
Technical Specification Document

Switching Operator (SO) Service Definition

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TBC

Change History

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0.1	TBD	Initial draft for November 2019 Technical Specification Approach Consultation
0.2	TBD	Version for March 2021 Switching Consultation

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1 Description of Service

The Switching Operator

- 1.1 The Switching Operator has overall accountability for the effective and robust operation of the end-to-end Switching Arrangements, as described in the Switching Service Management Schedule.
- 1.2 The Switching Operator co-ordinates service management activities delivered across all Switching Data Service Providers.
- 1.3 The service management activities and procedures will be based on a set of best practices such as the ITIL-based lifecycle. This aims to effectively co-ordinate service management activities and use a common approach across all Switching Data Services.
- 1.4 The Switching Operator delivers the following outcomes:
 - (a) provision of analysis, and detailed investigations into the root causes of recurring Switching Incidents, as part of its management of Switching Problems, to support the identification of any permanent resolutions that may be required;
 - (b) the agreement of manual activities and workarounds which should be implemented until any permanent solutions are in place or deemed not to be necessary; and
 - (c) provision of subject matter expertise to support Market Participants for Switching related issues.

Switching Service Desk

- 1.5 The Switching Operator shall provide a Switching Service Desk which:
 - (a) provides a single point of contact for Market Participants and other interested parties;
 - (b) co-ordinates ticket resolution across all Switching Data Service Providers;
 - (c) resolves Switching Incidents and fulfils Switching Service Requests raised by Market Participants and other interested parties, within agreed service levels; and
 - (d) manages Operational Switching Service Changes, analysis of Switching Problems and updates to knowledge articles.
- 1.6 The Switching Service Desk utilises the Switching Service Management System to access information relating to tickets raised via the Switching Portal and from Switching Data Service Providers who will input tickets directly into the Service Management System.
- 1.7 In addition to the facility for Switching Portal Users to raise tickets with the Switching Service Desk, the Switching Portal will enable users to review the status of open tickets and review historic tickets raised by their own organisation, in line with the data retention policy.
- 1.8 The Switching Operator shall manage the resolution of Switching Incidents according to its Switching Incident management process, which defines the activities and interactions between the Switching Operator Service, Switching Data Service Providers and Switching Portal Users.
- 1.9 Details of the services that are available via Switching Service Requests shall be described on the Switching Portal.

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- 1.10 Knowledge articles will be available on the Switching Portal to provide the facility for users to search for knowledge that can be used to solve their issues, before a ticket is raised.

Provision of General Switching Information

- 1.11 The Switching Operator shall maintain and operates a Switching Portal to deliver the following outcomes:
- (a) providing up-to-date information using service status dashboards covering all Switching Data Services along with service bulletins to keep Market Participants informed about the Switching Data Services and any issues or outages currently affecting the Switching Arrangements;
 - (b) providing links to other relevant services that are part of the Switching Arrangements or other REC Services (e.g. the Enquiry Services) and the REC Portal;
 - (c) providing an accurate and continually updated knowledge base for the guidance and assistance of Market Participants, Switching Data Service Providers and other interested parties; and
 - (d) using role-based access control to ensure that each Switching Portal User has access to the correct data for its organisation.

Co-ordination of Switching Activities delivered by Switching Data Service Providers

- 1.12 Requirements on Switching Data Service Providers to deliver their obligations to support the Switching Operator activities are included in the Service Management Schedule.
- 1.13 The Switching Operator will co-ordinate its activities and those of Switching Data Service Providers, to deliver the following outcomes:
- (a) a co-ordinated process to progress Operational Switching Service Changes that minimises the planned maintenance windows and, where possible, co-ordinates outages for Switching Data Service Providers and schedules these at times of the day that would cause the least disruption to Market Participants;
 - (b) an accurate and complete, published forward schedule of change that provides details of all planned changes and what effect they will have on the availability of Switching Data Services;
 - (c) sufficient capacity across all Switching Data Services, at all times, to meet Market Participant demand by collating capacity and headroom information and matching that with expected Market Participant activity¹;
 - (d) timely publication of accurate reports incorporating data received from all Switching Data Service Providers, as defined in section⁷;
 - (e) a review of processes and recommendations for the adjustment of service levels to improve the services provided; and

¹ Note that each Switching Data Service Provider is responsible for ensuring the capacity of its systems and for ensuring that there is sufficient headroom available at all times.

- (f) effective and proven business continuity and disaster recovery processes across the end-to-end Switching Arrangements.

Support to the Code Manager

- 1.14 The Switching Arrangements form part of the overall scope of this Code. .
- 1.15 The Code Manager is accountable for the overall Entry Assessment process and onboarding of new entrants. The Switching Operator shall co-ordinate with the Code Manager in the following areas:
 - (a) the onboarding of entrants who wish to become CSS Users or Switching Portal Users; and
 - (b) the receipt of CSS Operational Data.
- 1.16 The Code Manager is responsible for developing and maintaining the REC Portal, which provides information to Market Participants and other interested parties relating to activities delivered under this Code. The Switching Operator shall co-ordinate with the Code Manager to ensure information provided via the Switching Portal does not unnecessarily duplicate or conflict with information provided via the REC Portal.
- 1.17 The Code Manager is responsible for the service desk accessed via the REC Portal, which provides support to Market Participants and other interested parties relating to all activities delivered under this Code. The Switching Operator shall co-ordinate with the Code Manager to ensure the scope of each service desk and portal is clearly communicated and queries are directed to the correct service desk, with links and contact details on each portal.
- 1.18 The Code Manager is responsible for the overall change management arrangements defined in the Change Management Schedule. This does not include Operational Switching Service Changes. Where necessary (i.e. where the scope of change impacts multiple Switching Data Service Providers and a consolidated view is required) the Switching Operator shall co-ordinate with the Code Manager to ensure that the impact of changes impacting the Switching Arrangements have been fully documented.
- 1.19 As part of its role to deliver the Operational Switching Service Change process, the Switching Operator shall ensure the Code Manager (as chair of the Switching Change Advisory Board) has all the required information to effectively deliver its role. The make-up and operation of the Switching Change Advisory Board will be as defined in its terms of reference.

Interaction with the REC PAB

- 1.20 The REC Performance Assurance Board (REC PAB) is responsible for delivering the performance assurance framework for this Code, which covers both Market Participants and REC Service Providers.
- 1.21 The REC PAB requires access to relevant data from all REC Service Providers and REC Service Users for monitoring purposes. For the Switching Operator, the extent of data and timescales for providing this will be defined by the REC PAB, and will include:
 - (a) Switching information held by the CSS Provider;
 - (b) service management information as held by the Switching Service Management System; and

- (c) Switching Data Service Provider performance information, relating to the delivery of requirements defined within the Service Management Schedule.
- 1.22 The Switching Operator Service will provide data or reports (in accordance with the Switching Service Management Schedule) to the REC PAB to demonstrate the effectiveness of the end-to-end Switching Arrangements, based on its own data and that received from individual Switching Data Service Providers.
- 1.23 The REC PAB will deliver performance assurance activities using a risk-based methodology, therefore the specific Switching Operator reporting requirements may change to meet the REC PAB requirements.

2 Definition of Users

- 2.1 The following types of organisation can utilise the Switching Operator Service:
 - (a) Switching Data Service Providers – are required to interact with the Switching Operator to deliver a number of end-to-end processes in accordance with the Service Management Schedule;
 - (b) Market Participants– use the Switching Operator Service to obtain information about the Switching Arrangements and any specific availability issues, and log Switching Incidents and/or Switching Service Requests as necessary;
 - (c) Other users – including agreed interested parties such as potential CSS Users, Price Comparison Websites or Managed Service Providers² who will use the Switching Operator Service to obtain information about the Switching Arrangements and any specific availability issues, and log Switching Incidents and / or Switching Service Requests as necessary;
 - (d) the Code Manager – interacts with the Switching Operator across a range of activities including performance assurance, change management and entry assessment;
 - (e) governance bodies – including the Authority, BEIS, the REC Board and the REC PAB, use the Switching Operator Service to receive reports in accordance with Paragraph 7.

3 System Access and User Management

- 3.1 The Switching Operator utilises two key systems to ensure activities are delivered in a secure and robust way:
 - (a) **Switching Service Management System** - a central repository that stores and manages all Switching Incidents, Switching Service Requests, Operational Switching Service Changes and queries relating to the Switching Arrangements. The Service Management System also stores and provides self-help information to be published via the Switching Portal to aid in the resolution of queries.
 - (b) **Switching Portal** - the switching ‘shop window’ for Market Participants and agreed interested parties, providing key information about the Switching Arrangements to

² Managed Service Providers can be nominated by CSS Users to provide switching services and support on their behalf. Where this is the case, Managed Service Providers require the same access to Switching Operator Services (e.g. reports, tickets) as the CSS User would have.

Switching Portal Users, including dashboards, the forward schedule of change, a knowledge base and switching announcements.

- 3.2 Access to these systems is restricted to authorised users who have the required access credentials as set out below, although a part of the Switching Portal will be publicly available.

Access to the Switching Service Management System

- 3.3 All access requests will be logged on the Service Management System as Switching Service Requests for resolution.
- 3.4 Market Participants and other interested parties (not being Switching Data Service Providers) do not have direct access to the Switching Service Management System, but instead they will be able to raise Switching Incidents and Switching Service Requests, and track their progress, via the Switching Portal.
- 3.5 The Switching Service Desk uses the Switching Service Management System to manage all tickets raised and to ensure that each ticket is assigned to the correct team (in the Switching Operator or in one of the Switching Data Service Providers) for action, and that they are resolved within the service levels defined in Paragraph 5.
- 3.6 The Switching Operator shall use the Switching Service Management System to:
- (a) store all tickets, track progress and manage their resolution by the Switching Operator and Switching Data Service Providers;
 - (b) investigate and resolve Switching Problems;
 - (c) publish bulletins and dashboards;
 - (d) resolve recurring Switching Incidents and Switching Problems;
 - (e) publish reports to the Switching Portal; and
 - (f) co-ordinate the Operational Switching Service Change function for all Switching Data Service providers.
- 3.7 Access to the Switching Service Management System will be set up by the Switching Service Desk on request from a Switching Data Service Provider, and by agreed Switching Operator representatives for Switching Operator personnel.
- 3.8 Switching Data Service Providers will access the Switching Service Management System using:
- (a) Direct Access - all Switching Data Service Providers have direct access to the Switching Service Management System to submit Requests for Change, raise and investigate Problem Records and to add and resolve Switching Incidents, or
 - (b) Integrated Systems - Switching Data Service Providers may choose to integrate their own Systems with the Switching Service Management System to ensure that all switching tickets are in the same place and data is synchronised between the two Systems. These Switching Data Service Providers will manage each ticket in their local Service Management System with all updates being replicated automatically into the Switching Service Management System.

- 3.9 Following CSS Go-Live, any new automated integrations as referenced in Paragraph 3.8 (b) will attract an additional cost. This will cover the provision of the required switching resources to support the development and testing of the integration and all affected Systems. This will be in addition to the relevant Switching Data Service Provider cost of the integration.
- 3.10 [Direct access to the Service Management System is controlled by licence from the provider of the Service Management System. Each individual user must have its own licence, provided by the Switching Operator on request. Switching Data Service Providers will be limited in the number of licences they can request, with additional licences available at a cost, as set out in the REC Charging Statement.]³

Access to the Switching Portal

- 3.11 The Switching Portal provides access to Switching-related information including knowledge base articles and information relating to Switching Incidents and Switching Service Requests. It shall be designed to consist of publicly available information as well as security-controlled areas to protect the confidentiality of each organisation's data.
- 3.12 There shall also be the facility for individuals to subscribe to certain types of email communications, e.g. Major Incident communications, notice of outages. The full list of communications available shall be described on the Switching Portal.
- 3.13 Access to the protected parts of the Switching Portal shall use two-factor authentication:
- (a) Each Switching Portal User will be given a Switching Portal login account and a password (that they can reset themselves). They will then be asked to input a code sent to them via a different device, to confirm their identity.
 - (b) The Switching Portal supports a number of different Multi-Factor Authentication solutions. The easiest solution is Google Authenticator™ which requires the user to have a Smart Phone or device that can receive codes from the Switching Portal.
 - (c) Where an individual does not have a second device (phone or tablet) an alternative method can be used. The exact product will vary dependent on the technology and browser being used.
- 3.14 Each of the following organisations will have access to the Switching Portal to obtain the information and services that it needs. Each user shall have its own Switching Portal account.

User Type	Switching Portal Access
1. Generally available	The Switching Portal has a landing page of switching information that can be accessed by anyone in a similar way as a webpage. No access control is required here, as only 'public' information is available.
2. Interested parties and prospective Market Participants	Organisations can request access to the Switching Portal as an interested party and will be able to access switching knowledge and guides that explain what new entrants have to do to become a Market Participant. This will allow minimal access to Switching Service Requests.

³ [Requirements relating to service management system licences are subject to Design Authority approval.]

User Type	Switching Portal Access
	Any prospective Market Participant or any energy organisation known to the Switching Operator or Code Manager will be given access on request. If a request for access by an unknown organisation is received, then an acceptable reason for requiring access will be required before the Switching Operator grants access.
3. Switching Data Service Providers	Most switching access by Switching Data Service Providers is expected to be directly into the Switching Service Management System, but they can also use the Switching Portal to access switching knowledge and useful switching links if they choose.
4. Market Participants and other users	<p>Market Participants and other users will have access to all information and services on the Switching Portal, but can only access tickets and reports that relate to their organisation. They will be able to log Switching Incidents, submit Switching Service Requests, provide updates and check the progress of their tickets.</p> <p>They will also be able to view all system bulletins and the forward schedule of change, search the knowledge database for assistance and rate the articles available.</p> <p>Each Market Participant will also be able to access reports that relate to its organisation.</p>
5. Managed Service Providers	Managed Service Providers will have access to the Market Participant information when permitted by those Market Participants.
6. Switching Operator	<p>The Switching Operator will be responsible for managing the information on the Switching Portal using information from the Switching Service Management Service and from Switching Data Service Providers (e.g. scheduled changes).</p> <p>It will also be able to provide administration activities.</p>
7. Governing bodies – BEIS, the Authority, REC PAB, Code Manager	To access reports and other relevant information.

- 3.15 Requests for access to the protected parts for the Switching Portal shall be submitted using the Switching Portal 'access request' form held on the public-facing part of the Switching Portal. For Market Participants, the request will automatically create a user login and generate a single use password that will need to be changed on first use.
- 3.16 Access is based on the organisation's role i.e. whether the user is the Switching Operator, Switching Service Desk, Switching Data Service Provider, CSS User, Market Participant or other interested party.
- 3.17 Access requests from interested parties only, will ask why the organisation is requesting access. This will be analysed and if necessary, checked with the Code Manager to confirm that access

is reasonable. This will not apply to Market Participants as they will already be known via Market Participant Data and access will always be provided to them.

- 3.18 The Switching Operator will monitor the number and frequency of accesses for each user, mainly to identify where access is not being used.
- 3.19 Within each organisation there are different levels of access that can be assigned, to control what activities each individual within the organisation should be able to undertake. This will be selected by the 'Lead Contact' when access is requested, in accordance with roles available on the role-based access matrix.
- 3.20 There are a number of roles that can be assigned to an individual, including, but not limited to:
 - (a) a lead contact for each organisation;
 - (b) Switching Incidents and Switching Service Requests (raising and viewing);
 - (c) reports (viewing and running);
 - (d) a change manager who is approved to submit requests for Operational Switching Service Changes to the Switching Operator for evaluation and determination by the Change Advisory Board, if required;
 - (e) Major Switching Incidents; and
 - (f) financial approver, for additional reports or services.
- 3.21 The full list of roles available will be published on the Switching Portal. Organisations will be invited to request assignment to additional roles as new roles are identified. New role types may be added at the discretion of the Switching Operator or at the request of the Code Manager.
- 3.22 The Switching Operator maintains a table that identifies the link between each organisation and the associated Market Participant Identifiers and Market Participant Roles that each organisation is authorised to access. This is used to protect the confidentiality of each Market Participant's data. This will be loaded into the Service Management System tools using the CSS Operational Data that is provided by the Code Manager.
- 3.23 The association of a Managed Service Provider to a Market Participant is verified by a nomination to the Switching Operator from the relevant Market Participant that a Managed Service Provider is operating on its behalf. A Market Participant may nominate any individual as authorised to view its data by raising an access request for them.
- 3.24 Each organisation must nominate a 'Lead Contact' plus one or more backup contacts who are the main people that the Switching Operator will engage with on behalf of their organisation, and it is these people who are able to nominate new users or change access permissions, and verify that the contacts are up to date.
- 3.25 Each organisation (via one of the assigned 'Lead Contact' or backup contacts) is responsible for:
 - (a) deciding the individuals who should have Switching Portal access;
 - (b) determining the access that each individual should have;

- (c) ensuring that, at the point an individual leaves the organisation, their Switching Portal access is removed; and
- (d) once the 'Lead Contact' has been registered, the 'Lead Contact' will be able set up other users in its organisation.

4 Service availability

Service Desk

- 4.1 The Switching Operator shall ensure that the Switching Service Desk is available:

Item	Requirement
Standard Operational Hours	08:00 to 17:30 on Working Days. 24/7 for the Switching Operator's technical operation centre.
Out of Hours Support	24/7 support for Major Switching Incidents. 24/7 support for overnight processes. 17:30 – 22:00 on Working Days for ticket escalations.

Switching Operator

- 4.2 Whilst the main points of contact will be the Switching Portal and the Switching Service Desk, some more complicated Switching Incidents or occurrences may need to be escalated to, or managed by, the Switching Operator once they have been initially logged. These will be escalated as required by the Switching Service Desk. The Switching Operator shall be available:

Item	Requirement
Standard Operational Hours	08:00 to 17:30 on Working Days. 24/7 for the Switching Operator's technical operation centre.
Out of Hours Support	24/7 support for Major Switching Incidents. 24/7 support for overnight processes. 17:00 - 22:00 on Working Days for ticket escalations.

Systems

- 4.3 The Switching Service Management System and Switching Portal shall be available at all times unless a planned outage has been notified to all Switching Portal Users.

- 4.4 The Switching Operator shall notify Switching Portal Users of any planned maintenance windows at least 10 Working Days before the outage, and the Switching Operator shall report on unplanned maintenance as soon as reasonably practicable, after becoming aware of an unplanned outage.

User Support

- 4.5 The Switching Operator Service includes the Switching Service Desk.
- 4.6 Detailed procedures for logging Switching Incidents and raising Switching Service Requests will be available in the knowledge database, accessed via the Switching Portal.
- 4.7 Operational processes will be agreed with all Switching Data Service Providers via the Operational Switching Service Change process.

5 Service Levels

Switching Incidents

- 5.1 There are two parts to the service levels for Switching Incidents – response time and resolution time. Response time is the time between the point a Switching Incident is logged and the point it starts to be worked on; the resolution time is the time between the point that the Switching Incident is logged and the point the user is notified that it has been resolved.
- 5.2 Switching Incidents will be categorised as follows⁴:

Priority	Description	Target Response Time	Target Resolution Time
1	A Priority 1 Switching Incident (Major Incident) is a Switching Incident which, in the reasonable opinion of the Switching Operator is, or is likely to: <ul style="list-style-type: none">▪ prevent a large group of affected Market Participants from using the systems that make up the Switching Arrangements;▪ have a critical adverse impact on the activities of the affected Market Participants using the live Switching Data Services;▪ cause significant financial loss or reputational damage/or disruption to the affected Market Participants;▪ cause significant reputational damage to the affected Market Participants; or▪ result in any material loss or corruption of data used by the Switching Arrangements.	10 minutes	4 hours
2	An Switching Incident which in the reasonable opinion of the Switching Operator is, or is likely to:	20 minutes	1 Working Day

⁴ The service level for restoration of the Switching Service Management System and Switching Portal combined is 4 hours as this would be a Priority 1 Major Incident.

	<ul style="list-style-type: none"> have a non-critical adverse impact on the activities of affected Market Participants, but the Switching Arrangements are still working at a reduced capacity. 		
3	<p>A Switching Incident which, in the reasonable opinion of the Switching Operator is or is likely to:</p> <ul style="list-style-type: none"> have an adverse impact on the activities of an affected Market Participant but which can be reduced to a moderate adverse impact due to the availability of a workaround; or have a moderate adverse impact on the activities of an affected Market Participant. 	45 minutes	3 Working Days
4	<p>A Switching Incident which, in the reasonable opinion of the Switching Operator is, or is likely to have a minimal impact on the activities of an affected Market Participant.</p>	1 day	10 Working Days

Major Switching Incidents

Major Incident Management		
1	A Major Switching Incident which prevents a large group of CSS Users from using the Switching Arrangements.	Target Resolution Time: 4 hours
2	A Switching Incident which has a non-critical adverse impact on the activities of CSS Users, but the Switching Arrangements are still working at a reduced capacity.	Target Resolution Time: 24 hours

- 5.3 Major Switching Incidents will be priority 1 or 2, based on the number of affected CSS Users and the impact on each.

Switching Service Requests

- 5.4 Service Requests will be assigned a priority based on the nature of the request. Each request is defined in the Switching Portal with the priority and service level that applies.

Priority	Definition	Targets
1	Critical priority request	Target Fulfilment Time: 1 Working Day
2	High priority request	Target Fulfilment Time: 2 Working Days
3	Medium priority request	Target Fulfilment Time: 3 Working Days
4	Low priority request	Target Fulfilment Time: 10 Working Days

- 5.5 If a Market Participant or interested party requires a faster turnaround of a Switching Service Request, this can be noted on the Switching Service Request when it is raised; however, the Switching Service Desk is not obliged to provide the fulfilment in an expedited time frame and this shall be dependant on the Switching Data Service Providers and the volume of tickets waiting to be progressed.

6 Maximum Demand Volumes

- 6.1 None identified.

7 Reporting

Scheduled Reports

- 7.1 The Switching Operator shall produce regular reports for:
- (a) the Authority, BEIS and the Code Manager;
 - (b) Market Participants; and
 - (c) Switching Data Service Providers.
- 7.2 The following reports shall be made available on demand via the Switching Portal. Market Participants will only be able to see reports for their organisation.

Market Participant Reports
Recipients: Market Participants
▪ Open Issues Raised by Market Participant Organisation
▪ Open Issues Awaiting Information from the Market Participant Organisation
▪ Raised Issues by Market Participant Organisation.
▪ Closed Issues In the Last 30 Days By Market Participant Organisation
▪ Open Service Requests Raised By Market Participant Organisation.
▪ Open Service Requests Awaiting Information By Market Participant Organisation
▪ Service Requests Raised In The Last 30 Days By Market Participant Organisation
▪ Service Requests Closed In The Last 30 Days By Market Participant Organisation

- 7.3 The following reports shall be made available via the Switching Portal⁵.

⁵ [Reporting requirements are subject to agreement with RECCo and DCC]

Ofgem and Code Manager Reports	
Recipients: Ofgem and Code Manager	Frequency
▪ Weekly Incident Report	▪ Weekly
▪ Security Incident Report	▪ Monthly
▪ Problems Raised Last Month	▪ Monthly
▪ Registration Data Incident Report	▪ Monthly
▪ Security Incident Report	▪ 6 monthly
▪ Switching Major Incident Review Report	▪ As required
▪ Switching Major Incident Summary Report	▪ As required
▪ Switching KPIs	▪ Weekly
▪ Switching Performance Measurement Report	▪ Monthly

- 7.4 Market Participants may request additional reports to be created for them. If a Market Participant requests a custom / ad hoc report, then the Switching Operator will analyse the request and arrange for a cost estimate and projected timescale for it to be produced.
- 7.5 If the Market Participant wishes to accept this cost, it will need to provide financial approval from its organisation, following which the Switching Operator will arrange for the report to be produced, subject to them having access to the data that the report covers.
- 7.6 Reports relating to the Central Switching Service (Registration Service and Address Management Service) will be published on the Switching Portal. These will be produced by the CSS Provider and are detailed in the CSS Service Definition.

8 Business Continuity/Disaster Recovery⁶

- 8.1 The Switching Operator is responsible for ensuring business resilience across both its own organisation and the end-to-end Switching Arrangements.

Switching Operator and Switching Service Desk

- 8.2 The Switching Operator ensures that all staff, business processes, internal information and assets are protected and that there are clear, well-rehearsed and up to date business continuity and disaster recovery (BCDR) plans in place.
- 8.3 These BCDR plans are supported by effective and practised crisis management and crisis communications plans and an associated Switching Incident and Major Switching Incident management process.
- 8.4 The Switching Operator shall maintain a BCDR policy document that defines the outline requirements for the Switching Operator's business resilience plans and strategies, including a requirement to maintain a formal and effective Business Continuity Management System as described in:
- (a) International Standard ISO 22301, Societal security — Business continuity management systems — Requirements;

⁶ [Further work being progressed by DCC to define the BCDR requirements]

- (b) International Standard ISO 27031, Information technology — Security techniques — Guidelines for information and communication technology readiness for business continuity; and
- (c) the Business Continuity Institute’s Good Practice Guidelines.

- 8.5 The Switching Operator shall maintain the BCDR processes and plans that cover the services provided by the Switching Operator including those provided by the Switching Service Desk.
- 8.6 The Switching Operator is responsible for ensuring that these are fit for purpose for Switching, kept up to date at all times and that they are regularly tested.
- 8.7 A formal review of these will take place annually, after each BCDR test.

End-to-end Switching Arrangements

- 8.8 Each Switching Data Service Provider is responsible for ensuring that its BCDR plans and processes are fit for switching and are regularly tested. The Switching Operator shall ensure that the BCDR plans of the Switching Data Service Providers interface as appropriate, and co-ordinate an annual end-to-end business continuity and disaster recovery exercise with the Switching Data Service Providers in respect of the Switching Arrangements;
- 8.9 The Switching Operator shall develop and maintain an end-to-end BCDR plan for the Switching Arrangements with input from Switching Data Service Providers for the relevant sections. The Switching Operator shall co-ordinate the review of this plan with the Switching Data Service Providers in order to protect the continuity of the Switching Arrangements and minimise the impact on services in the event of a disaster;
- 8.10 Where BCDR tests will affect the availability of the Switching Data Services, Market Participants will be notified of this by the Switching Operator as part of the forward schedule of change.
- 8.11 The Switching Operator shall manage a BCDR event (excluding controlled tests) as a Major Switching Incident and notify Market Participants as it would for a Major Switching Incident.

9 System Audit

- 9.1 The Switching Operator shall ensure that the Switching Portal and Service Management System maintain an audit trail of messages received and responses sent.

10 Security

Security Monitoring

- 10.1 To ensure the delivery of robust Switching Arrangements, the Switching Operator is responsible for monitoring the overall security of the Switching Arrangements. It:
- (a) monitors the deployed security of CSS, ensuring any breaches are identified, resolved promptly and plugged to ensure that they will not recur;
 - (b) ensures that CSS data is secure at all times by monitoring for anomalies, threats and vulnerabilities;
 - (c) ensures that confidential data is not stored on the Switching Service Management System;

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- (d) continually monitors the CSS for threat detection; and
- (e) regularly reviews the CSS security model to ensure that it continues to be robust and appropriate for Switching services.

Switching Service Management System / Switching Portal

- 10.2 Access to the Switching Service Management System and Switching Portal is controlled as further described in Paragraph 3
- 10.3 The data stored in the Switching Service Management Service is encrypted to protect the data at rest.