



# Outage Management Process Summary

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# 1. Introduction

## 1.1 Purpose

The purpose of this document is to provide market participants with a summary of the business rules and software validation used in the redesigned outage management process. The rules and validations have been jointly developed between market participants and the IESO through the SE-109: Outage Management Process Redesign stakeholder engagement and will form the basis for market rules and market manuals development to support the redesigned process and tools.

## 1.2 Glossary

**Coverage Period** – means the Period in which an Outage Request is scheduled to start.

**Constraint Code** – means the Equipment limitations being reported on the Outage Request. The following Constraint Codes are available<sup>1</sup>:

- **Out of Service (OOS)** – means the Equipment is unavailable and removed from service.
- **In Service (IS)** – means the Equipment is available and in-service.
- **Derated To (DRATE)** – means the Equipment cannot operate above a specified capability that is less than its rated capability.
- **Must Run At (MUSTRUN)<sup>2</sup>** – means the Equipment can only operate a specified capability that is less than or equal to its rated capability.
- **Hold Off (HOLDOFF)** – means the Equipment (i.e. circuits) has its reclosing capability blocked.
- **Protection OOS (PROT OOS)** – means the Equipment's primary protection is unavailable in some capacity.
- **Breaker Fail Protection OOS (BF PROT OOS)** – means the Equipment's (i.e. breaker) backup protection (i.e. Breaker Fail) is unavailable in some capacity.
- **Automatic Voltage Regulator or Power System Stabilizer OOS (AVR/PSS OOS)** – means the Equipment's (i.e. generator) AVR or PSS is unavailable in some capacity.
- **Breaker Trip Coil Test (BTCT)** – means the Equipment (i.e. breaker) is undergoing a protection relay-initiated test operation.
- **Ancillary Service OOS (ASP OOS)** – means the Equipment's ability to provide a contracted ancillary service (i.e. Black-start, Regulation or Voltage Control) is restricted in some capacity.

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<sup>1</sup> See Appendix G for mapping of Equipment Classes to applicable Constraint Codes.

<sup>2</sup> While the MUSTRUN code represents a different limitation than the DRATE code, they are both translated the same by downstream software systems (i.e. IESO dispatch tool understands the value associated with MUSTRUN or DRATE to mean max capability for the duration of the Outage Request).

- **Information (INFO)** – means the Equipment has a condition or limitation that does not require IESO approval.
- **ABNO** – means Available But Not Operating and is a mechanism for generators to report they do not expect to participate in the market (e.g. off-peak curtailments).

**Equipment** – means reportable Equipment either connected to or forms part of the IESO-controlled grid (ICG)<sup>3</sup>.

- **Critical Equipment** – means Equipment that, when removed from service or restricted, has a material impact on the security of the ICG or the interconnection (e.g. 500 kV or 230 kV transmission facilities that impact power system stability limits). Outage Requests to this type of Equipment typically require the greatest amount of IESO study effort.
- **Non-critical Equipment** – means Equipment that, when removed from service or restricted, does not typically have a material impact on the security of the ICG or the interconnection (e.g. local area 230 kV or 115 kV transmission facilities and all generating facilities). Outage Requests to this type of Equipment typically require a moderate level of IESO study effort.
- **Low-impact Equipment** – means Equipment that, when removed from service or restricted, has little to no impact on the security of the ICG or the interconnection (e.g. load facilities or auxiliary Equipment such as protection relays). Outage Requests to this type of Equipment typically require little to no IESO study effort.

**Outage Request** – means an electronic record that reflects an existing or future removal of Equipment from service, unavailability for connection of Equipment or temporary de-rating, restriction of use, or reduction in performance of Equipment for any reason including, but not limited to, to permit the performance of inspections, tests or repairs on Equipment by Equipment owners.

**Outage Request Status** – means the status of an Outage Request during its lifecycle (i.e. from creation to completion). A diagram illustrating the possible transitions between Outage Request statuses is shown in Figure 1. Outage Requests can be in one of the following 13 statuses:

- **Advance Approved (AA)** – refers to IESO advance approvals issued to Outage Requests during the processes described in Section 2.
- **At Risk** – refers to an Outage Request that does not receive Advance Approval in the Quarterly AA process described in Section 2.
- **Cancelled** – refers to an Outage Request that has been withdrawn from the processes described in Section 2. Cancelled Outage Requests cannot be resubmitted into the processes described in Section 2 (i.e. an end state).
- **Completed** – refers to an Outage Request that has actually ended. Completed Outage Requests cannot be resubmitted into the processes described in Section 2 (i.e. an end state).
- **Draft** – refers to an Outage Request that has been created but not submitted into the processes described in Section 2.

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<sup>3</sup> See Appendix G for a list of Equipment classes that will be modelled in the outage management system. For Equipment reporting requirements, refer to Market Manual 7.3, Appendix B.

- **Final Approved** – refers to Outage Request that has received final approval from the IESO to proceed as planned within the Coverage Period.
- **Implemented** – refers to an Outage Request that has actually started.
- **Negotiate** – refers to an Outage Request that is being modified as a result of negotiations between the IESO and the Market participant typically for the purposes of rescheduling and/or conflict avoidance during the Study Period.
- **Recalled** – refers to an Outage Request that has actually started but the IESO has requested to end early in order to return the Equipment on the Outage Request to its normal status. Recalled Outage Requests cannot be resubmitted into the processes described in Section 2 (i.e. an end state).
- **Rejected** – refers to an Outage Request that that does not receive Advance Approval in the Weekly, 3 Day or 1 Day AA processes described in Section 2. Rejected Outage Requests cannot be resubmitted into the processes described in Section 2 (i.e. an end state).
- **Revoked** – refers to an action taken by the IESO to remove (revoke) Advance Approval of an Outage Request. Revoked Outage Requests cannot be resubmitted into the processes described in Section 2 (i.e. an end state).
- **Study** – refers to an Outage Request that is being studied by the IESO. Outage Requests in the Study status cannot be modified. [In order to make changes to an Outage Request in Study state, the IESO must change the status to Negotiate. Alternatively, the market participant may change the status to Cancelled and submit a new request.](#)
- **Submitted** – refers to an Outage Request that has been submitted into the processes described in Section 2 in accordance with the Submission Lead Times described in Appendix E.

**Priority Code** – refers to the Priority level of an Outage Request; used in determining the Priority of competing Outage Requests. Outage Requests can have one of 5 possible Priority Codes, listed in Priority sequence:

- **Forced** – refers to non-discretionary Outage Requests representing Equipment that has either been automatically or manually removed from service for Equipment protection, public safety, or regulatory requirements etc. Forced outages have little to no time-sensitive flexibility.
- **Urgent** – refers to non-discretionary Outage Requests representing Equipment that must be manually removed from service for Equipment protection, public safety, or regulatory requirements etc., but has some time-limited flexibility.
- **Planned** – refers to discretionary Outage Requests that are submitted by the start of a Study Period that corresponds to a Coverage Period in which Outage Requests are scheduled to start. Planned Outage Requests must be studied by the IESO before the end of a Study Period.
- **Opportunity** – refers to discretionary Outage Requests starting in the Coverage Period that are submitted after the start of a corresponding Study Period (i.e. late) but **represent** an unexpected opportunity to accomplish work that would have otherwise been unable to

proceed. The study of an Opportunity Outage Requests is subject to IESO discretion (i.e. no obligation) based on whether a change in system conditions afforded the opportunity with little to no impact on reliability and IESO study effort.

- **Information** – refers to an Outage Request that is submitted for informational purposes only, (i.e. conditions not required as per Market Manual 7.3, Appendix B).
- **Forced Extended** – is not an available option when submitting Outage Requests. However, if Planned, Opportunity or Information Outage Requests get extended, their Priority Code will be updated to Forced Extended.

**Priority Date** – refers to the submission date of an Outage Request and is used to determine Priority between competing Priority Codes. A new submission date is set when significant changes are made to an Outage Request<sup>4</sup>.

**Study Period** – refers to the Period in which Outage Requests are studied by the IESO for the purposes of negotiating the rescheduling of an Outage Request and/or determining whether the Outage Request can receive or maintain Advance Approval in the processes described in Section 2.

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<sup>4</sup> [See Appendix C for a list of Significant Change Criteria.](#)

# State Transition Model

All Outage Requests will be subject to the state transition model and rules shown below in Figure 1 and Tables 1 & 2. Table 2 describes the state transition rule numbers (#) shown in Figure 1.

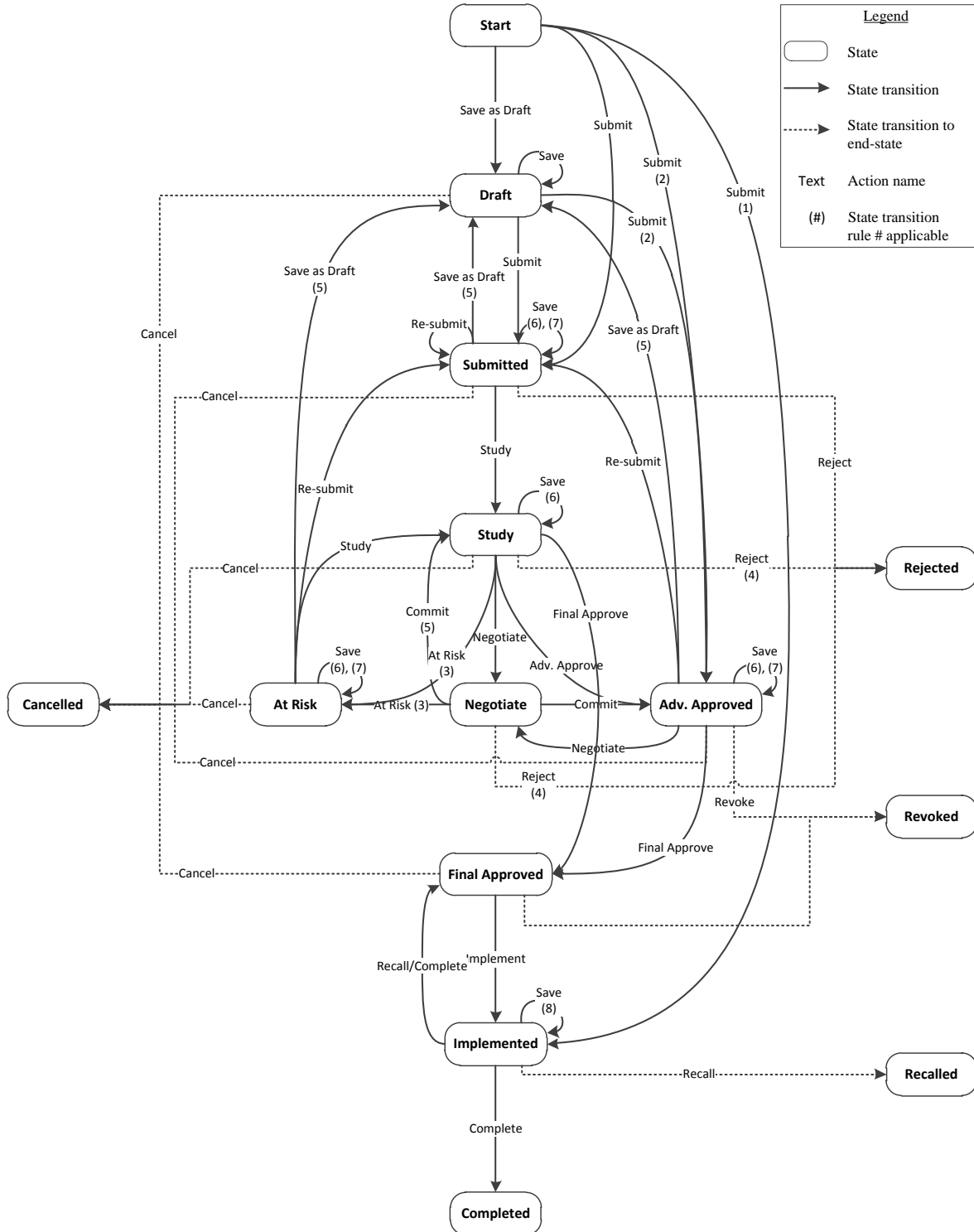


Figure 1: State Transition Model for Outage Requests



**Table 1: State Transitions**

From Status	To Status	Action Name (Button)	Permission		Rules and Notes
			IESO	MP	
None	Draft	Save as Draft	X	X	<ul style="list-style-type: none"> <li>No Priority Date is set.</li> </ul>
None	Submitted	Submit	X	X	<ul style="list-style-type: none"> <li>The Priority Date will be set.</li> <li>Submission lead time rules apply as per Appendix E.</li> </ul>
None	Adv Approved	Submit	X	X	<ul style="list-style-type: none"> <li>The Priority Date will be set.</li> <li>State transition rule #2 applies as per Table 2.</li> </ul>
None	Implemented	Implement	X	X	<ul style="list-style-type: none"> <li>The Priority Date will be set.</li> <li>State transition rule #1 applies as per Table 2.</li> </ul>
Draft	Submitted	Submit	X	X	<ul style="list-style-type: none"> <li>The Priority Date will be set.</li> <li>Submission lead time rules apply as per Appendix E.</li> </ul>
Draft	Adv Approved	Submit	X	X	<ul style="list-style-type: none"> <li>The Priority Date will be set.</li> <li>Submission lead time rules apply as per Appendix E.</li> <li>State transition rule #2 applies as per Table 2.</li> </ul>
Draft	Cancelled	Cancel	X	X	
Draft	Draft	Save	X	X	<ul style="list-style-type: none"> <li>No Priority Date is set.</li> </ul>
Submitted	Cancelled	Cancel	X	X	
Submitted	Submitted	Re-submit	X	X	<ul style="list-style-type: none"> <li>Priority Date is set for significant changes as per Appendix C.</li> <li>Submission lead time rules apply as per Appendix E.</li> </ul>
Submitted	Study	Study	X		
Submitted	Rejected	Reject	X		
Submitted	Submitted	Save	X	X	<ul style="list-style-type: none"> <li>State transition rules #6 &amp; 7 apply as per Table 2.</li> </ul>
Submitted	Draft	Save as Draft	X	X	<ul style="list-style-type: none"> <li>State transition rules #5 applies as per Table 2.</li> </ul>
Study	Cancelled	Cancel	X	X	
Study	At Risk	At Risk	X		<ul style="list-style-type: none"> <li>State transition rules #3 applies as per Table 2.</li> </ul>
Study	Rejected	Reject	X		<ul style="list-style-type: none"> <li>State transition rules #4 applies as per Table 2.</li> </ul>
Study	Adv Approved	Adv Approve	X		

From Status	To Status	Action Name (Button)	Permission		Rules and Notes
			IESO	MP	
Study	Final Approved	Final Approve	X		
Study	Negotiate	Negotiate	X		
Study	Study	Save	X		<ul style="list-style-type: none"> <li>State transition rules #6 applies as per Table 2.</li> </ul>
Adv Approved	Cancelled	Cancel	X	X	
Adv Approved	Submitted	Re-submit	X	X	<ul style="list-style-type: none"> <li>Priority Date is set for significant changes as per Appendix C.</li> <li>Submission lead time rules apply as per Appendix E.</li> </ul>
Adv Approved	Revoked	Revoke	X		
Adv Approved	Negotiate	Negotiate	X		
Adv Approved	Final Approved	Final Approve	X		
Adv Approved	Adv Approved	Save	X	X	<ul style="list-style-type: none"> <li>State transition rules #6 &amp; 7 apply as per Table 2.</li> </ul>
Adv Approved	Draft	Save as Draft	X	X	<ul style="list-style-type: none"> <li>State transition rules #5 applies as per Table 2.</li> </ul>
Negotiate	Study	Commit	X	X	<ul style="list-style-type: none"> <li>Priority Date will be maintained.</li> </ul>
Negotiate	Adv Approved	Commit	X	X	<ul style="list-style-type: none"> <li>Priority Date will be maintained.</li> </ul>
Negotiate	At Risk	At Risk	X		<ul style="list-style-type: none"> <li>State transition rules #3 applies as per Table 2.</li> </ul>
Negotiate	Rejected	Reject	X		<ul style="list-style-type: none"> <li>State transition rules #4 applies as per Table 2.</li> </ul>
At Risk	At Risk	Save	X	X	<ul style="list-style-type: none"> <li>State transition rules #6 &amp; 7 apply as per Table 2.</li> </ul>
At Risk	Study	Study	X		
At Risk	Cancelled	Cancel	X	X	
At Risk	Submitted	Re-submit	X	X	<ul style="list-style-type: none"> <li>State transition rules #9 applies as per Table 2.</li> </ul>
At Risk	Draft	Save as Draft	X	X	<ul style="list-style-type: none"> <li>State transition rules #5 applies as per Table 2.</li> </ul>
Final Approved	Cancelled	Cancel	X	X	
Final	Implemented	Implement	X	X	

From Status	To Status	Action Name (Button)	Permission		Rules and Notes
			IESO	MP	
Approved					
Final Approved	Revoked	Revoke	X		
Implemented	Recalled	Recall	X		<ul style="list-style-type: none"> <li>Recall the current active Period of an Outage Request when there are <u>no</u> future Periods; or</li> <li>Recall the entire Outage Request.</li> </ul>
Implemented	Final Approved	Recall	X		<ul style="list-style-type: none"> <li>Recall the current active Period of an Outage Request where there are future Periods (but not the entire Outage Request).</li> </ul>
Implemented	Completed	Complete	X	X	<ul style="list-style-type: none"> <li>Complete the current active Period of an Outage Request when there are <u>no</u> future Periods; or</li> <li>Complete the entire Outage Request.</li> </ul>
Implemented	Final Approved	Complete	X	X	<ul style="list-style-type: none"> <li>Complete the current active Period of an Outage Request where there are future Periods (but not the entire Outage Request).</li> </ul>
Implemented	Implemented	Save	X	X	<ul style="list-style-type: none"> <li>State transition rules #8 applies as per Table 2.</li> </ul>

**Table 2: State Transition Rules**

Rule #	Rule Description
1	An Outage Request with a Priority Code of Forced will transition immediately into the Implemented status. The actual start date will be set by default to the current date/time but can be modified by the user before they are ready to submit the Outage Request and transition it into the Implemented status. Note that the actual start date must be in the past.
2	Auto-Advance Approval (Auto AA) upon Submit is only valid for Outage Requests with a Planned Priority Code and the Auto AA rules in Appendix A are satisfied.
3	The At Risk action is only available and valid on Outage Requests during the Quarterly Study Period.
4	The Reject action is only available and valid on Outage Requests that are not in the Quarterly Study Period.
5	The move back into the Draft status will clear the Priority Date.
6	An IESO user can edit anything on the Outage Request, significant or not, and Save it into the existing status.
7	An MP is only allowed to use the Save action to make insignificant changes to the Outage Request. To make significant changes the market participant must use the Re-submit action.

Rule #	Rule Description
8	The Planned End date may be extended for Outage Requests in this status if the Priority Code is Forced, <del>or</del> Forced Extended, Urgent, Planned, Opportunity, or Information. In the case of Planned and Opportunity and Information the Priority Code will be updated to Forced Extended. An Outage Request with a Priority Code of Forced Extended can also have its Planned End date extended.
9	Priority Date will be maintained for a significant change if the planned start date is modified to start after the first 3 months of Quarterly Coverage Period that corresponds to the current Quarterly Study Period and the change is made before the start of the next Quarterly Study Period.

– End of Section –

## 2. Outage Management Processes

### 2.1 Quarterly Advance Approval (Quarterly AA) Process

This process repeats quarterly with Study and Coverage Periods as identified in Figure 2 below.

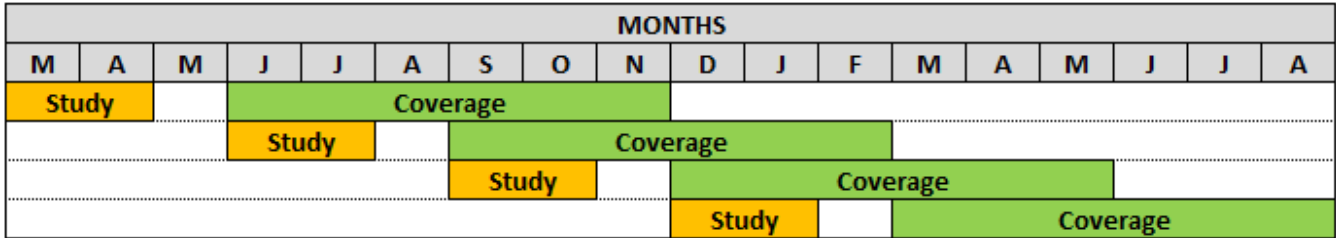


Figure 2: Quarterly AA Process Timeline

The Quarterly AA process has the following Period definitions:

- Study Period begins 00:00:00 EST on the first day of the period month and ends at 23:59:59 EST on the last day of Period month [as](#) shown in Figure 2.
- Coverage Period begins 00:00:00 EST on the first day of the period month and ends at 23:59:59 EST on the last day of period month [as](#) shown in Figure 2.

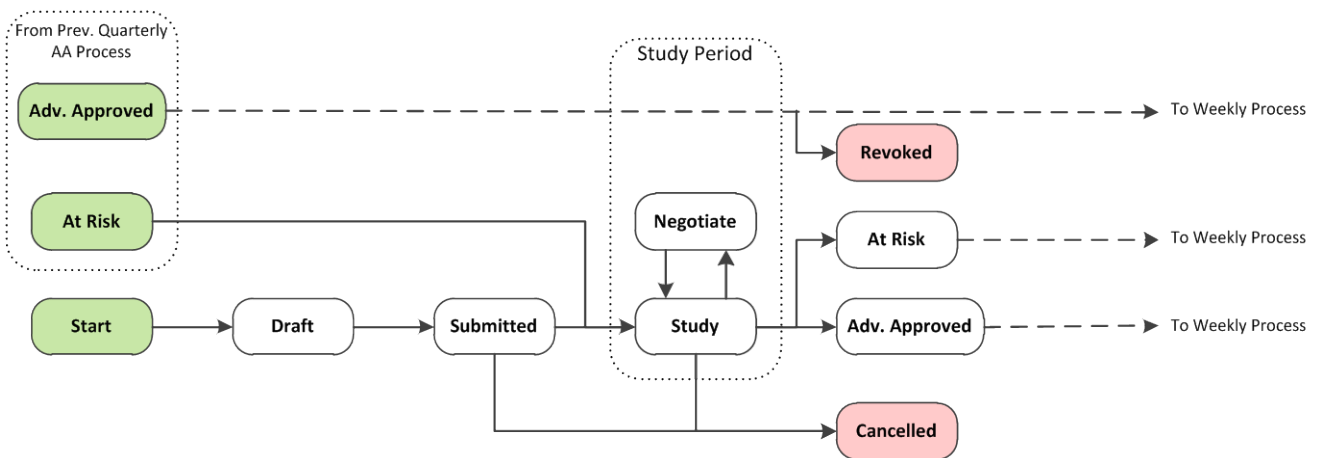


Figure 3: State Transition Diagram for the Quarterly AA Process

#### 2.1.1 Submission Requirements

The Quarterly AA process is voluntary and does not preclude Outage Requests with a Planned Priority Code from being submitted in subsequent processes (i.e. Weekly AA, 3-Day AA, 1-Day AA).

#### 2.1.2 Software Support for Submission

On submission, Outage Requests are:

- Validated for Auto Advance Approval (Auto AA) and Final Approval in Advance (FAA) according to the rules described in Appendix A; and
- Checked for conflicts with other Outage Requests according to the rules described in Appendix B.

### 2.1.3 Software Support at the Start of the Quarterly Study Period

At 00:00 EST on the first day of the Study Period, Outage Requests will be automatically transitioned into the Study status if the Outage Request matches the following criteria:

- the Outage Request is in the At Risk or Submitted status; and
- the Outage Request has a Priority Code of Planned; and
- the Outage Request has an overall Planned Start date within the Quarterly Coverage Period.

Outage Requests with a Priority Code of Urgent, Opportunity or Information are manually transitioned into the Study status by the IESO<sup>5</sup>.

### 2.1.4 IESO Quarterly Study Period

Market participants are precluded from making changes to an Outage Request that is in the Study status unless:

- the IESO transitions the Outage Request into the Negotiate status; or
- the market participant transitions the Outage Request to Cancelled status<sup>6</sup>.

By the end of the Study Period, the IESO will transition Outage Requests from the Study status into one of the following statuses:

- Advance Approved; or
- At Risk<sup>7</sup>

The IESO may transition Outage Requests already in the Advance Approved status (i.e. from a previous Quarterly Study Period) to Revoked status<sup>8</sup>.

### 2.1.5 Software Support at the End of the Quarterly Study Period

At 23:59:59 EST on the last day of the Quarterly Study Period, Outage Requests [that have not been manually Advance Approved or given At Risk by the IESO](#) will be automatically transitioned into the At Risk status if the Outage Request matches the following criteria:

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<sup>5</sup> Urgent or Information Outage Requests are transitioned as soon as possible following submission as they are typically either non-discretionary or informational only. Opportunity Outage Requests are also transitioned after submission but only at IESO discretion.

<sup>6</sup> Cancelled status requires a Cancel Code to be provided as per Appendix H.

<sup>7</sup> Note: The 18 Month Outlook process will no longer provide At Risk declarations.

<sup>8</sup> See Appendix F for business rules associated with resubmission and compensation of Revoked Outage Requests.

- the Outage Request is in the Negotiate or Study status; and
- the Outage Request has a Priority Code of Planned; and
- the Outage Request has an overall Planned Start date within the Quarterly Coverage Period.

## 2.2 Weekly Advance Approval (Weekly AA) Process

The process repeats weekly with Study and Coverage Periods as identified in Figure 4 below.

		DAYS						
		S	M	T	W	T	F	S
WEEKS	1							
	2	Study						
	3							
	4	Coverage						
	5							

Figure 4: Weekly AA Process Timeline

The weekly process has the following period definitions:

- Study Period begins 16:00:00 EST on Friday and ends at 15:59:59 EST on the following Friday as shown in Figure 4.
- Coverage Period begins 00:00:00 EST on Monday and ends at 23:59:59 EST on the following Sunday as shown in Figure 4.

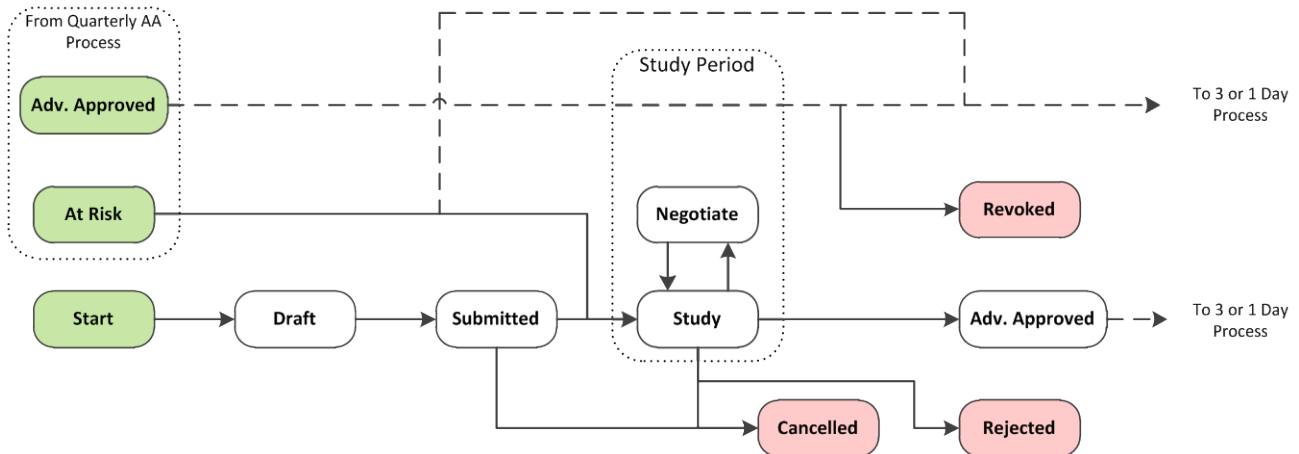


Figure 5: State Transition Diagram for the Weekly AA Process

### 2.2.1 Submission Requirements

The Weekly AA process is mandatory for Planned Outage Requests containing any Critical Equipment. It is voluntary for Outage Requests only containing Non-Critical and/or Low-Impact Equipment.

In order to be considered for Advance Approval:



- Outage Requests with a Planned Priority Code containing any Critical Equipment and starting in the Weekly Coverage Period must be submitted no later than the start of the corresponding Weekly Study Period<sup>9</sup>.
- Outage Requests with a Planned Priority Code containing only Non-Critical and/or Low-Impact Equipment and starting in the Weekly Coverage Period are assessed during the 3 Day Advance Approval process. However, these requests may be submitted into the Weekly AA Process provided they have the “Request Weekly AA” flag on the Outage Request set prior to the start of corresponding Weekly Study Period.

### 2.2.2 Software Support on Submission

On submission, Outage Requests with Planned Priority Code are:

1. Validated for Auto Advance Approval (Auto AA) and Final Approval in Advance (FAA) according to the rules described in Appendix A; and
2. Checked for conflicts with other Outage Requests according to the rules described in Appendix B; and
3. Validated against the Weekly AA Process Submission Lead Times described in Appendix E.

### 2.2.3 Software Support at the Start of the Weekly Study Period

At 16:00:00 EST on the first day of the Weekly Study Period, Outage Requests will be automatically transitioned into the Study status if the Outage Request matches the following criteria:

- the Outage Request is in the At Risk or Submitted status; and
- the Outage Request has a Priority Code of Planned; and
- the Outage Request contains Critical Equipment or the “Request Weekly AA” flag is set<sup>10</sup>; and
- the Outage Request has an overall Planned Start date within the Weekly Coverage Period.

Outage Requests with a Priority Code of Urgent, Opportunity or Information are manually transitioned into the Study status by the IESO<sup>11</sup>.

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<sup>9</sup> Late submissions of Outage Requests with a Planned Priority Code will not be accepted into the Submitted status.

<sup>10</sup> Outage Requests with “Request Weekly AA” flag set and transitioned into the Study Period will be precluded from being resubmitted into any upcoming 3 Day or 1 Day Coverage Periods that overlap with the Weekly Coverage Period being studied until that Weekly Coverage Period passes.

<sup>11</sup> Urgent or Information Outage Requests are transitioned as soon as possible following submission as they are typically either non-discretionary or informational only. Opportunity Outage Requests are also transitioned after submission but only at IESO discretion.

## 2.2.4 IESO Weekly Study Period

Market participants are precluded from making changes to an Outage Request that is in the Study status unless:

- the IESO transitions the Outage Request into the Negotiate status; or
- the market participant transitions the Outage Request to Cancelled status<sup>12</sup>.

By the end of the Weekly Study Period, the IESO will transition Outage Requests from the Study status into one of the following statuses:

- Advance Approved; or
- Rejected<sup>13</sup>

The IESO may transition Outage Requests already in the Advance Approved status (i.e. from a previous Quarterly Study Period) to Revoked status<sup>14</sup>.

## 2.2.5 Software Support at the End of the Weekly Study Period

At 15:59:59 EST on the last day of the Weekly Study Period Outage Requests [that have not been manually Advance Approved or Rejected by the IESO](#) will be automatically transitioned into the Rejected status if the Outage Request matches the following criteria:

- the Outage Request is in the Negotiate or Study status; and
- the Outage Request has a Priority Code of Planned; and
- the Outage Request has an overall Planned Start date within the Weekly Coverage Period.

[Outage Requests automatically transitioned to Rejected status will receive an “auto” rejection code as specified in Section 2 of Appendix H and will be accompanied by the following comment: Study Not Complete. Please contact IESO for details.](#)

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<sup>12</sup> Cancelled status requires a Cancel Code to be provided as per Appendix H.

<sup>13</sup> See Appendix F for business rules associated with resubmission and compensation of Rejected Outage Requests.

<sup>14</sup> See Appendix F for business rules associated with resubmission and compensation of Revoked Outage Requests.

## 2.3 3 Day Advance Approval (3 Day AA) Process

This process repeats daily on business days<sup>15</sup> with Study and Coverage Periods as identified in Figure 6 below.

**Note:** The figure on the left illustrates a coverage period that falls on a weekend and the figure on the right is an example of a coverage period that falls on a weekday

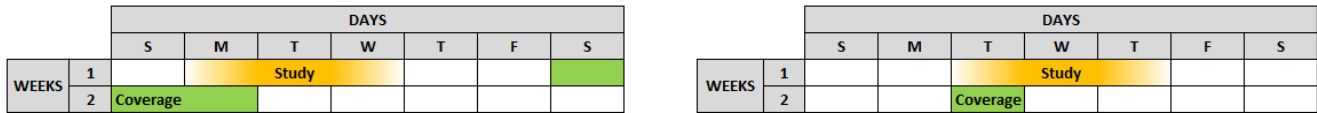


Figure 6: Sample 3 Day AA Process Timeline

The 3 Day AA process has the following period definitions:

- Study Period begins 16:00:00 EST on business days and ends at 15:59:59 EST, 2 business days later as shown in Figure 6.
- Coverage Period begins 00:00:00 EST on the 5<sup>th</sup> business day after the beginning of the Study Period and ends at 23:59:59 EST on the 5<sup>th</sup> business day after the beginning of the Study Period as shown in Figure 6.

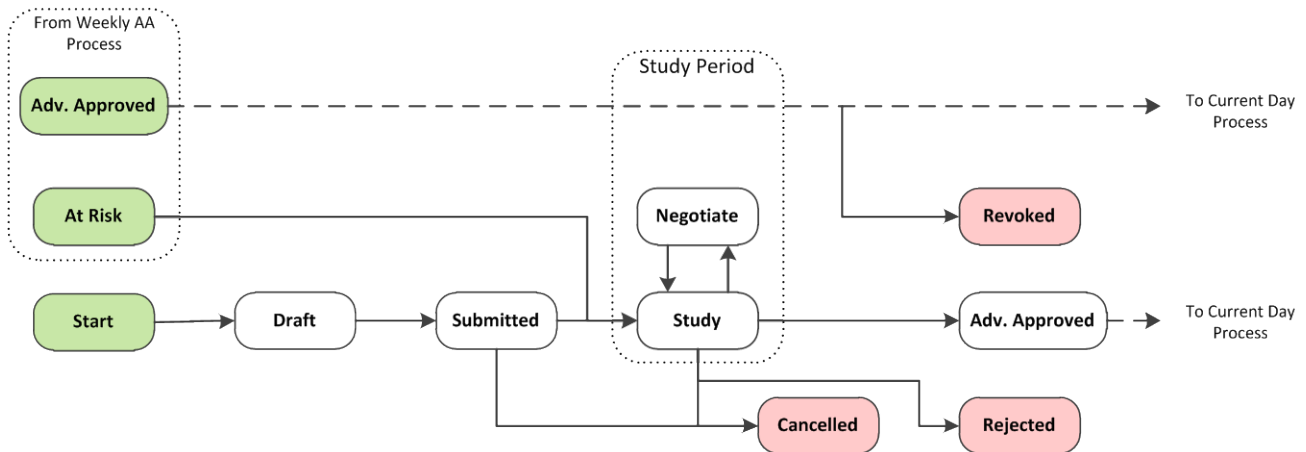


Figure 7: State Transition Diagram for the 3 Day AA Process

### 2.3.1 Submission Requirements

The 3 Day AA process is mandatory for Planned Outage Requests containing any Non-Critical Equipment. It is voluntary for Planned Outage Requests only containing Low-Impact Equipment or Planned Outage Requests containing only Critical and/or Non-Critical Equipment with Low-Impact Outage Request attributes<sup>16</sup>.

<sup>15</sup> A business day is defined as any Monday through Friday day, excluding Holiday days. Holiday and Weekend days that precede a business day are included in that business day (i.e. Saturday, Sunday and Monday equal one business day).

<sup>16</sup> See Appendix D for Low-Impact Outage Request Attribute Criteria.

In order to be considered for Advance Approval:

- Outage Requests with a Planned Priority Code containing any Non-Critical Equipment and no Low-Impact attributes and starting in the 3 Day Coverage Period must be submitted no later than the start of the corresponding 3 Day Study Period<sup>17</sup>.
- Planned Outage Requests containing only Low-Impact Equipment and Planned Outage Requests containing only Critical and/or Non-Critical Equipment with Low-Impact Outage Request attributes are assessed during the 1 Day Advance Approval process. However, these requests may be submitted into the 3 Day Advance Approval process no later than the start of the corresponding 3 Day Study Period.

### **2.3.2 Software Support on Submission**

On submission, Outage Requests with Planned Priority Code are:

- Validated for Auto Advance Approval (Auto AA) and Final Approval in Advance (FAA) according to the rules described in Appendix A; and
- Checked for conflicts with other Outage Requests according to the rules described in Appendix B; and
- Validated against the 3 Day AA Process Submission Lead Times described in Appendix E.

### **2.3.3 Software Support at the Start of the 3 Day Study Period**

At 16:00:00 EST on the first day of the 3 Day Study Period Outage Requests will be automatically transitioned into the Study status if the Outage Request matches the following criteria:

- the Outage Request is in the At Risk or Submitted status; and
- the Outage Request has a Priority Code of Planned; and
- the Outage Request only contains the Equipment and/or Outage Request attribute combinations described in Section 2.3.1 above; and
- the Outage Request does not have the “Request Weekly AA” flag set; and
- the Outage Request has an overall planned start date within the 3 Day Coverage Period.

Outage Requests with a Priority Code of Urgent, Opportunity or Information are manually transitioned into the Study status by the IESO<sup>18</sup>.

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<sup>17</sup> Late submissions of Outage Requests with a Planned Priority Code will not be accepted into the Submitted status.

<sup>18</sup> Urgent or Information Outage Requests are transitioned as soon as possible following submission as they are typically either non-discretionary or informational only. Opportunity Outage Requests are also transitioned after submission but only at IESO discretion.

### 2.3.4 IESO 3 Day Study Period

Market participants are precluded from making changes to an Outage Request that is in the Study status unless:

- the IESO transitions the Outage Request into the Negotiate status; or
- the market participant transitions the Outage Request to Cancelled status<sup>19</sup>.

By the end of the 3 Day Study Period, the IESO will transition Outage Requests from the Study status into one of the following statuses:

- Advance Approved; or
- Rejected<sup>20</sup>

The IESO may transition Outage Requests already in the Advance Approved status (i.e. from a previous Quarterly or Weekly Study Period) to Revoked status<sup>21</sup>.

### 2.3.5 Software Support at the End of the 3 Day Study Period

At 15:59:59 EST on the last business day of the 3 Day Study Period Outage Requests [that have not been manually Advance Approved or Rejected by the IESO](#) will be automatically transitioned into the Rejected status if the Outage Request matches the following criteria:

- the Outage Request is in the Negotiate or Study status; and
- the Outage Request has a Priority Code of Planned; and
- the Outage Request has an overall Planned Start date within the 3 Day Coverage Period.

[Outage Requests automatically transitioned to Rejected status will receive an “auto” rejection code as specified in Section 2 of Appendix H and will be accompanied by the following comment: Study Not Complete. Please contact IESO for details.](#)

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<sup>19</sup> Cancelled status requires a Cancel Code to be provided as per Appendix H.

<sup>20</sup> See Appendix F for business rules associated with resubmission and compensation of Rejected Outage Requests.

<sup>21</sup> See Appendix F for business rules associated with resubmission and compensation of Revoked Outage Requests.

## 2.4 1 Day Advance Approval (1 Day AA) Process

This process repeats daily on business days<sup>22</sup> with Study and Coverage Periods as identified in Figure 8 below.

**Note:** The figure on the left illustrates a coverage period that falls on a weekend and the figure on the right is an example of a coverage period that falls on a weekday.

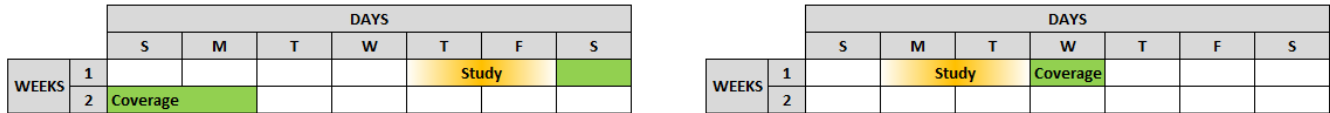


Figure 8: Sample 1 Day AA Process Timeline

The 1 Day AA process has the following Period definitions:

- Study Period begins 16:00:00 EST on business days and ends at 13:59:59 EST, 1 business day later as shown in Figure 8.
- Coverage Period begins 00:00:00 EST on the 2<sup>nd</sup> business day after the beginning of the Study Period and ends at 23:59:59 EST on the 2<sup>nd</sup> business day after the beginning of the Study Period as shown in Figure 8.

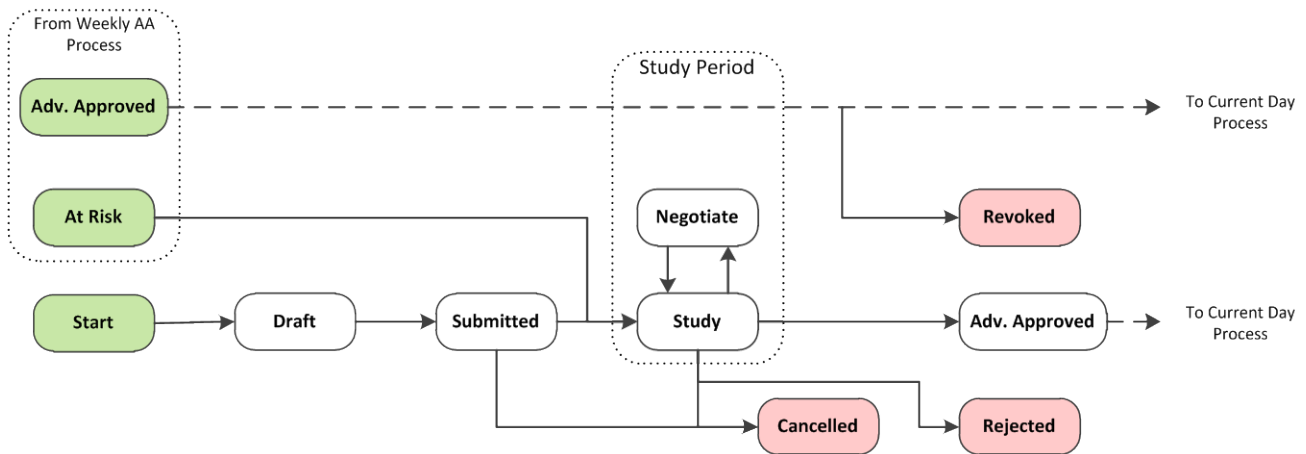


Figure 9: State Transition Diagram for the 1 Day AA Process

### 2.4.1 Submission Requirements

The 1 Day AA process is mandatory for Planned Outage Requests containing only Low-Impact Equipment and Planned Outage Requests containing any Critical and/or Non-Critical Equipment with Low-Impact Outage Request attributes<sup>23</sup>.

<sup>22</sup> A business day is defined as any Monday through Friday day, excluding Holiday days. Holiday and Weekend days that precede a business day are included in that business day (i.e. Saturday, Sunday and Monday are one business day).

<sup>23</sup> See Appendix D for Low-Impact Outage Request Attribute Criteria.

In order to be considered for Advance Approval, Outage Requests with a Planned Priority Code that meet the following criteria and are starting in the 1 Day AA Coverage Period must be submitted no later than the start of the corresponding 1 Day AA Study Period<sup>24</sup>:

- the Outage Request contains only Low-Impact Equipment; or
- the Outage Request contains any Critical or Non-Critical Equipment and has Low-Impact attributes

#### **2.4.2 Software Support on Submission**

On submission, Outage Requests with Planned Priority Code are:

- Validated for Auto Advance Approval (Auto AA) and Final Approval in Advance (FAA) according to the rules described in Appendix A; and
- Checked for conflicts with other Outage Requests according to the rules described in Appendix B; and
- Validated against the 1 Day AA Process Submission Lead Times described in Appendix E.

#### **2.4.3 Software Support at the Start of the 1 Day Study Period**

At 16:00:00 EST on the first day of the 1 Day AA Study Period Outage Requests will be automatically transitioned into the Study status if the Outage Request matches the following criteria:

- the Outage Request is in the Submitted status; and
- the Outage Request has a Priority Code of Planned; and
- the Outage Request only contains the Equipment and/or Outage Request attribute combinations described in Section 2.4.1 above; and
- the Outage Request has an overall planned start date within the 1 Day Coverage Period.

Outage Requests with a Priority Code of Urgent, Opportunity or Information are manually transitioned into the Study status by the IESO<sup>25</sup>.

#### **2.4.4 IESO 1 Day Study Period**

Market participants are precluded from making changes to an Outage Request that is in the Study status unless:

- the IESO transitions the Outage Request into the Negotiate status; or
- the market participant transitions the Outage Request to Cancelled status<sup>26</sup>.

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<sup>24</sup> Late submissions of Outage Requests with a Planned Priority Code will not be accepted into the Submitted status.

<sup>25</sup> Urgent or Information Outage Requests are transitioned as soon as possible following submission as they are non-discretionary in nature. Opportunity and Information Outage Requests are also transitioned after submission but only at IESO discretion.

By the end of the 1 Day Study Period, the IESO will transition Outage Requests from the Study status into one of the following statuses:

- Advance Approved; or
- Rejected<sup>27</sup>

The IESO may transition Outage Requests already in the Advance Approved status (i.e. from a previous Quarterly, Weekly or 3 Day Study Period) to Revoked status<sup>28</sup>.

#### **2.4.5 Software Support at the End of the 1 Day Study Period**

At 14:59:59 EST on the last business day of the 1 Day AA Study Period Outage Requests [that have not been manually Advance Approved or Rejected by the IESO](#) will be automatically transitioned into the Rejected status if the Outage Request matches the following criteria:

- the Outage Request is in the Negotiate or Study status; and
- the Outage Request has a Priority Code of Planned; and
- the Outage Request has an overall Planned Start date within the 1 Day AA Coverage Period.

[Outage Requests automatically transitioned to Rejected status will receive an “auto” rejection code as specified in Section 2 of Appendix H and will be accompanied by the following comment: Study Not Complete. Please contact IESO for details.](#)

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<sup>26</sup> Cancelled status requires a Cancel Code to be provided as per Appendix H.

<sup>27</sup> See Appendix F for business rules associated with resubmission and compensation of Rejected Outage Requests.

<sup>28</sup> See Appendix F for business rules associated with resubmission and compensation of Revoked Outage Requests.



## 2.5 Current Day Process

This process repeats daily on each calendar day and represents the Coverage Period in which Outage Requests are scheduled to start, as identified in the preceding processes.

### 2.5.1 Submission Requirements

The Current Day process manages Outage Requests with any Priority Code and every Outage Request must receive Final Approval<sup>29</sup> from the IESO before they can actually start. Outage Requests are also completed in this process.

In order to be considered for Final Approval, Outage Requests must meet the following criteria:

- Outage Requests with any Priority Code that are in Advance Approved status and starting today; or
- Outage Requests with Urgent, Opportunity or Information Priority Codes that are in Submitted status and starting today<sup>30</sup>;

Outage Requests with the Forced Priority Code do not require Final Approval as they have already occurred (i.e. the Equipment has either been automatically or manually removed from service for asset protection, safety or regulatory concerns). However, the IESO must be verbally notified as soon as possible when a Forced Outage occurs.

### 2.5.2 Software Support for the Current Day Process

The following automatic transitions take place in the Current Day Process:

- Outage Requests with the FAA flag set will be transitioned to Final Approved status as described in Appendix A;
- Outage Requests with Final Approved status will transition to Implemented status once the market participant applies an actual start time to the Outage Request.
- Outage Requests in the Implemented status will transition to Completed status once the market participant applies an actual end time to the Outage Request.

The IESO may manually transition Outage Requests as follows:

- Advance Approved status (i.e. from a previous Quarterly, Weekly, 3 Day or 1 Day Study Period) to Revoked status<sup>31</sup> instead of the Final Approved status; or
- Final Approved to Revoked status; or

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<sup>29</sup> Participants are required to verbally request Final Approval from the IESO just prior to the planned start time of the Outage Request, unless they have received Final Approval in Advance (FAA). See Appendix A for details.

<sup>30</sup> Urgent Outage Requests will always be considered for Final Approval. Opportunity and Information Outage Requests are only considered for Final Approval at the discretion of the IESO.

<sup>31</sup> See Appendix F for business rules associated with resubmission and compensation of Revoked Outage Requests.

- Implemented to Recalled status<sup>32</sup>.

Market participants are precluded from making changes to an Outage Request that is in the Implemented status unless the market participant:

- changes the Outage Request to a Priority Code of Forced Extended by extending the planned end date of the Outage Request; or
- advances the end date of the Outage Request; or
- transitions the Outage Request to Completed status.

**– End of Section –**

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<sup>32</sup> See Appendix F for business rules associated with resubmission and compensation of Recalled Outage Requests.

## Appendix A      Auto Advance Approval (Auto AA) and Final Approval in Advance (FAA) Processes

Outage Requests with Planned Priority Codes containing eligible Equipment and satisfy predetermined Outage Request attribute criteria will automatically receive Auto AA (i.e. automatically transition to Advance Approved status on Submission) and in some cases also receive Final Approval in Advance (FAA). The rules for Auto AA and FAA are described below.

### Auto AA Rules

PRIMARY PROTECTIONS (will also receive FAA)

- Priority Code = Planned;
- *AND* Equipment Class = Line *OR* Line Section *OR* Generator *OR* Bus *OR* Transformer *OR* Reactor *OR* Capacitor *OR* SVC *OR* *OR* Phase Shifter *OR* Voltage Regulator *OR* Synchronous Condenser *OR* Converter *OR* Filter *OR* Load;
- *AND* Constraint Code = PROT OOS;
- *AND* Question: "Loss of Redundancy?" = YES (Answer);

HOLDOFFS (will also receive FAA)

- Priority Code = Planned;
- *AND* Equipment Class = Line *OR* Line Section;
- *AND* Constraint Code = HOLDOFF

BREAKER FAILURE PROTECTIONS

- Priority Code = Planned;
- *AND* Equipment Class = Breaker;
- *AND* Constraint Code = BF PROT OOS;
- *AND* only one piece of Equipment is on the Outage Request;
- *AND* the Outage Request profile = Continuous and  $\leq 4$  hours in duration;
- *AND* no other Outage Requests with Constraint Code = BF PROT OOS are overlapping at the same station
- *AND* Question: "Adjacent breakers OOS?" = NO (Answer);
- *AND* Question: "Loss of Redundancy?" = YES (Answer)
- *ELSE, IF* Question: "Loss of Redundancy?" = NO (Answer)
- *THEN* Question: "CTs on both sides of the breaker?" = YES (Answer)

AUTOMATIC VOLTAGE REGULATOR (AVR) or POWER SYSTEM STABILIZER (PSS)

- Priority Code = Planned;

- *AND* Equipment Class = Generator;
- *AND* Constraint Code = AVR/PSS OOS;
- *AND* Question: "Loss of Redundancy?" = YES (Answer);

#### AC/DC STATION SERVICE (will also receive FAA)

- Priority Code = Planned;
- *AND* Equipment Class = AC/DC Station Service;
- *AND* Constraint Code = OOS;
- *AND* Max Recall is  $\leq$  15 minutes;
- *AND* Question: "Loss of Redundancy?" = YES (Answer)
- *AND* Question: "Does the SS supply Transformer Cooling?" = NO;

#### TONE COMMUNICATION CHANNELS (will also receive FAA)

- Priority Code = Planned;
- *AND* Equipment Class = Tone Communication Channels;
- *AND* Constraint Code = OOS;
- *AND* Max Recall is  $\leq$  15 minutes
- *AND* Question: "Loss of Redundancy?" = YES (Answer);
- *AND* Question: "RTU or HUB Affected?" = NO (Answer);

#### DISTRIBUTION EQUIPMENT

- Priority Code = Planned;
- *AND* Equipment Class = Breaker *OR* Bus *OR* Disconnect Switch *OR* Transformer *OR* Load;
- *AND* Constraint Code = OOS *OR* IS *OR* DRATE
- *AND* Facility Class = 3 (Low Impact)

#### UFLS EQUIPMENT (will also receive FAA)

- Priority Code = Planned;
- *AND* Equipment Class = UFLS Relay;
- *AND* Constraint Code = OOS;
- *AND* Facility Class = 3 (Low Impact)
- *AND* UFLS Validation Threshold passes (i.e. Sum UFLS Area Outages < UFLS Area Outage Margin)

#### **FAA Process**

This process provides market participants with permission to actually proceed with their Outage Request without verbally requesting Final Approval from the IESO on the day the Outage Request is scheduled to start.

This process is supported by an FAA flag on the Outage Request that is set in the following ways:

- Automatically for valid Auto AA conditions described in the Auto AA Rules above; or
- Manually by the IESO<sup>33</sup>.

If the FAA flag is still present at 00:01 EST on the day the Outage Request is planned to start, the Outage Request will automatically transition from Advance Approved to Final Approved status.

- If the FAA flag is manually unset by the IESO, this constitutes removal of FAA and implies the market participant must verbally request Final Approval to actually start the Outage Request<sup>34</sup>.

**– End of Section –**

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<sup>33</sup> If the FAA flag will only be manually set for new Auto AA conditions that are waiting to be incorporated into the software rules for automatic setting of the flag.

<sup>34</sup> The IESO will verbally notify the market participant if the FAA flag is unset.

## Appendix B Conflict Checking Capability

When an Outage Request is submitted or updated, the conflict checking process described below will be performed and display a warning message if any conflicts are discovered. Outage Requests will not be precluded from being submitted despite having conflicts. Outage Requests are considered to be in conflict when all of the following are true:

- The Outage Request Priority Codes are Forced, Forced Extended, Urgent, Planned or Opportunity;
- AND the Outage Requests overlap for any length of time;
- AND the Outage Requests have a status of Submitted, Study, Negotiate, At Risk, Advance Approved, or Implemented;
- AND the Outage Requests Periods share the same Equipment and have Constraint Codes that are flagged to be in conflict with each other as shown in the following table:

**Table 3: Outage Request Constraint Code Conflicts**

	OOS	IS	DRATE	HOLD OFF	MUST RUN	BTCT	PROT OOS	BF PROT OOS	AVR/PSS OOS	ASP OOS	INFO	<u>ABNO</u>
OOS		X										<u>X</u>
IS	X											<u>X</u>
DRATE												
HOLDOFF												
MUSTRUN												<u>X</u>
BTCT						X						
PROT OOS							X					
BF PROT OOS								X				
AVR/PSS OOS									X			
ASP OOS										X		
INFO												
<u>ABNO</u>	<u>X</u>	<u>X</u>			<u>X</u>							<u>X</u>

- OR The Outage Request's Equipment are on the same "Undesirable Combination" list<sup>35</sup>;

<sup>35</sup> "Undesirable Combination" lists will describe what types of equipment are in conflict with one another when overlapping on different Outage Requests. These lists will be developed as part of the outage management process redesign consultation.

- *OR* UFLS Validation fails;
- *OR* Outage Requests with BF PROT OOS Constraint Codes are overlapping at the same stations.

**– End of Section –**

## **Appendix C            Significant Change Criteria**

Changes to the following Outage Request attributes are considered significant and will reset the Outage Request Priority Date if one or more of the following conditions are true:

- Planned Start is changed to an earlier date/time;
- Planned End is changed to a later date/time;
- Equipment is added or removed;
- Priority Code is changed (e.g. from Planned to Forced);
- Constraint Code is changed (e.g. from Out of Service to De-rated);
- Max Recall is changed in any way.

**– End of Section –**



## Appendix D Low-Impact Outage Request Attributes

Planned Outages requests containing Critical Equipment or Non-Critical Equipment will be subject to the [Submission Lead Times](#)<sup>36</sup> of the 1 Day AA process if the Outage Request’s attributes meet any one of the following criteria:

Equipment Class	Outage Request Attribute Criteria
Generator	<ul style="list-style-type: none"> <li>Constraint Code = AVR/PSS OOS; and</li> <li>Question “Loss of Redundancy?” = YES</li> </ul>
	<ul style="list-style-type: none"> <li>Constraint Code = OOS or IS or DRATE or MUST RUN; and</li> <li>Planned Start and End Date/Time are in the same day or Max Recall ≤ 15 min</li> </ul>
Generator Load	<ul style="list-style-type: none"> <li>Constraint Code = ASP OOS; and</li> <li>Planned Start and End Date/Time are in the same day or Max Recall ≤ 15 min</li> </ul>
All Eligible <sup>37</sup>	<ul style="list-style-type: none"> <li>Constraint Code = PROT OOS; and</li> <li>Question “Loss of Redundancy?” = YES</li> </ul>
Breaker	<ul style="list-style-type: none"> <li>Constraint Code = BF PROT OOS or BTCT</li> </ul>
SPS AC/DC Station Service Tone Communication Channel RTU/ICCP/HUB Equipment Other Communication Equipment Other Miscellaneous Equipment	<ul style="list-style-type: none"> <li>Constraint Code = OOS or IS; and</li> <li>Question “Loss of Redundancy?” = YES; and</li> <li>Max Recall ≤ 15 minutes</li> </ul>
Line Section	<ul style="list-style-type: none"> <li>Constraint Code = HOLDOFF</li> </ul>

– End of Section –

<sup>36</sup> See Appendix E for lead time submission rules.

<sup>37</sup> See Appendix G for mapping of Equipment Classes to applicable Constraint Codes.

## Appendix E

## Submission Lead Time Rules

Priority Code	Adv. Approval Process	Rules
<b>Planned</b>	1 Day AA	<p>Outage Requests with a planned start date in the 1 Day AA Coverage Period must be submitted prior to the start of the corresponding 1 Day AA Study Period in the following cases:</p> <ul style="list-style-type: none"> <li>• All of the Equipment on the Outage Request is Low Impact; or</li> <li>• If there is Equipment on the Outage Request that is Non Critical or Critical then additional validation rules associated with the Equipment being requested and the Outage Request attributes must be satisfied as per Appendix D.</li> </ul>
	3 Day AA	Outage Requests that only have Non Critical Equipment and starting in the 3 Day AA Coverage Period must be submitted prior to the start of the corresponding 3 Day AA Study Period.
	Weekly AA	Outage Requests that only have Critical Equipment and starting in the Weekly Coverage Period must be submitted prior to the start of the corresponding Weekly Study Period.
	Quarterly AA	Not Applicable
<b>Urgent</b>	Not Applicable	Outage Request must have Planned Start date/time that is $\geq$ current date/time. No submission deadlines apply.
<b>Opportunity</b>	Not Applicable	Outage Request must have Planned Start date/time that is $\geq$ current date/time. No submission deadlines apply.
<b>Information</b>	Not Applicable	Outage Request must have Planned Start date/time that is $\geq$ current date/time. No submission deadlines apply.
<b>Forced</b>	Not Applicable	No submission deadlines apply.

## Appendix F                      Rules for Rejection, Revocation, Recall and Compensation

The following rules are applicable when Outage Requests with the Planned Priority Code are either Rejected, Revoked or Recalled by the IESO:

- Rejected Outage Requests can retain their most recent Priority Date by submitting a new Outage Request within 5 business days<sup>38</sup> of being Rejected and notifying the IESO of their intent to preserve the most recent Priority Date from the Rejected Outage Request.
  - The IESO will manually set the Priority Date on the new Outage Request if:
    - This is the first time the Outage Request has been rejected; and
    - The 5 business day resubmission rule described above is satisfied.
  
- For Revoked and Recalled Outage Requests the same rules described above for Rejected Outage Requests apply, except that the IESO will manually set the Priority Date regardless of how many times the Outage Request has been Revoked or Recalled.

### Compensation

The following types of market participants that have submitted Outage Requests with a Planned Priority Code and are Revoked or Recalled are eligible for compensation<sup>39</sup>:

- Generators
- [Distributors](#)
- Wholesale Customers

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<sup>38</sup> Planned Outages Requests can be resubmitted to start at any time. Only the act of resubmission is required within 5 business days of Rejection, Revocation or Recall.

<sup>39</sup> Except for those Outage Requests that started in the last 3 months of a Quarterly Coverage Period and had their Advance Approval Revoked during the Quarterly Study Period that corresponds to the next Quarterly Coverage Period.

## Appendix G Equipment Classes and Applicable Constraint Codes

Equipment Class	Constraint Code												
	VARIABLES	OOS	IS	DRATE	MUST RUN	HOLD OFF	AVR/PSS OOS	ASP OOS	PROT OOS	BF PROT OOS	BTCT	INFO	<u>ABNO</u>
Line													
Line Section		x	x			x			x			x	
Breaker		x	x							x	x	x	
Disconnect Switch		x	x									x	
Bus		x	x						x			x	
Transformer	x	x	x	x					x			x	
Reactor	x	x	x	x					x			x	
Capacitor	x	x	x	x					x			x	
SVC	x	x	x	x	x				x			x	
Converter	x	x	x	x	x				x			x	
Filter	x	x	x	x					x			x	
Phase Shifter	x	x	x	x					x			x	
Voltage Regulator	x	x	x	x					x			x	
UFLS Relay		x	x									x	
Synchronous Condenser	x	x	x	x					x			x	



## Appendix H      Miscellaneous Features

### 1. Cancellation Reason Codes are:

- OTH            Other<sup>40</sup>
- WEA            Weather
- CRW            Crew Availability
- SUP            Supplies / Parts Unavailable
- REL            Reliability Risk
- CON            Unforeseen Work Priority Conflict
- LDS            Load Security

### 2. Reject, Revoke, and Recall Reason Codes are:

- ADQ            Adequacy
- SEC            Security
- LAT            Late / No Time to Study
- AUT            Auto (for Rejections only)

### 3. Priority Codes and Applicable Purpose and Constraint Codes

Priority Code	Purpose Codes	Constraint Codes
<b>Planned</b>	<ul style="list-style-type: none"> <li>• Maintenance</li> <li>• Repair</li> <li>• Replacement</li> <li>• Commissioning</li> <li>• Testing</li> <li>• Other<sup>41</sup></li> </ul>	<ul style="list-style-type: none"> <li>• All except INFO <u>and</u> <u>ABNO</u></li> </ul>
<b>Urgent</b>	<ul style="list-style-type: none"> <li>• Equipment Concerns</li> <li>• Safety Concerns</li> <li>• Regulatory Concerns</li> <li>• Environmental Concerns</li> <li>• Other</li> </ul>	<ul style="list-style-type: none"> <li>• All except INFO <u>and</u> <u>ABNO</u></li> </ul>
<b>Opportunity</b>	<ul style="list-style-type: none"> <li>• FTOC (Favourable Transmission Outage Condition)</li> <li>• FGOE (Favourable Generation Outage Condition)</li> <li>• FAM (Favourable Adequacy Margin)</li> <li>• ERTS (Expedite Return to Service)</li> </ul>	<ul style="list-style-type: none"> <li>• All except INFO <u>and</u> <u>ABNO</u></li> </ul>

<sup>40</sup> The Other Cancel Code requires a free text description.

<sup>41</sup> The Other Purpose Code requires a free text description.

Priority Code	Purpose Codes	Constraint Codes
	<ul style="list-style-type: none"> <li>Commissioning</li> <li>Testing</li> <li>Other</li> </ul>	
Informational	<ul style="list-style-type: none"> <li>Other</li> </ul>	<ul style="list-style-type: none"> <li><u>INFO</u></li> <li><u>ABNO</u></li> </ul>
Forced	<ul style="list-style-type: none"> <li>MRFS (Manually Removed From Service)</li> <li>ARFS (Automatically Removed From Service)</li> <li>Failed to Synch</li> <li>Equipment Concerns</li> <li>Safety Concerns</li> <li>Regulatory Concerns</li> <li>Environmental Concerns</li> <li>Other</li> </ul>	<ul style="list-style-type: none"> <li>All except INFO <u>and</u> <u>ABNO</u></li> </ul>

#### 4. Outage Request Attributes Available to Market [Participants](#) (Web Client and API)

Name	Mandatory (Yes/No)	Notes
IESO ID	N/A	Read-only label.
Rev #	N/A	Read-only label.
Created By	N/A	Read-only label displaying the name of the user that created the Outage Request.
Date Created	N/A	Read-only label displaying the date of the original creation of the Outage Request.
Company	N/A	Read-only label displaying the name of the company that employs the user that requested the Outage Request.
Recurrence	Yes	<p>A drop down list displaying the following options:</p> <ul style="list-style-type: none"> <li>Non-Continuous</li> <li>Return Evenings</li> <li>Return Sat – Sun</li> <li>Return Sat – Mon</li> <li>Return Fri – Sun</li> <li>Return Fri – Mon</li> <li>Return Evening and Weekends</li> </ul>
Planned Start	Yes	A date/time selection control.

Name	Mandatory (Yes/No)	Notes
Planned End	Yes	A date/time selection control.
Priority Date	N/A	A read-only date/time selection control displaying the Priority Date.
Priority Code	Yes	Type of Outage Request (i.e. Planned, Forced etc.). Also available as a read-only label.
<u>Status</u>	<u>Yes</u>	<u>The status of the outage request during its lifecycle (i.e. Submitted, Adv. Approved, Study etc.)</u>
Equipment Requested	Yes	Selection control to add Equipment. Also available as a read-only label.
Remote System ID	No	API User System Outage ID (API Only)
Purpose Code	Yes	Code selection control.
Purpose Description	Yes	Text field which holds a description of the purpose of the Outage Request.
Max Recall	Yes	Recall Time control for Recall time in number of minutes, hours, or days. A selection option named Immediate is also available in the minutes, hours, days control. There is also a Non-Recallable checkbox available.
Recall Comments	No	Text field holding a description of the Recall.
Outage Duration	No	Duration control that is either calculated or editable to display the outage duration in number of minutes, hours, or days. Edits to this field re-calculate the Planned End date.
Request Weekly AA Flag	No	See Weekly AA Process in Section 2 for details.
FAA Flag	N/A	Read-only label. See Appendix A for details.
<u>Visibility</u> Flag	N/A	Read-only label that is set <u>as follows</u> : <ul style="list-style-type: none"> <li><u>PUBL (i.e. "Public")</u> – if all of the Equipment on the Outage Request is publicly available (e.g. most transmission Equipment).</li> <li><u>SEMI (i.e. "Semi-Private")</u> – if at least one piece of Equipment on the Outage Request is visible by another party market participant (e.g. Transmitter can see Generator equipment)</li> </ul>



Name	Mandatory (Yes/No)	Notes
		<ul style="list-style-type: none"> <li><u>CONF (i.e. "Confidential") – if all of the Equipment on the Outage Request is only visible by the IESO and the Owner/Operator of the Equipment.</u></li> </ul>
Auto AA Questions	Yes (if presented)	See Appendix A for questions that will be presented based on the Outage Request Equipment.
<u>Scaling Impact Question</u>	<u>No</u>	<p><u>An optional question presented on the Outage Request when one of the following Equipment classes are submitted:</u></p> <ul style="list-style-type: none"> <li><u>Tone Communication Channels</u></li> <li><u>RTU/ICCP/HUB Equipment</u></li> <li><u>Other Communication Equipment</u></li> <li><u>Other Miscellaneous Equipment</u></li> </ul>
Linked Outages	N/A	<p>Read-only label of the ID number of the linked Outage Request. There are three types of linking features:</p> <ul style="list-style-type: none"> <li>Predecessor/Successor (i.e. Outage A before B)</li> <li>Occurs Within (i.e. Outage A and B together)</li> <li>Open (i.e. Outage A and B linked with no rules)</li> </ul>
MP to IESO Comments	No	Text field holding free form comments from the market participant to the IESO.
IESO to MP Comments	N/A	Read-only text field holding free form comments from the IESO to the market participant.
Check Conflicts Button	N/A	Available in Web Client only. This button, when clicked, will perform a conflict check routine for the Outage Request according to the conflict checking rules in Appendix B.
Station	N/A	A read-only label of the name of the station(s) associated with the Equipment.
Equipment Class	N/A	A read-only label showing the type of Equipment on the Outage Request (See Appendix G for a list of available Equipment).
Equipment Name	N/A	A read-only label showing the operating name of the Equipment item.
Equipment Description	Yes (for applicable)	A free text field to further describe the Equipment being submitted on the Outage Request. Mandatory for the

Name	Mandatory (Yes/No)	Notes
	Equipment <a href="#">class and Constraint Codes</a> )	following Equipment classes: <ul style="list-style-type: none"> <li>• Special Protection System</li> <li>• Tone Communication Channels</li> <li>• RTU/ICCP/HUB Equipment</li> <li>• Other Communication Equipment</li> <li>• Other Miscellaneous Equipment</li> </ul> <u>OR when the following Constraint Codes apply:</u> <ul style="list-style-type: none"> <li>• <a href="#">PROT OOS</a></li> <li>• <a href="#">BF PROT OOS</a></li> <li>• <a href="#">AVR/PSS OOS</a></li> <li>• <a href="#">ASP OOS</a></li> </ul>
Constraint Code & Value	Yes	Control to specify the Equipment constraint (i.e. OOS, IS, DRATE etc.) and if applicable, the limit value (e.g. 80 MW).
Voltage Class	N/A	A read-only label showing the voltage level of the Equipment item on the Outage Request.
Facility Class	N/A	A read-only numerical value that represents the impact level of the Equipment as follows: 1 = Critical 2 = Non-Critical 3 = Low-Impact
<a href="#">Security</a> Operating Limit	N/A	A read-only label that identifies the <a href="#">security</a> operating limit (i.e. Flow Into Ottawa, Manitoba Export etc.) that the Equipment item on the Outage Request is critical to.

– End of Document –