



Stakeholder Meeting on Xcel Energy's Interactive Service Quality Map and Equity Analysis

July 9, 2024, 9am – 12pm

Hybrid Meeting – Small Hearing Room, Minnesota Public Utilities Commission and Microsoft Teams

- Always speak to a microphone so folks online can hear – if you're in the room please come up to the table and we'll make room
- Online folks, feel free to jump in or use the raise hand function
- Turn on camera if you plan to speak
- Use chat for technical difficulties but not questions or comments

Agenda

- 9:00 am Welcome and introductions
- 9:05 am Commission Staff overview
- 9:15 am Xcel Energy presentation - *Service Quality and Demographics Analysis (TRC, Close)*
- 9:30 am Grid Equity Commenters presentation - *Racial and Economic Disparities in Electric Reliability and Service Quality in Xcel Energy's MN Service Area (University of Minnesota, Pradhan/Chan)*
- 9:45 am Questions and discussion on analyses
- **10:15 am Break**
- 10:30 am Xcel Energy presentation - *Overview of Opportunities for Improvement identified in 2023 Annual SQSR Report*
- 10:40 am Discussion and stakeholder input on additional actions for improvement
- 11:20 am Discussion of future reporting, map developments, and process improvements
- 11:45 am Closing and next steps

Organizations attending today's meeting

- ARC Minnesota
- Citizens Utility Board
- City of Minneapolis
- Cooperative Energy Futures
- Dakota Electric Association
- Environmental Law and Policy Center
- Energy Cents Coalition
- Energy Foundation
- Fresh Energy
- Minnesota Department of Commerce
- Minnesota Office of the Attorney General
- Minnesota Power
- Minnesota Public Utilities Commission
- University of Minnesota
- Vote Solar
- Xcel Energy

Overview of today's meeting

- Not making any decisions, goal is to have a discussion and figure out areas of agreement and disagreement
- Commission Staff will take notes and will publish a non-attributed summary – will send out for stakeholder review prior to publishing in the docket
- Comment Period to follow this meeting in Xcel's Annual Service Quality, Safety, and Reliability Docket (E002/M-24-27)

Process History

- September 18, 2019, Order in the Performance Based Metrics Docket (E002/CI-17-401) established three metrics:
 - Locational Reliability
 - Reliability- Equity – reliability by geography, income, or other relevant benchmarks
 - Customer Service Quality- Equity metric – customer service quality by geography, income, or other relevant benchmarks
- Metrics referred to Xcel's Annual Service Quality, Safety, and Reliability Report for Development (Docket E002/M-20-406)
- Additional metrics on energy bill assistance and low-income energy efficiency program participation added via Commission's February 9, 2022, Order in Docket E002/CI-17-401

Process History

- Technical workgroups in 2021 – led to creation of Interactive Service Quality Map
- Map displays the following metrics at the Census Block Group level:
 - Customers Experiencing Lengthy Interruptions – 12 hours or longer (CELI-12);
 - Customers Experiencing Multiple Interruptions – 6 or more in a year (CEMI-6);
 - Percent of customers experiencing one or more involuntary disconnections in a year;
 - Conservation Improvement Program (CIP) low-income participation; and
 - Low-income energy assistance program participation.
- Map displays the following demographic data from the American Communities Survey:
 - Median Household Income
 - Census block groups where 40% or more of the population is at 185% of the poverty level
 - Census block groups with population of People of Color equal or greater than 50%
 - American Indian Reservations – Federally Recognized Tribal Entities

Process History

- May 18, 2023, Order, Dockets 20-406; 17-401
 - *Determined that the metrics displayed on the interactive map meet the requirement of the Commission's September 18, 2019, Order Establishing Performance Metrics to develop "future metrics" on Locational Reliability, Equity – Reliability, and Equity – Service Quality and the requirements of the Commission's February 9, 2022, Order Accepting Report and Setting Additional Requirements to display low-income energy efficiency program participation and energy bill assistance program participation.*
 - *Referred the matter of any additional metric development, including whether to set targets, back to Docket No. E002/CI-17-401 and take it up when the Commission considers next steps overall in that docket.*
 - *Required Xcel to conduct an analysis that examines whether there is a relationship between poor performance on the five identified metrics displayed on the interactive map and equity indicators. Required Xcel to file this analysis with its next service quality report due April 1, 2024.*
 - *If Xcel's analysis determines there are disparities in any of the five metrics displayed on the map, required Xcel to identify preliminary steps it could take to rectify the disparities and if Commission approval is required, where and when it would expect to file solutions.*

Disconnections, Outage, and Equity

MPUC Interactive Service Quality Map and Equity Analysis Stakeholder Meeting

July 9, 2024

Brett Close, TRC

Introduction

Building on previous work, but expanding with new methods and data

- Xcel Energy contracted with TRC to provide objective and comprehensive analysis of the relationship between demographics, key metrics of power service reliability and quality (e.g., disconnections, outages), and low-income program participation.
- This work builds on analysis conducted by Dr. Gabriel Chan on behalf of the Just Solar Coalition. It was completed around the same time as the recent analysis by Chan and Pradhan we will discuss today.

TRC relied on nonparametric kernel smoothing regressions to analyze the relationship between service quality and demographics

- Rather than group averages and linear regressions, we relied on nonparametric kernel smoothing regressions.
- This approach provides the advantage of both averages and regressions by allowing for flexible changes in relationship while also controlling for other variables.
- Similar to a moving average approach, but controls for multiple variables and uses the data to determine what range to average over.

TRC incorporated additional data into the modeling to control for other relevant characteristics

Original variables

- Percent POC
- Median household income
- Percent below 185% of poverty level

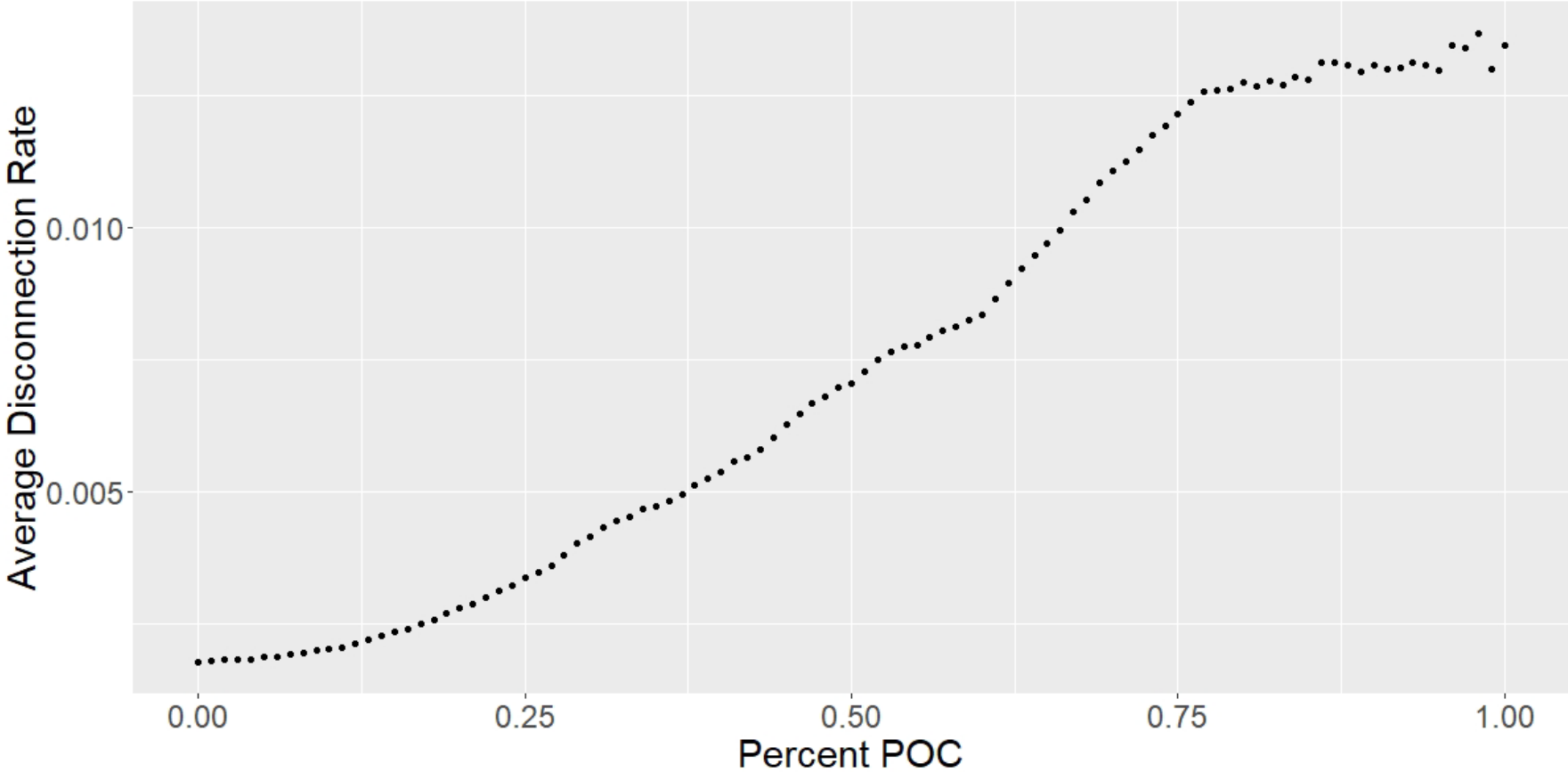
Additional variables incorporated

- Home ownership rate (wealth)
- Limited English proficiency rate (ability to decipher bill)
- Percent with no home internet access (barrier to online payment)
- Distance to nearest payment center (barrier to in-person payment)
- Housing vintage (median age or precent built before 1970)

Summary of Key Findings

- We find that disconnection rates rise with rising percent POC, even after controlling for additional variables.
 - Percent POC has a stronger impact on disconnections than other explanatory variables.
- We find that long-duration outages (CELI-12) also rise with rising percent POC, but that effect is primarily isolated to Census Block Groups with both high percent POC and older home vintage.
- We do not find a systematic relationship between percent POC and number of outages (CEMI-6).

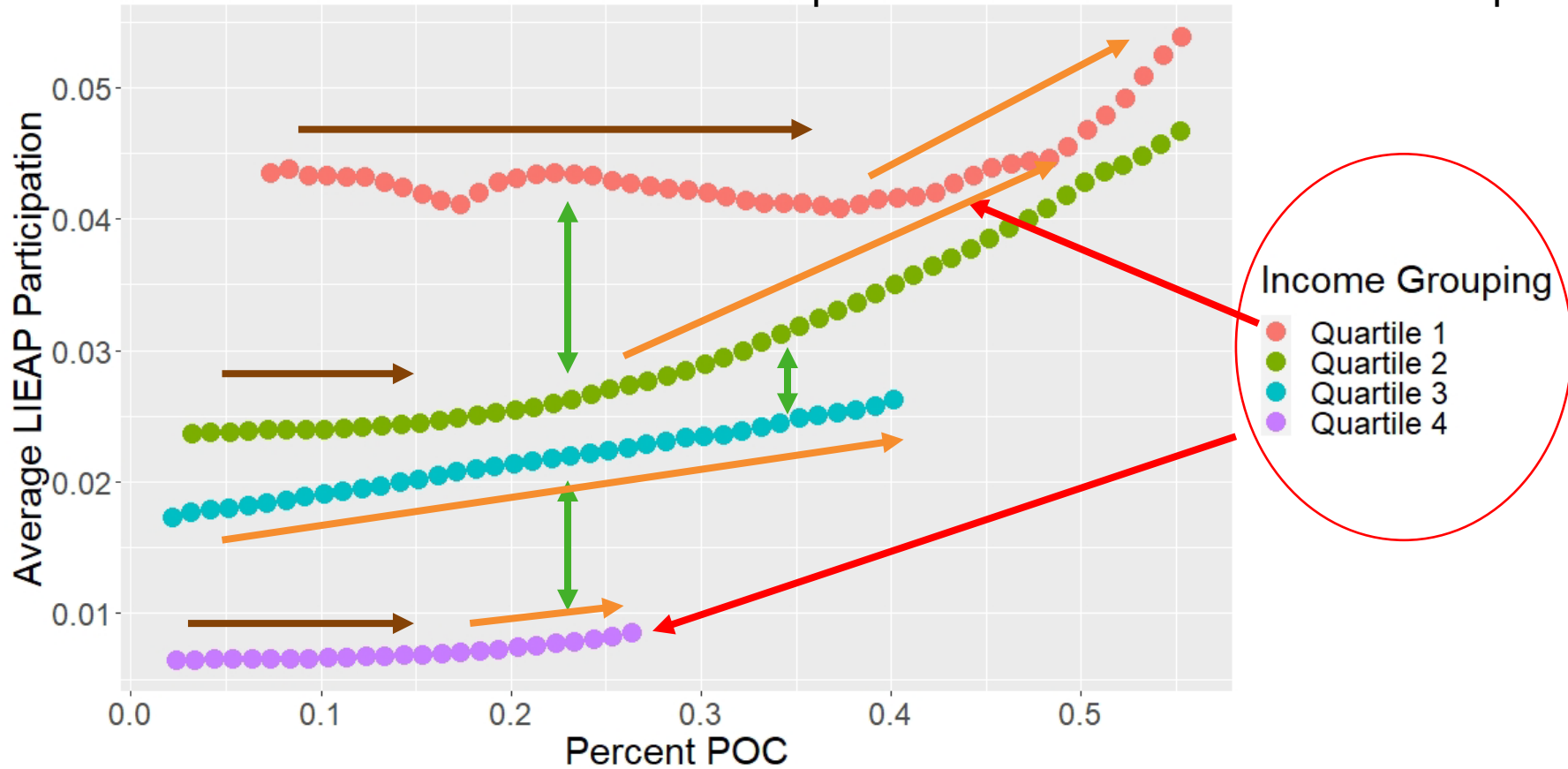
Observed disconnection rates rise as percent POC in a block group rises



How to read the figures

Census block groups are split into quartiles by income in this figure. We set all other characteristics not shown in the figure (e.g. home ownership, limited English proficiency, poverty, etc.) to quartile average and look at how LIEAP participation changes with changes in percent POC for each of these income quartiles with other characteristics kept constant.

In this figure, at every percent POC, **lower income quartiles have higher LIEAP participation** than higher income quartiles.

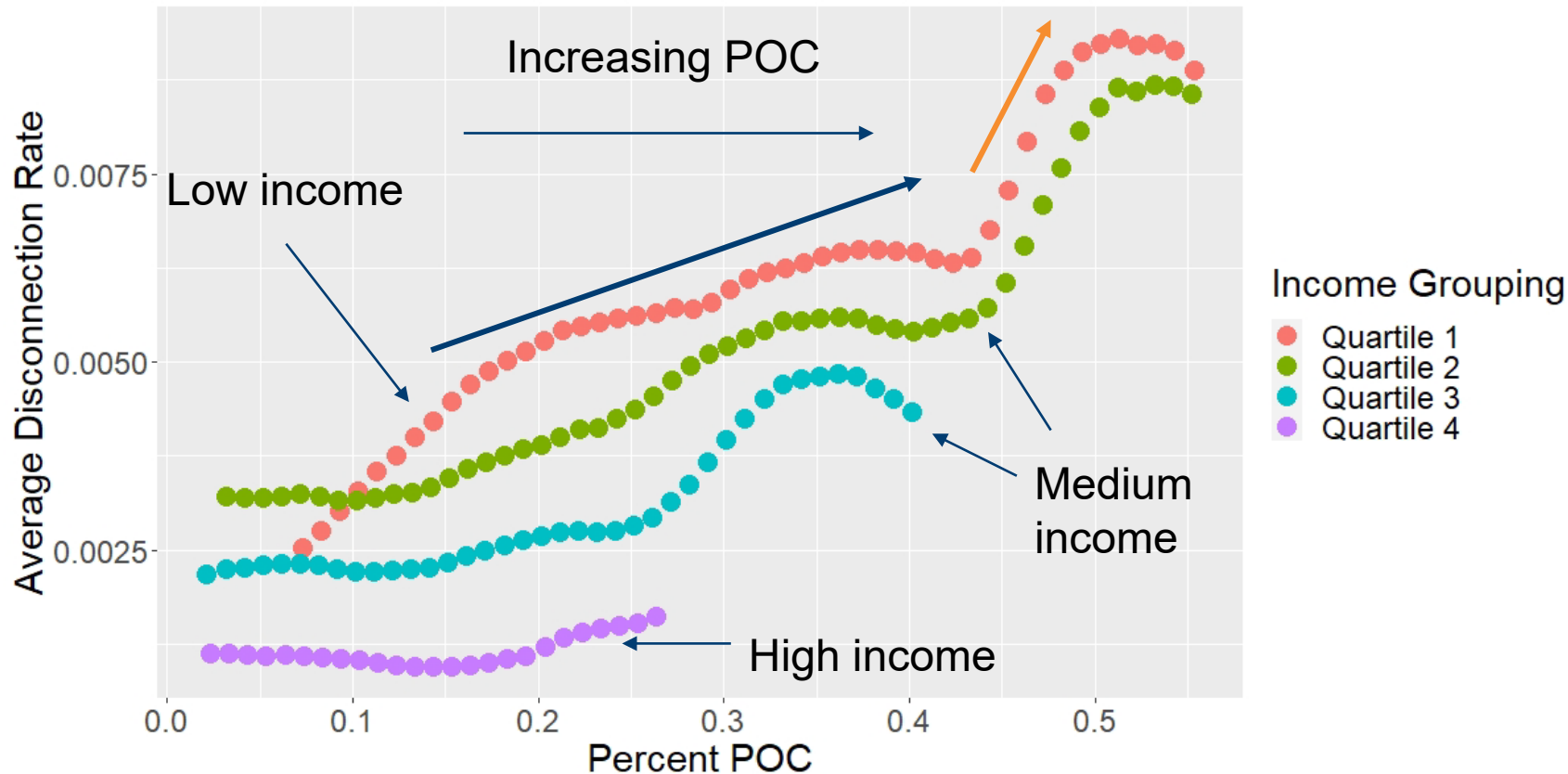


The red line shows the lowest income quartile and purple the highest.

For each of the income quartiles the **LIEAP participation rises** or **stays roughly steady** as percent POC rises.

After controlling for other relevant variables, disconnections rise as percent POC rises

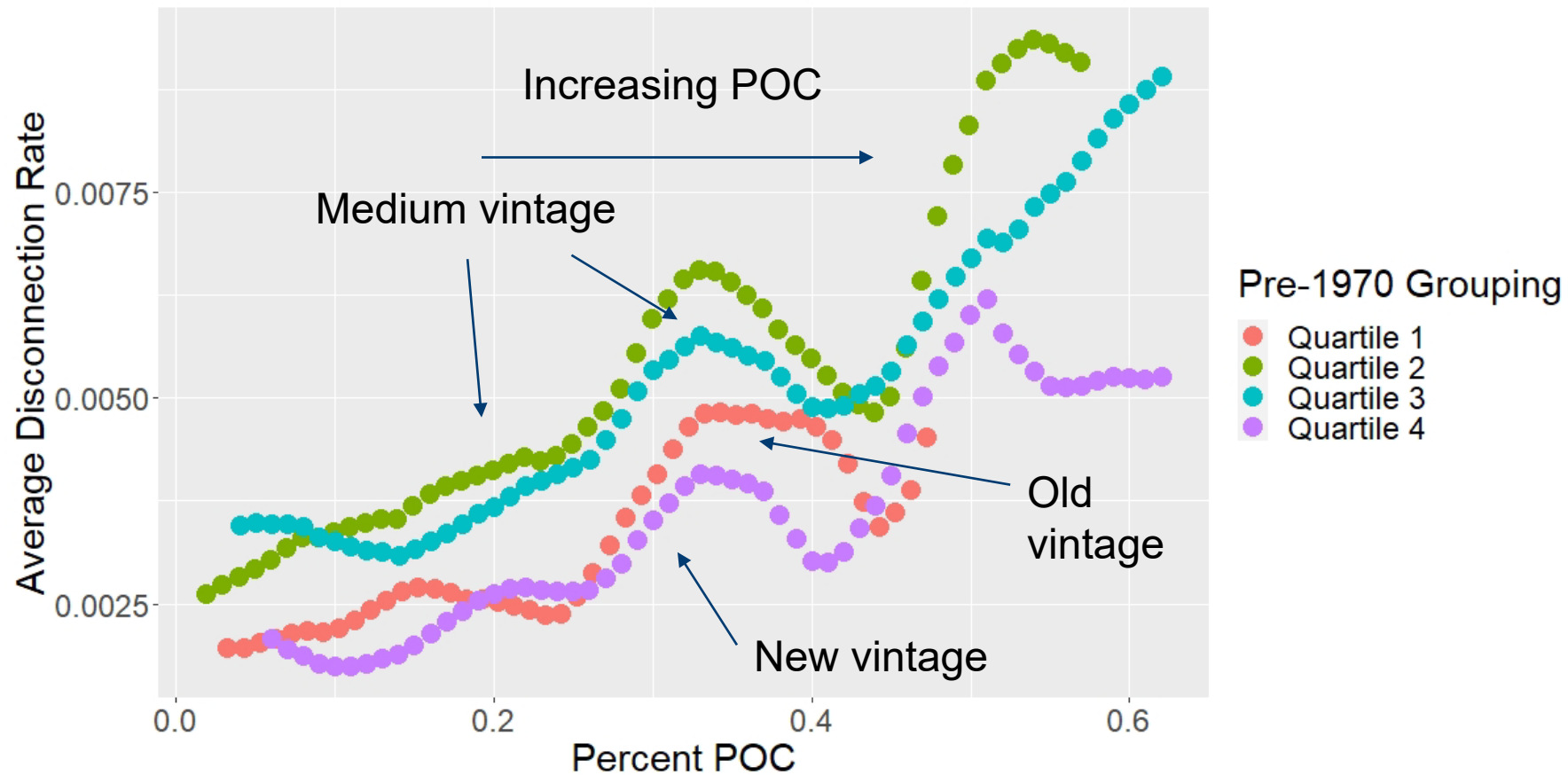
When we group block groups by income and hold other variables constant, disconnection rates rise with percent POC and rise faster in lower income areas



Holding other characteristics—including income, poverty, and home ownership—constant **higher percent POC neighborhoods have higher disconnections than similar neighborhoods with lower percent POC.**

This relationship is particularly clear in **neighborhoods with greater than about 45% POC.**

Controlling for vintage and other factors, disconnections rise with POC, but newest and oldest neighborhoods have lowest rates

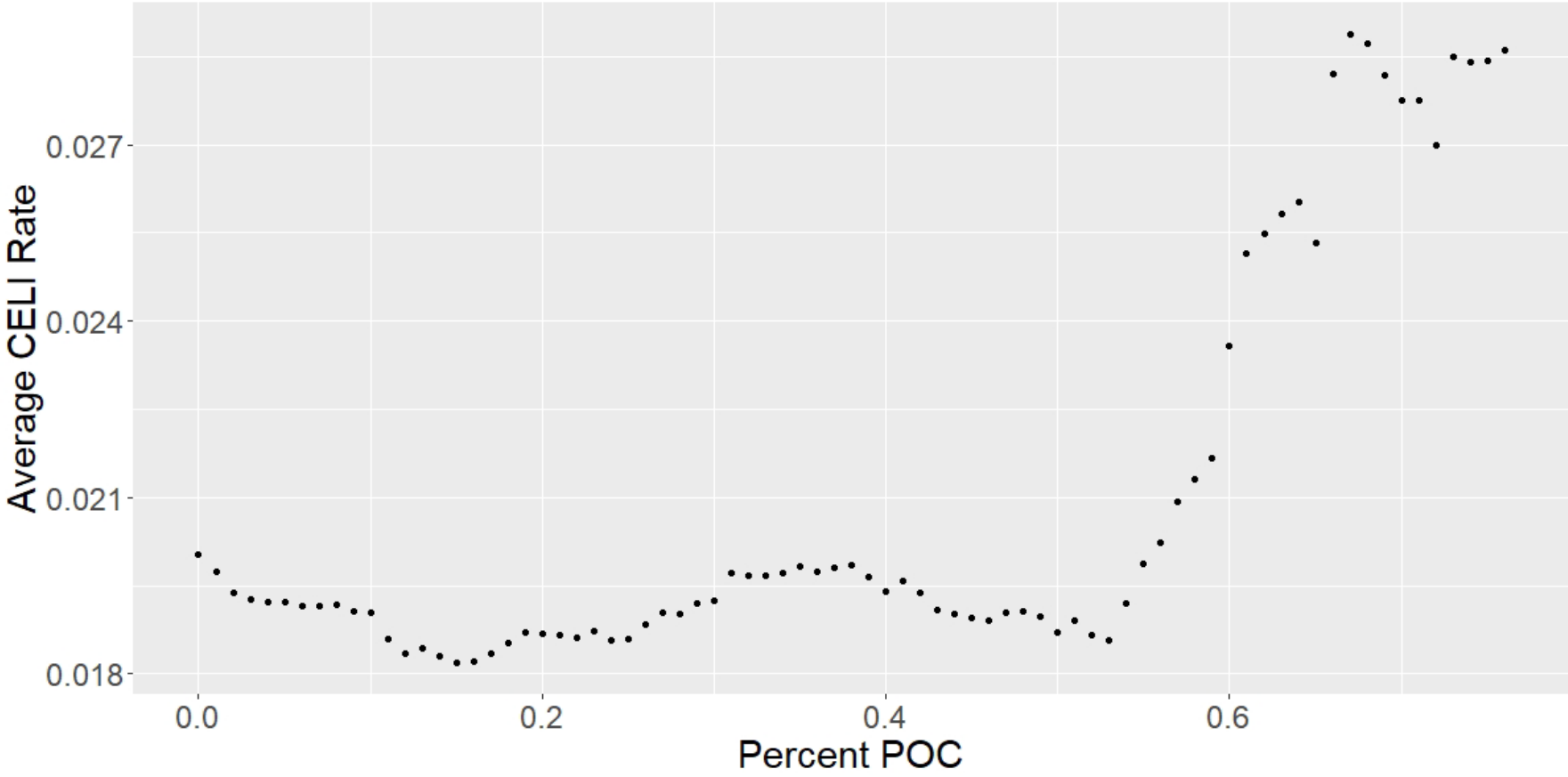


After controlling for vintage and other variables, POC still has the largest average marginal impact on disconnections

Relative marginal effects of one percentage point or one standard deviation increase in key variables:

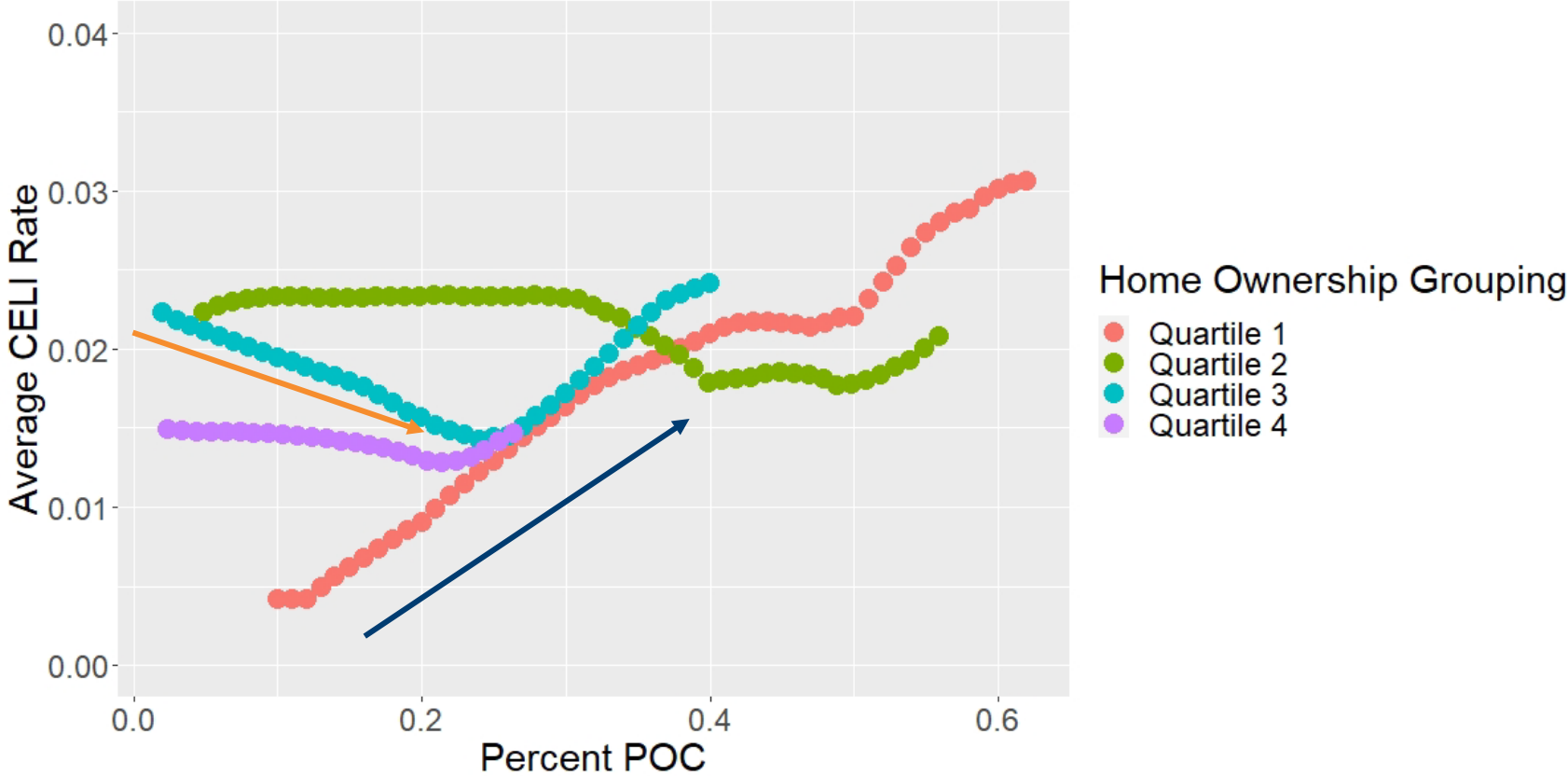
Variable	Percentage Point Impact (relative to %POC)	Standard Deviation Impact (relative to %POC)
Median HH Inc	-33%	-95%
Pct POC	100%	100%
Home Ownership	0%	-1%
Pct Below 185% Povert	12%	9%
Limited English Pct	0%	0%
Pct with No Internet	-17%	-4%
Distance to Payment Center	0%	0%
Percent Pre-1970	-32%	-41%

CELI is relatively flat up to 50% POC and then rises

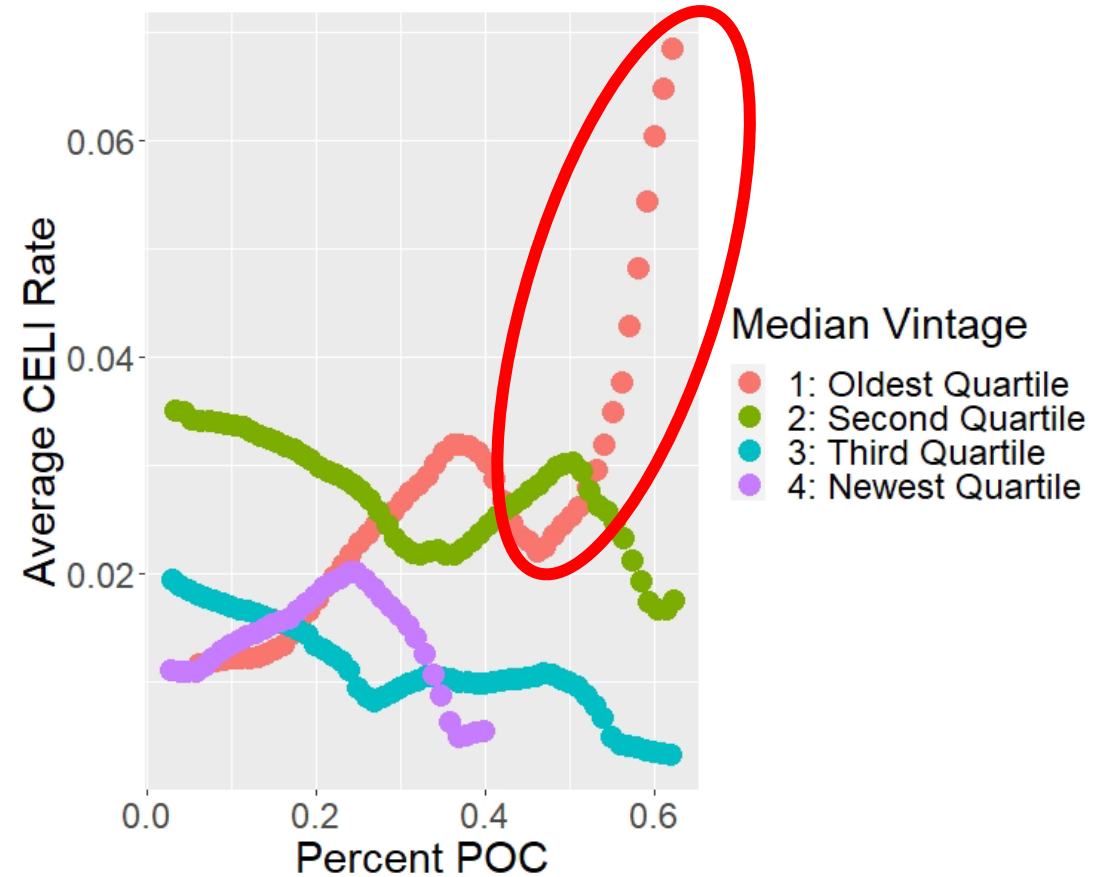
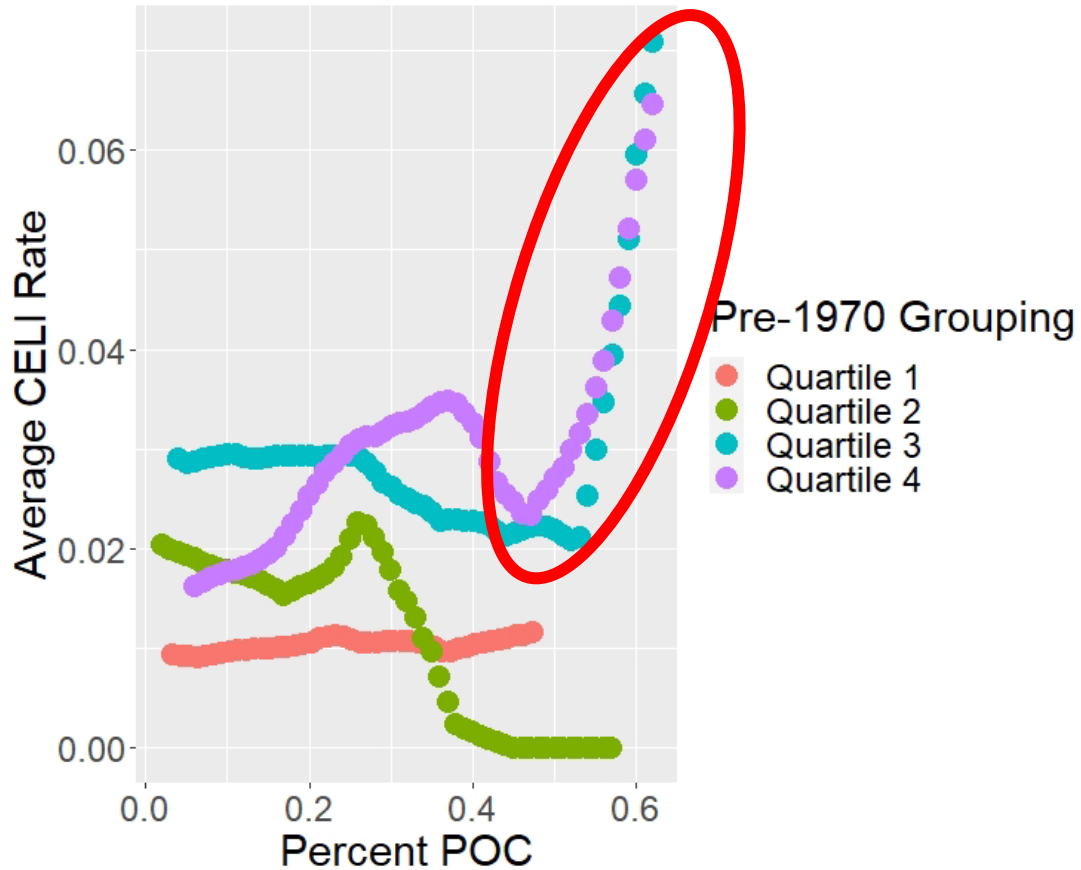


After controlling for other relevant variables, CELI is relatively flat for low POC communities but rises sharply at higher levels.

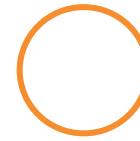
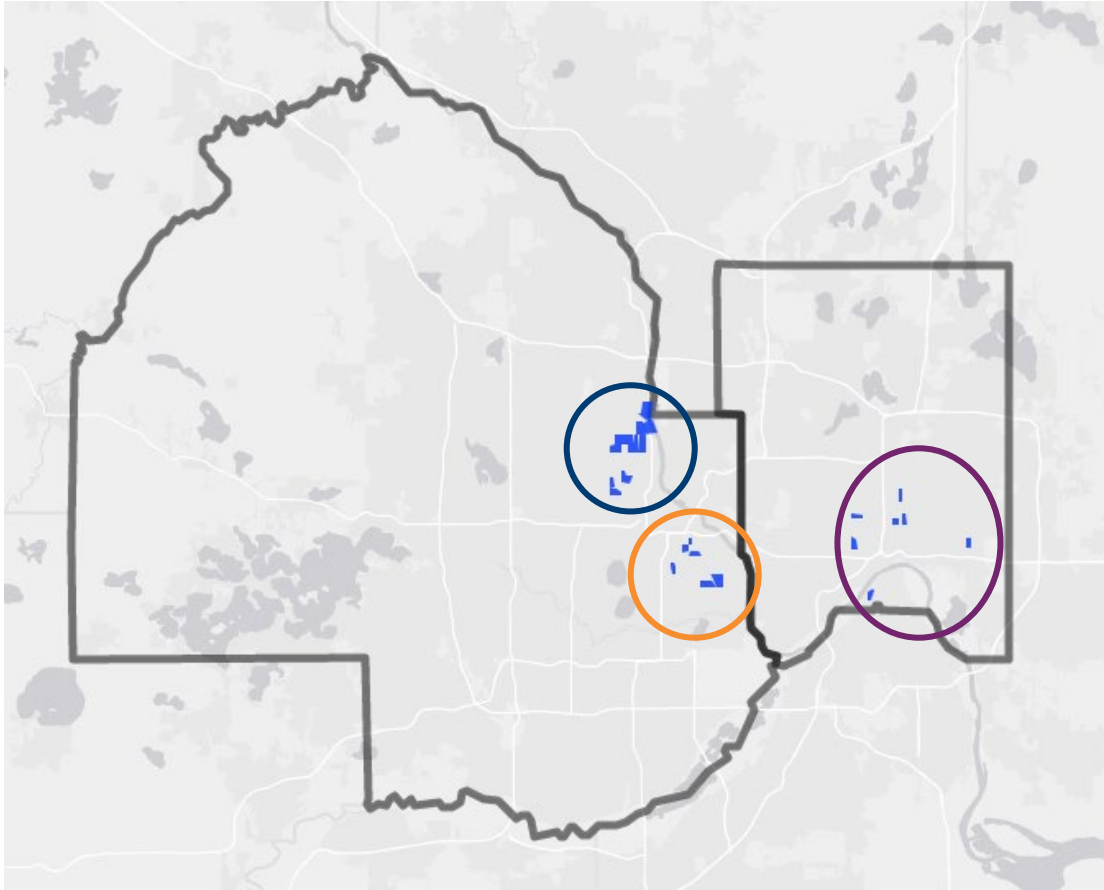
The overall pattern of response is much more complicated than for disconnections, with **low ownership increases** offsetting **high ownership decreases** to leave the average flat for lower levels of percent POC.



After controlling for vintage and other variables, POC is highly influential in neighborhoods with older homes



There are three clusters of block groups that drive the rapid rise of CELI at high POC for areas with older homes.



This group is close to the area that experienced significant civil unrest in 2020, but only three of the block groups were in the list provided by Xcel Energy of block groups impacted by civil unrest.

After controlling for vintage and other variables, other variables are as or more important than POC for CELI...

Relative marginal effects of one percentage point or one standard deviation increase in key variables:

Variable	Percentage Point Impact (relative to %POC)	Standard Deviation Impact (relative to %POC)
Median Home Age	-132%	-107%
Median HH Inc	21%	62%
Pct POC	100%	100%
Home Ownership	213%	243%
Pct Below 185% Povert	0%	0%
Limited English Pct	-25%	-7%
Pct with No Internet	253%	64%
Distance to Payment Center	75%	413%

...BUT POC is highly important in neighborhoods with older homes and high percent POC

Marginal impacts of POC in neighborhoods with lower percent POC OR newer houses

- Average marginal impact: $-7.184e-05$
- Essentially no impact

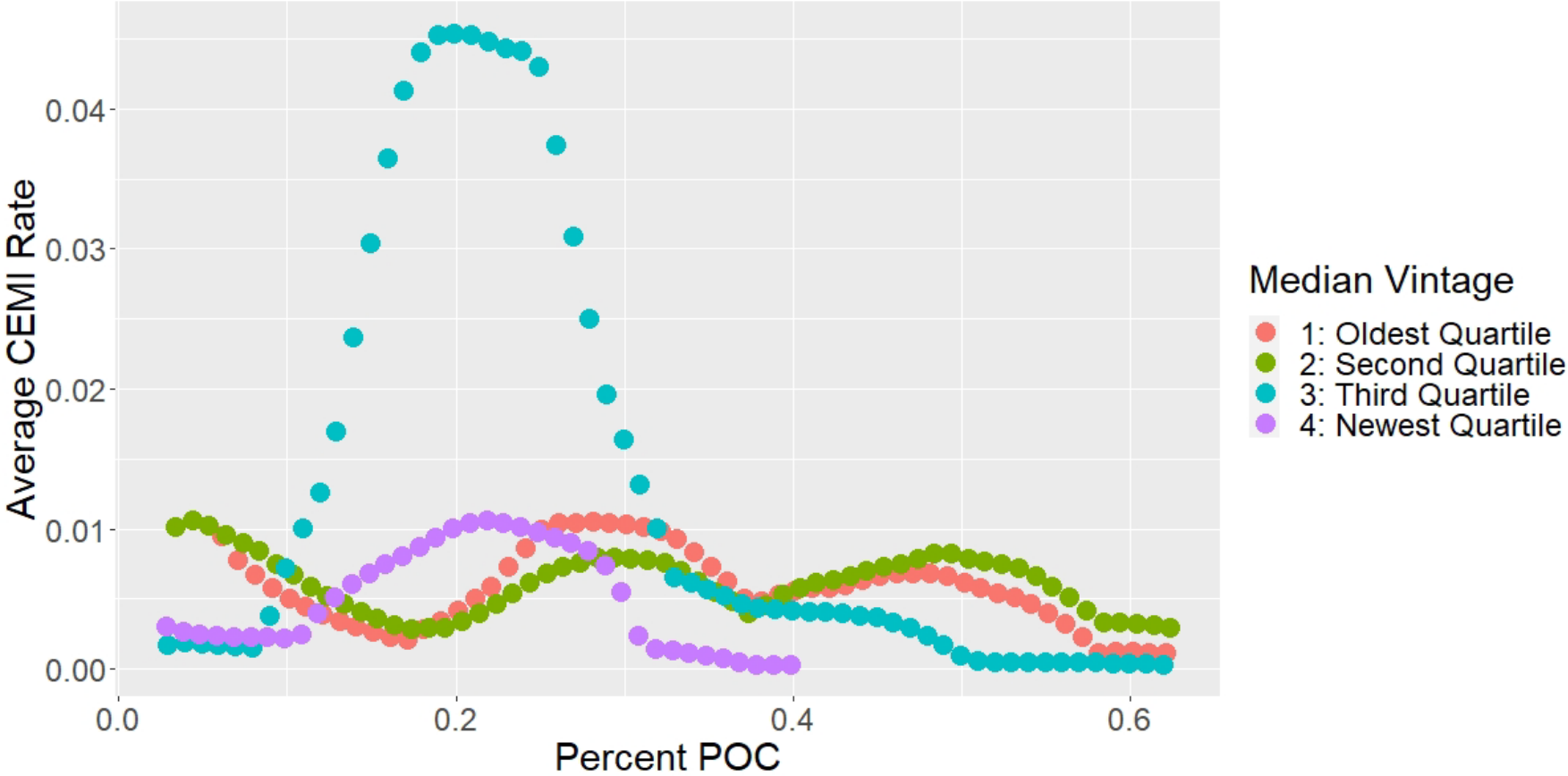
Marginal impacts of POC in neighborhoods with higher percent POC AND newer houses

- Average marginal impact: 0.05155
- About 4 and a half times as impactful as home ownership, the other most influential variable.

CEMI: Number of outages

None of the available data correlated strongly with or did a good job explaining the CEMI variable.

After controlling for vintage and other variables, patterns occur with POC for CEMI, but not overall clear relationship



Racial and Economic Disparities in Electric Reliability and Service Quality in Xcel Energy's Minnesota Service Area

Bhavin Pradhan, PhD
Gabriel Chan, PhD



UNIVERSITY OF MINNESOTA
Driven to DiscoverSM

Study Authors



Gabriel Chan

Center for Science,
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Technology, and
Environmental Policy,
University of Minnesota

Overview

- Pradhan and Chan Study Findings
- Points of Alignment with TRC Study
- Differences between Studies
- Next Steps

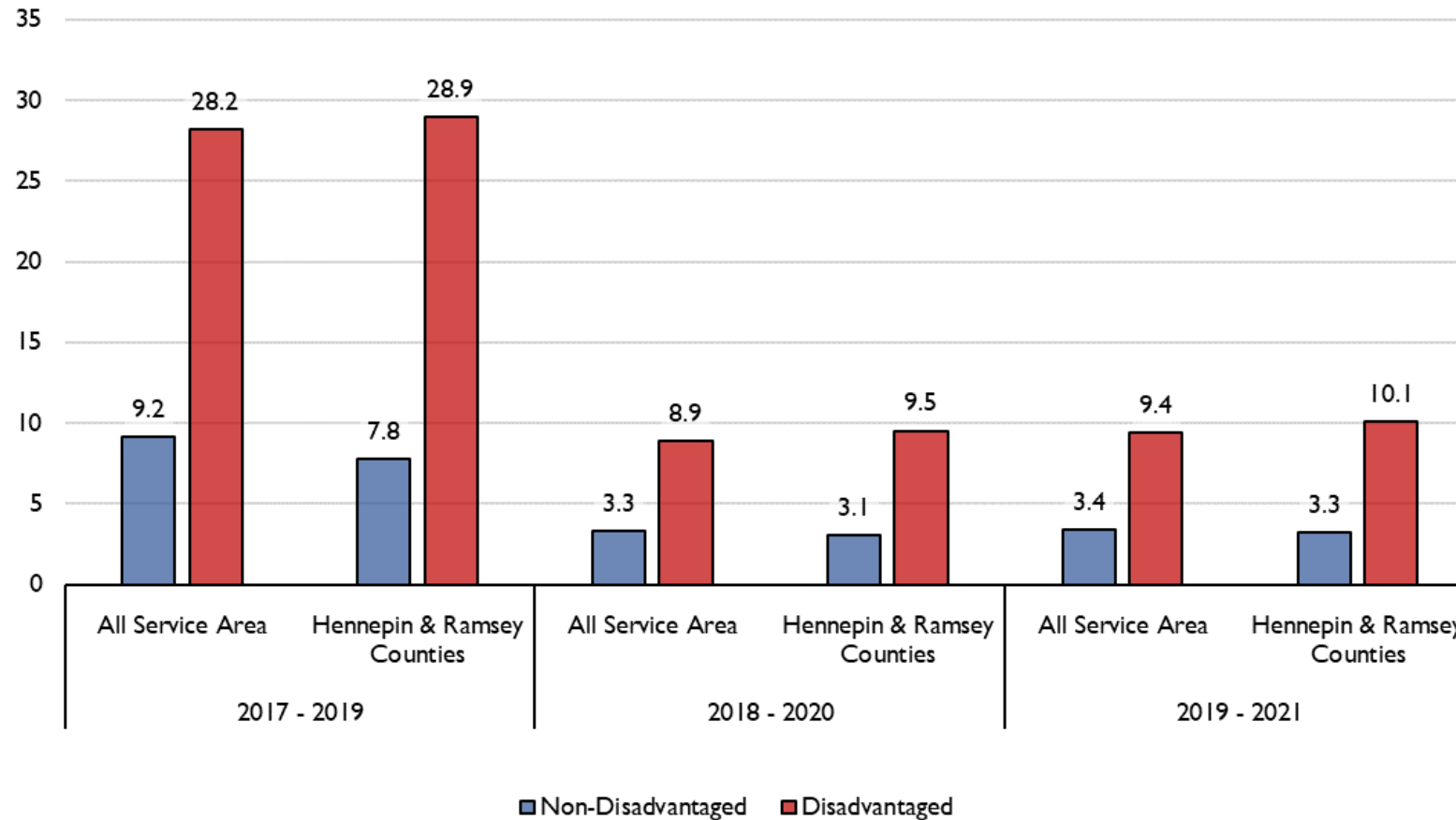
Pradhan and Chan Study Findings

Pradhan and Chan Study Overview

- Data Sources:
 - Interactive Equity and Service Quality Interactive Map (2017-2019, 2018-2020, 2019-2021, 2020-2022)
 - U.S. Census American Community Survey
 - Council on Environmental Quality's Climate and Economic Justice Screening Tool (CEJST) map
 - Xcel Energy's Hosting Capacity Analysis for Generation (Gen-HCA)
- Outcome Variables
 - Disconnections, Long-Duration Outages (CELI-12), Multiple Outages (CEMI-6), Area Maximum Hosting Capacity
 - All outcome variables are standardized to a relative per-capita measure (e.g. disconnections per 1,000)
- Methodology
 - Descriptive Analysis (maps, charts)
 - Difference-in-Means Hypothesis Tests (comparing CEJST Disadvantaged Communities vs. Others)
 - Linear Regression Models

Findings: Disconnections

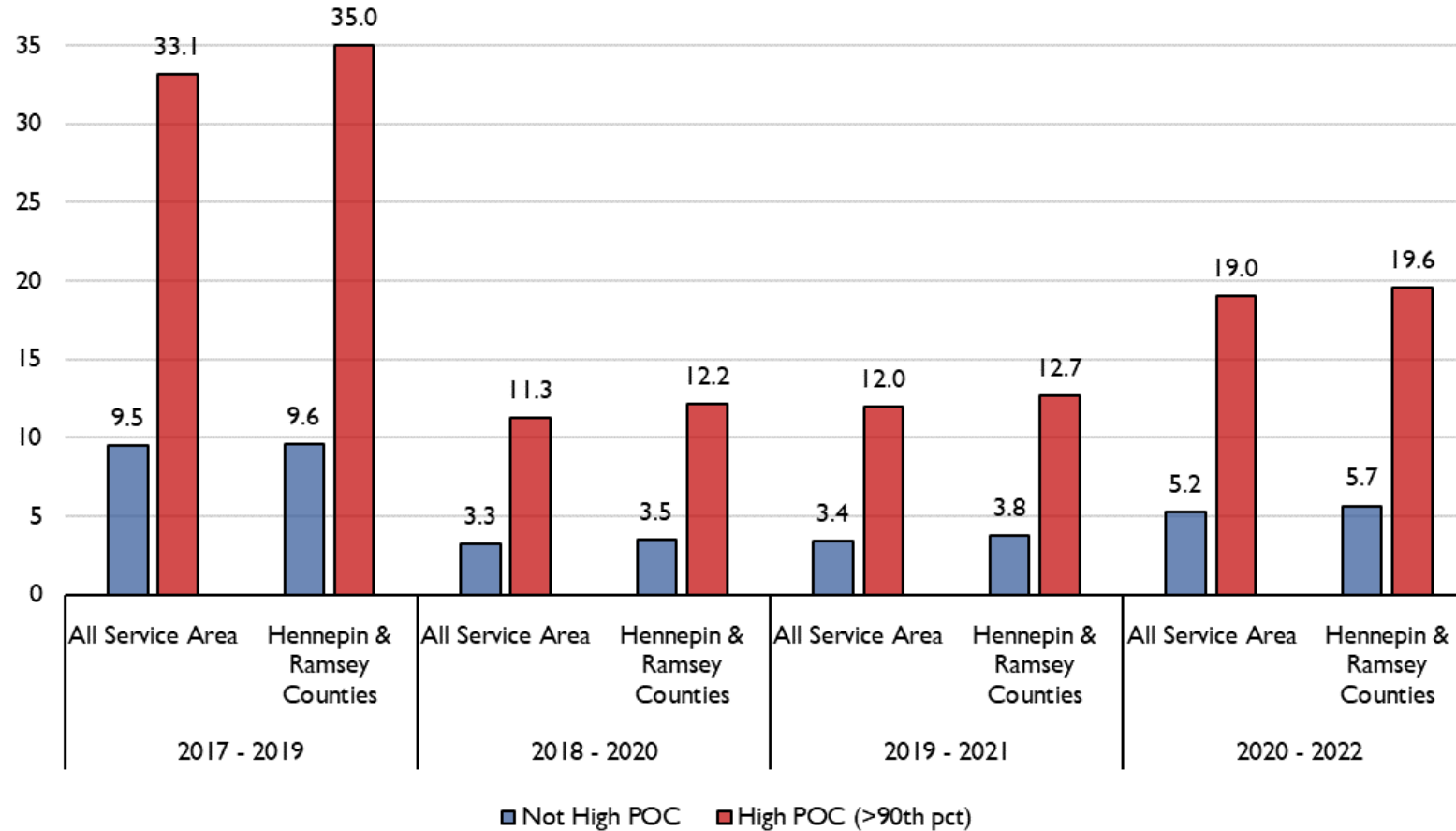
**Households Involuntarily Disconnected
(disconnections per 1,000)**



All differences are statistically significant with p-values < 0.0001

Findings: Disconnections

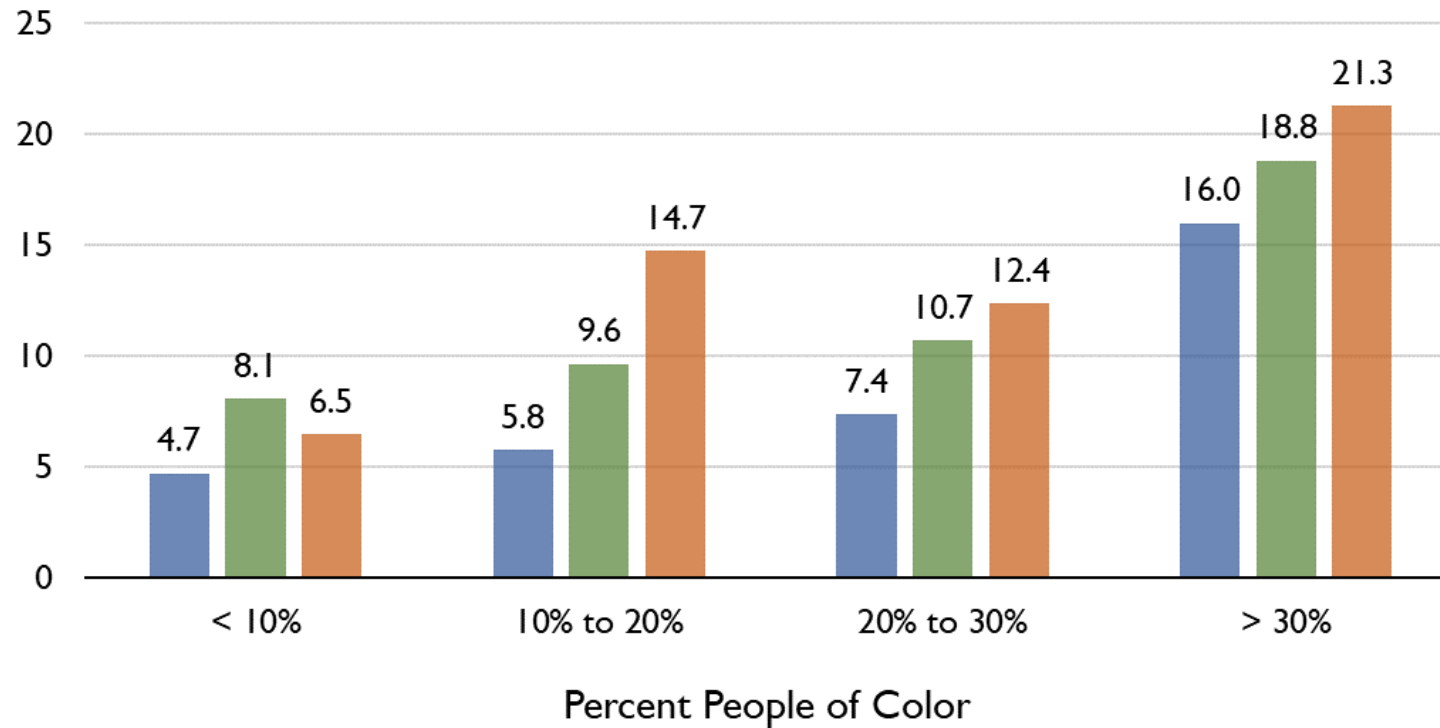
Households Involuntarily Disconnected
(disconnections per 1,000)



All differences are statistically significant with p-values < 0.0001

Findings: Disconnections

**Annual Disconnection Rate
(disconnections per 1,000 households)**



- All service area
- Majority Low Income Areas (Median Income < \$75k)
- Majority Very Low Income Areas (Median Income < \$50k)

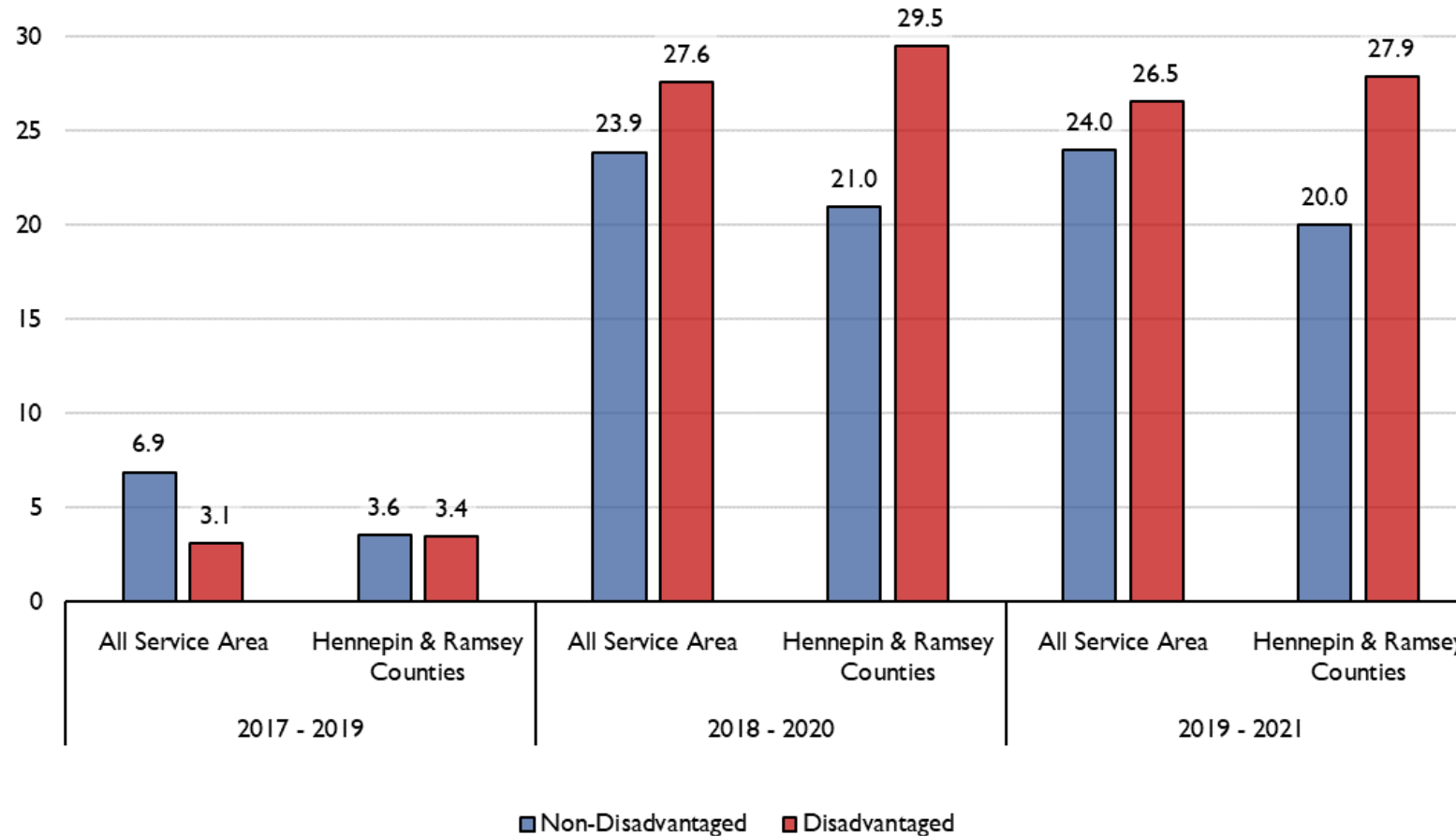
Findings: Disconnections

Dependent Variable: Model:	Disconnected homes (per 1,000 households)				
	(1)	(2)	(3)	(4)	(5)
POC (0-100%)	0.2927*** (0.0116)	0.2271*** (0.0132)	0.2645*** (0.0118)	0.2940*** (0.0118)	0.2236*** (0.0133)
Poverty (0-100%)		0.1201*** (0.0171)			0.0777*** (0.0210)
Med. HH Inc. (\$100,000)			-3.492*** (0.3699)		-1.296** (0.5153)
Population Density (1,000 households per sq. mile)				-0.0147 (0.0307)	-0.0925*** (0.0321)
Unemp. Rate (0-100%)					0.1633*** (0.0528)
Renters (0-100%)					0.0184 (0.0112)
Built after 90s (0-100%)					-0.0379*** (0.0066)
Year FE	✓	✓	✓	✓	✓
County FE	✓	✓	✓	✓	✓
Observations	4,511	4,511	4,511	4,511	4,451
R ²	0.3638	0.3776	0.3737	0.3639	0.3852

Significance Codes: *** p < 0.01, ** p < 0.05, * p < 0.1

Findings: Long-Duration Outages

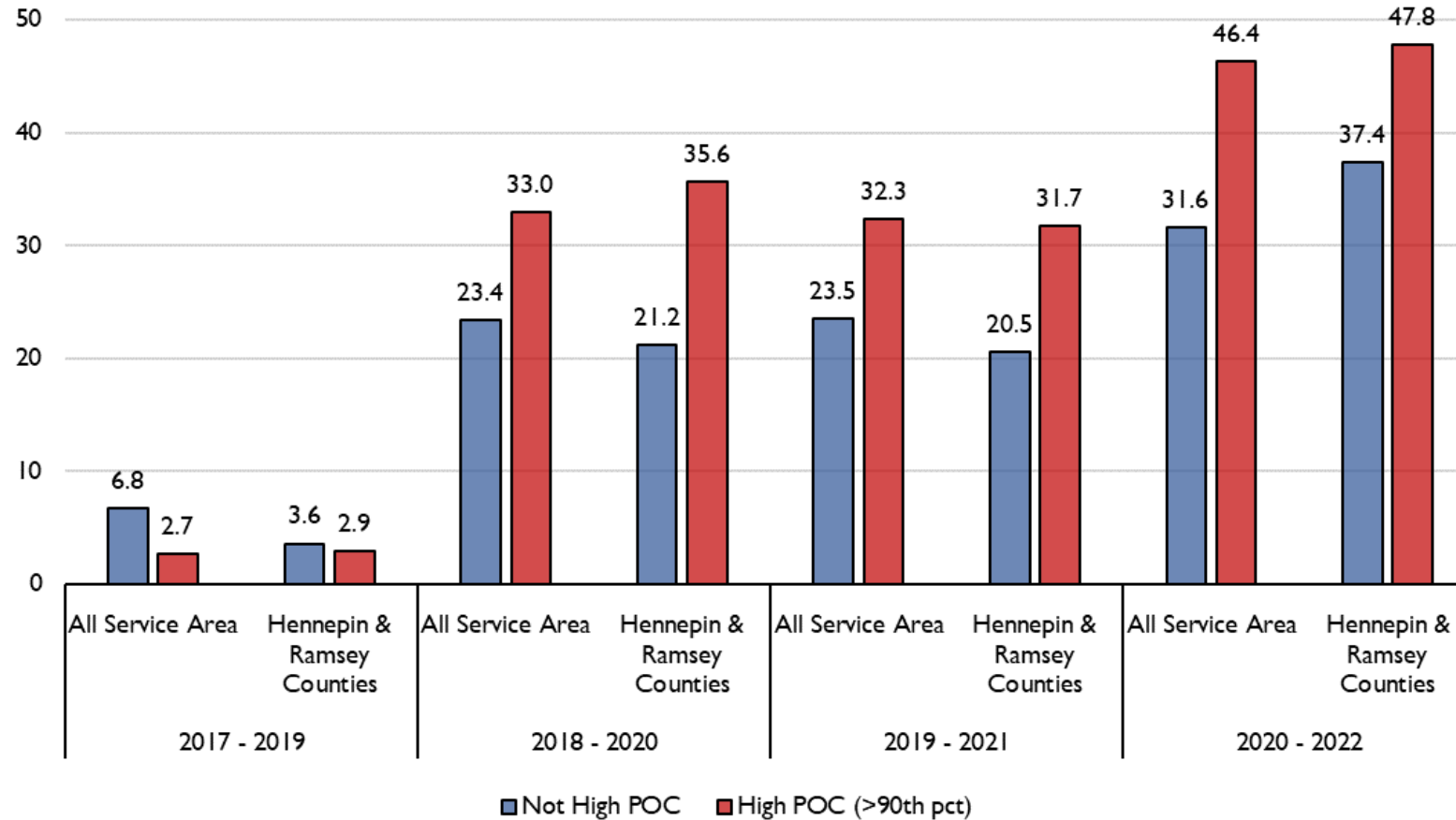
Number of Households Experiencing Outages >12 hours per 1,000 households



Statistically significant differences at 0.05 level: 2017-2019 all service area; 2018-2020 and 2019-2021 in Hennepin and Ramsey Counties

Findings: Long-Duration Outages

Number of Households Experiencing Outages >12 hours per 1,000 households



Statistically significant differences at 0.05 level: all service area in 2018-2020, 2019-2021, and 2020-2022; Hennepin and Ramsey Counties in 2018-2020 and 2019-2021

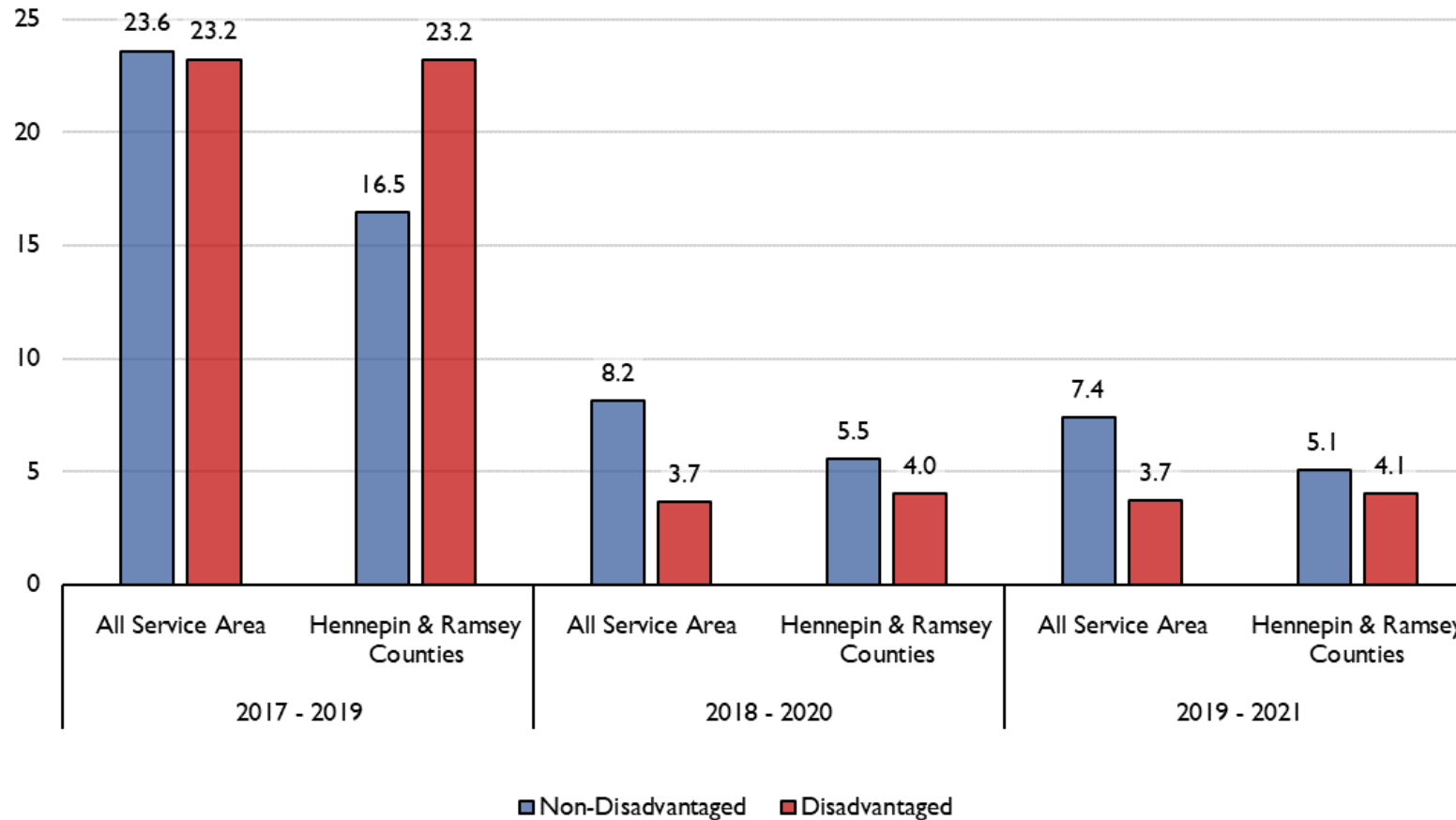
Findings: Long-Duration Outages

Dependent Variable: Model:	CELLI-12: Homes Experiencing Outages >12 hrs (per 1,000 households)				
	(1)	(2)	(3)	(4)	(5)
POC (%)	0.0652 (0.0441)	0.1992*** (0.0563)	0.1009** (0.0452)	0.1089** (0.0042)	0.2078*** (0.0561)
Poverty (%)		-0.2455*** (0.0630)			-0.0770 (0.0790)
Med. HH Inc. (\$100,000)			4.424** (1.814)		-7.307** (2.876)
Population Density (1,000 households per sq. mile)				-0.4941*** (0.1001)	-0.2258** (0.0989)
Unemp. Rate (%)					0.0177 (0.2021)
Renters (%)					-0.3180*** (0.042)
Built after 90s (%)					-0.3027*** (0.0275)
Year FE	✓	✓	✓	✓	✓
County FE	✓	✓	✓	✓	✓
Observations	4,511	4,511	4,511	4,511	4,451
R ²	0.1187	0.1213	0.1194	0.1211	0.1493

Significance Codes: *** p < 0.01, ** p < 0.05, * p < 0.1

Findings: Multiple Outages

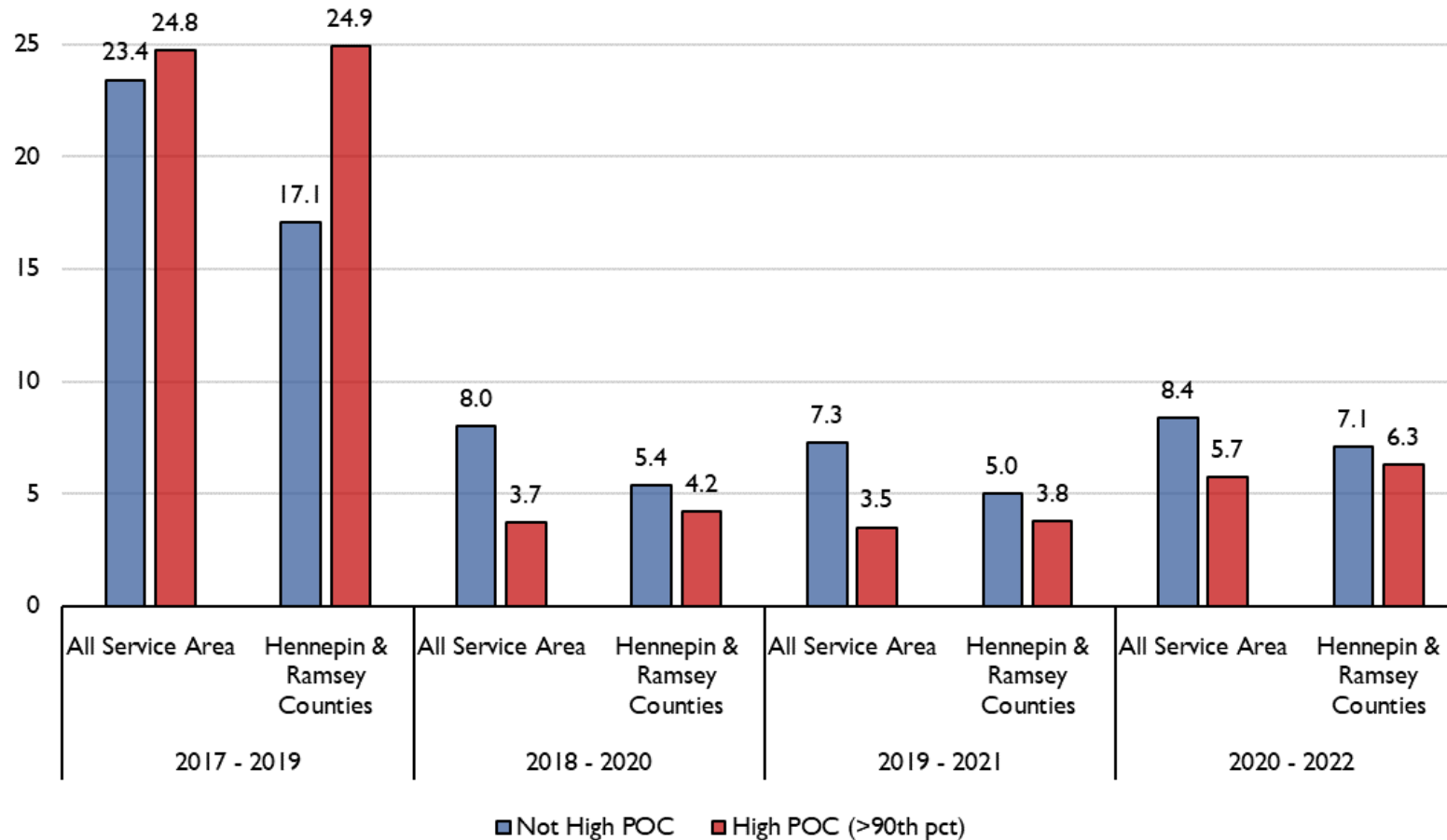
Number of Households Experiencing More than 6 Outages per 1,000 households



Statistically significant differences at 0.05 level: 2017-2019 for Hennepin and Ramsey Counties; 2019-2022 for all service area

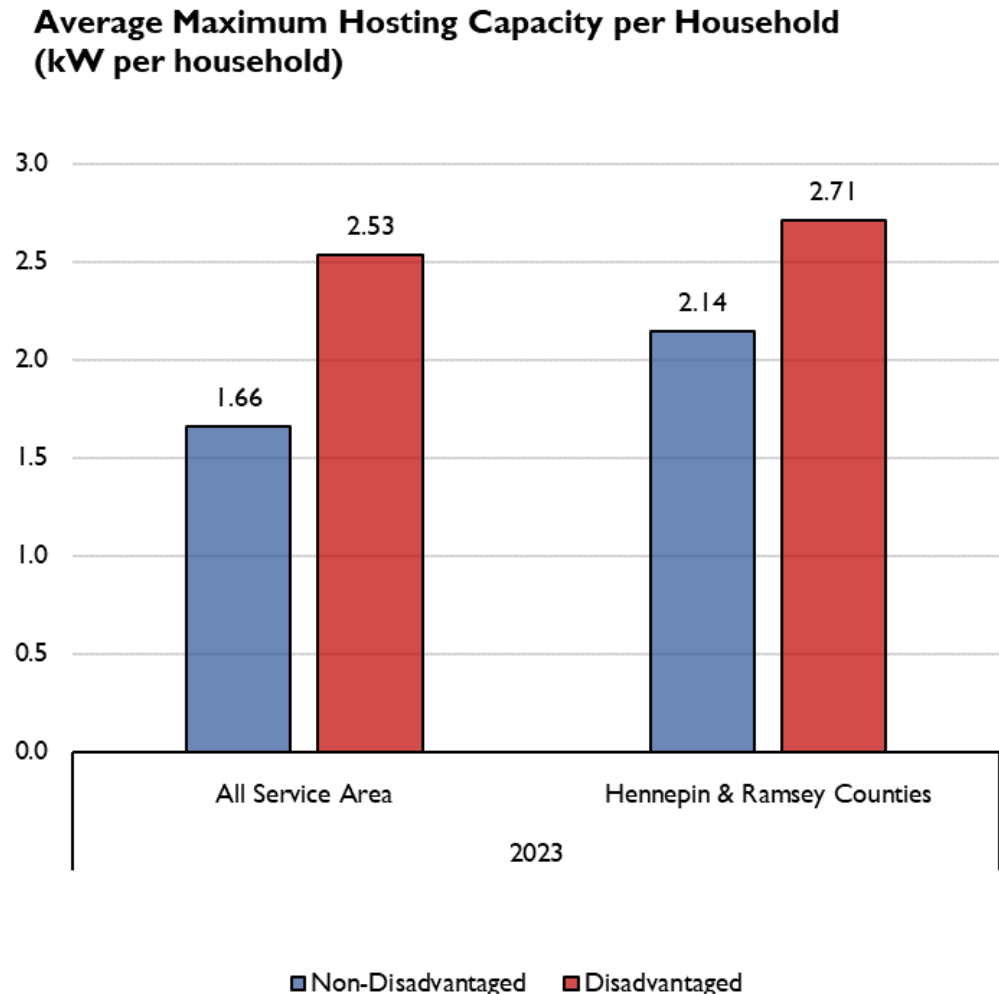
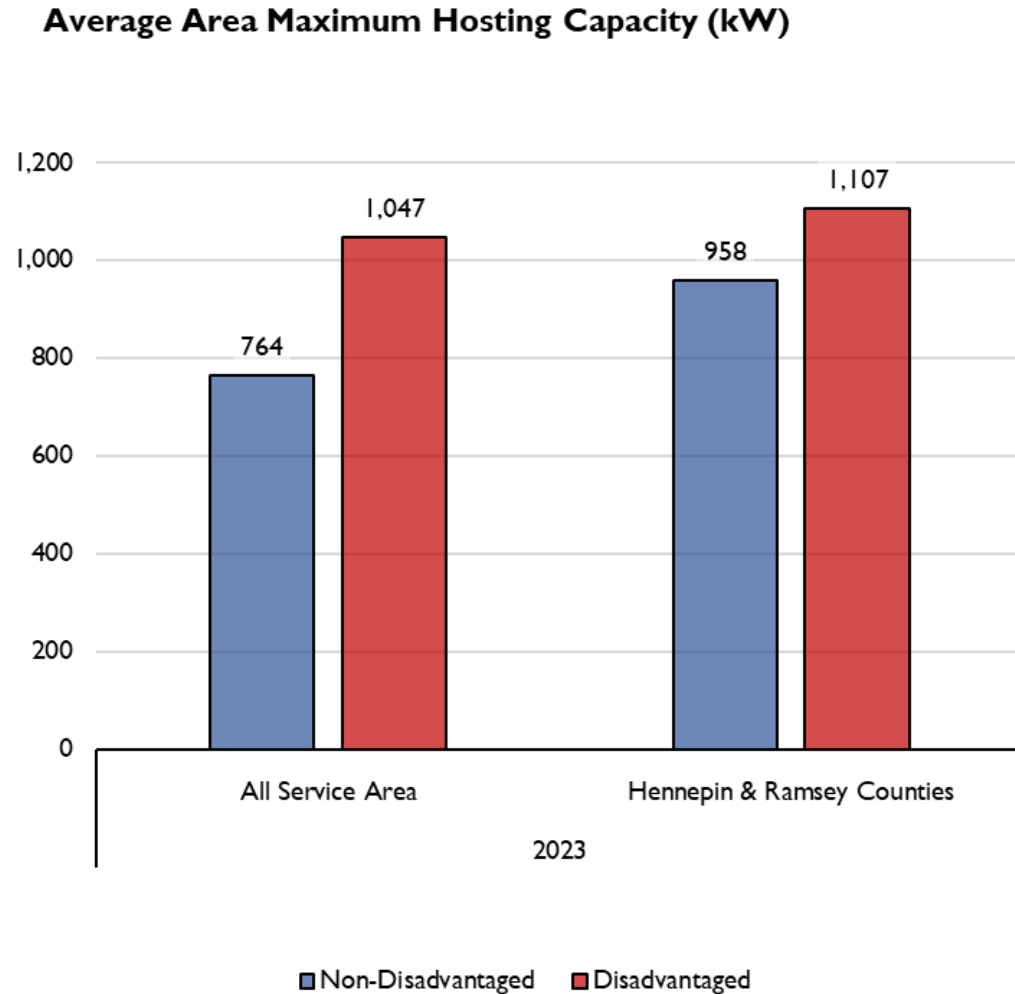
Findings: Multiple Outages

Number of Households Experiencing More than 6 Outages per 1,000 households



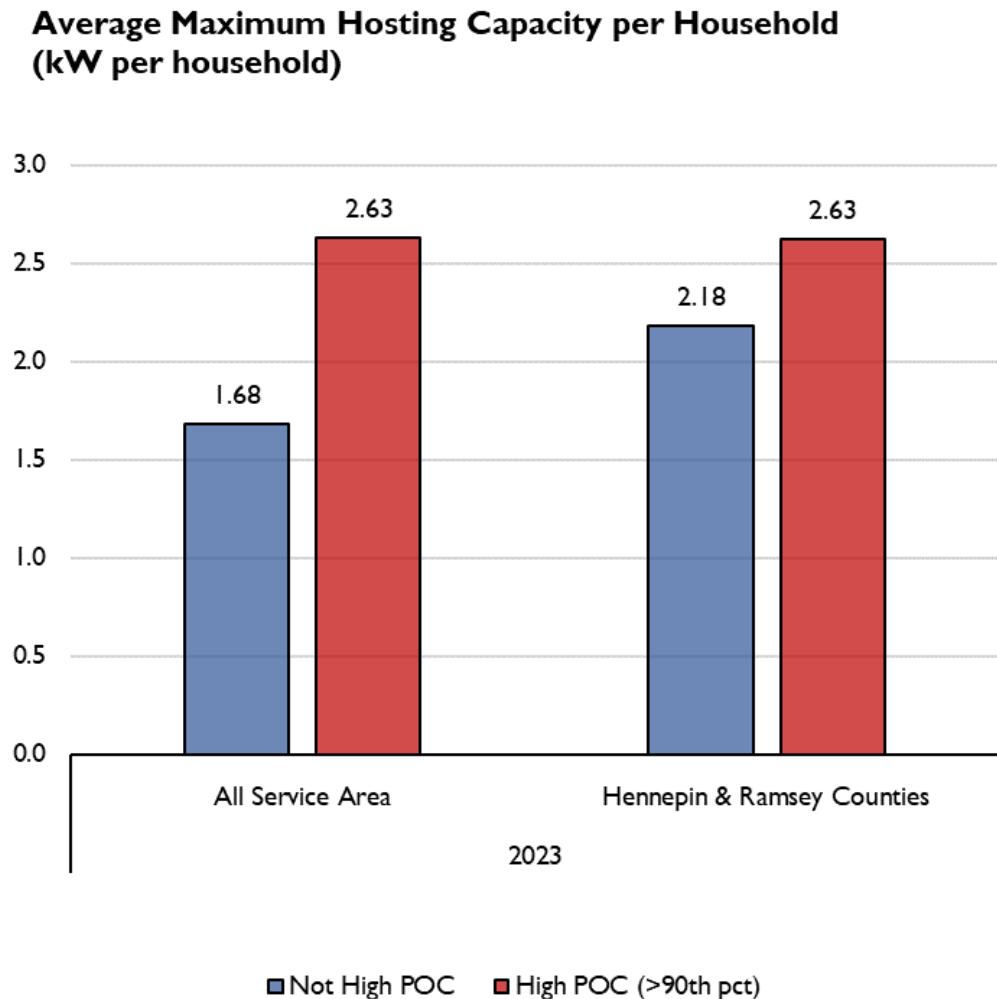
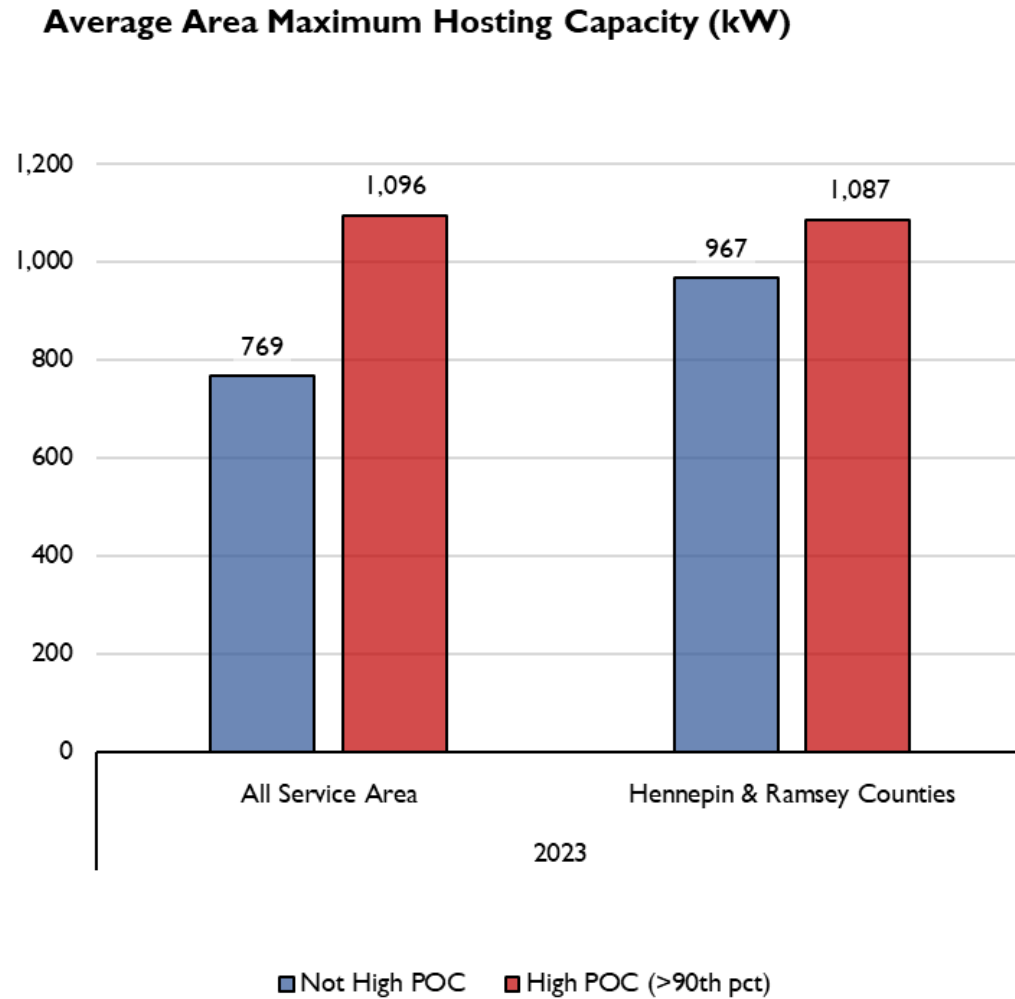
No statistically significant differences at 0.05 level

Findings: Hosting Capacity



All differences are statistically significant with p-values < 0.0001

Findings: Hosting Capacity



All differences are statistically significant with p-values < 0.0001

Points of Alignment with TRC Study

Alignment in Analysis of Disconnections

- Evidence of higher rate of involuntary disconnections with increasing proportion of people of color overall and *within an income group*
- Both the Pradhan and Chan Study and the TRC Study show this through descriptive analysis and multiple regression models

Alignment in Analysis of Service Reliability

- Evidence of higher incidence of long-duration outages in areas with higher percent people of color is highly consistent
 - Pradhan and Chan Study finds racial disparities in CELI overall
 - TRC Study emphasizes that the overall racial disparity is driven by higher CELI rates in areas with >50% people of color, particularly areas with older housing stock
- Lack of evidence of overall disparities in incidence of multiple outages

Differences between Studies

Differences

- Methodological Differences
 - Emphasis on models with/without controls; inclusion of additional controls
 - Time horizon of analysis with multiple vintages of data
 - Linear regression vs smoothed regression
- Analytical Differences
 - Whether analysis of racial disparities should control for economic factors. We contend that racial disparities should be examined first without controls in recognition of the systemic impacts of racialized systems.
- Interpretation Differences
 - The extent of the practical significance of disparities in disconnections
 - Whether multiple outages or long-duration outages should be priorities for Energy Justice

Next Steps

Next Steps

- Addressing policy implications of analysis (discussion to follow)
- Developing a plan for replication moving forward with updated data
 - Disparities materialize over time and infrastructure improvements and policies take time to realize their full impact
 - In our view, analysis is relatively straightforward to update on an ongoing basis. We think it would be feasible to replicate the analysis on an annual basis but we do not necessarily recommend that the interpretation of results should be updated annually. Instead, we think it would be valuable to take a longer time horizon for interpretation on a rolling basis (e.g. 3 vintages of reporting = 5-year averages)

Thank You

Bhavin Pradhan: pradh048@umn.edu
Gabriel Chan: gabechan@umn.edu

- *What are participant reactions to the results of the studies?*
- *Were there any variables or pieces left out of the analysis?*
- *Additional stakeholder questions and feedback*

Break – Return at 10:30

Equity Analysis, Program Information, and Proposed Plans

1. Reliability - CELI-12
2. Affordability Program Participation
3. Disconnections
4. CIP Low Income Program Participation





Reliability, CELI-12 Targeted Vegetation Management & Targeted Undergrounding Proposals

Mike Renman, Manager, Electric System Performance

Reliability - TRC Analysis Results

- The TRC Equity Analysis finds there have been more long-duration outages in high percent POC communities that also have older housing vintage.
- There may be an opportunity to assess vegetation management practices in those neighborhoods.



Enhanced Vegetation Management Proposal

- The Company could evaluate enhanced vegetation management in identified areas.
- Hazard trees located outside the standard clearance are an opportunity to address.
- Emerald ash borer infestations have generated a higher risk for overhead line impacts in recent years. Homeowners in lower income neighborhoods may be less able to afford insecticide treatment or address dying ash trees on their property.

Current Routine Vegetation Maintenance Standards

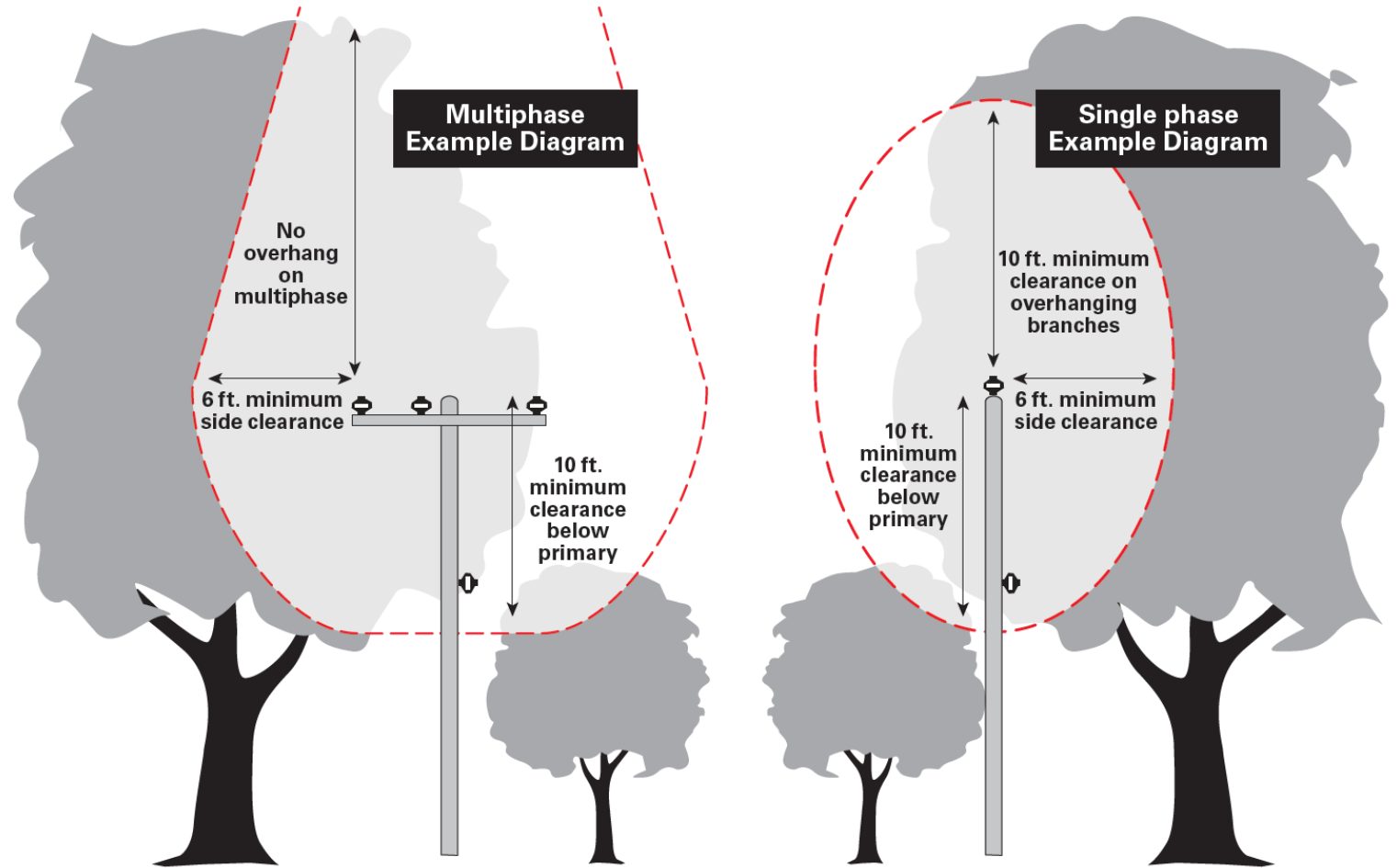
Clearance achieved at maintenance

- Above conductor
 - No overhang on multiphase
 - 10ft or greater on single phase
- Either side of conductor
 - 6 to 10ft, variable based on species
- Below conductor
 - 10ft or greater, variable based on species

**Exceptions where minimum clearance cannot be achieved*

Hazard tree mitigation

- Trees that have been determined to pose unacceptable risk of falling onto Company facilities



Multiphase distribution lines generally serve more customers than single phase and are less likely to shed falling branches

Risks Outside Standard Maintenance Corridor

Major Storm Event Impacts & Opportunities

- High wind events bring tree impacts from outside the traditional maintenance corridor.
- Generally caused by large mature trees.
- Create access issues that delay repairs.
- Opportunity to address risks located further away through enhanced vegetation management practices.
- Examples of utilities with past emerald ash borer targeted programs*
 - American Electric Power (AEP)
 - FirstEnergy
 - Kentucky Utilities Company (KU).



* [Emerald Ash Borer: A Race Against Time | T&D World \(tdworld.com\)](https://www.tdworld.com)

Targeted Undergrounding Proposal

- Review of 1st quartile reliability performance costs and benefits highlighted targeted undergrounding of distribution lines as an opportunity.
- Areas identified by the TRC analysis were identified as strong candidates for reliability improvement through targeted undergrounding.
- Addresses both aged infrastructure and vegetation related impacts to reliability.
- Higher costs and long planning, permitting, design, and construction durations must also be considered.
- A fully scoped plan would be necessary.





Affordability Program Participation Targeted Outreach Proposal

Nora Lindgren, Director, Billing & Regulatory Compliance

&

Diedra Howard, Manager, Customer Assistance & Advocacy

Affordable Program Process - Plan

- Demonstrated enrollment success in the LI EAP and ECO/CIP LI programs in high percent POC neighborhoods, provides opportunities to leverage existing relationships to increase enrollment.
- The Company can utilize current algorithms that identify customers who have not received assistance, are carrying past due balances, and reside within the identified communities.
- Targeted outreach about our affordability programs and payment options using a variety of contact methods such as social media, telephone, email, and direct mail to begin 30-45 days prior to LIHEAP season, lasting throughout.
- If approved, our proposed Automatic Bill Credit Pilot Program, which aims to reduce energy burden.
- In late 2023, we simplified our process by utilizing auto-enrollment into PowerON and GAP for LIHEAP qualified customers.
- Explore additional enrollment opportunities utilizing self-attestation.
- Discuss up front forgiveness through PowerOn/GAP/MAP during months when LIHEAP is closed.



Disconnections Proposal & Considerations

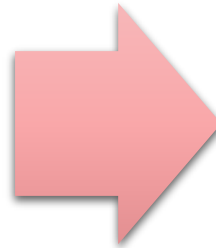
Nora Lindgren, Director, Billing & Regulatory Compliance

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Diedra Howard, Manager, Customer Assistance & Advocacy

TRC Analysis Results, Disconnections

Disconnections are higher in high percent POC neighborhoods even after controlling for other relevant explanatory variables



The study identifies three potential reasons for these results:

- 1) a higher rate of non-payment in higher percent POC neighborhoods;
- 2) potential disparities in disconnection policy; or
- 3) disparities in how people in different community's access elements of the disconnection policy-like payment plans.

Disconnections Proposal & Considerations

- Conduct a study that looks deeper into the reasons why disconnections show a higher rate in areas with higher percent POC.
- We are analyzing scenarios to reduce downpayments and affordable payment plans that will still allow customers to pay down their past due balance.
- Reviewing options/logistics for the Fresh Energy proposal of using the \$500,000 under performance penalty to help customers reduce a payment plan downpayment.



ECO/CIP Income Qualified Program Background & Participation Increase Plan

Sofia Troutman, Product Portfolio Manager

ECO/CIP TRC Analysis Results



ECO/CIP Low Income participation may be lower in very-low-income communities.



This may present an opportunity to conduct additional outreach or assess program barriers to participation in those communities

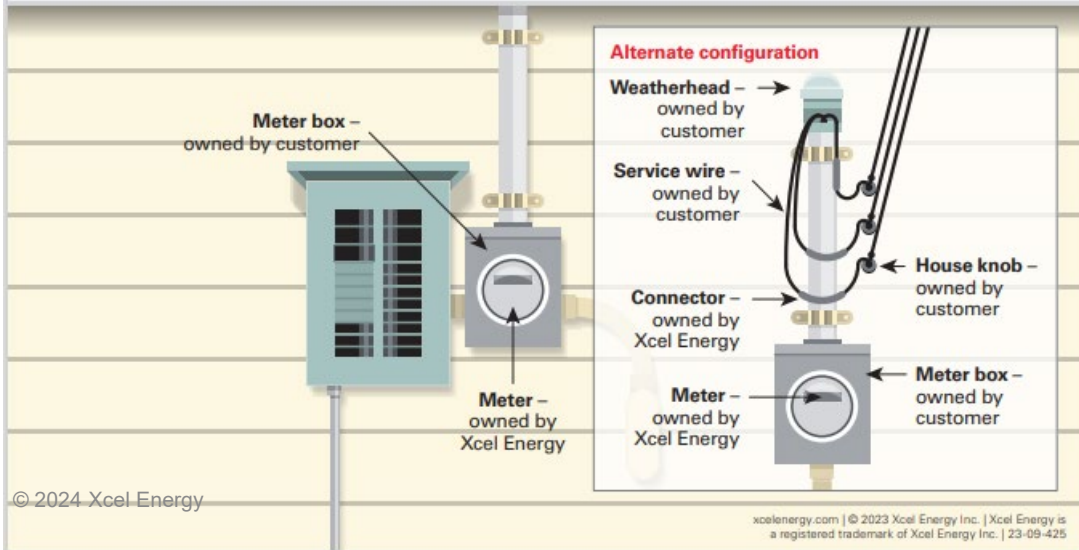
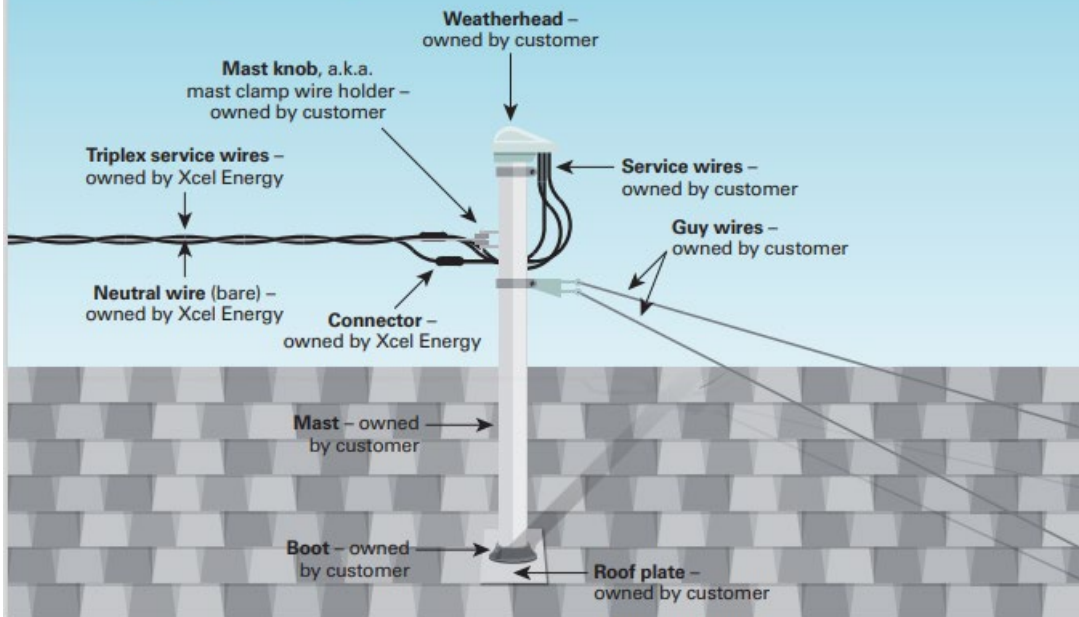
ECO/CIP – Current Income Qualified Programs

	LI Multifamily Building Efficiency	Home Energy Savings Program	LI Home Energy SQUAD	Non-Profit Energy Savings Program
No of Units	5+	1-4	1-4	
E Assessment	Y	Y	Y	Y
Electric Measures	Lighting, Appliances	Appliances	Lighting & Thermostats	Lighting, Appliances
HVAC / Water Heating	Y	Y	N	Y
Direct Install	Y	Y	Y	Y
Gas Measures	DI & Weatherization	Weatherization	Weatherization, Water measures & thermostats	Weatherization, Water measures & thermostats
Recent Additions	Mini split, smart thermostats	ccASHP	Pipe insulation	Foodbank Distributions, appliances & DI
Renter Benefits	Y	Y*	Y*	?
LI Qualification	66% units occupied by IQ, Geo Qualification	300% FP	Self-identify	501c3 & serve income qualified customers
Bonus	Bonus 200% bonus Income eligible (max equipment cost)	IQ HO occupied Free/ Insulation Free/ 50% co-pay landlord	No cost if IQ - free installation of basic energy efficiency measures	200% (3x) bonus Income eligible (to equipment cost)

ECO/CIP – Income Qualified Plan



WHO OWNS WHAT?



Overhead Electric Service Diagram

Damages to Customer Owned Components

- Not repairable by Xcel Energy
- Requires Electrician
- City Inspection in some cases

- *Are there additional actions to address identified disparities?*
- *What need Commission approval, and what could be implemented now?*

Actions identified in Reply Comments, Docket 24-27

Grid Equity Commenters

- Set reconnection fee to \$0 to better facilitate customer reconnection.
- Implement a more robust hot-weather rule to prevent disconnections in months with the highest cooling energy burden.
- Establish a minimum arrearage before disconnection subject to Commission oversight.
- Verify that Xcel manages disconnections due to a landlord's failure to pay consistent with the requirements in Minn. R. 7820.1400.
- Eliminate interest payments on late bill payment fees or require Xcel to donate those fees to low-income customer assistance programs.
- Order a study of the costs and benefits of reinstating a moratorium on some or all utility disconnections.
- Address any financial impacts on Xcel of reduced disconnections and other disconnection policy changes in its next general rate case and allow for reasonable cost recovery for costs demonstrated by the utility for providing service to a customer that it is no longer allowed to disconnect.
- Open a new proceeding to consider policies, rules, and regulations to reduce involuntary customer disconnections, including in particular for customers of color.

Energy Cents and CUB

- Direct Xcel to reduce its down payment requirements and modify its disconnection and payment agreement practices to include consideration of individual household financial circumstances.
- Order Xcel to file its payment agreement and disconnection practices in relevant dockets and direct the Company to share those practices with customers.
- Xcel should clarify discrepancies surrounding the number of customers that have applied for and been enrolled in medical protection programs.
- Disallow voicemails as a final means of communication with customers prior to remote service disconnection.

- Evaluate the amount of money needed for a customer to enter into a payment plan and the amount of money required to remain in the payment plan and consider reducing both.
- Develop a proposal to increase the number of customers receiving pre-weatherization, weatherization, and energy efficiency improvements, including deep retrofits to create greater energy savings, in the areas with high concentrations of people of color being shutoff. To be effective, such a proposal should have year-over-year targets designed to increase the number of people receiving energy efficiency measures.
- Institute a moratorium on remote shutoffs for customers in very low-income census block groups with high concentrations of people of color.
- Conduct an update to the Pradhan and Chan Study after two years to assess progress on addressing these disparities.

Discussion of future reporting, map developments, and process improvements

Existing Related Dockets

- Affordability and Disconnections

- Service Quality, Safety, and Reliability (SQSR) – E002/M-24-27
- Gas Affordability Program (GAP)– G002/M-24-36
- PowerON – E002/M-04-1956 and E002/M-10-854
- Quality of Service Plan (QSP) – E,G002/CI-02-2034 E,G002/M-12-383
- Cold Weather Rule (CWR) – E,G999/CI-24-02

- Reliability

- Service Quality, Safety, and Reliability (SQSR) – E002/M-24-27
- Quality of Service Plan (QSP) – E,G002/CI-02-2034 E,G002/M-12-383
- Integrated Distribution Plan (IDP) – E002/M-23-452
- Transmission Cost Recovery Rider (multiple dockets) – AMI related data
- Rate Cases – Distribution spending/reliability data; FLISR

Reporting Suggestions

- Require Xcel to compile existing disconnection reporting in a single proceeding and/or web site, and establish new reporting requirements, all broken out by gas and electric , potentially including:
 - Disconnections by census block group annually (already reported as a three-year average in the utility's SRSQ proceeding, including this Docket No. 24-27)
 - Households disconnected who were enrolled in Energy Assistance Programs at the census block group (already reported for all Xcel customers in the Cold Weather Rule proceedings, Docket Nos. YR-2)
 - Households disconnected once, twice, or three or more times
 - Households reconnected once, twice, or three or more times
 - Total dollars past due of involuntarily disconnected residential customers, in aggregate and per disconnected customer (including ranges, such as percent of disconnected customers with less than \$100 past due)

Grid Equity Commenters – Reply Comments, Xcel SQSR, Docket 24-27

Reporting Suggestions

- In addition to the reporting in its service quality reports and locational reliability map, require Xcel to:
 - Report in its 2025 IDP the CELI-12 in neighborhoods where analysis by both the Pradhan and Chan Report and the Company has shown a “strong relationship” between CELI-12 and race when the neighborhood has both a high proportion of people of color and older housing stock.
 - Report in its 2025 IDP the level of disconnections in neighborhoods where analysis by both the Pradhan and Chan Report and the Company has shown “the number of disconnections is higher in identified lower-income areas and increases when the proportion of people of color increases within an income group.” c.
 - Describe in its 2025 IDP the steps the Company is taking to reduce and eliminate the racial disparities seen in CELI-12 and disconnections in these neighborhoods. Xcel shall recalculate racial disparities as part of this reporting to identify the level of improvement over time.

- *How should improvements be tracked and reported?*
- *Are there any additions or improvements to the map?*
- *Are there process improvements or changes to take across multiple dockets to better understand and take action on current and future disparities?*

- Staff will send draft meeting notes and summary for review
- All documents and summary will be posted to the docket
- Forthcoming Comment Period in 24-27
 - Feedback from stakeholders on timing/duration/topics
- Commission consideration of SQSR Report



Thank you!

Questions? Contact PUC Staff:

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