COMMERCE DEPARTMENT

October 14, 2024

Will Seuffert
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, Minnesota 55101-2147

RE: **Supplemental Comments of the Minnesota Department of Commerce, Division of Energy Resources**
Docket No. E015/M-24-29

Dear Mr. Seuffert:

Attached are the comments of the Minnesota Department of Commerce (Department) in the following matter:

> Minnesota Power's 2023 Annual Safety, Reliability, and Service Quality Standards (SRSQ) Report and Proposed SAIFI, SAIDI, and CAIDI Reliability Standards for 2024.

Minnesota Power (MP or the Company) filed the Petition on April 1, 2024. The Company filed Supplemental Comments on October 7, 2024.

The Department recommends the Minnesota Public Utilities Commission (Commission):

- Accept Minnesota Power's 2023 SRSQ Report.
- Set the 2024 statewide reliability standards at the Institute of Electrical and Electronics Engineers (IEEE) benchmarking 2nd quartile for medium utilities and the work center reliability standards at the IEEE benchmarking 2nd quartile for small utilities.
- Require MP to include a discussion on alternate approaches to reliability standard setting in its 2024 SRSQ Report.
- Request MP include a discussion on the impact of the new OMS on reporting metrics and comparison of data from its existing OMS system and new OMS data (as available) in its 2024 SRSQ Report.

The Department also recommends MP make the following updates to future SRSQ reports, as outlined in the Department's initial comments:

- Add work center as a data point to the Distribution System Outage Notifications (included as Appendix A of the 2023 Annual Report) in future SRSQ reports.
- Regarding the Remote-Reconnect Pilot Program, provide the overall average time to reconnect using the remote-reconnect program compared to the standard reconnection process, as required in the December 9, 2020 Order in Docket No. E015/M-19-766.

The Department is available to answer any questions the Commission may have.

Sincerely,

/s/ Peter Wyckoff Ph.D.
Deputy Commissioner, Division of Energy Resources

MBK/ar
Attachment

Before the Minnesota Public Utilities Commission

Supplemental Comments of the Minnesota Department of Commerce
Division of Energy Resources

Docket No. E015/M-24-29

I. INTRODUCTION

On April 1, 2024, Minnesota Power (MP or the Company) filed its 2023 Annual Safety, Reliability, and Service Quality Standards (SRSQ) Report and Proposed SAIFI, SAIDI, and CAIDI Reliability Standards for 2024.

The Department filed Comments on June 28, 2024 providing its analysis, preliminary recommendations, and requesting the Company provide additional information in reply comments.

The Company submitted Reply Comments on July 22, 2024 addressing the requested additional reporting as noted in the Department's Comments. These Reply Comments also indicated that MP would be putting a new Outage Management System (OMS) in service late in 2024.[1] The Department filed Response Comments on August 6, 2024 acknowledging that the Company's Reply Comments addressed the requesting reporting and updating the Department's recommendations to the following:

- Accept Minnesota Power's 2023 Safety Report.
- Accept Minnesota Power's 2023 Service Quality Report.
- Withholding the recommendation on MP's 2023 Reliability Report.
- Set the 2024 statewide reliability standards at the IEEE benchmarking 2nd quartile for medium utilities and the work center reliability standards at the IEEE benchmarking 2nd quartile for small utilities.
- Request MP include a discussion on the impact of the new OMS on reporting metrics and comparison of data from its existing OMS system and new OMS data (as available) in its 2024 SRSQ Report.

The Company submitted its Supplemental Filing on October 7, 2024 providing the IEEE 2023 benchmarking data.

[1] Company Reply Comments, page 1.

II. ANALYSIS

1. Limitations of IEEE Data

The Department notes that IEEE initially released Benchmark Year 2024 Results for 2023 Data on an all-respondent basis. The Department reached out to IEEE to ask if utility-size results would be made available, and the IEEE results were later amended[2] to add in the utility-size results. The amended results allowed the Department to compare MP's performance against the utility-size based results; however, the results noted that the small-utility data is too small to be statistically significant. IEEE had only four small-utility respondents to its 2024 performance survey.

Table 1 below summarizes the 2023 data's second quartile results for small and medium-sized utilities as well as the results for all respondents of the IEEE survey. MP's performance benchmarks for the 2023 performance year were set at the 2nd quartile level of small-sized utilities for work centers and the statewide benchmark was set at the 2nd quartile of medium-sized utilities.[3]

Table 1: Comparison of IEEE 2nd Quartile Results for 2023 Data Based on Respondent Group[4]

Metric	Small-Sized	Medium-Sized	All Respondents
SAIDI	180	121	119
SAIFI	1.11	1.00	0.98
CAIDI	132	139	136

As outlined in the Department's earlier Comments, the Department recommends the Commission set the 2024 statewide reliability standards at the IEEE benchmarking 2nd quartile for medium utilities and the work center reliability standards at the IEEE benchmarking 2nd quartile for small utilities, consistent with the current approach and as proposed in the Company's initial filing. In light of the IEEE data this year initially excluding utility-size results, the Department also recommends that the Commission require Minnesota Power to include a discussion on alternate approaches to reliability standard setting in its 2024 SRSQ Report.

2. MP's 2023 Performance Against IEEE Goals

The Supplemental Filing provides the IEEE 2023 benchmarking data which is summarized with MP's reliability performance data in Table 2 below. The Department includes both the small and medium-

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[2] Department Attachment 1 includes the IEEE Benchmark Year 2024 Results for 2023 Data retrieved on October 7, 2024 from: https://cmte.ieee.org/pes-drwg/wp-content/uploads/sites/61/2024-IEEE-Benchmarking-Survey.pdf. Slide 7 (attachment page 4) of the IEEE results states that the small-sized utilities' quartiles sample is too small to be statistically significant.

[3] Docket No. E015/M-23-75 Order dated December 5, 2023, order point 2.

[4] Department Attachment 1, slides 6 – 7 (pages 3-4). Note that the IEEE results indicate that the small-sized utilities quartiles sample is too small to be statistically significant.

sized utilities' IEEE 2023 benchmarking data, and reviewed both against MP's performance since MP's work center performance is benchmarked against IEEE's small-utility results but IEEE noted that the data for the small-utility results was not statistically significant. The Department also includes the Company's five-year average performance by work center, to facilitate a comparison of 2023 performance to recent averages.

Table 2: MP 2023 Reliability Performance vs IEEE Benchmark[5]

Work Center	Metric	2023 IEEE Benchmark - Small[6]	2023 IEEE Benchmark -Medium	2023 MP Performance	MP 5-Year Avg Performance[7]	2023 Performance Variance from 5-Yr Avg
Central	SAIDI	**180**	121	78.68	93.48	(14.80)
	SAIFI	**1.11**	1.00	0.90	1.07	(0.17)
	CAIDI	**132**	139	87.60	87.97	(0.37)
Northern	SAIDI	**180**	121	149.07	156.59	(7.52)
	SAIFI	**1.11**	1.00	**1.07**	1.14	(0.07)
	CAIDI	**132**	139	139.21	137.46	1.75
Western	SAIDI	**180**	121	124.40	144.28	(19.88)
	SAIFI	**1.11**	1.00	1.68	1.54	0.15
	CAIDI	**132**	139	73.83	73.83	(21.37)
System	SAIDI	180	**121**	103.60	121.77	(18.17)
	SAIFI	1.11	**1.00**	1.16	1.24	(0.08)
	CAIDI	132	**139**	89.33	98.27	(8.94)

In 2023, Minnesota Power met seven out of nine of its goals by work center, when relying on IEEE's small-sized utilities second quartile results as the benchmark, and two out of three of its statewide system goals. If MP's work center performance is compared against the medium-sized utility second quartile IEEE results rather than small, then one metric, the Northern work center's SAIFI, would change from having achieved the benchmark to not meeting the benchmark. MP's Central work center performance was better in all three metrics, while all other work centers and the system had one metric which did not meet the benchmark.

The Company noted that overhead equipment, wildlife, and vegetation were the largest contributors to outage causes in 2023. MP stated that the Company is in the fourth year of strategic

[5] The 2023 performance data is from MP's 2023 SRSQ Report, Table 2 at page 16. The five-year average (2019 – 2023) data was compiled from historic reports. The 2023 IEEE benchmark data is from MP's Supplemental Filing, page 2.
[6] Department Attachment 1 includes the IEEE Benchmark Year 2024 Results for 2023 Data retrieved on October 7, 2024 from: https://cmte.ieee.org/pes-drwg/wp-content/uploads/sites/61/2024-IEEE-Benchmarking-Survey.pdf. Slide 7 of the IEEE results states that the small-sized utilities' quartiles sample is too small to be statistically significant.
[7] For the Western work center, 4-year averages (2020 – 2023) are shown. Data for 2019 was not found in historic petitions for this work center.

undergrounding of overhead lines and emphasized the Company's prioritization of preventative maintenance and grid modernization to improve reliability performance and shorten outages.[8]

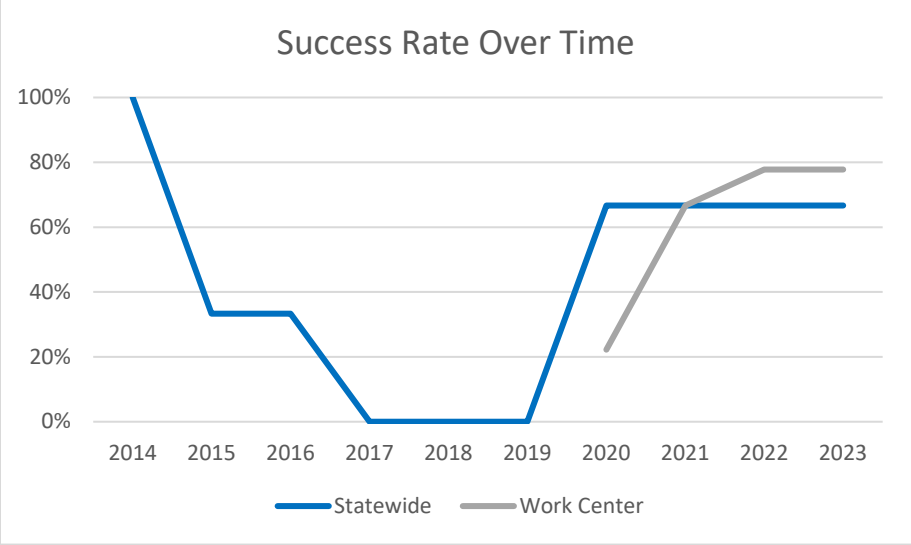
MP's performance in 2023 was generally better than the Company's five-year averages. Two metrics indicate worse performance in 2023 than the average: the Northern work center's CAIDI and the Western work center's SAIFI.

Table 3: 2023 Percent of Goals Achieved by Data Source

	2023
Work Center Basis	78%
Statewide	67%
All Metrics	75%

Table 3, above, shows MP's 2023 goal achievement by metric, and Figure 1, below, shows the Company's success rate at achieving its reliability goals from 2014 – 2023. If the work center performance goal achievement is compared against medium-sized utilities instead of small (since the small-sized results are noted as not statistically significant), the goal achievement by work center and all metrics would both drop to 67%.

Figure 1: MP Goal Achieved % for 2014 – 2023[9]



[8] MP's Supplemental Filing, page 2 – 3.
[9] Only statewide benchmarks were set for MP from 2014 – 2019. Beginning in 2020, benchmarks were set at the statewide and work center levels, so the goal achieved calculation increased from being based on performance against goal for three metrics to twelve metrics in 2020.

III. RECOMMENDATIONS

Based on the Company's Petition, Reply Comments, and Supplemental Filing, and the Department's analysis, the Department recommends that the Commission:

- Accept Minnesota Power's 2023 SRSQ Report.
- Set the 2024 statewide reliability standards at the IEEE benchmarking 2nd quartile for medium utilities and the work center reliability standards at the IEEE benchmarking 2nd quartile for small utilities.
- Require MP to include a discussion on alternate approaches to reliability standard setting in its 2024 SRSQ Report.
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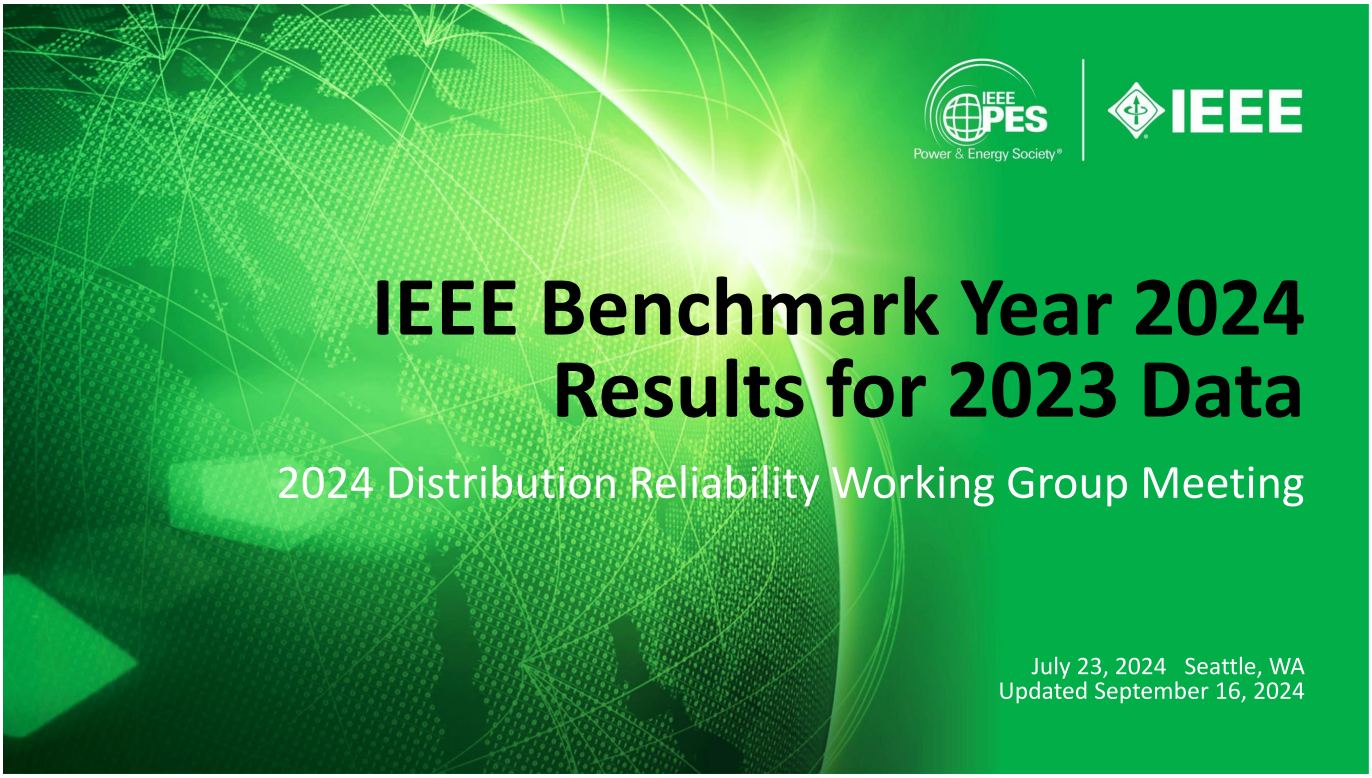
The Department also recommends MP make the following updates to future SRSQ reports, as outlined in the Department's initial comments, and agreed to by the Company in its reply comments:

- Add work center as a data point to the Distribution System Outage Notifications (included as Appendix A of the 2023 Annual Report) in future SRSQ reports.
- Regarding the Remote-Reconnect Pilot Program, provide the overall average time to reconnect using the remote-reconnect program compared to the standard reconnection process, as required in the December 9, 2020 Order in Docket No. E015/M-19-766.



History of the Study

Background

1. *Initiated in 2003, conducted annually*
2. *Participants are anonymous with key identifier to retain anonymity*
3. *Participation list is not revealed to anyone*
4. *Each participant can choose to share their results*
5. *No inference is made about good or bad reliability*
6. *Intended to provide information for users to assess their performance relative to peers*
7. *Called the 2024 Study (for 2023 Results)*

Benchmarking

Using annual key metrics (SAIDI, SAIFI and CAIDI) to assess performance of a system may be useful, however, needs to be tempered with judgment

DRWG Study attempts to identify various aspects that could cause a difference in reported metrics

Data may not be directly comparable, since

- Data collection & system differences exist
- Certain exclusion differences can occur, although we strive to have the differences minimized
- No exclusions for performance beyond catastrophic event day levels which could influence tmed in subsequent years and then roll off

IEEE 1366-2003/2012/2022

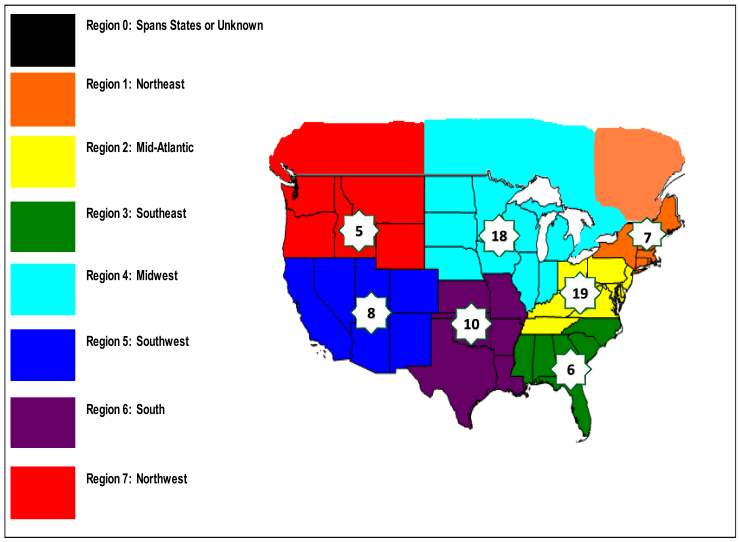
- addresses data issues by clearly defining the rules (i.e. what data should be excluded)
- It DOES NOT address the data collection issues
- Companies may not report all forms of outages, due to data collection issues or other reasons

2024 Benchmark Results

For calendar data 2023

Regions represented by the participants 2024 Benchmark Study

Reports on reliability for just over 70 million customers (74,266,805) represented by 73 operating companies with sizes grouped by:
Small<=100 k
Medium <1 m
Large>1 m



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Updated Values: Respondents in 2024: 73

	73	SAIDI ALL	SAIDI IEEE	SAIDI WOF	SAIDI WOP	SAIFI ALL	SAIFI IEEE	SAIFI WOF	SAIFI WOP	CAIDI ALL	CAIDI IEEE	CAIDI WOF	CAIDI WOP
ALL	MIN	37	24	24	24	0.06	0.06	0.06	0.06	69	61	61	58
	Q1	156	85	81	75	1.01	0.74	0.65	0.59	160	110	113	111
	MEDIAN	266	119	110	94	1.27	0.98	0.86	0.78	192	136	140	140
	Q3	491	186	182	156	1.64	1.27	1.22	1.08	306	154	158	157
	MAX	2822	401	401	349	5.07	3.45	2.84	2.64	1032	589	562	562

Original Results: Respondents in 2024: 73

	73	SAIDI ALL	SAIDI IEEE	SAIDI WOF	SAIDI WOP	SAIFI ALL	SAIFI IEEE	SAIFI WOF	SAIFI WOP	CAIDI ALL	CAIDI IEEE	CAIDI WOF	CAIDI WOP
ALL	MIN	37	24	24	24	0.06	0.06	0.06	0.06	69	61	61	58
	Q1	150	84	80	74	0.95	0.70	0.65	0.58	156	109	112	108
	MEDIAN	266	119	110	94	1.27	0.98	0.86	0.78	192	136	140	140
	Q3	491	186	182	156	1.64	1.27	1.22	1.08	306	154	158	157
	MAX	2822	401	401	349	5.07	3.45	2.84	2.64	1032	589	562	562

Results in 2023: 74 Respondents

	74	SAIDI ALL	SAIDI IEEE	SAIDI WOF	SAIDI WOP	SAIFI ALL	SAIFI IEEE	SAIFI WOF	SAIFI WOP	CAIDI ALL	CAIDI IEEE	CAIDI WOF	CAIDI WOP
ALL	MIN	38	22	22	22	0.39	0.20	0.20	0.20	42	39	42	41
	Q1	163	90	86	84	1.12	0.84	0.77	0.68	138	106	109	107
	MEDIAN	250	131	119	111	1.35	1.09	0.93	0.86	183	128	133	134
	Q3	455	191	171	158	1.82	1.47	1.25	1.14	277	149	155	153
	MAX	1711	582	556	518	4.15	2.45	2.42	2.05	603	275	279	289

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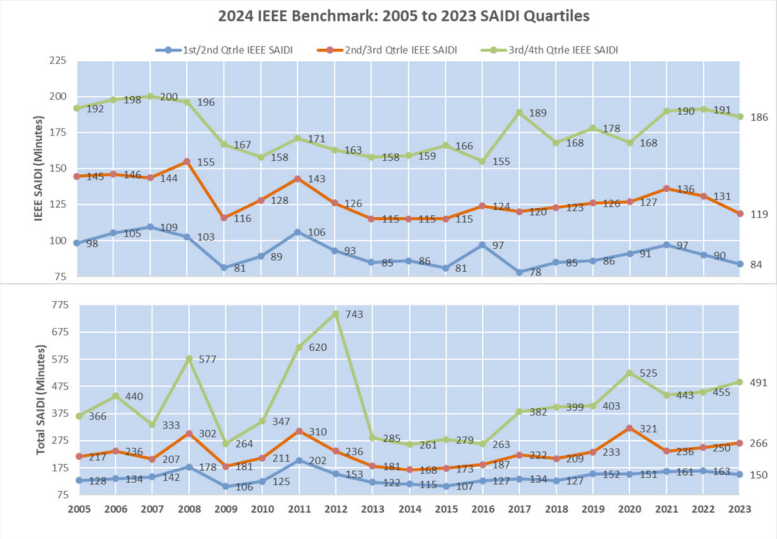
Added Slide: Quartiles by Utility Size

(note that Small Quartiles sample is too small to be statistically significant)

	4	SAIDI ALL	SAIDI IEEE	SAIDI WOF	SAIDI WOP	SAIFI ALL	SAIFI IEEE	SAIFI WOF	SAIFI WOP	CAIDI ALL	CAIDI IEEE	CAIDI WOF	CAIDI WOP
SMALL	MIN	112	81	50	40	1.18	1.01	0.61	0.51	85	71	82	78
	Q1	188	149	133	117	1.28	1.06	0.86	0.79	135	96	140	127
	MEDIAN	289	180	174	147	1.32	1.11	0.98	0.90	167	132	166	154
	Q3	395	208	198	159	1.79	1.50	1.09	0.94	206	166	179	174
	MAX	485	268	231	179	3.20	2.58	1.33	1.00	276	186	197	201
MEDIUM	40	SAIDI ALL	SAIDI IEEE	SAIDI WOF	SAIDI WOP	SAIFI ALL	SAIFI IEEE	SAIFI WOF	SAIFI WOP	CAIDI ALL	CAIDI IEEE	CAIDI WOF	CAIDI WOP
	MIN	37	24	24	24	0.06	0.06	0.06	0.06	73	71	73	72
	Q1	136	85	80	74	0.95	0.74	0.64	0.58	152	111	113	115
	MEDIAN	222	121	107	103	1.28	1.00	0.86	0.78	188	139	143	142
	Q3	486	186	175	153	1.56	1.27	1.19	1.05	300	155	160	164
	MAX	2822	363	319	303	3.54	2.58	1.90	1.84	1032	589	562	562
LARGE	29	SAIDI ALL	SAIDI IEEE	SAIDI WOF	SAIDI WOP	SAIFI ALL	SAIFI IEEE	SAIFI WOF	SAIFI WOP	CAIDI ALL	CAIDI IEEE	CAIDI WOF	CAIDI WOP
	MIN	70	35	35	26	0.61	0.48	0.48	0.39	69	61	61	58
	Q1	190	85	85	77	1.02	0.78	0.75	0.62	166	105	108	106
	MEDIAN	277	114	113	93	1.26	0.96	0.88	0.78	209	126	126	125
	Q3	575	182	182	159	1.64	1.32	1.22	1.08	317	151	155	150
	MAX	1542	401	401	349	5.07	3.45	2.84	2.64	895	233	233	246

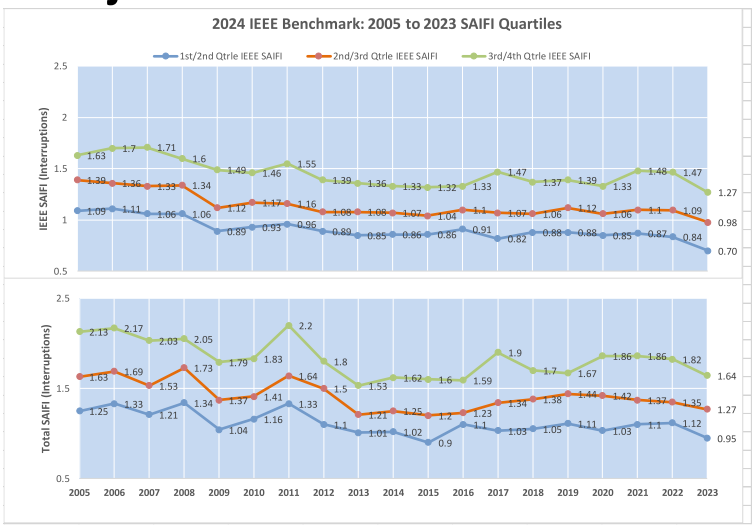
Historic SAIDI Quartiles

Without Major Events & Total



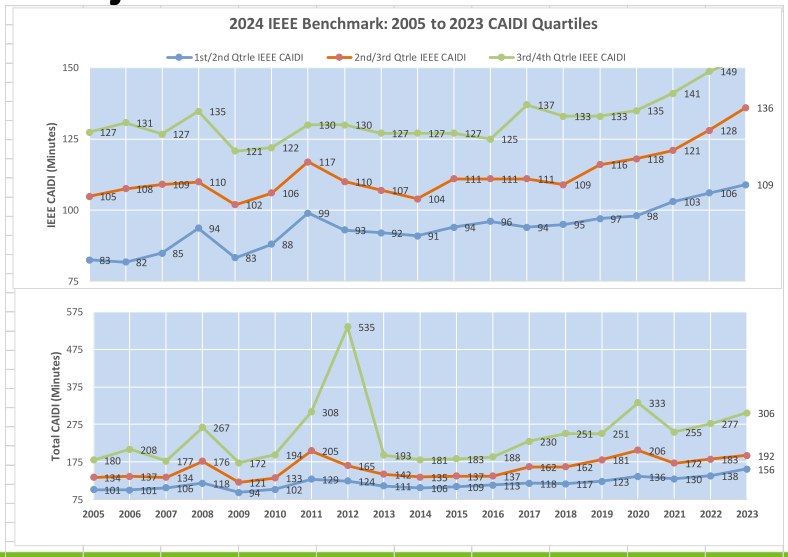
Historic SAIFI Quartiles

Without Major Events & Total

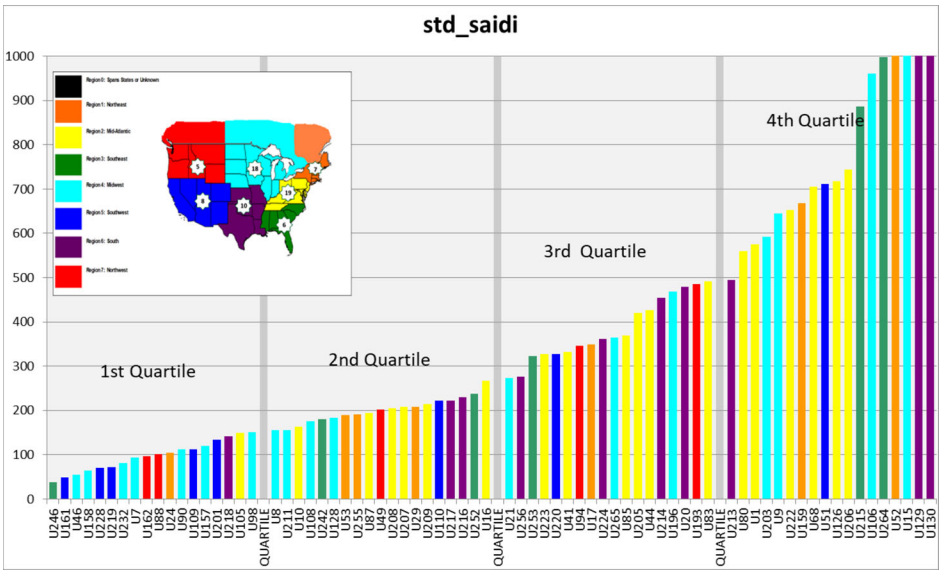


Historic CAIDI Quartiles

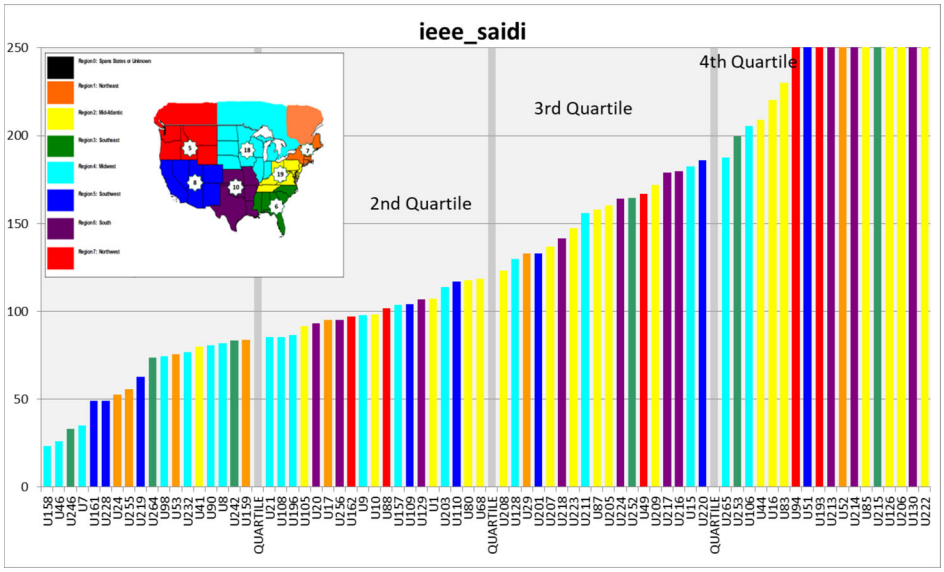
Without Major Events & Total



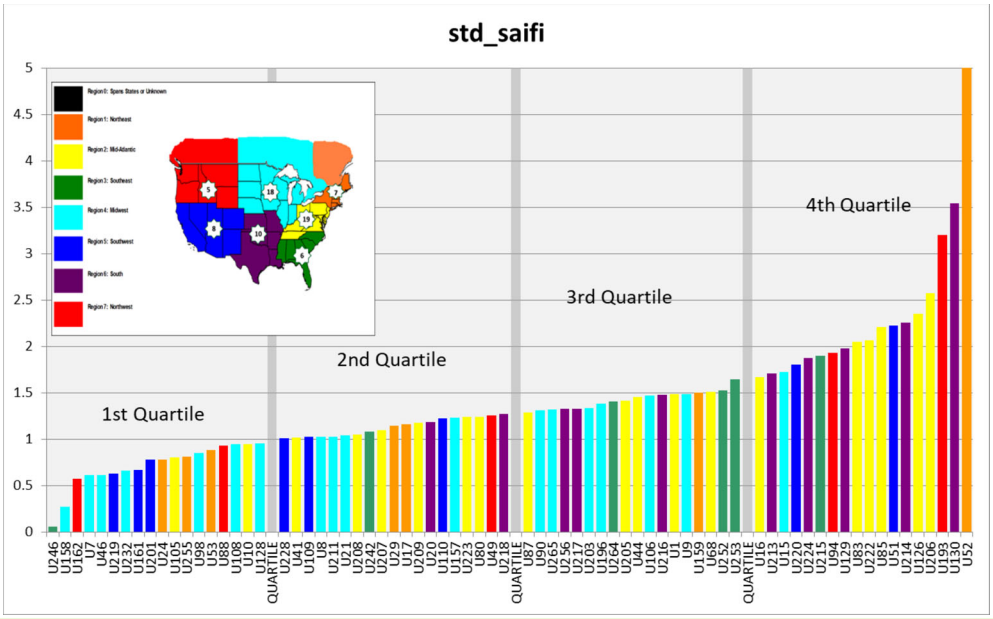
Total SAIDI



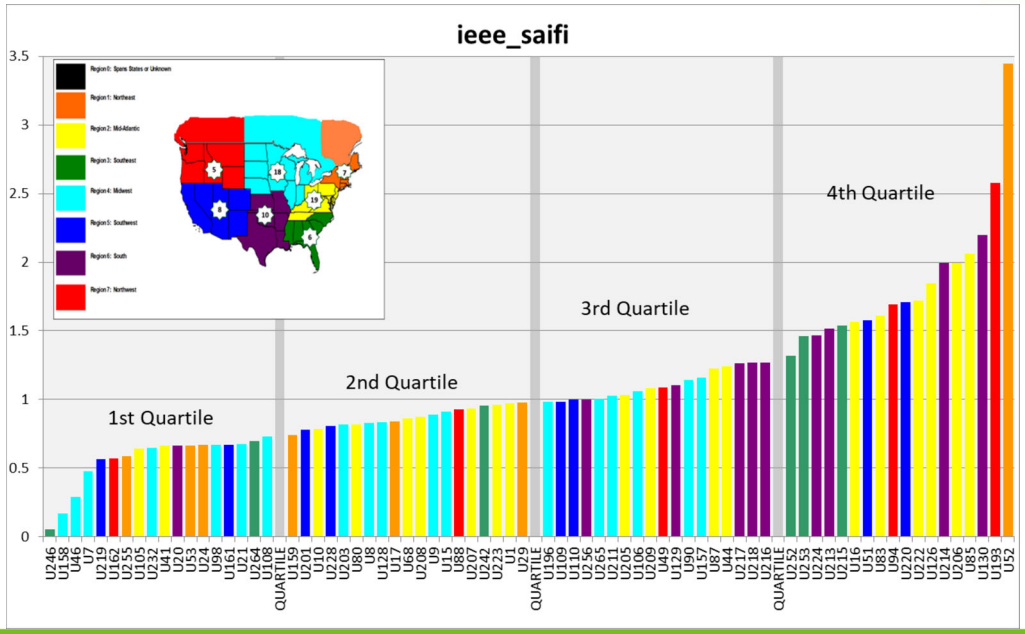
IEEE SAIDI



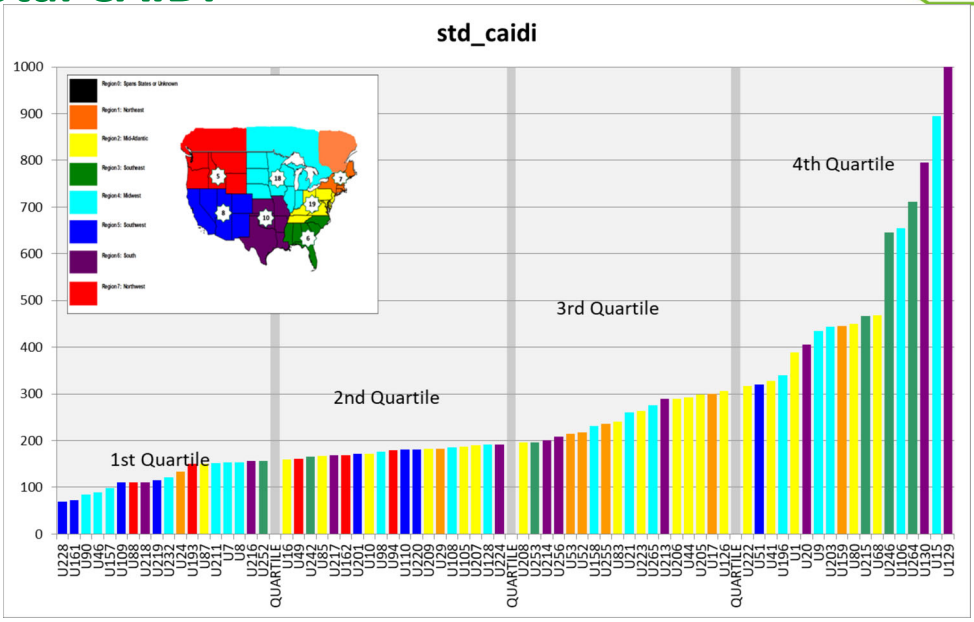
Total SAIFI



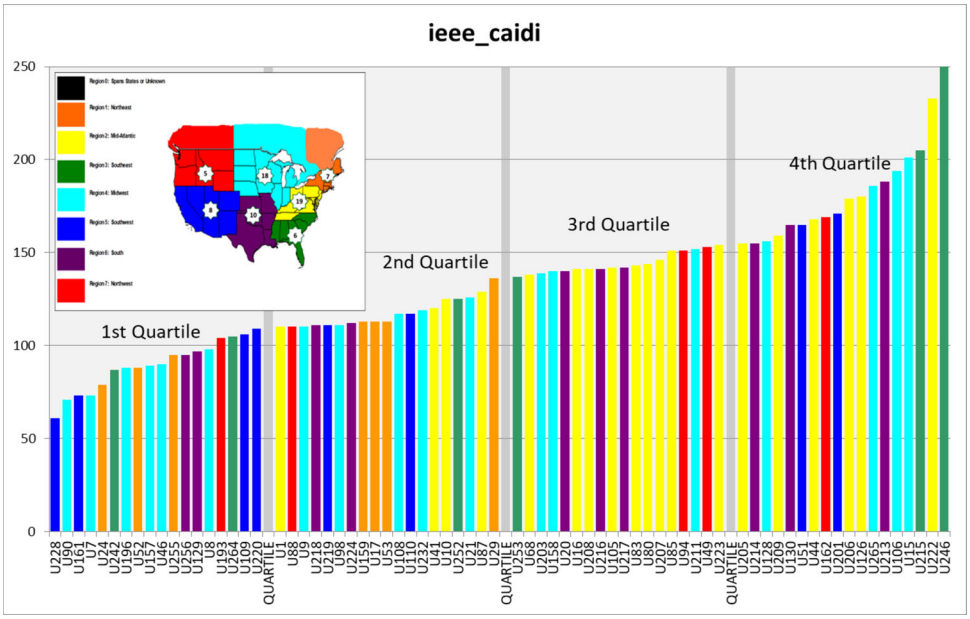
IEEE SAIFI



Total CAIDI



Total CAIDI



Questions

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CERTIFICATE OF SERVICE

I, Sharon Ferguson, hereby certify that I have this day, served copies of the following document on the attached list of persons by electronic filing, certified mail, e-mail, or by depositing a true and correct copy thereof properly enveloped with postage paid in the United States Mail at St. Paul, Minnesota.

Minnesota Department of Commerce
Supplemental Comments

Docket No. E015/M-24-29

Dated this **14th** day of **October 2024**

/s/Sharon Ferguson

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Matthew	Brodin	mbrodin@allete.com	Minnesota Power Company	30 West Superior St Duluth, MN 55802	Electronic Service	No	OFF_SL_24-29_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_24-29_Official
MP Regulatory	Compliance	MPRegulatoryCompliance@mnpower.com	Minnesota Power	30 W Superior St. Duluth, MN 55802	Electronic Service	No	OFF_SL_24-29_Official
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 280 Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_24-29_Official
Discovery	Manager	discoverymanager@mnpower.com	Minnesota Power	30 W Superior St Duluth, MN 55802	Electronic Service	No	OFF_SL_24-29_Official
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_24-29_Official
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_24-29_Official
Claire	Vatalaro	cvatalaro@allete.com	Allete	30 W Superior St Duluth, MN 55802	Electronic Service	No	OFF_SL_24-29_Official