



March 5, 2025

Will Seuffert
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
Saint Paul, MN 55101

VIA E-FILING

Re:

**In the Matter of a Commission Inquiry
into Xcel Energy's Advanced Rate Design
for Load Management**

Docket No. E-002/CI-24-115

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

E,G-999/M-19-505

Dear Mr. Seuffert:

The Citizens Utility Board of Minnesota ("CUB") and the Chan Lab at the University of Minnesota Center for Science, Technology, and Environmental Policy ("Chan Lab") respectfully submit this complaint to the Minnesota Public Utilities Commission ("Commission") regarding the refusal of Northern States Power Company d/b/a Xcel Energy ("Xcel" or the "Company") to provide anonymized customer energy use data consistent with the terms of the Commission's duly-adopted Open Data Access Standards.

I. Complaint

On February 13, 2025, the Chan Lab requested anonymized customer energy use data ("CEUD") from Xcel Energy in order to conduct a customer segmentation study and identify potential sources of cross-subsidization within the Company's residential rate class.¹ Xcel responded to this request by refusing to provide such data.² Xcel's justifications for its refusal are not reasonably grounded on a factual basis and are inconsistent with the Commission's prior directives. We respectfully request the Commission require the provision of such anonymized data in accordance with the terms of the Open Data Access Standards.

¹ Gabriel Chan, CHAN LAB, *Request for Qualified Third-Party Access to Anonymized Customer Energy Use Data* (Feb. 13, 2025) (included and hereinafter referred to as "Attachment A").

² E-mail from Nick Martin, Xcel Energy to Gabriel Chan (Feb. 21, 2025) (included and hereinafter referred to as "Attachment B").

II. Background

On August 6, 2019, CUB petitioned the Commission to initiate a proceeding to adopt Open Data Access Standards (“ODAS” or “the Standards”) for the sharing of aggregated or anonymized CEUD.³ The Commission subsequently opened Docket No. E,G-999/M-19-505 and noticed multiple comment periods over the next five years to develop a full and robust record around ODAS deployment. The Commission finalized its implementation of the Standards by authorizing the sharing of anonymized CEUD with qualifying parties on July 5, 2024.⁴ As approved, the Standards set the rules by which qualified third parties may request, and utilities must provide, customer energy use data that has been aggregated or anonymized to protect individual customers from re-identification.

Following the adoption of the Standards and the deployment of advanced metering infrastructure (“AMI”) in Xcel’s service territory, the Commission expressed an interest in understanding how residential customers with different usage profiles contribute to system costs. In its hearing and Order in Docket No. E-002/M-24-173, the Commission cited a customer segmentation study prepared by the Citizens Utility Board of Illinois to exemplify the type of analysis that could be conducted to inform these questions.⁵ This study utilized anonymized CEUD to compare patterns of electricity consumption against income and other demographic variables at the U.S. Census tract level, and found evidence that lower-income households were less likely to contribute to on-peak energy costs.⁶ Given the potential insights a similar study could provide in Minnesota, the Commission referred the matter to Docket No. E-002/CI-24-115. A Notice of Process was thereafter issued to inform stakeholders of the Commission’s intention to address various matters related to advanced rate design, including whether Xcel should be required to “study the contributions to system cost from residential customers with different usage profiles.”⁷

Prior to, and separate from, the Commission’s directives in Dockets Nos. E-002/M-24-173 and E-002/CI-24-115, CUB and the Chan Lab began scoping out a customer segmentation study using data from Xcel customers upon the Commission’s implementation of the anonymized CEUD standard in 2024. On February 13, 2025, CUB and the Chan Lab filed a letter in E-002/CI-24-115 detailing their efforts to develop and conduct a customer segmentation study, and inviting stakeholder discussion and input.⁸ In order to facilitate this study, the Chan Lab simultaneously requested that Xcel provide anonymized CEUD meeting the following parameters and conditions:

³ *In the Matter of a Petition by the Citizens Utility Board of Minnesota to Adopt Open Data Access Standards*, Docket No. E,G-999/M-19-505, Notice of Petition and Petition to Adopt Open Data Access Standards (Aug. 6, 2019).

⁴ *In the Matter of a Petition by the Citizens Utility Board of Minnesota to Adopt Open Data Access Standards*, Docket No. E,G-999/M-19-505, Order Refining Open Data Access Standards (Jul. 5, 2024) (hereinafter “Commission Order Authorizing Anonymized CEUD Sharing”).

⁵ *In the Matter of Xcel Energy’s Petition for an Automatic Bill Credit Pilot Program*, Docket No. E-002/M-24-173, Order Approving Automatic Bill Credit Pilot Program as Modified at 9 (Dec. 5, 2024).

⁶ Jeff Zethmayr & Ramandeep Singh Makhija, *Six Unique Load Shapes: A Segmentation Analysis of Illinois Residential Electricity Customers*, 32 THE ELECTRICITY JOURNAL 9 (2019).

⁷ *In the Matter of a Commission Inquiry into Xcel Energy’s Advanced Rate Design for Load Management*, Docket No. E-002/CI-24-115, Notice of Docket Process and Topics for Comment at 1 (Jan. 17, 2025).

⁸ *In the Matter of a Commission Inquiry into Xcel Energy’s Advanced Rate Design for Load Management*, Docket No. E-002/CI-24-115, Letter of the Citizens Utility Board of Minnesota and Chan Lab (Feb. 13, 2025).

1. Residential customer energy usage data for a minimum of twelve consecutive months and up to thirty-six consecutive months;
2. At intervals of 30 minutes;
3. At the individual meter level;
4. Identified by U.S. Census block group;
5. For all households in Xcel Energy's service area for which a minimum of 12 months' advanced metering data is available; and
6. Which satisfies the 15/15 standard of anonymization adopted by the Commission.⁹

Xcel Energy denied this request on February 21, 2025, citing (1) the existence of an anticipated comment period in Docket No. E-002/CI-24-115 regarding the development of a customer segmentation study; and (2) generalized concerns about customer re-identification.¹⁰

III. Standard for Denying Access to Anonymized CEUD

The Open Data Access Standards adopted by the Commission establish a comprehensive framework for protecting customers' personally identifiable information while ensuring utilities provide qualified third-party recipients with reasonable, timely access to aggregated and anonymized CEUD.¹¹

ODAS protects customers by limiting the scope of accessible information, the number of entities eligible to receive data, and the purposes for which data can be requested. Specifically, ODAS Section III(B)(2) requires anonymized data sets to include CEUD "from no fewer than 15 customers," with no single customer "constitut[ing] more than 15 percent of total energy consumption."¹² Anonymized data sets meeting these requirements can only be requested by specific entities including, among others, nonprofit organizations registered in Minnesota and researchers affiliated with accredited colleges or universities.¹³ The utility providing CEUD may require these parties to sign nondisclosure agreements prior to the release of data.¹⁴ Lastly, the requesting entity must use the CEUD for study or program design.¹⁵

If the utility nonetheless determines these protections are inadequate to protect customer data, ODAS Section III(C) permits the denial of data requests in limited situations if a reasonable basis is established:

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

⁹ See generally Attachment A.

¹⁰ See generally Attachment B.

¹¹ Commission Order Authorizing Anonymized CEUD Sharing, Att. 1 at 1 (hereinafter "Open Data Access Standards").

¹² Open Data Access Standards, Section III(B)(2)(i).

¹³ *Id.* at Section III(B)(2)(iv).

¹⁴ *Id.* at Section III(B)(2)(v).

¹⁵ Commission Order Authorizing Anonymized CEUD Sharing at 4-5.

contract in 2(v) above, or otherwise use the data in violation of these standards.¹⁶

As further detailed below, Xcel's justifications for refusing to provide anonymized CEUD are unreasonable and inconsistent with ODAS and the Commission's prior Orders.

IV. Analysis

A. The existence of an ongoing docketed procedure is an unreasonable basis for denying the provision of CEUD to qualifying parties.

Xcel's first justification for refusing to provide the data requested by Chan Lab is based on the Commission's issuance of a Notice of Process in Docket No. E-002/CI-24-115. As described in that filing, the intent of the Notice was to "inform parties of the general content and scope of future comment periods" and introduce relevant topics for discussion.¹⁷ Among the topics listed was "whether Xcel should study the contributions to system cost from residential customers with different usage profiles."¹⁸ While the Company suggests the existence of this inquiry could lead to "Commission guidance on study goals, approach and methodology,"¹⁹ ODAS does not make CEUD access dependent on the existence of an overlapping docket or advanced Commission approval, nor does it permit a utility to refuse to provide data due to the existence of a related Commission proceeding. Delaying or denying data access based on the Commission's Notice of Process would therefore be unreasonable.

B. The risk of customer re-identification is an unreasonable basis upon which to deny the provision of CEUD to the Chan Lab in this instance.

Xcel's second justification for denying CEUD access is based on the unsupported suggestion that ODAS is insufficient to protect against customer re-identification.²⁰ The Company provides no basis for its conclusion and instead suggests it will deny CEUD access to all eligible recipients "until an objective basis has been established to address the risk of customer re-identification."²¹ Xcel's blanket rejection would effectively supplant the Commission's determination that ODAS establishes an "appropriate balance" between the twin goals of facilitating data access and customer privacy.²² Indeed, the Commission already expressly considered, and rejected, Xcel's argument. Xcel's refusal to provide CEUD in response to the Chan Lab's request violates the Commission's July 5, 2024 Order implementing anonymized data access standards.

CUB and the Chan Lab recognize the need to adequately safeguard customers against the risks of re-identification and the inadvertent disclosure of sensitive information. The Commission has carefully considered these security concerns throughout each step in its

¹⁶ Open Data Access Standards, Section III(C).

¹⁷ *In the Matter of a Commission Inquiry into Xcel Energy's Advanced Rate Design for Load Management*, Docket No. E-002/CI-24-115, Notice of Docket Process and Topics for Comment at 1 (Jan. 17, 2025).

¹⁸ *Id.*

¹⁹ See Attachment B.

²⁰ *Id.*

²¹ *Id.*

²² Commission Order Authorizing Anonymized CEUD Sharing at 4.

incremental adoption of ODAS. Though there was general agreement that the risk of re-identification “is greater with anonymized CEUD than with aggregated CEUD,” the Commission disagreed with utilities that this risk justified the non-application of the Standards to anonymized data.²³ Rather, the Commission confirmed that the benefits associated with reasonable access to anonymized CEUD were significant and “outweigh[ed] the potential risks, so long as adequate protections” against re-identification were in place.²⁴ Restrictive anonymization screens and nondisclosure requirements were therefore established to protect customer privacy.

Utilities are authorized under the Standards to refuse to provide CEUD if there is a “reasonable belief” security risks would result.²⁵ However, the Commission expressly considered Xcel’s assertion that the Company “would not provide anonymized CEUD . . . until an objective basis is established for assessing the risk of customer re-identification or the Commission otherwise requires Xcel Energy to provide the data.”²⁶ The Commission disagreed with this approach and the overarching suggestion that the Standards should not be implemented for anonymized CEUD in light of re-identification risks.²⁷ In other words, the Commission has already determined Xcel’s blanket justification is an *unreasonable* belief and basis for denying anonymized data access.

Xcel does not provide any further explanation for why the specific data request submitted by the Chan Lab would result in a greater likelihood of security risks materializing. On the contrary, the requirements of ODAS Section III(B)(2)(iv)(d) necessitate institutional and federal oversight designed to adequately protect the privacy and confidentiality of sensitive information. The researchers involved in the instant request are career professionals employed by accredited universities who regularly conduct complex statistical analyses in compliance with federal laws governing the protection of human subjects.²⁸ Rather than contributing to an elevated security risk, these restrictive parameters should lessen concerns related to the provision of anonymized CEUD.

Further, Chan Lab’s proposed customer segmentation study fits squarely within the scope of analysis intended to be allowed by the Commission under ODAS.²⁹ As previously explained, restricting the use of data for study and program design “aligns with the . . . balanced approach to accessing CEUD because the limitation maximizes the public benefit of this information . . . while limiting those eligible to access the data.”³⁰ The Chan Lab’s customer segmentation study would analyze residential CEUD to identify potential cross-subsidization of utility costs by different demographic groups within the residential rate class.³¹ This coincides with the Commission’s understanding that CEUD could create “significant public benefit[s]” by

²³ *Id.*

²⁴ *Id.*

²⁵ *Id.* at 4-5.

²⁶ *Id.* at 3.

²⁷ *Id.* at 4.

²⁸ The researchers requesting data include Gabriel Chan (University of Minnesota), Destenie Nock (Carnegie Mellon University), and Lucy Qiu (University of Maryland).

²⁹ Commission Order Authorizing Anonymized CEUD Sharing at 4 -5.

³⁰ *Id.*

³¹ See generally *In the Matter of a Commission Inquiry into Xcel Energy’s Advanced Rate Design for Load Management*, Docket No. E-002/CI-24-115, Letter of the Citizens Utility Board of Minnesota and Chan Lab (Feb. 13, 2025).

increasing awareness of energy burden and system inequities or aiding in the pursuit of the state's energy goals.³²

V. Conclusion

Xcel has not provided sufficient reasoning or justification for its denial of Chan Lab's request for anonymized CEUD. We respectfully request the Commission order Xcel to provide the requested data in a timely and secure manner.

Dated: March 5, 2025

Respectfully submitted,

/s/ Gabriel Chan

Gabriel Chan

Associate Professor, University of Minnesota

Principal Investigator, Chan Lab

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/s/ Annie Levenson-Falk

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/s/ Brandon Crawford

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³² Commission Order Authorizing Anonymized CEUD Sharing at 4.

Northern States Power Company
414 Nicollet Mall
Minneapolis, MN 55401

Request for Qualified Third-Party Access to Anonymized Customer Energy Use Data

Gabriel Chan (University of Minnesota), Destenie Nock (Carnegie Mellon University), and Lucy Qiu (University of Maryland) (the “Qualifying Parties”), hereby request anonymized third-party access to residential customer energy use data for households located in Northern States Power Company d/b/a Xcel Energy’s (“Xcel Energy”) service territory.

Qualifying Parties

Pursuant to the requirements of the Open Data Access Standards adopted by the Minnesota Public Utilities Commission in Docket No. E,G-999/M-19-505, the Qualifying Parties are researchers affiliated with colleges or universities accredited by national or regional accrediting agencies recognized by the U.S. Secretary of Education conducting research in compliance with the federal government’s “Common Rule” for the protection of human subjects by an Institutional Review Board, as defined by the National Science Foundation 45 CFR 690.

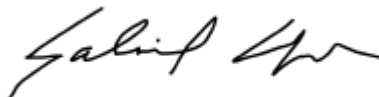
Content of Request

The Qualifying Parties respectfully request the provision of customer energy use data meeting the following parameters and conditions:

1. Residential customer energy usage data for a minimum of twelve consecutive months and up to thirty-six consecutive months;
2. At intervals of 30 minutes;
3. At the individual meter level;
4. Identified by U.S. Census block group;
5. For all households in Xcel Energy’s service area for which a minimum of 12 months’ advanced metering data is available; and
6. Which satisfies the 15/15 standard of anonymization adopted by the Commission.

The Qualifying Parties welcome the opportunity to work with Xcel Energy to facilitate the timely and secure delivery of customer energy use data in a convenient manner and format.

Sincerely,



Dr. Gabriel Chan

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Open Data Access Standard Data Request

2 messages

Gabriel Chan <gabechan@umn.edu>

Thu, Feb 13, 2025 at 5:11 PM

To: amy.a.liberkowski@xcelenergy.com, mario.g.martinez@xcelenergy.com, Jody.L.Londo@xcelenergy.com, "Martin, Nick" <Nicholas.F.Martin@xcelenergy.com>, Nick.Paluck@xcelenergy.com

Cc: Destenie Nock <dnock@andrew.cmu.edu>, Yueming Lucy Qiu <yqiu16@umd.edu>, Annie Levenson-Falk <annielf@cubminnesota.org>, Brandon Crawford <brandonc@cubminnesota.org>

Hi Amy, Mario, Jody, Nick, and Nick,

Thank you for the conversation organized by CUB last month. Following up on that conversation, I would like to make the formal request for the provision of customer energy use data on behalf of myself and my collaborators. Please see the letter attached for details.

If you have any questions or concerns, please let me know and I would be happy to jump on the phone or schedule an in-person or virtual meeting.

Best,
Gabe

Gabe Chan

Associate Professor

Humphrey School of Public Affairs, University of Minnesota

[301 19th Avenue S., Office 161, Minneapolis, MN 55455](#)

gabechan@umn.edu; (612) 626-3292

Website: chan-lab.umn.edu



Data Request.pdf

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Martin, Nick <Nicholas.F.Martin@xcelenergy.com>

Fri, Feb 21, 2025 at 12:13 PM

To: Gabriel Chan <gabechan@umn.edu>

Cc: Destenie Nock <dnock@andrew.cmu.edu>, Yueming Lucy Qiu <yqiu16@umd.edu>, Annie Levenson-Falk <annielf@cubminnesota.org>, Brandon Crawford <brandonc@cubminnesota.org>

Hi Gabe,

Thank you for your Feb 13 Data Request for anonymized CEUD. We have discussed this quite a bit and have concerns about providing this data. We also think the forthcoming comment period in CI-24-115 may provide more guidance from the Commission that could help better tailor any study along these lines.

We decline your request at this time for two primary reasons. First, we understand that PUC staff are planning to notice that comment period in CI-24-115 fairly soon. That could result in Xcel being directed to perform a study similar to the CUB Illinois one. If so, we would then consider whether we want to do it in-house or collaborate with you and/or other parties on it. The attached "Notice of Docket Process" is not the actual notice, but does preview under Topic 1 (page 3) the questions the PUC intends to seek comment on. This may result in guidance from the Commission on study goals, approach and methodology. As such, we prefer to await the outcome of that comment period prior to any agreement on this request.

Second, as you're likely aware, the Open Data Access Standards allow but do not require utilities to provide anonymized CEUD. Section III.C. states, "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." We take our responsibility to secure and protect our customers' data very seriously and, to date, we have been very clear that we would decline to provide anonymized CEUD until an objective basis has been established to address the risk of customer re-identification from anonymized CEUD. Commission Orders in E,G-999/M-19-505 have supported that position. On that basis, we have thus far not fulfilled any requests for anonymized CEUD in Minnesota due to the risk that release would allow a third party to re-identify customers or create a security risk for the utility, its customers, or the public, resulting in disclosure of sensitive information that the Commission has tasked utilities with protecting. We decline this request on that basis as well.

We would of course be willing to revisit your request at a later date, as the information and standards around securing anonymized data evolve, and as we know the results of the forthcoming comment period.

Thanks for your understanding,

Nick

From: Gabriel Chan <gabechan@umn.edu>

Sent: Thursday, February 13, 2025 5:11 PM

To: Liberkowski, Amy A <amy.a.liberkowski@xcelenergy.com>; Martinez, Mario G <mario.g.martinez@xcelenergy.com>; Londo, Jody L <Jody.L.Londo@xcelenergy.com>; Martin, Nick <Nicholas.F.Martin@xcelenergy.com>; Paluck, Nick <Nick.Paluck@xcelenergy.com>

Cc: Destenie Nock <dnock@andrew.cmu.edu>; Yueming Lucy Qiu <yqiu16@umd.edu>; Annie Levenson-Falk <annielf@cubminnesota.org>; Brandon Crawford <brandonc@cubminnesota.org>


Subject: Open Data Access Standard Data Request

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2 attachments

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