Service Quality & Reliability and and Technical Standards Workgroup Kickoff

December 3, 2019





Today's Agenda



Agenda Items		
9:00 am	Welcome, Introduction, and Background	MPSC Staff
9:45 am	Technical Standards for Electric Service Review and Updates	Tayler Becker, Electric Operations Section Brian Sheldon, Energy Security Section
10:30 am	Break	
10:45 am	Service Quality and Reliability Standards for Electric Distribution Systems Review and Updates	Charyl Kirkland, Electric Operations Section
11:30 am	Open Discussion: Suggested Updates to Standards	All
12:15 pm	Closing Statements, Next Steps, and Assignment	MPSC Staff
12:30 pm	Adjourn	

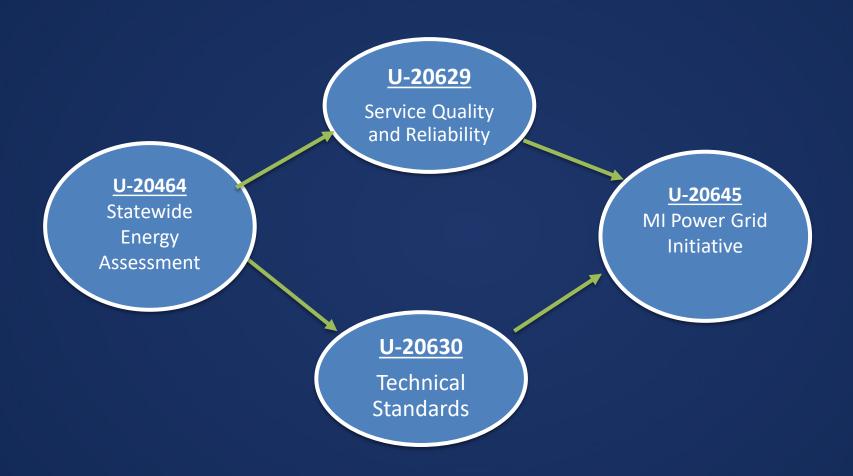
MPSC Authority



- Investor-Owned Utilities: PA 3 of 1939 Section 6(1) states:
 - "The public service commission is vested with the power and jurisdiction to regulate all rates, fares, fees, charges, services, rules, conditions of service, and all other matters pertaining to the formation, operation, or direction of public utilities. The public service commission is further granted the power and jurisdiction to hear and pass upon all matters pertaining to, necessary, or incident to the regulation of public utilities, including electric light and power companies..."
- Cooperatives: PA 167 of 2008 Section 6(2) states:
 - "...the Commission shall retain jurisdiction and control over all memberregulated cooperatives for matters involving **safety**, interconnection, code of <u>conduct,...customer choice...</u>"
- Municipally-Owned Utilities: PA 295 of 2008 Section 25(2) states:
 - "Each electric provider shall file a proposed renewable energy plan..."

Recent Commission Orders





www.Michigan.gov/mipowergrid

U-20464 SEA Recommendations: Electric



E-3: The MPSC's electric service quality and reliability rules have not been updated recently and could be modified to enhance safety, reliability, and resiliency of the distribution system. The rules address actions to prevent power outages and system restoration.

The Commission recommends opening a docket to establish a workgroup to investigate and provide recommendations for updating the Service Quality and Reliability rules and the Technical Standards for Electric Service using lessons learned in Michigan and best practices in other states as a guide.

SEA Recommendations: Cybersecurity



S-2: The Commission instructs Staff to continue to evaluate existing Commission rules and utility data privacy tariffs for opportunities to enhance the protection of customer data and the cybersecurity of electric distribution infrastructure.

S-10: The Commission recommends utilities adopt industry best practices in mitigating threats from phishing and other IT threats, perform a cost-benefit analysis for top CIS security controls, and take appropriate steps to implement additional controls.

U-20629 and U-20630 Orders



- Issued on September 11, 2019
- Order language:
 - Staff lead workgroups "...for the purpose of convening a series of meetings to thoroughly review..." rule sets
 - Will "...look to other states for best practices and optimal standards regarding the rule sets"
 - "...the workgroups will consider current and probable future technological advances in electric distribution systems..."
 - "...the goal is that input from the workgroups will provide a foundation for potential future rule changes that are flexible and responsive to changing technologies..."
- Deliverables:
 - April 30, 2020 (initial report)
 - September 1, 2020 (final report)

The Standards At A Glance



Technical Standards

- Promotes safe and adequate service to the public by providing standards for uniform and reasonable utility practices for utilities and electric cooperatives.
- Specifically, these standards are comprised of the following requirements:
 - Records and reports
 - Meter requirements
 - Customer relations
 - Engineering
 - Metering equipment inspections and tests
 - Standards of quality of services
 - Safety

Service Quality and Reliability

- A set of administrative rules promulgated for the purposes of monitoring the service quality and reliability performance of a distribution utility.
- Specifically, these standards are comprised of the following requirements:
 - Unacceptable levels of performance
 - Records and reports
 - Financial incentives and penalties
 - Waivers and exceptions

Workgroup Directives



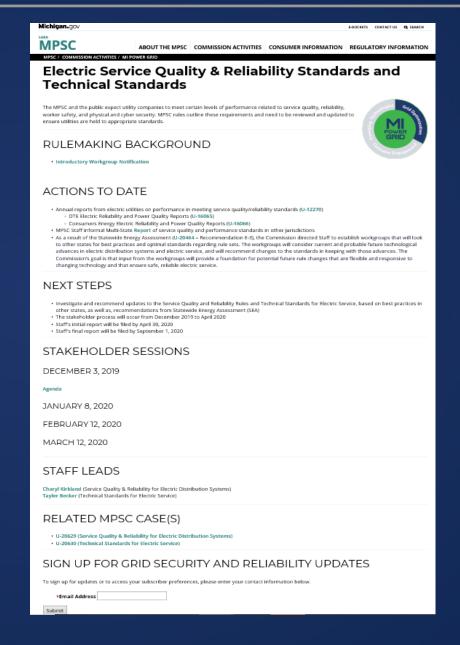
- Best practices
- Consider technological advances
- Enhance cybersecurity of electric distribution infrastructure
- Implement recommendations from the Statewide Energy Assessment related to physical and cyber security
- Flexible and responsive rules that ensure safe, reliable electric service

Workgroup Information



Service Quality &
 Reliability and Technical
 Standards Workgroup
 Website:

www/michigan.gov/MiPowerGrid



Workgroup Information



- All updates will be on this joint website regarding:
 - Workgroup Meeting Details
 - Workgroup Agendas
 - Listserv Announcements
 - Recordings of Each Session
 - Links to Current Standards for Service Quality & Reliability and Technical Standards
 - Presentations
- Comments from each workgroup will be housed in each respective docket.
 - U-20629 (Service Quality & Reliability for Electric Distribution Systems)
 - U-20630 (Technical Standards for Electric Service)

Technical Standards for Electric Service Workgroup

December 3, 2019





About Technical Standards for Electric Service



Adopted in 1983 to promote safe and adequate service to the public by providing standards for uniform and reasonable utility practices for both investor owned utilities and electric cooperatives.

DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS

PUBLIC SERVICE COMMISSION

TECHNICAL STANDARDS FOR ELECTRIC SERVICE

(By authority conferred on the public service commission by section 7 of 1909 PA 106, section 2 of 1909 PA 300, section 5 of 1919 PA 419, sections 4 and 6 of 1939 PA 3, and sections 3, 9, and 231 of 1965 PA 380, MCL 460.557, 460.55, 460.4, 460.4, 460.4, 462.2(12), 16.103, 16.109, 16.331, and Executive Reorganization Order Nos. 1996-2, 2003-1, 2008-4, and 2011-4, MCL 445.2001, 445.2011, 445.2025, and 445.2030.)

PART 1. GENERAL PROVISIONS

R 460.3101 Applicability; purpose; modification; adoption of rules and regulations by utility.

Rule 101. (1) These rules apply to utility service that is provided by electric utilities that are subject to the jurisdiction of the public service commission.

- (2) These rules are intended to promote safe and adequate service to the public and to provide standards for uniform and reasonable practices by utilities.
- (3) These rules do not relieve a utility from any of its duties under the laws of the state of Michigan. (See R 460.1601(3).)
- (4) Each utility may adopt reasonable rules and regulations governing its relations with customers which it finds necessary and which are not inconsistent with these rules for electric service. Adopted rules and regulations must be filed with, and approved by, the commission
- (5) An electric utility may petition the commission for a permanent or temporary waiver or exception from these rules for good cause shown provided that the waiver or exception is consistent with the purpose of these rules.

History: 1983 AACS; 1996 AACS; 2019 MR 1, Eff. Jan. 9, 2019.

R 460.3102 Definitions.

Rule 102. As used in these rules:

- (a) "Approved by the commission" means that a commission order has been issued.
- (b) "Commission" means the Michigan public service commission.
- (c) "Customer" means an account holder who purchases electric service from a utility. An individual who is a customer must be at least 18 years of age or an emancipated minor.
- (d) "Electric plant" means all real estate, fixtures, or property that is owned, controlled, operated, or managed in connection with, or to facilitate the production, transmission, and delivery of, electric energy.

Part 1. General Provisions



R 460.3101

- Applicability: "These to rules apply to utility service that is provided by electric utilities that are subject to the jurisdiction of the public service commission."
- Purpose: "These rules are intended to promote safe and adequate service to the public and to provide standards for uniform and reasonable practices by utilities."
- Petition for waivers

R 460.3102

Definitions



R 460.3201

Record location and examination

R 460.3202

- Record preservation
- Petition for waivers

R 460.3203

• Submission of required documents (tariffs, customer bill forms, list of areas utility serves, utility construction budget, etc.)

R 460.3204

Customer records retention and content

R 460.3205

Security reporting that may affect security or safety of persons or property



Part 3. Meter Requirements



R 460.3301

Meter measurement and exceptions

R 460.3303

• Meter reading data and customer identification

R 460.3304

Meter data collection

R 460.3305

Meter multiplier and location

R 460.3308

 Standards adopted by reference (ANSI C12.1-2014 and C12.20-2010, ANSI/ASQ Z-1.9-2003 (R2013), ANSI C57.13-2016, IEEE C57.13.6-2005)

R 460.3309

Metering inaccuracies and billing adjustments



Part 4. Customer Relations



R 460.3408

Temporary service costs of installing and removing

R 460.3409

Protection of utility-owned equipment on customer premises

R 460.3410

Extension of facilities plan

R 460.3411

Extension of electric service: 2 or more utilities

Part 5. Engineering



R 460.3501

 Electric plant construction, installation, maintenance, and operation: pursuant to good engineering practice

R 460.3502

 Standards of good practice adopted by reference: NESC (ANSI-C2-2017)

R 460.3503

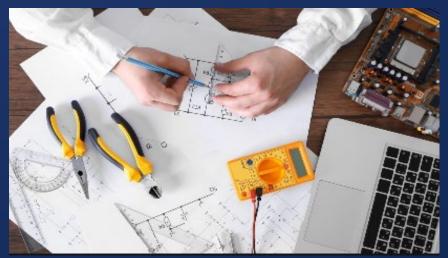
Utility plant capacity and meeting demand

R 460.3504

Electric plant inspection program

R 460.3505

Utility line clearance program







R 460.3601 – R 460.3618

- 18 Rules
- Largest rule set in electric technical standards outlining requirements pertaining to customer-requested meter tests, meter and associated device inspections, meter requirements, meter testing equipment, test standards, metering equipment records, meter error, and reports filed to the Commission

Part 7. Standards of Quality of Services



R 460.3701

Standard frequency for alternating current systems

R 460.3702

Standard nominal voltage limits

R 460.3703

Voltage measurements and records



R 460.3704

Voltage measurement checks and certificate or calibration card

R 460.3705

 Interruptions of service records, planned interruption notifications, and notification of major interruptions to the Commission

Part 8. Safety



R 460.3801

 Protective measures for employees, customers, and public

R 460.3802

Safety program: OSHA and Act 154 of 1974

R 460.3803

Provisions for energizing services

R 460.3804

Notice of accidents to the Commission



Source: https://safety.lovetoknow.com/Electrical Safety Tips for Children

Multi-State Review of Technical Standards



- Statewide Energy Assessment (U-20464)
 recommendation E-3 states: "...best practices in other
 states as a guide"
- U-20630 order states: "These workgroups will look to other states for best practices and optimal standards..."
- Staff Technical Standards Review same states to evaluate areas such including:
 - Elements of technical standards
 - Meter testing
 - Cybersecurity
 - O&M
 - How technological advancements are being considered

Preliminary Objectives/Areas of Interest



- Consistency with Technical Standards for Gas Service (titles to parts, language, rescission of rules and waiver language)
- Incorporate "Electric Supply and Communication Lines and Associated Equipment" rules
- Incorporate cybersecurity requirements
- Update entire ruleset to reflect modern meters
- Update to include meter location requirements
- Amend definitions to clearly define AMI meters and define "serious injury" (R 460.3102)
- Eliminate R 460.115 reference to billing rules (R 460.3309(3))
- Update the extension of service rules to promote consistency and clarity (R 460.3411)
- Update O&M requirements (R 460.3504)
- Update vegetation management requirements (R 460.3505)

Thank You



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Break





Service Quality and Reliability Standards for Electric Service

December 3, 2019





Background



 In 2000, Docket U-12270 was opened and ordered MPSC Staff to investigate "methods to improve service reliability"

 Subsequently, the Commission established the Service Quality and Reliability Standards for Electric Service in 2002.

DEPARTMENT OF LABOR AND ECONOMIC GROWTH

PUBLIC SERVICE COMMISSION

SERVICE QUALITY AND RELIABILITY STANDARDS

FOR ELECTRIC DISTRIBUTION SYSTEMS

(By authority conferred on the public service commission by section 10p of 2000 PA 141, section 7 of 1909 PA 106, section 5 of 1919 PA 419, sections 4 and 6 of 1939 PA 3, and sections 3, 9, and 231 of 1965 PA 380, MCL 460.10p, 460.557, 460,55, 460,4, 460.6, 16.103, 16.109, and 16.331)

PART 1. GENERAL PROVISIONS

R 460.701 Application of rules.

Rule 1. (1) These rules apply to electric utilities as defined by R 460.702(k).

(2) These rules do not relieve an electric utility that is subject to the jurisdiction of the public service commission from any of its duties under the laws of this state, including all of the requirements of R 460.3101 to R 460.3908.

History: 2004 AACS.

R 460.702 Definitions.

Rule 2. As used in these rules:

- (a) "All conditions" means conditions reflected by data derived through the amalgamation of data from both normal conditions and catastrophic conditions. "All conditions" does not mean only normal conditions or only catastrophic conditions.
- (b) "Answer" means that a utility representative, voice response unit, or automated operator system is ready to render assistance or ready to accept information necessary to process the call. An acknowledgment that the customer is waiting on the line does not constitute an answer.
- (c) "Approved by the commission" means that a favorable commission order has been obtained.

Part 1: General Provisions



R 460.701: Application Of Rules

- "Electric utility" means a person, partnership, corporation, association, or other legal entity whose transmission or distribution of electricity the commission regulates under 1909 PA 106, MCL 460.551 to 460.559, or 1939 PA 3, MCL 460.1 to 460.10cc.
- Electric utility does not include a municipal utility, affiliated transmission company, or independent transmission company. Must follow all requirements of R 460.3101 to R 460.3908
- R 460.702: Definitions
- R 460.703: Revision of Tariff Provisions
 - Utilities must revise their tariffs to conform with this ruleset within 30 days after they become effective

Part 2: Unacceptable Levels of Performance



R 460.721: Duty To Plan to Avoid Unacceptable Levels

— An electric utility shall plan to operate and maintain its distribution system in a manner that will permit it to provide service to its customers without experiencing an unacceptable level of performance as defined by these rules.

Part 2: Unacceptable Levels of Performance



• R 460.722: Unacceptable Levels of Performance

- It is unacceptable for a utility to fail to meet these interruption standards:
 - Normal and Catastrophic conditions: an electric utility shall restore service within 36 hours to not less than 90% of its customers experiencing service interruptions.
 - Catastrophic conditions: an electric utility shall restore service within 60 hours to not less than 90% of its customers experiencing service interruptions.
 - **Normal conditions:** an electric utility shall restore service within 8 hours to not less than 90% of its customers experiencing service interruptions.
 - Repetitive Outages: An electric utility shall not experience 5 or more same circuit repetitive interruptions in a 12-month period on more than 5% of its circuits.

Part 2: Unacceptable Levels of Performance



• R 460.723: Wire Down Relief Requests

- It is an unacceptable level of performance for an electric utility to fail to respond to a request for relief of a non-utility employee guarded downed wire at a location in a metropolitan statistical area within 240 minutes after notification at least 90% of the time under all conditions.
- It is an unacceptable level of performance for an electric utility to fail to respond to a request for relief of a non-utility employee guarded downed wire at a location in a non-metropolitan statistical area within 360 minutes after notification at least 90% of the time under all conditions.

Part 2: Unacceptable Performance



- R 460.724 Unacceptable Service Quality Levels of Performance
 - It is an unacceptable level of performance for an electric utility to fail to meet any of the following service quality standards:
 - (a) An electric utility shall have an average customer call answer time of less than 90 seconds.
 - (b) An electric utility shall have a call blockage factor of 5% or less.
 - (c) An electric utility shall have a complaint response factor of 90% or more within 3 business days.
 - (d) An electric utility shall have a meter reading factor of 85% or more within the approved period, including customer reads.
 - (e) An electric utility shall complete 90% or more of its new service installations within 15 business days.
- Annual report containing this information is required to be filed with MPSC.



- R 460.731 Deadline for Filing Annual Reports
- R 460.732 Annual Report Contents
 - In 2002, regulated utilities and cooperatives were required to file annual service quality and reliability reports within Docket U-12270.
 - Wire Down Relief
 - Meter Read
 - New Service Installation
 - Complaint Response
 - Average Call Answer Time
 - Call Blockage
 - Outage Restoration—Normal
 - Outage Restoration—Catastrophic
 - Outage Restoration—All Conditions
 - Same Circuit Repetitive Outage



R 460.732 Annual Report Contents

- All Utilities and Cooperatives
 - Wire Down Relief
 - Meter Read
 - New Service Installation
 - Complaint Response
 - Average Call Answer Time
 - Call Blockage
 - Outage Restoration—Normal
 - Outage Restoration—Catastrophic
 - Outage Restoration—All Conditions
 - Same Circuit Repetitive Outage
 - SAIDI, SAIFI, CAIDI
 - 5 year rolling average
 - With and Without Major Event Days



R 460.732 Annual Report Contents

All Utilities & Cooperatives

- Wire Down Relief
- Meter Read
- New Service Installation
- Complaint Response
- Average Call Answer Time
- Call Blockage
- Outage Restoration—Normal
- Outage Restoration—Catastrophic
- Outage Restoration—All Conditions
- Same Circuit Repetitive Outage
- SAIDI, SAIFI, CAIDI
 - 5 year rolling average
 - With and Without Major Event Days

DTE ELECTRIC & CONSUMERS ONLY:

- CEMI 0-10+
- CELID 60hrs and CELID 8hrs (excluding catastrophic events)
- New \$25.00 Outage Credit
 Directives
- List of their 10 worst performing circuits for the prior years in terms of SAIDI & SAIFI
 - SAIDI and SAIFI excluding major events for the year
 - Circuit name, number and location
 - Length of circuit (miles)
 - Number of customers served
 - Substation name
 - Last circuit trim
 - List of outages and causes
 - Corrective action plan to improve performance



- R 460.733: Availability of Records
- R 460.734: Retention of Records

Part 4: Incentives and Penalties



- R 460.741: Approval of Incentives by the Commission
- R 460.742: Criteria for Receipt of an Incentive
- R 460.743: Disqualification

Part 4: Financial Incentives & Penalties



R 460.744: Catastrophic Conditions

 an electric utility fails to restore service to a customer within 120 hours after an interruption that occurred during the course of catastrophic conditions.

R 460.745: Normal Conditions

an electric utility fails to restore service to a customer within 16 hours after an interruption that occurred during normal conditions.

R 460.746: Repetitive Outages

- a customer of an electric utility that experiences and notifies the utility of more than 7 interruptions in a 12-month period due to a same-circuit repetitive interruption.
- R 460.747: Multiple Billing Credits Allowed
- R 460.748: Effect in Other Proceedings

Part 5: Waivers and Exceptions



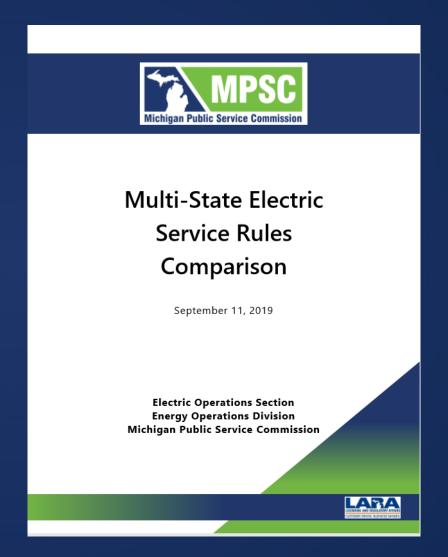
• R 460.751: Waivers and Exceptions by Electric Utilities

R 460.752: Proceedings for Waivers and Exceptions

Multi-State Electric Rules Comparison



- As part of the Statewide Energy
 Assessment (2019), Staff in the Electric
 Operations Section gathered
 comparable power quality and
 reliability standards data from 10
 different states in order to investigate
 how Michigan reasonably compares to
 other states.
- Staff researched ten states: California, Illinois, Indiana, Massachusetts, Minnesota, New Jersey, New York, Ohio, Washington State, and Wisconsin.



State Selection Criteria



- Staff selected states based on:
 - geography (Midwest states, east coast states, west coast states)
 - states that are known for precedent setting policies for their utilities
 - states that have major annual storms that require significant rebuilding (east coast)

Staff's Findings



- Staff found that in totality, Michigan's Service Quality and Reliability Standards were more detailed in comparison to the initial ten states studied. For example, Michigan specifically states what constitutes "normal" and "catastrophic" conditions whereas many of the other states did not have that level of granularity.
- It has been nearly 20 years since these Standards were created, and it would be beneficial to gather information via the stakeholder process in order to ascertain which rules would benefit from an update.

Staff Recommendations



- Strengthen our Service and Reliability existing rules by:
 - Expanding the annual reliability report to include all utilities, not just Consumers Energy and DTE Electric (currently, Docket Nos. U-16065 and U-16066, respectively).
 - Reduce the length of time for acceptable customer call answer time from 90 seconds to 45 or 30 seconds.
 - Require annual reporting of reliability metrics SAIFI, SAIDI, CAIDI and CEMI for all utilities.
 - Reduce annual same circuit repetitive interruption factor from 5
 outages to 4 outages and require utilities to pay the service credit if a
 customer experiences more than 5 outages instead of 7 outages.

Staff Recommendations (cont'd)



- Require customers to receive automatic service credits if they qualify and eliminating the requirement for customers to apply for the credit.
- Increase service credits to \$50.00 from \$25.00.
- Consider mandating that fines go directly to customers instead of to the State.
- Consider mandating that utilities submit Annual Safety reports of OSHA incidents, and injuries requiring medical attention or property damage.

Staff Recommendations (cont'd)



- Consider requiring the utilities to file their Emergency response plan every 5 years.
- Consider requiring a report from each utility after each major service interruption.
- Require that utilities send customer credit approval/denial to letters customers within 30 days of application.

Specific Rules Considered for Revision



- R 460.744-746 update outage credits from \$25 to \$50
- R 460.744-746 require customer to be notified by the company whether they were accepted or rejected for a credit (30 days)
- R 460.741-747 require companies to auto generate service credits
- Require customer specific outage history to be available through utility company portal
- R 460.731-732 require an annual reliability report
- R 460.724(a) reduce average customer call answer time from 90 seconds to 45 or 30 seconds
- R 460.722(d) and R 460.732 (j) reduce same circuit interruption factor from 5 to 4
- R 460.746 pay service credit if it is over 5 interruptions in a 12-month period instead of 7
- R 460.741-746 Consider fines going to customers instead of the state
- R 460.732 require utilities to file their Emergency Response Plan every 3 or 5 years
- R 460.732 require a report for each major service interruption

Thank You



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Upcoming Meetings & Deliverables



Upcoming Workgroup Meetings @ MPSC

— January 8, 2020 9:00 AM-4:00 PM

February 12, 20209:00 AM-4:00 PM

- March 12, 2020 9:00 AM-4:00 PM

April 16, 2020 (tentative)9:00 AM-4:00 PM

Deliverables

- April 30, 2020: Initial Report Due
 - Summary of Workgroups
 - Summary of Stakeholder Comments
- May-August 2020
 - Stakeholder Review and Comment Period
- September 1, 2020: Final Report Due

Looking Ahead



Next Workgroup Meeting

January 8, 2020 @ MPSC

Technical Standards: 9:00AM-12:00PM

Service Quality & Reliability: 1:00PM-4:00PM

Homework due by December 20, 2019



Please provide the following information and add to the respective dockets:

- Comments (all) either U-20629 (Service Quality) or U-20630 (Technical Standards):
 - Which standards do you think can be deleted? Updated?
 - Are there standards which should be added?
 - Which standards are the most feasible to implement?
 - Which standards are the least feasible to implement?
- Meter inventory (utilities) U-20629 (Service Quality) and/or U-20630 (Technical Standards):
 - What type of meters are currently in the system? (i.e. analog, AMR, AMI, etc.)
 - What type meters do you plan to have in the system beyond 5-years?

Contact Us

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Open Discussion: Suggested Updates To Standards

We're Adjourned! TRAVEL SAFELY!



