



Operating Code OC7 – Contingency Planning

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Operating Code OC7 – Contingency Planning

OC7.1 Introduction

Operating Code OC7, Contingency Planning, requires OETC to develop a strategy to be implemented in Emergency Conditions such as a Total System Shutdown or Partial System Shutdown and in response to other major System Incidents.

A Total System Shutdown or Partial System Shutdown can have widespread implications for electricity Supply and it is imperative that OETC has arrangements in place to deal with such situations. It is also important that Users are aware of the procedures, and cooperate fully in the implementation of the procedures, through which OETC can return the Transmission System to normal operating conditions.

OC7.2 Objective

The objectives of OC7 are;

- to require OETC to develop a general restoration strategy to adopt in the event of Total System Shutdown or Partial System Shutdown;
- to require OETC to produce and maintain comprehensive System Normalisation Procedures covering Total System Shutdowns and Partial System Shutdowns;
- to provide for the cooperation of Users with the formation and execution of System Normalisation Procedures;
- to provide for the development and implementation of communications between OETC and Users when dealing with a System Incident; and
- to ensure OETC and User personnel who will be involved with the implementation of System Normalisation Procedures, are adequately trained and familiar with the relevant details of the procedures.

OC7.3 Scope

In addition to OETC, OC7 applies to;

- Power Producers;
- Licensed Distributors;
- Directly Connected Consumers;
- International Interconnected Parties; and
- Internally Interconnected Parties.



OC7.4 Terms

For the purposes of this section of the Grid Code, the term;

- **Incident Centre** means a centre established as determined by OETC following a Significant Incident to provide a focal point for communication and the dissemination of information between OETC and senior management representatives of relevant Users;
- **Power Island** means a group of Production Facilities together with complementary local Demand, disconnected from any other power source or the Total System. (A group may only contain a single Production Facility);
- **System Normalisation Strategy** means the strategy setting out the procedures for the restoration of the System following a major Incident;
- **System Incident Communications** procedures are procedures agreed between OETC and Users to ensure secure communications during System Incidents.

OC7.5 System Normalisation strategy

OETC shall develop a System Normalisation Strategy to be implemented in Emergency Conditions such as Total System Shutdown or a Partial System Shutdown and other major System Incidents. The overall objectives of the System Normalisation Strategy shall be as follows;

- restoration of the Transmission System and associated Demand in the shortest possible time, taking into account Production Facilities' capabilities, including Embedded Gensets and Transmission System operational constraints;
- re-synchronisation of parts of the Transmission System which have become out of synchronism with each other; and
- to provide for effective communication routes and arrangements to enable senior management representatives of OETC and Users, who are authorised to make binding decisions on behalf of OETC or a User to communicate with each other during a System Incident.

The System Normalisation Strategy will provide for the detailed implementation of the following;

- notification by OETC to Users that a Total System Shutdown or a Partial System Shutdown exists and that OETC intends to implement a System Normalisation Procedures;
- identification of separate groups of Production Facilities (a group may only contain a single Production Facility) together with complementary local Demand; and
- step by step integration of these Power Islands into larger sub-Systems to return the Transmission System to normal operating conditions.

The System Normalisation Strategy will also provide for the issue of any Dispatch Instructions necessitated by the System conditions prevailing at the time of the System Incident.

OETC will consult with International Interconnected Parties and with Internal Interconnected Parties during the preparation of the System Normalisation Procedures and incorporate their services wherever practicable.



OC7.6 System Normalisation Procedures

In the event of Emergency Conditions such as a Total System Shutdown or Partial System Shutdown of the Transmission System OETC shall issue an Alert as set out in OC7.7.2 to notify Users that it intends to implement System Normalisation Procedures. OETC shall notify Users at the time of a System Incident of the particular System Normalisation Procedure to be implemented for that System Incident.

The System Normalisation Procedures will be developed and maintained by OETC in consultation with other Users as appropriate in accordance with Good Industry Practice.

The System Normalisation Procedures shall be subject to periodic review by the Grid Code Review Panel.

The System Normalisation Procedures shall provide for;

- procedures to establish an Incident Centre immediately following a major System Incident;
- a decision on the location of an Incident Centre; and
- the operational responsibilities and requirements of an Incident Centre, noting that such an Incident Centre will not have any responsibility for the Operation of the Transmission System but will be the focal point for communication and the dissemination of information between OETC and senior management representatives of relevant Users.

The complexities and uncertainties of recovery from a Total System Shutdown or Partial System Shutdown of the Transmission System require the System Normalisation Procedures to be sufficiently flexible so as to accommodate the full range of prevailing CDGenset and Transmission System operational possibilities.

OC7.6.1 User responsibilities

Each User shall follow OETC's instructions during a System Incident and restoration process, subject to safety of personnel, OETC and the User's Plant.

It shall be the responsibility of the User to ensure that any of its personnel who may reasonably be expected to be involved in System Normalisation Procedures are familiar with, and are adequately trained and experienced in their standing instructions and other obligations so as to be able to implement the procedures notified by OETC.

OC7.6.2 Black Start procedure

The procedure for a Black Start situation will be that specified by OETC at the time of the Black Start situation. Users shall abide by OETC instructions during a Black Start provided that the instructions are to operate within the Operating Parameters of each CDGenset.

OETC may issue instructions to;

- a Production Facility with Black Start capability or to a Licensed Distributor with an Embedded Generator with Black Start capability relating to the commencement of Generation;
- a Licensed Distributor or to a Directly Connected Consumer relating to the restoration of Demand; and
- a Production Facility relating to commencement of Generation when an external power Supply is made available to it.

Black Start instructions shall be implemented in accordance with the following procedures;



- a Production Facility with Black Start capability will start-up as soon as possible and within two hours of an instruction from OETC to initiate start-up. The Production Facility will confirm to OETC when start-up of a CDGenset has been completed;
- following such confirmation, OETC will endeavour to stabilise that CDGenset by instructing a Licensed Distributor to Connect appropriate Demand, following which OETC may instruct the start-up and Synchronisation of the remaining Available CDGensets at that Production Facility and their loading with appropriate Demand to create a Power Island;
- if during this Demand restoration process any CDGenset cannot keep within its safe Operating Parameters because of Demand conditions, the Power Producer shall inform OETC and OETC will, where possible, either instruct Demand to be altered or will re-configure the Transmission System or will instruct a User to re-configure its System in order to alleviate the problem being experienced by the Power Producer;
- OETC accepts that the decision to keep a CDGenset operating outside its safe Operating Parameters is one for the Power Producer concerned. OETC will accept and respond accordingly to a decision of Power Producer to change Generation output on a CDGenset if it believes it is necessary to do so for safety reasons;
- as part of the Black Start strategy, Licensed Distributors with Embedded Gensets within their Distribution System which have become islanded, may in liaison with OETC sustain and expand these islands. Licensed Distributors will inform OETC of their actions and will not re-Synchronise to the Transmission System without OETC agreement; and
- OETC will instruct a relevant User, where possible, to interconnect Power Islands to achieve larger sub-Systems, and subsequently may instruct the interconnection of these sub-Systems to form an integrated System. This should eventually provide for the return of the Transmission System to normal operating conditions.

Certain Black Start and System restoration procedures already exist within MHEW. Such procedures shall be reviewed by OETC and updated or incorporated into other procedures developed in accordance with this code.

OETC shall inform Users of the end of a Black Start situation and the time at which the Transmission System resumed normal Operation.

All notifications must be made promptly. Notifications and responses may be made by telephone but must be confirmed within 2 hours where practical. Where information is requested in writing throughout this code, facsimile transmission or other electronic means as agreed with OETC in writing may be used. All writing shall be in the English language.

OC7.6.3 Re-Synchronisation procedures

Where there is neither a Total System Shutdown nor a Partial System Shutdown but parts of the Transmission System are out of Synchronism with each other, OETC will instruct Users to regulate Generation output or Demand to enable the separate parts to be re-Synchronised. OETC will inform the relevant Users when re-Synchronisation has taken place.

OETC shall issue whatever revised Despatch Instruction are required to enable re-Synchronisation and to return the Transmission System to normal Operation.

OC7.7 System Incident procedures

OC5 - Operational Event Reporting, Communication and Liaison sets out the procedures for



the exchange of information and follow up reporting between OETC and Users in relation to events that have an impact on the Transmission System. An event may be either an Operation or an Incident. OETC will define certain Incidents as Significant Incidents; other more severe Incidents such as a Partial System Shutdown will be defined as System Incidents.

System Incidents are unpredictable both with respect to timing and the resulting implications. OETC shall establish procedures for determining when an Incident on the Transmission System shall be considered a System Incident and also establish outline procedures for handling System Incidents.

In certain circumstances, OETC may require an Incident Centre to be established to coordinate the response to a System Incident and to avoid placing further stress on existing OETC and User operational control arrangements.

OETC will inform Users promptly that an Incident Centre is to be established and request all relevant Users to implement System Incident communications procedures. OETC will specify the responsibilities and functions of the Incident Centre and the relationship with existing operational and control arrangements.

The Incident Centre established in accordance with OETC's instructions will not have any responsibility for the Operation of the Transmission System but will be the focal point for communication and the dissemination of information between OETC and senior management representatives of relevant Users.

An Incident Centre does not imply a specially built centre for dealing with System Incidents; it is a focal point for communications related to the System Incident. During a System Incident, normal communication channels for operational control communication between OETC and Users will continue to be used.

OETC will decide when conditions no longer justify the need to use the Incident Centre and will inform all relevant Users .

In certain rare situations, Licensed Distributors may declare a System Incident on their Distribution System. The procedures for this are included in the Distribution Code and may not involve OETC directly. OETC shall however be kept informed promptly of such Incidents.

OC7.7.1 System Incident communications

OETC and all Users will maintain lists of telephone contact numbers at which, or through which, senior management representatives nominated for this purpose and who are fully authorised to make binding decisions on behalf of OETC or the relevant User can be contacted day or night.

The lists of telephone contact numbers shall be provided in writing prior to the time that a User Connects to the Transmission System and must be up-dated and circulated to all relevant parties (in writing) whenever the information changes.

Notifications and responses will be made normally by telephone but must be confirmed in writing within 2 hours where practical.

All communications between the senior management representatives of the relevant parties with regard to OETC's role in the System Incident shall be made via the Incident Centre if such a centre has been established.



OC7.7.2 System Alerts/Warnings

In the event of System Incidents, such as Total System Shutdown, a Partial System Shutdown or a System separation, OETC will issue promptly an Alert warning to all Users.

The form of the Alert Warning will be;

- “This is an Alert timed at (xx:xx) hours;
- There is a (*Partial System Shutdown*) at (aaaaa);
- A System Normalisation Procedure is being implemented;
- Standby for further instructions”.