Technical Specification Document

Switching Operator (SO) Service Definition

Version: XX Effective Date: TBC

Domestic Suppliers	N/A
Non-Domestic Suppliers	N/A
Gas Transporters	N/A
Distribution Network Operators	N/A
DCC	Mandatory

[Minor amendement made to paragraph 6.6 to bring incident prioritisation into line with DB4.]

Change History

Version Number	Implementation Date	Reason for Change
1.0	Date TBD	[To be completed with reference to any relevant CPs]

Contents Table

[To be included]

1 Description of service

1.1 The Switching Operator has overall accountability the effective and robust operation of the end to end Switching Arrangements. The key functions of the Switching Operator Service include:

(a) Deliver the Switching Service Desk, to support Market Participants and other interested parties and enable them to raise Incidents and log Service Requests;

(b) Provide a Service Management System to store and manage the resolution of Incidents and a Switching Portal to provide:

(i) detailed information for each Market Participant, including Incident and Service Request progress, reports and knowledge articles, and

(ii) general information on the Switching Arrangements to Market Participants and other interested parties;

(c) Co-ordinate other switching activities (not covered by a), b) and c) above) delivered by Switching Data Service Providers in accordance with the Service Management Schedule;

(d) Support the Code Manager delivering its objectives under the REC; and

(e) Provide information to the REC Performance Assurance Board (PAB) to support it operating the REC performance assurance regime.

Delivery of the Switching Service Desk

1.2 The Switching Operator, using the Switching Service Desk, co-ordinates service management activities delivered across all Switching Data Service Providers, delivering a single point of contact for Market Participants and interested parties.

1.3 Procedures for delivering the service management activities via the Switching Service Desk follow an ITIL-based lifecycle based on a set of best practices. This aims to effectively co-ordinate service management activities across all Switching Data Services.

1.4 The Switching Operator, using its Switching Service Desk, delivers the following outcomes:

(a) resolving Market Participant and interested party Service Requests and Incident reports within agreed service levels;

(b) providing analysis, following detailed investigations into the root causes of recurring Incidents, as part of Problem Management, to supports the implementation of automated resolutions;

(c) the agreement of manual activities and workarounds which should be implemented until automated solutions are in place; and

(d) providing subject matter expertise to support Market Participants for all switching related issues.

1.5 The Switching Portal enables Market Participants and interested parties to raise tickets[1] with the Switching Service Desk, review the status of open tickets and review historic tickets raised by their own organisation.

1.6 The Switching Service Desk utilises the Switching Service Management System to capture information relating to tickets raised via the Switching Portal and from Switching Service Providers directly.

1.7 The Switching Operator and will manage the resolution of Incidents according to its Incident Management process, that defines the activities and interactions between the Switching Operator Service, Switching Data Service Providers and users of the service.

1.8 Details of the services available via Service Requests to the Switching Service Desk are included in the Service Catalogue, available on the Switching Portal.

1.9 Knowledge articles are available on the Switching Portal to provide a summary of how Market Participants will interact with these, and other service management processes;

Provision of general switching information

1.10 The Switching Operator Service maintains 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 and service bulletins to keep Market Participants informed about the Switching Data Services and any issues currently affecting the Switching Arrangements;

(b) providing links to other relevant services that are part of the Switching Arrangements or the wider REC provisions e.g. the Electricity and Gas Enquiry Services, the REC Portal;

(c) an accurate and complete knowledge base for the guidance and assistance of Market Participants, Switching Data Service Providers and other interested parties.

Co-ordination of switching activities delivered by Switching Data Service Providers

1.11 The Switching Operator Service co-ordination activities deliver the following outcomes:

(a) a co-ordinated process to progress Operational Switching Service Change 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 activity[2].

[1] A ticket is an Incident or Service Request.

[2] Note that 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.

(d) timely publication of accurate reports incorporating data received from all Switching Data Service Providers, as defined in section 9

(e) review of processes and recommendations for the adjustment of service levels to improve the services provided;

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

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 is responsible for developing and maintaining the detailed operational procedures and any reporting templates required to define the low-level coordination activities required to meet the outcomes described above.

Support to the Code Manager

1.14 The Switching Arrangements form part of the overall scope of the REC. The Code Manager is responsible for delivery of the REC in accordance with its service definition.

1.15 The Switching Operator Service will interact with the Code Manager in the following areas:

(a) the Code Manager is responsible for the REC Entry Assessment process, which includes onboarding CSS Users. The Switching Operator will co-ordinate with the Code Manager, supporting new market entrants through the CSS onboarding process and facilitating external CSS testing;

(b) The Code Manager is responsible for the overall REC Portal, which provides information to Market Participants and other interested parties relating to activities delivered under the overall REC. The Switching Operator will 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 Website.

(c) The Code Manager is responsible for the overall REC Service Desk, which provides support to Market Participants and other interested parties relating to all activities delivered under the REC. Specific Switching information is provided by the Switching Operator who will co-ordinate with the Code Manager to ensure the scope of each service desk is clearly communicated and queries are directed to the correct service desk.

(d) The Code Manager is responsible for the overall REC change management arrangements defined in the Change Management Schedule. This does not include Operational Switching Service Change as defined in the REC Service Management Schedule. Where necessary (i.e. where the scope of change impacts multiple Switching Data Service Providers and a consolidated view is required) the Switching Operator will co-ordinate with the Code Manager to ensure that the impact of changes impacting the Switching Arrangements have been fully documented.

(e) The Code Manager will be part of the Change Advisory Board defined within the Service Management Schedule. As part of its role to deliver the Operational Switching Service Change process, the Switching Operator will ensure the Code Manager has all the required information to effectively deliver its role. The make-up and operation of the Change Advisory Board will be as defined in its terms of reference.

Interaction with the PAB

1.16 The PAB is responsible for delivering the REC performance assurance framework which covers both Market Participants and REC service providers.

1.17 PAB requires access to relevant data from all parties for monitoring purposes. For the Switching Operator, this includes:

(a) Switching information as 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.

1.18 The Switching Operator Service will provide reports to the 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.

1.19 The PAB will deliver performance assurance activities using a risk-based methodology, therefore the specific Switching Operator reporting requirements may change to meet the 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 – specifically CSS Users, use the Switching Operator Service to obtain information about the Switching Arrangements and any specific availability issues, and log Incidents and / or Service Requests as necessary.

(c) Other users – including interested parties such as potential CSS Users, Price Comparison Websites or Managed Service Providers[3] who will use the Switching Operator Service to obtain information about the Switching Arrangements and any specific availability issues, and log Incidents and / or Service Requests as necessary.

(d) Code Manager – interacts with the Switching Operator across a range of activities including performance assurance, change management and entry assessment.

(e) Governance Bodies – including Ofgem, BEIS, REC Board and the PAB, use the Switching Operator Service to receive reports in accordance with section 9.

[3] 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.

3 System access and user management

3.1 The Switching Operator Service utilises two key systems to ensure activities are delivered in a secure and robust way:

(a) Service Management System - a central repository that stores and manages all Incidents, Service Requests, Switching Service Operational 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 other interested parties, providing key information about the Switching Arrangements to Switching Portal Users, including dashboards, the forward schedule of change (FSOC), a knowledge base and switching announcements.

3.2 Access to each of these systems is restricted to authorised users who have the required access credentials as set out below, although there will be an area of the Switching Portal that is publicly available:

Access to the Switching Service Management System

3.3 Market Participants and interested parties do not have direct access to the Switching Service Management System, but instead they will be able to raise Incidents and Service Requests, and track their progress, via the Switching Portal.

3.4 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 section 6.

3.5 The Switching Operator uses the Switching Service Management System to provide expertise to resolving tickets, managing the resolution of tickets by Switching Data Service Providers and co-ordinating the Operational Switching Service Change and release functions for all Switching Data Service providers.

3.6 Access to the Switching Service Management System will be set up by the Switching Service Desk on request by a Switching Data Service Provider.

3.7 Switching Data Service Providers

(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 add and resolve Incidents.

(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.

Access to the Switching Portal

3.8 The Switching Portal provides access to switching related information including knowledge base articles and information relating to Incidents and Service Requests. It has been designed to consist of publicly available information as well as security-controlled areas to protect the confidentiality of each organisation's data.

3.9 There is also 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 is available on the Switching Portal.

3.10 Access to the protected parts of the Switching Portal uses two-factor authentication:

(a) Each Switching Portal user will be given a Switching Portal ID and a password (that they can reset themselves) and will be required to have a PKI certificate on their device. They will then be asked to input a code sent to them via a different device, to confirm their identity.

(b) Where an individual does not have a second device (phone or tablet) an alternative method is available.

3.11 Each of the following organisations will have access to the Switching Portal to obtain the information and services that it needs.

User Type	Switching Portal Access
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
Interested parties and prospective Energy Suppliers	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 Service Requests. An acceptable reason for access will be required before the Switching Operator grants access.
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.
Market Participants	Market Participants 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 Incidents and submit Service Requests and check the progress of these. 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.

User Type	Switching Portal Access
	Each Market Participant will also be able to access reports that relate to its organisation.
Managed Service Providers	Managed Service Providers will have access to the Market Participant information when permitted by those Market Participants.
Switching Operator	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). It will also be able to provide administration activities.
Governing bodies – BEIS, Ofgem and Code Manager	To access reports and other relevant information.

3.12 Requests for access to protected parts for the Switching Portal must be submitted using the Switching Portal 'access form' held on the Switching Portal.

3.13 Access is based on the organisation's role i.e. whether the user is the Switching Operator, Switching Service Desk, Switching Data Service Provider, Market Participant or other interested party.

3.14 Within each organisation there are different levels of access that can assigned, to control what activities each individual within the organisation should be able to access. This will be selected by when access is requested, in accordance with roles available on the role-based access matrix.

3.15 There are a number of roles that can be assigned to an individual, including, but not limited to:

(a) Organisation lead contact(s);

(b) Incidents and Service Requests (raising and viewing);

(c) Reports (viewing and running);

(d) 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. This excludes changes to REC, which will be managed by the Code Manager;

(e) Major Incidents;

(f) Financial Approver, for additional reports or services.

3.16 The full list of roles available is published on the Switching Portal. Organisations will be invited to request assignment to additional roles as new roles are identified. New roles will be added at the discretion of the Switching Operator or at the request of the Code Manager.

3.17 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 party's data.

3.18 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.

3.19 The organisation's role is then used to control which Incidents, Service Requests, data and reports the organisation can access. This is to maintain the confidentiality of each Market Participant's data.

3.20 Each organisation (via one of the assigned lead contacts) is responsible for:

(a) deciding the individuals who should have Switching Portal access;

(b) determining the access that each individual should have; and

(c) ensuring that, at the point an individual leaves the organisation, their Switching Portal access is removed.

4 Service availability

Service Desk

4.1 The Switching Service Desk is available:

Item	Requirement
Standard Operational Hours	08:00 to 17:30 Monday to Friday. 24/7 for the Switching Operator's technical operation center.
Out of Hours Support	24/7 support for Major Incidents 24/7 support for overnight processes 8:00 – 22:00 7 days a week for Incident scalations.

Switching Operator

4.2 Whilst the main points of contact for Market Participants will be the Switching Portal and the Switching Service Desk, some more complicated incidents or occurrences may need to be escalated to, or managed by, the Switching Operator. The Switching Operator is available:

Item	Requirement
Standard Operational Hours	08:00 to 17:30 Monday to Friday. 24/7 for the Switching Operator's technical operation center.

Out of Hours Support	24/7 support for Major Incidents 24/7 support for overnight processes 8:00 – 22:00 7 days a week for Incident escalations.

Systems

4.3 The Switching Service Management System and Switching Portal will be available at all times unless a planned outage has been notified to all Market Participants and interested parties.

5 User support

5.1 The Switching Operator Service includes the Switching Service Desk as defined in section 1. Detailed procedures for logging Incidents and raising Service Requests are included in separate operational documents.

6 Service Levels

Code Performance Measures

6.1 [Include the Code Performance Measures here, once they have been agreed]

Service Levels for Switching

6.2 In addition to being in this service definition, the lists of SLAs that apply, is published on the Portal.

6.3 The service levels that apply to the Switching Service Desk function are shown in the table below.

6.4 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.

Incidents

6.5 There are two Service Levels for Incidents – response time and resolution time. Response time is the time between the point an Incident is logged and the point it starts to be worked on; the resolution time is the time between the point that the Incident is logged and the point the user is notified that it has been resolved.

6.6 Switching will use ~~five~~ four priorities for incidents raised.

Priority	Description	Target Response Time	Target Resolution Time
1	A Category 1 Incident (Major Incident) is an incident which, in the reasonable opinion of the Switching Operator is, or is likely to: ▪ prevent a large group of affected Market Participants from using the systems that make up the Switching Arrangements;	10 minutes	4 hours

	▪ have a critical adverse impact on the activities of the affected Market Participants using the live Switching Data Services; ▪ cause significant financial loss and/or disruption to the affected Market Participants; or ▪ result in any material loss or corruption of data used by the Switching Arrangements.		
2	An Incident which in the reasonable opinion of the Switching Operator is, or is likely to: ▪ have a non-critical adverse impact on the activities of affected Market Participants, but the Switching Arrangements are still working at a reduced capacity.	20 minutes	24 hours
3	An Incident which, in the reasonable opinion of the Switching Operator is or is likely to: ▪ 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	72 hours
~~4~~	~~An incident which, in the reasonable opinion of the Switching Operator is, or is likely to have a minor adverse impact on the activities of an affected Market Participant.~~	~~3 hours~~	~~5 days~~
~~4~~5	An 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.	1 day	10 days

Major Incidents

Major Incident Management		
1	An Incident (Major Incident) which prevents a large group of Market Participants from using the Switching Arrangements.	Target Resolution Time: 4 hours
2	An Incident which has a non-critical adverse impact on the activities of Market Participants, but the Switching Arrangements are still working at a reduced capacity.	Target Resolution Time: 24 hours
3	An Incident which has an adverse impact on the activities of an individual Market Participant which can be reduced to a moderate adverse impact due to the availability of a workaround.	Target Resolution Time: 72 hours

6.7 Major Incidents are mostly priority 1 or 2, based on the number of affected Market Participants and the impact on each.

Service Requests

Priority	Definition	Targets
1	**Critical** priority request	Target Fulfilment Time: 24 hours
2	**High** priority request	Target Fulfilment Time: 48 hours
3	**Medium** priority request	Target Fulfilment Time: 3 days
4	**Low** priority request	Target Fulfilment Time: 10 days

6.8 The priority associated with each individual Service Request is shown in the Service Catalogue that is available on the Switching Portal.

6.9 If a Market Participant or interested party requires a faster turnaround of a Service Request, this can be noted on the Service Request when it is raised.

7 Maximum Demand Volumes

7.1 Not relevant.

8 Managing Exceptions

8.1 The CSS Interface Specification and Error Handling Strategy cover the initial switch requests and the responses that can be expected. These are managed directly by the CSS SP.

8.2 However, there are some scenarios where an Incident should be raised on the Portal for investigation and resolution:

(a) if errors that are not covered in the interface spec are encountered;

(b) if failures or delays frequently occur, which may suggest flaws in the infrastructure or processes;

(c) if an MP thinks that the response code received is incorrect;

(d) if an MP believes that the Switch Request(s) is incorrectly rejected;

(e) if there is a significant volume of Switch Requests that are sent but are not received or successfully processed by CSS.

8.3 If during the Design, Build & Test or Early Life Support phases of the Switching Programme, additional errors or exceptions have been identified, then these may require a workaround or system change to automatically deal with the circumstances that cause the error.

8.4 A knowledge article will be created and made available on the Switching Portal for any workaround currently in operation. The issue will be recorded on the Known Errors Database.

8.5 If an MP receives an error code to its switch request that they do not know how to resolve, they should raise an incident that will be investigated, a workaround created (if necessary) and a long-term solution identified. Each new exception will result in the production of knowledge articles that can be used by all MPs.

9 Reporting

Scheduled Reports

9.1 The Switching Operator produces regular reports for:

(a) Ofgem, BEIS and the Code Manager;

(b) Market Participants; and

(c) Switching Data Service Providers.

Report List

9.2 Although CSS reports are published to the appropriate parties, via the Switching Portal, the details have been included in the CSS Service Definition, rather than listed here.

(a) Service Management Governance

Recipient	Report Name	Frequency	Key Contents of Report
Ofgem, BEIS, REC Panel	Monthly Raised Problems Summary Report	Monthly	▪ Problems raised ▪ Details ▪ Status
Ofgem, BEIS, REC Panel	Switching KPIs	Weekly	▪ Status of Incidents, ▪ Switching Components Availability, ▪ Portal Availability, ▪ Switching requests processed, ▪ Address issues identified ▪ Users onboarded,
Ofgem, BEIS, REC Panel	Weekly Incident Reports	Weekly	▪ Raised/Closed Incidents, ▪ Incident ID/Category, ▪ Summary of Incident, ▪ Status/ Status Reason, ▪ Resolution details
Ofgem	Security Incident Report	6 Monthly	▪ No. of Major vs Non-Major Incidents ▪ Incident Details
Ofgem, BEIS, REC Panel	Switching Major Incident Review Report (for a single MI)	Weekly	▪ Description of Major Incident ▪ Incident and resolution details ▪ Root Cause ▪ REC Mods Required
Ofgem BEIS, REC Panel	Switching Major Incident Summary Report	Weekly	▪ Description of Major Incident ▪ Incident details ▪ Resolution details ▪ Root Cause ▪ SLAs met?

Recipient	Report Name	Frequency	Key Contents of Report
Ofgem, BEIS, REC Panel	Switching Performance Measurement Report	Monthly	▪ Details of Service Levels as per REC ▪ Performance Measures ▪ Service Levels required/met ▪ Exceptions permitted
REC Panel	Registration Data Incident Report	Monthly	▪ Registration Data Incidents ▪ Incidents details
REC Panel	REC Panel Quarterly Report	Quarterly	Significant and/or Impacting Open Problem records, Problem details

(b) Switching Operator Service Management

SM Area	Report Name	Frequency
Security Management	▪ Anomaly Detection Thresholds Set ▪ Access Management Report	Weekly Real Time
Knowledge Management	▪ Knowledge Performance Internal Dashboard ▪ Knowledge Management Performance Monitoring	Real Time Monthly
Change Management	▪ Number of Changes - All, Successful, Failed ▪ Number of emergency/expedited/latent Changes ▪ Notification of Planned Maintenance ▪ Delivery of Risk & Impact Assessments ▪ Open Changes by Status and Status Reason ▪ Live Change Management Internal Dashboard	Real Time
Capacity Management	▪ Capacity Management Internal Dashboard ▪ Demand Management Internal Dashboard	Monthly Up to 1 hour
Incident Management	▪ Switching Data Service Provider Incident Compliance Metrics ▪ Incidents by User Organisation ▪ Average time to assign, by priority, by Switching Data Service Provider ▪ Market Participant Incident Resolution Metrics ▪ Incident Breach Reason Profiles ▪ Incident Trend Report ▪ Incidents Raised - Recent Hour ▪ Weekly Incident Management Pack ▪ Live Incident Management Internal Dashboard ▪ Incident Management First Time Fix Report	Real Time Real Time Real Time Real Time Real Time Real Time Real Time Weekly Real Time Real Time
Performance Management	▪ Monthly Performance Measurement Report ▪ Monthly Performance Measurement Data ▪ Performance Measurement Internal Dashboard ▪ Service Failures for Provider Internal Dashboard ▪ Monthly Switching SD Performance Pack ▪ Provider Monthly Incident Performance Report	Monthly & Annual Monthly Monthly Monthly Monthly Monthly
Problem Management	▪ Volumetric report on All Open Problems ▪ Number of Problems resulting in a CR	Monthly Monthly

SM Area	Report Name	Frequency
Release Management	▪ Number of successful/failed releases	Real Time

9.3 The finalised list of reports that are available for each Market Participants will be published on the Switching Portal and updated as new reports are created.

9.4 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.

9.5 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:

9.6 Reports relating to the CSS (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.

10 Business Continuity/Disaster Recovery

Switching Operator and Service Desk

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

10.2 This 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.

10.3 These BCDR plans are supported by effective and practised Crisis Management and Crisis Communications plans and an associated incident management and Major Incident Management process.

10.4 The Switching Operator has 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;

(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.

10.5 The Switching Operator maintains the BCDR processes and plans that cover the services provided by the Switching Operator including those provided by the Switching Service Desk.

10.6 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.

10.7 A formal review of these will take place annually, after each BCDR test.

End to end Switching Arrangements

10.8 The Switching Operator is responsible for managing the BCDR arrangements for the Switching Arrangements overall. Its responsibilities include:

(a) reviewing the BCDR plans of each Switching Data Service Provider for completeness and suitability;

(b) testing the end-to-end BCDR plans at least every 12 months; and

(c) producing a report to the REC Board and PAB identifying improvements that are required.

10.9 Where BCDR tests will affect the availability of the Switching Service, Market Participants will be notified of this as part of the forward schedule of change.

10.10 The Switching Operator will manage a BCDR event as a Major Incident and notify Market Participants as it would for a Major Incident.

Switching Service Providers' plans

10.11 Each Switching Data Service Provider is responsible for ensuring that its BCDR plans and processes are fit for switching and are regularly tested.

10.12 The Switching Data Service Provider plans are regularly reviewed by the Switching Operator to ensure their suitability for Switching and to ensure that they are complete and up to date at all times.

11 System Audit

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

12 Data Handling

12.1 [To be completed]

13 Security

Security Monitoring

13.1 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;

(d) continually monitors the CSS for threat detection;

(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

13.2 Access to the Switching Service Management System and Switching Portal is controlled as further described in section 3

13.3 Data sent across the internet is encrypted to protect it during transit.

13.4 The data stored in the Switching Service Management Service is encrypted to protect the data at rest.

13.5 [To be developed during DBT and added to by DCC Security]