	Springfield	62629	1	2	--	--	1/1/19	2.75	.0234	.0234	...
002	Sangamon	Springfield	62629	1	2	--	--	1/1/19	2.63	.0235	.0235	...
003	Sangamon	Springfield	62629	1	2	--	--	1/1/19	2.84	.0236	.0236	...

II. Response to Notice of Comment Period

1. Should the Commission further refine the Standards adopted in the Data Access Order?

Yes. CUB recommends that the Commission further refine the Standards, as discussed below.

⁶¹ For further discussion, see CUB Oct. 2019 Initial at 13-14.

2. If so, which options for refinement of ODAS should the Commission consider for the six issues identified in Order Point 4 of the Data Access Order?

a. Segmentation of data screens

As noted, the Standards currently apply different privacy screens to aggregated CEUD and anonymized CEUD. CUB does not recommend additional segmentation. There has been discussion in this docket of segmenting aggregated data access into separate screens for whole building and community-level (all requests at larger than a building scale) data or by applying different screens to different classes of customers. CUB is aware of no privacy basis for either approach. Therefore, we recommend that the Commission not modify the privacy screens set forth by the Standards, and apply the 4/50 screen for aggregated data at all levels.

The 4/50 screen for aggregated data is already employed by Minnesota Power⁶² and by utilities in the State of New York, by order of the New York Public Service Commission (“NY Commission”). As RAP’s issue brief states, New York had applied a 15/15 screen to residential aggregated CEUD and a 6/40 screen to non-residential CEUD. However, after gaining some practical experience with those screens the NY Commission opted to apply a less-restrictive 4/50 screen to all customers.

In a 2018 order, the NY Commission reiterated:

[T]he 15/15 standard may be overly conservative. In general, a privacy standard for aggregated energy data establishes the minimum configuration and characteristics of energy accounts that, when aggregated over a geographic area or building, are expected to provide a reasonable expectation of customer privacy by not revealing or permitting determination of individual customer-specific energy use.⁶³

Subsequently, the NY Commission noted that the 15/15 screen resulted in “high failure rates, as well as reports that the 15/15 privacy screen is unbalanced, being too restrictive and blocking access to valuable data by preventing the data from being published.”⁶⁴ The NY Commission found that “the 15/15 aggregated data privacy screen must be modified to allow community energy planning data to be made available at a level that ensures it can be used for its intended purpose.”⁶⁵ The NY Commission further found: “In evaluating alternative approaches, the 4/50 whole building aggregated data standard has demonstrated a balance between the protection of customer’s [sic] identities and the broader interest of the public.”⁶⁶ For that reason, the NY Commission established a 4/50 screen to be applied to aggregated CEUD statewide for all customer classes.

Xcel’s Community Energy Reports show that the 15/15 screen results in high failure rates in Minnesota, as well, causing difficulties for entities seeking to use the data in the public interest. Approximately

⁶² *In the Matter of a Petition by Citizens Utility Board of Minnesota to Adopt Open Data Access Standards*, Docket No. E,G-999/M-19-505, Minnesota Power Compliance Filing (Feb. 25, 2022) at 2.

⁶³ State of New York Public Service Commission, *In the Matter of the Utility Energy Registry*, Case 17-M-0315, Order Adopting Utility Energy Registry (April 20, 2018) at 3.

⁶⁴ State of New York Public Service Commission, *In the Matter of the Strategic Use of Energy Related Data*, [Order Adopting a Data Access Framework and Establishing Further Process](#) (April 15, 2021) at 27.

⁶⁵ *Id.* at 29.

⁶⁶ *Id.*

85% of Xcel's 2020 municipal energy reports would have failed the 15/15 screen with the C&I classes' energy use data reported separately. In these cases, Xcel combines its C&I classes into a single "business" class. In approximately 60% of the reports, Xcel had to go a step further and exclude one or more customers in order to pass the privacy screen.⁶⁷ These actions allow Xcel to release community data but results in data that is less precise, often incomplete, and less helpful for data users. The Metropolitan Council, for example, has stated that it benefits from "energy use data by customer classes – for example, industrial vs. commercial vs. residential customers."⁶⁸ CEE reports:

In our experience that [sic] the 15/15 standard for community aggregation is quite restrictive and limits program effectiveness for communities. More specifically, the threshold that any single customer must use less than 15% of the total consumption has proven challenging for communities to receive a consistent, accurate understanding of community-wide energy use.⁶⁹

Additionally, CUB is aware of no evidence that applying a more restrictive screen to community-level aggregated data is necessary to protect customer privacy. Indeed, customer privacy seems more sensitive at a building level, when the customer's exact address is known, than at a larger community scale.

Further, we are aware of no evidence suggesting that a more restrictive screen is necessary for large customers or for any customer class. Indeed, the example of other states suggest that, if anything, a less restrictive screen may be required for commercial and industrial customers than for residential customers. RAP found two states applying screens that were segmented by customer class: New York (which has since changed its policy) and California. Both applied less-restrictive screens to non-residential than to residential customers.⁷⁰ As discussed, a 4/50 screen is currently applied by all Minnesota utilities to which the Standards apply for building benchmarking data, which includes many residential and commercial customers. The City of Minneapolis, in particular, has substantial experience through its building benchmarking program, which has published benchmarking data for hundreds of buildings for nine years.⁷¹

b. Contract requirements

CUB makes no recommendations regarding contract requirements at this time.

c. Uniform access forms

CUB has no recommendations regarding uniform access forms at this time.

⁶⁷ See, generally, Xcel Energy, Community Energy Reports, https://www.xcelenergy.com/community_energy_reports (accessed May 18, 2022). CUB's analysis of these reports found that the commercial and industrial classes are combined in approximately 85% of Xcel's 2020 municipal reports, and at least one customer is removed from approximately 60% of reports.

⁶⁸ *In the Matter of a Petition by Citizens Utility Board of Minnesota to Adopt Open Data Access Standards*, Docket No. E,G-999/M-19-505, Metropolitan Council Comments (Apr. 9, 2021) at 3.

⁶⁹ CEE Oct. 2019 Initial at 3.

⁷⁰ RAP Issue Brief at 20.

⁷¹ City of Minneapolis, Benchmarking results, <https://www2.minneapolismn.gov/government/programs-initiatives/environmental-programs/energy/benchmarking-results/>, accessed May 18, 2022.

d. Thresholds for C&I customer data and their peak demand

As noted above, in its July 2020 hearing and November 2020 Order, the Commission discussed the important privacy concerns of large commercial and industrial (“C&I”) customers. The Commission exempted large customers with peak demand above 5 megawatts (“MW”) from the Standards at that stage in order to further consider whether any such exemption is warranted from the full Standards. Large customers have important concerns and every right to the expectation that their utility data remain private – as do customers of all types. CUB believes that the aggregation and anonymization screens provide such privacy, and that a blanket exemption from all aggregated and anonymized data is neither warranted nor in the public interest.

Large customers have been included in aggregated data reported in Minnesota for years. Xcel's Community Energy Reports, for example, include all customers; Xcel combines customer classes or removes customers as necessary to ensure the data sets do not violate the 15/15 screen that it applies. In this way, the privacy screen already provides the protection necessary to keep a particular customer's CEUD private. Large customers' energy use is also included in reports filed by all Minnesota electric and natural gas utilities pursuant to Minn. Rules Chapter 7610. Each utility reports electricity and natural gas used by county and by customer class (monthly and annually), among other information. These reports are publicly available.⁷²

Additionally, as noted by RAP, much information on *individual* large customers' energy use is already publicly reported. Citing a white paper from the New York State Energy and Research Development Authority (“NYSERDA”), RAP states:

[They] noted that the largest energy consumers (e.g., paper mills, cement plants) routinely report fuel usage to EPA [the Environmental Protection Agency] for emissions inventories and permitting. That data is almost always public information (per the federal Clean Air Act). ... [S]creening out these industrial customers wouldn't be protecting confidential information since most of the relevant information is already public; however it makes public information more difficult to obtain. Their conclusion was to avoid 'needless privacy failures' meaning if data is already public there is no need to shield the relevant industry or commercial operation.⁷³

Energy and emissions data is published on the EPA's online Facility Level Information on GreenHouse gases Tool (“FLIGHT”).⁷⁴ A search of the tool yields more than 100 reporting facilities in Minnesota, each of which reports a large amount of greenhouse gas-related data, including emissions related to natural gas used on site. For example, the tool shows that the 3M Magnetic Tape Manufacturing Division located in Hutchinson, Minnesota, had carbon dioxide equivalent emissions of 39,621 metric tons due to the stationary combustion of natural gas in 2020.⁷⁵

⁷² See, e.g., Docket No. 21-11.

⁷³ RAP Issue Brief at 29.

⁷⁴ Available at <https://ghgdata.epa.gov/ghgp/main.do>.

⁷⁵ https://ghgdata.epa.gov/ghgp/service/facilityDetail/2020?id=1004914&ds=E&et=FC_NG&popup=true, accessed on May 19, 2022.

In October 2019 comments in this docket, the Minnesota Large Industrial Group imagined a scenario in which a third party submitted multiple data requests in order to single out the energy use of a particular large customer.⁷⁶ Subsequently, language was added to the Standards that would prohibit a third party from making multiple requests in order to identify any customer or customers, or to otherwise make requests that would allow a customer to be identified.⁷⁷

Paradoxically, exempting an individual large customer from one data set and then comparing that data set to other publicly available data (such as the EPA data described above) can, in some instances, actually make it easier to back-calculate that customer's energy use. Anecdotally, CUB heard from one analyst who had done just that in order to help estimate the amount and sources of greenhouse gas emissions. Further, if large users who had been included in previously published data sets were subsequently excluded, it could allow those customers' energy usage to be quite easily visible. It is possible that a blanket exemption from the Open Data Access Standards could have the opposite effect of that intended.

CUB believes that the privacy screen is the best way to ensure the privacy of all customers (including but not limited to large C&I customers). Utility regulators in other states appear to agree. Regulators in California, Colorado, New York, and Illinois have adopted privacy screens to protect CEUD, but CUB is aware of no other states that provide a blanket exemption to large customers. The RAP issue brief notes: "None of the other states researched by RAP exempt customers from data access policies based on the customer's peak demand."⁷⁸ Further, some states provide *greater* protection for residential than for C&I customers. California requires at least 100 residential customers be included in a ZIP code-level aggregated data set but applies a 15/15 screen for C&I customers. New York previously applied a 15/15 screen for residential customers and a less-restrictive 6/40 screen for non-residential customers (before opting for the still more inclusive 4/50 screen for all customers).⁷⁹

So long as customer privacy is reasonably protected, making as much information available as possible serves the public interest – and the energy use of large customers is important data for parties who are using community-level aggregated data in Minnesota today. Many local and regional governments entities – and the nonprofits and consulting firms working with these entities – rely on aggregated CEUD for their communities to determine the amount and sources of greenhouse gas emissions in their communities and, from there, to determine which strategies will be most effective to reduce those emissions. Exempting large users would mean that large portions of communities' greenhouse gas emissions are missing from their data or would require the communities to take unnecessary additional steps to back-calculate these emissions using other publicly available sources.

For these reasons, CUB recommends that the Standards include no blanket exemption based on peak demand. Alternatively, if the Commission does include such an exemption, CUB recommends the Commission exempt large users (above 5 MW peak demand) from building-level aggregated data and anonymized data only, and/or exempt Minnesota Power's Large Power class, which is made up of a small number of especially large customers.

⁷⁶ MLIG Oct. 2019 Initial at 7-9.

⁷⁷ Standards III.C.

⁷⁸ RAP Issue Brief at 29.

⁷⁹ Id. at 20.

e. Opportunities to streamline data access

RAP identified three opportunities for streamlining data access:

- “Requir[ing] utilities to make standard CEUD aggregations easily accessible from their website without filling out any form;”
- “Creat[ing] a single statewide web portal for CEUD requests;” and
- “Allow[ing] entities that make frequent data requests to create user accounts in which utilities save any user’s data that must be provided for each request, but don’t require occasional requesters to create such accounts.”⁸⁰

At this time, CUB does not recommend that the Commission require any of these options, though we look forward to reviewing other parties’ recommendations on these ideas. We note that Xcel and CenterPoint – the Minnesota utilities that have received the most requests for aggregated data – have apparently found it worthwhile to undertake some of these efforts voluntarily. Both have online portals where building owners and managers can request benchmarking data, and Xcel publishes Community Energy Reports annually for the communities it serves.⁸¹ If and when Minnesota’s other utilities begin to receive a greater number of data requests, they may find it would increase efficiency to take similar steps.

Three additional opportunities for streamlining data access emerged from our discussions with stakeholders.

First, the Commission could require a uniform release format for aggregated data requests. Based on our conversations with organizations that use aggregated data, we believe that parties generally like the format of Xcel’s Community Energy Reports. These reports include a large amount of data that would not be required by the Open Data Access Standards. However, they could provide a model for reporting of aggregated data.

CUB recommends that the Commission require aggregated data to be reported in machine-readable format modeled on Xcel’s Community Energy Reports (see page 10 of these comments for two examples). Report columns should include:

- Customer class including, at a minimum, commercial, industrial, residential, and other. (Classes may be combined if a data set violates the privacy screen.)
- Number of customers.
- Energy consumption (kWh or therms).
- Number of customers removed from data set.

Second, CUB recommends that utilities be required to clearly indicate how they determine to which class a customer belongs. A local government staff person whose city is served by a different electric and gas utility, for example, explained that the City does not know when a building may be classified

⁸⁰ Id. at 28-29.

⁸¹ See CenterPoint Energy, Energy Data Portal, <https://energydataportal.centerpointenergy.com>; Xcel Energy, Energy Benchmarking, <https://mn.my.xcelenergy.com/s/business/cost-savings/energy-benchmarking>; Xcel Energy, Community Energy Reports, https://www.xcelenergy.com/community_energy_reports.

as “commercial” by one utility and some other class by the other utility. Additionally, data users may wish to compare electric or gas usage (and the related greenhouse gas emissions) across cities served by different utilities. From the data users’ perspective, it would be ideal for these categorizations to be uniform across utilities; however, CUB recognizes that could be difficult to achieve. Short of that level of consistency, it would be helpful for utilities to provide clarity about how they classify customers.

Third, CUB recommends that each utility designate a contact person for third-party CEUD requests.

f. Aggregated CEUD

CUB discusses this topic above and has no additional comments at this time.

3. Are there other issues or concerns related to this matter?

Yes. CUB has recommendations on the following additional topics.

a. Access

CUB believes that the Standards, as written, unnecessarily restrict the third parties that may access aggregated CEUD. Pursuant to the Standards, aggregated CEUD may be requested by:

- “tax-exempt organizations based within the United States;
- “U.S. Federal Government agencies and subdivisions thereof; State of Minnesota government agencies, boards, and/or commissions; local government entities with jurisdiction within Minnesota; and government entities of federally recognized tribes that share Minnesota’s geography; and
- “Property owners or managers, so long as the CEUD requested applies only to the property the requestor owns or manages.”⁸²

CUB does not believe it is reasonable to introduce a restriction regarding who may request aggregated data. Much of the aggregated data contemplated by the Standards is already publicly distributed in Minnesota (as it is in other states, such as New York⁸³), including through Xcel’s Community Energy Reports, the Regional Indicators Initiative,⁸⁴ and the City of Minneapolis’s Energy Benchmarking website, which provides energy use data on several hundred multi-unit buildings within the city.⁸⁵

CUB believes that limiting which parties may access CEUD in this manner will not protect customer privacy; however, it may require data users to go through unnecessary hurdles in order to obtain data to which they have had access for years. For example, municipalities sometimes partner with private consulting firms like LHB to analyze energy use and emissions within their borders. Indeed, LHB has

⁸² Standards III.B.(iv).

⁸³ See New York State Utility Energy Registry, which provides monthly and annual electricity and natural gas usage data at the county, community, and ZIP code level (<https://utilityregistry.org/app/#/>, accessed May 18, 2022).

⁸⁴ Available at <https://regionalindicatorsmn.com/energy-chart>.

⁸⁵ Available at <https://www.minneapolismn.gov/government/government-data/datasource/energy-benchmarking-results-dashboard/#d.en.109652>.

as much experience with aggregated CEUD as nearly anyone in Minnesota and has managed the Regional Indicators Initiative, measuring performance metrics (including energy use) for cities, since 2008.⁸⁶ Under the Standards as written, LHB would no longer be allowed to request this data; presumably, each city would instead be required to request data from utilities and then to pass that data to LHB, and utilities would be required to manage data requests from dozens of cities rather than a single coordinating entity that best understands the requests. Further, Section III.C of the Standards already allows a utility to refuse to provide CEUD when the utility “reasonably believes the data release would allow the third party to re-identify customers, violate the terms of the contract in 2(v) above, or otherwise use the data in violation of these standards.” In light of this language and current practice, we believe it is unnecessary for the Standards to include categorical limitations that prevent certain entities from even requesting aggregated CEUD.

CUB recommends that Standards not limit the parties that may request aggregated CEUD. Alternatively, if the Commission maintains such a limitation, CUB recommends that it apply only to those that request building-level aggregated CEUD.

Additionally, CUB notes that regional units of government were inadvertently excluded from those parties who may access aggregated and anonymized data under the Standards. This includes the Metropolitan Council, which currently accesses and analyzes aggregated data. We recommend that regional government entities be added to the list of parties that may request anonymized data⁸⁷ – as well as aggregated data,⁸⁸ should the Commission retain that limitation.

b. Fees

The Standards permit, but do not require, a utility to charge a party requesting aggregated or anonymized CEUD a fee that is based on the actual cost of preparing and supplying requested data, after considering the reasonable value of the data to the utility. Parties to this docket have previously discussed several circumstances in which it is likely that no fee should be charged. CUB’s November 2019 reply comments in this docket state:

In some circumstances, it is likely that no fee should be charged. The costs of some requests will likely be so low that they do not merit a fee to the requestor. That will likely be the case where utilities have set up semi-automatic procedures to respond to a large number of similar requests, such as a building benchmarking program. The City of Minneapolis notes that, in a case like that, “the cost of producing and processing a check may be greater than the fee payment itself.”⁸⁹ In other cases, as Xcel states, the value of the data to a utility may exceed the cost to produce it.⁹⁰ In either of these examples, no fee should be charged.”⁹¹

⁸⁶ Regional Indicators Initiative, About the Regional Indicators Initiative, available at <https://www.regionalindicatorsmn.com/about-regional-indicators-initiative>, accessed May 20, 2022.

⁸⁷ Standards III.B.(2)(iv).

⁸⁸ Standards III.B.(1)(iv).

⁸⁹ Minneapolis Oct. 2019 Initial at 7.

⁹⁰ *In the Matter of a Petition by Citizens Utility Board of Minnesota to Adopt Open Data Access Standards*, Docket No. E, G-999/M-19-505, Xcel Energy Initial Comments (Oct. 15, 2019, “Xcel Oct. 2019 Initial”) at 13.

⁹¹ CUB Nov. 2019 Reply 9.

In addition, it has become clear that there is high demand for – and public-interest value in – aggregated data at the building and local government level. CenterPoint Energy, for example, received 872 requests for aggregated data in 2021; most requests were for building-level aggregated data.⁹² Xcel Energy reports receiving more than 41,000 third-party requests for CEUD.⁹³ Other utilities report receiving fewer inquiries but indicate that they expect the number of requests to grow in the near future.⁹⁴ To our knowledge, no utility has charged for the provision of this data.

CUB recommends that utilities be required to provide data aggregated at the building, municipal, and county levels at no charge.

c. Geographic boundaries

The Standards provide that data may be requested by customer class and/or “defined municipal boundary, county boundary, or U.S. postal code area, provided that no data set violates” the applicable privacy screen.⁹⁵ However, some utilities have expressed that their systems are better able to provide data based on U.S. Census boundaries. It is our impression that all utilities are able to provide either ZIP code or Census boundary data, if not both. Additionally, many data analysts prefer to use Census boundaries, which change less frequently than ZIP codes and can easily be paired with other information from the U.S. Census.

CUB recommends that Census boundaries be added to the lists of geographic boundaries by which a third party may request aggregated or anonymized data. In combination with the requirement that a utility furnish requested data only “to the best of its ability,”⁹⁶ we understand that the Standards would allow flexibility for a utility to provide ZIP- or Census-boundary data, depending on what their systems allow.

d. Grounds for denying a data request

In our discussions, utilities raised that they may deny a data request due to a security risk. CUB recommends an amendment to section III.C of the Standards to allow for a denial when a utility reasonably believes a data release would create a security risk for the utility, its customer(s), or the public.

Further, CUB recommends that, if a utility refuses to provide requested CEUD, the utility be required to provide a timely, written explanation to the requestor describing the reason(s) for the refusal.

⁹² *In the Matter of a Petition by Citizens Utility Board of Minnesota to Adopt Open Data Access Standards*, Docket No. E,G-999/M-19-505, CenterPoint Energy Compliance Filing (Mar. 1, 2022) at 2.

⁹³ *In the Matter of a Petition by Citizens Utility Board of Minnesota to Adopt Open Data Access Standards*, Docket No. E,G-999/M-19-505, Xcel Energy Compliance Filing (Mar. 1, 2022) at 21.

⁹⁴ *In the Matter of a Petition by Citizens Utility Board of Minnesota to Adopt Open Data Access Standards*, Docket No. E,G-999/M-19-505, Dakota Electric Association Compliance Filing (Feb. 25, 2022) at 3;

In the Matter of a Petition by Citizens Utility Board of Minnesota to Adopt Open Data Access Standards, Docket No. E,G-999/M-19-505, Otter Tail Power Co. Compliance Filing (Feb. 28, 2022) at 3.

⁹⁵ Standards III.B.(1)(iii) and III.B.(2)(iii). Aggregated data may additionally be requested by “building or property.”

⁹⁶ Standards I.A.(3).

e. Technical corrections to the Standards

Finally, CUB notes two technical corrections to the Standards. First, Commission staff had previously noted the need to correct language in paragraph III.B.(1)(ii). Specifically, the phrase “and/or” in this paragraph should simply state “and,” as follows:

CEUD data sets containing 3 or fewer customers or with a single customer’s energy use constituting more than 50 percent of total energy consumption may be provided upon the written consent of (1) all customers included in the requested data set, in cases of 3 or fewer customers, and (2) any customer constituting more than 50 percent of total energy consumption for the requested data set.⁹⁷

The intent of this paragraph is to require express permission from customers when an aggregated data request violates the 4/50 screen. This correction was not made in the Commission’s November 2020 Order – likely an oversight, and CUB recommends that the correction be made at this time.

Second, paragraph III.B.(2)(iii) includes an unnecessary word (“area”) which we suggest should be struck, as follows: “Anonymized data sets may be requested by customer class and/or defined municipal boundary, county boundary, or U.S. postal code ~~area~~, provided that no data set violates paragraph (i).”

III. Conclusion

The type of information contained in aggregated and anonymized CEUD is essential for advancing statutory and Commission goals regarding energy efficiency and conservation, greenhouse gas reduction, economic competitiveness, affordability, and equity. The Commission-adopted Open Data Access Standards provide a method for protecting customer privacy while putting this data to work in the public interest, and provide a measured step forward in the Commission’s ongoing efforts surrounding customer privacy and data access.

CUB recommends that the Commission implement the Standards in their entirety. In addition, CUB recommends that the Commission:

1. Retain the 4/50 screen for aggregated data requests
2. Find that the Standards apply to all customers, regardless of a customer’s peak demand
 - a. Alternatively, exempt large users (above 5 MW peak demand) from building-level aggregated data and anonymized data only, and/or exempt Minnesota Power’s Large Power class.
2. Require utilities to provide aggregated data reports in machine-readable format with columns that include:

⁹⁷ *In the Matter of a Petition by Citizens Utility Board of Minnesota to Adopt Open Data Access Standards*, Docket No. E,G-999/M-19-505, Staff Briefing Papers – CORRECTED (Jul. 10, 2020) at 90.

- a. Customer class, including, at a minimum, commercial, industrial, residential, and other, provided that classes may be combined if a data set violates the privacy screen
 - b. Number of customers
 - c. Energy consumption (kWh or therms)
 - d. Number of customers removed from the data set
3. Require that utilities to clearly indicate how they determine to which class a customer belongs
4. Require utilities to provide a contact person for third-party CEUD requests
5. Eliminate the limitation on the parties that may request aggregated CEUD
 - a. Alternatively, apply the limitation only to those parties requesting building-level aggregated CEUD
6. Add regional government entities to the list of parties that may request anonymized data -- as well as aggregated data, should the Commission retain that limitation
7. Require utilities to provide data aggregated at the municipal, county, and building levels at no charge
8. Permit aggregated and anonymized data requests by Census boundary
9. Permit a utility to deny a data request if it reasonably believes a data release would create a security risk for the utility, its customer(s), or the public
10. If a utility refuses to provide requested CEUD, require the utility to provide a timely, written explanation to the requestor describing the reason(s) for the refusal
11. Make the following technical corrections to the Standards:
 - a. At III.B.(1)(ii), strike “/or”
 - b. At III.B.(2)(iii), strike “area”

Thank you for the opportunity to submit these comments.

Sincerely,

May 23, 2022

/s/ Annie Levenson-Falk
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Appendix A:
Open Data Access Standards – CUB Recommended Redline

I. Purpose and Scope

- A. These standards apply to investor-owned electric or gas public utilities with greater than 50,000 customers within the state of Minnesota. They are intended to set standards for the collection and sharing of customer energy use data (CEUD) for use by third parties, as defined below. In particular, these standards are designed to ensure that:
- (1) Third parties may access aggregated or anonymized, disaggregated CEUD;
 - (2) The data be identified at the closest level of geographical specificity possible to maintain customer anonymity and at the finest practicable time interval;
 - (3) The utility, to the best of its ability, shall in a timely manner furnish this data in a consistent, standard format aligned with industry best practices regarding ease of access and granularity of data; and
 - (4) Unless authorized by a customer, a third party shall not have access to any personally identifiable information for a customer.

II. Definitions

- A. “Aggregated customer energy use data” refers to the data of individual customers located in a defined geographical area, which is combined into one collective data point per time interval.
- B. “Anonymized customer energy use data” refers to the data of individual customers, which has been modified sufficiently to prevent the release of personally identifiable information, collected over a number of time intervals from a defined geographical area.
- C. “Customer” means a person contracting for or purchasing electric or natural gas service at retail from an investor owned electric or gas public utility with customers greater than 50,000 within the state of Minnesota.
- D. “Customer energy use data” (CEUD) refers to data collected from the utility customer meters that reflect the quantity, quality, or timing of customers’ natural gas or electric usage or electricity production. For the purposes of these Open Data Access Standards, CEUD includes data regarding:
- (1) the amount and timing of energy use and production;
 - (2) peak load contributions and the amount and timing of demand; and

(3) rate class.

- E. "Interval data" means CEUD that is collected and compiled for a particular interval of time— including but not limited to intervals of minutes, hours, or day, but no greater than one month—for an individual customer or for a collective data set.
- F. "Personally identifiable information" (PII) means customer data which can be used to distinguish or trace the identity of an individual (e.g., name, social security number, biometric records, etc.) alone, or when combined with other personal or identifying information which is linked or linkable to a specific individual (e.g., date and place of birth, mother's maiden name, etc.).
- G. "Tax exempt organization" means a business entity organized in the United States for a nonprofit purpose and that is exempt from paying federal income tax pursuant to the Internal Revenue Code.
- H. "Third party" means a person or entity who requests CEUD other than their own from the utility that maintains the data.
- I. "Utility" means an investor-owned electric or gas public utility with customers greater than 50,000 within the state of Minnesota.

III. Third Party Access to Customer Energy Use Data and Customer Privacy Protection

- A. A utility must prepare and make available aggregated and/or anonymized CEUD upon the written or electronic request of any qualifying third party. The procedure a utility uses to allow a person to request this data must be (1) convenient for the typical third party, and (2) available on the utility's website. Such sets must consist of the past 24 months of historical CEUD in the smallest interval practicable unless otherwise requested by the customer or authorized third party.
- B. CEUD provided may include aggregated and anonymized sets of customer energy use data.

(1) Aggregated CEUD

- (i) Aggregation standard: An aggregated customer energy use data set may include CEUD from no fewer than 4 customers. A single customer's energy use must not constitute more than 50 percent of total energy consumption for the requested data set.
- (ii) CEUD data sets containing 3 or fewer customers or with a single customer's energy use constituting more than 50 percent of total energy consumption may be provided upon the written consent of (1) all customers included in the requested data set, in cases of 3 or fewer customers, and ~~or~~ (2) any customer constituting more than 50 percent of total energy consumption for the requested data set.

- (iii) Aggregated CEUD may be requested by customer class and/or building or property, defined municipal boundary, county boundary, U.S. Census boundary, or U.S. postal code, provided that no data set violates paragraphs (i) and (ii).

~~(iv) Aggregated CEUD may be requested by:~~

~~(a) Tax-exempt organizations based within the United States;~~

~~(b) U.S. Federal Government agencies and subdivisions thereof; State of Minnesota government agencies, boards, and/or commissions; local government entities with jurisdiction within Minnesota; and government entities of federally recognized tribes that share Minnesota's geography; and~~

~~(c) Property owners or managers, so long as the CEUD requested applies only to the property the requestor owns or manages.~~

(2) Anonymized CEUD

- (i) Anonymization standard: Anonymized data sets may include CEUD from no fewer than 15 customers. A single customer's energy use must not constitute more than 15 percent of total energy consumption for the data set.
- (ii) A unique customer identification code shall be assigned to each anonymous customer in a data set. The customer identification code shall remain consistent within the data set.
- (iii) Anonymized data sets may be requested by customer class and/or defined municipal boundary, county boundary, U.S. Census boundary, or U.S. postal code ~~area~~, provided that no data set violates paragraph (i).
- (iv) Anonymized CEUD may be requested by:
 - (a) Tax-exempt organizations based within the United States;
 - (b) U.S. Federal Government agencies and subdivisions thereof; State of Minnesota government agencies, boards, and/or commissions; regional or local government entities with jurisdiction within Minnesota; and government entities of federally recognized tribes that share Minnesota's geography.
 - (c) Entities that provide or seek to provide demand response, energy efficiency, or other services to a utility may access anonymized data for the sole purpose of providing such services or preparing a

proposal to the utility to do so.

- (v) A utility may refuse to provide CEUD to a third party requesting anonymized data if the third party does not sign a contract with the utility that must at a minimum:
 - (a) Prohibit the third party from attempting to reverse engineer data or re- identify customers included in a data set;
 - (b) Require a third-party to disclose all of the third party's employees, subcontractors, or agents with access to the data set at the time of the contract and require this to be updated if it changes during the life of the contract;
 - (c) Prohibit the third party from disclosing anonymized data except to the third party's personnel or to entities with whom the third party has a contractual relationship for the purpose of conducting an investigation with the anonymized data;
 - (d) Require the third a party to have contractual terms for disclosure with contracted entities noted in paragraphs (b) and (c) above that are equivalent to utilities contract here in and provide executed copies of those agreements in advance or when they're made;
 - (e) Hold the third party responsible for its actions with the data;
 - (f) Require the third party to promptly delete data and notify the utility if it discovers any PII contained in the data set; and
 - (g) Require the third party to state its intended use for the data.
- (3) Each utility covered under these standards must file their contract form developed pursuant to 2(v) above with the Commission.
- (4) The Commission may set alternative aggregation or anonymization standards upon the petition of any party, as long as those new standards do not restrict public access to energy data deemed in the public interest nor allow for the identification of individual customers within a data set.

C. Notwithstanding section III.B, a utility may refuse to provide aggregated or anonymized CEUD when it reasonably believes the data release would create a security risk for the utility, its customer(s), or the public, or that the release would allow the third party to re-identify customers, violate the terms of the contract in 2(v) above, or otherwise use the data in violation of these standards.

D. A utility that refuses to provide requested CEUD for any reason must provide a timely, written explanation to the requester explaining the utility's reason(s) for refusing to

provide the requested CEUD.

IV. Data Type and Format

- A. Utilities will provide CEUD in as short intervals as practicable, with 15-minute intervals recommended where utility data collection infrastructure allows.
- B. Utilities will work with third parties to provide CEUD in a manner that reasonably facilitates ease of access, ease of CEUD preparation, and comports with accepted data handling standards.

C. Utilities will provide aggregated data reports in machine-readable format with columns that include:

- (1) Customer class, including, at a minimum, commercial, industrial, residential, and other (along with an explanation of how the utility determines to which class a customer belongs), provided that classes may be combined if a data set violates the privacy screen
- (2) Number of customers
- (3) Energy consumption (kWh or therms)
- (4) Number of customers removed from the data set

V. Delivery of Data

- A. Utilities shall work with third parties to facilitate timely and secure delivery of CEUD. Disputes may be brought to the Commission for resolution.

VI. Fees and Cost Recovery

- A. A utility may charge the requester a fee to prepare and supply CEUD. A utility charging a data access fee authorized by this section must:
 - (1) base the fee amount on the actual costs incurred by the utility to create and deliver the requested data;
 - (2) consider the reasonable value of the data prepared to the utility and, if appropriate, reduce the fee assessed to the requesting person;
 - (3) provide the requesting person with an estimate and explanation of the fee; and
 - (4) collect the fee before preparing or supplying the requested data.
- B. Notwithstanding Section VI.A, utilities shall provide data aggregated at the county, municipal, and building levels at no charge.

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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Arnie	Anderson	ArnieAnderson@MinnCAP.org	Minnesota Community Action Partnership	MCIT Building 100 Empire Drive, Suite 202 St. Paul, MN 55103	Electronic Service	No	OFF_SL_19-505_Official
Kristine	Anderson	kanderson@greatermngas.com	Greater Minnesota Gas, Inc.& Greater MN Transmission, LLC	1900 Cardinal Lane PO Box 798 Faribault, MN 55021	Electronic Service	No	OFF_SL_19-505_Official
Sarah	Anderson	sa@bomampls.org	Greater Minneapolis BOMA	Suite 610 121 South 8th Street Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-505_Official
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Nichol	Beckstrand	Nichol.beckstrand@mmha.com	Minnesota Multi Housing Association	1600 W 82nd St Ste 110 Minneapolis, MN 55431	Electronic Service	No	OFF_SL_19-505_Official
Scott	Bohler	scott.bohler@ftr.com	Frontier Communications Corporation	2378 Wilshire Blvd Mound, MN 55364-1652	Electronic Service	No	OFF_SL_19-505_Official
Jon	Braman	jbraman@brightpower.com	Bright Power, Inc.	11 Hanover Square, 21st floor New York, NY 10005	Electronic Service	No	OFF_SL_19-505_Official
Sheri	Brezinka	sbrezinka@usgbc.org	USGBC-Minnesota Chapter	701 Washington Ave. N Suite 200 Minneapolis, MN 55401	Electronic Service	No	OFF_SL_19-505_Official

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Brent	Christensen	brentc@mnta.org	Minnesota Telecom Alliance	1000 Westgate Drive, Ste 252 St. Paul, MN 55117	Electronic Service	No	OFF_SL_19-505_Official
Andrew	Clearwater	N/A	Future of Privacy Forum	1400 I St NW Ste 450 Washington, DC 20005-6503	Paper Service	No	OFF_SL_19-505_Official
Roger	Colton	roger@fsconline.com	Fisher, Sheehan and Colton	34 Warwick Road Belmont, MA 02478	Electronic Service	No	OFF_SL_19-505_Official
Generic Notice	Commerce Attorneys	commerce.attorneys@ag.state.mn.us	Office of the Attorney General-DOC	445 Minnesota Street Suite 1400 St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_19-505_Official
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First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012131	Electronic Service	Yes	OFF_SL_19-505_Official
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Andrew	Clearwater	N/A	Future of Privacy Forum	1400 I St NW Ste 450 Washington, DC 20005-6503	Paper Service	No	OFF_SL_12-1344_Official
Roger	Colton	roger@fsconline.com	Fisher, Sheehan and Colton	34 Warwick Road Belmont, MA 02478	Electronic Service	No	OFF_SL_12-1344_Official
Generic Notice	Commerce Attorneys	commerce.attorneys@ag.state.mn.us	Office of the Attorney General-DOC	445 Minnesota Street Suite 1400 St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_12-1344_Official
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J.B.	Matthews	N/A	Cushman & Wakefield/NorthMarq	3500 American Blvd W - #200 Minneapolis, MN 55431	Paper Service	No	OFF_SL_12-1344_Official

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Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012131	Electronic Service	Yes	OFF_SL_12-1344_Official
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Will	Seuffert	Will.Seuffert@state.mn.us	Public Utilities Commission	121 7th Pl E Ste 350 Saint Paul, MN 55101	Electronic Service	Yes	OFF_SL_12-1344_Official
Janet	Shaddix Elling	jshaddix@janetshaddix.com	Shaddix And Associates	7400 Lyndale Ave S Ste 190 Richfield, MN 55423	Electronic Service	No	OFF_SL_12-1344_Official
Brendon	Slotterback	bslotterback@mcknight.org	The McKnight Foundation	710 S 2nd St Minneapolis, MN 55401	Electronic Service	No	OFF_SL_12-1344_Official
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Cary	Stephenson	cStephenson@otpc.com	Otter Tail Power Company	215 South Cascade Street Fergus Falls, MN 56537	Electronic Service	No	OFF_SL_12-1344_Official
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Robyn	Woeste	robynwoeste@alliantenergy.com	Interstate Power and Light Company	200 First St SE Cedar Rapids, IA 52401	Electronic Service	No	OFF_SL_12-1344_Official