# BP_SO_05.2 Interconnector Trips

## Business Process

**01/07/2024 - Version 3**

EirGrid GROUP

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# Contents

# 1. Assumptions

Assumptions made during the design of this process include:

- This is an all-island business process, meaning the same process will be used across both jurisdictions on the island, Ireland and Northern Ireland. It can conducted by the relevant team in either Dublin or Belfast;
- The following business processes addresses all requirements, including roles, tools, and activities that will enable the TSO to achieve scheduling objectives;
- All required systems, including MMS and ICMP are in place. They offer all required functionalities to support business needs; and
- System security issues identified ahead of real time should be managed through the routine scheduling and dispatch process and resolved ahead of real time to reduce the dependency on cross border actions.

# 2. Process References

## 2.1. Related Rules References

The following table provides references to the documents that govern the design of this business process for any of the SEM-GB interconnectors (Moyle, EWIC and Greenlink).

| Document Title | Description |
|---|---|
| Interconnector Operating Protocol | The protocol operates as a common point of reference for the interconnector owner, EirGrid/SONI and NGESO in relation to the operation of the Interconnector, covering the following areas; outage planning, day ahead user data and transfer programme agreement, real time operation and post event review and general management. |
| Balancing and Ancillary Services Agreement | The agreement details the provision of commercial ancillary services across the Interconnector including cross border balancing and emergency assistance prices. |

## 2.2. Related Documents

The following table provides a list of documents that are related to this business process.

| Document Title | Relationship | Description |
|---|---|---|
| Real Time NTC Reductions | Related process | Following an interconnector trip the TSO will update the Net Transfer Capacity of that interconnector in the systems. |
| Perform Long Term and Short Term Scheduling | Related process | Following an interconnector trip NCC/HCC will have to perform additional long term and short term scheduling runs. |

# 3. Process Context

## 3.1. Business Model Relationship

The Interconnector Trips process sits within the interconnector process group. This group covers the interactions between System Operator (Back Offices and NCC/CHCC) and Interconnector Owners in relation to outage management, testing and following trips.

## 3.2. Background and Scope

In the event of an interconnector trip it is the responsibility of Control Centres to inform National Grid Electricity System Operator (NGESO) within 15 minutes of the event in accordance with Grid Code. The Interconnector Operating Protocol provides guidance in relation to communications between the Control Centres following an interconnector event. An interconnector trip is a significant event and the immediate priority of NCC/CHCC is to ensure the system is secure and to redispatch as required to return the system to a secure state. Once the system has stabilised there are a number of activities in relation to scheduling and dispatch, notification of interconnector owners to establish return to service times and keeping NGESO informed of these events.

# 4. Process Objective

The objective of this Business Process is to meet the obligations set out in the relevant agreement between the Interconnector Owner and the TSOs when an interconnector trips.

# 5. Roles and Responsibilities

## 5.1. NCC/CHCC

The following table provides a summary of the obligations of NCC/CHCC relating to Interconnector Trips:

| Function | Responsibility in relation to process | Timeline Associated |
|---|---|---|
| NCC/CHCC (Process Owner) | • Take require action once trip has occurred, ensuring redispatch to ensure safety of supply and reducing NTC | Immediately after trip |
| | • Inform NGESO of trip | Within 15 minutes of trip |
| | • Liaise with relevant Interconnector owner during process | As soon as practicable |
| | • Produce Significant Incident Report, if required | Within 2 hours of trip |

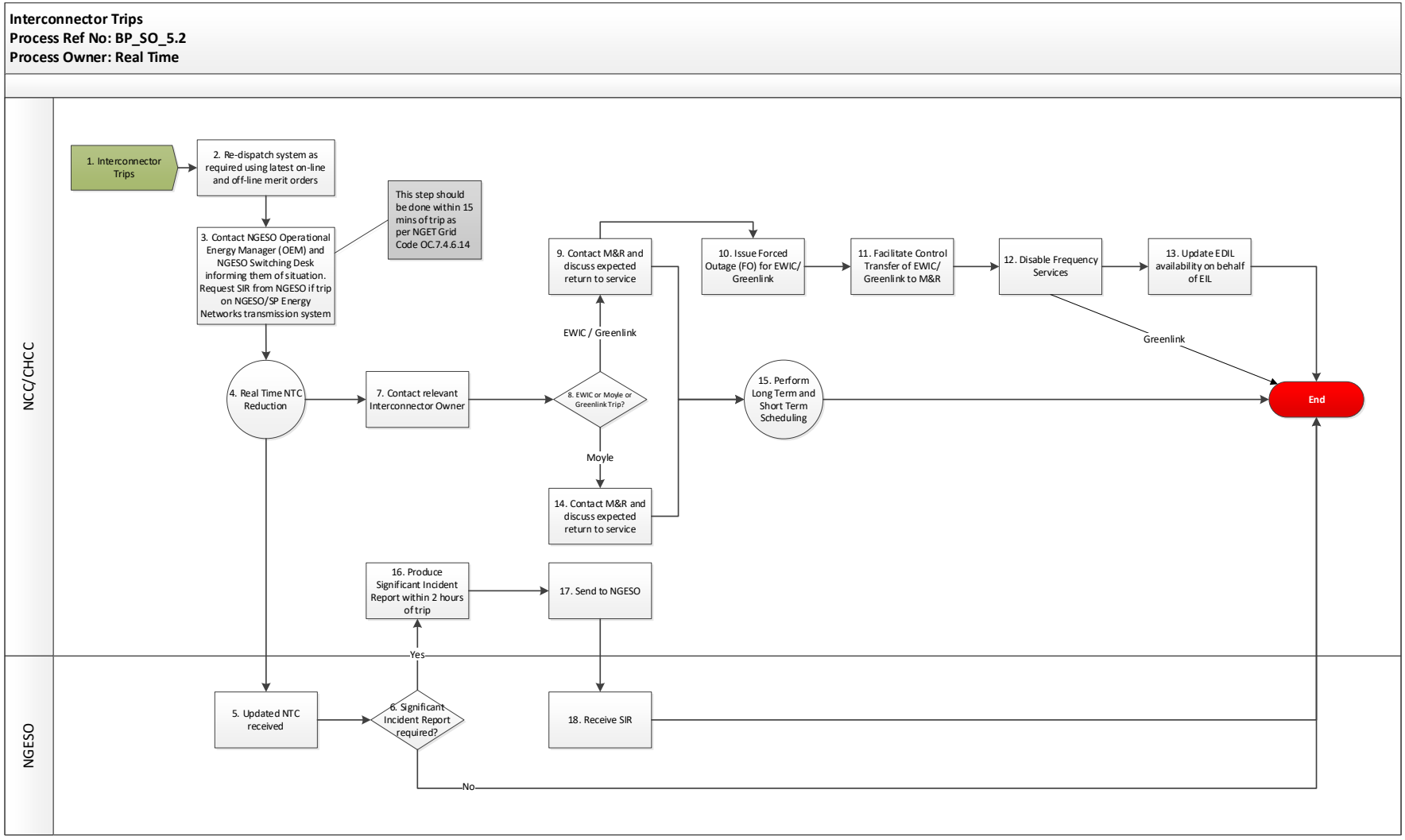
## 5.2. National Grid Electricity System Operator

The following table provides a summary of the obligations of National Grid Electricity System Operator (NGESO) relating to Interconnector Trips:

| Function | Responsibility in relation to process | Timeline Associated |
|---|---|---|
| NGESO | Assess if Significant Incident Report is required | As soon as practicable after being informed of trip |

# 6. Process Description

## 6.1. Process Map



## 6.2. Process Steps

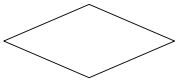
| # | Step | Step Description | Responsible Role | Outputs | Indicative Timing/ Frequency | System |
|---|---|---|---|---|---|---|
| 1 | Interconnector Trips | Trigger for this process will be an Interconnector tripping. | NCC/CHCC | N/A | N/A | N/A |
| 2 | Re-dispatch system as required using latest on-line and off-line merit orders | Control Centre will immediately re dispatch system as required using latest on-line and off-line merit orders. | NCC/CHCC | N/A | Immediately after trip has occurred | MMS |
| 3 | Contact NGESO Operational Energy Manager (OEM) and NGESO Switching Desk informing them of situation. Request SIR from NGESO if trip on NGESO/SP Energy Networks transmission system | Once redispatch is complete, contact NGESO Operational Energy Manager (OEM) and NGESO Switching Desk informing them of situation.<br>As per NGESO Grid Code OC7.4.6.14, this step should be done within 15 mins of trip.<br>Request Significant Incident Report (SIR) from NGESO if trip on NGESO/SP Energy Networks transmission system. | NCC/CHCC | N/A | Upon completion of redispatch | Phone |
| 4 | Real Time NTC Reduction | The 'Real Time NTC Reduction' process will then be triggered to ensure the NTC minute values are amended accordingly and so that a new Interconnector Reference Programme is generated within the Interconnector Management Platform (ICMP). | NCC/CHCC | NTC updated | Upon completion of redispatch | ICMP |
| 5 | Updated NTC received | Updated NTC received. | NGESO | N/A | N/A | ICMP |

| # | Step | Step Description | Responsible Role | Outputs | Indicative Timing/ Frequency | System |
|---|---|---|---|---|---|---|
| 6 | Significant Incident Report required? | Significant Incident Report required?<br>If yes, go to step 16.<br>If no, process ends. | NGESO | N/A | N/A | N/A |
| 7 | Contact relevant Interconnector Owner | Contact relevant Interconnector Owner to assess the situation. | NCC/CHCC | N/A | N/A | Phone |
| 8 | Which IC Trips? | Which IC Trips?<br>If it is EWIC or Greenlink, go step 9.<br>If it is Moyle, go to step 14. | NCC/CHCC | N/A | N/A | N/A |
| 9 | Contact M&R and discuss expected return to service | Contact Maintenance & Repair and discuss expected return to service. | NCC/CHCC | N/A | As soon as possible after trip | Phone |
| 10 | Issue Forced Outage (FO) for EWIC or Greenlink | Issue Forced Outage (FO) for EWIC / Greenlink. | NCC/CHCC | Forced Outage Notice | As soon as possible after trip | Email |
| 11 | Facilitate Control Transfer of EWIC or Greenlink to M&R | Facilitate Control Transfer of EWIC / Greenlink to Maintenance & Repair. | NCC/CHCC | N/A | As soon as possible after trip | Control Transfer form |
| 12 | Disable Frequency Services | Disable Frequency Services | NCC/CHCC | N/A | As soon as possible after trip | Email |
| 13 | Update EDIL availability on behalf of EIL | Only for EWIC: Update EDIL availability for on behalf of EIL. | NCC/CHCC | Availability updated | As soon as possible after trip | EDIL |
| 14 | Contact M&R and discuss expected return to service | Contact Maintenance & Repair and discuss expected return to service. | NCC/CHCC | N/A | As soon as possible after trip | Phone |

| # | Step | Step Description | Responsible Role | Outputs | Indicative Timing/ Frequency | System |
|---|---|---|---|---|---|---|
| 15 | Perform Long Term and Short Term Scheduling | Perform Long Term and Short Term Scheduling process to generate scheduling runs which reflect the trip. | NCC/CHCC | LTS/ RTC scheduling runs | As soon as possible after trip | MMS |
| 16 | Produce Significant Incident Report within 2 hours of trip | Produce Significant Incident Report within 2 hours of trip outlining the details of the trip. | NCC/CHCC | Significant Incident Report | Within 2 hours of trip | N/A |
| 17 | Send to NGESO | Once complete send SIR to NGESO. | NCC/CHCC | N/A | N/A | N/A |
| 18 | Receive SIR | Receive SIR. | NGESO | N/A | N/A | N/A |

# 7. Appendices

## 7.1. Process Flowchart Key

| FLOWCHART KEY | |
|---|---|
|  | Trigger |
|  | Process step |
|  | Process decision / question |
|  | Reference to another process |
|  | Another business process to be implemented following current step (current step is a trigger for another process) |
|  | Process end |
|  | System (automatic step) |