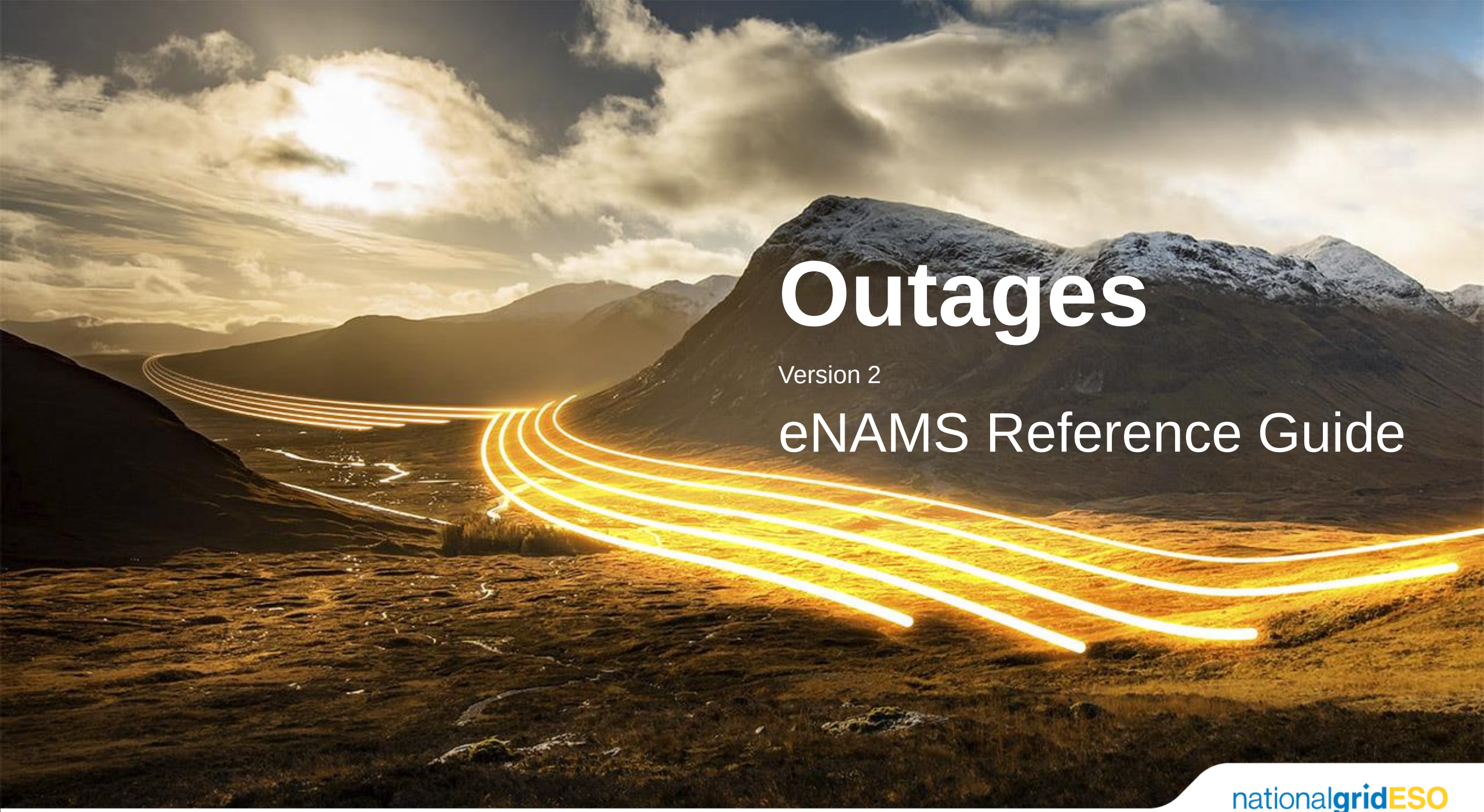


Outages

Version 2

eNAMS Reference Guide

nationalgridESO

Table of Contents

Key for Chapters 1) & 4):

Brand new to eNAMS

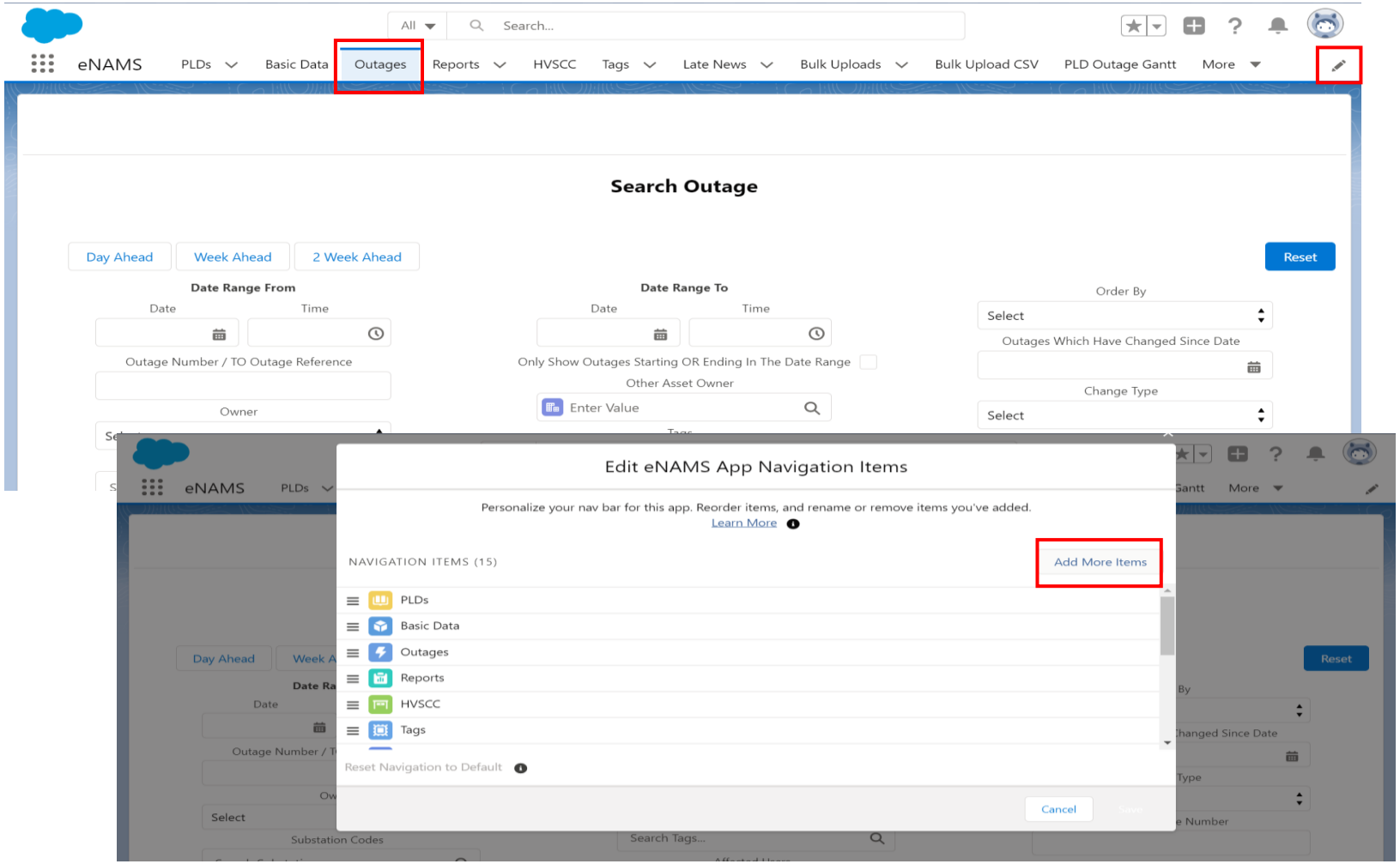
Similar to field in TOGA

Same as field in TOGA

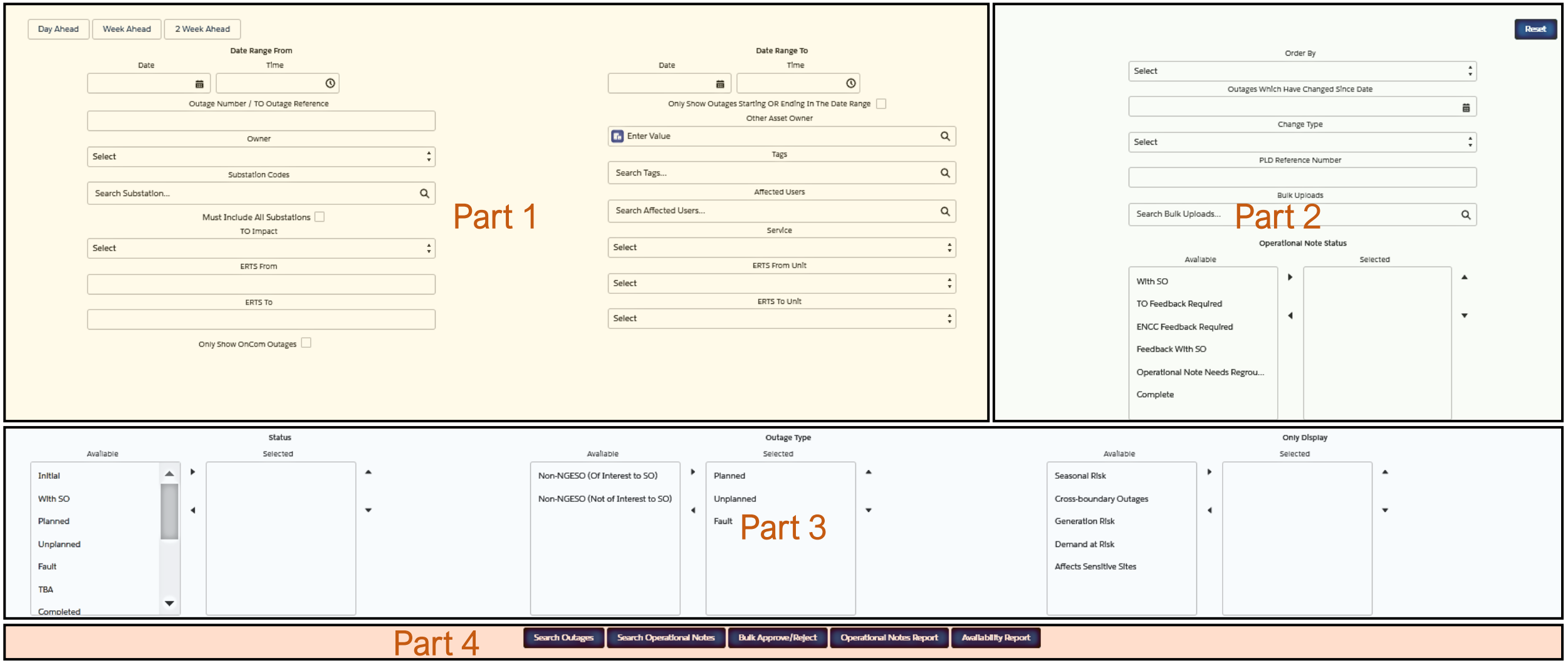
Using the Outage Search page

Navigate to Outages

- Click on **Outages** in your toolbar in eNAMS
- If Outages is not visible in the toolbar, click on the **pencil icon** on the right-hand side then click **Add More Items** then find **Outages**.



Outage Search page (Reference)



Part 1 of 4 – Outage Search page fields

Search selected plan week (Sat – Fri).

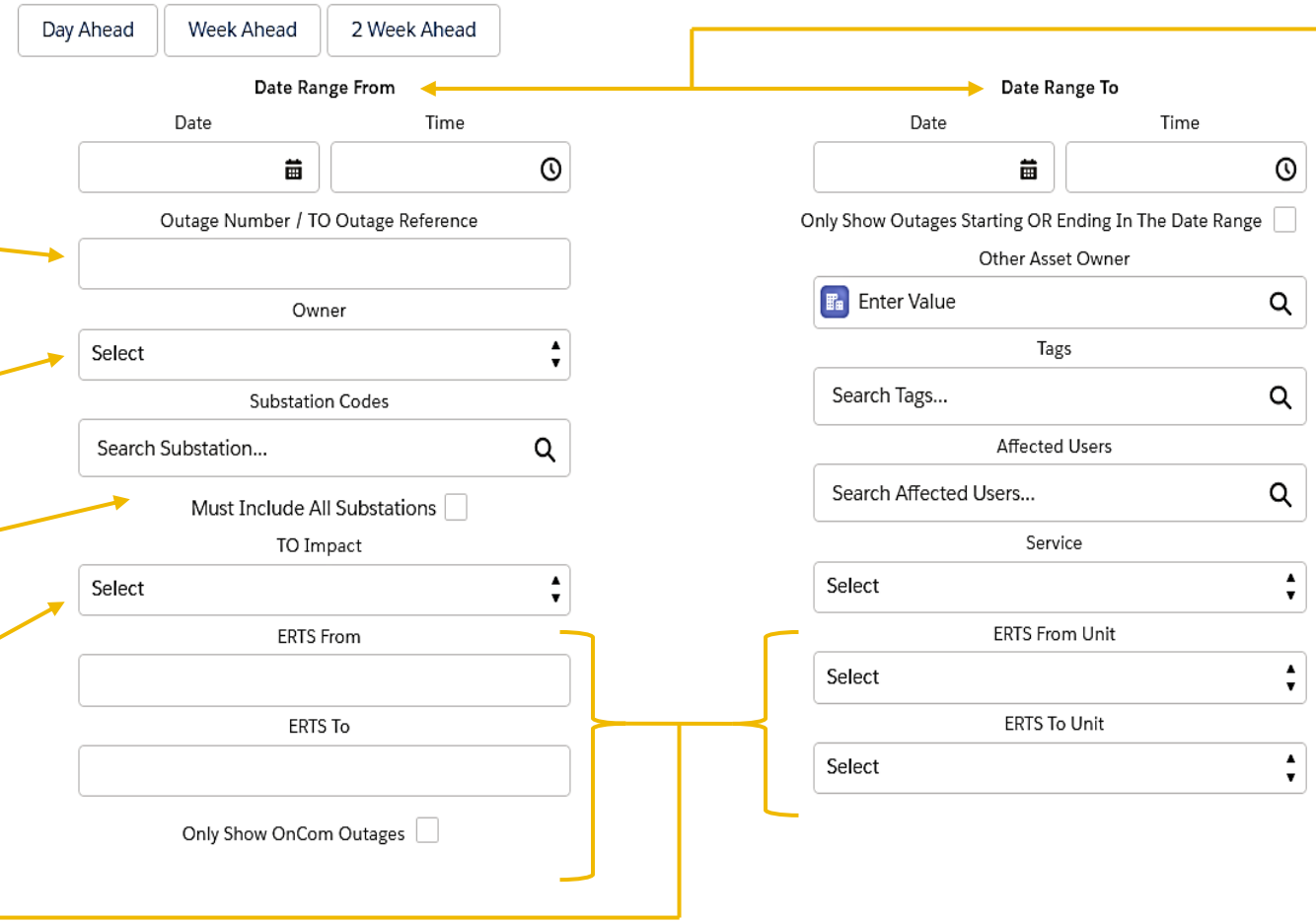
Search by eNAMS Outage Number or TOGA number (TO Outage Reference)

Search by Owner of (Basic) Outage if listed, otherwise use Other Asset Owner field

Click on tick box to return Outages which include all listed substations

Search by TO Priority (P1 = Highest Priority)

Search by ERTS Range. Enter same ERTS From and ERTS To to search a single ERTS value. eNAMS includes ERTS conversion logic i.e. 2 DAYS = 48 HOURS.



Search by Date range (Time auto-populated as 00:00 and 23:59 respectively unless specified)

Other Asset Owner comprises non-onshore TO's & other parties. Example being OFTO's.

Search all Tags. Use Tags PLSTH/PLNTH/PLSCOT to search by planning region.

Search by External Parties. Example being RWE.

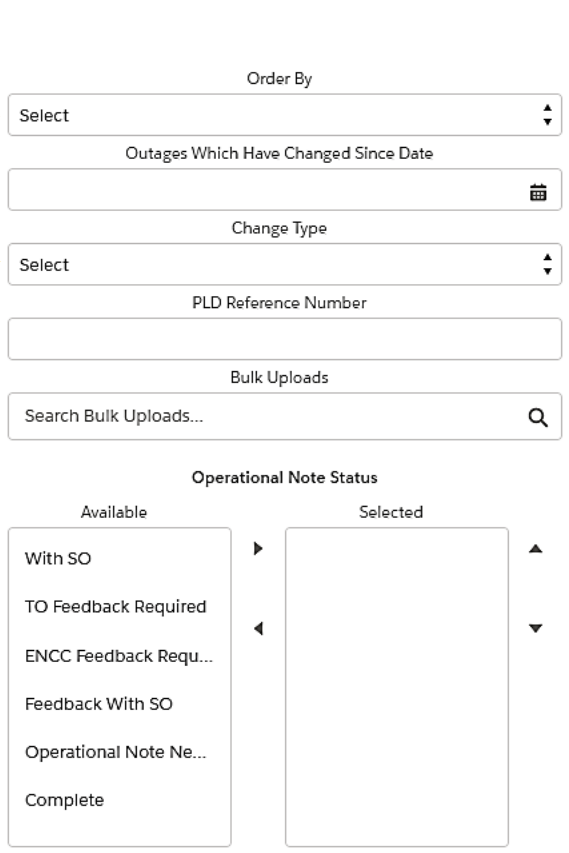
Select In Service or Out Of Service

Part 2 of 4 – Outage Search page fields

Order the search results in Chronological order based on Last Updated date or order in numerical order based on Outage Number. Order By Planned Start Date is an option however is applied by default.

Change Requests are assigned with a Change Type depending on the type of change. This can be either Add (for brand new outage), Update (for changing an existing outage), TBA (when an Outage is TBA'd) or Cancel (when an Outage is cancelled).

Each Bulk Upload is assigned a reference number that starts with BU. Search here by this reference number.



Reset all Outage Search page fields

Search by Outage Last Updated Date

Search by PLD Project Number

Multi-selectable field to view by Op Note status for when viewing Op Notes.

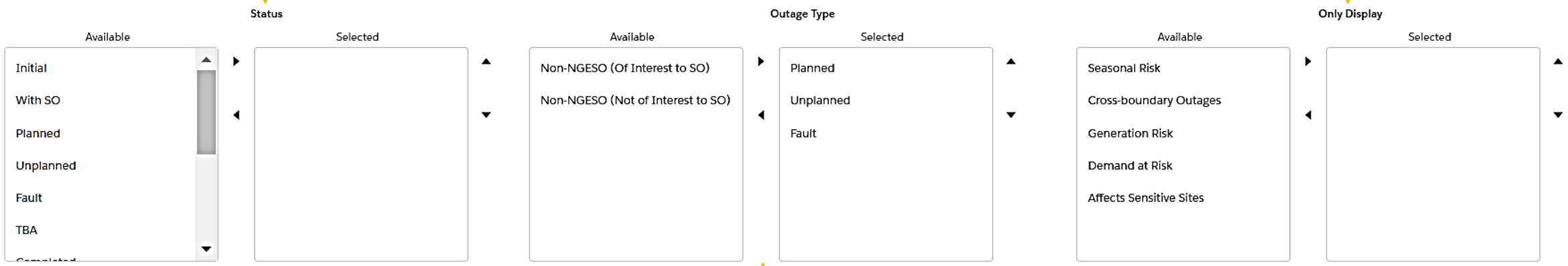
Part 3 of 4 – Outage Search page fields

Search by Outage status. For outage planning, the user will typically select:

- With SO
- Planned
- Unplanned
- Fault
- Started

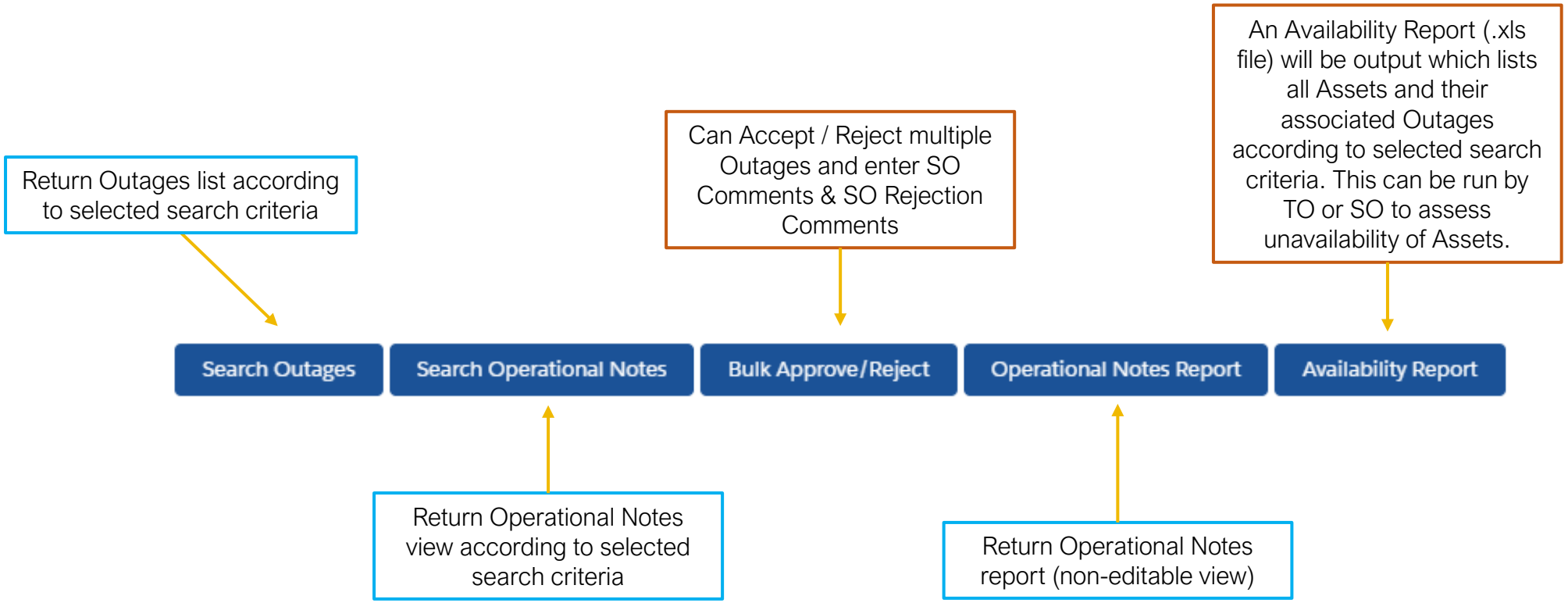
Search by:

- Seasonal Risk – if ticked in Outage
- Cross-boundary Outages – if Basic Outage is of cross-boundary type
- Generation Risk – if ticked in Outage
- Demand at Risk – if ticked in Outage
- Affects Sensitive Site – if ticked in Outage



Search by Outage Type field.
To view DNO created outages for assessment, select Non-NGESO (Of Interest to SO). Currently, only SPD are expecting to use this Outage Type.
Please note, if user is searching for Fault in Status field, then Fault must be selected in Outage Type; same also for Unplanned Outages.
All other Status are covered under Planned Outage Type.

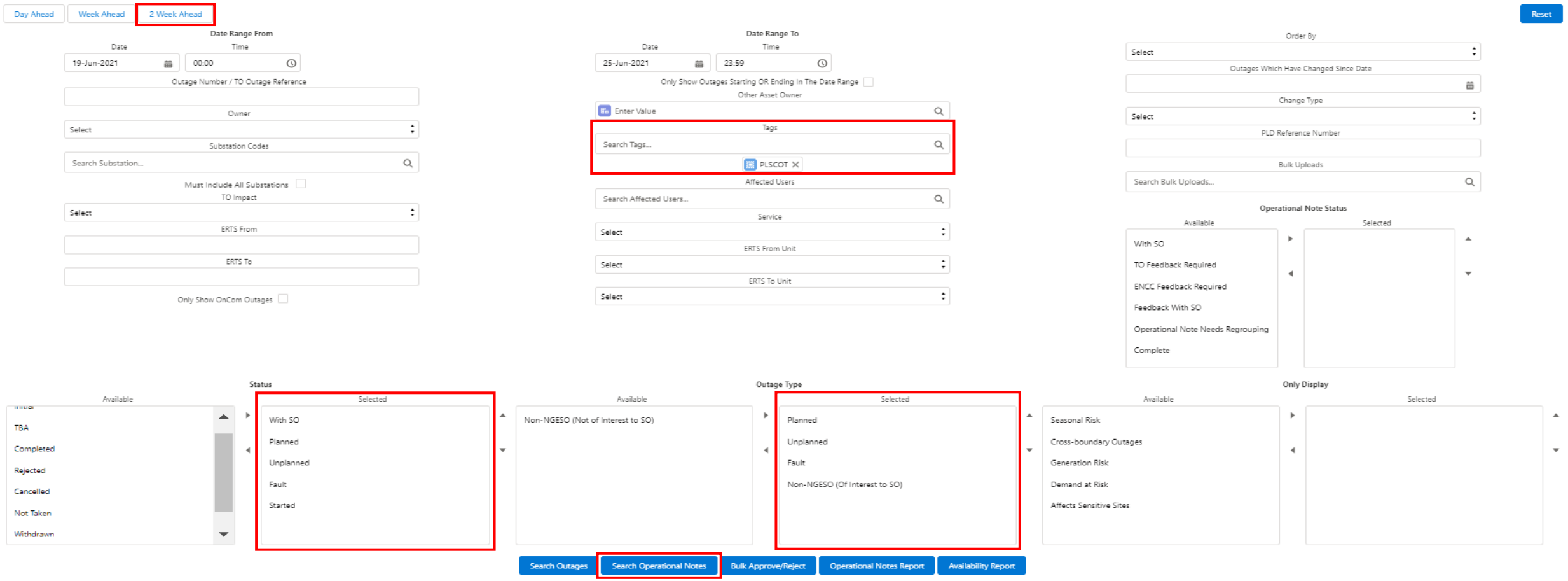
Part 4 of 4 – Outage Search page fields



Typical Outage Search page selections

View Two Week Ahead Notes for Scotland

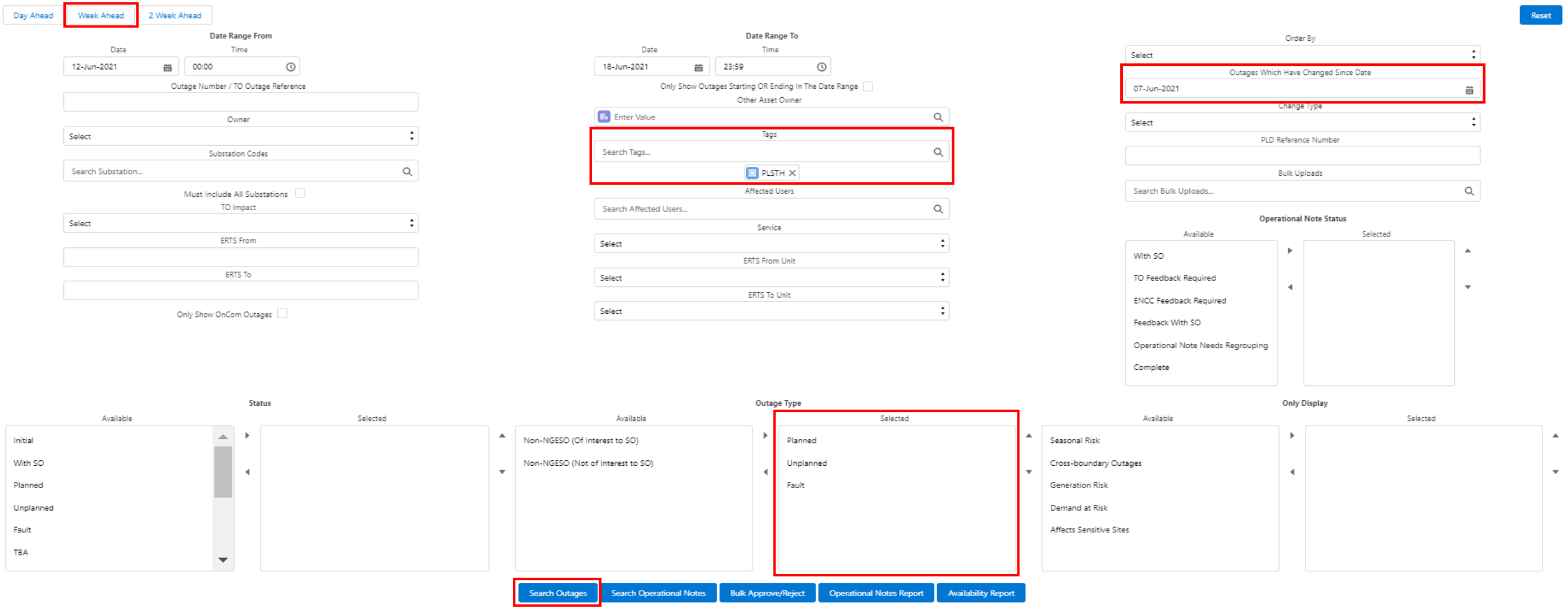
(see *Operational Notes Guide – eNAMS* for further information)



To view information on the appropriate Tag to select to query a region, click here in Slide Show view:

Typical Outage Search page selections

View Week Ahead South Outages which have changed since a specific date



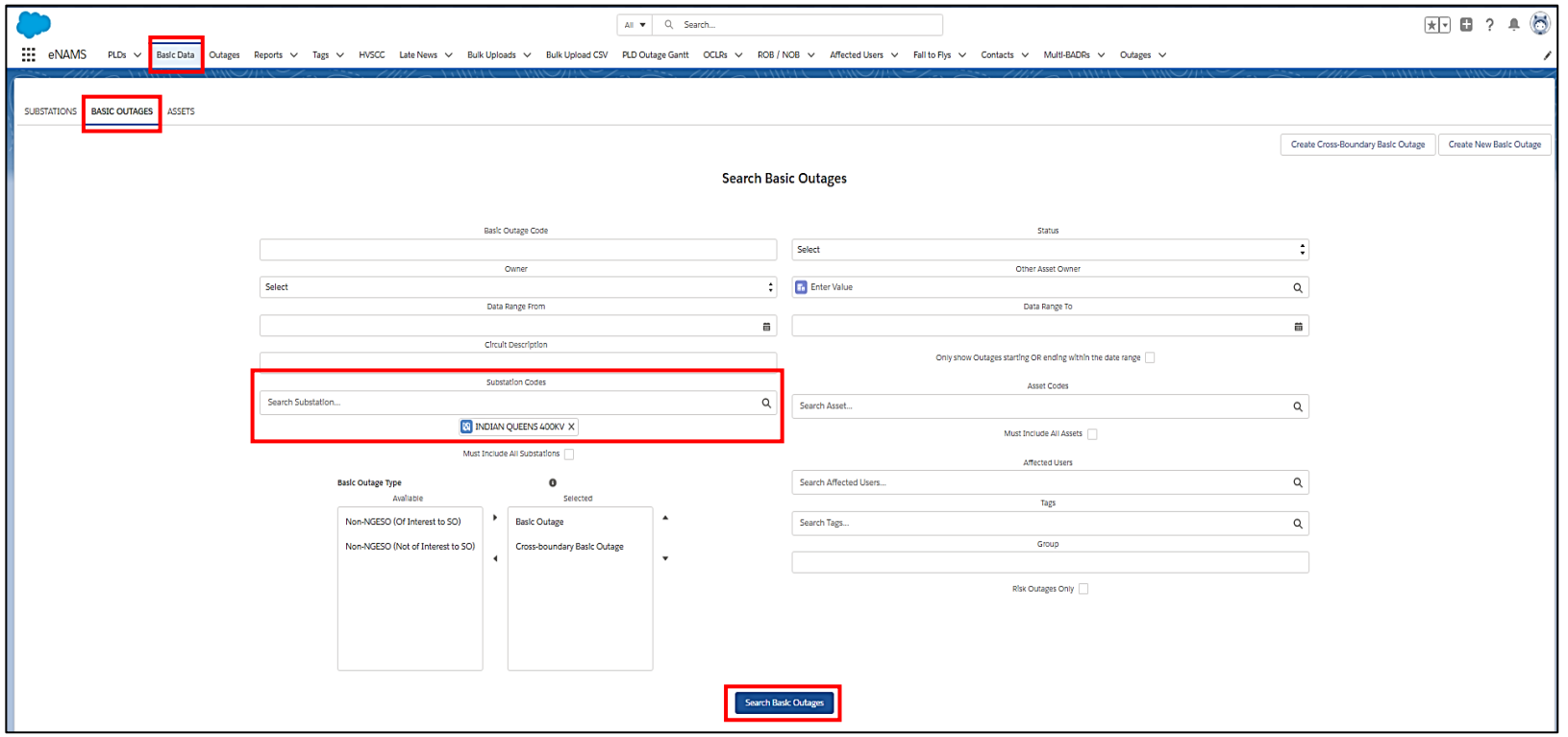
To view information on the appropriate Tag to select to query a region, click here in Slide Show view:

Creating an Outage

Both the SO and TO have permissions to create an Outage.
The TO can only create an Outage up to With SO status

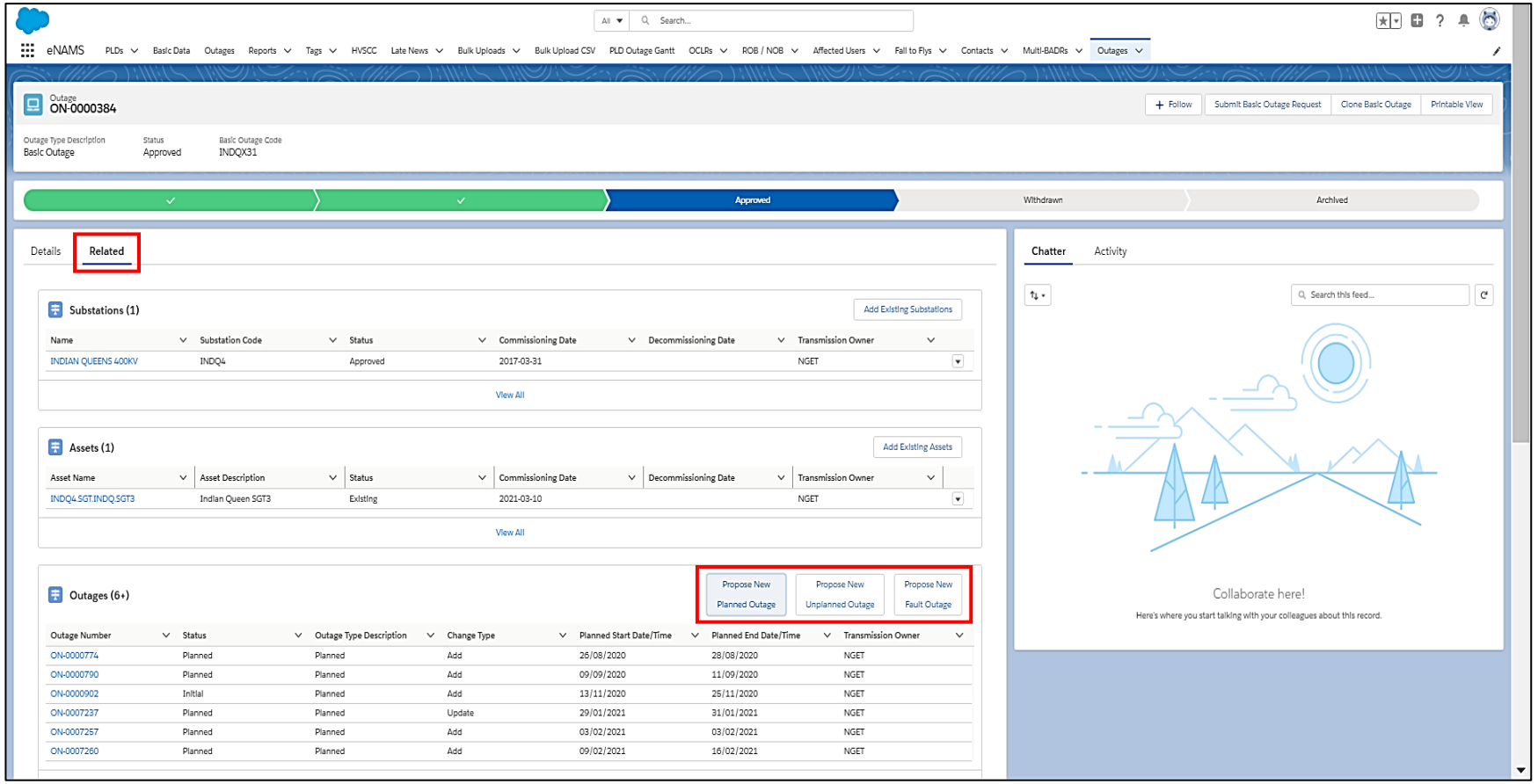
Find Basic Outage

- Navigate to **Basic Data** tab, then select **Basic Outages**. Enter your search criteria (i.e. enter Substation Code), then click **Search Basic Outages**
- Click and open the relevant **Basic Outage**



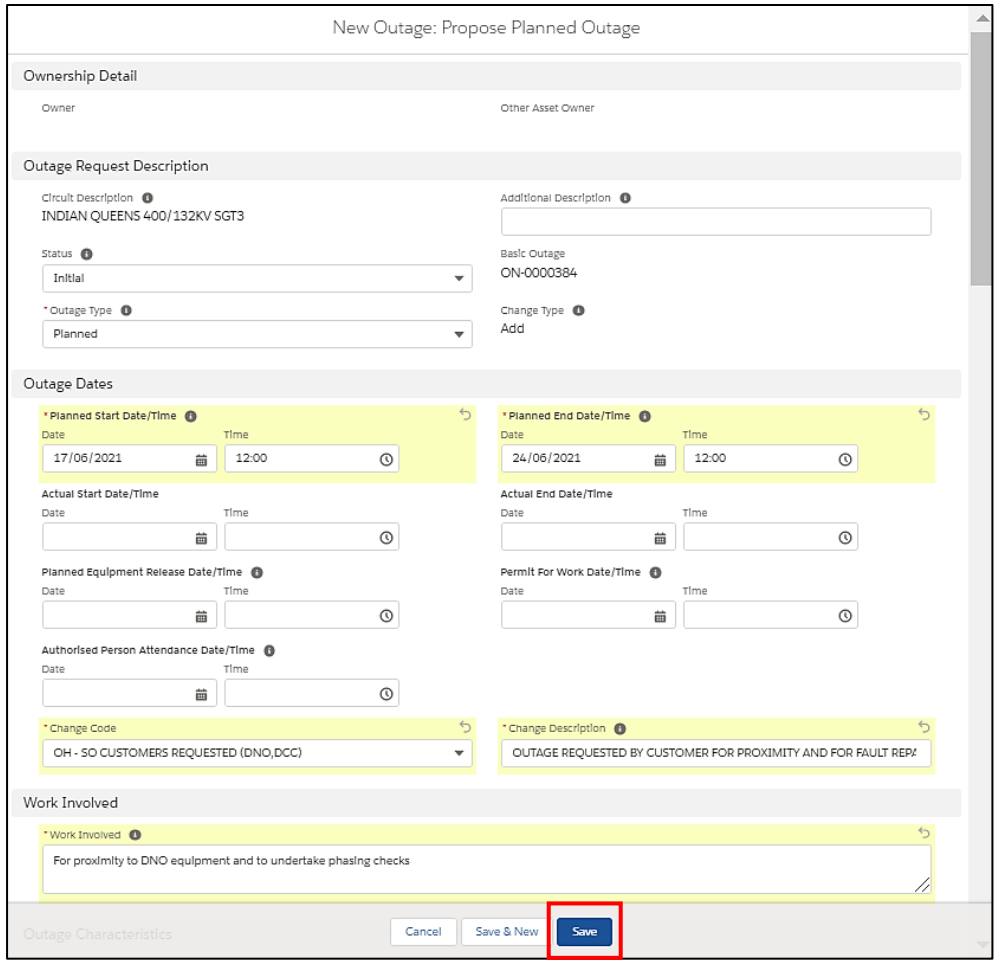
Propose Outage

- Once you've selected the **Basic Outage**, click on the **Related** tab
- Scroll down to the **Outages** section
- Click to propose either a **Planned Outage** / **Unplanned Outage** or **Fault Outage**.
- (Note: TO accounts have a slightly different page layout than the SO)



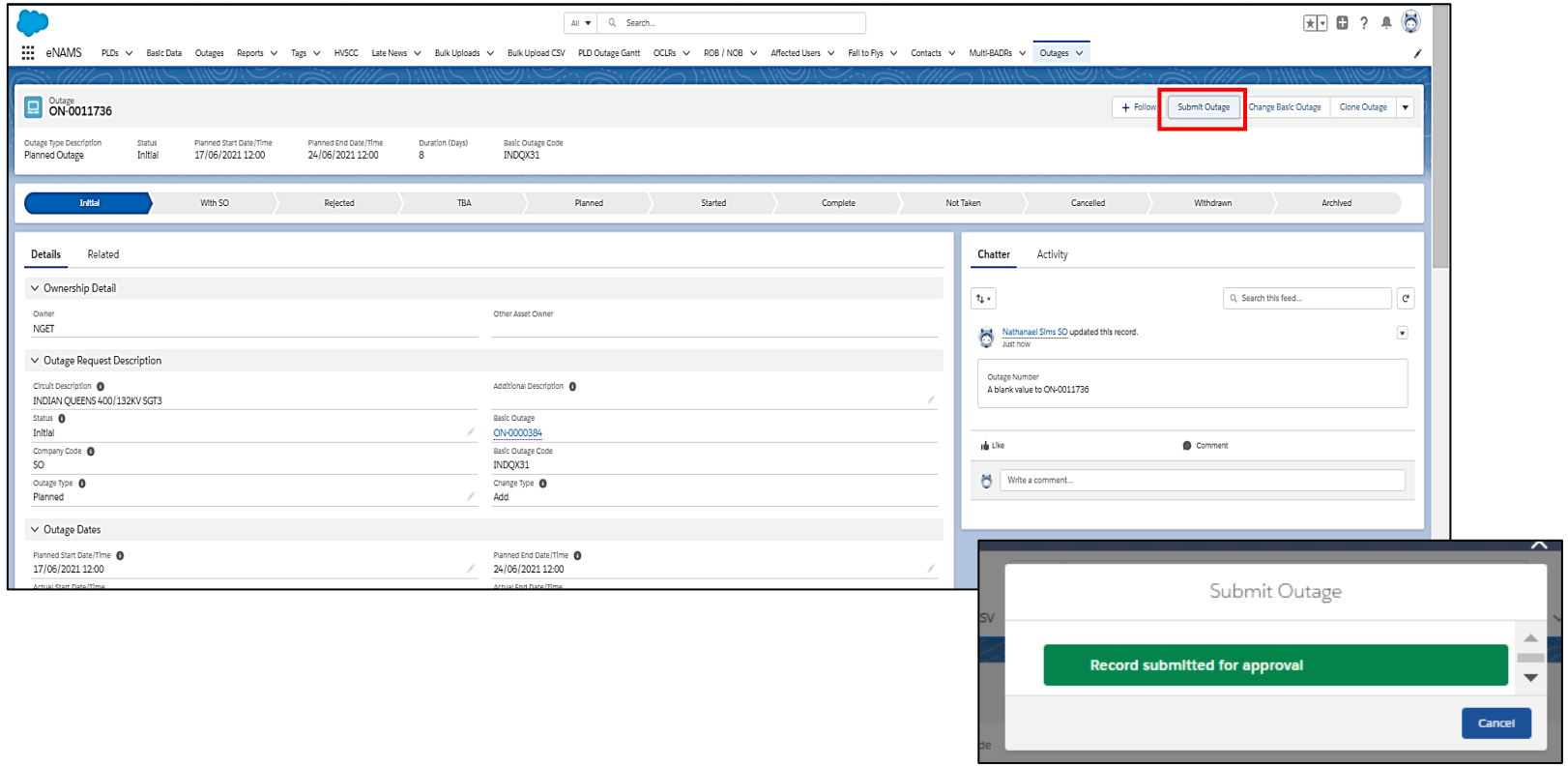
Populate Outage fields

- Populate fields as required.
- Fields with a red asterisk (*) indicate mandatory fields
- When complete, press **Save** to create Outage (prior to Save, ensure **Status** is in **Initial** status).



Submit Outage to With SO

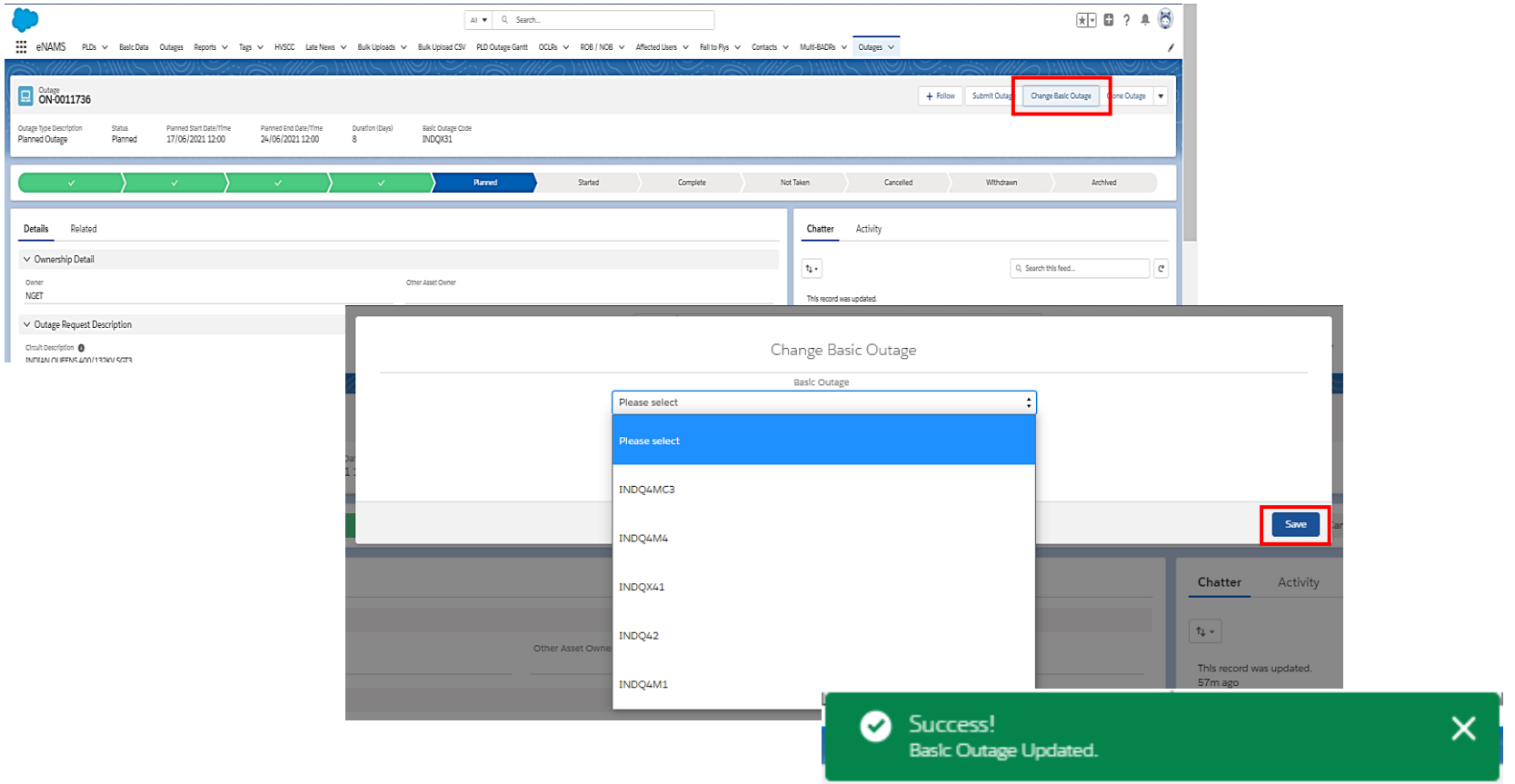
- Check the Outage details and make any modifications /additions if necessary
- When ready, click **Submit Outage** at the top*
- You should see a green popup appear
- The Outage will automatically change to **With SO** status



*Please note the Submit Outage button is used only for changing from Initial to With SO; eNAMS will not allow the user to simply change the status from Initial to With SO directly in the Status field. If attempted, when the user presses “Save”, it will throw an error.

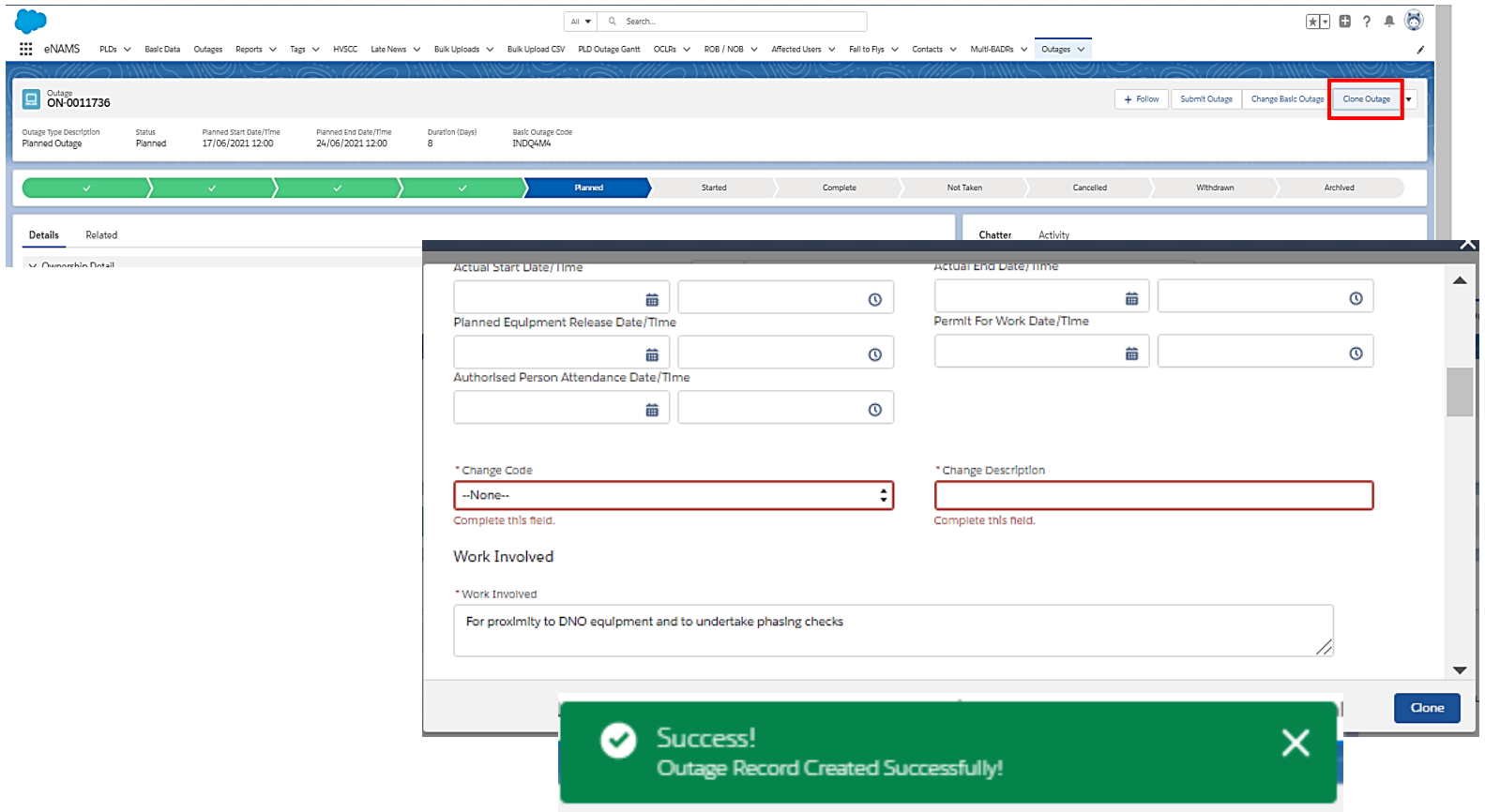
Changing an Outage's Basic Outage

- If an Outage description is incorrect and therefore was formed from the wrong Basic Outage, you can change this by clicking **Change Basic Outage** at the top of the Outage page.
- For TO users, a Change Request (Initial) has to be raised before the button will appear to enable changing the Basic Outage.
- Select an alternative Basic Outage (note: the new Basic Outage has to be part of the same Basic Group)
- Click **Save**
- A green popup should appear



Cloning an Outage

- To Clone an existing Outage, click on **Clone Outage** at the top of the Outage page
- Populate fields as necessary
- Ensure **Change Code** and **Change Description** mandatory fields are populated
- Click **Clone**
- A green popup should appear
- (Note: this functionality is available to TO and SO users – TO users are forced to submit the change via a With SO Change Request)



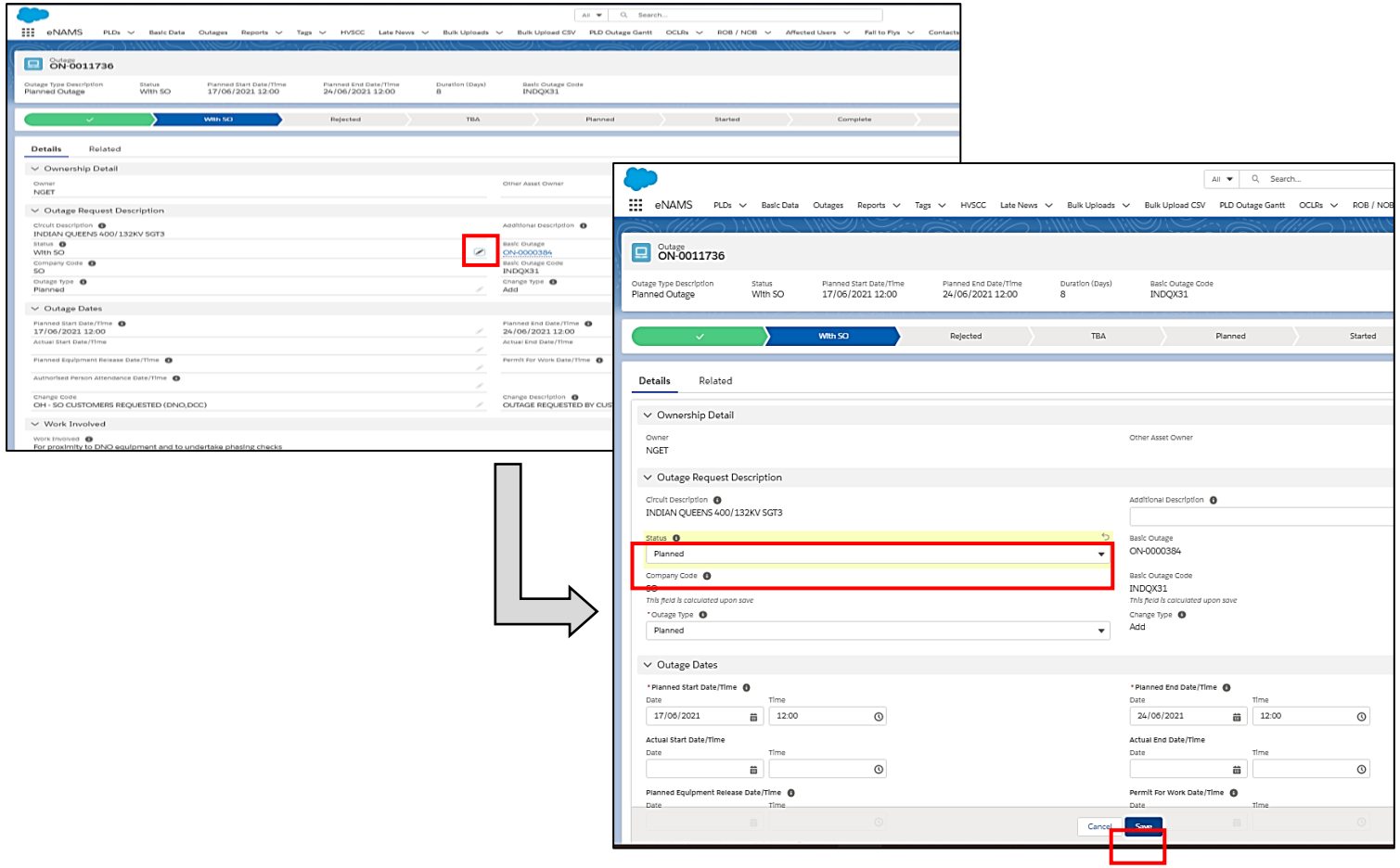
Approving / Rejecting Outages

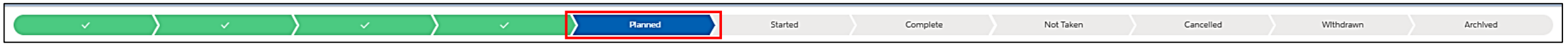
Only one Change Request at Initial or With SO status can exist for an Outage at any one point in time.

Approving / Rejecting an Outage or Change Request are known as “end states”; this means the TO is then able to make a change to an Outage / submit a new Change Request.

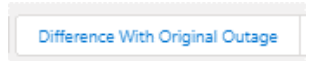
Approve a single Outage / Change Request

- To accept an Outage / Change Request*, firstly click on any pencil icon in the Outage / Change Request, or click **Edit** in the top right-hand corner of the page.
- This will make some fields editable
- To approve, click on the dropdown against the **Status** field
- Select **Planned** for a new outage or select **Approved** for a Change Request
- Then click **Save** to accept
- The chevrons will update to indicate **Planned** status if a new Outage / **Approved** if a Change Request



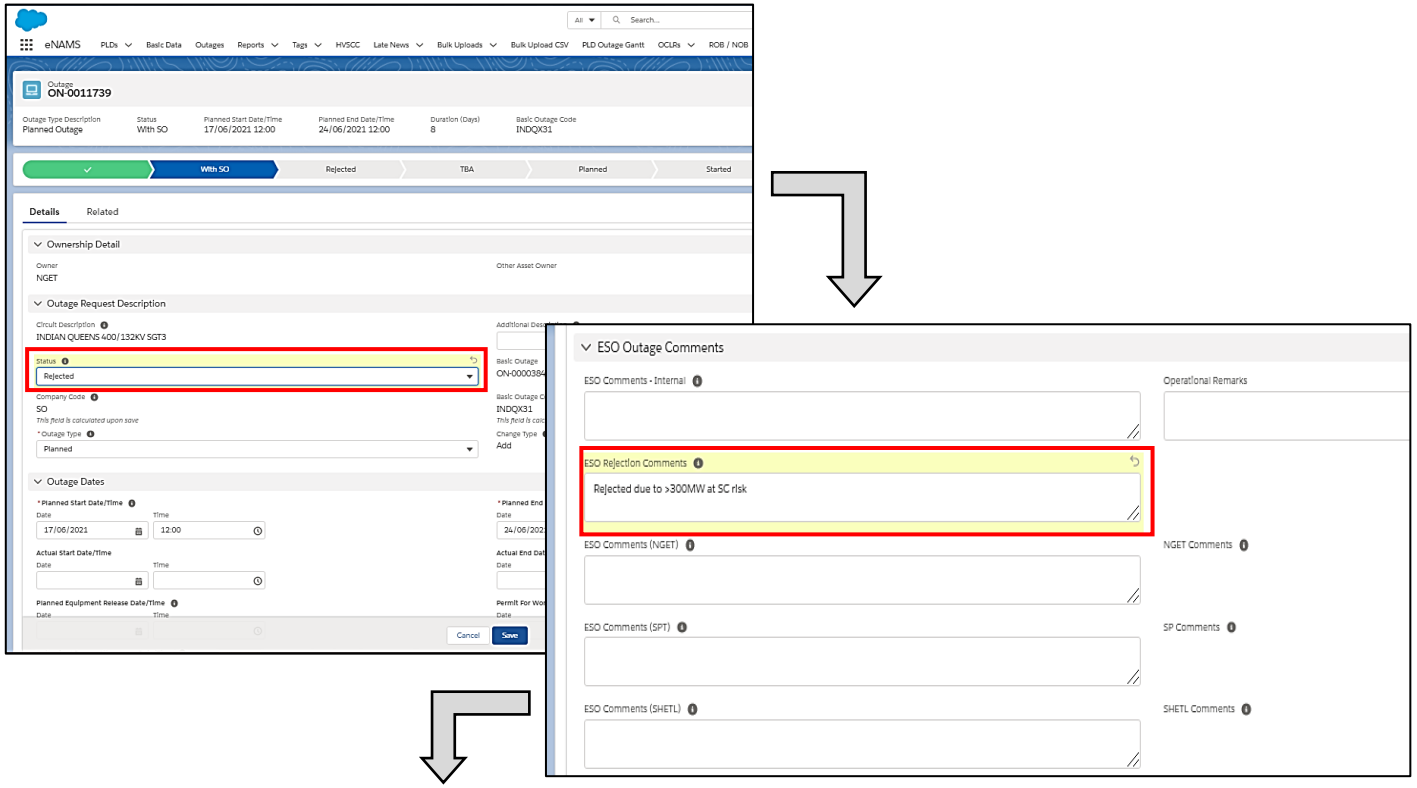


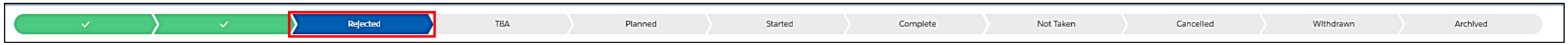
*To view the details of a Change Request (i.e. what is changing), click on the **Difference With Original Outage** button on the Change Request page before proceeding with approval.



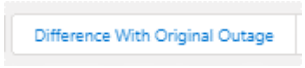
Reject a single Outage / Change Request

- To reject an Outage / Change Request*, firstly click on any pencil icon in the Outage / Change Request, or click **Edit** in the top right-hand corner of the page
- This will make some fields editable
- To reject, click on the dropdown against the **Status** field
- Select **Rejected**
- You must populate ESO **Rejection Comments** field
- Then click **Save** to reject the Outage / Change Request.
- The chevrons will update to indicate **Rejected** status





*To view the details of a Change Request (i.e. what is changing), click on the **Difference With Original Outage** button on the Change Request page before proceeding with rejection.

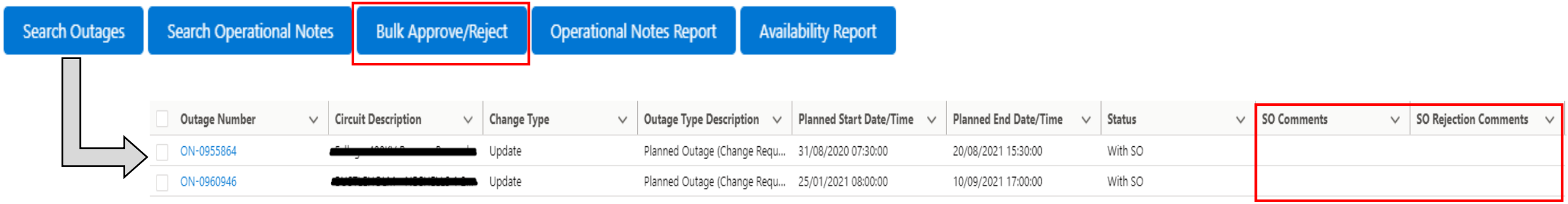


Please note:

1) *eNAMS validation does not currently prevent the user selecting Not Taken, TBA or Cancelled for a new Outage (Change Type: Add and Status: Initial / With SO); therefore the user should be careful not to inadvertently select these status' due to lack of prevention logic.*
2) *SO user must remember to delete old SO Rejection Comments that may already exist from a previous rejection that may have occurred prior to the outage first being Planned and write new ones in applicable to the first change request being rejected.*

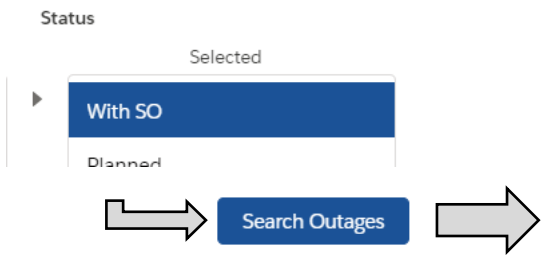
Bulk Approve / Reject Outages

- The Bulk Approve/Reject page in eNAMS allows you to do the following in bulk:
  - **Approve** multiple Outages
  - Populate multiple **ESO Comments – Internal**
  - Populate multiple **Rejection Comments**
  - **Reject** multiple Outages
- Currently the bulk functionality does not work for Change Requests, only for new Outages (i.e. with Change Type = Add). This is a known defect.
- To navigate to the Bulk Approve/Reject page, first go to the **Search Outage** page
- Define your search criteria then click on **Bulk Approve/Reject** button
- You will see the list of Outage appear with any existing **SO Comments** or **SO Rejections Comments** listed in the last two columns (highlighted below)
- When Outages are Approved / Rejected or Comments fields populated in the bulk view, the relevant fields will be updated in the outage list.



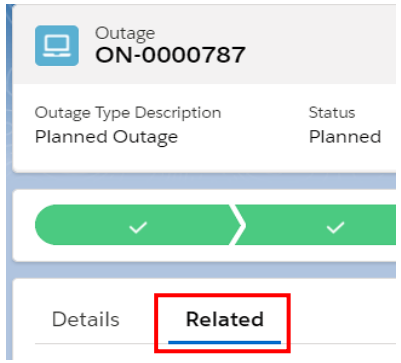
Locating Change Request of an Outage

- There are multiple methods of finding out if an Outage has an open (i.e. With SO) Change Request
- One such method is to search for the Outage / Outages on the Outage Search page in the normal way (ensure With SO is selected in the Status field on the Outage Search page).
- The Change Request is identified in the Outage Type Description column with "(Change Request)".



Outage Number	TO Outage Refere...	Status	Outage Type Desc...	Circuit Description	Additional Descri...	Change Type	Planned Start Dat...	Planned End Date...	Owner
ON-0000787		Planned	Planned Outage	INDIAN QUEENS 400KV MESH CORNER 4 / SGT4 / MSC4 AND LAN-DULPH 1 CIRCUIT		Add	17/09/2026 07:45:00	19/09/2030 16:00:00	NGET
ON-0000787		With SO	Planned Outage (Change Request)	INDIAN QUEENS 400KV MESH CORNER 4 / SGT4 / MSC4 AND LAN-DULPH 1 CIRCUIT		Update	18/09/2026 07:45:00	19/09/2030 16:00:00	NGET

- Another method is by navigating to a specific Outage, followed by the Related tab, then view the Outage Change Requests field



Outage Change Requests (2)

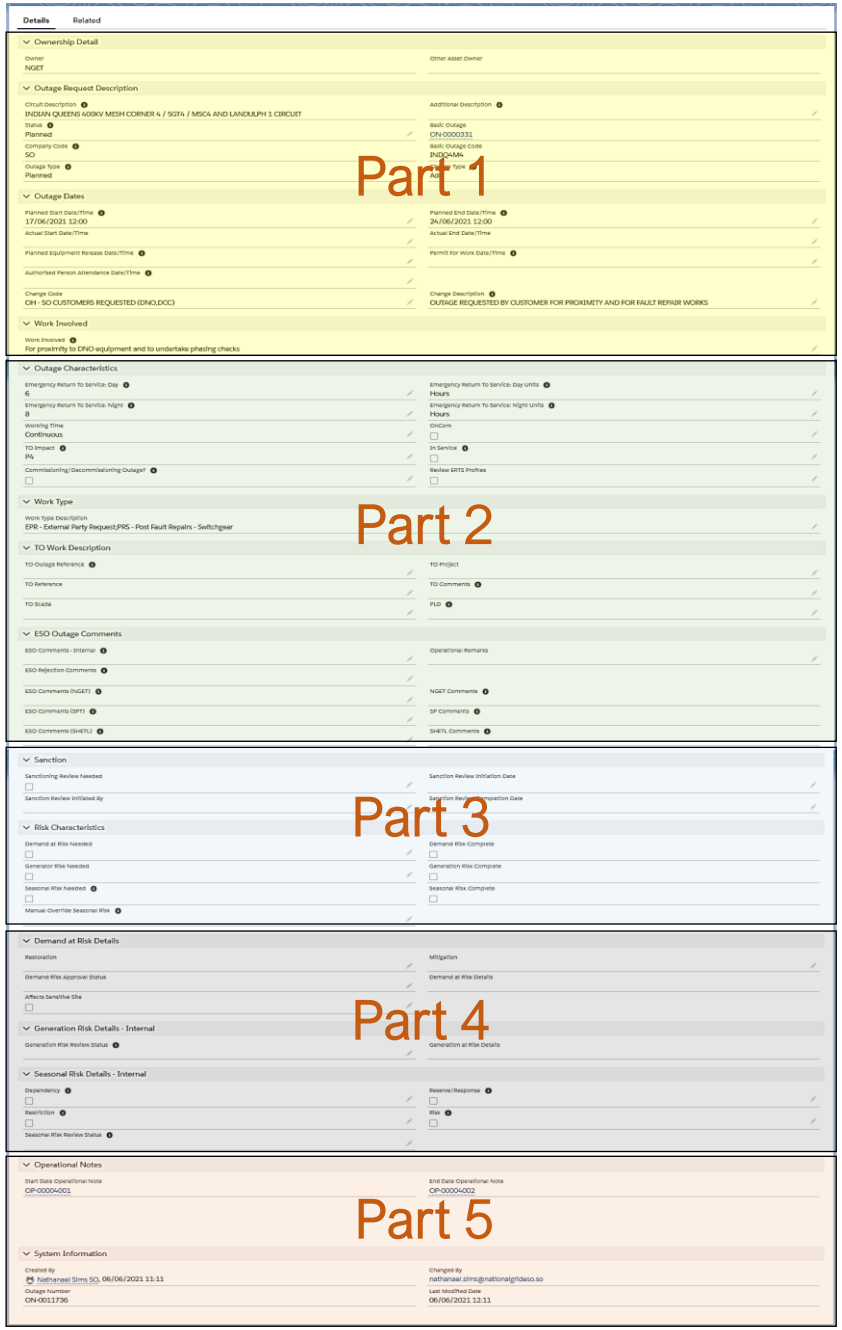
Outage Name	Status	Change Type	Change Description	CreatedDate ↓	Created By
ON-0000787	With SO	Update	tt	08/06/2021	Nathanael Sims NGET OP
ON-0000787	Approved	Add	Test	04/09/2020	Jonathan Barcroft

View All

Understanding Outage Fields

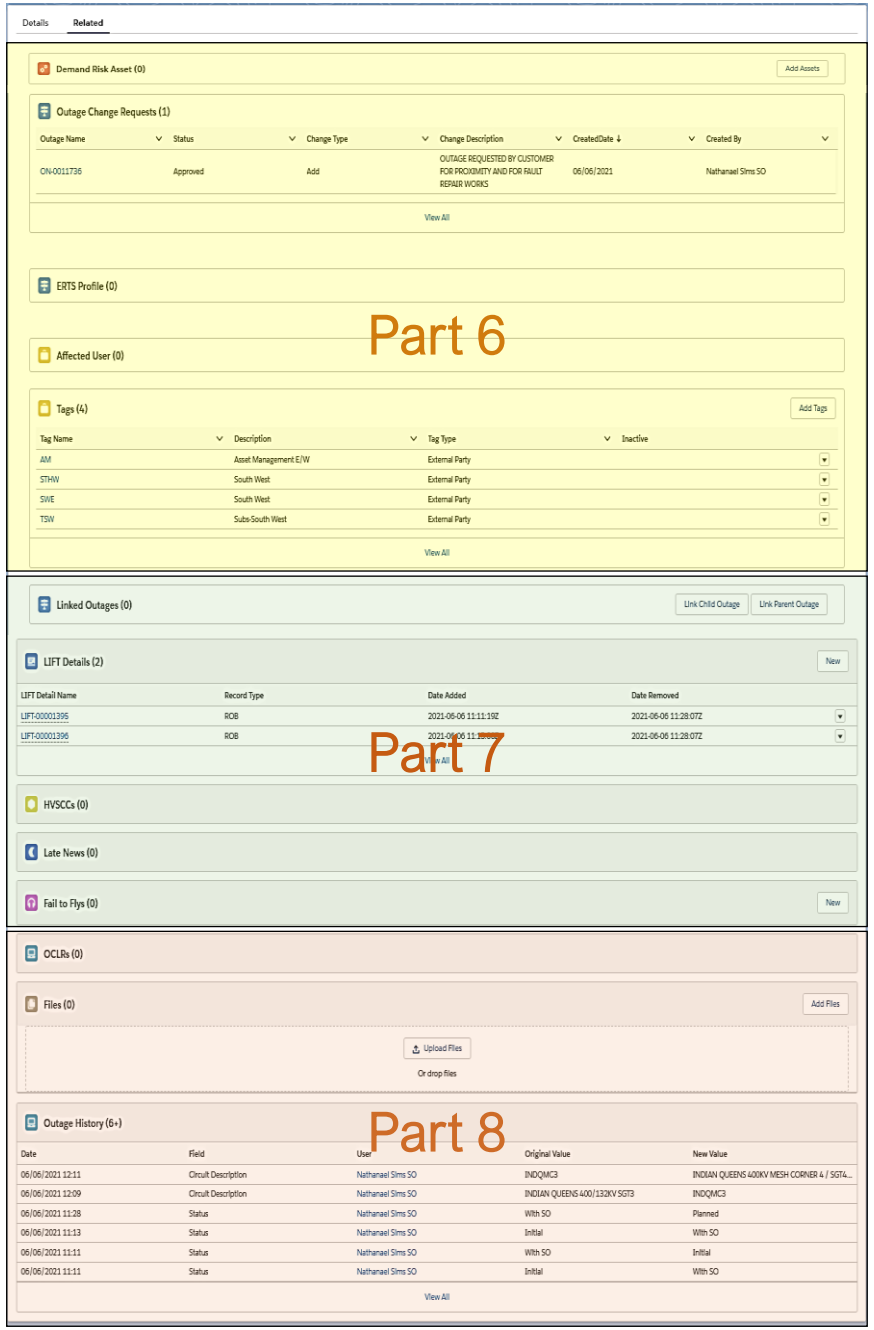
Outage – Details tab (Reference Page)

- Part 1
  - Ownership Detail
  - Outage Request Description
  - Outage Dates
  - Work Involved
- Part 2
  - Outage Characteristics
  - Work Type
  - TO Work Description
  - ESO Outage Comments
- Part 3
  - Sanction
  - Risk Characteristics
- Part 4
  - Demand at Risk Details
  - Generation Risk Details – Internal
  - Seasonal Risk Details – Internal
- Part 5
  - Operational Notes
  - System Information



Outage – Related tab (Reference Page)

- Part 6
  - Demand Risk Asset
  - Outage Change Requests
  - ERTS Profile
  - Affected User
  - Tags
- Part 7
  - Linked Outages
  - LIFT Details
  - HVSCCs
  - Late News
  - Fail to Flys
- Part 8
  - OCLRs
  - Files
  - Outages History



Part 1a of 8 – Outage page fields

Automatically populated from Basic Outage

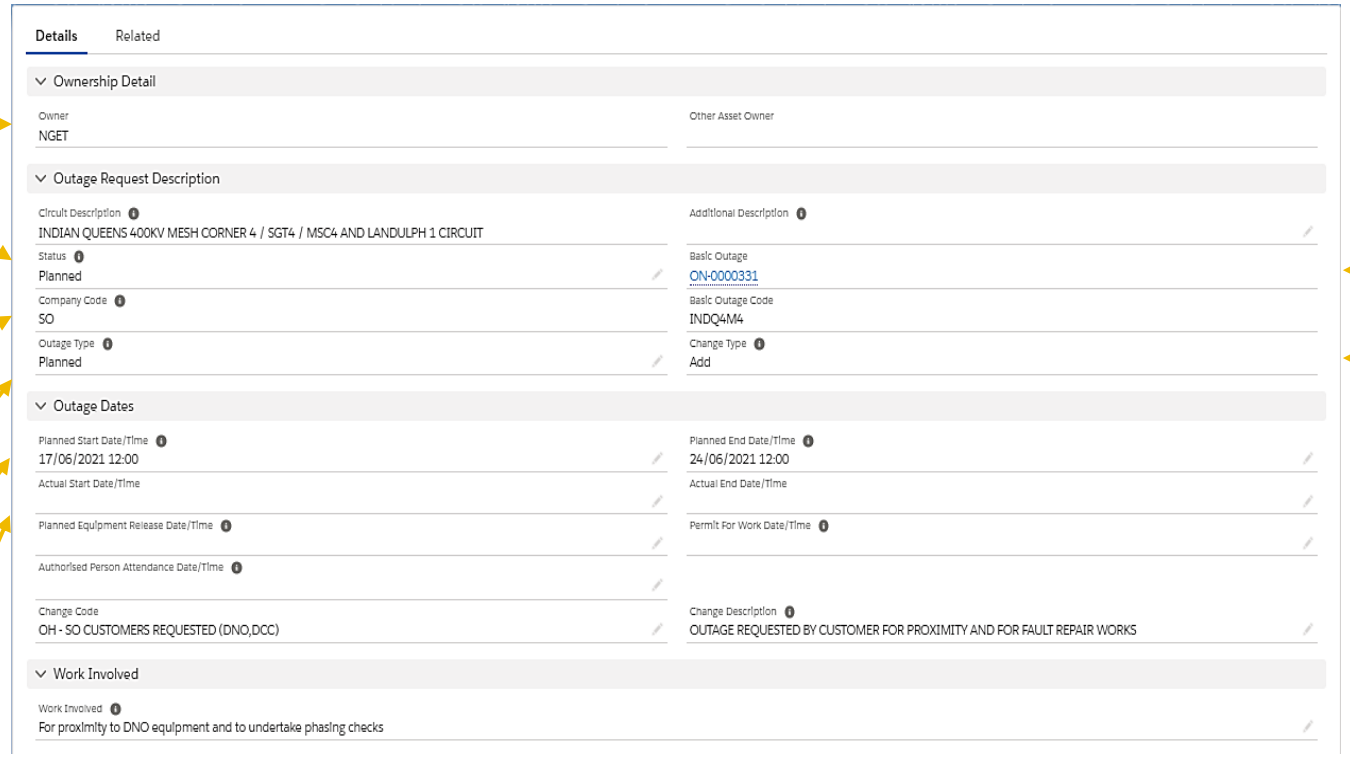
Current Outage status. See Outage Status slide for Descriptions.

A two-letter prefix for specific company derived from Basic Outage owner.

Planned / Unplanned / Fault

Outage Start / End Dates & Times

Actual Start / End Dates & Times (automatically marks Outage as Started when populated)



Link to Basic Outage

Inherited from most recent closed Change Request

Part 1b of 8 – Outage Status

- Initial – pre-submission status.
- With SO – when an Outage (New or Change Request) has been submitted to the ESO.
- Rejected – when an Outage has been rejected by the ESO.
- TBA – when an Outage has been accepted into TBA (TBA = To be arranged). Booking can be reused.
- Planned – when a Planned outage has been accepted into the plan by the ESO.
- Unplanned – when an Unplanned outage has been accepted by the ESO. Unplanned outages are those switched out through manual intervention but have not followed the planning process.
- Fault – when a Fault outage has been accepted by the ESO. Fault outages are those switched out through automatic protective action.
- Started – when an Outage has begun (Actual Start Date & Time is populated).
- Complete – when an Outage has finished (Actual End Date & Time is populated).
- Not Taken – when an Outage didn't go ahead (can currently only be marked by the ESO). Booking can be reused. Please note there is a future change planned to allow TOs to mark an Outage as Not Taken.
- Cancelled – when the work associated with an Outage is no longer required (booking cannot be reused).
- Withdrawn – when an Outage booking isn't required (booking cannot be reused). Can be marked by ESO only.
- Archived – after a certain length of time, an Outage in Completed status is Archived (to save space on Salesforce server).

Part 1c of 8 – Outage Status

Statuses		
Planned Outage	Unplanned Outage	Fault Outage
Initial	Initial	Initial
With SO	With SO	With SO
Rejected	Rejected	Rejected
Planned	**Unplanned**	**Fault**
TBA	TBA	TBA
Started	Started	Complete
Complete	Complete	Cancelled
Not Taken	Not Taken	Archived
Cancelled	Cancelled	
Withdrawn	Archived	
Archived		

Part 2 of 8 – Outage page fields

ERTS – separate fields for digits and unit of time

Select if Com / Decom is associated with this outage (purpose is to aid visibility of upcoming CSP's). Can be selected by TO or SO.

TO can enter reference number (i.e. legacy TOGA number). This number can be searched on the Outage Search page*

Additional TO reference (not searchable except via Reports)

SCADA reference if available

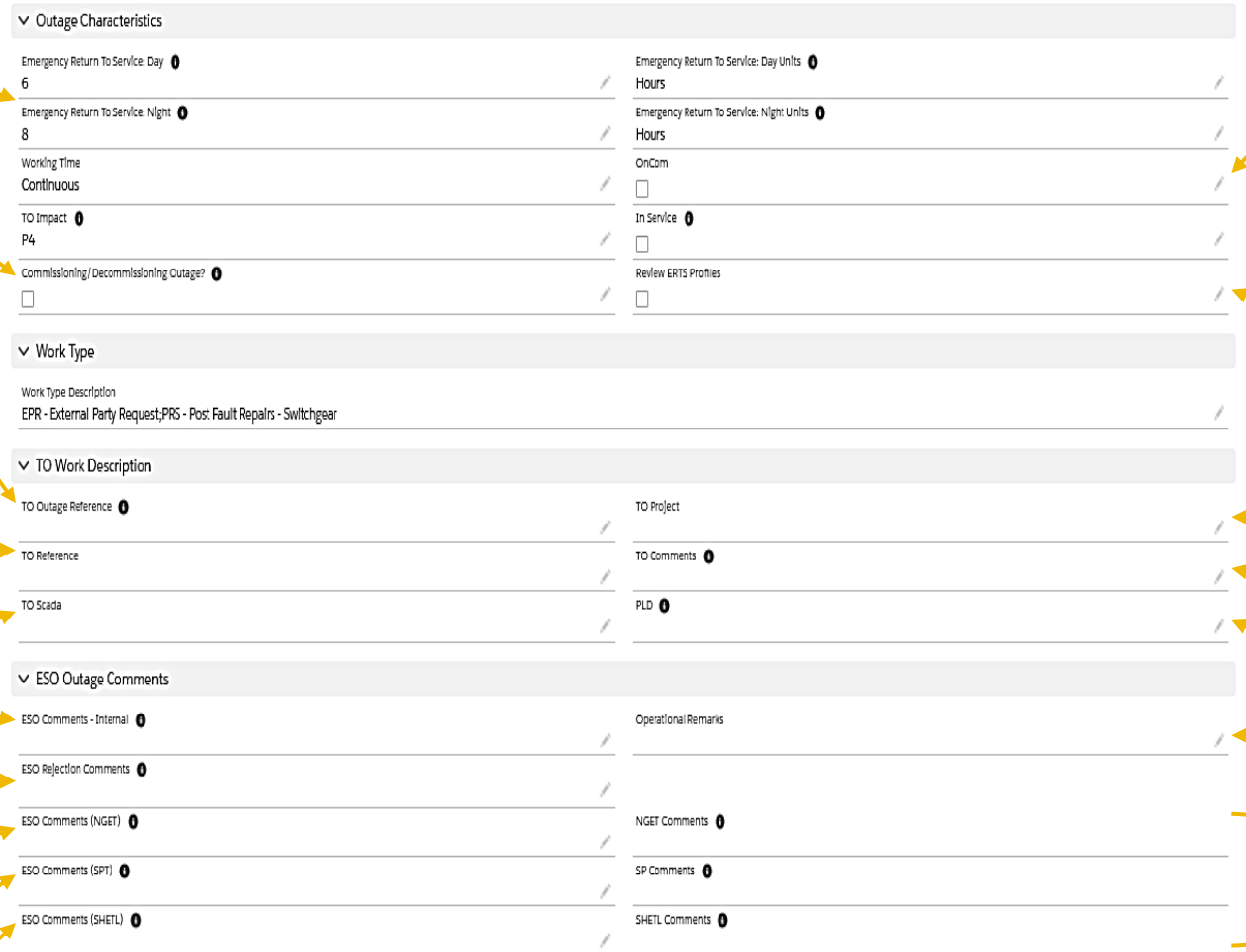
SO only comments

To be populated if Outage Rejected

SO comments visible to NGET

SO comments visible to SPT

SO comments visible to SSEN-T



Tick if Outage has no ERTS (i.e. return On Completion)

Should be ticked by the TO to indicate if ERTS Profile has been submitted (ERTS Profile is visible in Related tab of Outage – see slide Part 6 of 8). However, there is an outstanding defect in that this field is not visible to TO. Therefore cannot be used as intended.

TO Project reference (i.e. PI no.)

TO comments, visible to SO

PLD name, if linked

Any operational comments, such as switching restrictions, OESB etc.

Only available for cross-boundary outages. Visible to the specific TO and the ESO

**note: the legacy TOGA number is migrated to this field for all migrated outages.*

Part 3 of 8 – Outage page fields

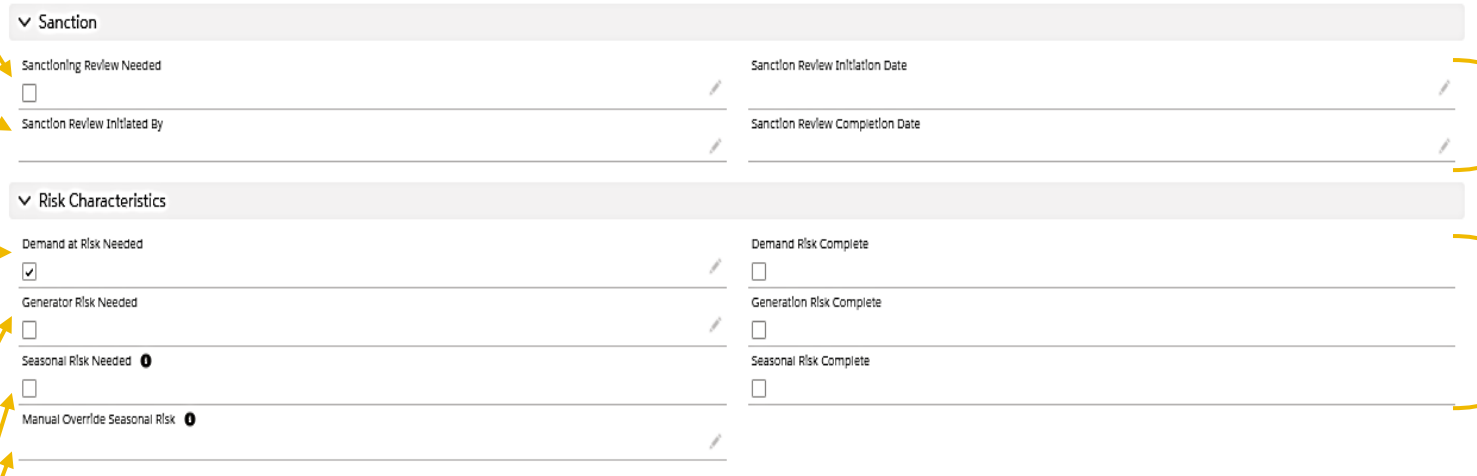
Tick if commercial sanction is required (i.e. if TO Justification paper required)

NAP Paper initiated by (mark as SO or TO)

Ticked if Demand At Risk (Demand Risk Asset field will then become visible on Related tab). See Demand At Risk chapter.

Tick if Generation is at increased risk (no longer necessary for RoCoF / VS following SQSS mod GSR027). See Generation Risk chapter.

Ticked if Winter ERTS review required. See Seasonal Risk chapter.



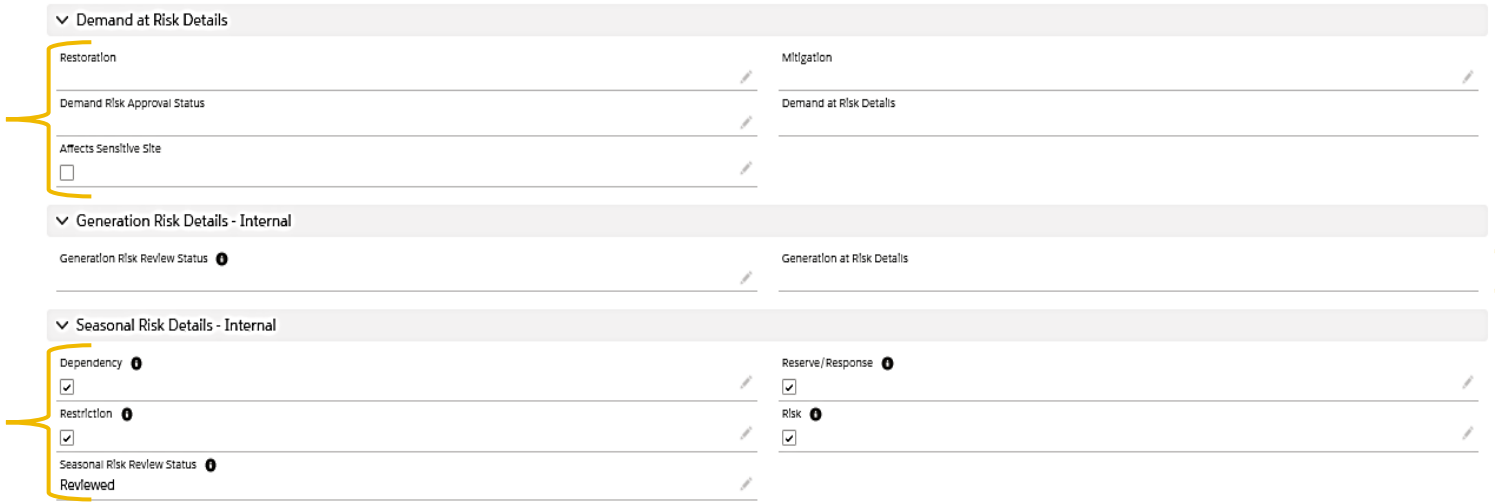
Date sanction requirement initiated and date outage sanctioned

These fields are automatically populated when the respective assessments have been completed (i.e. Approval / Review Status' are set to Approved / Reviewed).

Part 4 of 8 – Outage page fields

Demand at Risk fields.
See Demand At Risk chapter for details of process

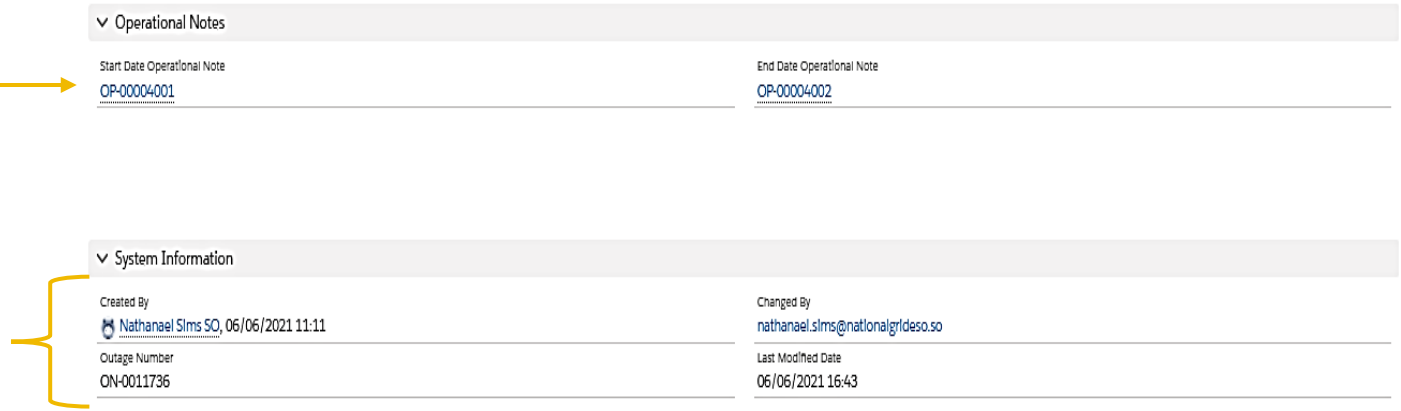
Seasonal Risk (i.e. Winter ERTS Risk) fields.
See Seasonal Risk chapter for details of process



Generation Risk fields.
See Generation Risk chapter for details of process

Part 5 of 8 – Outage page fields

Click link to view Starting Operational Note



Click link to view Ending Operational Note

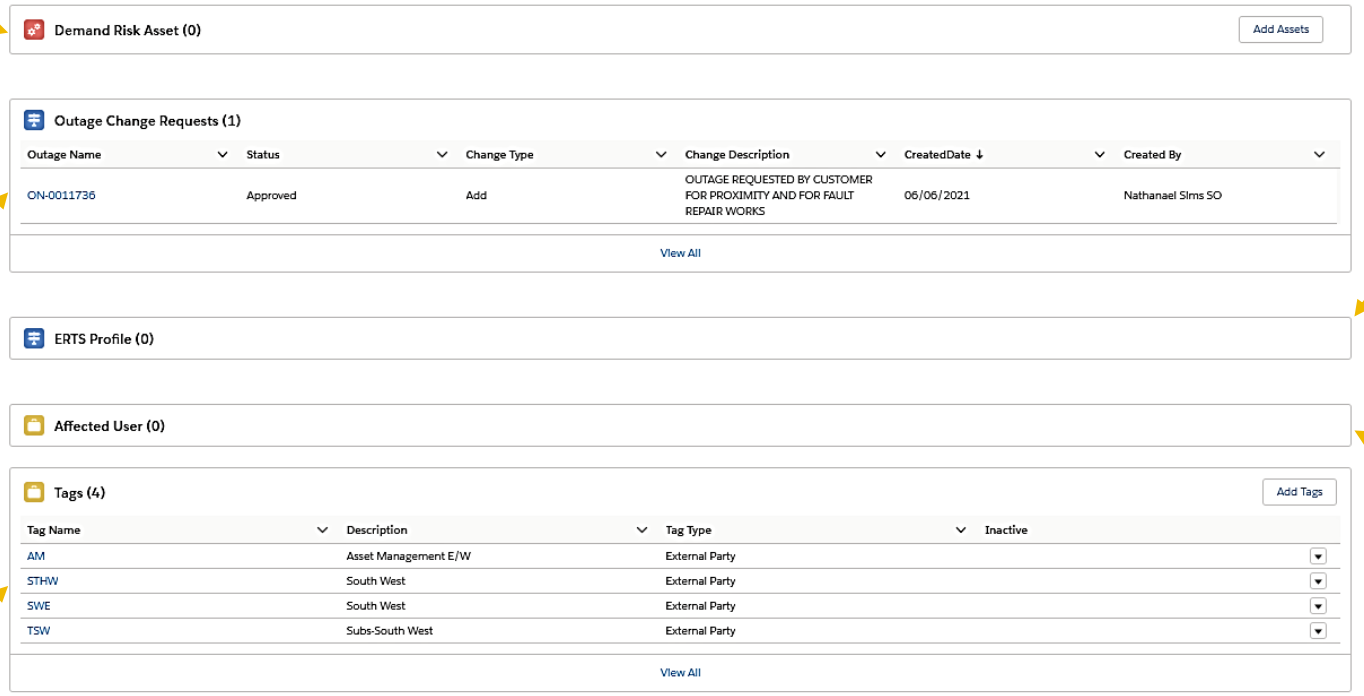
This section is automatically populated

Part 6 of 8 – Outage page fields

This field is made visible when Demand at Risk Needed field is ticked in Details tab. See Demand At Risk chapter for process details.

All closed and open Change Requests (CR) are listed here. Click Outage Name against each CR to view the details. See Interpreting Outage History section for details on viewing in conjunction with Outage History field.

Lists all Tags inherited from the Basic Outage, in addition to any Tags assigned for the individual Outage. Tags fall into categories of External Party / Scheme / Free Codes / ESO Party.



Click to view if a granular view of ERTS of an Outage has been created by the TO. ERTS Profile entries can be generated by TO when the Outage is in Initial status. There is currently little validation for this field, there are defects on the backlog to enhance this feature.

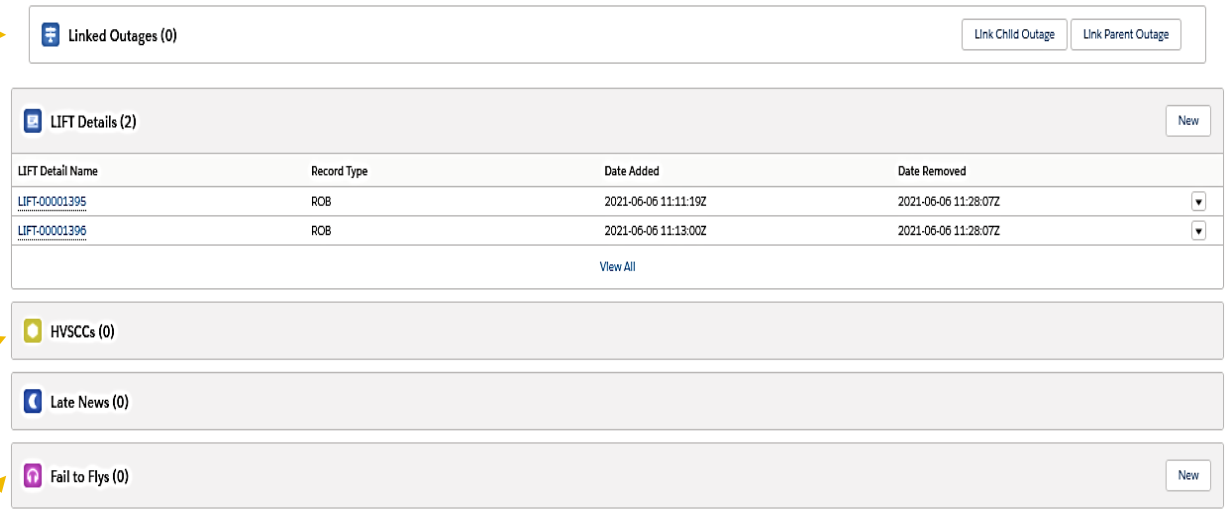
Inherited from Basic Outage. This field lists all the organisations (Accounts) who can see the Outage in their reports.

Part 7 of 8 – Outage page fields

May link a Parent or Child Outage to current Outage. A Parent Outage will see the current outage as a Child Outage, and vice versa. This functionality is similar to TOGA and is useful to see easily when there are multiple shorter outages planned in coordination with a longer umbrella outage.

When an Outage is linked to an HVSCC Record, the HVSCC Record details will appear here.

A F2F record can be generated here (or by navigating to Fail To Flys in the eNAMS toolbar). Visible to ESO only.



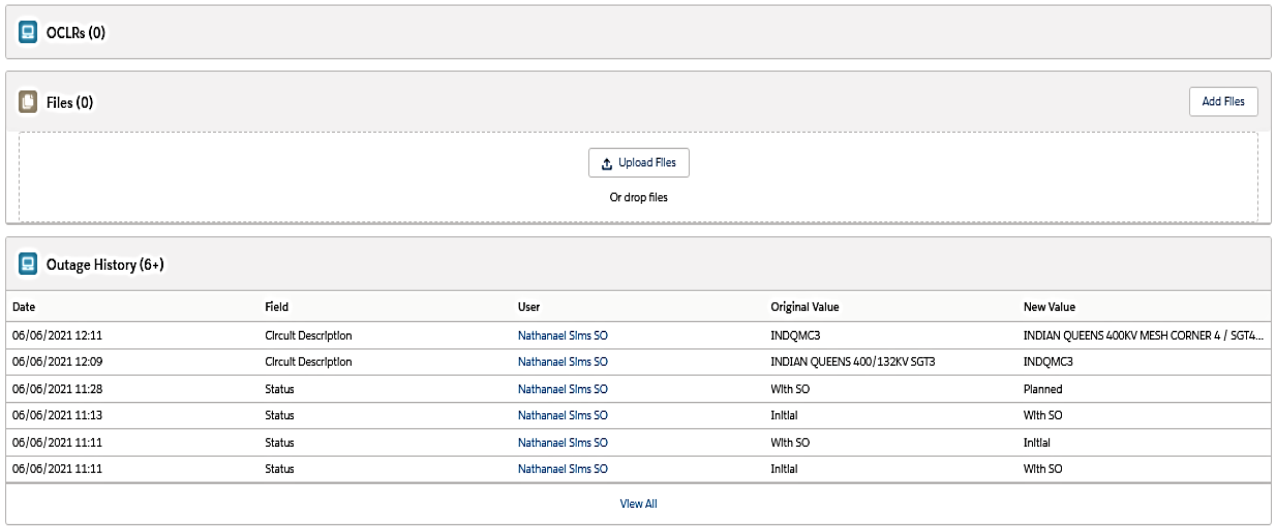
An item is automatically created on the ROB (Regional Outage Board). The user may manually create an item on the NOB (National Outage Board) if National assessment required.

A Late News record is automatically generated if there is a new Outage / Outage Change that affects the following day. See *Late News Guide – eNAMS.pptx* for further details.

Part 8 of 8 – Outage page fields

When an Outage is linked to an OCLR in eNAMS, the OCLR details will appear here.

Each change to a pre-defined 20 tracked Outage fields will be shown here in a new row

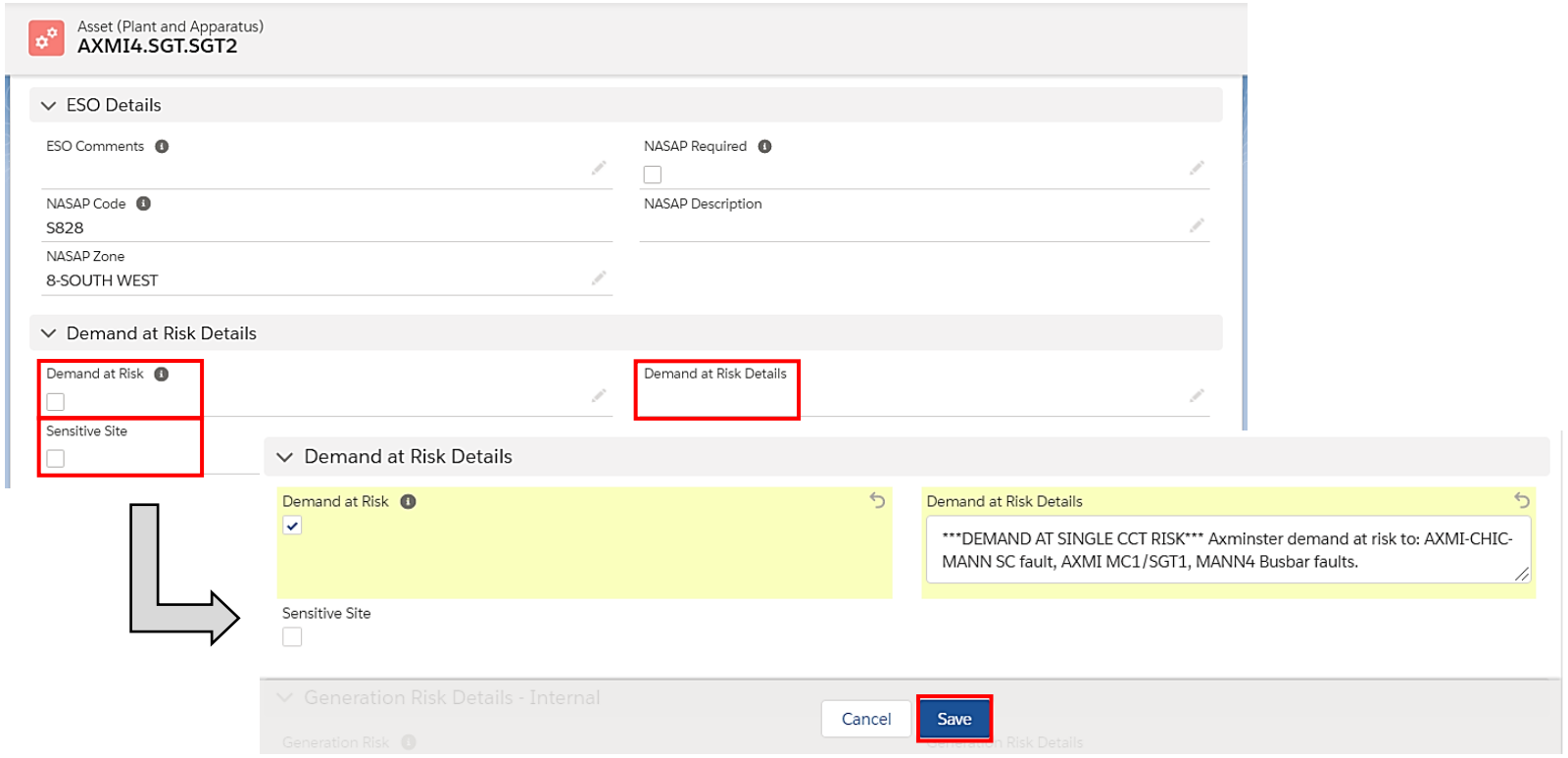


The user may upload any type of file. The file is visible to all Affected Users who have visibility of the Outage (TO, SO, DNO's, DCC's).

Demand At Risk

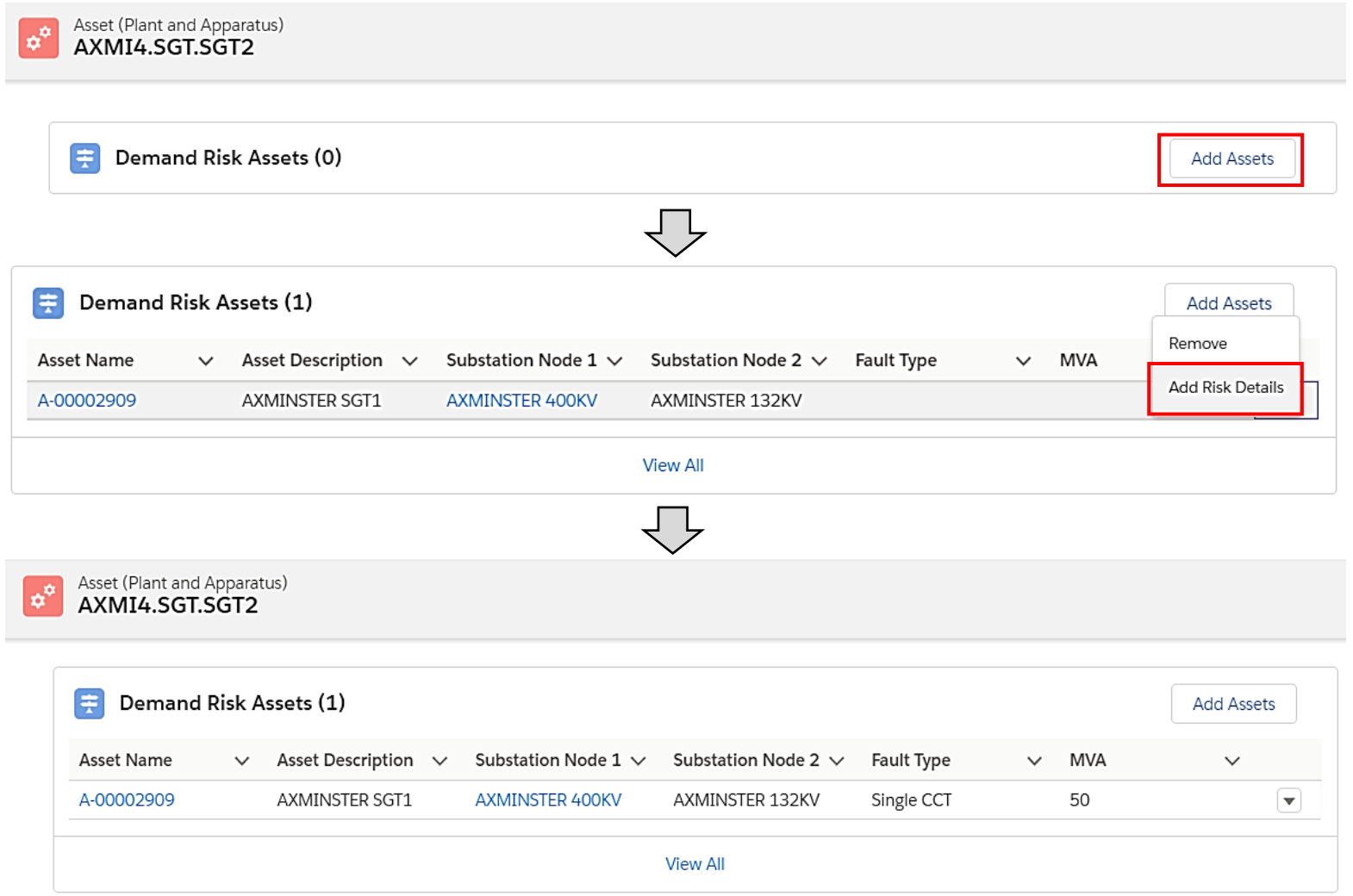
Asset Level (1/2) – Defining Demand at Risk

- Demand at Risk can be defined at the Asset level i.e. if an outage on an Asset is always going to cause demand to be at risk to a fault, this can be marked within the Asset.
- There are three fields available to populate:
  - **Demand at Risk** (tick to say yes)
  - **Demand at Risk Details**
  - **Sensitive Site** (i.e. if impacted site is listed within Work Instruction NAP-020)



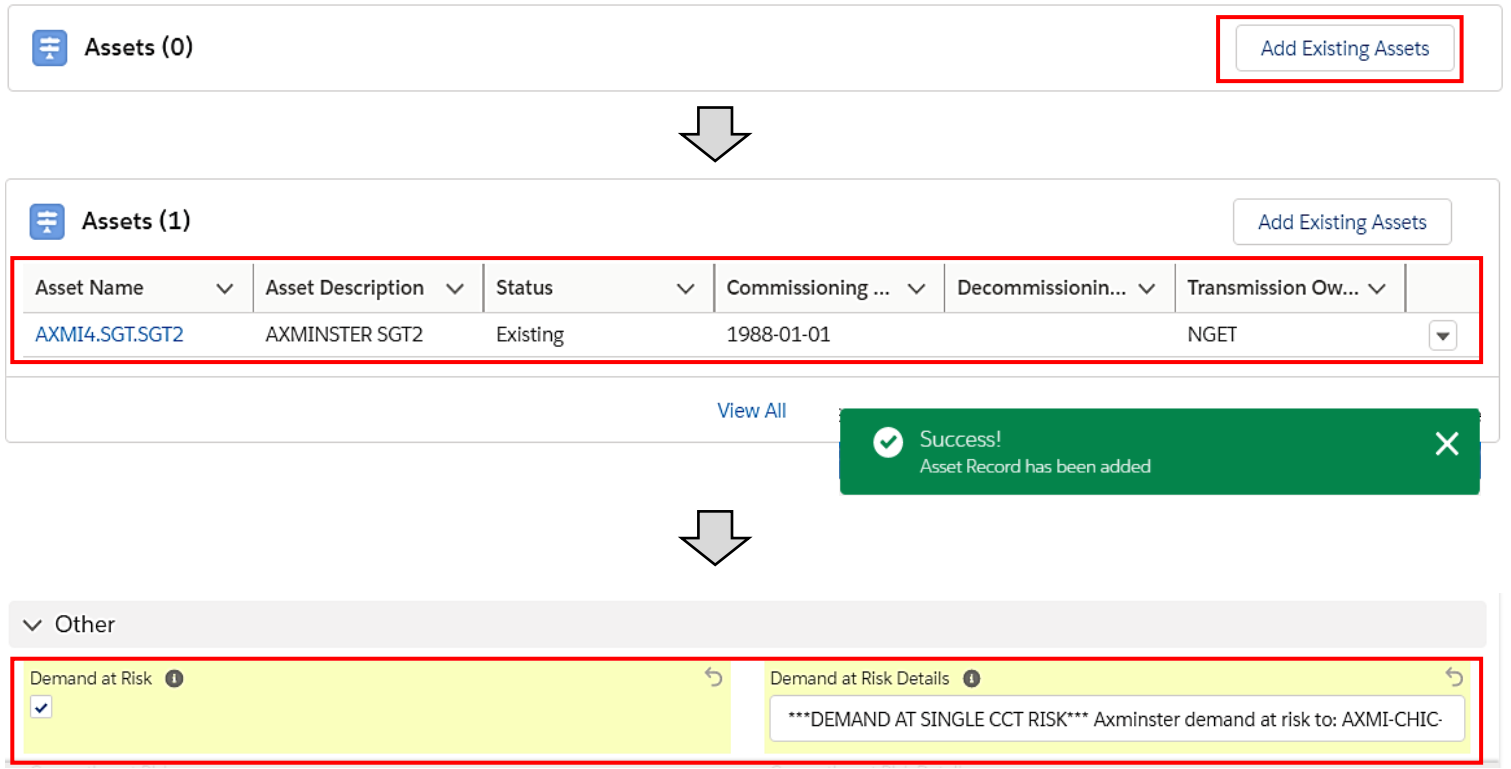
Asset Level (2/2) – Defining Demand at Risk

- If **Demand at Risk** is flagged, the **Demand Risk Assets** field will become visible on the **Related** tab of the Asset.
- Multiple **Demand Risk Assets** can be linked to a single Asset by clicking on **Add Assets**
- Once linked, click on the dropdown arrow on the right hand side, then click on **Add Risk Details**
- Here, the user can populate Risk Details including **MVA** at risk, **Fault Type** and any additional **comments**. Then click **Save**.
- Refresh the page to see the entered details appear.



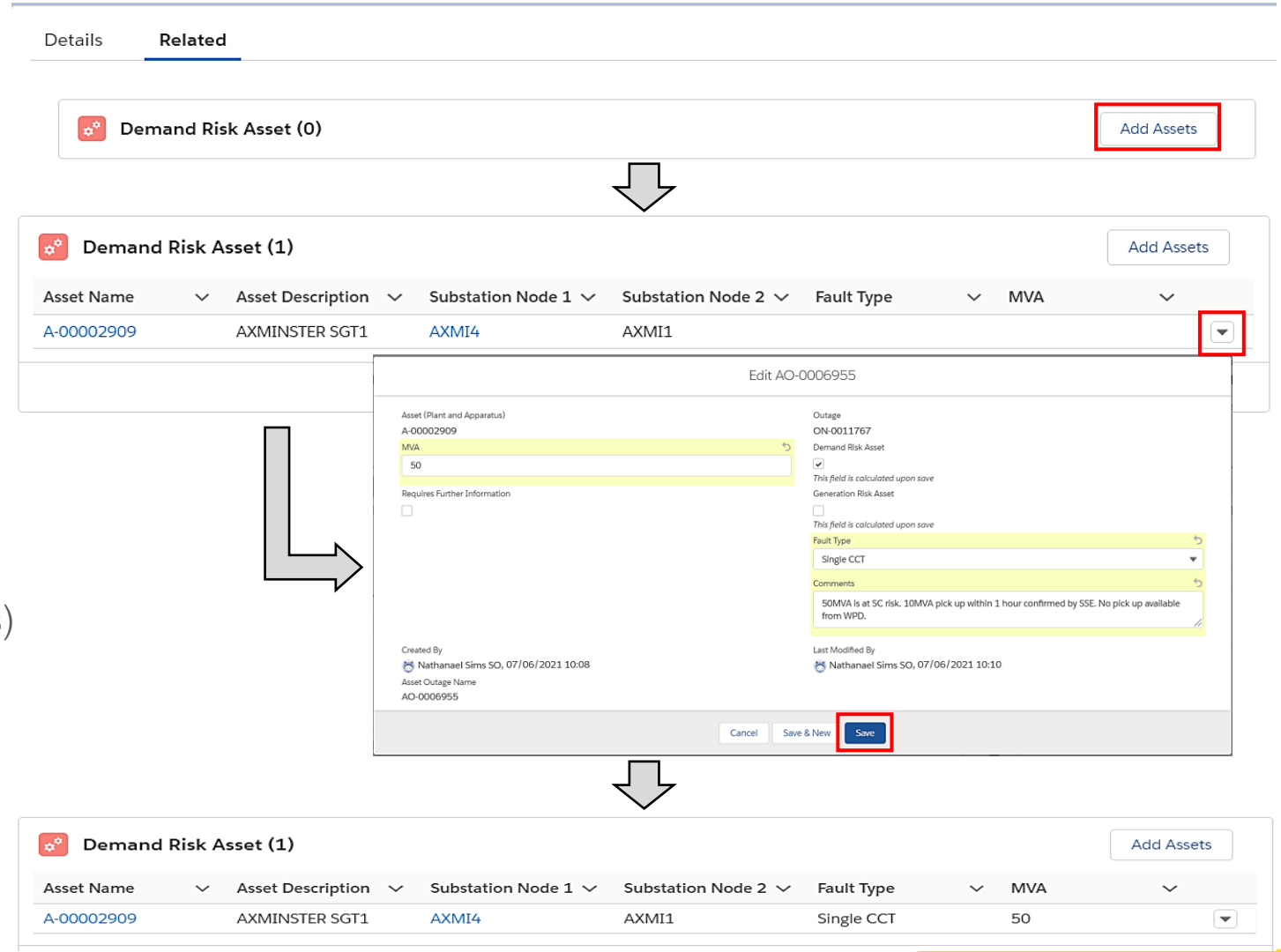
Basic Outage Level – Defining Demand at Risk

- Demand at Risk is also defined at the Basic Outage level i.e. if an Outage is always going to cause demand to be at risk to a fault, this can be marked within the Basic Outage.
- When an Asset that has **Demand at Risk** tagged is linked to a **Basic Outage**, the **Basic Outage** automatically inherits the **Demand at Risk** flag and **Demand at Risk Details**.
- **Demand At Risk** can also be manually flagged within the Basic Outage (same process as for an Asset).
- There are two fields available to populate:
  - **Demand at Risk** (tick to say yes)
  - **Demand at Risk Details**



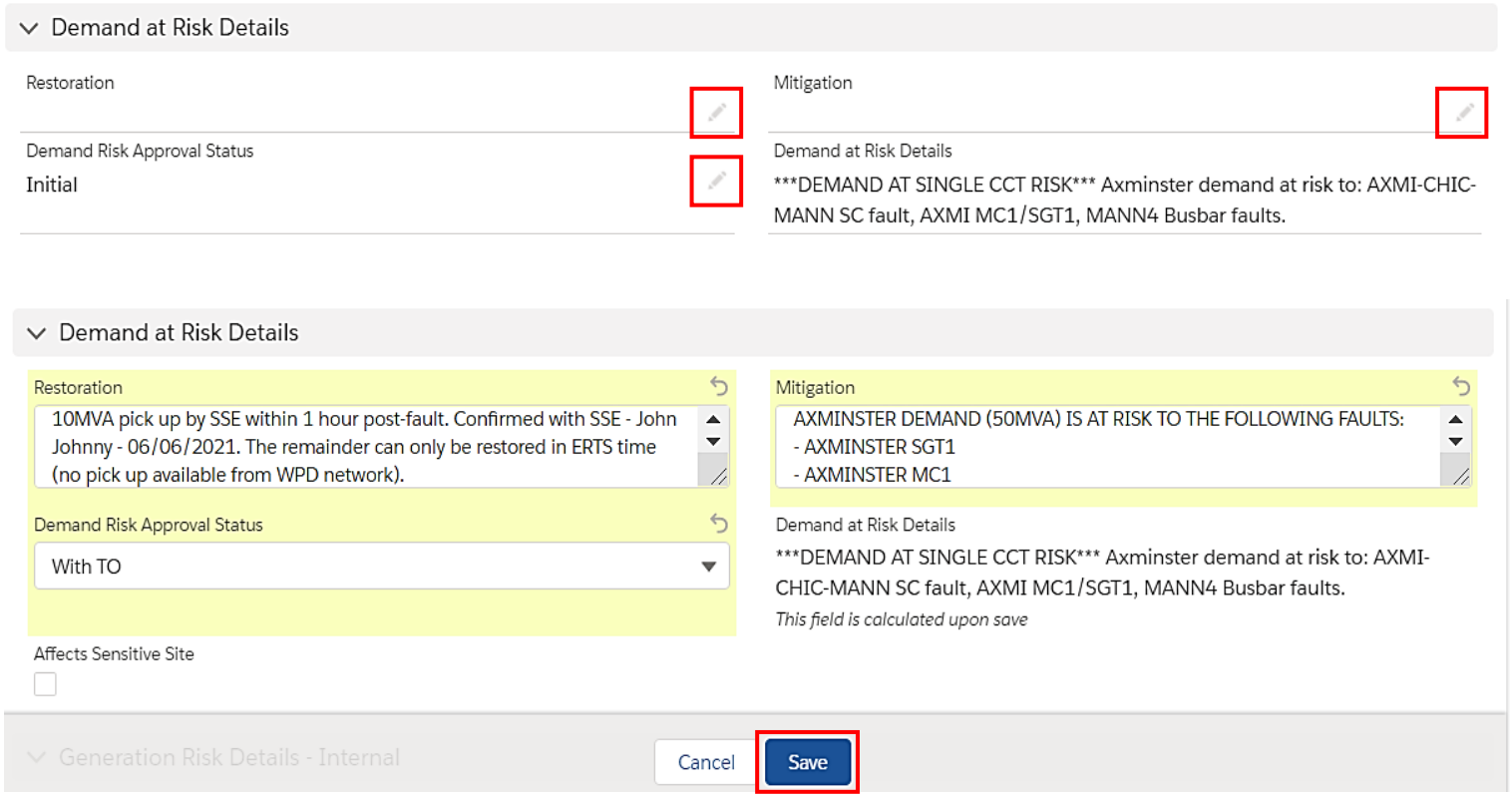
Outage Level (1/2) – Defining Demand at Risk

- If Demand at Risk is defined at Basic Outage level, then the **Demand at Risk** flag and **Demand at Risk Details** will be automatically inherited by Outages. The **Affects Sensitive Site** flag will be automatically inherited from Assets.
- If **Demand at Risk** is flagged, the **Demand Risk Asset** field will become visible on the **Related** tab of the Outage.
- The **Demand Risk Asset** details will be automatically inherited from **Assets** linked to the Basic Outage. It can also be configured manually in the Outage.
- The user can click **Add Assets** and link Asset(s) to which demand would be lost if faulted.
- Once linked, click on the dropdown arrow and click **Risk Details**
- Here, the user can stipulate the **MVA** at risk, **Fault Type** and any additional **comments**
- Click **Save** and refresh the page to view the updated details.



Outage Level (2/2) – Defining Demand at Risk

- The user may populate the **Restoration** and **Mitigation** fields (Note: SO and TO have permissions).
- Once complete, mark **Demand Risk Approval Status** as **With TO** to request the TO's approval.
- **Demand Risk Approval Status** is a monitored field, therefore any change (i.e. when TO changes **Approval Status** field to Approved), will be recorded in Outage History – see example screenshot below.
- When Approval Status is **Approved**, the **Demand Risk Complete** box in the Outage is automatically ticked.



Note:
If Sensitive Site: SO must approve Demand at Risk; TO moves from With TO to With SO, the TO user does not have permissions to move to Approved
If not Sensitive Site: TO can and shall move directly to Approved.

	Date	Field	User	Original Value	New Value
1	07/06/2021 10:58	Demand Risk Approval Status	Nathanael Sims NGET OP	With TO	Approved

Field Descriptions - Demand at Risk

eNAMS Field	Object Level	Proposed Use
Demand at Risk Needed	Asset / Basic Outage / Outage	Check the box if an outage on this equipment will cause demand to be lost to a subsequent fault. Selection inherited from Asset -> Basic Outage -> Outage, can be added or taken away at each level. After checking the box, you may need to refresh the page for additional fields to appear.
Risk Details	Asset / Basic Outage / Outage	High level summary of why demand is at risk during an outage on this equipment e.g., on PEMB4 SGT1 it may say “Local demand at risk to faults losing SGT2” Outage is locked to the Basic Outage’s Risk Details (which can be set independent of the Asset if necessary).
Restoration	Outage	Description of recovery actions that will be taken post fault. Detailed description of any outage specific risks, e.g., “Demand will be transferred to X group in Y minutes”
Mitigation	Outage	Description of health checks or other mitigations carried out to ensure likelihood of fault is as low as possible
Affects Sensitive Site	Asset / Outage	Check the box if the demand that would be lost is at a sensitive site (site list provided in Work Instruction NAP-020). These sites require additional approval from ESO.
Demand Risk Approval Status	Outage	Initial – while drafting risk details. With TO – when ready for TO actions (i.e. Mitigation) With SO - only applicable at sensitive sites, which require NGESO final approval of demand at risk. Approved – can be set directly by the TO if non-sensitive site impacted.
Demand at Risk Asset	Asset / Basic Outage / Outage	Can be found in Related tab. List of assets to which demand is at risk to a fault on. Selection and values inherit from Asset -> Outage (via Basic Outage), additional assets can be added or taken away at Outage level.
Change History	Asset / Basic Outage / Outage	The date, time and user of each change will be recorded in the Field History Tracker which can be found in Related tab.

Generation at Risk

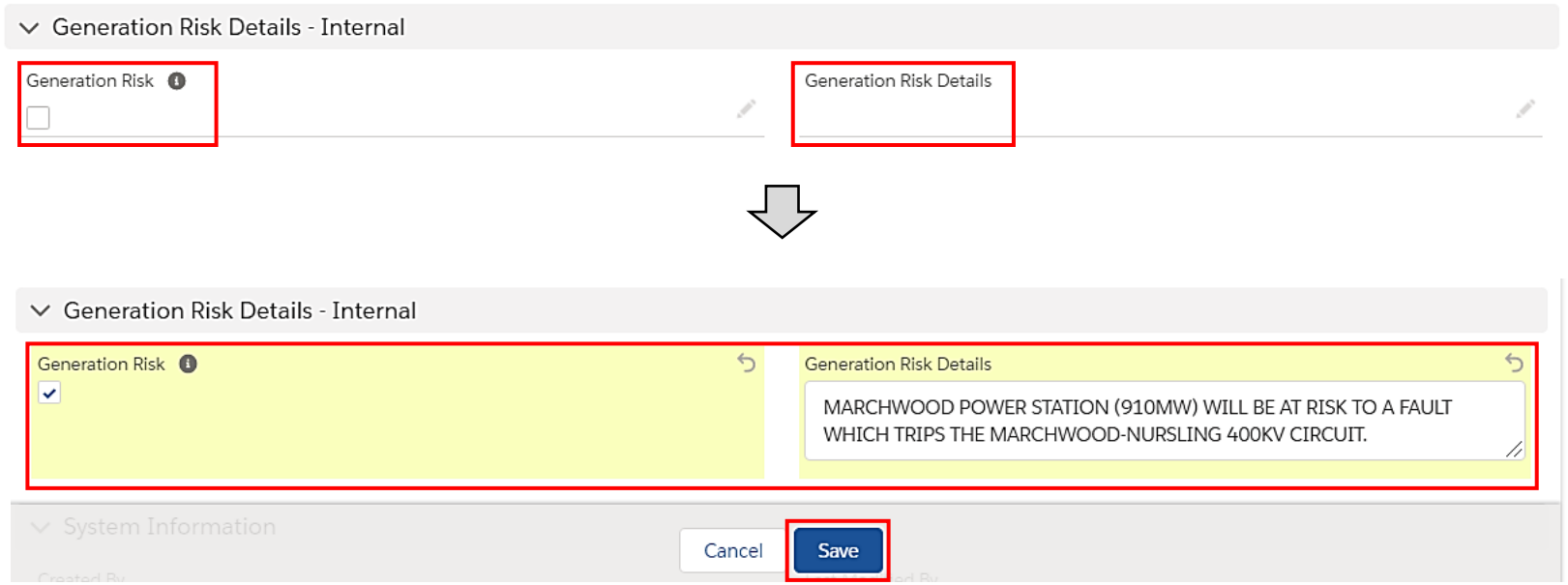
Generation Risk was added to eNAMS to highlight occasions where a RoCoF / Vector Shift constraint might be triggered, where additional sanction could be needed or where an outage causes a largest loss.

Following FRCR Phase 1 go-live on 25/05/2021, BMU+VS losses are no longer required to be secured. However the intention is to continue to populate this field in the event of adverse weather, in line with provisions in the SQSS operational chapters which allow the Control Room to take additional actions over and above the agreed criteria if there is a period of significantly higher risk.

The benefit of recording in the Generation Risk field on the outage level is that a report can be run for commercial and the ENCC Energy and Strategy desks to review forecast risk as and when is necessary.

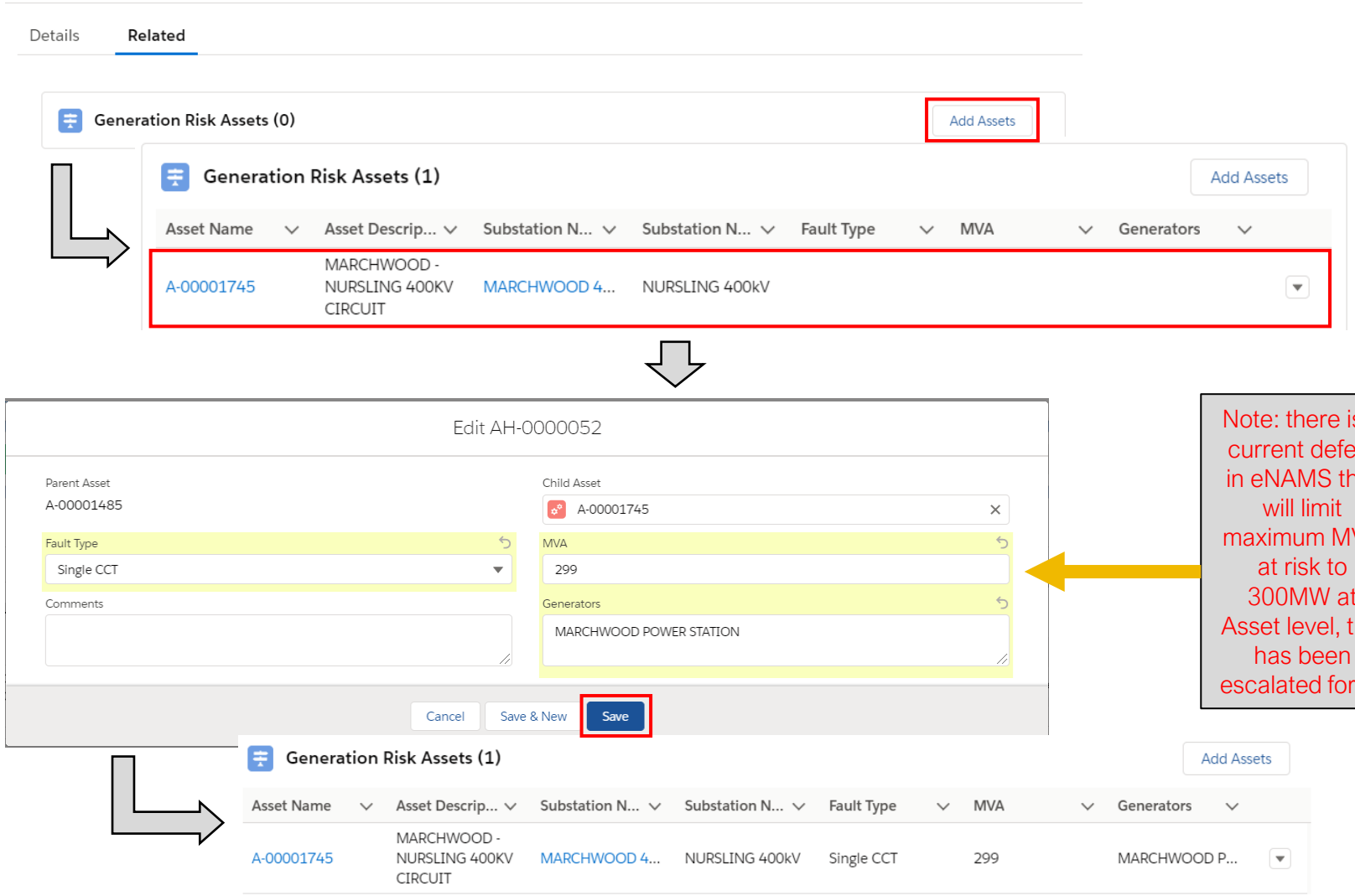
Asset Level (1/2) - Defining Generation at Risk

- Generation Risk is only visible to SO.
- Like Demand at Risk, Generation Risk can be defined at the Asset level i.e. if an outage on an Asset is always going to cause generation to be at risk to a fault, this can be marked within the Asset.
- There are two fields available to populate:
  - **Generation Risk** (tick to say yes)
  - **Generation Risk Details**



Asset Level (2/2) - Defining Generation at Risk

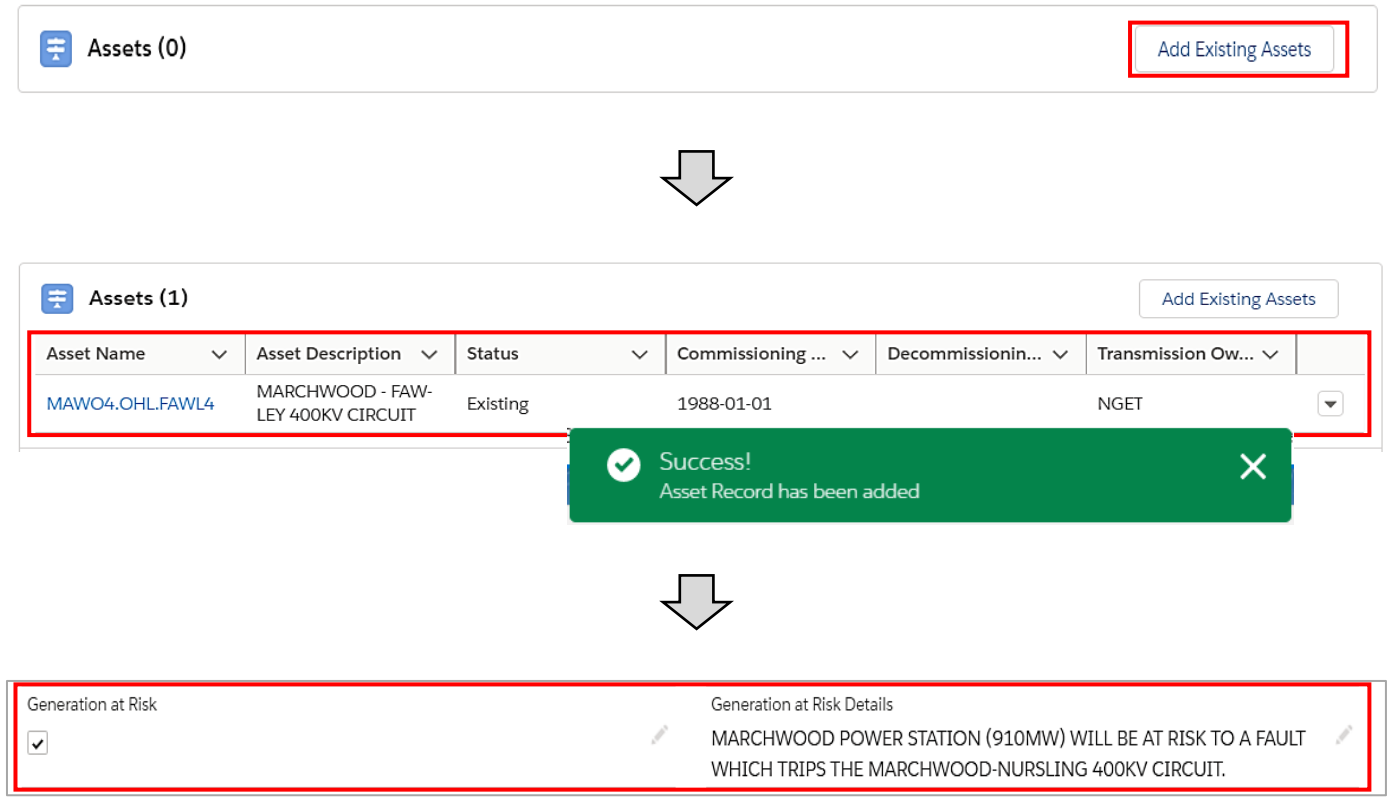
- If **Generation Risk** is flagged, the **Generation Risk Assets** field will become visible on the **Related** tab of the Asset
- Multiple **Generation Risk Assets** can be linked to a single Asset by clicking on **Add Assets**
- Once linked, click on the dropdown arrow on the right hand side, then click on **Add Risk Details**
- Here, the user can populate Risk Details including **MVA** at risk, **Fault Type, Generators** and any additional **comments**. Then click **Save**.
- Refresh the page to see the entered details appear.



Note: there is a current defect in eNAMS that will limit maximum MVA at risk to 300MW at Asset level, this has been escalated for fix

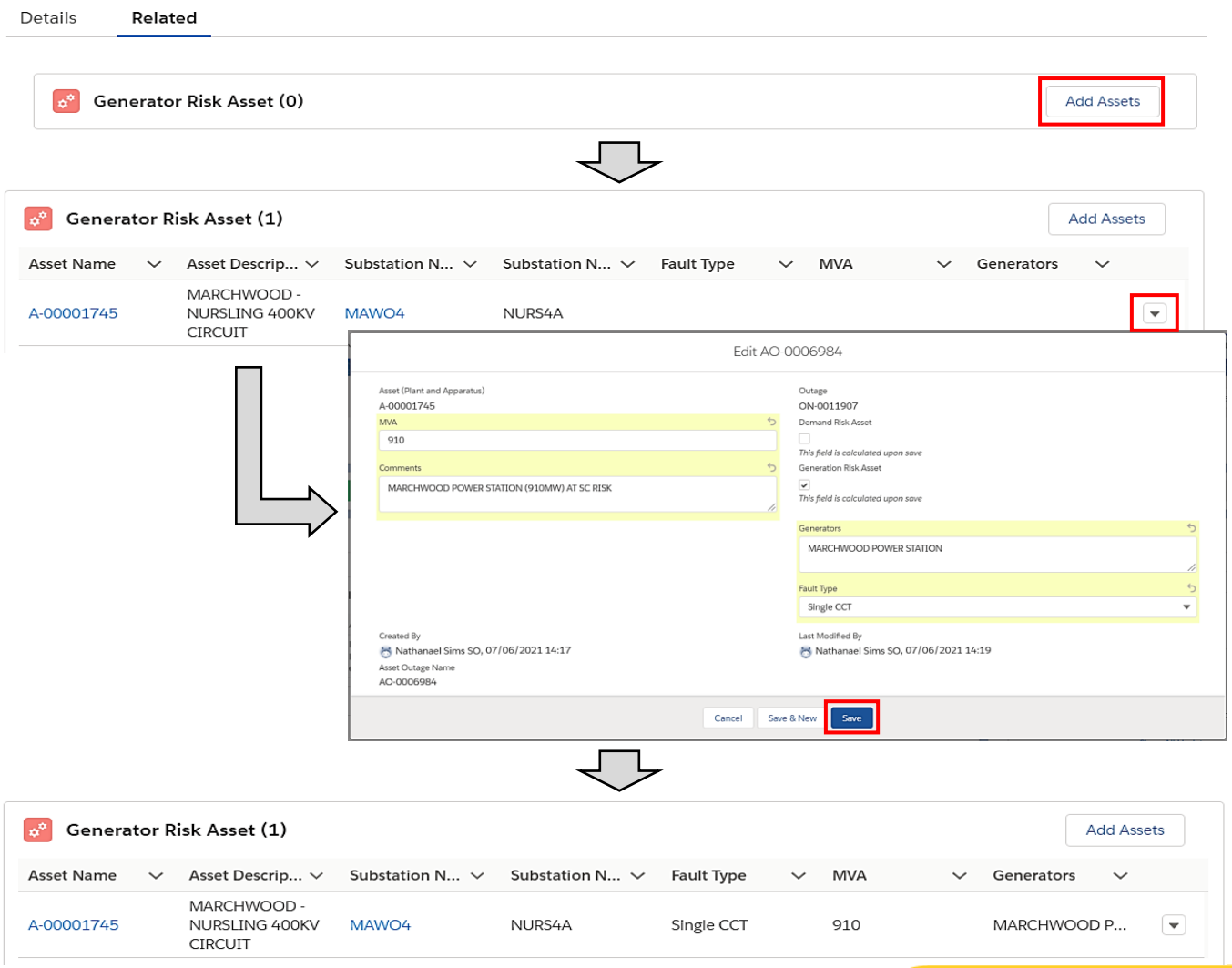
Basic Outage Level – Defining Generation at Risk

- Generation Risk is also defined at the Basic Outage level i.e. if an Outage is always going to cause generation to be at risk to a fault, this can be marked within the Basic Outage.
- When an Asset that has **Generation Risk** tagged is linked to a Basic Outage, the Basic Outage automatically inherits the **Generation at Risk flag** and **Generation at Risk Details**.
- **Generation at Risk** can also be manually flagged within the Basic Outage (same process as for an Asset).
- There are two fields available to populate:
  - **Generation at Risk** (tick to say yes)
  - **Generation at Risk Details**



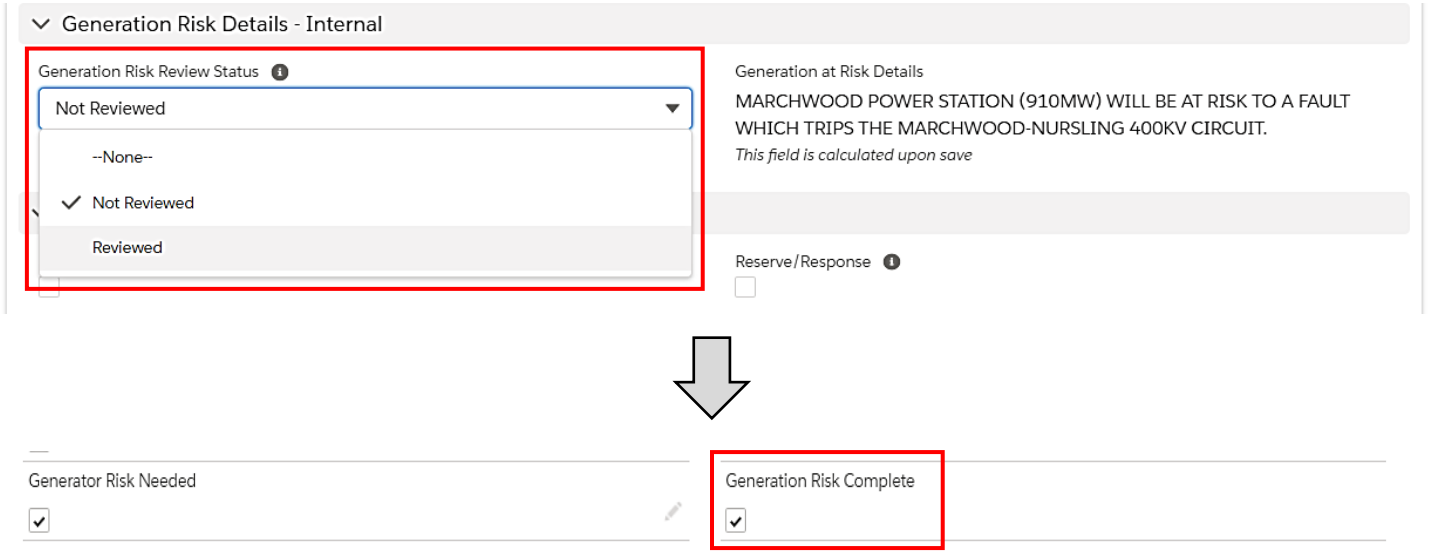
Outage Level (1/2) – Defining Generation at Risk

- If Generation at Risk is defined at Basic Outage level, then the **Demand at Risk** flag and **Demand at Risk Details** will be automatically inherited by Outages.
- If **Generation at Risk** is flagged, the **Generation Risk Asset** field will become visible on the **Related** tab of the Outage.
- The **Generation Risk Asset** details will be automatically inherited from **Assets** linked to the Basic Outage. It can also be configured manually in the Outage.
- The user can click **Add Assets** and link Asset(s) to which generation would be lost if faulted
- Once linked, click on the dropdown arrow and click **Risk Details**
- Here, the user can stipulate the **MVA** at risk, **Fault Type, Generators** and any additional **comments**
- Click **Save** and refresh the page to view the updated details.



Outage Level (2/2) – Defining Generation at Risk

- If Generation at Risk is acceptable, the appropriate user can mark **Generation Risk Review Status** as **Reviewed**
- Following this, the **Generation Risk Complete** box is automatically ticked
- Note: **Generation Risk Review Status** or **Generation Risk Complete** fields are <u>not</u> a monitored field, therefore any change would not be recorded in Outage History.



Field Descriptions – Generation at Risk

eNAMS Field	Object Level	Proposed Use
Generation at Risk Needed	Asset / Basic Outage / Outage	Check the box if an outage on this equipment will cause a generator to be lost to a subsequent fault. Selection inherited from Asset -> Basic Outage -> Outage, can be added or taken away at each level. After checking the box, you may need to refresh the page for additional fields to appear.
Risk Details	Asset / Basic Outage / Outage	High level summary of why generation is at risk during an outage on this equipment e.g. “Following fault on X Circuit I/T will trip off generator” Outage is locked to the Basic Outage’s Risk Details (which can be set independent of the Asset if necessary).
Generation Risk Approval Status	Outage	Not Reviewed – risk is identified but not yet approved. Reviewed – risk has been agreed to.
Generation Risk Asset	Asset / Basic Outage / Outage	Can be found in Related tab. List of assets to which demand is at risk to a fault on. Selection and values inherit from Asset -> Outage (via Basic Outage), additional assets can be added or taken away at Outage level. **There is a current defect in eNAMS that will limit maximum MW at risk to 300MW at the Asset level, this has been escalated for fix.**
Change History	Asset / Basic Outage / Outage	The date, time and user of each change will be recorded in the Field History Tracker which can be found in Related tab.

Seasonal Risk

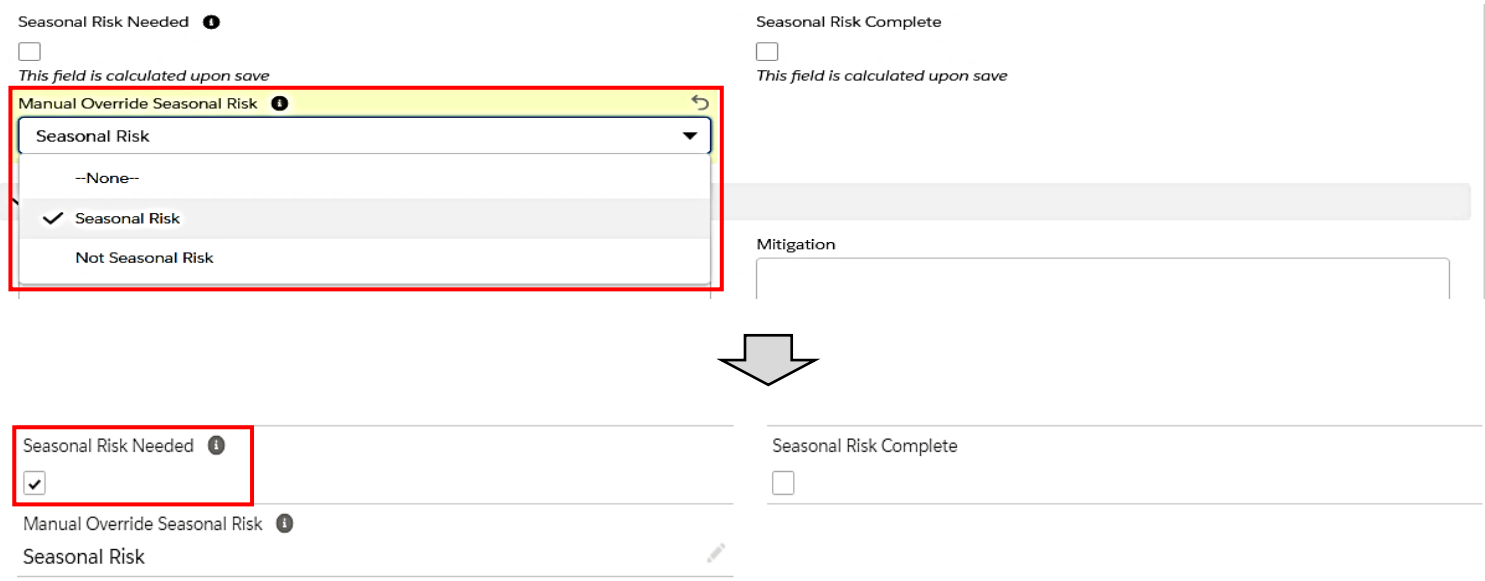
Seasonal Risk replaces ‘Risk 18’, ‘ERTS risk’ or ‘Winter Risk’. Currently this applies to outages with an ERTS > 18H (>= 18H in E&W) in the Winter period - between Week 45 and Week 9.

The requirement for assessing Seasonal Risk is stated in STCP 11-1 (extract taken in 2021):

“*The types of faults on the National Electricity Transmission System in winter tend to have a greater potential for longer repair times and there is a greater potential for circuits to be recalled to secure the Transmission System against severe weather conditions. All Outages placed in the Winter Period that have an Emergency Return to Service Time greater than 24 hours must be pre-approved by both NGESO and the relevant TO”*

Defining Seasonal Risk (1/2)

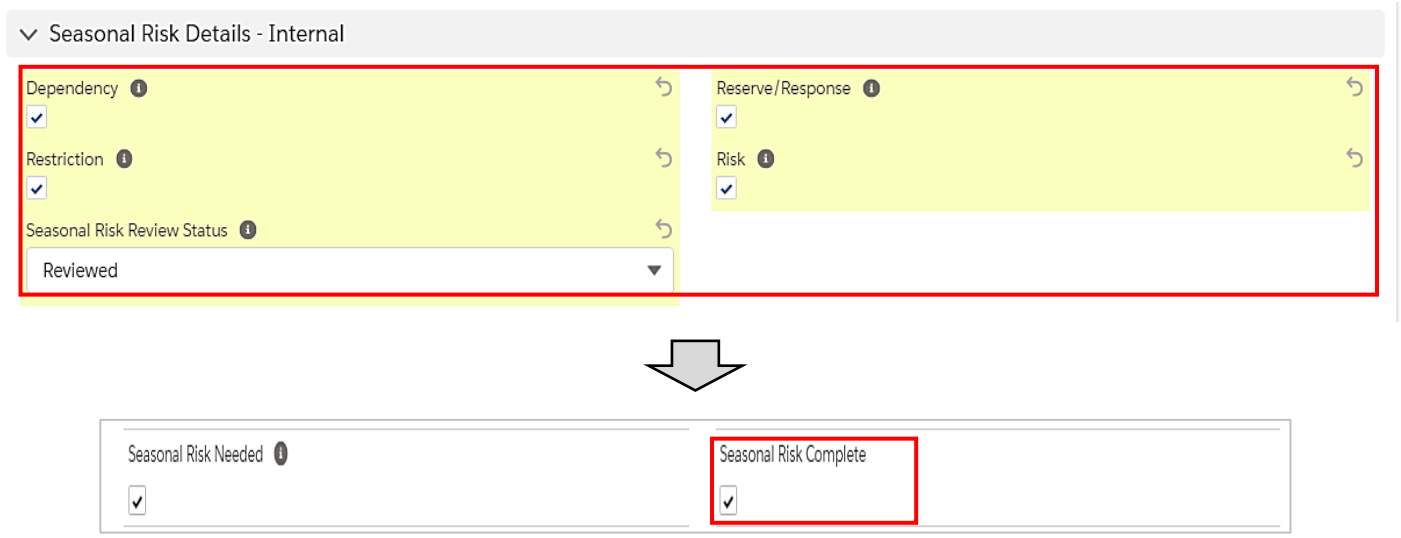
- Seasonal Risk is defined on the Outage level only
- For Outages where ERTS > 18H and is planned between Week 45 – 9, the **Seasonal Risk Needed** flag should be set
- This flag is set automatically for Outages that meet that aforementioned criteria*
- For those not automatically set, this can be done by clicking on **Manual Override Seasonal Risk** field and selecting **Seasonal Risk**
- The **Seasonal Risk Needed** flag will then be automatically ticked.



*note: there is an outstanding defect which doesn't automatically tag ONCOM outages as Seasonal Risk Needed if it meets the aforementioned criteria. This has been escalated for resolution.

Defining Seasonal Risk (2/2)

- Following requisite checks, the user may tick against **Dependency**, **Restriction**, **Reserve/Response**, **Risk** fields to indicate acceptance against each category
- **Seasonal Risk Review Status** can be changed to **Reviewed** to indicate agreement to Seasonal Risk.
- **Seasonal Risk Complete** flag will then be automatically ticked
- Note: **Seasonal Risk Review Status** or **Seasonal Risk Complete** are <u>not</u> a monitored field, therefore any change would not be recorded in Outage History
- Only the SO has access to view the Seasonal Risk Details section. TO only has permissions to view Seasonal Risk Needed / Complete section.



Field Descriptions – Seasonal Risk

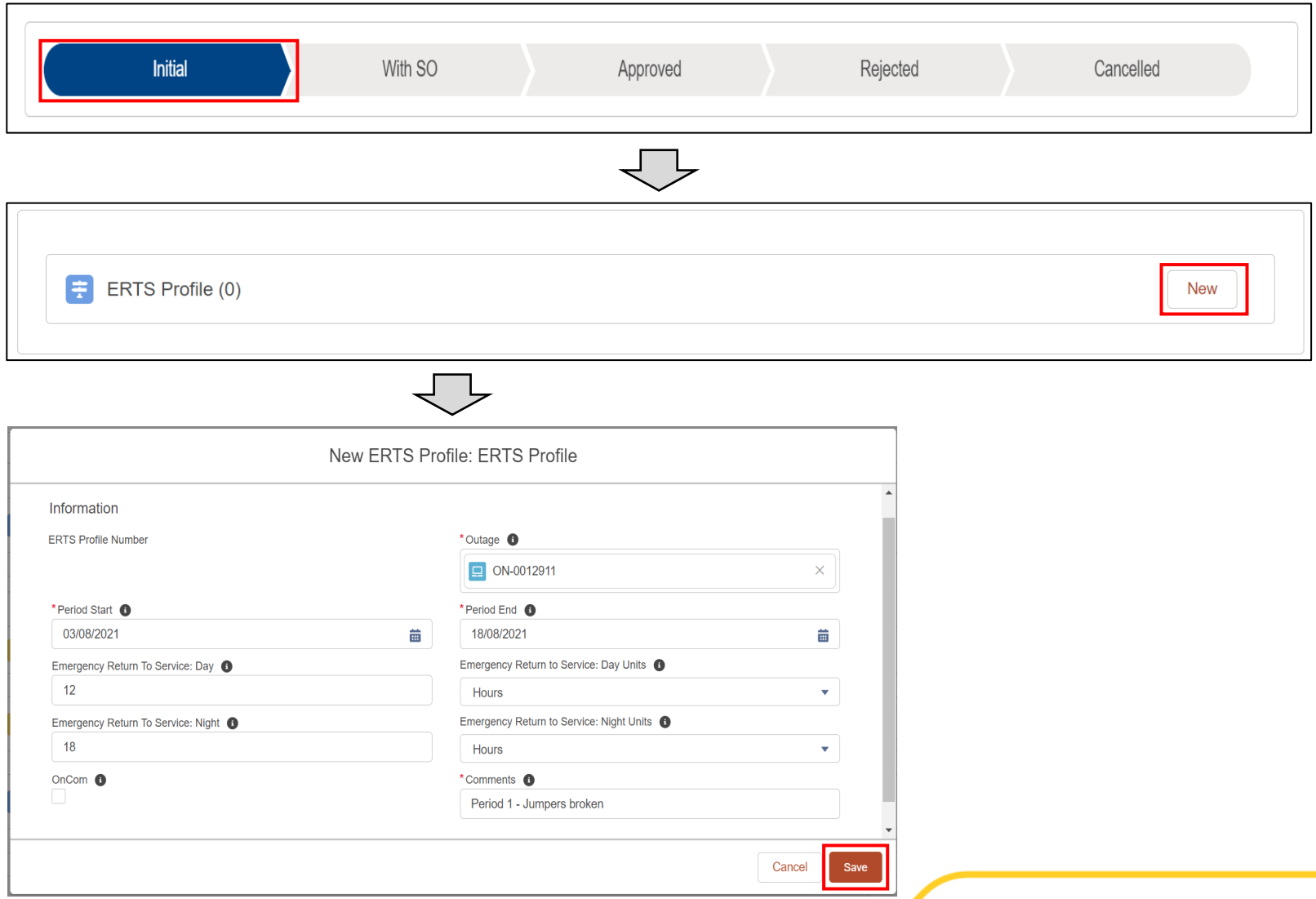
eNAMS Field	Object Level	Proposed Use
Seasonal Risk Needed	Outage	Calculated field, eNAMS will check the box if the criteria is met *There is an outstanding defect as it doesn't pick up on ONCOM ERTS outages. This has been escalated to fix.*
Manual Override Seasonal Risk	Outage	Can be used to add Seasonal Risk to an outage that has not been automatically marked.
Dependency	Outage	Check the box to confirm there is no / approved dependency on generation during this outage.
Reserve/Response	Outage	Check the box to confirm there is no / approved constraint of reserve/response during this outage.
Restriction	Outage	Check the box to confirm there is no / approved constraint of generation during this outage.
Risk	Outage	Check the box to confirm there is no / approved additional risk to generation during this outage.
Seasonal Risk Review Status	Outage	Not Reviewed – Requirement is identified and pending assessment outcome. Reviewed – All four boxes are ticked and there are no issues, or any issues have been approved through sanctioning.
Change History	Outage	The date, time and user of each change will be recorded in the Field History Tracker which can be found in Related tab.

ERTS Profiling

ERTS Profile in eNAMS enables a more granular view of an Outage ERTS to be made available to the SO by the TO

Defining ERTS Profile

- An ERTS Profile can be raised from the **Initial** page of a new Outage / Outage Change Request
- From the Outage page in Initial status, scroll down to **ERTS Profile** (in TO view)
- Click on **New** button found within the ERTS Profile field
- Populate the **New ERTS Profile: ERTS Profile** popup as much as possible, and provide details of the reason for the ERTS entry in the **Comments** field
- Click **Save**
- Create multiple ERTS Profile entries to cover the entire period of the Outage
- (Please note there is no logic to prevent ERTS Profile entries overlap – this is a known defect to be rectified)



Interpreting Outage History

Outage Lifecycle Example

- We shall use an example of an Outage that has had the following lifecycle:

1) New Outage Rejected
2) Outage Resubmitted and Accepted
3) Change of Start Date (One day earlier) Accepted
4) Change of ERTS (to ONCOM) Accepted
5) Change of End Date (Delay end by one day) Rejected
6) Outage TBA request submitted and Accepted
7) Outage requested from TBA to Planned and Accepted
8) Outage Cancelled

Records of Outage

Outage Change Requests (7)

Outage Name	Status	Change Type	Change Description	CreatedDate ↓	Created By
ON-0011912	Approved	Cancel	Outage works were bundled and completed in another booking therefore this booking is no longer required.	08/06/2021	Nathanael Sims NGET OP
ON-0011912	Approved	TBA	Ops confirmed they are now able to resource - please rein-state into plan for old Planned	08/06/2021	Nathanael Sims SO
ON-0011912	Approved				
ON-0011912	Rejected				
ON-0011912	Approved				
ON-0011912	Approved				
ON-0011912	Approved				

Outage History

29 items • Sorted by Date • Updated 14 minutes ago

	Date	Field	User	Original Value	New Value
1	07/06/2021 16:09	Change Code	Nathanael Sims SO	9 - TO Resource	13 - Bundling / Opportunity Outage
2	07/06/2021 16:09	Change Description	Nathanael Sims SO	Ops confirmed they are now able to resource - please reinstate into plan for old P...	Outage works were bundled and completed in another booking therefore this bo...
3	07/06/2021 16:09	Status	Nathanael Sims SO	Planned	Cancelled
4	07/06/2021 16:08	Status	Nathanael Sims SO	With SO	Planned
5	07/06/2021 16:06	Status	Nathanael Sims NGET OP	Initial	With SO
6	07/06/2021 16:06	Change Code	Nathanael Sims NGET OP	11 - Replan TBA	9 - TO Resource
7	07/06/2021 16:06	Change Description	Nathanael Sims NGET OP	To TBA - Ops no longer able to resource	Ops confirmed they are now able to resource - please reinstate into plan for old P...
8	07/06/2021 16:06	Status	Nathanael Sims NGET OP	TBA	Initial
9	07/06/2021 16:05	Change Code	Nathanael Sims SO	13 - Bundling / Opportunity Outage	11 - Replan TBA
10	07/06/2021 16:05	Change Description	Nathanael Sims SO	CAN WE CHANGE ERTS TO ONCOM	To TBA - Ops no longer able to resource
11	07/06/2021 16:05	Status	Nathanael Sims SO	Planned	TBA
12	07/06/2021 16:00	Change Code	Nathanael Sims SO	9 - TO Resource	13 - Bundling / Opportunity Outage
13	07/06/2021 16:00	Change Description	Nathanael Sims SO	START ONE DAY EARLIER - NOW 15/06/2021	CAN WE CHANGE ERTS TO ONCOM
14	07/06/2021 16:00	Emergency Return To Service: Day	Nathanael Sims SO	4	
15	07/06/2021 16:00	Emergency Return To Service: Night	Nathanael Sims SO	6	
16	07/06/2021 16:00	Emergency Return To Service: Day Units	Nathanael Sims SO	Hours	
17	07/06/2021 16:00	Emergency Return To Service: Night Un...	Nathanael Sims SO	Hours	
18	07/06/2021 15:58	Change Code	Nathanael Sims SO	1 - New work identified in current year	9 - TO Resource
19	07/06/2021 15:58	Change Description	Nathanael Sims SO	NEW	START ONE DAY EARLIER - NOW 15/06/2021
20	07/06/2021 15:58	Planned Start Date/Time	Nathanael Sims SO	15/06/2021 02:00	14/06/2021 02:00
21	07/06/2021 15:57	Status	Nathanael Sims SO	With SO	Planned
22	07/06/2021 15:56	Status	Nathanael Sims NGET OP	Initial	With SO
23	07/06/2021 15:56	Status	Nathanael Sims NGET OP	Rejected	Initial
24	07/06/2021 15:56	Work Involved	Nathanael Sims NGET OP		
25	07/06/2021 15:56	Status	Nathanael Sims SO	With SO	Rejected
26	07/06/2021 15:54	Status	Nathanael Sims NGET OP	Initial	With SO
27	07/06/2021 15:54	Created.	Nathanael Sims NGET OP		
28	07/06/2021 15:54	Demand Risk Approval Status	Nathanael Sims NGET OP		Initial
29	07/06/2021 15:54	Owner	Nathanael Sims NGET OP		NGET

Change Requests and Outage History Use

- It is important to highlight that **Change Requests** must be viewed in conjunction with **Outage History** to appreciate all the details of a historical change / open Change Request of an Outage.
- **Change Requests** are required to view:
  - Who submitted a Change Request and when
  - Any details of an open Change Request (i.e. what is changing)
  - Details of any fields not tracked by Outage History (not included in list of 20 tracked fields).
- **Outage History** field simply tracks any changes to an Outage (i.e. acknowledges changes made under a Change Request only once Approved). This includes an Outage that has never been in Planned status, therefore any changes are made directly in the Outage (not through a Change Request).
- An example to illustrate its limitations is the below where the **Outage History** skips out **Rejected** Change Request (No. 5 from previous slide)

No. 6) of Outage Lifecycle Example: Outage to TBA - Accepted

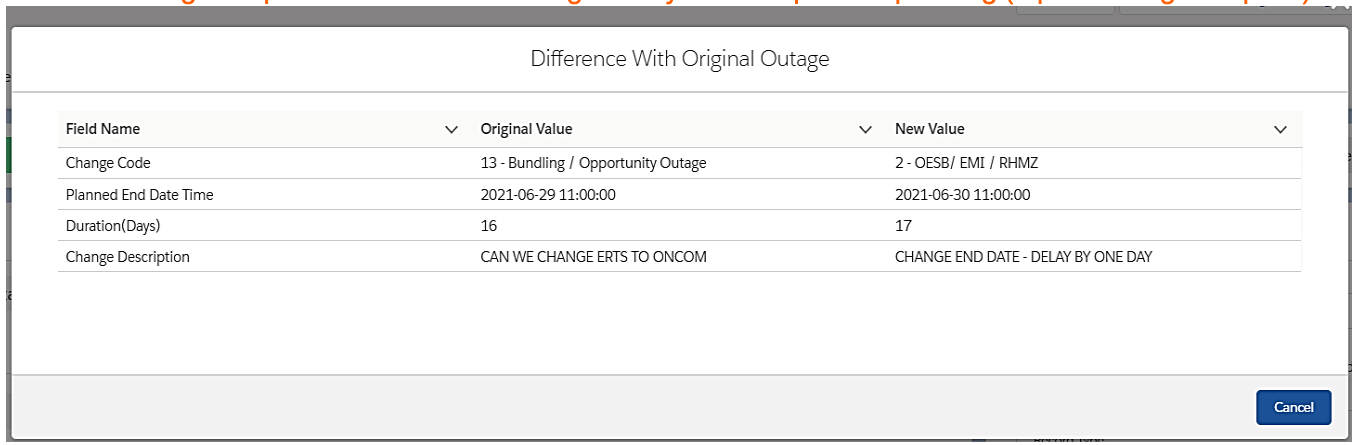
6	07/06/2021 16:06	Change Code	Nathanael Sims NGET OP	11 - Replan TBA	9 - TO Resource
7	07/06/2021 16:06	Change Description	Nathanael Sims NGET OP	To TBA - Ops no longer able to resource	Ops confirmed they are now able to resource - please reinstate into plan for old P...
8	07/06/2021 16:06	Status	Nathanael Sims NGET OP	TBA	Initial
9	07/06/2021 16:05	Change Code	Nathanael Sims SO	13 - Bundling / Opportunity Outage	11 - Replan TBA
10	07/06/2021 16:05	Change Description	Nathanael Sims SO	CAN WE CHANGE ERTS TO ONCOM	To TBA - Ops no longer able to resource

No. 4) of Outage Lifecycle Example: Change ERTS - Accepted

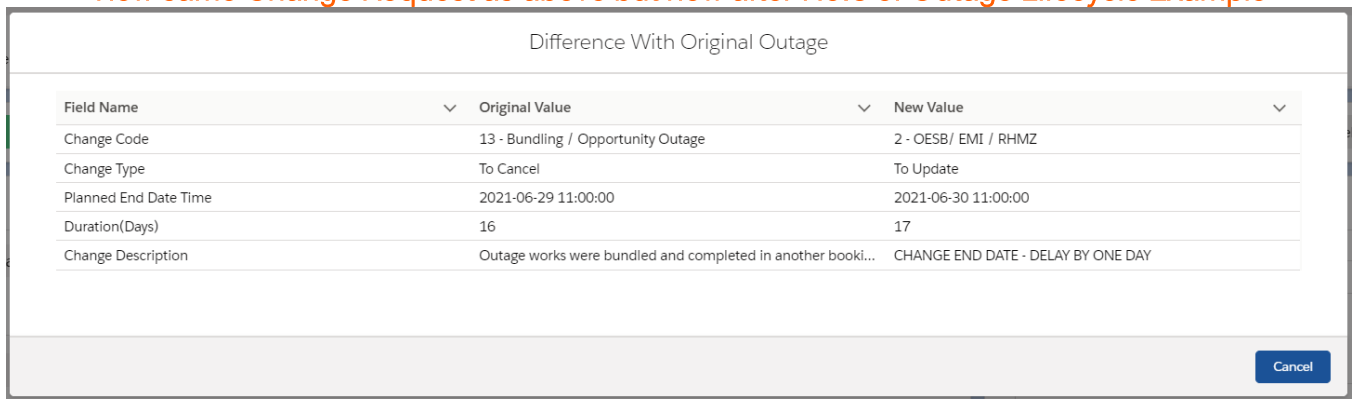
Difference With Original Outage

- The **Difference With Original Outage** button in a Change Request will open a **Difference With Original Outage** tab.
- It can be used effectively for open Change Requests (i.e. Change Requests at Initial or With SO Status) as the columns represent:
  - Original Value = current Planned Outage
  - New Value = open Change Request
- Conversely, it is not effective for closed Change Requests (i.e. Change Requests at Accepted / Rejected / Cancelled Status), as it will only show you what has changed since the Change Request as opposed to what changed under the Change Request. Furthermore, as would be expected, the latest closed Change Request will be blank in both the **Original Value** and **New Value** column.
- As a result, it is important to interrogate **Outage History** field to understand what changed under a particular **Change Request**, by matching the dates / time of a Change Request being **Accepted** (i.e. Last Modified Date) to the **Outage History Date** column to find the relevant changes.

View Change Request when No.6 of Outage Lifecycle Example was pending (Open Change Request)



View same Change Request as above but now after No.8 of Outage Lifecycle Example



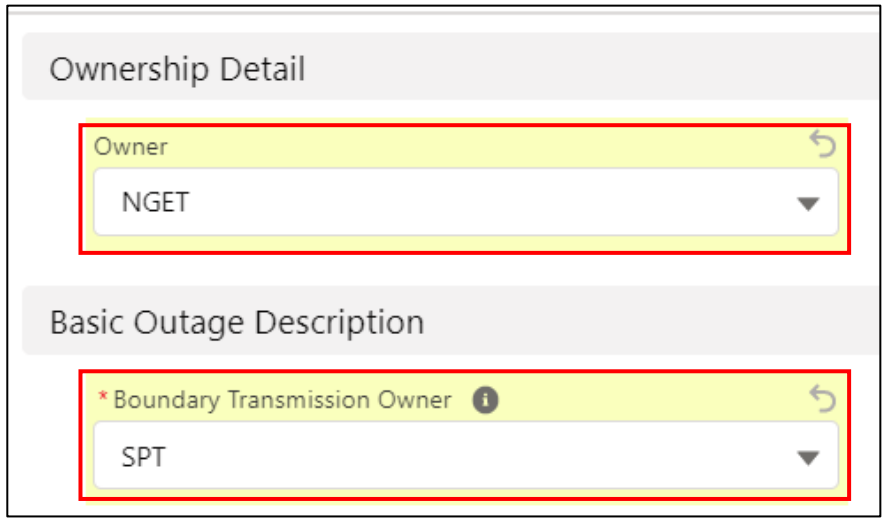
Interpreting Migrated Outages History

- Outages have been migrated from TOGA to eNAMS in line with criteria given to preserve Outage history required for reporting purposes and for day to day tasks, while acknowledging technical limitations which prevent a full scale replica of what is available in TOGA in regards to history.
- Some of the limitations of mapping between TOGA -> eNAMS that users should be aware of when interrogating the history of migrated Outage data:
  - There is no mapping for Outage changes in TOGA that were made without a change request. A change request in TOGA constitutes [Status] -> Awaiting Agreement (primarily used for E&W Outages) or a Request Outage (primarily used for Scotland and GB YA Outages).
  - Rejected Outages are not migrated into eNAMS from Request Outages in TOGA, due to technical limitations. Rejected Outages have however been migrated from the Planned Outages area in TOGA (therefore no limitations for E&W Planners).
  - TOGA Change Date & Time is mapped to eNAMS Created Date & Time, therefore:
    - For open CR's (i.e. With SO status), the Created Date & Time is accurate.
    - For closed CR's (i.e. in Approved / Rejected status), Date & Time the request was signed in in TOGA = Created Date & Time in eNAMS, therefore is not accurate.
  - eNAMS Last Modified Date & Time is populated as Data migration date & time, therefore is not accurate for migrated Outages.
  - "Outage History" field is blank for migrated Outages due to limitations.
  - "Changed By" field in eNAMS CR is correctly mapped to display the name of the person who signed in the change in TOGA.
  - "Created By" field states a generic Data Migration Salesforce ID due to limitations.

Cross-boundary Outages

Cross-boundary Outages

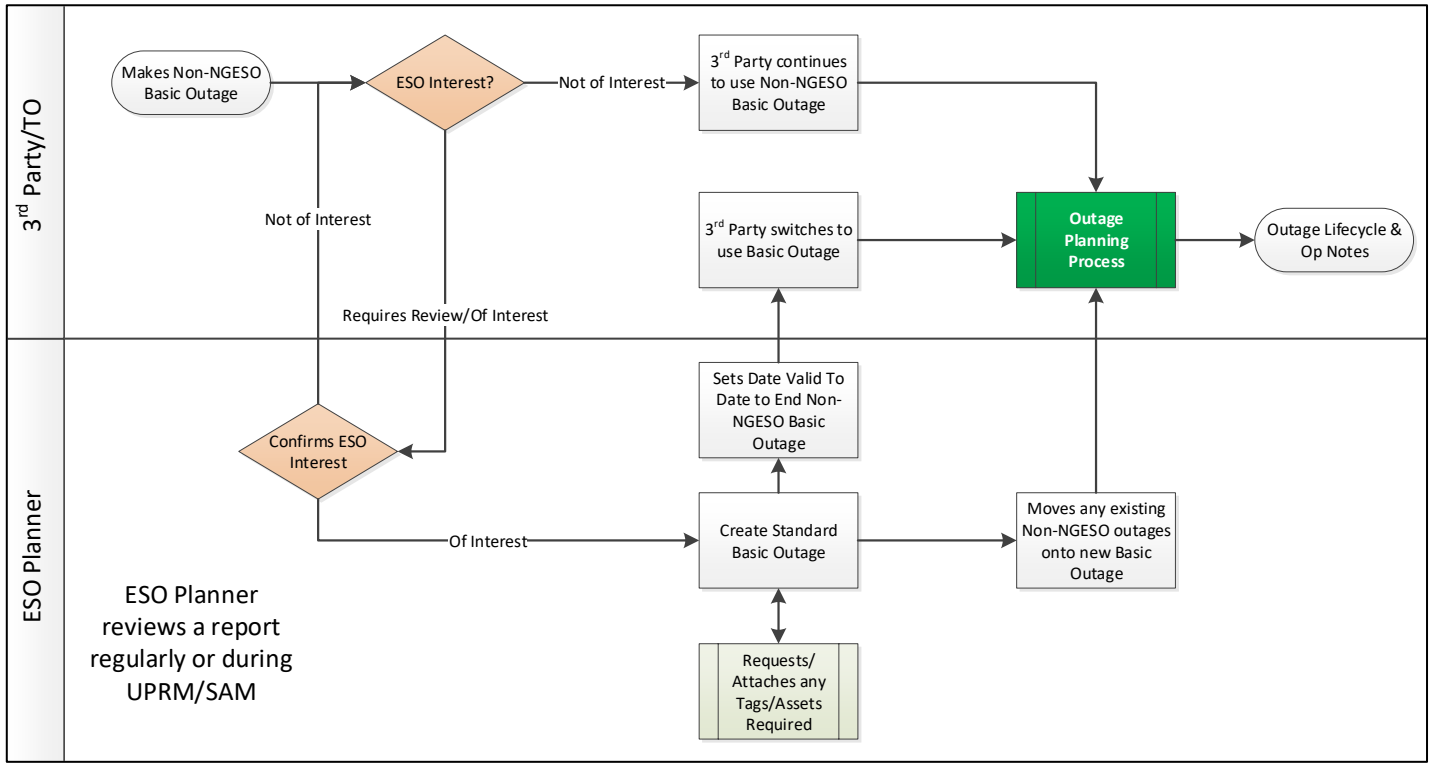
- Cross-boundary Outages can be created in eNAMS (a feature that wasn't available in TOGA).
- The premise of this functionality is to provide a single booking for Outages that span two TO's.
- Using Cross-boundary Basic Outages when raising Outages than span more than one TO eliminates the need to raise a "mirror booking" as was necessary in TOGA.
- There is two Cross-boundary Basic Outages for each circuit where the circuit spans two TO's, one Cross-boundary Basic Outage for each Owner of the circuit
- There are two fields within a Cross-boundary Basic Outage that enable visibility of a Cross-boundary Outages by both affected TO's.
  - Owner – this is the TO who has requested the outage (i.e. the one conducting work on the circuit)
  - Boundary Transmission Owner – this is the TO affected by the cross-boundary outage



Non-NGESO Outages

Non-NGESO Outages

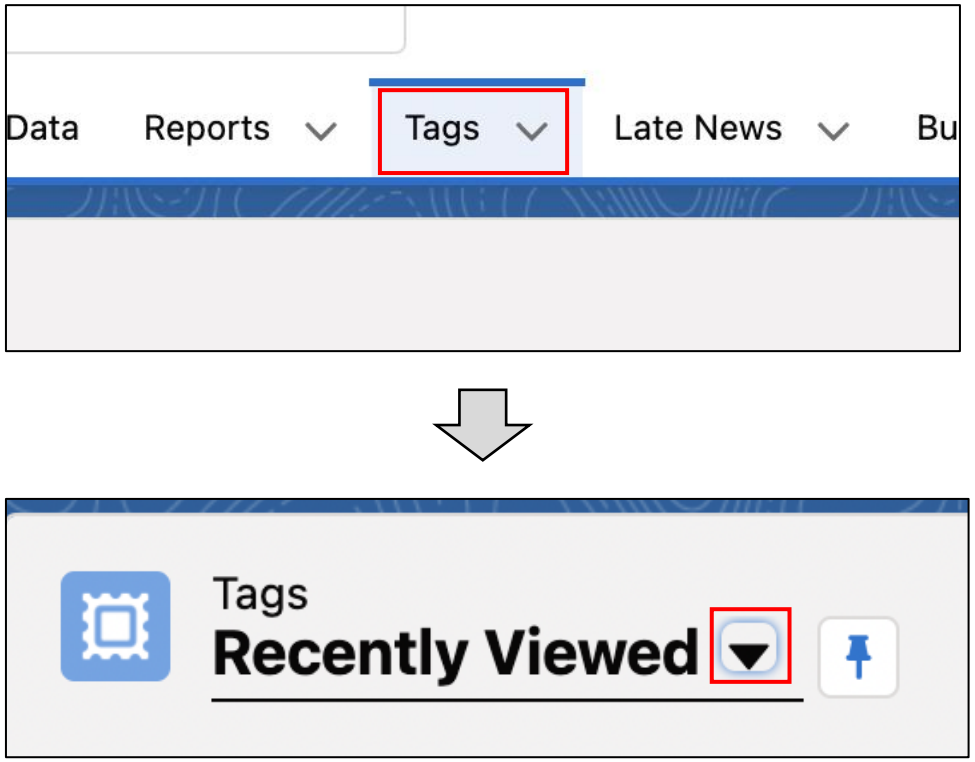
- Non-NGESO Outages are intended to be used by Third Parties (currently DNO's only) to submit their outages directly in eNAMS to be reviewed by ESO
- The Non-NGESO Outage differs from the normal Outage in one significant way in that it does not have an approval or change request process built into eNAMS (on the backlog for addressing post go-live).
- The DNO is able to create a Non-NGESO Basic Outage and advise of whether it is of ESO interest (i.e. affects ESO outage planning) or not
- If it is not of interest, the DNO may submit Non-NGESO outages directly into eNAMS
- If it is of interest, the ESO shall withdraw the Non-NGESO Basic Outage and create a standard Basic Outage for it which the DNO can use to submit outages to ESO for approval.



Tags and Affected Users

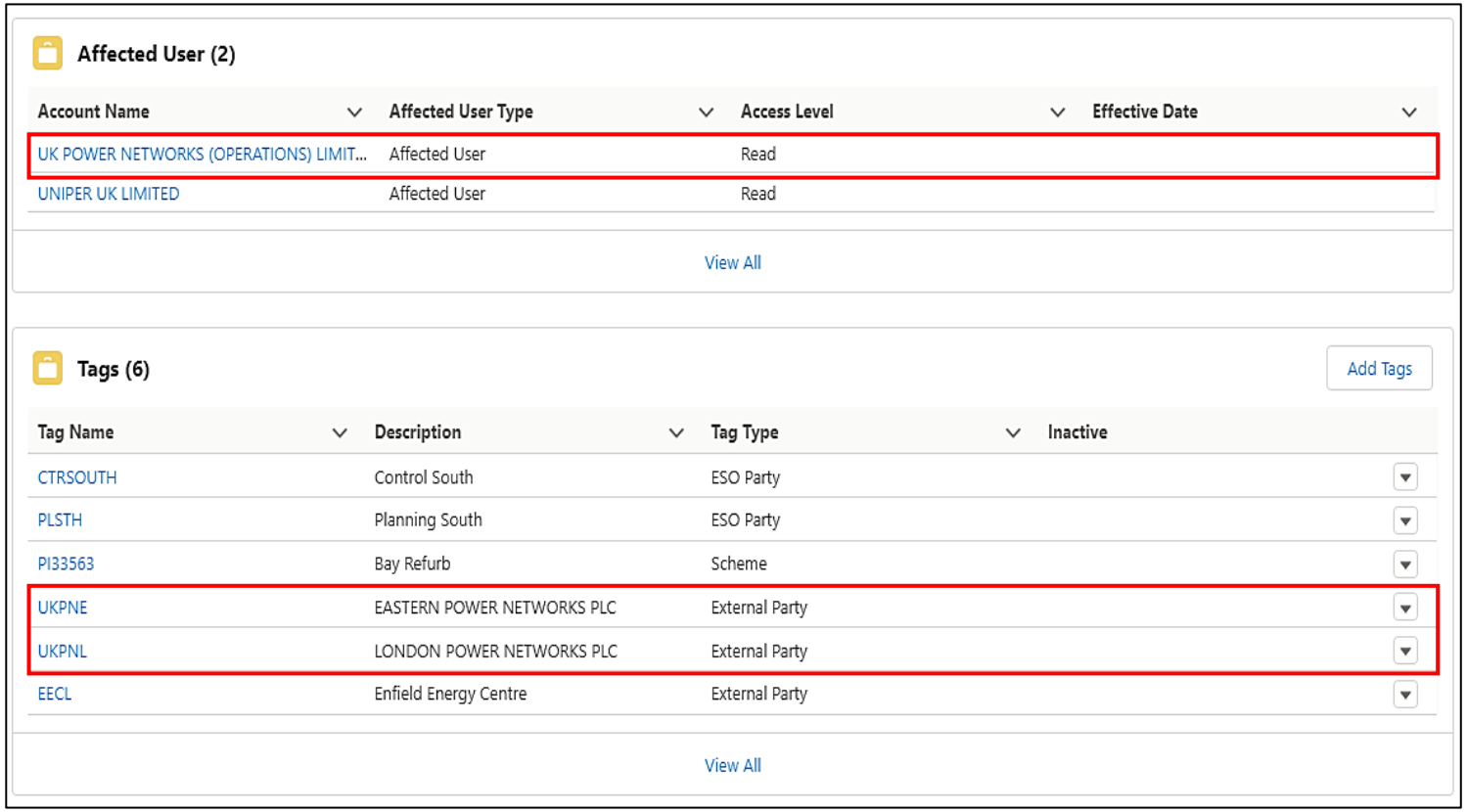
Purpose and Types of Tags

- Tags are essentially keywords that can be associated with records.
- These keywords are used to categorize and search the data easily.
- Tags can be accessed from the toolbar in eNAMS under **Tags** and filtered using the **dropdown arrow** shown on the right.
- There are four types of Tags present in eNAMS:
  - ESO Party
    - These are the same as SO Party Tags in TOGA, these include PLNTH and CTRSCOTN Tags
  - External Party
    - These Tags are used to identify affected parties and are associated with Accounts
  - Free Codes
    - These cover a wide variety and can be created and linked freely to Outages
  - Scheme
    - Each Tags is associated with a Scheme therefore can be used effectively to bundle Outages relating to a project



Outages Visibility using Tags / Accounts

- Permissions for visibility is granted to external parties (i.e. not ESO) by adding their Account as an **Affected User** to Outages (inherited from Basic Outage).
- By also adding their **External Party** tag as a **Tag** to Outages (inherited from Substation, Asset, Basic Outage) this allows the company Account and OC2 reports to filter data to the appropriate contacts.
- For example, UKPN has an Electricity Account in eNAMS which is set as an Affected User on all Outages which affect UKPN. It also has External Party Tags which represent each of the subsidiaries (London, Eastern and South-Eastern). These are added individually as Tags on the Outages that affect the subsidiary.
- The example on the right is a Brimsdown 132kV outage which affects both UKPN-E and UKPN-L
- Each Affected User has an **Access Level** which defines the permissions available to the party, these are **Read** or **Read & Write**.
- If a company is the Owner of a Basic Outage (and therefore Outage), they do not need to be an Affected User to have Read & Write permissions of the Outage



Affected User (2)

Account Name	Affected User Type	Access Level	Effective Date
UK POWER NETWORKS (OPERATIONS) LIMIT...	Affected User	Read	
UNIPER UK LIMITED	Affected User	Read	

View All

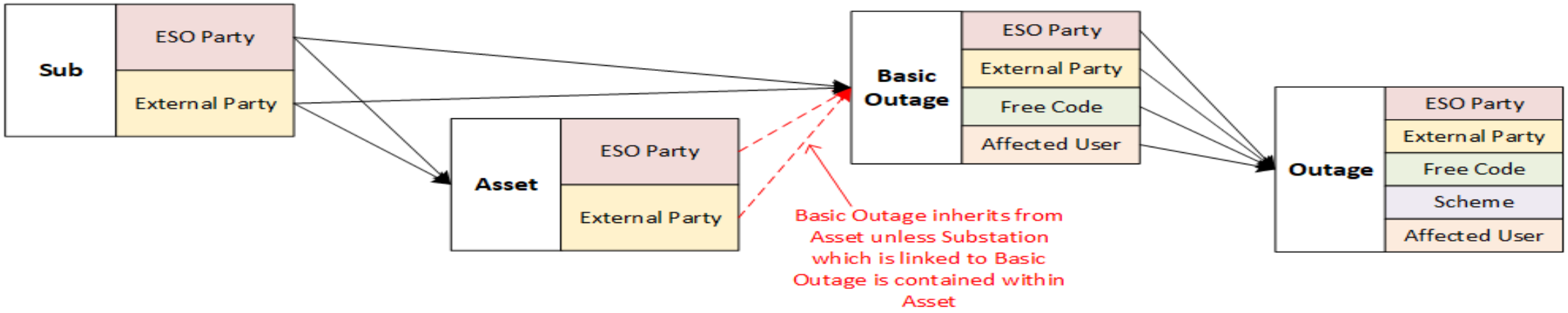
Tags (6) Add Tags

Tag Name	Description	Tag Type	Inactive
CTRSOUTH	Control South	ESO Party	
PLSTH	Planning South	ESO Party	
PI33563	Bay Refurb	Scheme	
UKPNE	EASTERN POWER NETWORKS PLC	External Party	
UKPNL	LONDON POWER NETWORKS PLC	External Party	
EECL	Enfield Energy Centre	External Party	

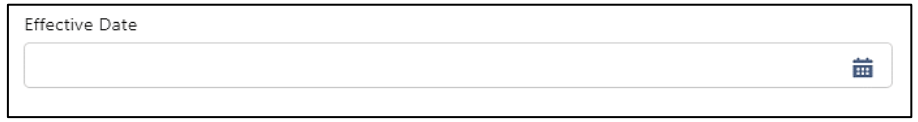
View All

Tags Inheritance

- Tags and Affected Users are inherited in line with the following:
  - Substation to Asset: Inherit **ESO Party** & **External Party** Tags
  - Substation to Basic Outage: Inherit **ESO Party** & **External Party** Tags
  - Asset to Basic Outage: Inherit **ESO Party** & **External Party** Tags
  - Basic Outage to Outage: Inherit **ESO Party** & **External Party** & **Free Code** Tags and **Affected User**

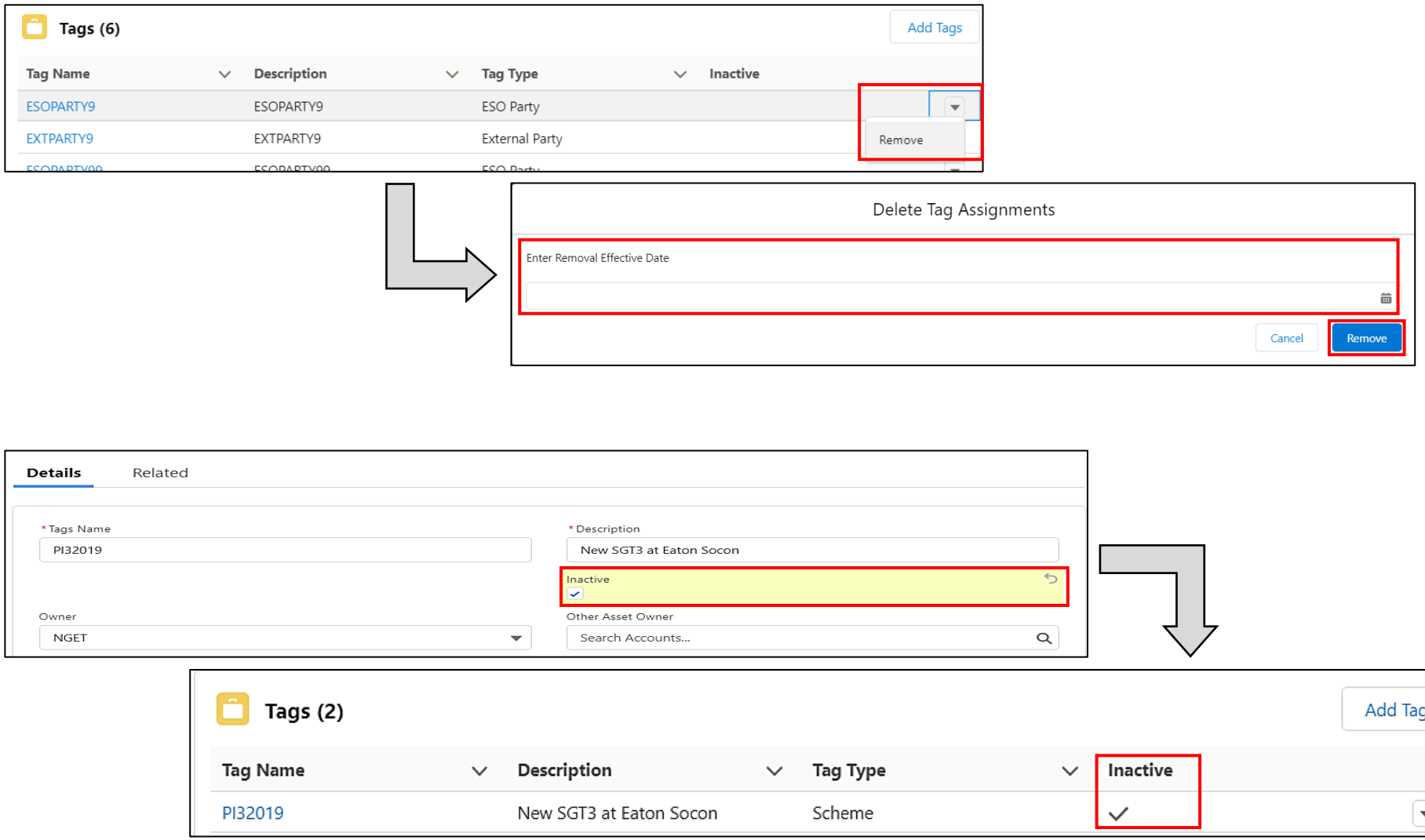


- When Tags are added to objects, an **Effective Date** field is used to apply the Tag to all Outages with a Planned End Date of equal to or after the Effective Date



Deactivating / Deleting Tags (1/2)

- eNAMS currently only has an Effective Date field for removing ESO Party & Free Codes Tags and Affected Users
- For the other types of Tags, there is a manual process for deleting Tags from objects in eNAMS
- If a Tag is no longer relevant / needed:
  - Open the **Tag**
  - Click on **Inactive** field and check the box
  - A tick will appear in the Inactive column of all objects (Assets / Basic Outages / Outages etc.) that have the Tag linked



Deactivating / Deleting Tags (2/2)

- If a Tag needs to be removed from select objects, then the process that needs to be followed depends on the type of Tag
- As mentioned in the previous slide, the Effective Date filter is available for Affected Users, ESO Party & Free Code Tags
- For other types of Tags, a manual process is necessary
- If, for example, a Scheme Tag needs to be deleted from a Substation and the user wishes to remove the same Tag from Outages in the future, they must do the following:
  - Go to the **Substation** and go to the **Tags** field then delete the Tag by clicking the **dropdown arrow** and click **Remove**
  - On **Search Basic Outages** page, search **Basic Outages** by that Tag
  - Go into each **Basic Outage** individually to remove the **Tag** in question
  - Follow the same process for **Outages** using the **Search Outage** page as for Basic Outages

Tags for Querying Regions

- Each object (Substation, Asset, Basic Outages, Outages etc.) in TOGA was assigned a “Licensed Area” which was NGET, SHETL or SPT
- This however came with drawbacks in that all objects were visible to at least one TO
- eNAMS does not have a “Licensed Area” field and instead categorises each object by its Owner.
- This allows OFTO outages, for instance, to be visible to the OFTO but not the onshore TO where they are not affected
- Due to the fact that there could be several Owners (i.e. OFTO’s, DNO’s, TO’s) in a single Licensed Area, it is not appropriate to query using the Owner field if searching for everything that falls within a region.
- The search query needs to be conducted using the **Tags** field in eNAMS
- The below table shows what **Tags** are suggested when querying for all objects affecting a region in eNAMS

Role	Region	Identifier used in TOGA	Identifier to be used in eNAMS
National	E&W	E&W (Licensed Area)	PLSTH + PLNTH (Tag)
	Scotland	SHETL + SPT (Licensed Area)	PLSCOT or CTRSCOTN + CTRSCOTS (Tag)
Outage Planning	E&W South	PLSTH (SO Party)	PLSTH (Tag)
	E&W North	PLNTH (SO Party)	PLNTH (Tag)
	Scotland North	SHETL (Licensed Area)	CTRSCOTN (Tag)
	Scotland South	SPT (Licensed Area)	CTRSCOTS (Tag)

Appendix – Outage Change Scenarios

1) New Outage -> Accepted into plan

To use these outage change scenario process diagrams most effectively, start the slide show in Power Point. You can then click on the thumbnail pictures to see more detail on each process stage if you need to and click again to come back to this diagram.

SO or TO users can do these steps (usually a TO though)

Only SO users can do these steps

START

Find Basic Outage for Outage

In the Basic Outage, click Propose New Planned Outage Button

Complete all required outage information then save

User can further edit outage further at Initial status

Initial status

Click “Submit Outage Request”

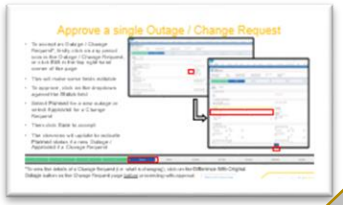
Assess outage request

With SO status

Change Outage status from “With SO” to “Planned”

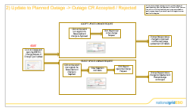
Outage is now Planned

Planned status

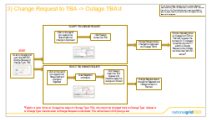


Links to further outage change scenarios that follow directly on from this one:

2) Accept / Reject Change Request for an Outage



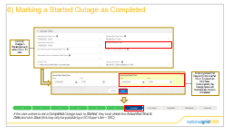
3) Accept TBA Change Request for an Outage



4) Planned Outage Not Taken

5) Starting a Planned Outage

6) Completing a Started Outage



nationalgridESO

2) Update to Planned Outage -> Outage CR Accepted / Rejected

To use these outage change scenario process diagrams most effectively, start the slide show in Power Point. You can then click on the thumbnail pictures to see more detail on each process stage if you need to and click again to come back to this diagram.

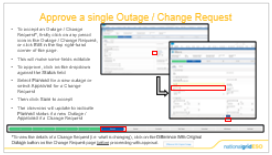
START

Go to an Outage and open the **With SO** Change Request of Change Type: **Update**

ACCEPT UPDATE CHANGE REQUEST

Click on the pencil icon against the **Status** field and change to **Approved**

Click **Save** to sign in the Change Request



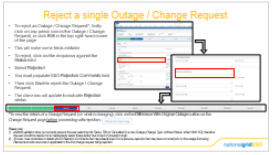
Change Request status changed to **Approved** and Planned outage updated with CR details

REJECT UPDATE CHANGE REQUEST

Click on the pencil icon against the **Status** field and change to **Rejected**

Enter **Rejection comments**

Click **Save** to reject the Change Request



Change Request status changed to **Rejected** and Planned outage unchanged

3) Change Request to TBA -> Outage TBA'd

To use these outage change scenario process diagrams most effectively, start the slide show in Power Point. You can then click on the thumbnail pictures to see more detail on each process stage if you need to and click again to come back to this diagram.

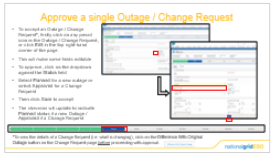
START

Go to an Outage and open the **With SO** Change Request of Change Type: **TBA**

ACCEPT TBA CHANGE REQUEST

Click on the pencil icon against the **Status** field and change to **Approved**

Click **Save** to accept the TBA



Change Request status changed to **Approved** and Outage TBA'd

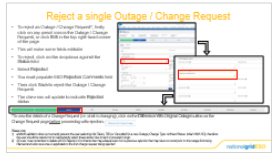
SO can manually move an Outage from TBA to Planned, however the process for TO outages should be that the TO submit a Change Request to the Outage into Initial then With SO status*

REJECT TBA CHANGE REQUEST

Click on the pencil icon against the **Status** field and change to **Rejected**

Enter **Rejection comments**

Click **Save** to reject the TBA request and therefore keep the outage as Planned



Change Request status changed to **Rejected** and Outage remains in Planned

*Defect to note: Once an Outage has taken on Change Type: TBA, this cannot be changed back to Change Type: Update or to Change Type: Cancel when a Change Request is submitted. This will be fixed in ELS post go-live

3) Change Request to Cancel -> Outage Cancelled

To use these outage change scenario process diagrams most effectively, start the slide show in Power Point. You can then click on the thumbnail pictures to see more detail on each process stage if you need to and click again to come back to this diagram.

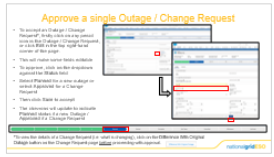
START

Go to an Outage and open the **With SO** Change Request of Change Type: **Cancel**

ACCEPT CANCEL CHANGE REQUEST

Click on the pencil icon against the **Status** field and change to **Approved**

Click **Save** to accept the Cancel



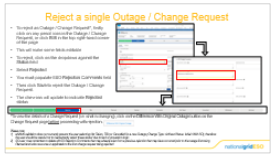
Change Request status changed to **Approved** and Outage Cancelled. Once Cancelled, an Outage cannot be reused / resubmitted.

REJECT CANCEL CHANGE REQUEST

Click on the pencil icon against the **Status** field and change to **Rejected**

Enter **Rejection comments**

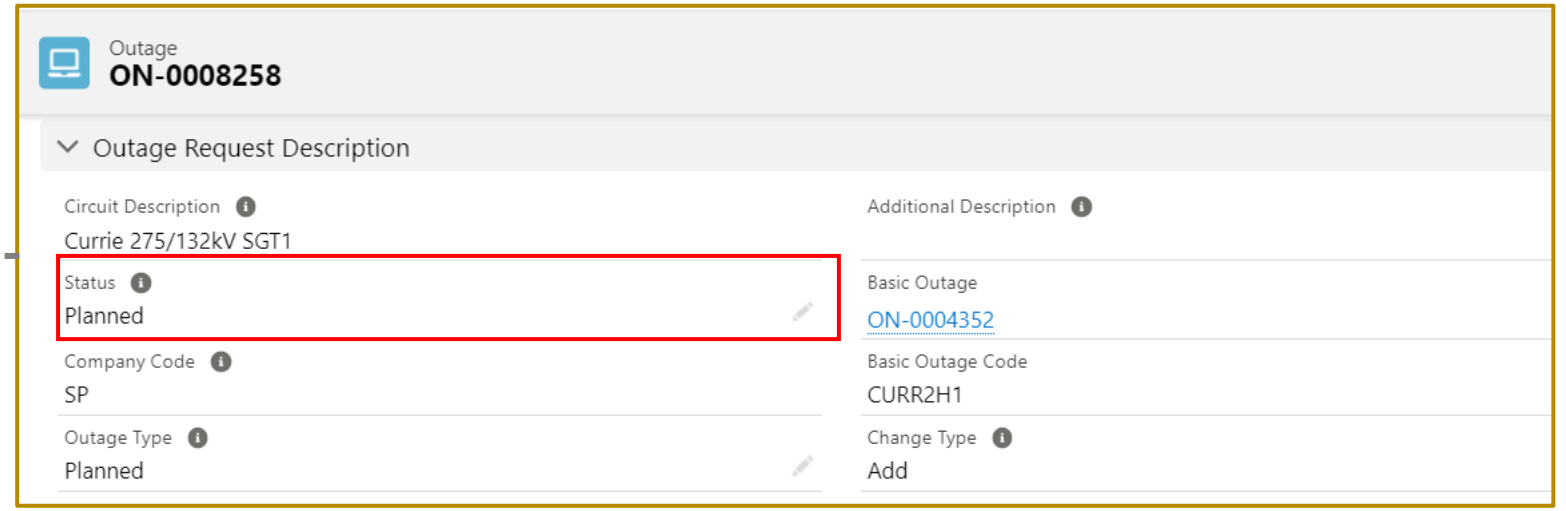
Click **Save** to reject the Cancel request and therefore keep the outage as Planned

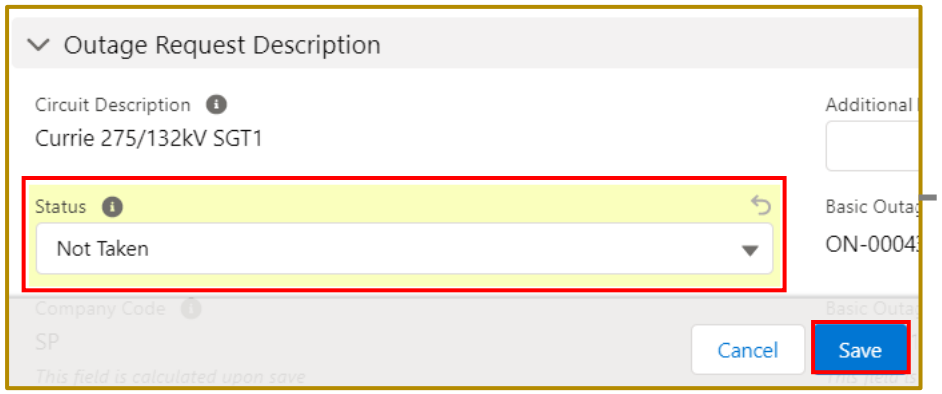


Change Request status changed to **Rejected** and Outage remains in Planned

4) Marking an Outage as Not Taken

Go to the Outage in **Planned** status in SO view (only SO can change a Planned outage status currently)

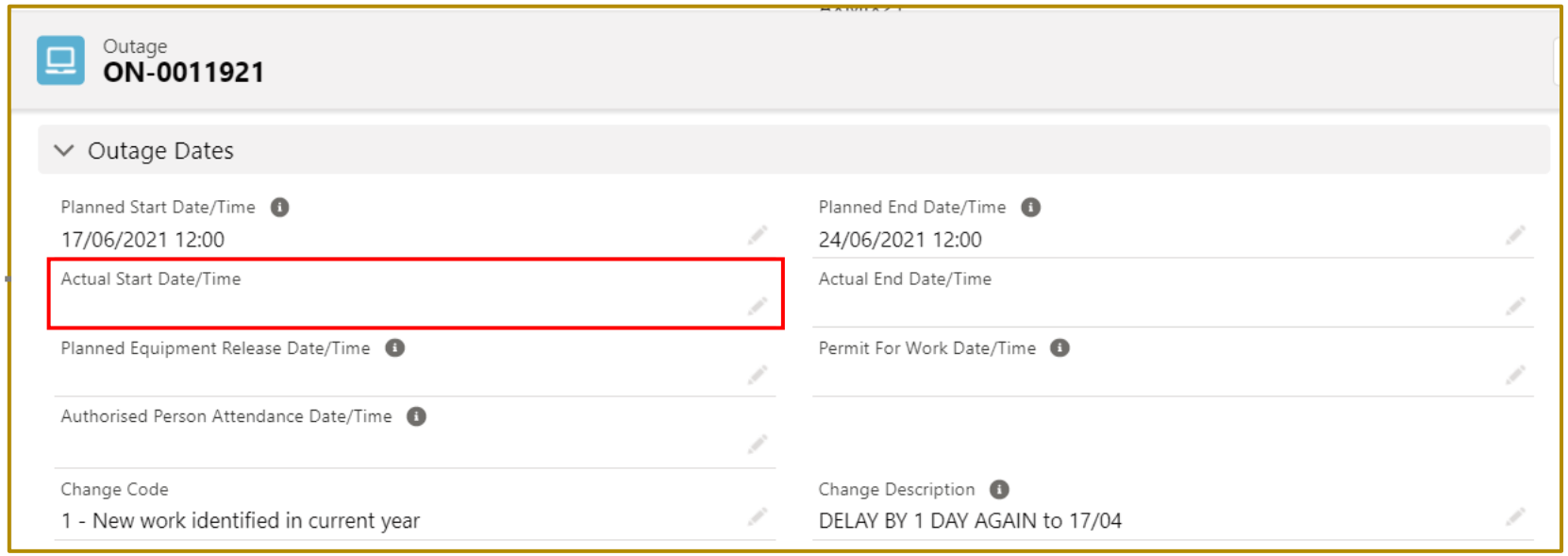


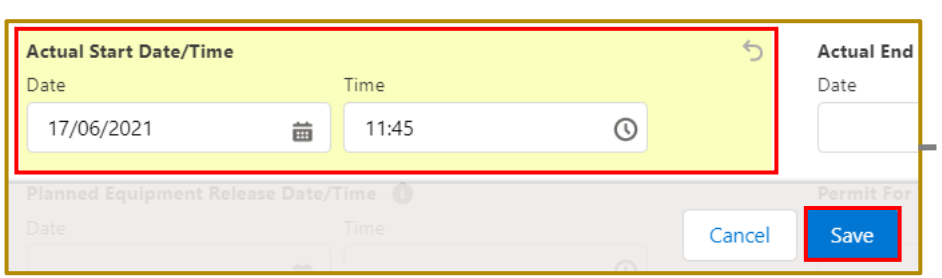


Change the Status to **Not Taken** and click **Save**.
Once marked as Not Taken, the Outage can be reused by the TO or SO by moving to Initial then to With SO.

5) Starting a Planned Outage

Go to an Outage in **Planned** status in either SO or TO view



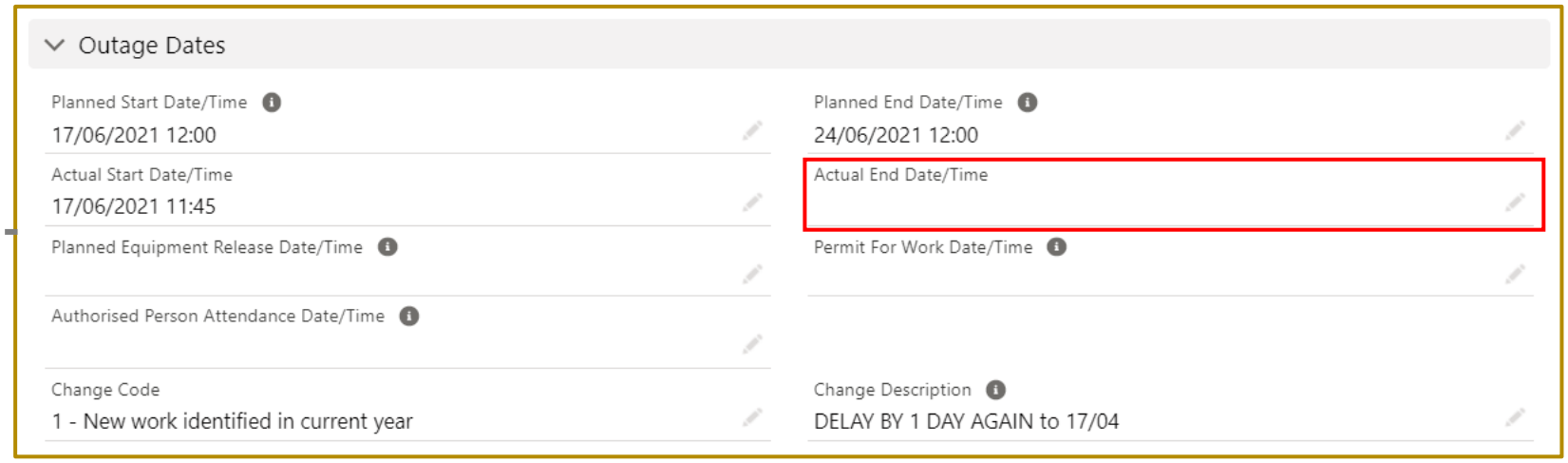


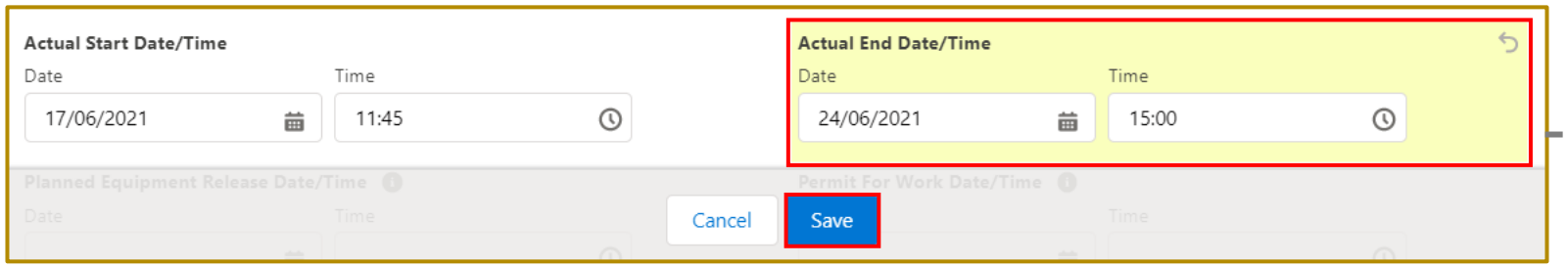
Enter an Actual Start Date and Time in either SO or TO view then click **Save**. Once entered, the Outage Status will automatically move to **Started**

*If the user wishes to set a **Started** Outage back to **Planned**, they must delete the **Actual Start Time & Date** and click **Save** (this may only be possible by a SO Super User – TBC)*

6) Marking a Started Outage as Completed

Go to an Outage in **Started** status in either SO or TO view





Enter an Actual End Date and Time in either SO or TO view then click **Save**.
Once entered, the Outage Status will automatically move to **Completed**

*If the user wishes to set a **Completed** Outage back to **Started**, they must delete the **Actual End Time & Date** and click **Save** (this may only be possible by a SO Super User – TBC)*