

Section
5.2

5.2.1 a-f

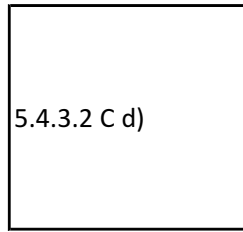
5.2.2 a
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5.4 a
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5.4.1 e
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5.4.3.1 bullet 1
5.4.3.1 bullet 2

5.4.3.1 bullet 3
5.4.3.2 A
5.4.3.2 B
5.4.3.2 C a)
5.4.3.2 C b)
5.4.3.2 C c)



Information Item
DISTRIBUTION SYSTEM PLANS
High level summary of DS Plan - Main investment drivers - Expected drivers of cost savings - DS Plan time horizon - Vintage of information on investment drivers - Important changes to the utility's asset management process since last DS filing - DS Plan aspects contingent on outcomes of ongoing activities
Details about all third parties involved in coordinated planning: - Purpose - Initiating party - Other participants - Associated timelines - Anticipated effect on DS Plan
Details about Regional Planning Process (coordinated) deliverables: - Role of utility - Status - Deliverable date (or expected date)
Documentation provided to other participants
Documentation of consultation undertaken
IESO comment letter about Renewable Energy Generation (REG) investments
Definition of all the metrics used for performance measurement and the motivation behind them.
Summary of historical and present performance based on the specified metrics
Summary of historical causes of interruption including: - Name - Number of interruptions - Number of Customer Interruptions - Number of customer-hours of interruptions
Effect of historical performance on the DS Plan

ASSET MANAGEMENT PROCESS
High level description of the utility's asset management process including: - Objectives - Process steps - Components (data inputs and outputs)
Data requirements - asset register - asset condition assessment - asset capacity utilization/constraint assessment - historical period data on customer interruptions caused by equipment failure - reliability-based 'worst performing feeder' information and analysis - reliability risk/consequence of failure analyses

Description of the features of the utility's service area for asset management purposes:
- Physical
- Economic
- Forecast evolution of these features
High level description of the system configuration
- Circuits
- Underground/overhead
- Transformers
Asset years in service & condition
Dates the data was compiled
Utilization relative to planning criteria
Where cited as a 'driver' of a material investment, describe influence on scope/value
Description of trade-off between replacement vs refurbishment of assets
Description of Asset Management policies and practices
Replacement and refurbishment policies
Explanation of system renewal spending optimization, prioritization & scheduling practices
Explanation of system renewal investment impacts on routine system O&M
Description of inspection and maintenance criteria, assumptions and policies, including routine and preventative inspections
Risk management policies and practices
Assessment methods and approaches to risk mitigation
Inputs and outputs
How conclusions of risks are used to select/prioritize capital expenditures
Interconnection Requests/applications >10 kW
Anticipated REG connections over the [planning period. (number and MW)
The utility's capacity to connect new REG
Constraints on REG connection. Localized or system wide

5.4 CAPITAL EXPENDITURE PLAN

Description of customer engagement activities and their impact on the DS plan
Anticipated system development:
- Load growth
- Technological
- Renewable generation integration
Capital planning objectives, criteria and assumptions in relation to asset management Objectives
Outlook and objectives for accommodating renewable generation
Policy and procedure on using non-distribution alternatives to relieve system constraints
Detailed description of decision making process for each investment category
Customer engagement mechanisms
Method and criteria for prioritizing REG investments
Capital expenditure summary including explanatory notes for trends and variances
- Historical (past five years)
- Forecast (future five years)
Comparative expenditures by category over the historical period
Forecast impact of system investment on O&M costs

Historical and expected evolution of investment 'drivers'
Information regarding listed Material Projects - Capital and O&M costs proposed for recovery in rates - Related loads - Project milestone dates - Expenditure schedule - Project risks and planned mitigations - Comparative expenditures for historical equivalent projects - Other key project documents e.g. Leave to construct approval
General project evaluation information regarding: - Efficiency, customer value and Reliability - Safety - Cyber-security and Privacy - Co-ordination and Interoperability - Economic Development - Environmental Benefits
Evaluation Information for System Access Projects: - Timing and prioritization factors - Customer preferences, input from third parties/stakeholders - Cost factors - Cost minimization - Project fit with planning objectives - Project feasibility options - Cost options considered and methods used - Project economic evaluation results - System impact assessment, mitigation costs - Cost recovery
Evaluation information for System Renewal Projects: - Performance-related operational targets in relation to asset lifecycle optimization policies - Asset condition relative to typical lifecycle - Number of customers(classified) affected by asset failure - Quantitative and qualitative customer impacts - Criticality and cost of asset failure - Investment intensity and priority over other projects - O&M impacts of not implementing the project - Driving safety and reliability factors - Cost benefit analysis where applicable
Evaluation information for System Service projects: - Customer benefit assessment - Information on regional infrastructure requirements - Description of technology, cyber-security and privacy standards met - Reliability, efficiency, safety and coordination benefits/effects - Timing and prioritization factors - Feasibility options and analysis methods

Evaluation of Generation Plant projects:

- Quantitative and qualitative analysis results
- Feasibility options including “do nothing option”
- Cost benefit analysis
- Customer benefits
- Impact on utility costs

[illegible]

Appendix 5.3.2-b - Asset Inventory
Appendix 4.3.2-c - Asset Condition Assessment
Appendix 5.3.2-d - Asset Capacity
Appendix 5.3.3 - Asset Management & Risk Management Process Overview
Appendix 5.3.3-a1 - Asset Refurbishment & Replacement Overview
Appendix 5.3.3-a2 - Asset Maintenance Overview
Appendix 5.3.3 - Asset Management & Risk Management Process Overview
Appendix 5.3.3 - Asset Management & Risk Management Process Overview
Appendix 5.3.3-b - Capital Projects - Risk Assessment

Appendix 5.4.2-a - Capital Expenditure Summary from Chapter 5 & Appendix 5.4.2-b - Capital Projects - Material Investments Table
Appendix 5.4.2-a - Capital Expenditure Summary from Chapter 5 & Appendix 5.4.2-b - Capital Projects - Material Investments Table

Sections 5.4.1, 5.4.2, 5.4.4 and 5.4.5: - Appendix 5.4.3-a - Capital Projects - Prioritized List - Appendix 5.4.3-b - Capital Projects - Alternatives Considered - Appendix 5.4.3-c - Other Capital Projects



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Notes to the Table:

- 1 SAIFI: System Average Interruption Frequency Index
- 2 SAIDI: System Average Interruption Duration Index
- 3 The Total Cost per Customer is the sum of a distributor's capital and O&M costs divided by the total n
- 4 The Total Cost per km of Line is the sum of a distributor's capital and O&M costs divided by the total n

Explanatory Notes on Adverse Deviations (complete only if applicable)	
Metric Name:	
Metric Name:	
Metric Name:	

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Schedule:
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Date:

Appendix 5.2.3-a Metrics

[illegible]

umber of customers that the distributor serves.
umber of kilometers of line that the distributor operates to serve its customers.

[illegible]

Appendix Historical Causes of Interruption (Si

[illegible]

Notes to the Table:

Explanatory Notes on Adverse Deviations (complete only if applicable)
Cause of Interruption Name:
Cause of Interruption Name:
Cause of Interruption Name:

Date:

5.2.3-b
Since the last Cost of Service Filing)

[illegible]

Asset Class ¹	Asset Type ²	Are there any noteworthy circumstances? (Yes / No)
Poles	Wood	
	Concrete	
	Steel	
	Composite	
Cables	Underground	
	Overhead	
	Submarine	
Distribution Station ³	Station 1	
	Station 2	
Transformers	Substation	
	Pole Mounted	
	Pad Mounted	
Switchgear		
Circuit Breakers		

Notes to the Table:

- 1 This is not intended to be an exhaustive list of asset classes. Please popu
- 2 This is not intended to be an exhaustive list of asset types. Please popu
- 3 Option to provide a separate asset inventory table for each voltage clas

Explanatory Notes on Noteworthy Circumstances (comp
Asset Class & Type:

Asset Class & Type:
Asset Class & Type:

Appendix 5.3.2-a Asset Inventory

[illegible]

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lete only if applicable)

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Date:

[illegible]

Asset Class ¹	Asset Type ²	Overview of Health Index derivation methodology (option to provide explanatory notes below)	Average Health Index
Poles	Wood		
	Concrete		
	Steel		
	Composite		
Cables	Underground		
	Overhead		
	Submarine		
Distribution Station	Station 1		
	Station 2		
Transformers	Substation		
	Pole Mounted		
	Pad Mounted		
Switchgear			
Circuit Breakers			

Notes to the Table:

- 1 This is not intended to be an exhaustive list of asset classes. Please populate appropriately.
- 2 This is not intended to be an exhaustive list of asset types. Please populate appropriately.

Explanatory Notes on Health Index Derivation (complete only if applicable)

Asset Class & Type:
Asset Class & Type:
Asset Class & Type:

Appendix 5.3.2-b

Asset Condition Assessment

[illegible]

[illegible]

Asset Class ¹	Asset Type ²	Peak Capacity		Capacity
		Summer Capacity	Winter Capacity	Summer Peak Loading
Distribution Stations	Station 1			
	Station 2			
Distribution Feeders	Feeder 1			
	Feeder 2			

Notes to the Table:

- 1 This is not intended to be an exhaustive list of asset classes. Please populate appropriately.
- 2 This is not intended to be an exhaustive list of asset types. Please populate appropriately.

Explanatory Notes on Capacity Limitation (complete only if applicable)	
Asset Class & Type:	
Asset Class & Type:	
Asset Class & Type:	





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Date:

st	Is there a Capacity Limitation? (Yes / No)	If yes to column R, please describe the capacity limitation and what's causing the limitation (option to provide explanatory notes below)
2022		



Asset

Asset Class ¹	Asset Type ²	Asset Refurbishment Policy ³	
		Are Assets Conducive to Refurbishment ³ ? (Yes / No)	Do you have an Asset Refurbishment Policy? (Yes / No)
Poles	Wood		
	Concrete		
	Steel		
	Composite		
Cables	Underground		
	Overhead		
	Submarine		
Distribution Station	Station 1		
	Station 2		
Transformers	Substation		
	Pole Mounted		
	Pad Mounted		
Switchgear			
Circuit Breakers			

Notes to the Table:

- 1 This is not intended to be an exhaustive list of asset classes. Please populate appropriately.
- 2 This is not intended to be an exhaustive list of asset types. Please populate appropriately.
- 3 Being conducive to refurbishment means that refurbishment techniques can be applied as a way to prolong

Overview of Asset Refurbishment Policy (complete only if applicable)
Asset Class & Type:
Asset Class & Type:
Asset Class & Type:

Overview of Proactive Asset Replacement Policy (complete only if applicable)
Asset Class & Type:
Asset Class & Type:
Asset Class & Type:

Appendix 5.3.3-a t Refurbishment & Replacement Overview

[illegible]

the assets expected useful life.

[illegible]

Asset Maintenance

[illegible]

Notes to the Table:

1 This is not intended to be an exhaustive list of asset classes. Please populate appropriately.

2 This is not intended to be an exhaustive list of asset types. Please populate appropriately.

3 Motivation refers to the reason for implementing maintenance procedures (e.g. to determine what are deteriorating, etc.)

[illegible]**Notes to the Table:**

Explanatory Notes on Probability of Failure Derivation (compl

Project Name:

Project Name:
Project Name:

Explanatory Notes on Consequence of Failure Derivation (con
Project Name:
Project Name:
Project Name:

Appendix 5.3.3-c Capital Projects - Risk Ass

[illegible]

(complete only if applicable)

Complete only if applicable)

Assessment

[illegible]

[illegible]

Appendix 5.4.1

Asset Management & Risk Management Process C

Asset Management Process Overview
Do you follow ISO 55000 ¹ (or an equivalent state of the art process)?
Do you follow ISO 55001 ² (or an equivalent state of the art process)?
Do you follow ISO 55002 ³ (or an equivalent state of the art process)?
Please provide an assessment of your company's Asset Management Maturity Level ⁴ (1=1st Generation, 4=4th Generation)
evaluation.
If the above noted Asset Management Maturity Level is less than 4, please outline the schedule to improve current Asset Management Practices (e.g. how the company plans to get to 4th Generation / best in class
Please provide a list of what your Asset Management documents are.
Risk Management Process Overview
Do you follow ISO 33000 ⁵ (or an equivalent state of the art process)?
Please provide a list of what your Risk Management documents are.

Notes to the Table:

- 1 ISO 55000 provides an overview of the subject of asset management and the standard terms and definitions;
- 2 ISO 55001 is the requirements specification for an integrated, effective management system for asset
- 3 ISO 55002 provides guidance for the implementation of such a management system.
- 4 Maturity Levels are defined as:
 - Level 1 - 1st Generation: Reactive - repair after breakdown.
 - Level 2 - 2st Generation: Planned - Repair before it breaks down.
 - Level 3 - 3st Generation: Proactive - Don't just repair, improve it.
 - Level 4 - 4st Generation: Strategic - Innovation, no breaks.
- 5 ISO 33000 provides principles, framework and a process for managing risk.

Explanatory Notes on Asset Management Maturity Level Improvement Plan (complete c



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Schedule:

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Date:

Overview

Response
(Please provide explanation in space below)
Response

only if applicable)



Appendix A Capital Projects - A

[illegible]

Notes to the Table:

1 'Other Capital Projects' corresponds to all projects that did not make the list of prioritized C

Power Outage Causes	Project Investment Category	Type of Project
Loss of Supply	System Access	Discretionary
End of Life	System Renewal	Non-Discretionary
Spontaneous Equipment Failure	System Service	
Lightning	General Plant	
Adverse Weather		
Tree Contacts		
Human Element		
Foreign Interference		
Multiple Reasons		
Unknown / Other		

Main Driver of the Project / Activity

Efficiency

Customer Value

Reliability

Safety

Cyber-security, Privacy

Co-ordination, Interoperability

Economic Development

Environmental Benefits