Outage Coordination and Scheduling System (OCSS) CROW Web Client User Guide

GDE-259

Issue: 3.0

Issue Date: September 15, 2021



AN IESO TRAINING PUBLICATION

This training manual has been prepared to assist in the IESO training of market participants and has been compiled from extracts from the market rules or documents posted on the web site of Ontario's Independent Electricity System Operator. Users of this training manual are reminded that they remain responsible for complying with all of their obligations under the market rules and associated policies, standards and procedures relating to the subject matter of this training manual, even if such obligations are not specifically referred to herein. While every effort has been made to ensure the provisions of this training manual are accurate and up to date, users must be aware that the specific provisions of the market rules or particular document shall govern.

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1. Introduction

This guide is intended to provide information with respect to usage of the CROW Web Client with the goal of introducing features and functionality. Any specific business processes and rules are beyond the scope of this guide.

Equipment for the CROW Web Client is populated from the registered equipment for your organization in Online IESO (online.ieso.ca). Outage Management Attributes for your equipment, such as the Outage Reporting Required flag and Outage Criticality Level, are available through Online IESO under the equipment details for your facility.

Refer to the <u>IESO Supported Client Platforms webpage</u> for details on web browser compatibility for the CROW Web Client. You may check your browser settings by clicking F12 Developer Tool > Emulation Tab > Mode > Document Mode. If the default setting is other than the IESO-supported web browser, contact your IT department.

- End of Section -

2. User Access

2.1. Logging into CROW Web Client

CROW Web Client shares the same log in mechanism as the IESO Gateway. Once you have logged in, you will be automatically authenticated to all IESO applications within the IESO Gateway. Similarly, once you are logged in to the IESO Gateway, you may access the CROW Web Client.

• Log into the <u>CROW Web Client</u>

Constitute Value
Login
Username
test
Password
••••
Remember me
Sign In
Need help signing in?

- Enter your IESO Gateway Username and Password, then click Sign In
- Alternatively, if you are logged into the IESO Gateway, click the CROW Web Client hyperlink under IESO related web links.

	Preview Sandbox: This is a preview	of next week's release. See a prob	elem? <u>File a case</u> or visit our <u>supp</u>	ort site.	
Carrecting Today. Powering Tomorow.		(🕈 Home	≜ -
					Try the new dashboard
Work	+				
FUS	TRA	TRA	ch Service CR	ow	EMI
Forecast Usage Selection	Transmission Rights Trans Auction - Admin	nission Rights Dispate Auction	ch Service CROW V	Veb Client	Energy Market Interface

• Once authenticated, the user will be directed to the CROW Web Client.

Dutage Request Index	ge Request Index			
Refresh No Auto Refresh V Displaying 0 of 0 records	🥖 Clear Highlights 🛛 🕞 New 🛛 🗃 Excel 🛛 🚔 Gantt	Print 🙆 View Definition <default></default>		
Request Date: 2016 / 07 / 29 📰 00:00 to 2016 / 08 / 06 🚍 00:00	Request Status: Submitted	•		
Range Overlap O Starts Between O Ends Between Control Centre Itist	Constraint: All Request Priority: All	• •		
Voltage Class: is between · V and · V kv Outage Number V 1 · Find				
Click to a	open/close OPTIONS PANEL			

NOTE: If authentication fails, you may not have the rights to access the system. Contact your organization's Applicant Representative to grant you access as Equipment Outage Submitter/Viewer in <u>IESO Online Registration</u> <u>Tool</u>.

- End of Section -

3. User Permissions and Roles

3.1. Overview

For access to the Outage Management tool, there are one of two new contact roles required: "Equipment Outage Submitter" or "Equipment Outage Viewer".

- The Equipment Outage Submitter contact role: Users will be able to submit outages as well as view previously submitted outages.
- The Equipment Outage Viewer contact role: Users will only be able to view outage without the ability to submit.
- Equipment Outage Late Notification contact role: Users will receive email notifications for outages that are late to start for that organization

For staff that does not have access to the Outage Management tool, your organization's Applicant Representative will need to request access to one of the above contact roles in Online IESO (https://online.ieso.ca).

Select "Update Organization/Update Contact Roles" under the ACTIONS tab to get started.
 NOTE: A user cannot have both "Equipment Outage Viewer" and "Equipment Outage Submitter" contact roles.

A CROW user profile will be set up with Roles and Permissions which dictate the actions and the data that is available to the user in CROW. Permissions are used to limit which interfaces the user may access, what general actions a user may take, and to enforce which business unit privileges they have (to determine which equipment in the database is made available to the user).

Equipment in the database will have configured relationships to business units, such as power utilities and control centers. These equipment relationships are used to determine the availability of an equipment item to a user. For example, a user profile may have "Equipment Outage Viewer" contact role to <u>View</u> outage requests that contain equipment which is <u>operated by 'Control Center A'</u>, giving the user the access to view any outages requests for equipment that is operated by 'Control Center A'. But that user would not be able to view outages requests for equipment that is operated by 'Control Center B'. If the user profile had "Equipment Outage Submitter" contact role to <u>Submit/Update</u> outage requests on equipment that is <u>operated by</u> 'Control Center B'. If the user profile had "Equipment Outage Submitter" contact role to <u>Submit/Update</u> outage requests on equipment that is <u>operated by</u> 'Control Center B'.

NOTE: Equipment in the database may also have a Third Party Viewer relationship to a Third Party Viewer Group. Those relationships are also used to establish viewing privileges for the user on equipment items and their associated outage requests. Third Party Viewership is managed through Online IESO (online.ieso.ca), which allows you to share outage information with other market participants by granting third party viewership of your equipment. After creating a Third Party Viewership group, the selected organization will be able to view outage details for the selected equipment in the Outage Management System. A single outage request may contain both, equipment with and without third party viewership access. In such cases, third party viewers will only see the equipment to which they have access. Roles are used in CROW to determine user access to features and data as well as possibly being used in some business rules for your specific CROW configuration.

NOTE: Outage Management Attributes for your equipment, such as the Outage Reporting Required flag and Outage Criticality Level, are available through Online IESO (online.ieso.ca) under the equipment details for your facility.

NOTE: Control Centre facilities represent the location of an organization's real-time operations. This facilitates the submission of outages that are not associated to a particular station, e.g. SCADA systems. The creation and update of Control Centre facilities is managed through Online IESO (online.ieso.ca) by updating the organization.

3.2. CROW Web Site Areas



The CROW Web site application contains the following areas:

- Outage Requests contains a summary listing of Outage Requests and the create/edit Outage Request form. There are also a couple of methods to generate an Excel or Word report of an Outage Request.
- Reports contains filtering and subscription features for outage request reporting.
- Options contains settings for some basic user preferences as well as a password reset function. In some configurations there is also a listing of Equipment Groups available to the user.
- Logout this functions simply as a logout button to kill the user's web session.

- End of Section -

4. Options Area

The user has the ability to change their preferences by way of the Options form available in this area. As well there is a read-only listing of Equipment Groups available to the user.

To open the Options area, the user must click the Options menu button at the top of the web page.

Optior	าร				
Options	My Equipment Groups				
	Date/Time Options				
	Time Zone:	Eastern Time (UTC - 05:00)	•		
	Daylight Savings:	O Use Daylight Savings Time			
	Date Format:	 Use Standard Time yyyy/MM/dd 			
	Outage Request Noti	fication Option			
	Send Me Outage Rec Notifications:	juest Approval/Denial			
	Outage Request Form	ı Options	_		
	Close Outage Reques	st Form After Saving: Company Default:	<pre><click select="" to=""></click></pre>		
				Update	

4.1. Options

Form Field	Description
Time Zone	Select the local time zone. This time zone will be used when displaying date/time values to the user in the CROW Web.
Daylight Savings	Choose the selection that you wish the CROW to use. This will apply to date/time values in the CROW Web.
Date Format	The default date format is yyyy/MM/dd. If desired, select a different format. It will be applied to date/time values in the CROW Client and CROW Web.

4.1.1. Date/Time Options

4.1.2. Outage Request Notification Option

0 1	•
Form Field	Description
Send Me Outage Request Approval/Denial Notifications	To be able to receive Outage Request Approvals notifications the user must tick this box to enable the preference.

4.1.3. Outage Request Form Options

Form Field	Description
Close Outage Request Form After Saving	Ticking this checkbox causes the Outage Request form to close after it has changes saved. Upon successfully saving changes the CROW Web Index summary page will be displayed.
Equipment Selection Company Default	This setting allows the user to choose the preferred control center displayed in the Choose Equipment dialog. Select Circuits/Equipment Search Select Stn./Equip. Equip. Groups Company: PU1_CC Station: <click select="" to=""> Equipment Type: All Equipment:</click>

After all desired Options settings have been entered the user must click the "Update" button to save the changes. A confirmation message will appear above the Options form.



4.2. Equipment Groups

The "My Equipment Groups" tab in the Options area provides a listing (if any available) of equipment groups that have been set up for the users company.

My Equipr Options My Eq	ne Iuip	nent Groups uipment Groups	
		Equipment Group	
	×	K Demo 2	
	×	K Demo Group	
		Add	

Abiding by organizational permissions and roles, a user can also create their own Equipment Groups. This is done by clicking on the "Add..." command button.

The user may double click on any of the listed Equipment Group names to bring up a read-only details page. The details page displays the name of the Equipment Group, the name of the company that owns the Equipment Group, and the equipment listed in the Equipment Group. The Equipment Group is used to add equipment to an outage request. One or more equipment items from the group may be added to an Outage Request from an Equipment Group selection list.

My Equipment	Groups	Back
Options My Equipment	Groups	
Group Name: Group Owner: Associated Equipment:	EG for PU One 002 Power Utility 1	
Equipment		
STNA Generator 002		
STNA Load 001		
STNA Load 003		
STNA Reactor 001		
STNA Generator 004		

- End of Section -

5. Outage Requests

5.1. Outage Request State Transition

There are a number of varied paths the lifecycle of an outage request may take. The State Transition Model configured for the CROW system defines the available paths and also the limitations. Some actions configured in the model will be governed by specific business rules or will have limited access based on the current overall condition of the outage request and/or the users profile roles and permissions.

When viewing an outage request form there will be a row of state transition "action buttons" displayed across the bottom of the outage request form. The form will only display an action button if that particular action is available to the user given the current overall condition of the outage request.

An example of a simple state transition path an outage request may follow over the course of its lifecycle is:

New -> Draft -> Submitted -> Study -> Approved -> Implemented -> Completed

The current Outage Status along with the user name of the person that initiated the action resulting in the status will be displayed on the outage request.

NOTE: In some circumstances a user may perform a Submit action on an outage request that ends up with the outage request being automatically approved and ends up in the "Adv Approved" status rather than the "Submitted" status. As always the users name will appear on the outage request form along with the Outage Status. This only indicates that the user initiated the state transition action that led to the outage status – it does not mean that the user granted an approval for the outage request. The Approvals information (Approver, Approval Type, Approval Date) can only be found in the Approvals grid at the bottom of the "Details" tab of the outage request form.

It is important to note that when saving changes or initiating a state transition action for an outage request the CROW employs a first-save-wins method. CROW will not lock an outage request from others if a user has opened it before them. The first user to fully conclude their changes will successfully finish their action. For example, if James has concluded an update to an outage request in the time since Carol has opened that same outage request form (and before Carol has saved any of her updates), then Carol will not be able to save her changes without first closing and reopening the outage request and re-entering her changes on the latest revision of the outage request. CROW will not attempt a merge in of data for an outage request in these situations.

5.1.1. Business Rules and Validations

Some state transition actions carry with them specific business rules and/or validations. Generally, when an outage request has changes saved on it validations are performed to ensure that required fields have valid values. In addition, other more specific validations take place to ensure a business process is adhered to - for example some outage requests (depending on their characteristics) may require submission further in advance of their Planned

Start date than other outage requests. If rules or validations are violated, then an error message is presented to the user whereby the user can make required edits and try the state transition action again.

5.2. Outage Request Revisions

From the very first save, through all subsequent updates in the lifecycle of an outage request, a new revision is created for each saved change. This results in a revision history, tracking changes made to the outage request, along with who made the change and when. A user may refer back to any revision to see the state of the outage at that time.

5.3. Outage Request and Outage Period Information

An outage request in CROW has a basic structure that is used to organize information about it.

There is summary information which has data relevant to the overall outage request including:

- Planned Start date/time overall Planned Start of the outage request.
- Planned End date/time overall Planned End of the outage request.
- Actual Start date/time <u>first</u> Actual Start on the outage request. Derived from the first implemented/completed outage period.
- Actual End date/time <u>last</u> Actual End on the outage request. Derived from the last completed outage period.
- Outage Status overall Status of the outage request.
- Recurrence the type of Recurrence the outage request is structured with.
- Requested Equipment Collection the list of equipment items for the outage request. Each equipment item contains its own overall constraint information as well as some other attribute values.
- Max Recall information about recall time requirements.
- Approvals information about who approve the outage request and when.
- Various other information about the overall outage request.

There is information which provides detail about the individual time periods that the outage request is broken down into. These time periods are referred to as Outage Periods. An outage request will always have one or more non-overlapping Outage Periods all falling within the timeframe of the overall Outage Request. Each Outage Period contains the following information:

- Planned Start date/time –Planned Start of the individual Outage Period.
- Planned End date/time Planned End of the individual Outage Period.
- Actual Start date/time Actual Start of the individual Outage Period.
- Actual End date/time Actual End of the individual Outage Period.
- Period Status Status of the individual Outage Period and when it entered that status.
- Equipment the equipment items on the Outage Period. Each equipment item contains its own constraint information.

NOTE: For an outage with multiple periods, the actual times cannot overlap. The actual end date/time of the first period must be equal to or earlier than the actual start date/time of the next period. An Error Message will be generated, preventing submission.

Example A - Incorrect outage request:

	Equipment	Constraint	Actual Start	Actual End	
	Generator G1	Derate to 10	Mon 2016/11/14	<mark>Mon 2016/11/14</mark>	Incorrect Outage
Outago		MW	13:51	<mark>14:05</mark>	Request.
Outage					The actual start of the
Request 1	Generator G1	Derate to 50	<mark>Mon 2016/11/14</mark>	Mon 2016/11/14	second period must
		MW	<mark>13:53</mark>	14:20	be after 14:05.

Example B – Correct outage request:

	Equipment	Constraint	Actual Start	Actual End	
	Generator G2	Derate to 10	Mon 2016/11/14	Mon 2016/11/14	
Outage		MW	13:51	14:05	Correct Outage
Request 2	Generator G2	Derate to 50	Mon 2016/11/14	Mon 2016/11/14	Request.
		MW	14:05	14:20	

1999	Outage Requests Options Logou	t CROW QA	
Validation Error			
There are the following val	idation errors:		
The 'Daily Outages' list has	an outage period where there the 'Planned Sta	art' date is after the 'Planned End' date.	
utage Request	:: 0-00000000 rev. 1 Pla	inned (New)	Horr
A1000000			
equest Summary Detail	s Study Attachments (0)	N	
equest Summary Detail	s Study Attachments (0)		
IESO Outage ID:	s Study Attachments (0) Rev #: 1 V History		Check Conflicts
IESO Outage ID: Created By:	s Study Attachments (0)	Market Participant:	Check Conflicts ORGANIZATION 1
IESO Outage ID: Created By: Submitter Org:	s Study Attachments (0) Rev #: 1 History - ORGANIZATION 1 V	Market Participant:	Check Conflicts ORGANIZATION 1
EQUEST SUMMARY Detail IESO Outage ID: Created By: Submitter Org: Outage Status:	s Study Attachments (0) Rev #: 1 History - ORGANIZATION 1	Market Participant: Predecessor:	Check Conflicts ORGANIZATION 1
IESO Outage ID: Created By: Submitter Org: Outage Status:	s Study Attachments (0) Rev #: 1 History ORGANIZATION 1 2 2017/08/18 07:15 TESTER, ABC	Market Participant: Predecessor: Linked Outages:	Check Conflicts ORGANIZATION 1
equest Summary Detail IESO Outage ID: Created By: Submitter Org: Outage Status: *Planned Start:	s Study Attachments (0) Rev #: 1 History ORGANIZATION 1 2 2017/08/18 07:15 TESTER, ABC 2017/08/25 08:00	Market Participant: Predecessor: Linked Outages: *Planned Complete:	Check Conflicts ORGANIZATION 1 2017/08/19 16:00

5.4. The Outage Request Form

Request Summary Details Study Attachments (r) 2 IESO Outage ID: 1-00058119 Rev #: 1 × History Inceck Conflicts Created By: IESTER, ABC 2017/08/18 1150 Submitted Org: ORGANIZATION 2 × Outage Status: Submitted Predecessor: 2017/08/18 1150 Inned Statt: 2017/08/25 06:00 m * Planned Start: 2017/08/25 06:00 m * Recurrence: * Outage Duration: 8 Hour(s) × * Priority Code: Panned × Priority Date: 2017/08/18 11:50 * Purpose Code: Commissioning × * Recurrence: Continuous × Outage Flags: Confidential FAA Request Weekly AA Assessment Fligibility: 3 Day Assessment Process ending 2017/08/22 16:00 EST * Requested Equipment: Its kr 2 Koo × 1/2 × Kod * totalion Equip Name Equip Class Equip Description Constraint Volage Flags: Confidential FAA Request Weekly AA * station 1 Equip Name Equip Name Equip Name Equip Name Its kr 2 Kod * total in Concertaint Tone Communicatio Test Oot S	utage Request:	1-0005811	19 rev. 1 \$	Submitte	d Planned		
equest Summary Details Study Attachments (0) -2 3 IESO Outage ID: 1-00058119 Rev #: Ivit Witter View Check Conflicts Created By: 2017/08/151150 Market Participant: ORGANIZATION 1 Submitter Org: ORGANIZATION 2 Outage Status: ORGANIZATION 2 Outage Status: 2017/08/151150 Predecessor: Linked Outages: **Outage Duration: Image: Status 2017/08/25 08:00 **Planned Complete: 2017/08/25 16:00 ** **Outage Duration: Image: Hour(a) ** *Recurrence: Continuous ** **Purpose Code: Commissioning ** ** ** Recall Comments: * No **Purpose Description: ** Recall Comments: * No * Recall Comments: * No * ** Station Equip: Class Equip. Description: * No N/A © * * Yes No N/A © * * * Add * Yes No N/A © * * * * </th <th></th> <th></th> <th></th> <th></th> <th>+</th> <th>Back 🚺 Export 🛛 🕞</th> <th>New 🛛 🕂 Duplicate 🚺 🐂 H</th>					+	Back 🚺 Export 🛛 🕞	New 🛛 🕂 Duplicate 🚺 🐂 H
IESO Outage ID: 1-00058119 Rev #: [♥] History Check Conflicts Created By: IESTER, ABC Market Participant: ORGANIZATION 1 Submitter Org: Schmitted Predecessor: Dutage Status: Submitted Outage Status: Submitted Predecessor: Dutage Status: Non*Recallable Dutage Status: Dutage Status: Dutage Status:	equest Summary Details	Study Attachm	nents (0)2	2 1	3		
LESO Outage ID: 1-00058119 Rev #: Image: Status Check Conflicts Created By: TESTER, ABC Market Participant: ORGANIZATION 1 Submitter Org: ORGANIZATION 2 ♥ Predecessor: Duityle Status: Submitted 2017/08/18 11:50 TESTER, ABC 2017/08/18 11:50 Linked Outages: *Planned Start: 2017/08/15 08:00 ● *Predecessor: Continuous ♥ *Priority Code: Planned ▼ Priority Date: 2017/08/18 11:50 *Purpose Code: Commissioning ♥ *Max Recall: 2 Hour(6) ♥ *Purpose Code: Commissioning ♥ *Max Recall: 2 Hour(6) ♥ Outage Flags: Confidential FAA Request Weekly AA Assessment Eligibility: 3 Day Assessment Process ending 2017/08/22 16:00 EST *Requested Equipment: Test # @ 005 ♥ 016 115 kV 2 2 Y TEST FACLL Tone Communication. Test ♥ 005 ♥ 013 115 kV 2 Y TEST FACLL Tone Communicatio. Test ♥ 005 ♥ 013 115 kV 2 Y TEST FACLL Tone Communicatio. Test ♥ 005 ♥ 013 115 kV 2 Add Tedemetry Scaing Impact? Yes ● No ● N/A ● * No <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
Created By: TESTER, ABC Market Participant: ORGANIZATION 1 Submitter Org: ORGANIZATION 2 Outage Status: Submitted Outage Status: Submitted Predecessor: Linked Outages: "Planned Start: 2017/08/15 11:50 Linked Outages: 2017/08/25 16:00 "Outage Duration: 8 Hour(s) *Recurrence: Continuous "Priority Code: Planned Priority Date: 2017/08/18 11:50 "Purpose Code: Commissioning *Recurrence: Continuous * "Purpose Code: Commissioning *Recall: 2 Hour(s) * "Purpose Code: Commissioning * Recall Comments: Non-Recallable Outage Flags: Confidential FAA Request Weekly AA Assessment Eligibility: 3 Day Assessment Process ending 2017/08/22 16:00 EST *Requested Equipment: Tone Communicatio Test OoS 115 kV 2 *TEST FACIL Tone Communicatio Test OoS 115 kV 2 *StatioN 1 CB3 Breaker OoS 115 kV 2 Add Telemetry Sc	IESO Outage ID:	1-00058119 Rev	v #: 1 🗸 Hist	ory		Check Co	onflicts
Submitter Org: ORGANIZATION 2♥ Outage Status: Submitted Datage Status: Submitted Datage Status: Submitted Pedecessor: Linked Outages: ** ESTER, ABC ** Planned Start: 2017/08/15 08:00 ** ** Planned Complete: 2017/08/15 11:50 ** ** Priority Code: Commissioning ** ** Priority Date: ** Commissioning ** ** ** Commissioning ** Purpose Coescription: This needs to be checked. ** Outage Flags: Confidential FAA Request Weekly AA Assessment Eligibility: 3 Day Assessment Process ending 2017/08/22 16:00 EST * Test FACIL. Tone Communicatio Test * Test FACIL. Tone Comm 1 Tone Communicatio * Test FACIL. Tone Communicatio Test * OoS * Yes <td>Created By:</td> <td>TESTER, ABC 2017/08/18 11:5</td> <td>0</td> <td></td> <td>Market Participant</td> <td>ORGANIZAT</td> <td>TON 1</td>	Created By:	TESTER, ABC 2017/08/18 11:5	0		Market Participant	ORGANIZAT	TON 1
Outage Status: Submitted 2017/08/18 11:50 TESTER, ABC Predecessor: Linked Outages: *Planned Start: 2017/08/25 08:00 *Planned Complete: 2017/08/25 16:00 * *Outage Duration: 8 Hour(s) *Planned Complete: 2017/08/25 16:00 * *Outage Duration: 8 Hour(s) * *Recurrence: Continuous * *Priority Code: Planned * Priority Date: 2017/08/18 11:50 * *Purpose Code: Commissioning * * * * * *Purpose Code: Commissioning * Recall Comments: Non-Recallable This needs to be checked.	Submitter Org:	ORGANIZATION	2 🗸				
2017/08/18 11:50 TESTER, ABC Linked Outages: *Planned Start: 2017/08/25 08:00 *Planned Complete: 2017/08/25 16:00 * *Outage Duration: 8 Hour(s) *Recurrence: Continuous *Priority Code: Planned * Priority Date: 2017/08/18 11:50 * *Purpose Code: Commissioning * *Max Recall: 2 Hour(s) * *Purpose Description: Recall Comments: Non-Recallable * Non-Recallable Outage Flags: Confidential FAA Request Weekly AA Assessment Eligibility: 3 Day Assessment Process ending 2017/08/22 16:00 EST * *Requested Equipment: Station Equip. Class Equip. Description Constraint Voltage Flags: Class * TEST FACIL Tone Comm 1 Tone Communicatio Test Ø 005 1 15 kV 2 Value * * Mod Add Telemetry Scaling Impact? Yes No N/A © * *Low Impact Questions: On No N/A © * Only a Loss Of Redundancy? Yes No No	Outage Status:	Submitted			Predecessor:		
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The Outage Request Form has a few general areas to be aware of:

Area #	Description
1	Basic Outage Request information including the outage request number, revision number, overall outage status, and priority code.
2	Outage Request form tabs. Request Summary Details Study Attachments
3	Outage Request function and navigation buttons. Back Export New Duplicate Home
4	Outage Request Save and State Transition action buttons.

5.4.1. Open an Outage Request Form

The user can open a <u>new</u> Outage Request form in any of the following ways:

• From the Outage Request Index summary, click on the "New" button near the top of the page.

Refresh No Auto Refresh Displaying 4 of 4 records Image: Clear Highlights Image: Cl
Sefresh No Auto Refresh Displaying 4 of 4 records
Outage Request Index

The user can open an <u>existing</u> Outage Request in any of the following ways:

- Double click on the outage request in a row in the Outage Request Index summary listing.
- If the user knows the Outage Request number, use the Find feature on the Outage Request Index summary form.

Outage Number 🗸	1	-	4	🔍 Find
outage Number	-		•	-0 mid

The user must click the "Find" button to open the Outage Request form, if the outage request exists and is available to the user.

5.4.2. Outage Request Form: Request Summary tab

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*Purpose Code	:	Comn	nissioning	_	~	-	-17	*1	Max Recal	l:		2	Hour	s) 🗸	
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Field #	Description								
1	IESO Outage ID This is a read-only label displaying the Outage Request Number. During the creation of a new Outage Request, initially, it will display as "0-00000000". Upon Save or Submission of an Outage Request an internally generated number by Crow in the format: Server ID + "-" + Outage Request ID (e.g. 1-00000295) will be displayed for this field.								
2	Revision Number A revision number drop-down selection box is available beside the label "rev. #". During the creation of a new Outage Request, the default value for the revision number is '1'. Note: For an Outage Request that has gone through some revisions due to actions (state transitions) performed by users of the system, the user may select a value from the "Revision Number" drop-down selection to display the information associated to a particular revision of an Outage Request that the user wants to view. Past revisions are read-only.								
3	History button Displayed beside the Revision Number drop-down selection box is the "History" button which when clicked, will generate a revision history report in Excel. The Revision History report will list the changes made to some certain outage request fields, presented as one revision per row in the Excel file. See the following example screen capture: A B C D E F G H I J K I Revision Summary for Outage Request #1-00000004 rev. 7 Created: 2016/04/25 16:44 I J K								
	3 Revised Created Revised By Priority Outage Status Purpose Station Requested Equip. Planned Planned End 1 2016/04/11 2016/04/11 2016/04/11 Approver, IESO Planned Submitted COM STNA STNA Breaker 001 IS 2016/04/18 2016/04/19 6 2 2016/04/11 Approver, IESO Draft Image: Common State Image: Common State Image: Common State Image: Common State 2016/04/19 08:00 18:00 18:00 6 2 2016/04/11 Approver, IESO Draft Image: Common State Image: Common								
4	Check Conflicts button This button, when clicked, will perform a conflict check routine for the outage request and then a message appears above the outage request form. If conflicts are identified, this will display a hyperlinked Outage Request Number/s that it is in conflict with.								

Field #	Description
	The following conflict(s) exist for this outage request: 1-00000007
	A second and a second
	Outage Request: 1-00000004 rev. 7 Submitted Planned
	🗧 Back 🕔 Export 🕞 New 🕂 Duplicate 🚔 Home
	Request Summary Details Study Attachments (0)
	IESO Outage ID: 1-00000004 Rev #: 7 • History Check Conflicts Created Rv: Approver IESO Market Participant: Independent Electricity System Operator
	In cases where there are conflicts, the user may click the hyperlinked Outage Request number to open it in a new browser window.
5	Created By This is a read-only label displaying the date/time of the original creation of the outage request as well as the name of the user that created the outage request.
6	Market Participant This is a read-only label displaying the name of the company that employs the user that created the outage request.
7	Submitter Organization This drop down selection box provides the user with a list of organizations for which they are permitted to submit an outage request on behalf of. This value defaults to the employer of the user upon creation of an outage request.
	Upon addition of equipment, the list will be updated to reflect organizations that own or operate any equipment added and the employer of the user's organization.
	Upon outage request submission, a check will be performed to validate that the equipment selected is owned by the selected organization. If there is a mismatch, a warning will be displayed, but it will not prevent submission.
	Submitter Org: ORGANIZATION 2
8	Predecessor/Successor When populated this control displays the outage request number that is related to the current outage request as a predecessor or successor (whichever the label indicates).

Field #	Description
	The predecessor type can be either "Finish-Start" or "Run Within". "Finish-Start" indicates that the outage identified as the predecessor must first finish before the current outage (the successor) can be Implemented. "Run Within" indicates that the current outage must be Implemented and Completed while the outage identified as the predecessor has been Implemented but is not yet Completed. A warning message will prompt the user if a predecessor rule is being violated during Implementation or Completion of the current outage request. The user has the option to continue on or not. Warnings in Implement The following warning was generated: The Predecessor has not been completed for this 'Finish-Start' relationship. Do you still want to complete this action?
	Yes No
9	Linked Outages The Linked Outages label displays a read-only list of the numbers of any outage requests that are linked to the current outage request.
10	Outage Status This is a read-only label displaying the following information:
	 The current status of the outage request The date/time the outage request entered the status
	 The name of the user that initiated the action resulting in the status.
	NOTE: In some cases, a user will Submit an outage request which, due to its current characteristics, will get automatically approved and the status will become 'Adv Approved' instead of 'Submitted'. It is worth noting that the person listed along with the Outage Status is simply the person that initiated the original state transition action and should not be assumed to be the approver. The approver of the outage request is listed on the 'Details' tab in the 'Approvals' grid.
11	Planned Start The Planned Start Date is a date/time selection control in which the user may edit the date as necessary. It is a read-only label in situations where the user does not have permission to edit the date/time value. The following options can be use by the user to adjust the date:

Field #	Descriptio	n							
	•	Selecti	ng the	Date k	by using	g the c	alenda	ar contr	ol. Click the calendar icon next to the Planned Start date field.
		2016/0	5/03 0	8:00					
		<		М	ay 201	16		>	
		Su	Мо	Tu	We	Th	Fr	Sa	
		24	25	26	27	28	29	30	
		1	2	3	4	5	6	7	
		8	9	10	11	12	13	14	
		15	16	17	18	19	20	21	
		22	23	24	25	26	27	28	
		29	30	31	1	2	3	4	
					G				
	•	Alterna	itively,	user o	can hig	hlight	the yea	ar, mor	nth or day and type in the value.
	The Planned highlighting	d Start T the hou	Time is ur or m	a time ninute	e select and ty	tion co ping ir	ontrol v the va	vhich u alue or	ses a 24-Hour format (e.g. 1 PM is 13:00). The user may edit the time by by using the time icon button at the bottom of the calendar control.
	22 23 29 30	31	1 2 9						
	Clicking on	the time	e icon l	button	ı (abov	e) brin	igs up 1	the tim	e adjustment form (below)



Field #	Description
	Validation Error
	There are the following validation errors:
	The 'Planned Start' date must be on or after the start of the next unprocessed three day coverage period: 2017/08/25 12:00:00 AM
12	Planned End The Planned End Date is a date selection control in which the user may edit the date as necessary. It is a read-only label in situations where the user does not have permission to edit the date/time value. Options for editing the date/time are the same as that of the Planned Start Date field (noted above).
	Note that editing the Planned End Date (Summary Tab) will cause a rebuild of the Outage Period Dates (Planned Start and Planned End under the Details Tab) depending on the current selected recurrence of the Outage Request. The overall Planned End Date (Summary Tab) of the Outage Request is equal to the last Outage Period's Planned End Date (in the Details Tab).
13	Outage Duration Outage Duration is a calculated/editable field to display the outage duration in number of minutes, hours, or days. Edits to this field re- calculate the Planned End Date/Time. It is a read-only label in situations where edits are not allowed. Changes to the Planned Start Date/Time or Planned End Date/Time re-calculate the Outage Duration.
14	Recurrence Recurrence is a drop-down selection box displaying the following options which the user must select from: Continuous Noncontinuous Return Evenings Return Sat - Sun Return Fri - Sun Return Fri - Mon Return Evenings and Weekends

Field #	Description
15	 Priority Code Priority Code field is a drop-down selection box displaying the following options from which the user must select: Planned Opportunity Urgent Forced Informational
16	Priority Date This is a date/time selection read-only label displaying the Priority Date. This is set to the current system date/time whenever a user uses Submit, Resubmit (with some exceptions) or Implement (applicable for Outage Requests with a Priority Code of 'Forced') actions on an Outage Request. In the case where a user Resubmits an Outage Request, the user will be warned that the Resubmit action will result in a new Priority Date, and will have the option to cancel out of the action before committing to the Resubmit. Warnings in Resubmit The following warning was generated: Warning: The Re-Submit action will result in a new Priority Date. Do you still want to complete this action? Yes No
17	Purpose Code The Purpose Code field is a drop-down selection box displaying available purpose codes based on the selected Priority Code. The user must choose a value from the selection as this is a required field for creating an Outage Request. Refer to Market Manual 7.3: Outage Management for a list of Priority Codes with Associated Purpose Codes and Equipment Constraints.
18	Max Recall Max Recall Time control includes a field to enter Recall time in number of minutes, hours, or days. A selection option named "Immediate" is also available in the drop-down control and is equivalent to a time value of zero. There is also a "Non-recallable" checkbox available on

Field #	Description					
	the control which, when ticked by the user, indicates a time value of NULL for the Max Recall of the outage request. The the Max Recall is 2 Hours.					
	2 Hour(s) Non-Recal Min(s) Hour(s) Day(s) Immediate					
	NOTE: When you blank o replace the numeric value	ut the max recall number text field, it will automatically set the recall to non-recallable. If the user only wishes to e, they must first highlight the number and type the new number over it.				
19	Purpose Description This is a multi-line text fie as it is a requirement for	eld which holds a description of the purpose of the outage request. The user must make a text entry to this field creating an outage request.				
20	Recall Comments This is a multi-line text fie	eld which is intended to hold a description of the Recall. The user may enter a text value or leave this field blank.				
21	Outage Flags Outage Flags: CONF FAA	Request Weekly AA				
	Visibility	 This is a read-only label indicating how visible (i.e. PUBL, SEMI, CONF) the outage request is to Third Party Viewers: The flag will display "PUBL" if every equipment item on the outage request has a Third Party Viewer relationship to the "All" Third Party Group. The flag will display "SEMI" if at least one equipment item on the outage request has a Third Party Viewer relationship to any Third Party Viewer. The flag will display "CONF" if all equipment items on the outage request have no Third Party Viewer relationships at all. 				

Field #	Description				
	FAA	This read-only flag acts as an indicator of whether or not to automatically move the outage request into the Final Approved status on the first day that the overall outage request starts. A bold font indicates a value of 'True'.			
	Request Weekly AA	Under certain outage request conditions, the user may edit this Outage Request Flag to 'True' (Bold Font) or 'False' (not Bold Font) by clicking "Request Weekly AA" label on the Outage Flags Section. A blue font indicates that the flag is editable.			
		Outage Flags: CONF FAA Request Weekly AA			
22	Requested Equipment Outage Requests can have one or more requested equipment items listed in a grid on the form. The Requested Equipment grid displays one equipment item per row and has a small number of data columns as follows: Delete button – used for removing an equipment item from the Requested Equipment grid. Station – the station/s associated with the equipment item. Equip. Name – the name of the equipment item. Equip. Class – the type of equipment item. Equip. Description – an editable cell to hold a user entered description. Constraint – a mandatory and editable field to hold constraint information. Voltage Class – the Voltage Class attribute value of the equipment item. Facility Class - the Facility Class attribute value of the equipment item. 				
23	Assessment Eligibility This is a read-only to identify what process an outage request has been submitted to as well as its associated process end date. Upon Submit or Re-Submit actions this will also be presented as an informational message. This will not be provided for outages with Priority Forced, Forced Extended, Urgent, Informational, or Opportunity.				
24	Telemetry Scaling Impac Whenever applicable, the right beside the Low Impa	t Question e user may select between "Yes", "No" or "N/A" to answer the Telemetry Scaling Impact question presented act Questions just below the Requested Equipment grid. "N/A" is selected by default.			

Field #	Description						
25	Low Impact Questions						
	Depending on the Equipment Type and/or equipment constraint in the outage request, the following low impact questions may be						
	presented in the Outage Request form below the Requested Equipment grid.						
	Only a Loss of Redundancy?						
	Adjacent Breakers OOS?						
	CTs on Both Sides of the Breaker?						
	Does the SS Supply Transformer Cooling?						
	RTU or HUB Affected?						
	When Low Impact questions are presented they are mandatory and the user must select "Yes" or "No".						

When completing the Outage Request form, all mandatory fields will be highlighted in real-time as data is entered. The user must complete their entry into all highlighted fields before submitting the outage request. If there are any fields left highlighted, an error message will present itself and specify which additional details are required.

outage Req	uest: 0-00	000000 rev. 1	(New)		(÷ 1	Back 🕞 New 🚽	- Duplicat	e 🗎 Hoi
lequest Summary	Details Study	Attachments (0)						
IESO Outage ID): Rev	/#: 1 ♥ History				Check Conflicts		
Created By:	-			Market Participan	t:	ORGANIZATION 1		
Submitter Org:	ORG	SANIZATION 1						
Outage Status:				Predecessor:				
	2017 TEST	/08/18 12:50		Linked Outages:				
*Planned Start:	2013	7/08/19 08:00		*Planned Complet	e:	2017/08/19 16:00		
*Outage Durati	08:			*Recurrence:		Continuous		
****	0	Hour(s) V		D.:		continuous		
*Priority Code:		~		Priority Date:				
*Purpose Code:	· ·			*Max Recall:		2 Hour(s)) 🗸	
*Purpose Descr	iption:			Recall Comments:		Non-Recallable		
			~					~
			\sim					\sim
Outage Flags:	FAA Request Wee	kly AA Assessment Elig	gibility: n/a					
*Requested Equip	oment:							
Station	Equip. Name	Equip. Class	Equip. Des	scription	Constraint		Voltage Class	Facility Class
		<					_	>
								Add

5.4.3. Outage Request Form: Details Tab

utage Reque	st: 0-00000000 r	ev. 1 Planned	l (New)	🗲 Bac	k 🕞 New 🕂 Duplicate 🕇	н
quest Summary Det	alls Study Attachments	(0)				
Outage Periods:	—1					
Planned Start	Planned End	Actual Start Actual End	Equipment	Constraint	Status By/ When	
2016/04/27 08:00	2016/04/27 16:00	-	Generator 001	DRATE: 75 MW	2	^
× 2016/04/28 03:00	2016/04/28 14:00	-	Generator 001	DRATE: 50 MW		
4						* *
					3 Add.)
Notifications:	-4					
Notification Typ	e Contact Information	Accepted/ By/ Result When	1	Comments		
Approvals:	5					
Approval Type	Approved When	Approved By				
repproteint type						

Field #	Description
# 1	Outage Periods An outage request contains one or more outage periods, each detailing the characteristics of the outage for the time frame specified by the outage period. The Outage Periods grid on the Details tab of the outage request form contains the listing of all outage periods for the outage request and includes the following data: Delete button – used for removing an outage period from the grid. Planned Start – The planned starting date/time for the outage period. Actual Start – The planned ending date/time for the outage period. Actual Start – The actual ending date/time for the completion of the outage period. Actual End – The actual ending date/time for the completion of the outage period. Equipment – The actual ending date/time for the outage period. Constraint – The constraint information for each equipment item during the outage period. Status – The status of the outage period. By/When – The user that initiated the action resulting in the status and when it occurred. Reason Code – Holds a selected code in cases where some action (e.g. cancellation, rejection, recall etc) was taken on the outage period. Reason Comment – Holds a comment which may accompany a Reason Code as noted in the bullet point above. Space is limited in some of the Outage Periods grid cells. If the text in the cell is truncated from view the user can hover their mouse cursor over the text to get a tooltp view of the entire text.
	Breaker 001 2016/0 Break Tone Comm Channel 002 DOS Adv Approv
	NOTE: For an outage with multiple periods, the actual times cannot overlap. The actual end date/time of the first period must be equal to or earlier than the actual start date/time of the next period. See Section 5.3 for examples.
2	X – (remove outage period) The Remove button icon is only available for outage requests having a recurrence of "Noncontinuous". It allows the user to remove an outage period from the set of existing outage periods.

Field #	ield Description	
3	Add (outage period button) The Add button is only enabled for outage requests having a recurrence of "Nonconti period to the set of existing outage periods. By default, the added outage period's Pla the previous period and the Planned End will be set to 23:59:00 of the same day as its	inuous". It allows the user to add a new outage anned Start will be set to the Planned End of s Planned Start.
	Request Summary Details Study Attachments (0) Outage Periods:	
	Planned Start Planned End Actual Start Equipment Constraint S Actual End B	status Sy/ When
	X 2017/08/25 08:00 2017/08/25 16:00 - CB1 OOS S5 - GENERATOR A OOS 72	Submitted TESTER, ABC 2017/08/18 08:55
	× 2017/08/25 16:00 2017/08/25 23:59 2017/08/25 2017/08/25 2017/08/25 2017/08/25 2017/08/25 2017/08/25 2017/08/25 2017/08/25 2017/08/25 2017/08/25 2017/08/25 2017/08/25 2017/08/25 2017/08/25 2017/08/25 2017/08/25 2017/08/25 2017/08/25 2017/08/25 200000000000000000000000000000000000	Submitted TESTER, ABC 2017/08/18 08:55
		3
		Add
4	 Notifications The Notifications grid is available on the Details tab of the outage request form and ir Notification Type – The type of notification (e.g. Approval, Telephone) Notify – The name of the person being notified. Contact Information – Contact information of the notified if available – for address. Accepted/Result – The results of the notification attempt (if available). By/When – Indicates who entered the notification record and when for a Comments –Notes about a non-automated notification (e.g. telephone notification) 	ncludes the following read-only data columns: or emailed notifications this would be the email telephone notification. otification).
	Notifications:	
	Notification Type Contact Information Accepted / By / Result By / Comments	
	Approval Notification Approver, IESO (n/a) Send a notific	cation of approval fo

Field	Description					
#	Space is limited in some cursor over the text to a	e of the Notifications grid co get a tooltip view of the ent	ells. If the text in the ce tire text.	Il is truncated from view, the user can hover their mouse		
	Comments Send a notification of approval fo Send a notification of approval for confirmation.					
5	Approvals The Approvals grid on t Approval Ty Approved V Approved E A "Pending" indicator r outage request is trans Advance Approval, 3 Da information will also be	he form displays three read ype – The type of approval a When – The date/time of th By – The user that approved ecord will be added to the o itioned into the 'Adv Appro ay AA, etc), current date/t e displayed in the Approvals	l-only columns: applied to the outage r e approval. I the outage request. outage request approve ved' status the indicate ime and the Name of t grid.	request. als grid when the outage request is created. When the or will update to show the advance approval type (e.g. he User who did the approval. The Final Approval		
Approval Type Approved When Approved By						
	3 Day AA	2016/04/26 18:32	Approver, IESO			
	Final Approval	2016/04/26 18:32	Approver, IESO			

5.4.4. Outage Request Form: Study tab

Outage Request: 1-00000008 rev. 3 Draft Urgent	🗲 Back 🕕 Export 🕞 New	+ Duplicate 🔒 Home
Request Summary Details Study Attachments (0)		
Market Participant to IESO Comments: <u>1</u>		
		/
Note: This tab is not visible to Third Party market participants		
Conflict Rationale: <u>2</u>		
IESO to Market Participant Comments: <u>3</u>		
		17
Field #	Description	
------------	---	
1	Market Participant to IESO Comments This multi-line text field allows Market Participants to enter comments for IESO review.	
2	Conflict Rationale The Conflict Rationale field is used to hold the reason for entering a conflicting outage request into the system. The user will be prompted to make a text entry to this field if the outage request they are adding or modifying creates a new conflict with other existing outages in the system. The Conflict Rationale field and the Study tab become highlighted in yellow and indicates mandatory entry to the user. Validation Error Validation Error Conflet Request: 0-00000000 rev. 1 Opportunity (New) Request Summary Details Study Attachments Merket Participant to II:50 Comments: Conflet Rationale A maximum of 150 characters may be entered in this text field.	
3	IESO to Market Participant Comments This multi-line text field allows IESO users to comments to the Market Participants to review.	

5.4.5. Outage Request Form: Attachments Tab

utage Request:	1-00000004 r	rev. 26 Submit	ted Planned	
			🗲 Back 😈 Export 🔒 Ne	w 🕂 Duplicate 🗎 Hom
Request Summary Details	Study Attachments	(1) -1		
-				
Attachments: 2	Added When	File Name	Comments	
Attachments: 2 Added By	Added When 2016/04/26 12:14	File Name Agenda.docx	Comments My Own Attachment	
Attachments: 2 Added By Submitter, PUone	Added When 2016/04/26 12:14	File Name Agenda.docx	Comments My Own Attachment	4 Add
Attachments: 2 Added By Submitter, PUone	Added When 2016/04/26 12:14	File Name Agenda.docx	Comments My Own Attachment	4 Add

Field #	Description
1	Attachments Tab The tab itself displays the number of attachments currently attached to the outage request.
2	 Attachments The Attachments grid lists the attachments on the outage request and has the following columns: Delete button – used for removing an attachment from the grid. Attached By – The name of the user that added the attachment. Attached When – The date/time that the attachment was added. File Name – The name and file type extension of the attachment. Comments – An editable cell to hold a short description or title for the attachment. Clicking once on the file name in this grid will download the Attachment for the user. Clicking once in the Comments cell allows the user to edit the comment or title of the attachment.

Field #	Description
	Comments Editing the comment
3	X – (remove attachment) The Remove button icon allows the user to remove an attachment from the set of existing attachments.
4	Add The Add button, when clicked, will bring up a file selection dialog box will appear where the user can enter an attachment title and select a file from their accessible network to attach to the Outage Request. Select File Attachment Attachment Title: Attachment File: Choose File No file chosen OK
	After selecting a file to attach a new row will be added in the Attachments grid with attachment details. NOTE: The size of the attachment file must adhere to the limit set for the application otherwise the user will be presented with an error message and unable to attach the file.

5.4.6. Outage Request Control Usage: Requested Equipment

As noted in an earlier section the Requested Equipment grid holds a list of equipment items present on the outage request. Users are able to add/edit/remove data on the grid.

5.4.6.1. Adding Requested Equipment

To add equipment to an Outage Request, the user must click on the "Add" button below the "Requested Equipment" grid.

*Requ	lested Equip	ment:				
s	Station	Equip. Name	Equip. Class	Equip. Description	Constraint	Voltage Facility Class Class
			4			• •
						Add

A "Select Circuits/Equipment" dialog box will appear allowing the user to perform a search for equipment to be added in the outage request.

sarch	Select S	tn./Equip.	Equip. Grou	ps	
Name:					
wildcard	(*)				
				ОК	Cancel

There are 3 ways to select equipment to be added to the outage request, as follows:

- Text-based search using the Equipment Label (Search tab)
- Combination of Control Center, Station and Equipment Type(Class) filter (Select Stn./Equip tab)
- Using the Equipment Group (Equip. Group tab)

Adding Equipment via Text-based search using the Equipment Label (Search tab)

NOTE: The user must remove all filters prior to using the Search function.

The user must indicate how to use the input text value in the query for the Equipment Label:

- wildcard (*)
- begins with
- is
- contains
- ends with

elect Circuits/Equipment			
Search Select Stn./Equip.	Equip. Group	is.	
ends with wildcard (*)	New	ОК	Cancel

The user must input the text value to use in the query.

earch	Select Stn./Equip.	Equip. Group	5	
Name:				
contains	s 🔻 Breaker			
		New	ок	Cancel

The user must click the "OK" button. A list of equipment matching the query will be shown in the resulting dialog box where the user can select one or more equipment items. The user can individually select equipment by ticking the checkbox beside the Equipment listing or the user can use the Dual-State control checkbox in the title bar to select/de-select all equipment in the list.

	0	Name	•
		STNA Breaker 001	Dual-State Control
		STNA Breaker 002	Checkbox to select/deselect
		STNA Breaker 083	All Equipment in the list
		STNA Broaker 004	
de la		STNB Breaker 001	
	۰	STNB Breaker 002	
		STNB Breaker 003	Individual Equipment check
		STNB Breaker 004	
		STNB Breaker 005	
		STNB Breaker 006	
		STNB Breaker 007	
		STNB Breaker 008	
		STNB Breaker 009	
		STNB Breaker 010	
		STNB Breaker 011	
		STNB Breaker 012	

The user then must click the "Select" button and the chosen equipment will be populated in the Requested Equipment Grid.

	Station	Equip. Name	Equip. Class	Equip. Description	Constraint	Voltage Class	Facility Class
×	STATION A	Breaker 001	Breaker	2	005	115 kV	3
×	STATION A	Breaker 003	Breaker	<u></u>	005	115 kV	2
			4				+

Adding Equipment via Combination of Control Center (Company), Station and Equipment Type (Class) filter (Select Stn./Equip tab)

From the "Select Stn./Equip" tab, the user must select the Control Center from the drop-down selection.

Company:	<click select="" to=""></click>	
Station:	<click select="" to=""></click>	4
Equipment Type: Equipment:	PU1_CC PU2_CC PU3_CC PU4_CC PU5_CC	-

The user must select a Station from the drop-down selection.

Select Circuits/Equip	ment	×
Search Select St	n./Equip. Equip. Groups	
Company:	PU1_CC •	
Station:	<click select="" to=""></click>	
Equipment Type: Equipment:	<click select="" to=""> 43 STATION A STATION B STATION C STATION D STATION P 44</click>	
	New Add Cancel	

Upon selection of the Station, Equipment will be populated in the list. The user can further trim down the selection by selecting the Equipment Type (Class) from the drop-down selection.

ect Circuits/Equip	ment	
Search Select S	tn./Equip. Equip. Groups	
Company:	PU1_CC	•
Station:	STATION A	•
Equipment Type:		
Equipment:	Al AC/DC Station Service Breaker Bus Capacitor Converter Disconnect Switch Filter Generator Line Line Section Load Other Communication Equipment Other Miscellaneous Equipment Phase Shifter Reactor	k2 ⇒
	^{III} RTU/ICCP/HUB Equipment Special Protection System Static VAR Compensator Synchronous Condenser	el

The equipment that matches the filter will be populated in the Circuit/Equipment list.

Select Circuits/Equip	ment	1
Search Select S	tn./Equip. Equip. Groups	
<i>C</i>		
Company:	PU1_CC	•
Station:	STATION A	•
Equipment Type:	Bus	•
Equipment:	STNA Bus 001 STNA Bus 002	^ ⇒
	STNA Bus 003	4=
	\searrow	
		-
	New Add	Cancel

The user selects an equipment item or may use the Control and Shift Keys with mouse clicks to select multiple equipment items. The user then must click the "Add" button and the selected equipment will be populated in the Requested Equipment grid.

	Station	Equip. Name	Equip. Class	Equip. Description	Constraint		Voltage Class	Facility Class
×	STATION A	Breaker 001	Breaker	2	005	2	115 kV	3
×	STATION A	Breaker 003	Breaker	2	005		115 kV	2
×	STATION A	Bus 001	Bus	2	005		230 kV	3
×	STATION A	Bus 002	Bus	1	005	1	230 kV	2
			4					•

Adding Equipment using the Equipment Groups (Equip. Groups tab)

From the Equip. Groups Tab, the user must select an Equipment Group from the drop-down selection. Note that the possible values for the selection will be those Equipment Groups owned by the company of the user creating the outage request. The user must select the Equipment Group from the drop-down selection.

Select Circuits/Equip	ment	×
Search Select St	tn./Equip. Equip. Groups	
Group:	<click select="" to=""></click>	
Equipment:	<click select="" to=""></click>	
	· · · · · · · · · · · · · · · · · · ·	
	OK Cancel	

The list of equipment belonging to the Equipment Group selected will be populated where user can select one or more equipment items. Control and Shift Keys along with mouse clicks can be used to select multiple equipment items.

Select Circuits/Equ	ipment	×
Search Select	Stn./Equip. Equip. Groups	
Group:	Equipment Group PU1 🔹	
Equipment:	Line 1	
	STNA ACDC Service 001	
	STNA Breaker 001	
	STNA Bus 001	
	STNA Bus 002 STNA Generator 001	
	STNA Tone Comm Channel 001	
	· · · · · · · · · · · · · · · · · · ·	
	OK Cancel	
		·

The user then must click the "Add" button and the selected equipment will be populated in the Requested Equipment Grid.

*Re	Requested Equipment:								
	Station	Equip. Name	Equip. Class	Equip. Description	Constraint	Voltage Class	Facility Class		
×	STATION A	Breaker 001	Breaker	2	005 🛃	115 kV	3		
×	STATION A	Breaker 003	Breaker	-	005 🖉	115 kV	2		
×	STATION A	Bus 001	Bus		005 🛃	230 kV	3		
X	STATION A	Bus 002	Bus		00S 🧭	230 kV	2		
×	STATION A	ACDC Service 001	AC/DC Station Service		005 🛃	n/a	3		
X	STATION A	Generator 001	Generator		005 🖉	230 kV	1		
×	STATION A	Tone Comm Channel 001	Tone Communication	2	005 💋	n/a	3		
			•						
						1			

5.4.6.2. Viewing Requested Equipment

The user can view an equipment item on the Requested Equipment list by clicking once on the equipment name hyperlink. An equipment form will be displayed with information about associated station, equipment owner, equipment operator, equipment third party viewers, and equipment attribute values.

ne Communication	Channel: STNA Tone Comm Channel 002	Tone Communication Cha	annel: STNA Tone Comm Channel 002
Tone Communication C	hannel Properties	Tone Communication Char	nnel Properties
Name:	Tone Comm Channel 002		
Class:	Tone Communication Channel	Equipment Category:	Auxiliary
Station:	STATION A	Exclude from Auto AA:	🔍 True 💿 False
Owned By:	Power Utility 1	Facility Class:	2
Operated By 1:	Control Room	Chatas	2
Operated By 2:	CC for Power Utility 1	State:	Active

5.4.6.3. Removing Requested Equipment

The user can remove equipment from the Requested Equipment list by clicking on the "X" icon in the first column of the corresponding row of the equipment to be deleted in the Requested Equipment grid.

*Requested Equipment:							
	Station	Equip. Name	Equip. Class				
×	STATION A	Breaker 001	Breaker				
×	STATION A	Tone Comm Channel 00	Tone Communic				

When the user clicks on the "X" icon, the selected equipment is removed from the Requested Equipment grid. The user must save the changes with one of the available state transition action buttons at the bottom of the form.

5.4.6.4. Editing Requested Equipment Description Data

Equipment Description is a free form text entry field for the user to enter information for each equipment item added in the Requested Equipment grid. This can sometimes be a required field depending on the equipment class or equipment constraint. To initiate edit mode, the user must click on the "pencil" icon on the corresponding row of the equipment to be modified under the Equipment Description column.

Equip Decoription		Constraint
Equip. Description	<i>3</i> 0 -	Constraint
		005
	1	005
	2	005
	1	005
	Elbr	DRATE: 10 MW
) N/A ®	Pene	Click here to enter a description

A dialog box will appear where the user may enter the Equipment Description.

Description	ж
Enter an additional description for STNA Generator 001:	
Equipment Description	
	11
	OK Cancel

The user must click the "OK" button to reflect the changes in the grid.

Equip. Description			
	1		
Equipment Description			
and the second			

If an Equipment Description is required by nature of the Constraint Code, the field will automatically be highlighted yellow in real-time as data is entered.

	Station	Equip. Name	Equip. Class	Equip. Description	Constraint	Voltage Class	Facility Class
×	TEST FACIL	Tone Comm 1	Tone Communicatio		005	n/a	2
							Add

5.4.6.5. Editing Requested Equipment Constraint Data

Constraints available for selection by the user are dependent upon equipment type as well as the selected Priority Code of the Outage Request. Refer to Market Manual 7.3: Outage Management for a list of Priority Codes with Associated Purpose Codes and Equipment Constraints. When an equipment item is added, Outage Requests with Priority Code other than "Informational" will have a default constraint of "OOS". For Outage Requests having a Priority Code of "Informational", the default constraint is "INFO".

To modify the constraint of a particular equipment item, the user must click the "pencil icon" under the constraint column on the corresponding row of the equipment to be modified.

Constraint		Voltage Class	Fa Cl
BF PROT OOS		115 kV	3
OOS	1	n/a	2
			٨dd

A dialog box will appear where the user can select a constraint applicable to the equipment being modified. Refer to Market Manual 7.3 for a list of Equipment Classes with Associated Constraint Types.

Constraint Info	×
Constraint/Commitment Type For STNA Generator 001	
Out of Service	
O Derated To:	
O Must Run At:	
◎ In Service	
Protection Out of Service	
O Automatic Voltage Regulator / Power System Stabilizer Out of Service	
Ancillary Service Out of Service	
	Select Cancel

For equipment with 'Derated To' or 'Must Run At' constraints, the user must enter a constraint value and select a constraint unit from the drop-down selection. Note that the available constraint unit is also dependent on the Equipment Type (Class) of the Equipment to be modified.

Refer to the following table for DRATE & MUSTRUN Measurement Unit/Equipment Class matrix.

Equipment Class	MW	MVAR In	MVAR Out
Reactor		х	
Capacitor			x
SVC		Х	x
Converter	х	х	x
Filter		Х	x
Synchronous Condenser		х	х
Generator	х	Х	x
Load	х	х	x

As well, validations for the constraint value are in place such that a negative value is not allowed and that it will not allow a value greater than the maximum level noted on the relevant equipment attribute (Rated MW, Rated MVAR In, Rated MVAR Out).

Constraint Info Constraint/Commitment Type For STNA Generator 001 Out of Service Derated To: Must Run At: In Service Protection Out of Service Automatic Voltage Regulator / Power System Stabilizer Out of Service Automatic Voltage Regulator / Power System Stabilizer Out of Service		
Constraint/Commitment Type For STNA Generator 001		
Out of Service		
Derated To:	10	MW T
O Must Run At:		MW NVAR Out
O In Service		MVAR In
Protection Out of Service		
Automatic Voltage Regulator / Power System Stabilizer Out of Service		
Ancillary Service Out of Service	straint alue	1
		Constraint Unit
	Selec	t Cancel

The user must then click the "Select" button and the selected constraint for the equipment being modified will be reflected in the Requested Equipment grid. If the user clicks the "Cancel" button, the action of modifying the constraint will be cancelled.

Constraint	
005	2
005	2
005	2
005	
DRATE: 10 MW	

5.4.7. Outage Request Control Usage: Outage Periods

As noted in an earlier section, Outage Requests with a recurrence of "Noncontinuous" can have outage periods added/edited/removed manually.

5.4.7.1. Adding Outage Periods

For Outage Requests with a recurrence of "Noncontinuous", outage periods can be added manually. In the Details Tab, the user must click on the 'Add' button just below the Outage Periods grid, on the right side.

Out	age Periods:					
atage Plan Plan × 201	Planned Start	Planned End	Actual Start Actual End	Equipment Constraint Status By/ Whe		Status By/ When
×	2016/04/20 08:00	2016/04/20 16:00	- -	Equipment Constraint Status By/When ACDC Service 001 OOS OOS Breaker 001 BF PROT OOS OOS Tone Comm Chann OOS Add	OOS BF PROT OOS OOS	raint Status By/ When
•					•	
						Add

A new Outage Period will be created after any others already existing on the outage request. The user can repeat the steps to add more outage periods.

Planned Start	Planned End	Actual Start Actual End	Equipment	Constraint	Status By/ When
× 2016/04/20 08:00	2016/04/20 16:00	-	ACDC Service 001 Breaker 001 Tone Comm Chann	OOS BF PROT OOS OOS	
× 2016/04/21 08:00	2016/04/21 16:00	1	ACDC Service 001 Breaker 001 Tone Comm Chann	OOS BF PROT OOS OOS	

Note that adding an outage period will cause the overall outage request Planned End Date/Time on the Summary Tab to change. The overall Planned Start Date/Time (Summary Tab) of the Outage Request is equal to the first Outage Period's Planned Start Date/Time (in the Details Tab). Likewise, the overall Planned End Date/Time (Summary Tab) of the Outage Request is equal to the last Outage Period's Planned End Date/Time (in the Details Tab).

5.4.7.2. Removing Outage Periods

For Outage Request with a recurrence of "Noncontinuous", outage periods can also be removed. In the Details tab, the user must click on the "X" icon in the first column on the row of the outage period to be deleted in the Outage Periods grid.



Note that removing an Outage Period will cause the overall outage Planned Start Date/Time and/or Planned End Date/Time under the Summary Tab to change. The overall Planned Start Date/Time (Summary Tab) of the Outage Request is equal to the first Outage Period's Planned Start Date/Time (in the Details Tab). Likewise, the overall Planned End Date/Time (Summary Tab) of the Outage Request is equal to the last Outage Period's Planned End Date/Time (in the Details Tab).

5.4.7.3. Edit Outage Period Planned Start Date and Time

For Outage Requests with a recurrence of "Noncontinuous", the user can have the ability to modify Planned Start Date and Time of a period. The following options can be used by the user to adjust the date/time value under the Details Tab:

• The user can double click the Planned Start column of the Outage Period row and type in the new desired value.



• Alternatively, instead of typing the Date and Time, the user can open up the calendar control by clicking the calendar icon. To edit the date, the user can select the date from the Calendar.

2016/0	5/03 0	8:00				
<		М	ay 201	.6		>
Su	Мо	Tu	We	Th	Fr	Sa
24	25	26	27	28	29	30
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4
			©			

The Planned Start Time is a time selection control which uses a 24-Hour format (e.g. 1 PM is 13:00). The



user may edit the time by highlighting the hour or minute and typing in the value or by using the time icon button at the bottom of the calendar control.

Clicking on the time icon button (above) brings up the time adjustment form (below)



- 1 Increment by the hour button. Clicking will increase the hour value in one hour increments.
- 2 Hour selection button. Clicking will allow the user to select the hour number value.
- 3 Decrement by the hour button. Clicking will decrease the hour value in one hour decrements.
- 4 Increment by the minute button. Clicking will increase the minute value in one minute increments.

5 – Minute selection button. Clicking will allow the user to select the minute number value. (5 minute intervals)

6 - Decrement by the minute button. Clicking will decrease the minute value in one minute decrements.

Note that editing the Planned Start Date (Details Tab) of the **first** outage period may cause an update of the overall Outage Requests Planned Start date on the Details Tab depending on the current selected recurrence of the Outage Request. The overall Planned Start Date (Summary Tab) of the Outage Request is equal to the first Outage Period's Planned Start Date (in the Details Tab).

5.4.7.4. Editing the Outage Period Planned End Date and Time

For Outage Requests with a recurrence of "Noncontinuous", the user can have the ability to modify the Planned End Date and Time of an outage period. The following options can be use by the user to adjust the outage period date/time value on the Details Tab:

• The user can double click the Planned End column of the Outage Period row and type in the new desired value.



• Alternatively, instead of typing the Date and Time, the user can open up the calendar control by clicking the calendar icon. To edit the date, the user can select the date from the Calendar. (See the calendar usage explanation above in the Planned Start section.)

Note that editing the Planned End Date/Time of the **last** outage period of the Outage Request will cause the overall Planned End Date/Time of the Outage Request to change. The overall Planned End Date/Time (Summary Tab) of the Outage Request is equal to the last Outage Period's Planned End Date/Time (in the Details Tab).

5.4.7.5. Editing the Outage Period Constraint Value

Under the Details tab, the Derate or Must Run constraint value is defaulted to the value set in the Requested Equipment entry on the Request Summary tab. However, for Outage Requests with a recurrence of "Noncontinuous", the user has the ability to modify the constraint value for a specific outage period.

	Planned Start	Planned End	Actual Start Actual End	Equipment	Constraint
×	2016/04/28 10:00	2016/05/01 18:00	-	Filter 001	DRATE: 140 MVAR Out 🛛
×	2016/05/02 10:00	2016/05/02 18:00	-	Filter 001	DRATE: 140 MVAR Out 🗹

To do this, the user must click the pencil icon in the Constraint column for the equipment of the Outage Period. The constraint value for the selected outage period and equipment will be highlighted where the user can either type in the value in the text field or make use of the scroll buttons to move the constraint value up or down.



Note that validations for the constraint value are in place when the Outage Request is submitted/saved such that a negative value is not allowed and that it will not allow a value greater than the maximum level noted on the relevant equipment attribute (Rated MW, Rated MVAR In, Rated MVAR Out).

5.4.8. Outage Request Control Usage: Attachments

5.4.8.1. Attaching a File to an Outage Request

On the Attachments tab, a user can attach files of valid file types and size limits. The user clicks on the "Add" button just below the Attachments grid on the right side.

Outage Rec	quest:	0-0000000	rev. 1 Planne	d (New)	🗲 Back 🔂 Ne	w + Duplicate	A Home
Request Summary	Details	Study Attachments	(0)				
Attachments: Added By	3	Added When	File Name	Comments			
						_	
						A	dd
						Save as Draft	Submit

A dialog box will appear where the user may enter a title/comment for the attachment. Note that initially, the text "No file chosen" beside the "Choose File" button indicates that an attachment file has not yet been selected. The user must click on the "Choose File" button.

Select File Attachn	elect File Attachment Attachment Title: Brief desc of the File Attachment File: Choose File No file chosen OK Cance	×
Attachment Title: Attachment File:	Brief desc of the File	Comment/Brief description of the file
		OK Cancel

A Windows file selection dialog box will appear where the user can select a file from their accessible network to attach to the Outage Request.

🔍 🗢 🛄 Desktop 🕨	•	4→ Search I	Desktop	
Organize - New folder			····	
Favorites	Name	Size	Item type	
Desktop	Equinox QA test cases - Results (002).xlsx	20,122 KB	Microsoft Excel W	
Downloads	Equinox_IESO_OCSS_Design_Document_v_1 0_POST_SIGNING_UPDATES_v_8 0.d	1,816 KB	Microsoft Word D	
Recent Places	Equinox_JESO_OCSS_Design_Document_v_1 0_POST_SIGNING_UPDATES_v_9.docx	1,830 KB	Microsoft Word D	
	Equinox_IESO_OCSS_Design_Document_v_1 0_POST_SIGNING_UPDATES_v_12 (2)	1,935 KB	Microsoft Word D	
Libraries	Equinox_IESO_OCSS_Design_Document_v_1 0_POST_SIGNING_UPDATES_v_12.do	1,935 KB	Microsoft Word D	
Documents	Equinox_IESO_OCSS_Design_Document_v_1.0_POST_SIGNING_UPDATES_v_7.docx	1,741 KB	Microsoft Word D	
Music	尾 error.png	24 KB	PNG image	
Pictures	🔊 ExamDiff	1 KB	Shortcut	
Videos	Reg FB9364-Test Evidence.png	193 KB	PNG image	
-	IESO-Logging-Application-User-Guide v1.0.docx	2,152 KB	Microsoft Word D	
Computer	🛃 Inbox	2 KB	Shortcut	
Local Disk (C:)	JBK_paysheet_20150927.xlsx	18 KB	Microsoft Excel W	
Local Disk (D:)	Jerry Most Restrictive Query Test.txt	203 KB	Text Document	
Seagate Backup Plus Drive (G:)	CutageRequest_1-00000029 (4).doc	116 KB	Microsoft Word 9	
Installers (I:)	OutageRequestStateTransition.feature.cs	41 KB	Visual C# Source f	
CROW V6 (J:)	Powershell 4 Windows6.1-KB2819745 -x64-MultiPkg.msu	18,852 KB	Microsoft Update	
Business Development (M:)	Powershell scripts for getting updates.txt	3 KB	Text Document	
CROW Product Documentation (0:)	Regression IESO.txt	2 KB	Text Document	
CROW Prototypes (P:)	requirements_accavdar-e1318187040437.jpg	61 KB	JPEG image	
CROW Implementation Projects (Q:)	stacktrace.txt	2 KB	Text Document	
CROW Change Requests (R:)	stacktrace-web.txt	4 KB	Text Document	
CROW Builds (S:)	State Transition Feature	94 KB	File	
CROW Images (T:)	TechTalk.SpecFlow.VsIntegration.vsix	4,962 KB	Microsoft Visual S	
Jerry Home Directory (U:)	tes.exe	0 KB	Application	
CROW Support (V:)	TEST FDD FILE.docx	12 KB	Microsoft Word D	
Airlines - Web (W:)	TEST SLD FILE.docx	12 KB	Microsoft Word D	
CROW Production Versions (X:)	test.txt	3 KB	Text Document	
CROW Documentation (Y:)	test2.txt	5 KB	Text Document	
	🖪 VisualHG.vsix	166 KB	Microsoft Visual S	
Vetwork	Web.config	6 KB	CONFIG File	
	< [_		
File name: TEST FDD FILE.docx				

The user selects the file and clicks the "Open" button or simply double clicks the file. The file name of the selected file will be displayed in the previous dialog box ("Select File Attachment") next to the "Choose File" button indicating that the file is ready to be attached to the Outage Request.

Select File Attachn	ient	x
	le la	
Attachment Title:	Brief desc of the File	
Attachment File:	Choose File TEST FDD FILE.docx	
	OK Cancel	

The user must click the "OK" button to proceed. A new row will be added in the Attachments grid which shows the user who attached the file, the date and time when the file was attached, the file name of the document to be attached and the Title/Comments.

Out	age Request: 0- est Summary Details St	Attachments (rev. 1 Planned (Ne 1)	w)	🗲 Back 🔒 New 🕂 Duplica	te 💏 Home
At	ttachments:					
1 1 1	Added By	Added When	File Name	Comments		
	X Submitter, PUone	2016/03/23 16:05	TEST FDD FILE.docx	Brief desc of the File		2
						Add
					Save as Draft	Submit

The user may go into edit mode for the Title/Comments of the file by clicking on the "Pencil" icon in the Comments column of the row holding the file.

Attachments:	Study Attachments (ev. 1 Planned (N 1)	New) 🗲 Back	New + Duplicat	te 🕈 Home
Added By	Added When	File Name	Comments		
X Submitter, PUone	2016/03/23 16:05	TEST FDD FILE.docx	Brief desc of the File		Add Click here to enter title
	Pencil icon to ed file to be attach	it the Title/Comments ed to the Outage Req	of the uest	Save as Draft	Submit

The Comments field gets highlighted after the click action.

Outage Request: Request Summary Details	O-00000000 Study Attachments	rev. 1 Planned (I ⁽¹⁾	New)	🗰 Back	New + Duplical	e 🛉 Home
Attachments:						
Added By	Added When	File Name	Comments			
X Submitter, PUone	2016/03/23 16:05	TEST FDD FILE.docx	Brief desc of the File			
						Add
-					Save as Draft	Submit
					6	

The user may type in the new Title/Comments of the file and must hit the "Enter" or "Tab" key to leave edit mode for the Title/Comments cell.

Duta	ge Request: 0-	1 0000000 I	ev. 1 Planned (N	New)	🗲 Back 🔒 Ne	w + Duplicate	Home
Reques	t Summary Details St	udy Attachments (1)				
Atta	chments:						
	Added By	Added When	File Name	Comments			
×	Submitter, PUone	2016/03/23 16:05	TEST FDD FILE.docx	Brief desc of the File			
						(Add
					(Save as Draft	Submit

5.4.8.2. Removing an Attachment from an Outage Request

Under the Attachments tab, user can remove an attached file from an Outage Request. To do so the user must click on the "X" icon in the first column of the row of the file attachment.

Outage Request: 0	-00000000	rev. 1 Planned (N	New) 🖛 Back	👌 New 🕂 Duplicate 👫 Home
Request Summary Details S	tudy Attachments	(2)		
Attachments:	Added When	File Name	Comments	
X Submitter, PUone	2016/03/23 16:05	TEST FDD FILE.docx	This is the new title for the file	1
Submitter, PUone	2016/03/23 16:25	TEST SLD FILE.docx	File to be deleted	
C)				Add
				Save as Draft Submit
	The u	ser must click this "X"	icon if the user wishes	
		to delete this particu		

When the user clicks on the "X" icon, the file attachment is removed from the Attachments grid.

Outage	Request:	0-0000000	rev. 1 Planned (N	lew) 🗲
Request Su	mmary Details	Study Attachments	(1)	
Attach	nents:			
Ad	lded By	Added When	File Name	Comments
X Su	bmitter, PUone	2016/03/23 16:05	TEST FDD FILE.docx	Brief desc of the File

5.4.9. Outage Request Field Access

The various fields present on the outage request are presented as either editable or read-only based on the current user's role permissions and the current state of the outage request.

5.4.10. Outage Request Significant Field Edits and the Priority Date

A Priority Date date/time value is tracked at the outage request level. The Priority Date will be automatically set to the current date/time anytime a significant edit is made on the outage request that is beyond the outage status of Draft.

5.4.10.1. Rule Exception for Outage Requests in the "At Risk" status

An outage request currently in the "At Risk" status and having its Planned Start date modified in a significant manner will move to the "Submitted" status, and will maintain its Priority Date if all of the following are true:

- The Planned Start date is currently within the first 3 months of the Quarterly coverage period that corresponds to the current Quarterly study period (or, if there is no current quarterly study period, the quarterly coverage period that corresponds to the most recent quarterly study period that has passed).
- AND the Planned Start is changed to be ≥ 00:00:00 of the first day of the quarterly coverage period that corresponds to the next quarterly study period.
- AND the date edit is made prior to the start of the next quarterly study period.

5.4.10.2. Rule Exception for Outage Requests in the "Negotiate" status

The Priority Date will be maintained if the outage request is in the "Negotiate" status and the "Commit" action is used to save any edit (significant or insignificant).

Transitions from "Negotiate" upon "Commit" action:

- If a significant change is not made (as per Market Manual 7.3 Sec 2.2.1), then the outage goes into the previous state;
- If a significant change is made (as per Market Manual 7.3 Sec 2.2.1), and the previous status was Advanced Approved then the outage goes into "Study" state;
- If the Planned Start is changed to be outside the current study period, and the previous status was "Study":
 - If the outage is Planned and there is no lead time rule violation, then the outage goes into Submitted; OR
 - If the outage is Planned and there is a lead-time rule violation, then the outage goes into "Study" state; OR
 - If the outage is not Planned, then the outage goes into "Study" state.

From the "Negotiate" state, users have the ability to cancel an outage request.

5.4.11. Extending an Implemented Outage Request

Outage Requests in the "Implemented" status and having a Priority Code of "Forced" or "Urgent", will allow an edit to the Planned End date (i.e. edit the final outage period's Planned End date to extend the period) to extend the outage duration. The Planned End date may also be moved back but cannot be put into the past.

Out	Outage Periods:					
	Planned Start	Planned End	Actual Start Actual End			
	2016/04/26 18:28	2016/04/28 16:00	2016/04/26 18:28 -			
	2016/04/29 18:27	2016/04/30 16:00	:			

Outage Requests in the "Implemented" status and having a Priority Code of "Planned", "Informational" or "Opportunity" will allow an edit to the Planned End date to extend the outage duration. When the outage request level Planned End date extension occurs (i.e. when the final outage period's Planned End date is extended), the outage Priority Code will change to indicate 'Forced Extended'. The Planned End date may also be moved back but cannot be put into the past.

*Priority Code:	Forced Extended T
-----------------	--------------------------

5.4.12. Outage Period Date Shift

Outage requests that have a Recurrence type of "Noncontinuous" provide the user with the capability to shift the date/times of all outage periods by the same offset amount, keeping the period duration. The date shift functionality is available only until the outage request first gets Implemented.

*Planned Start:	2016/04/28 08:00	*Planned Complete:	2016/05/03 16:00	
*Outage Duration:	5.3 Day(s) 🔻	*Recurrence:	Noncontinuous	۲



Any edit the user makes to the overall outage Planned Start date/time on the Summary tab (forward or backward) will trigger the period date/time shift.

Each outage period will shift its Planned Start date/time and Planned End date/time by the same amount of offset created by the edit of the overall outage Planned Start date/time. Each outage period's duration will remain the same but the outage period Planned Start and period Planned End date/times will all be offset in every outage period.

*Planned Start:	2016/04/28 10:00	*Planned Complete:	2016/05/03 18:00
*Outage Duration:	5.3 Day(s) 🔻	*Recurrence:	Noncontinuous
Outage Periode			
Planned Start	Planned End		
× 2016/04/28 10:00	2016/05/01 18:00		
× 2016/05/02 10:00	2016/05/02 18:00		
× 2016/05/03 10:00	2016/05/03 18:00		

5.4.13. Outage Request Action Dialogs

For some state transition actions extra information is required as input from the user. In these cases, CROW will present the user with a dialog box upon initiating the action.

5.4.13.1. Implement Action

A dialog box is presented to allow the edit of the Actual Start date/time value for the outage period being Implemented (NOTE: only one outage period may be Implemented at any given time). The default Actual Start value is the current date/time.

Implement Outage		×
Outage #1-00000011 rev. 3 S	TNA Generator 003 OOS	
Log Outage Start For:	Element Equipment Req. Type	
	STNA Generator 003 OOS	
Actual Start When:	2016 / 04 / 27 🗰 10:24	
	Implement	ose

After editing the Actual Start When date/time value the user can either finish the Implement action by clicking the "Implement" button or abort the action by clicking the "Close" button. The outage period that the user has implemented will show its outage period status as "Implemented".

5.4.13.2. Cancel Action

A dialog box is presented to allow the user to choose to either cancel the entire outage request or cancel only some select outage periods. Any outage periods that are available for cancellation are listed in a grid on the dialog for the user to select. The user must also select a reason for the cancellation from a drop down list, and if the selected reason is "Other" the user must enter a text description of the reason.

The two options to Cancel:

- Entire Outage all outage periods that are not in an end state will become Cancelled. All affected outage periods will display the cancel code and cancel comment if one is available.
- Selected Outage Periods the selected outage period/s will become Cancelled. These outage period/s will display the reason for cancellation code and comment if one is available. There is no effect on any other outage periods.

Cancel Request							×
Outage #1-00000008 re Cancel Request:	v. 7 S © Enti ® Sele	STNA Filter 00 re Outage Req acted Outage P	1 DRATE uest eriod(s)	: 140	MVAR Out		
Log Cancel Request for:	Cancel	Planned Start	Planned	d End	Status	Code	*
		2016/04/28 08:00:00	2016/05/01 16:00:00		Draft		
		2016/05/02	2016/05/02		Draft		-
Reason for Cancel Request:	Other A comm selected	nent is required I d Other as the re	▼ here becaus ason for ca	se the u Incellati	user ion.		
				Ca	ancel Reques	t C	lose

After selecting a reason for cancellation and editing the date/time value the user can either finish the Cancel action by clicking the "Cancel Request" button or abort the action by clicking the "Close" button.

5.4.13.3. Complete Outage Action

A dialog box is presented to allow the edit of the Actual End Date/Time value for outage period Completion. The default value is the current date/time.

The user may select one of two options to Complete:

• Entire Outage – the currently Implemented outage period will become Completed. Any other outage periods that remain after the completed outage period become Cancelled.

• Current Daily Outage - the currently Implemented outage period will become Completed. This has no effect on any other outage periods.

Complete Outage		×
Outage #1-00000011 rev Complete Outage:	. 4 STNA Generator 003 00S	
Log Complete Outage for:	Element Engineent Reg. Type	
	STNA Generator 003 005	
Complete Outage When:	2016 / 04 / 27 11:01	
	Complete Outage Close	2

After selecting a completion type and editing the date/time value the user can either finish the Complete action by clicking the "Complete Outage" button or abort the action by clicking the "Cancel" button.

5.4.14. Outage Request Duplication

The outage request duplicate feature is available to users as a button near the top-right of the outage request form.

Outage Rec	uest:	1-00	000004 rev.	35 Impler	mented Fo	rced E	xtended			1
						🗭 Back	W Export	New	+ Duplicate	🗎 Home
Request Summary	Details	Study	Attachments (0)							
IESO Outage II):	1-000	000004 Rev #: 35	▼ History	Markat Part	cinant	Che	ck Conflict	s	rətor

The outage request duplicate feature copies the following data fields from the source to the new outage request:

- The collection of Requested Equipment
- The Requested Equipment Constraint type, Constraint value
- Planned Start (overall and period level)
- Planned End (overall and period level)
- Profiles (with the exception of Actual Start, Actual End, Status, Reason Code, and Reason Description)
- Recurrence
- Duration
- Max Recall Time
- Max Recall Unit
- Requested Equipment Description column

- Recall Comments
- Priority Code
- Purpose Code

The following fields will be reset during duplication:

• The Requested Equipment XFR To MKT will be cleared out (and therefore the calculated MKT XFR flag will be cleared as a result)

The following will not be duplicated:

- Priority Date
- Outage Description
- Answers to Low-Impact questions
- Market Participant to IESO Comments (Study tab)
- Conflict Rationale (Study tab)

utage Rec	uest: 0-0000	0000 rev. 1 Pla	anned (Dupl	icate)	-	Back 🕞 New 🚽	Duplicat	e 🛉 Ho
equest Summary	Details Study At	tachments (0)						
		_						
IESO Outage II): Rev #:	1 V History				Check Conflicts		
Created By: Submitter Org:	-		Market	Participant:		ORGANIZATION 1		
Outage Status	ORGANIZ		Predec	05508				
Outage Status.	2017/08/18 TESTER, A	8 13:07 BC	Linked	Outages:				
*Planned Start	2017/08/2	5 08:00	*Plann	ed Complete		2017/08/25 16:00		
*Outage Durati	ion: 8	Hour(s) 🗸	*Recur	rence:		Continuous 🗸		
*Priority Code:	Planned	v	Priority	Date:				
*Purpose Code	Commissi	oning 🗸	*Max R	tecall:		2 Hour(s)	~	
*Purpose Desci	ription:		Recall	Comments:		Non-Recallable		
Outage Flags:	FAA Request Weekly A	A Assessment Eligibilit	y : n/a					$\widehat{}$
Requested Equip	oment:							
Station	Equip. Name	Equip. Class	Equip. Description		Constraint		Voltage Class	Facility Class
X TEST FACIL	Tone Comm 1	Tone Communicatio	Test		005		n/a	2
X STATION 1	CB1	Breaker			005		115 kV	2
		<					_	>
								Add
Telemetry Scaling I	mpact?	Yes O No	○ n/a					
*Low Impact Que	estions:							
Only a Loss Of Redu	undancy?		No					
RTU or HUB Affecte	d?	O Yes	No					

The user may edit the duplicated outage request and save it or initiate a state transition action.

5.4.15. Outage Request Conflict Checking

There are built in conflict checking rules to identify when two or more outage requests being entered for the same equipment with conflicting planned date ranges and equipment constraints along with other outage request characteristics.

NOTE: In addition to the basic conflict checking routine there is also conflict checking done against lists of Undesirable Equipment Combinations.

CROW will warn the user of conflicting outage requests at the time he/she is saving or state transitioning the entered data. As well the user can perform a conflict check by clicking on the "Check Conflicts" button available on the outage request form "Request Summary" tab.

Outage Req	uest:	1-00	000007 rev	1 Submitted Plan	ned			
					🗲 Back	W Export	New	+
Request Summary	Details	Study	Attachments (0)					
IESO Outage IE):	1-00	000007 Rev #: 1	History		Check	k Conflict	s

The outage request number that is in conflict is displayed as a clickable hyperlink.



NOTE: When an outage conflict is created during a save or state transition action or a conflict is present when the Priority Date has changed, the user will be asked to provide a Conflict Rationale comment (if none exists) before being able to complete the action. This requirement will be foregone for the following outage Priorities:

- Forced
- Forced Extended
- Urgent



5.4.16. Outage Request Export

The user may create a Word document report of an open outage request form by clicking the "W Export" button near the top-right of the outage request form.

Outage Rec	uest:	1-00	000007 rev.	3 Sub	omitted	Planne	ed			
							+	Back	🕛 Ехро	rt
Request Summary	Details	Study	Attachments (0)							
IESO Outage II).	1-000	000007 Rev #· 3 T	History					0	heck

The Word document will be downloaded via the user's web browser.

- End of Section -

6. Outage Request Index

The main screen in CROW Web is the Outage Request Index. This is a filtered tabular listing of outage requests in the system. Users may select pre-configured summaries of outage request data to view, or users may create their own views by way of setting up various filters to meet their specific requirements. By way of a polling mechanism the data displayed in the Outage Request Index remains up-to-date as new information is added or updated in the underlying database.

NOTE: The user must remove all filters prior to using the Search function.

Each row in the Outage Request Index grid represents one Outage Request which can be opened into its own Outage Request form to view all the details.

utage Requ	iest Inde	x							
ổ Refresh 5 M	inutes 🔻	Displaying 8 of	8 records			👌 Clear Highlights 🔽 New 👔 Excel	🚔 Gantt 🛛 📙	Print	② View Definition
Request Date: Control Centre Voltage Class: Outage Numbe	2016 ● Range is betwee ar ▼ 1 -	/ 04 / 27 [e Overlap Sta en - • anc	■ 00:00 t rts Between I ▼ kV	o 2016 / 05 // Ends Between	10 🎟 0	0:00 Request Status: All Constraint: All Request Priority: All	• •		
						Click to open/close OPTIONS PANEL			
					Outao	e Requests appearing in Dark Violet are overdue.			
Has Conflict	IESO ID/ Rev. #/ Status	Planned Start	Planned End	Priority	Purpose Code	Purpose Description	Request Weekly AA	FAA Flag	Equipment Label
(All)	(All)	(All)	(All)	(All)	(All)	(All)	(All)	(All)	(All)
	1-00000003 Revision #8 Rejected	2016/04/26 08:00	2016/04/30 16:00	Planned	СОМ	fdsaasdf	false		STNA Capacitor 003
Y	1-00000004 Revision #35 Implemented	2016/05/03 08:00	2016/05/06 19:00	Forced Extended	СОМ	Needs to be checked on.	false		STNA Breaker 001, STNA Tone Comm Channel 002
	1-00000005 Revision #4 Submitted	2016/04/28 08:00	2016/04/28 16:00	Urgent	ENV	save and close test	false		STNA Breaker 004
Y	1-00000007	2016/05/05	2016/05/06	Planned	MTCE	This is a conflicting outage.	false		STNA Breaker 001, STNA

6.1. Server Filters vs. Client Filters

There are two types of filters present on the Outage Request Index screen – Server Filters and Client Filters. These two filter types serve different purposes and the distinction is important to take note of.

Server Filters are used to form the query that is applied to the outage request records in the database. The resulting set of data from that query is returned to the user's local machine. To avoid using up large amounts of a local machine's memory and for better performance it is strongly advised that the user employ Server Filters to limit the set of data as much as possible. Note that there is a display limit built into Outage Request Index page of 300 visible records.

Client Filters (column header filters) are used to further filter the set of data that has already been returned to the user's local machine by the server filter query (as noted in the paragraph above). The client filters are a string matching search to narrow the view of the set of outage request data.

Best results and performance are achieved by using the following method of filtering:

- 1) First filter as much as possible with Server Filters to reduce unnecessary data overhead.
- 2) Then apply **Client Filters** to target a smaller subset of outage request data.

6.2. Server Filters

The **Server Filter** controls are located in the collapsible "Options Panel" on the Outage Request Index screen, just above the data results grid. It displays a number of controls the user may set to configure outage request start date range, outage request constraints, outage request status, outage request priority, and more. These inputs are used inclusively in a query against the database to return a general set of data records.

Server Filters outlined in red

Outage	Requ	est Inde	<												
🕏 Refre	esh 5 Mi	nutes 🔻	Displaying 8 of	8 records				🤳 Clear	Highlights	New	Excel	🚔 Gantt	B P	Print	🤰 View D
Requ Con Volta Outa	iest Date: trol Centre ige Class: age Numbe	2016 ,	1 04 / 27 € Overlap ○ Sta n _ ▼ and	i _ ▼ kV	0 2016 / 05 / P Ends Between	10 🏼 0	©:00 [⊕] Click	Request Status: Constraint: Request Priority: to open/close OPTION:	All All All S PANEL				*		
						Outag	e Requests	s appearing in Dark Vie	olet are ove	rdue.					
	Has Conflict	IESO ID/ Rev. #/ Status	Planned Start	Planned End	Priority	Purpose Code	Purpose	Description				Reques Weekly	st AA	FAA Flag	Equipm
	(All)	(All)	(All)	(All)	(All)	(All)	(All)					(All)		(All)	(All)
		1-0000003 Revision #8 Rejected	2016/04/26 08:00	2016/04/30 16:00	Planned	СОМ	fdsaasdf					false			STNA Cap
	Y	1-00000004 Revision #35 Implemented	2016/05/03 08:00	2016/05/06 19:00	Forced Extended	СОМ	Needs to b	e checked on.				false			STNA Bre Tone Con
		1.00000005	2010/01/20	2016/04/20	Linnah	TABL		lana kark				false			CTNA Day

6.2.1. Dates Filter

Request Date:	2016	/ 04	/ 27	00:00	to 2016	/ 05 / 10	00:00

The **Dates** filter is used to set the "From" date/time and "To" date/time of the date range to consider in the query for outage request records.

There are a couple ways to edit the values:

Directly typing into the "From" or the "To" date/time fields.
 Just select the portion of the date or time to edit and type in a valid number.

2) Use the pop-up calendar control to select a "From" or a "To" date.

Click on the calendar icon at the right side of the date field and select a date from the calendar dialog that appears.



The user may click on the "previous" and "next" links to move to adjacent months. The user must click on a date link to select the date to populate the control with. The user may cancel the date selection action by clicking on the "Cancel" button at the bottom of the calendar dialog.

a. After entering a new date, the user should click on the "Refresh" button at the top-left of the page if they wish to apply the new date/s to the query immediately and refresh the outage request listings.

The user must click on the "Refresh" button near the top-left of the index page to have the new filter settings take effect.

6.2.2. Dates Filter Options

Along with the "From/To" date range controls there is a date range overlap comparison option that is applied to the date filtering to modify the query.



6.2.2.1. Date Range Overlap Comparison

The radio button set for the date range comparison type has four options:

- Range Overlap any overlap of the Outage Request Index "From/To" date range with the outage date range.
- Starts Between the outage must have a starting date within the Outage Request Index "From/To" date range.
- Ends Between the outage must have an ending date within the Outage Request Index "From/To" date range.

6.2.2.2. Query Uses Overall Outage Request Level Planned Dates

	Query Date Logic
Range Overlap	Returns outage requests that have any overlap between the overall Outage Request level Planned dates and the query "From/To" date range.
Starts Between	Returns outage requests that have an overall Outage Request level Planned Start date within the query "From/To" date range.
Ends Between	Returns outage requests that have an overall Outage Request level Planned End date within the query "From/To" date range.

The user must click on the "Refresh" button near the top-left of the index page to have the new filter settings take effect.

6.2.3. Control Centre Filter

The Control Centre filter is used to narrow the search query down to only those outage requests that contain equipment that is operated by the selected control centre/s.

To set this filter the user must select "Control Centre" from the drop down box (if it is not already selected).

С	Circuit/Equipment	
C	Control Centre	List
S	station/Location	Listin

Then the user must enter the beginning characters of the name or abbreviation of the Control Center to use in the filter and click the "List..." button or hit the tab key to move out of the text field.

Control Centre	V CC for	Liet

This will open up a selection dialog box which lists the matching control centres to choose from.

Select Contro	l Centre (5 matches):	×
Abbrev	Name	
✓ PU1_CC	CC for Power Utility 1	
PU2_CC	CC for Power Utility 2	
PU3_CC	CC for Power Utility 3	
PU4_CC	CC for Power Utility 4	
PU5_CC	CC for Power Utility 5	
	Select Can	cel

The user must click on the checkboxes to tick the control centres to include as the filter.

To cancel out of the setting the filter and leave it as it was, the user can click the "Cancel" button. The user can complete the setting of the filter by clicking the "Select" button.

The filter field will be populated with a comma delimited list of abbreviations of the selected control centers.

Control Centre PU1_CC, PU3_CC List...

If the user wishes to add to the list, he can do so by adding a comma to the end of the list in the text field and then typing the beginning of the name or abbreviation of another control center. The user must then click the "List..." button or hit the tab key to move out of the text field and bring up the Control Center selection dialog.

Control Centre V PU1_CC, PU3_CC, cc for	List
---	------

If the user wishes to remove one or more control centers from the filter list, he can simply highlight them in the text field and hit the delete key on the keyboard.

The user must click on the "Refresh" button near the top-left of the index page to have the new filter settings take effect.

6.2.4. Station Filter

The Station filter is used to narrow the search query down to only those outage requests that contain equipment that is associated with the selected stations.

To set this filter the user must select "Station/Location" from the drop down box (if it is not already selected).



Then the user must enter the beginning characters of the name or abbreviation of the Station to use in the filter and click the "List..." button or hit the tab key to move out of the text field.

Station/Location	V Station	Liet
Station/Location	Station	LISU

This will open up a selection dialog box which lists the matching stations to choose from.

Abbrev	Name	
STNA	STATION A	
StNbE	STATION BE	
StNbE	STATION BE	
	Select Ca	ncel
	Abbrev STNA StNbE	Abbrev Name STNA STATION A StNbE STATION BE Select Ca

The user must click on the checkboxes to tick the stations to include as the filter.

To cancel out of the setting the filter and leave it as it was, the user can click the "Cancel" button. The user can complete the setting of the filter by clicking the "Select" button.

The filter field will be populated with a comma delimited list of abbreviations of the selected stations.

Chatian / a cation T CTNA CANEE	
Station/Location + STNA, StNDE LIS	t

If the user wishes to add to the list, he can do so by adding a comma to the end of the list in the text field and then typing the beginning of the name or abbreviation of another station. The user must then click the "List..." button or hit the tab key to move out of the text field and bring up the Station/Location selection dialog.

Station/Location	¥	STNA, StNbE	L	ist
-				

If the user wishes to remove one or more stations from the filter list, he can simply highlight them in the text field and hit the delete key on the keyboard.

The user must click on the "Refresh" button near the top-left of the index page to have the new filter settings take effect.
6.2.5. Circuit/Equipment Filter

The Circuit/Equipment filter is used to narrow the search query down to only those outage requests that contain the equipment in this filter.

To set this filter the user must select "Circuit/Equipment" from the drop down box (if it is not already selected).

Station/Location 🔻		List
Circuit/Equipment		
Control Centre	is between 🔻 and 🔻 kV	
Station/Location	1 - • • Find	

Then the user must enter the beginning characters of the name or label of the equipment to use in the filter and click the "List..." button or hit the tab key to move out of the text field.

Circuit/Equipment ▼	Capac	List
	L	· · · · · · · · · · · · · · · · · · ·

This will open up a selection dialog box which lists the matching equipment items to choose from.

Sele	ct Circuits/Equipment (9 matches):	×
	Name	
v	STNA Capacitor 001	
	STNA Capacitor 002	
	STNA Capacitor 003	
	STNB Capacitor 001	
	STND Capacitor 001	
	STNE Capacitor 001	
	STNG Capacitor 001	
	STNI Capacitor 001	
	STNJ Capacitor 001	
	Select Cance	el

The user must click on the checkboxes to tick the equipment to include in the filter.

To cancel out of the setting the filter and leave it as it was, the user can click the "Cancel" button. The user can complete the setting of the filter by clicking the "Select" button.

The filter field will be populated with a comma delimited list of labels of the selected equipment items.

Circuit/Equipment ▼ STNA Capacitor 001, STNA Capacitor 003, STNB Cal List...

If the user wishes to add to the list, he can do so by adding a comma to the end of the list in the text field and then typing the beginning of the name or label of another equipment item. The user must then click the "List..." button or hit the tab key to move out of the text field and bring up the Circuit/Equipment selection dialog.

Circuit/Equipment 1, STNA Capacitor 003, STNB Capacitor 001, STNC List	5t
---	----

If the user wishes to remove one or more equipment items from the filter list, he can simply highlight them in the text field and hit the delete key on the keyboard.

The user must click on the "Refresh" button near the top-left of the index page to have the new filter settings take effect.

6.2.6. Voltage Class Range Filter

The Voltage Class filter is used to narrow the search query down to only those outage requests that contain equipment having a Voltage Class attribute value within the range entered in the filter. NOTE: The Outage Request Index "Voltage Class" column is designed to display the maximum voltage class attribute value present on the outage request, however this filter will look at <u>all</u> equipment item voltage class values on the outage request rather than only the maximum value. So it is possible to see a displayed "Voltage Class" column data value higher than the upper end of the input range set in this filter, but the associated outage request will contain other equipment items within filtered voltage class range.

Voltage Class: is between - ▼ and - ▼ kV

To set this filter the user selects a numeric value in one or both fields. The lower number must be in the left field.



The values entered into the fields are used inclusively in the query parameters. If a field is set to blank (-) it is assumed to have no set limit, so a setting that has the left field set to blank (-) is assumed to be a value of 0. A right field setting of blank (-) is assumed to be infinite.

The user must click on the "Refresh" button near the top-left of the index page to have the new filter settings take effect.

6.2.7. Request Status Filter

The Request Status filter is used to narrow the search query down to only those outage requests that are in the selected request status type/s.

Request Status:	All	

To set this filter the user simply clicks the drop down arrow on the filter control. This will open up a drop down box which lists the Status types to choose from.

Request Status:	Draft, Submitted, Implemented 🔹
Constraint:	
Request Priority:	🕑 Draft
Request Friority.	Submitted
	Negotiate
	Study
	Adv Approved
	Final Approved
k to open/close O	Rejected
	Cancelled
sts appearing in D	🗹 Implemented
nes appearing in s	Completed
	Recalled
iption	Revoked
	At Risk

The user must tick the checkboxes of the Status types to include as the filter. The user may untick checkboxes to remove the Status type from the filter.

The user must click on the "Refresh" button near the top-left of the index page to have the new filter settings take effect.

6.2.8. Constraint Filter

The Constraint filter is used to narrow the search query down to only those outage requests that contain equipment that is constrained in the manner of the selected constraint type/s.

Constraint: All	•
-----------------	---

To set this filter the user simply clicks the drop down arrow on the filter control. This will open up a drop down box which lists the Constraint Types to choose from.

Constraint:	OOS, DRATE, INFO
Request Priority:	
	✓ oos
	C DRATE
	HOLDOFF
	MUSTRUN
	✓ INFO
k to open/close O	IS IS
	PROT OOS
sts appearing in D	AVR/PSS OOS
	BF PROT OOS
	ASP OOS
iption	🔲 ВТСТ
	ABNO

The user must tick the checkboxes of the Constraint types to include as the filter. The user may untick checkboxes to remove the Constraint type from the filter.

The user must click on the "Refresh" button near the top-left of the index page to have the new filter settings take effect.

6.2.9. Priority Filter

The Priority filter is used to narrow the search query down to only those outage requests that are in the selected request status type/s.

Request Priority: All	•
-----------------------	---

To set this filter the user simply clicks the drop down arrow on the filter control. This will open up a drop down box which lists the Priority types to choose from.

	Forced, Planned, Informational							
	All	٦						
	Forced							
	Opportunity							
	Planned							
k to open/close OI	Informational							
	Urgent Urgent							
	Forced Extended							

The user must tick the checkboxes of the Priority types to include as the filter. The user may untick checkboxes to remove a Priority type from the filter.

The user must click on the "Refresh" button near the top-left of the index page to have the new filter settings take effect.

6.3. Client Filters

The client-side filtering capabilities are available by clicking on the light-yellow colored row below the column titles. These filters operate on the set of data records that has been returned by the general Server Filter search criteria described above, allowing the user to refine their visible record set using some simple string filtering.

Client Filters row outlined in red

	Outage Requests appearing in Dark Violet are overdue.										
Has Conflict	IESO ID/ Rev. #/ Status	Planned Start	Planned End	Priority	Purpose Code	Purpose Description	Request Weekly AA	FAA Flag	Equipment Label	VoltageClass	
(All)	(All)	(All)	(All)	forced	(All)	(All)	(All)	(All)	(All)	(All)	
Y	1-00000004 Revision #35 Implemented	2016/05/03 08:00	2016/05/06 19:00	Forced Extended	СОМ	Needs to be checked on.	false		STNA Breaker 001, STNA Tone Comm Channel 002	115	
	1-00000009 Revision #1 Implemented	2016/04/26 18:27	2016/04/30 16:00	Forced	ENV	afasdf	false		STNA Converter 002	230	
	1-00000010 Revision #1 Implemented	2016/04/26 18:28	2016/04/30 16:00	Forced	ARFS	asdf asdf	false		STNA Converter 002	230	

The client filters operate on a 'contains string' filter basis. When the user enters a string the list of outage requests will adjust to display only those that contain matches to the filters applied to various columns.

If more than one column is set up with filter criteria, then the different columns' filters are ANDed together.

	Outage Requests appearing in Dark Violet are overdue.									
Has Conflict	IESO ID/ Rev. #/ Status	<u>Planned</u> <u>Start</u>	Planned End	Priority	Purpose Code	Purpose Description	Request Weekly AA	FAA Flag	Equipment Label	VoltageClass
(All)	(All)	(All)	(All)	forced	(All)	(All)	(All)	(All)	Breaker	(IAI)
Y	1-00000004 Revision #35 Implemented	2016/05/03 08:00	2016/05/06 19:00	Forced Extended	сом	Needs to be checked on.	false		STNA Breaker 001, STNA Tone Comm Channel 002	115

A label near the top-left of the Outage Request Index will indicate how many records of the total set available are being displayed.

To remove the client filter the user must click on the yellow filter cell and delete the text entered into it.



6.4. Outage Request Index Display Settings

In addition to data filtering capabilities, the Outage Request Index is color coded and sortable. As well a data column can be used to sort the order of the outage requests presented in the result set.

6.4.1. Sorting

To sort on a particular Outage Request Index column the user must click the column name heading. The user can click the same column heading again to toggle between ascending and descending order.

If the list of outage requests is sorted in ascending order, the column heading will appear in **blue**. If the list is sorted in descending order, the column heading will appear in **red**. See the screens below.



6.4.2. Outage Request Index Font Colors

The color of the fonts displayed in Outage Request Index is used as a quick indicator of Outage Status <u>or</u> of a late starting or finishing outage request.

						Outage Requests appearing in Dark Violet are overdue.
Has Conflict	IESO ID/ Rev. #/ Status	<u>Planned</u> <u>Start</u>	Planned End	Priority	<u>Purpose</u> <u>Code</u>	Purpose Description
(All)	(All)	(All)	(All)	(All)	(All)	(All)
	1-00000003 Revision #8 Rejected	2016/04/26 08:00	2016/04/30 16:00	Planned	СОМ	fdsaasdf
	1-00000009 Revision #1 Implemented	2016/04/26 18:27	2016/04/30 16:00	Forced	ENV	afasdf
	1-00000010 Revision #1 Implemented	2016/04/26 18:28	2016/04/30 16:00	Forced	ARFS	asdf asdf
	1-00000008 Revision #9 Draft	2016/04/28 08:00	2016/05/03 16:00	Urgent	ENV	asefasdfasdf
	1-0000005 Revision #4 Submitted	2016/04/28 08:00	2016/04/28 16:00	Urgent	ENV	save and close test
Y	1-00000004 Revision #35 Implemented	2016/05/03 08:00	2016/05/06 19:00	Forced Extended	COM	Needs to be checked on.
Y	1-00000007 Revision #4 Study	2016/05/05 08:00	2016/05/06 18:00	Planned	MTCE	This is a conflicting outage.

Mainly, font colors are associated with Outage Status unless an outage is late starting or late finishing. If an outage request is either late to start or late to finish then the outage status font color will be overridden by the "Late To Start" or "Late To Finish" font color. NOTE: This update will only happen when a change to an outage is made, or the F5 button is pressed; the Refresh button will not retrieve this update.

- An outage request is considered "Late to Start" if the Planned Start + grace period is prior to the current time.
- An outage request is considered "Late to Finish" if the Planned End + grace period is prior to the current time.

6.4.3. Background Highlighting

Background highlighting in the View Summaries is enabled by default to indicate new/revised outage requests.

Has Conflict	IESO ID/ Rev. #/ Status	Planned Start	Planned End	Priority	Purpos Code
(All)	(All)	(All)	(All)	(All)	(All)
	1-00000003 Revision #8 Rejected	2016/04/26 08:00	2016/04/30 16:00	Planned	СОМ
Y	1-00000004 Revision #10 Adv Approved	2016/05/03 08:00	2016/05/06 18:00	Planned	СОМ
	1-0000005 Revision #3 Submitted	2016/04/28 08:00	2016/04/28 16:00	Urgent	ENV
	1-0000008 Revision #3 Draft	2016/04/28 10:00	2016/05/03 18:00	Urgent	ENV

Background highlighting will be displayed when the outage requests' latest revision date/time is more recent than all of the following:

- the users' most recent opening of the outage request.
- the users' most recent "Clear All Highlights" action.

	кејестеа						
	1-00000009 Revision #1 Implemented	2016/04/26 18:27	2016/04/30 16:00	Forced	ENV	afasdf	false
	1-00000010 Revision #1 Implemented	2016/04/26 18:28	2016/04/30 16:00	Forced	ARFS	asdf asdf	false
	1-00000008 Revision #10 Draft	2016/04/28 08:00	2016/05/03 16:00	Urgent	ENV	asefasdfasdf	false
	1-00000005 Revision #5 Submitted	2016/04/28 08:00	2016/04/28 16:00	Urgent	ENV	save and close test	false
Y	1-00000004 Revision #35 Implemented	2016/05/03 08:00	2016/05/06 19:00	Forced Extended	СОМ	Needs to be checked on.	false

The background highlight will be cleared, only for the individual user, when he/she opens an outage request. Alternatively, the user may click the "Clear Highlights" button located above the server filter area to clear all highlighted outages in the Outage Request Index.

Οι	itage Request Index		
	Sefresh No Auto Refresh ▼ Displaying 7 of 7 records	🥖 Clear Highlights	New
	Request Date: 2016 / 04 / 28 🗰 00:00 to 2016 / 05 / 06 🗰 00:00 Request Status: /	AII	

- End of Section -

7. Outage Request Index Functions

There are a number of functions available on the Outage Request Index page allowing the user to Print, export to Excel, generate a Gantt chart and more.

Outage Request Index								
Bisplaying 7 of 7 records		🥖 Clear Highlights	New	🐮 Excel	🚔 Gantt	🔒 Print	🙆 View Definition	My View 🗸
Request Date: 2016 //04 //28 mm 00:00 to 2016 //05 //06 mm 00:00 • Range Overlap Ostarts Between OEnds Between Control Centre List Voltage Class: is between - V and - V kV Outage Number 1 - 4	Request Status: Constraint: Request Priority	All All All			•			

7.1. Refreshing the Outage Request Index

Users may click on the "Refresh" button any time they wish to refresh the set of outage request data from the database.



There is also a setting to auto-refresh the Outage Request Index page every X minutes. To engage the setting, the user simply makes a selection from the drop down control next to the "Refresh" button. The available selections are to refresh every 5, 10, 15, 30, 45, and 60 minutes.



7.2. Find an Outage Request by Number

If the user knows the outage request number of the outage they would like to open the "Find" function can be used. The user can enter the number of the outage request in the text fields and click the "Find" button. NOTE: the prefixed zeroes on the outage request number do not need to be entered (see the screenshot below).

Outage Number 🗸	1] -	4	Q. Find
Outage Number	-		·	

If the outage request is found, and the user has permissions to view it, the page will change to the outage request form.

7.3. Clear Highlighted Rows

The user may click the "Clear Highlights" button located above the server filter area to clear all highlighted outages in the Outage Request Index.



7.4. Open a New Outage Request Form

The user may click the "New" button located above the server filter area to open up a new outage request form ready for input.



7.5. Excel Export from Outage Request Index

Users can generate an Excel report directly from the listings in Outage Request Index by clicking on the "Excel" button located above the server filter area.



The Excel report will be generated to include all currently visible rows in the Outage Request Index. The report is downloaded to the user's web browser and made available to the user for opening.

	_	-	1	1	1		
- 4	A	B	C	D	E	F	
1	CROW - Ou	itage Request Listi	ng				
2	2016/04/28	14:20					
3							
	Has	IESO ID/ Rev. #/				Purpose	
4	Conflict	Status	Planned Start	Planned End	Priority	Code	Purpose Description
		1-0000009	4/26/2016 18:27	4/30/2016 16:00	Forced	ENV	afasdf
		Revision #1					
5		Implemented					
		1-00000010	4/26/2016 18:28	4/30/2016 16:00	Forced	ARFS	asdf asdf
		Revision #1					
6		Implemented					
	Y	1-00000004	5/3/2016 8:00	5/6/2016 19:00	Forced Extended	COM	Needs to be checked on
		Revision #35					
7		Implemented					

7.6. Gantt Reports from Outage Request Index

A Gantt chart report can be generated in Excel format, containing all of the outage requests currently displayed in the Outage Request Index. Each row will contain some basic information about an outage request along with cell highlighting to indicate days (or weeks) when the outage is in progress.

To generate the report, the user simply clicks on the "Gantt" button located above the server filter area.



A dialog displaying two choices appears:



- Filter at the period level instead of overall outage request level For outages with a "Noncontinuous" recurrence gaps between periods will not be highlighted if the user selects "Yes". If "No" then the overall outage range will be highlighted without regard for gaps between outage periods.
- Report at a weekly format instead of a daily format Selecting "Yes" for this option results in a less
 granular Gantt view of the outage request date ranges. It is used for wider reporting date ranges where
 daily detail is less important. If there is any outage period in a given week the background will be
 highlighted with this option. This option may only be set to "Yes" if the "Filter Period" option (above) is set
 to "No".

Daily Gantt Option

CROW Client Created: 2016/0	CROW Client - Outage Request Listing Created: 2016/04/20 14:15									
Request #	Outage Description	Planned Start	Planned End	Control Centre	Outage Status	Priority	April 20 13 14 15 1 We Th Fr S)16 6 17 18 a Su Mo	19 20 21 Tu We Th	1 22 23 n Fr Sa
1-00000307	STNA Capacitor 001 OOS	5/6/2016 8:00	5/10/2016 16:00	PU1_CC	Draft	Planned	1			
1-00000306	STNC Converter 001 OOS	4/19/2016 8:00	4/19/2016 16:00	PU2_CC	Draft	Urgent				
1-00000305	STNB Generator 001 DRATE 25 MW	4/16/2016 8:00	4/18/2016 16:00	PU1_CC	Draft	Planned				
1-00000304	STNA Breaker 003 OOS	4/16/2016 8:00	4/19/2016 16:00	PU1_CC	Final Approved	Urgent				
1-00000303	STNA Converter 002 OOS	4/16/2016 8:00	4/18/2016 16:00	PU1_CC	Final Approved	Urgent				
1-00000302	STNA Breaker 004 OOS	4/16/2016 8:00	4/19/2016 16:00	PU1_CC	Implemented	Urgent				
1-00000301	STNA Filter 001 OOS	4/15/2016 16:29	4/16/2016 16:00	PU1_CC	Completed	Forced				
1-00000300	STNA Capacitor 001 OOS	4/15/2016 15:40	4/16/2016 16:00	PU1_CC	Implemented	Forced				

Weekly Gantt Option

1 2 3	CROW Client Created: 2016/0	CROW Client - Outage Request Listing Created: 2016/04/20 14:20									
4					Control			04/02	Apr 2	2016	0.4
6	Request #	Outage Description	Planned Start	Planned End	Centre	Outage Status	Priority	Week	Week	Week	04 W
8	1-00000307	STNA Capacitor 001 OOS	5/6/2016 8:00	5/10/2016 16:00	PU1_CC	Draft	Planned				
9	1-00000306	STNC Converter 001 OOS	4/19/2016 8:00	4/19/2016 16:00	PU2_CC	Draft	Urgent				
10	1-00000305	STNB Generator 001 DRATE 25 MW	4/16/2016 8:00	4/18/2016 16:00	PU1_CC	Draft	Planned				
11	1-00000304	STNA Breaker 003 OOS	4/16/2016 8:00	4/19/2016 16:00	PU1_CC	Final Approved	Urgent				
12	1-00000303	STNA Converter 002 OOS	4/16/2016 8:00	4/18/2016 16:00	PU1_CC	Final Approved	Urgent				
13	1-00000302	STNA Breaker 004 OOS	4/16/2016 8:00	4/19/2016 16:00	PU1_CC	Implemented	Urgent				
14	1-00000301	STNA Filter 001 OOS	4/15/2016 16:29	4/16/2016 16:00	PU1_CC	Completed	Forced				
15	1-0000300	STNA Capacitor 001 OOS	4/15/2016 15:40	4/16/2016 16:00	PU1_CC	Implemented	Forced				

7.7. Print Outage Request Index

The user may print the Outage Request Index grid data by clicking on the "Print" button located above the server filter area.



The user's web browser will open up in a print set up view to allow printing of the grid data.

7.8. View Definition Selection

View Definitions are intended as a configured set of filters and display criteria applied to the Outage Request Index. There is a pre-configured view definition named "<default>" included in the list. Users may select a View Definition from the drop down selection list located to the right of the "View Definition" button.

🙆 View Definition	My View <default></default>
	My View

- End of Section -

8. Creating/Editing View Definitions

There are two types of View Definitions in CROW; System and Personal.

A **System** View Definition is one which can be used by all CROW users, but is defined and editable only by a user with CROW administrator level privileges. An example of a System view definition is the "<Default>" view that is configured into the initial CROW installation.

A **Personal** View Definition is one which can be created by any CROW user and may be viewed only by the creator of the view definition.

8.1. Creating a View Definition

The View Definition dialog is accessed by clicking on the "View Definition" button near the top right of the Outage Request Index.



The View Definition dialog provides users with the ability to set up and save view configurations on CROW data using filtering, sorting, ordering and providing features like show/hide, column sizing and a number of other formatting features, all accessible from a simple Edit View Definition dialog (see screen shot, below):

Field Name	Visible	Sort Order	Desc	Col Width	
Has Conflict	\checkmark			60	~
IESO ID/ Rev. #/ Status				90	
Attachments Exist				24	
Linked				24	
Planned Start	\checkmark			80	
Planned End	\checkmark			80	
Priority	\checkmark			103	
Purpose Code	\checkmark			60	
Purpose Description				425	
Request Weekly AA	\checkmark			100	× .

The Edit View Definition dialog presents a grid with a row for each column that is available for display on the Outage Request Index page. As well it presents a checkbox with a setting that will apply an in-page scrollable grid if the user prefers it.

Once a view definition has been modified the user has the option to type in a new name for it in the "Name" field if the user wishes to create a new View Definition with it. Alternatively, the user may leave the "Name" field unchanged to save the other changes as edits to the existing View Definition of that name.

Edit V	iew		
Name:	My New View		
Field I	Name	Visible	So
Line C	opflict		

Either way, the user must click the "OK" button to keep the changes.

It is also possible for users to make changes directly to the main Outage Request Index screen (altering date ranges, date query parameters, server filtering on outage attributes, adding sorts, custom filters on columns, moving or resizing columns). If users make any of these changes (and refreshes the page), the name in the View Definition drop down control will have an asterisk (*) appended at the end of its name to signify that a change to the view has been made, but not yet saved.



To save these changes the user must open the Edit View Definition dialog and click the "Save" button.

Form Field	Description and use
Field Name	The value noted here is what will be displayed in the header of the column in the Outage Request Index screen. The user may change this value to display another name in the column header.
Visible	This determines if the column will be displayed on the Outage Request Index screen. The user may tick the checkbox to make the column visible or un-tick the checkbox to hide the column from the Outage Request Index screen.
Sort Order	This field indicates whether the column is used for sorting the data displayed in the Outage Request Index screen and, if so, in what order compared to other sorted columns. The user may type in an ordered number (e.g. 1) to indicate the order in which an <u>ascending sort</u> (lowest to highest / A to Z) will be applied to this columns data. It is possible for the user to add a sort order number to multiple columns, for the second desired column, type in the Number (2) and (3) for a third sorted column if needed. NOTE: In Outage Request Index screen a column that has an ascending sort direction is indicated by the column heading text color being light purple. Planned Start 1 (AII) (2016/05/03 2 08:00 1 2016/05/05 2 08:00 1
Descending Order	This field is only relevant if the Sort Order column is used. It toggles the sort direction between descending and ascending order. The user can tick the checkbox to have the sort direction be descending (highest to lowest / Z to A). Likewise, you may un-tick the checkbox to have the sort direction be ascending. NOTE: In the Outage Request Index screen a column that has a descending sort direction is indicated by the column heading text color being pink.

8.1.1. View Definition Form Fields

Col Width	Users may set the width of the column here by typing in the number of pixels.
Moving Columns	Users may move a column to a different location in the Outage Request Index screen. To do this, users must click on the field name so that it is highlighted. The green arrow buttons near the bottom right corner of the dialog will become enabled. Planned End Image: Code Purpose Code Image: Code Clicking on the up arrow will move the column to the left in the Outage Request Index and clicking on the down arrow will move the column to the right.
Use Embedded Scroll Window in Results	When the checkbox is not ticked the results will be displayed in a tabular view on the page. To scroll the user must scroll the entire page (and potentially lose sight of the header name row). When ticked the results will be displayed inside an embedded, scrollable window within the page. To scroll the user scrolls only the results grid (not the entire page) and that keeps the header name row statically in view. NOTE: when the scroll window option is chosen the header row column widths can get out of alignment with the columns in the results grid depending on the data that has been returned).
Reportable	This is to make the Outage Request Index data available for reporting on in a subscription or generated report. To be able to generate a report based on this Outage Request Index the user must tick this checkbox.

To cancel changes made in the Edit View Definition dialog the user must click on the "Cancel" button.

To save changes made in the Edit View Definition dialog to the Outage Request Index screen, the user must click on the "OK" button.

To delete the View Definition the user must click on the "Delete" button.

- End of Section -

9. Reports

The "Reports" section of CROW Web is accessed by clicking on the "Reports" tab in the top main menu.



Any saved View Definition can be used as the basis of a report if that View Definition is flagged as "Reportable". If it is a 'System' view it may be used by any CROW user as a subscribed report.

Individually, CROW users can define customized 'Personal' View Definitions and flag them as "Reportable" (refer to the "Creating/Editing View Definitions" section of this document for details). CROW users may then generate a report for immediate viewing or subscribe to a report that is based on their own customized 'Personal' View Definition.

The structure of the report will emulate the columns and rows of the View Definition that it is based on.

9.1. Reports – Generate Now

The Generate Now option gives users the ability to instantly view a report or to send it as an attachment to an email from the Reports page. To open up this page the user must click on the "Generate Now" radio button on the left side margin of the "Reports" section.



The Generate Now page is opened, ready to set up a Reportable View report.

Operations	Reports		
Reports Generate Now Queue Subscribe Netification	View/Email: Report Title: View Category: View Name: Report Extension:	View Report Online O Mail Report to Recipients View Report General	
OEmail	View Transform:		
Subscriptions Feedback		View Report	

9.1.1. Generate Now Form Fields

9.1.1.1. View/Email

The two options available are to View Report Online or Mail Report to Recipients.

View/Email:	💿 View Report Online 🔍 Mail Report to Recipie	nts
View/Email:	💿 View Report Online 🔍 Mail Report to Recipie	1

View Report Online will generate a report and download it to the user's web browser.

9.1.1.2. Recipient Addresses

Mail Report to Recipients will generate a report and deliver it via email to a list of recipients. By default, the user will be entered as the recipient but may edit the list of recipients.

View/Email:	○ View Report Online Mail Report to Recipients
Recipient Addresses:	🗙 Submitter, PUone

To add another recipient, the user simply types in some characters contained in the recipient's CROW profile name. A selection list of matching CROW profiles will appear.

🗙 Submitter, PUone pu	
Submitter, PUfive	•
Submitter, PUfour	
Submitter, PUthree	
Submitter, PUtwo	
Viewer, PUfive	
Viewer, PUfour	
Viewer, PUone	
Viewer, PUthree	
Viewer, PUtwo	
DUI1 Cubmittor	•

The selected profile listing will be added to the recipient list.

Recipient Addresses:	Submitter, PUone 😠 Viewer, PUor	ne
----------------------	---------------------------------	----

The user may also type any full email address in as a recipient. The recipient does not need to have a CROW profile so the user must keep in mind that the report may contain confidential information.

	Recipient Addresses:	Culture Dillore	Lillon:
--	----------------------	-----------------	---------

To remove a recipient from the list the user may simply click on the 'x' next to the recipient's name.



9.1.1.3. Report Title

Note that initially, the "Report Title" has a default value of the current View Definition Name e.g. 'View Name'). The user may enter a new title for the report in the "Report Title" textbox.

Description Theory	
Report litle:	Report for Me

9.1.1.4. View Category

The user must select "Outage Request Index" from the "View Category" to proceed. CROW Web users' own created reportable View Definitions will fall under the "Outage Request Index" View Category.

View Category:	•
View Name:	
Report Extension:	
View Transform:	
	Outage Request Index

9.1.1.5. View Name

Upon selection of the View Category any reportable view definitions available in that View Category will populate the "View Name" drop-down control. Note that the options displayed here are the "System View Definitions" created by CROW Administrators as well as the "Personal View Definitions" created by the current logged user and are tagged as "Reportable". In the example below, the reportable View Definitions that appeared in the drop-down are created in the "Outage Request Index" View Category.

The user must make a "View Name" selection to proceed.

View Category:	Outage Request In	dex 🔻
View Name:	My View	
Report Extension:	My Breaker View	
	My View	

9.1.1.6. Report Extension

Depending on the file type for the report, the user must select a format (e.g. 'HTML') for the report based on the pre-configured list in the "Report Extension" drop-down selection.

Report Extension:	PDF (.pdf)
View Transform:	Excel 2007+ (.xlsx)
	Excel 97/2000/XP/2003 (.xls)
	Comma Separated Values (.csv)
	Text (.txt)
	XML (.xml)
	HTML (.html)
	PDF (.pdf)
	Word ML (.xml)
	Word 2007+ (.docx)
CDOW/W-h-	Word 97/2000/XP/2003 (.doc)
CROW Web sup	XPS (.xps)
CROW 5.17.0.0 • Copyright	Rich Text (.itf)

9.1.1.7. View Transform

A "View Transform" is an effect that changes the position, alignment, size, font and properties relating to how the data will be presented to make it more visually appealing in the report for users. In Crow, some output formats (e.g. '.txt') would not require a "Transform" to proceed with the generation of the report but some formats do require it.

If a transform is required for the selected output format, the user must select a value from the pre-configured list in the drop-down selection. Otherwise, a user is prompted with an error.

Error Generating Report WordML Output requires a transform. This view contains no data

Once the user has selected the required parameters for the report, they can immediately generate the report by clicking the "View Report" button or the "Mail Report" button. If the report is mailed, then the report will be attached to an email and sent to the current user's email address.

	- 1			7541.)
	J 1: ↓ ↓		IES I Data view Report - 2010/03/30 - Message (H	IIML)
FILE MESS	AGE			
🕞 Ignore 🗙		IESO-OCSS 🔤 To Manager	🔄 🎍 👼 Rules 🐐 💫 📕 🕨 🦓 🏭 🦉	
Delete	Renky Renky Forward En	Team Email V Done	Move OneNote Mark Categorize Follow Translate Zoom	
ao Junk + Delete	All More *	Reply & Delete F Create New	▼ → PActions ▼ Unread ▼ Up ▼ → Select ▼	
Delete	Respond	Quick Steps	rs Move Tags rs Editing Zoom	
	Wed 3/30/2016 1:10 PM			
	CROW Logging <crowl< td=""><td>og@ieso.ca></td><td></td><td></td></crowl<>	og@ieso.ca>		
	TEST Data View Benert 3	016/03/20		
	TEST Data view Report - 2	010/05/50		
To Approver, IESC	3			
Message	🔮 Data View Report.XML (60 KB)			
			leso	
			*** IES I *** Data View Repo	ort -
			2016/03/30	
			2010/03/30	
			The attached document was sent from the CROW Pr	port
			subscription service.	pon
			Control Room Operations Window Copyright © 2016 Equinox Software Design Corpor	ation All Rights Reserved.
(

9.2. Reports - Subscribe

In addition to viewing reports immediately users can set up a subscription to a report to receive it via email on a scheduled basis (e.g. 'Daily at 09:00'). To begin the subscription set up process the user must click on the "Subscribe" radio button on the left side margin of the "Reports" section.

The 'Subscription' form will appear allowing the user to define different parameters (delivery schedule, recipients) for the report subscription.

Operations	Reports	
Reports Generate Now Subscribe Notification Email Subscriptions Feedback	Email When: No Data Confirmation: Recipient Addresses: Report Title: View Category: View Name: Report Extension: View Transform: Subscription Enabled:	Daily at 09:00:00 Send notification when report contains no data Submitter, PUone General T HTML (.html) T
		Subscribe

9.2.1. Subscribe Form Fields

9.2.1.1. Email When

The user must select the report delivery schedule from a pre-configured list in the drop-down selection.

9.2.1.2. No Data Confirmation

The user may tick the "No Data Confirmation" checkbox to receive a notification even if there is no data to report on. If the checkbox is unticked, the report recipients will only receive emails with the report attached to it if there is data available to report on.

No Data Send notification when report contains no data

9.2.1.3. Recipient Addresses

By default, the user will be entered as the recipient but may edit the list of recipients.

Recipient Addresses:	x Submitter, PUone
-------------------------	--------------------

Adding and removing recipients is done in the same manner as described in the previous section of this document named "Reports – Generate Now".

9.2.1.4. Report Title

Note that initially, the "Report Title" has a default value of the current View Definition Name e.g. 'View Name'). The user may enter a new title for the report in the "Report Title" textbox.

Report Title:	Subscribed Report for Me
---------------	--------------------------

9.2.1.5. View Category

The user must select "Outage Request Index" from the "View Category" to proceed. CROW Web users' own created reportable View Definitions will fall under the "Outage Request Index" View Category.

View Category:	•
View Name:	
Report Extension:	
View Transform:	
	Outage Request Index

9.2.1.6. View Name

Upon selection of the View Category any reportable view definitions available in that View Category will populate the "View Name" drop-down control. Note that the options displayed here are the "System View Definitions" created by CROW Administrators as well as the "Personal View Definitions" created by the current logged user and are tagged as "Reportable". In the example below, the reportable View Definitions that appeared in the drop-down are created in the "Outage Request Index" View Category. The user must make a "View Name" selection to proceed.

View Category:	Outage Request Index	
View Name:	My View	T
Report Extension:	My Breaker View My View	

9.2.1.7. Report Extension

Depending on the file type for the report, the user must select a format (e.g. 'HTML') for the report based on the pre-configured list in the "Report Extension" drop-down selection.

Report Extension:	
	PDF (.pdf)
View Transform:	Excel 2007+ (.xlsx)
	Excel 97/2000/XP/2003 (.xls)
	Comma Separated Values (.csv)
	Text (.txt)
	XML (.xml)
	HTML (.html)
	PDF (.pdf)
	Word ML (.xml)
	Word 2007+ (.docx)
67.03V/14/1	Word 97/2000/XP/2003 (.doc)
CROW Web su	XPS (.xps)
CROW 5.17.0.0 • Copyright	Rich Text (.rtf)

9.2.1.8. View Transform

A "View Transform" is an effect that changes the position, alignment, size, font and properties relating to how the data will be presented to make it more visually appealing in the report for users. In Crow, some output formats (e.g. '.txt') would not require a "Transform" to proceed with the generation of the report but some formats do require it.

If a transform is required for the selected output format, the user must select a value from the pre-configured list in the drop-down selection. Otherwise, a user is prompted with an error.

Q	Error Generating Report		
	WordML Output requires a transform.		
	This view contains no data		

9.2.1.9. Subscription Enabled

The user must tick the "Subscription Enabled" checkbox to activate the subscription.

9.2.1.10. Subscribe button

To save the subscription the user must click on the "Subscribe" button at the bottom of the form.

9.3. Reports - Email Notification

CROW can produce an email notification based on outage request status criteria. To begin the email notification set up process the user must click on the "Email" radio button on the left side margin of the "Reports" section.

Reports	
Generate Now Subscribe	
Notification	
• Email	

The 'Subscription' form will appear allowing the user to define different parameters for the notification subscription.

Stn/Equip Relationship:	Stations/Equipment Owned 🔹	
Generate By:	Power Utility	
Power Utility:	PU1 - Power Utility 1 PU2 - Power Utility 2 PU3 - Power Utility 3 PU4 - Power Utility 4 PU5 - Power Utility 5	↑
Equipment Types: (Ctri-click to select more than one item. If you select a superclass, all subclasses will automatically be included as well.)	all Business Unit Special Protection System Station Station Equipment T	
Outage Requests:	for Outage Requests	
Recipient Addresses:	🗙 Submitter, PUone	
Subscription Enabled:		
	Subscribe	

9.3.1. Email Notification Form Fields

9.3.1.1. Stn/Equip Relationship with Generate By:

There are a couple combinations of selections that can be used to filter notifications based on equipment's relationship to its owner or operator.

Stations/Equipment Owned – Power Utility

The "Stn/Equip Relationship" filter can be used set up notifications for equipment that is owned by a particular power utility. To do so, the user must select "Stations/Equipment Owned" in the "Stn/Equip Relationship" drop down control and then select "Power Utility" from the "Generate By" drop down control. A "Power Utility" selection box will appear where the user may select one or more power utilities to filter by. These settings will limit notifications to equipment that is owned by the selected power utilities. Users can combine this set of filters with the "Equipment Types" filter to further narrow down the notification criteria.

Stn/Equip Relationship:	Stations/Equipment Owned 🔻	
Generate By:	Power Utility 🔻	
Power Utility:	PU1 - Power Utility 1	*
	PU2 - Power Utility 2	
	PU3 - Power Utility 3	
	PU4 - Power Utility 4	
	PU5 - Power Utility 5	۳.

Stations/Equipment Operated – Control Center

The "Stn/Equip Relationship" filter can be used set up notifications for equipment that is operated by a particular control center. To do so, the user must select "Stations/Equipment Operated" in the "Stn/Equip Relationship" drop down control and then select "Control Center" from the "Generate By" drop down control. A "Control Center" selection box will appear where the user may select one or more control centers to filter by. These settings will limit notifications to equipment that is operated by the selected control centers. Users can combine this set of filters with the "Equipment Types" filter to further narrow down the notification criteria.

Stn/Equip Relationship:	Stations/Equipment Operated 🔻
Generate By:	Control Center 🔹
Control Center:	all
	PU1_CC - CC for Power Utility 1 💌

9.3.1.2. Generate By

As noted in the section above, the "Generate By" control can be used to filter notifications by equipment relationship to power utility or control center. There are also other options available with the "Generate By" filter; **Station** and **Power System Equipment**. These options are used independently of the "Stn/Equip Relationship" control.

Station

Users may filter the notifications down to equipment that is associated with a particular station. Selecting the "Station" option in the "Generate By" control will display a station selection box where the user may select one or more stations to filter by.

Generate By:	Station	•
Station: Pick List Entry Free Form Entry	STNE - STATION E STNF - STATION F STNG - STATION G STNH - STATION H STNI - STATION I	•

As an alternative to using the station "Pick List Entry" selection box users may manually type in the abbreviations of the station/s they wish to filter on by way of the "Free Form Entry" fields. The user may click the "List..." button to bring up a selection dialog with the full station names listed along with the abbreviations.

Station: Pick I Free I	List Eni Form E	try intry	stna, str	nc, stne		List
Equipme (Ctrl-click to one item. If all subclasse	Sele	ct Statio	ns/Locations:			×
		Abbrev	Name			
		STNA	STATION A			
Outage I		StNbE	STATION BE			
		STNC	STATION C			
Outage		STND	STATION D			
(Ctrl-click to one item.)		STNE	STATION E			
,		STNF	STATION F			
		STNG	STATION G			
		STNH	STATION H			
Recipier		STNI	STATION I			
Subscrip		STN	STATION			
		STNJ	STATION J			
					Select	Cancel

The user is able click on the checkboxes to tick the stations to include as the filter or untick any unwanted stations.

To cancel out of the setting the filter and leave it as it was, the user can click the "Cancel" button. The user can complete the setting of the filter by clicking the "Select" button.

The filter field will be populated with a comma delimited list of abbreviations of the selected stations.

Station:	STNA, STNC, STNE	List
Pick List Entry		
Free Form Entry		

If the user wishes to remove one or more stations from the filter list, he can simply highlight them in the text field and hit the delete key on the keyboard.

Power System Equipment

Users may filter the notifications down to specific equipment items. Selecting the "Power System Equipment" option in the "Generate By" control coupled with the "Pick List Entry" option will display a "Select..." hyperlink for the user to click on.

Generate By:	Power System Equipment 🔻
Power System Equipment: Pick List Entry Free Form Entry	select

When the user clicks on the hyperlink a "Find Circuit/Equipment" dialog will be displayed to allow an equipment search.

Gen	erate By:	Power System Equipment 🔻
Pow	er System Equipment:	select
Equ	Find Circuit/Equipmen	t X
(Ctrl- one it all su	Circuit/Equipment Name:	egins with ▼
		Search Cancel

The user must indicate how to use the input text value in the query for the Equipment Label:

- begins with
- is
- contains
- ends with

Find Circuit/Equipme	nt	×
Circuit/Equipment Name:	begins with ▼ begins with	
	contains is ends with	Search Cancel

The user must input the text value to use in the query and then click the "Search" button.

Find Circuit/Equipment	×
Circuit/Equipment Name: contains	
	Search Cancel

A list of equipment matching the query will be shown in the resulting dialog box where the user can select one or more equipment items. The user can individually select equipment by ticking the checkbox beside the Equipment listing or the user can use the Dual-State control checkbox in the title bar to select/de-select all equipment in the list.

Select a Circuit/Equipment Item	×
Equipment	
STNA Breaker 001	
STNA Breaker 002	
STNA Breaker 003	
STNA Breaker 004	
STNB Breaker 001	
STNB Breaker 002	
STNB Breaker 003	
STNB Breaker 004	
STNB Breaker 005	
STNB Breaker 006	
STNB Breaker 007	
STNB Breaker 008	
STNB Breaker 009	
STNB Breaker 010	
STNB Breaker 011	
STNB Breaker 012	
Select	Cancel

The user then must click the "Select" button and the chosen equipment will be listed in the "Power System Equipment" area. To add another equipment item the user must click on the "Add" link.

Power System Equipment:	X STNA Breaker 004
Pick List Entry	add
Free Form Entry	

To remove a listed equipment item from the filter the user must click on the "X" (delete icon) next to the equipment label.

As an alternative to using the station "Pick List Entry" selection box users may manually type in the full labels of the equipment items they wish to filter on by way of the "Free Form Entry" field. The labels that are typed in will be validated and if any are not matched an error message will be presented to the user.

Power Sy	stem Equipment:	STNA Breaker 004, Stna Breaker 001
Pick	Clist Entry	
Image: Free	e Form Entry	

9.3.1.3. Equipment Types

This is a list of equipment and business unit types. The list is used to further define filtering to only email a notification for those outage requests that have Requested Equipment that is of the type selected in this list. If no selection in the list is made then all types will be included, but the user may limit the types to select items by clicking on one or more of them in this list.

Equipment Types:	all	
one item. If you select a superclass, all subclasses will automatically be included as well.)	Business Unit Special Protection System	
	Station Station Equipment	•

For example, in the following screenshot the email notifications are limited to outage requests that have Generator or Load Requested Equipment that is Operated by "PU1_CC-CC for Power Utility 1".

Stn/Equip Relationship:	Stations/Equipment Operated 🔻
Generate By:	Control Center
Control Center:	
	PU1_CC - CC for Power Utility 1
	PU2_CC - CC for Power Utility 2
	PU3_CC - CC for Power Utility 3
	PU4_CC - CC for Power Utility 4 🔻
Equipment Types:	converter
(Ctrl-click to select more than	- Filter
one item. If you select a superclass,	- Generator
all subclasses will automatically be included as well.)	- Load
	- Not In Model
	 Other Communication Equipment

9.3.1.4. Outage Requests and Outage Request Status

This sets the trigger for an email notification when the overall outage status value changes. The user must tick both checkboxes and then make selections in the "Outage Request Status" list. For example, the following screenshot shows a configuration to trigger an email notification when an outage request, which passes the filters set in the controls above, gets set to a status of Submitted or Adv Approved.

Outage Request Status:	Submitted 📃 🔺
(Ctrl-click to select more than one item.)	Negotiate
	Study
	Adv Approved
	Final Approved 👻

9.3.1.5. Recipient Addresses

By default, the user will be entered as the recipient but may edit the list of recipients.

Recipient Addresses:	🗴 Submitter, PUone

Adding and removing recipients is done in the same manner as described in the earlier section of this document named "Reports – Generate Now".

9.3.1.6. Subscription Enabled

The "Subscription Enabled" checkbox must be ticked to make the notification subscription active.

 Subscription Enabled:
 Image: Comparison of the second second

After setting up all filters the user must click on the "Subscribe" button to save the subscription.

Subscribe

9.4. Managing Subscriptions

The subscriptions that have been created are listed on the "Subscriptions Management" page and are reachable by clicking on the "Subscriptions" button in the left margin of the subscription form.



The subscriptions management page displays all of the users existing subscriptions. From this page the user may disable the subscription, delete the subscription or navigate to the subscription form to modify the subscription.



9.4.1.1. Enabling/Disabling Subscriptions

The user may click on the "Disable Subscription" hyperlink to de-activate it. Upon clicking it the user will be prompted with a confirmation message to agree to the action. Once the subscription is disabled it will not be sent out to the user.

The user has the option to re-enable the subscription by clicking on the "Enable Subscription" hyperlink. Upon clicking it the user will be prompted with a confirmation message to agree to the action.

	Email Notific	cations for Subi XDelete Subscri	nitter, _{ption}	PUone Enable Subscription
Subscription Date: E-mail For Event Types: Email When Event Entered: Event Returned: Email With Fault Loc.: Event Update: Event Update: Event Est. Return: Momentary Outages: Entry Time:	2016/05/03 11:02:58 All no no no no Don't email for momentary outages Email only if entered within 24 hours of outage.	Equip. Relationship: Generate By Type: Generate For: Equip. Classes: Outage Req. Status: Outage Req. Updated:	Equipmen Control Ce Control Ro Bus AC/DC Sta Load Submitted yes	t Operated enter bom ition Service
	❑View/Modify Subscription	XDelete Subscri	ption	Disable Subscription
Subscription Date: E-mail For Event Types: Email When Event Entered: Event Returned: Email With Fault Loc.: Event Update: Event Update: Event Est. Return: Momentary Outages: Entry Time:	2016/05/03 11:38:17 All no no no no Don't email for momentary outages Email only if entered within 24 hours of	Equip. Relationship: Generate By Type: Generate For: Equip. Classes: Outage Req. Status: Outage Req. Updated:	Equipmen Control Ce CC for Pov Generator Load Submitted yes	t Operated enter ver Utility 1 r d, Adv Approved

9.4.1.2. Deleting Subscriptions

The user may delete subscriptions by clicking on the "Delete Subscription" hyperlink. Upon clicking it the user will be prompted with a confirmation message to agree to the deletion.

	View/Modify Subscription	XDelete Subscri	ption Disable Subscription
Subscription Date:	2016/05/03 11:38:17	Equip. Relationship:	Equipment Operated
E-mail For Event Types:	All	Generate By Type:	Control Center
Email When		Generate For:	CC for Power Utility 1
Event Entered:	no	Equip. Classes:	Generator
Event Returned:	no		Load
Email With Fault Loc.:	no	Outage Req. Status:	Submitted, Adv Approved
Event Update:	no	Outage Req. Updated:	yes
Event Est. Return:	no		

9.4.1.3. View/Modify Subscription

The user may view and modify an existing subscription by clicking on the "View/Modify Subscription" hyperlink. Upon clicking it the user will be taken to the subscription form page to make any changes.

	View/Modify Subscription	XDelete Subscri	ption Disable Subscription
Subscription Date:	2016/05/03 11:38:17	Equip. Relationship:	Equipment Operated
E-mail For Event Types:	All	Generate By Type:	Control Center

After editing the subscription form the user may save the changes as an update to subscription by clicking the "Update Subscription" button.



Alternatively, the user may save the changes as a new subscription by clicking the "Add Subscription" button.



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