LUMA

PERFORMANCE REPORTING

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Procedure Title: **Performance Reporting**

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1.0 Executive Summary

The Performance Reporting procedure provides the steps to develop a Key Performance Indicator Dashboard that will measure and drive successful implementation of the System Operating Principles and manage the Bulk Power System to the performance goals.

2.0 Objective/Scope/Roles

2.1 Objective

This procedure is intended to identify specific Key Performance Indicators (KPIs) that will help System Operations outline the steps required to develop tracking methods and develop metrics to evaluate, manage and report on System Operations' performance.

2.2 Scope

The Director of System Operations is responsible for the development of System Operations' Key Performance Indicator Dashboard, which **shall** be a comprehensive set of performance indicators that **shall** track and evaluate System Operations performance so that System Operations can manage to the goals set forth in the KPI's. The frequency of reporting **shall** be monthly. The set of performance indicators are listed in this procedure which **shall** be approved by the Director System Operations and revised as needed.

2.3 Roles and Responsibilities

2.3.1 Director System Operations (DSO)

Approve KPI Dashboard for System Operations and suggest additional metrics to be measured and tracked. Conduct monthly meeting to review metrics and identify actions.

2.3.2 DSO Administrative Coordinator

Shall schedule and arrange for the monthly meeting to discuss the KPIs.

2.3.3 Manager, Energy Management (MEM)

Shall oversee those KPIs as assigned by the DSO. This entails understanding each data component of the KPIs and managing staff towards improved KPI performance.

2.3.4 Manager, Control Center Operations (MCCO)

Shall oversee those KPIs as assigned by the DSO. This entails understanding each data component of the KPIs and managing staff towards improved KPI performance.

2.3.5 Manager, Control Center Support (MCCS)

Shall oversee those KPIs as assigned by the DSO. This entails understanding each data component of the KPIs and managing staff towards improved KPI performance. Additionally, as performance is directly in the span of this manager's purview, the MCCS is responsible for generating the KPI reports.

2.3.6 Project Director (PD)

Shall oversee those KPIs as assigned by the DSO. This entails understanding each data component of the KPIs and working with other staff as may be delegated for those roles.

3.0 Procedure

3.1 Defining and Ownership

The MCCS **shall** present a comprehensive list of the System Operations' KPIs to the DSO for approval. The DSO **shall** approve the set and definition of the KPIs.

3.1.1 KPI Generation and Management

The MCCS **shall**:

- Develop methods to generate KPI data, develop an historical database, maintain historical performance trends of each KPI and retain this data as baseline performance.
- Research KPIs for similar utilities and develop a minimum acceptable performance level or each KPI.
- Develop visual graphic displays to illustrate System Operations' performance in each of the KPI Dashboard and gain approval of the Director System Operations.
- Update each KPI data monthly or as appropriate.

3.1.2 KPIs

The KPI list includes the following:

- Safety – Power System Work Standards:
    - Measures the number of incidents requiring the Operator-in-Charge to perform an investigation.
    - Goal is to trend to zero investigations.
    - Benefit is that with strict adherence to switching and tagging procedures, overall field personnel safety will be improved.
    - Responsible Executive is DSO, KPI Lead Manager is MCCO.

- Safety – Switching Incidents:
    - Measures the number of Switching Incidents on BPS.
    - Goal is to trend to zero Incidents.
    - Benefit is improved safety for field switching personnel, fewer unplanned outages, improved system reliability.
    - Responsible Executive is DSO, KPI Lead Manager is PD.

- Load Forecasting – Short Term (1-7 days) Load Forecasting:
    - Compares Forecasted Load in MW versus Actual Load in MW.
    - Goal is to have Forecasted Load within 5% of Peak Actual Load.
    - Benefit is that Shift Engineers will be able to efficiently and effectively plan and schedule outages, and generation usage.

- Responsible Executive is DSO, KPI Lead Manager is MCCO.

- Data Management – SCADA Data Point Health
  - Measures percent of operational SCADA data points on 230kv, 115kV, 38kV and Distribution.
  - Goal is to have 100% of SCADA Data Points operational.
  - Benefit is increased real time data for System Operations to inform operational decisions and increased operational control of Bulk Power System and BPS Elements.
  - Responsible Executive is DSO, KPI Lead Manager is MCCS.

- Merit Order – Number of Days Actual Cost of Generation is within 5% of Scheduled Cost:
  - Tallies the Number of Days per Month Actual Generation is Within 5% of Scheduled Generation Cost.
  - Goal is 15 days per Month where Actual is within 5% of Scheduled.
  - Benefit is lower cost for Generation, lower cost to utility customers and increased flexibility for Shift Engineers for day-to-day operations.
  - Responsible Executive is DSO, KPI Lead Manager is MEM.

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- Transmission Line Configuration:
    - Measures: Days per Month when 2 or more Same Voltage Lines are out of Configuration for 230kV, 115kV, and 38kV Transmission Lines.
    - Goal is to reduce occurrence to at most 5 days per month for each voltage.
    - Benefit is improved Bulk Power System capabilities for effective day-to-day operations.
    - Responsible Executive is DSO, KPI Lead Manager is MCCO.
- Grid Reinforcement Initiative:
    - Measures: Number of Transmission Elements Not in Operation by Category.
    - Goal is to reduce Number of Elements Not in Operation to zero.
    - Benefit is System Operations will have a more robust Bulk Power System to operate in order to balance frequency and voltage improving system reliability and safety.
    - Responsible Executive is DSO, KPI Lead Manager is MCCS.
- Generation Reserves in Compliance - Average Daily Generation Reserves Measured Daily:
    - Measures: Daily amount of Controlled Reserves in MW and Daily amount of Spinning Reserves (Per Policy on Reserves). This is set at the Largest Generation Unit online.
    - Goal: is to have 300MW of Controlled Reserves and Spinning Reserves equal to the Daily Largest Generation Unit online.
    - Benefit is System Operations will have increased operational capabilities to fully carry total system load as transient events and forced outages occur.

- Responsible Executive is DSO, KPI Lead Manage is MEM.

- Transmission & Distribution Corrective Maintenance Work Orders Backlog
  - Measures: Monthly Backlog of Corrective Maintenance Work Orders.
  - Goal: is a downward trending of the monthly total number of outstanding Corrective maintenance work orders.
  - Benefit is increased capacity and operational flexibility in BPS and lower incidence of unplanned outages.
  - Responsible Executive is DSO, KPI Lead Manager is MCCS.
- Training - System Operations Training and Certification
  - Measures: Monthly Percentage of System Operations, Completion of General Training and Monthly Percentage Certified for Job Responsibility.
  - Goal is to complete accurately track training program and certifications.
  - Benefit is to have all System Operation personnel fully trained and certified for their job responsibility, thus having increased availability and job effectiveness.
  - Responsible Executive is DSO, KPI Lead Manager is MCCO.
- Staffing Levels - Expected FTE's versus Actual FTE's
  - Measures: Monthly Expected Full Time Employee Equivalents versus Actual Full Time Employee Equivalents.
  - Goal is to have Actual Full Time Equivalents Equal Expected.
  - Benefit is reduced overtime hours and employee expenses.
  - Responsible Executive is DSO, KPI Lead Manager is MEM.

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- Overall System Outage Duration – SAIDI
    - Measures: The Monthly Average Duration of Outages across the overall BPS in Minutes.
    - Goal is a downward trending monthly duration number.
    - Benefit is increased customer electric service reliability and increased customer electric sales.
    - Responsible Executive is DSO, KPI Lead Manager is MCCS.
- Critical Loads Outage Duration – SAIDI applied to lines with Critical Loads
    - Measures: Number of Minutes Average Duration of Outages per Month on lines with Critical Load Customers.
    - Goal is a downward trending monthly duration number.
    - Benefit is reduction in complaints by Critical Load customers which may include those with medical conditions requiring electrical equipment.
    - Responsible Executive is DSO, KPI Lead Manager is MCCS.
- Overall System Outage Frequency – SAIFI
    - Measures: Frequency of Outages Greater than 5 Minutes per Month
    - Goal is a downward trending monthly frequency number.
    - Benefit is fewer customer calls, decrease in field operator dispatching.
    - Responsible Executive is DSO, KPI Lead Manager is MCCS.

3.2 Monthly KPI Review

On a monthly basis, the leadership team and key staff members **shall** meet to review and discuss the KPIs.

3.2.1 Schedule KPI Meeting

The DSO Administrative Coordinator schedules and communicates KPI meeting date.

3.2.2 KPI Review

Each manager **shall** report out on the KPIs that they are assigned as KPI Lead Manager. Team **shall** discuss each KPI as needed during the meeting.

3.3 KPI Meeting Action Items

Action items from KPI Meeting **shall** be assigned with a due date and responsible party.

3.3.1 Meeting Records

The DSO Administrative Coordinator **shall** record all Action Items from KPI meeting and distribute list to DSO and KPI Lead Managers for follow up.

3.3.2 Completion of Action Items

Each Lead Manager **shall** address each Action Item before the following Monthly KPI meeting date.

3.4 Updating KPIs

Each month the KPIs **shall** be updated to include the current data. The maintenance and revision of KPIs **shall** be generated prior to the monthly meeting.

3.4.1 KPI Database

The MCCS **shall** be responsible to maintain the KPI Database, KPI Reporting, to perform the KPI Data Collection and to implement all monthly data updates/revisions to the KPIs.

Appendix A: Glossary

Term	Definition
CAIDI	Customer Average Interruption Duration Index (CAIDI) measures the average length of time an interrupted customer is without power during a predefined period of time.
SAIDI	System Average Interruption Duration Index (SAIDI) measures the average length of time customers are without power during a predefined period of time. It is commonly measured in minutes or hours of interruption. SAIDI is one indication of overall system reliability because it incorporates the impact of frequency and duration of outages on the total customer base.
SAIFI	System Average Interruption Frequency Index (SAIFI) measures the average frequency or number of times customers experience a sustained interruption of service during a predefined period of time.
Key Performance Indicator	Quantifiable measures used to evaluate the success of an organization, in meeting objectives for performance.

Appendix B: Procedure Cross-Reference Matrix

Procedure Reference Matrix, Part 1 of 2	Short Term Load Forecasting	New Facility Interconnection	Resource Adequacy Planning	Interconnected Facility Retirements	Legacy T&G Demarcation	Interconnected Facilities Capabilities	Black Start	Telemetry	Cybersecurity	Root Cause Analysis & Corrective Actions	Public Reporting	Performance Reporting	Stakeholder Management	Policy on Reserves
Short Term Load Forecasting														
New Facility Interconnection														
Resource Adequacy Planning														
Interconnected Facility Retirements														
Legacy T&G Demarcation														
Interconnected Facilities Capabilities														
Black Start														
Telemetry														
Cybersecurity														
Root Cause Analysis and Corrective Actions														
Public Reporting														
Performance Reporting														
Stakeholder Management														
Policy On Reserves														
Reducing Risk Exposure to Contingencies														
Critical Loads														
Load Shedding														
Contingency and System Operating Limits Response														
Energy Dispatch, Scheduling and Merit Order														
Transmission Operations														
Plant Level Communications														
Balancing Frequency and Voltage														
Demand-Side Resources (Non-Wire Alternatives)														
System Operator Training														
Scheduling Planned T&G Outages														
Forced Outage														
Outage Execution and Closeout														
Emergency Response Execution														
Emergency Response Drills														

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Procedure Reference Matrix, Part 2 of 2	Reducing Risk Exposure to Contingencies	Critical Loads	Load Shedding	Contingency & System Operating Limits Response	Energy Dispatch, Shedding & Merit Order	Transmission Operations	Plant Level Communications	Balancing Frequency & Voltage	Demand Side Resources (NWA)	System Operator Training	Scheduling Planned T&G Outages	Forced Outage	Outage Execution & Closeout	Emergency Response Execution	Emergency Response Drills
Short Term Load Forecasting															
New Facility Interconnection															
Resource Adequacy Planning															
Interconnected Facility Retirements															
Legacy T&G Demarcation															
Interconnected Facilities Capabilities															
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Root Cause Analysis and Corrective Actions															
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Performance Reporting															
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Demand-Side Resources (Non-Wire Alternatives)															
System Operator Training															
Scheduling Planned T&G Outages															
Forced Outage															
Outage Execution and Closeout															
Emergency Response Execution															
Emergency Response Drills															

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