Data Communications Company

Annual Service Report

Performance Year 2015/16

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DCC Public

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1 Introduction

1. The purpose of the Annual Service Report is to provide an assessment of the overall service performance of the Data and Communications Company (DCC) and its External Service Providers[1] during the preceding Performance Year (PY). The PY for this Annual Service Report ran from 1 April 2015 to 31 March 2016.

2. The Annual Service Report has been developed in accordance with Condition 34 of the Smart Meter Communication Licence (the Licence). In accordance with Condition 34.9 of the Licence, External Service Providers were provided with a copy of the Report[2] in draft and were invited to comment on the relevant sections. DCC has completed a review of these comments and has outlined to what extent they have affected the drafting of the Annual Service Report in Appendix A.

3. The Annual Service Report includes:

- Reporting on the context for the 2015/16 Performance Year
- Summary of overall DCC performance
- A description of the role of each External Service Provider with an assessment of performance, which may include an additional summary of:
  - Overall performance
  - Performance against contractual milestones (where applicable)
  - Remediation plans (where applicable)
  - Milestones (where applicable)
  - Operational performance (where applicable)

[1] A list of External Service Providers included in the PY 2015/16 Annual Service Report is included in Appendix B
[2] External Service Providers received sections 1 – 3 and the part of section 4 pertaining to their organisation

2 Performance Year 2015/16 Context

4. The PY 2015/16 was a period of great progress and significant programme change for DCC. DCC moved closer to achieving its key deliverable of building and operating a smart metering data and communications solution for SMETS 2 meters. The DCC communications, data and security systems are developing well and the challenge of integrating them into an end to end service is well underway.

5. DCC has also made good progress towards developing technically sound solutions to support the roll-out of Smart Meters through two additional projects: Enrolment and Adoption and Dual Band Communications Hubs.

6. In conjunction with Ofgem, DCC initiated a project to take forward activity to design and procure a new Centralised Registration Service that enables a faster and more reliable service for energy consumers to switch energy suppliers.

7. This section provides context to the Annual Service Report, detailing the key events and internal and external factors that have shaped DCC and External Service Provider performance.

2.1 Key Events

8. Key events during PY 2015/16 span the breadth of DCC activity, from completing or entering Programme phases for Design, Build and Test to transitioning interim and enduring services to live operations. Some of the key events included:

- Release 1.0 entered Systems Integration Testing in September 2015 and the first end-to-end testing of large messages across the network occurred in early 2016
- Launched several new services to Industry, including: Smart Metering Key Infrastructure (SMKI) Registration, DCC Gateway Connection ordering and configuration, Ordering and Forecasting of Communications Hubs
- Held three Industry Days open to all Parties to communicate the latest information on DCC's progress and to provide an overview briefing to new Industry representatives
- Managed a large volume of complex change to the design of the SMETS2 solution and produced a revised plan for delivering the SMETS2 solutions across several releases that received formal approval of the Secretary of State in December 2015
- Released GBCS Integration Testing for Industry (GFI), a software tool developed by DCC to share its interpretation of the Great Britain Companion Specification (GBCS) for SMETS2 meters
- Multiple releases of Parse and Correlate software to Industry to align with the latest versions of GBCS, with Parse and Correlate v0.8.2 aligned to GBCS v0.8.2 released in March 2016
- Produced or updated over 30 SEC Subsidiary or similar documents, with over 25 public consultations during the year, which were then submitted to the Secretary of State or relevant authority for approval
- The Smart Metering Key Infrastructure (SMKI) service went live on time in March 2016 marking the most fundamental milestone in the DCC Programme so far.

2.2 SMETS2 Programme Performance Factors

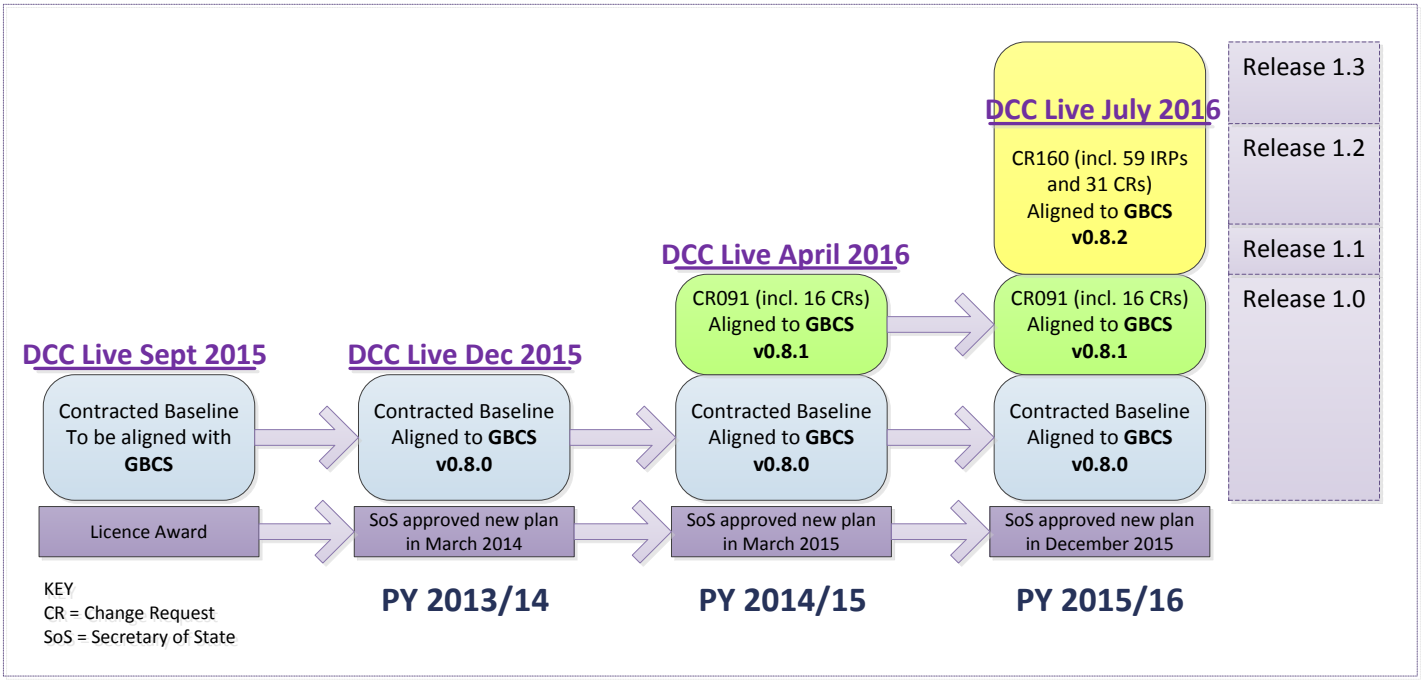
9. The principal factor affecting DCC and External Service Provider performance in PY 2015/16 was the number and complexity of defects raised against GBCS v0.8.1 during the first half of 2015. The publication of a stable, complete and unambiguous GBCS by the Department of Energy and Climate Change (DECC) was a critical dependency for finalising the design of DCC systems and ensuring that the services operate as expected.

10. By the end of July 2015, 174 defects known as IRPs (GBCS Issue Resolution Proposals) were raised against GBCS v0.8.1. Each one of these IRPs was assessed by DCC, External Service Providers, and DECC and categorised based on its impact on the solution as designed for Release 1.0. A description of the categories and the number of IRPs that were assigned to each category is included in Appendix C.

11. Of the 174 IRPs, 59 were categorised as essential to the correct functioning of the DCC solution and it was determined that they should be included in the initial DCC release. Implementing the essential IRPs required fundamental reworking of core code within the DCC systems meaning that the IRPs had a significant impact on the development of the solution. In parallel to the GBCS IRPs being raised, other sources of change resulted in over 30 Change Requests being raised by DCC with the External Service Providers for the design of Release 1.0. These Change Requests were assessed by DCC, External Service Providers and DECC as highly desirable for including in the initial DCC release.

12. Working in partnership with External Service Providers, DECC and in consultation with Industry, in late summer 2015 DCC determined that the most effective method for including the GBCS IRPs and DCC Change Requests was through a multiple release approach. The plan that received approval from the Secretary of State in December 2015 showed DCC continuing to deliver Release 1.0, but also delivering Releases 1.1, 1.2, and 1.3, with Release 1.2 being the first release available to Industry and aligned to DCC Live in July 2016.

13. The diagram below shows how the scope and release approach has changed since the Licence was awarded to DCC.



14. DECC released GBCS v0.8.2 that included the 59 essential IRPs in November 2015. As a result of the collaborative process undertaken in the development and categorisation of the IRPs, activity by DCC and External Service Providers to analyse the impact on the solution and related contract changes commenced in advance of GBCS v0.8.2 being formally issued.

15. The uplift of GBCS to include the IRPs and the increase in scope to include DCC Change Requests was a performance factor for DCC and External Service Providers as it resulted in changes to delivery and contractual milestones, increased workload and delivery complexity and increased costs.

16. The introduction of a release approach for the Programme moves DCC to a more resilient and sustainable plan in which Industry can have confidence and one which will ensure that energy suppliers have the right platform to give consumers the best possible experience.

3 DCC Performance

3.1 Overall Performance on SMETS2 Programme

17. DCC has remained focused on delivering its core SMETS2 solution, whilst ensuring that other deliverables continue to progress during PY 2015/16. DCC has demonstrated its ability to overcome complex challenges and adapt to changes in scope and plan while continuing to deliver and continuing to launch new services to Parties.

18. The move of DCC Live date and introduction of a new multiple release strategy created opportunities for DCC and External Service Providers to gain maximum value from Release 1.0 by learning from the experiences of building and testing the release that integrated systems from multiple External Service Providers and applying that knowledge to improve the efficiency and effectiveness of the subsequent releases.

19. DCC improved on its commitment to being open and transparent and sharing relevant information with its External Service Providers, DECC, Ofgem and Industry. This was achieved by inviting DECC to be involved in all relevant DCC working groups and internal governance boards, and increasing our engagement with Industry through focused weekly calls with the Smart Metering Delivery Group to seek views and share information during the development of the multiple release strategy. Other Industry engagement has included:

- DCC Industry Days – two full day events and one half day event were held during PY 2015/16 with a total of 357 participants. Feedback on the events showed that 79% of attendees rated the events as either good / very good / excellent and 90% said they would like to attend future events
- DCC Forums – 65 forums were held during PY 2015/16, topics included: Service Management Design, Solution Design, Communications Hub & SMWAN, Testing, and Finance. Forums typically lasted half a day with between 20 – 30 attendees.
- Participation in Industry governance groups
- An extensive consultation programme, including consultation briefings and contact with all stakeholders disagreeing with, or having questions on, the proposals set out in consultation drafts
- Frequent and structured reporting to Parties on testing activities, including progress through Systems Integration Testing and end stage reports
- On-going customer engagement through DCC Industry Partnership Managers, who engaged with 54 individual SEC Party organisations during PY 2015/16.

3.1.1 Progress with Design and Build

20. A priority for PY 2015/16 was to create a stable design baseline for Release 1.0 by clearly documenting the design for the release and limiting the amount of change impacting the release. In the summer of 2015, this priority was then extended to include the updated Delivery Stream 3 for Release 1.0 and the new Releases 1.1, 1.2 and 1.3. The design baseline for each release was made up of Industry facing SEC Subsidiary and similar documents and internally facing detailed technical specifications and design artefacts. DCC and External Service Providers successfully achieved Solution Design Complete on time for Release 1.0, 1.0 (Stream 3), 1.1, 1.2 and 1.3.

21. During PY 2015/16 DCC with input from External Service Providers successfully produced, updated and where appropriate consulted upon over 30 SEC Subsidiary and similar documents with specific versions of the baselined documents included in the design baseline for each release.

22. External Service Providers produced the relevant detailed technical specifications and design artefacts which were then assured by DCC and presented at an internal governance board for approval. At the end of each assurance cycle a lessons learned session was held to look for ways to improve both the process and ways of working between the many DCC and External Service Provider teams involved. During PY 2015/16 DCC and External Service Providers produced and assured over 300 versions of technical specifications and design artefacts.

23. DCC worked with External Service Providers to assure the build as it developed and to resolve any design issues that arose. The majority of the build effort during PY 2015/16 focused on Release 1.0 and covered the following areas:

- Core systems delivered by CGI IT UK Limited (CGI), Arqiva Smart Metering Limited (Arqiva) and Telefonica UK Limited (Telefonica) to support the transmission of messages from a DCC User to a Device and back to the User, including the 63 Service Request (SRs) required to support Release 1.2 operation
- Communications Hubs
- Service Management System, based on Remedy, to support the provision of interconnected Service Desk capability between Users, DCC and the External Service Providers
- Self Service Interface (SSI) to provide Users with access to information and data from across the DCC ecosystem
- Self Service Management Interface to provide DCC with access to information and data from across the DCC ecosystem
- Parse and Correlate Software to enable Users to issue critical commands to Devices (meters and CH) in XML and receive messages from the Devices in a format that can be understood by the Users systems (XML)
- SMKI Service (provided by British Telecommunications Plc (BT)) and SMKI Repository (provided by CGI) for the issuance of test and live SMKI Certificates
- DCC Enterprise Systems including: Billing System, based on SAP; Business & Management Information system (BI/MI), based on IBM Cognos Software; and File Transfer System to enable the transfer of data between these systems and CGI
- Order Management Systems (OMS) provided by Arqiva and Telefonica
- Meters, to the extent that actual devices are used during Systems Integration Testing (noting that this testing phase does not encompass the functional or non-functional/performance testing of meters)
- Processing of data files in respect of Registration Data Provider functionality
- Various interim and enduring services as described in section 3.1.5 below.

24. Build of Releases 1.1, 1.2, and 1.3 commenced in PY 2015/16 and is due to be completed in PY 2016/17.

3.1.2 Progress with Testing

25. Release 1.0, a non-consumable release of the integrated components of the core smart metering solution (based on GBCS V0.8.1) exited testing phases in PY 2015/16, along with testing of several interim and enduring live services. This non-consumable release cannot be used as the basis for the roll out of smart meters but proved that the DCC systems are capable of integration and that the communications protocol (GBCS) is robust. It also allowed the DCC to gain a significant level of experience in systems integration activities, including identifying and resolving defects that would have impacted later releases.

Systems Integration Testing

26. Core systems were delivered into Release 1.0 Systems Integration Testing in three stages: SIT1, SIT2 and SIT3. This enabled DCC to complete development activities and Pre-Integration Testing with its External Service Providers and introduce code into integration testing in an incremental manner ensuring a high degree of control and greater visibility during testing. SIT1 Testing commenced with CGI and Telefonica at the beginning of September 2015 and Arqiva were introduced into SIT at the beginning of October 2015.

27. Progress through SIT1 testing was significantly slower than anticipated. The highly complex physical, networking and application firewalls coupled with new systems and security requirements resulted in a significant number of blocking ‘defects’ (Testing Issues) which took a longer than anticipated to resolve. Furthermore, the triage process was slower than anticipated, a key reason being reliance on a limited number of technical experts to conduct root cause analysis, resulting in delays in fixing defects. The location of CGI development resource off shore (remote from the CGI test team) and the lack of central triage facility with co-located External Service Provider resources were also identified as contributory factors in slow defect triage and rectification. This has resulted in a review of the triage and defect management process and implementation of improvements to the process.

28. Communication with actual Devices also proved problematic with defects found in Communications Hubs firmware and meters were only at an early stage of development. Due to GBCS IRPs different assumptions had been made by Arqiva, Telefonica and Device manufacturers in terms of interpretation of GBCS, which differed from CGI’s assumptions.

29. Additionally concerns were raised during Systems Integration Testing that the scope of the Systems Integrator was inadequately defined and focused, and under-resourced. To ensure that Systems Integration Testing continued to make progress despite these difficulties, DCC increased its activity in Systems Integration and provided resource to complete essential activities. These concerns led to DCC commissioning an independent review of Systems Integration Testing resulting in several recommendations for improvement as described in section 3.1.3 below.

30. The delays experienced during SIT1 impacted the testing plan for SIT2 and SIT3. However, by prioritising the parts of the system identified on the Programme critical path (e.g. SMKI Apex Recovery) and the parts of the system not directly impacted by GBCS IRPs (Service Management Systems and OMS) during SIT 2, DCC managed to re-plan testing activities and successfully closed SIT 3 at the end of March 2016.

SMKI and Repository Testing

31. Three stages of SMKI and Repository Testing activities were conducted during Release 1.0 enabling DCC to issue SMKI Test and Live certificates and Parties to conduct SMKI and Repository Entry Process Testing. The results of these test stages are set out in the SMKI and Repository Testing Exit Report which was presented to the SMKI PMA and SEC Panel on 8 March 2016[3] and are summarised below.

SMKI and Repository Testing Stages[4]	Description	Performance
Part 1a SRT	Testing of the SMKI Services and SMKI Repository Services, required ahead of enabling SMKI and Repository Entry Process Tests to be conducted via a DCC Gateway Connection.	100% of executed tests passed. A Work-Off Plan was produced by DCC that detailed each of the Testing Issues that were outstanding at the point at which Part 1a SRT completed (7 issues where workarounds were available or the impact on activities was agreed as minor).
Part 1b SRT	Testing equivalent to Part 1a SRT to enable SMKI and Repository Entry Process Tests to be conducted via the Internet.	100% of executed tests passed with no outstanding issues.
Part 2b SRT	Testing that Apex contingency key has been adequately tested to ensure its accuracy and integrity prior to Live SMKI certificates being issued.	Test completed successfully.

32. Completion of Part 1a SRT enabled Parties to undertake SMKI and Repository Entry Process Testing via a DCC Gateway Connection. Section T5.5(g) and T5.20 of the SEC sets out that the exit criteria for SMKI and Repository Testing must include a requirement that at least two Large Supplier Parties must complete SMKI and Repository Entry Process Testing. By 4 March 2016, nine Parties had successfully completed SMKI and Repository Entry Process Testing, which included four Large Supplier Parties that were not affiliated.

Benefits of Testing Release 1.0 and Lessons Learned

33. Whilst not a consumable release in terms of providing Users with the capability to roll out smart meters, DCC considers that testing of Release 1.0 functionality has provided a significant level of benefits:

[3] SMKI and Repository Testing Exit Report presented to the SMKI PMA and SEC Panel, 8 March 2016: https://www.smartenergycodecompany.co.uk/meetings/meetings-calender/all-meetings/meeting-details?Id=5784a1ad-f26d-69b4-bb96-ff0000a6837f

[4] This report does not cover Part 2a SRT, since Part 2a SRT does not form part of the formal scope of SMKI and Repository Testing. Part 3 SRT is also excluded from this report as the delivery and testing of these requirements is descoped from Release R1.0 and will form the scope of Additional SRT Testing. Reporting on the completion of Part 3 SRT exit criteria will form part of a later report to the SEC Panel.

- All Release 1.0 interfaces, except that between CGI and DCC Enterprise Systems, have been exercised and used successfully and DCC has proven the ability of the various components of the DCC ecosystem to be integrated

- Multiple Service Requests have successfully completed motorway 'round trip' scenarios (from Service User Simulator, to a Device/emulator, via the SMWAN and Communications Hub, returning to the Service User Simulator), giving a high degree of confidence in the basis of the GBCS as a communications protocol

- DCC has gained valuable experience in working with external parties (Registration Data Providers and meter manufacturers) and has successfully installed and commissioned both electricity and gas meters in all Regions and processed a Registration Data Provider file.

- DCC has proved the SMKI Apex Key Recovery functionality, ensuring that SMKI Live Certificates can be issued in timescales that support DCC Live

- User testing activities commenced and to date 11 Testing Participants have completed SMKI and Repository Entry Process Testing.

34. Problems were encountered during testing of Release 1.0 and DCC completed a lessons learned review in early PY 2016/17 with actions being implemented during both PY 2015/16 and PY 2016/17.

3.1.3 Progress with Systems Integration

35. The DCC solution is made from many parts provided by seven main External Service Providers: CGI IT UK Limited (CGI), Arqiva Smart Metering Limited (Arqiva), Telefonica UK Limited (Telefonica), British Telecommunications Plc (BT), Critical Software Technologies Limited, Capita Business Services Limited, and Capita IT Enterprise Services. As DCC's core solution moved through detailed design to build and test during PY 2015/16, the responsibility of the Systems Integrator (performed by CGI) to integrate the many parts of the solution was a prime focus for DCC. However, the service provided by the Systems Integrator did not meet expectations and was not adequately scaled to handle the size and complexity of the integration challenge.

36. DCC and the Systems Integrator worked together to further define the role and requirements, to set up governance bodies and working groups, and to troubleshoot issues as they arose. Concerns raised during Systems Integration Testing led to DCC appointing a specialised IT consultancy firm with complex systems integration experience, Hunter Macdonald Ltd, to carry out a review of Systems Integration Testing and the role of the Systems Integrator.

37. The decision to expand the scope of the core solution to include GBCS IRPs and DCC Change Requests and deliver the scope through a multiple release strategy (described in section 2.2 above) increased the technical and delivery complexity of the solution, creating an additional driver for ensuring the effectiveness of the Systems Integrator service.

38. Following the review in October 2015, DCC initiated a short and intense project with its External Service Providers and supported by Hunter Macdonald Ltd to implement the 31 actions that came out of the Systems Integration Testing review. Work on further improving systems integration activity continued for the remainder of PY 2015/16 in readiness for entering System Integration Testing with Release 1.2 and beyond.

3.1.4 Operating DCC Service Desk

39. Section X of the SEC requires DCC to operate an interim Service Desk. The DCC Service Desk officially opened on 14 January 2015 and during PY 2015/16 operated from 08:00 to 18:00 hrs Monday to Friday. Based in Ruddington, Nottinghamshire, the Service Desk is a vital component of DCC Service and performed satisfactorily during PY 2015/16. The team of analysts are responsible for several key functions, notably:

- Logging and resolving SEC Party or other User incidents, requests for support and general enquiries
- Operating as the primary interface to Users for all DCC live services
- Communicating to Parties on new services, updates and other information as required
- Logging nominated contacts and managing access to the Live Operations SharePoint Site, which is necessary to be able to make use of a number of DCC services.

40. As at 31 March 2016, 124 SEC Parties have collectively provided details of 582 individual nominated contacts, whom DCC recognises as being authorised to raise Incidents and service requests on their respective Party's behalf. DCC has confirmed email connectivity with each nominee.

41. During PY 2015/16, Service Desk's telephony, ticketing and email systems were 100% available.

42. The Service Desk was originally stood up with six analysts to focus on establishing operations and to support the small number of live services at the beginning of 2015. As the year progressed and more services were transitioned to live, the Service Desk team grew to match demand with fifteen team members by end of March 2016.

43. The Service desk team will expand again in PY 2016/17 to respond to 24 x 7 hour working that will be introduced prior to DCC Live.

3.1.5 Performance of Services Provided to SEC Parties

44. The following services were in operation during PY 2015/16. The services are grouped and where appropriate a service overview has been provided. Where performance of a service is described as 'satisfactory' this means that is has met or exceeded DCC expectations and delivered a professional service within agreed timescales and quality standards.

DCC Gateway Connection Services - Service Overview

All DCC Users require access to the DCC Network (provided by CGI using third party supplier Gamma) to enable them to send and receive DCC User Interface Specification (DUIS) Service Requests, access the Self Service Interface (SSI) and for testing services.

A DCC Gateway Connection is required by each Registration Data Provider (RDP) to facilitate the initial load of registration data to the DCC, the daily transfer of Registration Data changes to DCC and the DCC status flow back to the RDPs.

Service	Description of Service	Performance for PY 2015/16	Date Available to Parties
DCC Gateway Connection Ordering	Parties can use the DCC Gateway Connection Ordering service to complete and submit a Connection Request to DCC Service Desk for processing. A separate Connection Request form should be completed for each connection required, even if the connections are into the same data centre. SEC reference: sections H15 and E3.	Satisfactory performance. The Service Desk received 70 Connection Request forms during 2015/16.	Jan 2015

Service	Description of Service	Performance for PY 2015/16	Date Available to Parties
DCC Gateway Connections	Each Party or RDP will either order their own Gateway Connection(s) into the Network or may contract another Party to provide connectivity for them. However, if as a group, a number of RDPs appoint a shared service provider, then this provider must become a SEC Party in order to operate as the DCC Gateway Party on behalf of the RDPs. The installation of these Connections is a three stage process, with the first two stages being covered by this service and the third stage covered the Gateway Connection Configurations service (described below): 1) Laying of the physical cabling 2) Installation of the equipment at the end of the connection 3) Configuration of the connection to connect to the required services. SEC reference: sections H15 and E3.	There have been some performance issues with this service as CGI struggled to fully support the provision of initial quotations and the arrangement of site surveys in a timely manner. CGI's progress updates lacked clarity and management of its third party access providers (BT Openreach and Virgin) was inconsistent and reactive. A remediation plan was put in place and performance continued to be monitored during PY 2015/16. Volumes during the PY 2015/16 for this service include: - 70 Connection Request forms received - 42 Quotations accepted - 6 Installations pending - 36 Connections completed	Jan 2015

Service	Description of Service	Performance for PY 2015/16	Date Available to Parties
Gateway Connection Configurations	Part of the DCC Gateway Connections process, Parties and RDPs are able to use this service to request configuration of their installed DCC Gateway Connections. Once the physical connection has been supplied using the DCC Gateway Connection process, the gateway connections then need to be configured so that they recognise Users confidential URL and IP address data and enable communication to DCC. Configuration is a remote activity carried out by CGI. Multiple configurations will be required for each connection, for the various environments, services and DCC User Ids. SEC reference: sections H15 and E3.	Satisfactory performance. Service Desk received 23 requests to configure DCC Gateway Connections during 2015/16.	Aug 2015
Gateway Connection Performance Reports	The Gateway Connection Performance Reports service is within the suite of DCC Gateway Connection Services. The service allows Parties to opt for DCC to provide a monthly report on the performance of each of its Gateway Connections. SEC reference: section H15.	Satisfactory performance. Performance reports were issued to Parties in February and March 2016.	Feb 2016

Communications Hubs Forecasting and Ordering Services - Service Overview

Parties are required to forecast the number of Communications Hubs that they will want to order in each Region (North, Central, and South). Forecasts must be submitted for a 24 month period starting in the month that is 10 full months before the month in which the Communications Hubs are to be delivered.

Parties are also required to place orders for the number of Communications Hubs they require in each Region; these must be submitted in the month that is 5 months before the month in which the Communications Hubs are to be delivered and must be within SEC defined tolerances of the previous forecasts.

Both interim and enduring services were developed during PY 2015/16, with the interim services being utilised until the enduring solution completed development and transitioned to live. The enduring Communications Hubs Forecasting and Ordering Service is provided via the Order Management System (OMS) which is provided and run by Telefonica and Arqiva.

Service	Description of Service	Performance for PY 2015/16	Date Available to Parties
Interim Process for Communications Hubs Forecasting	In order to allow forecasting to take place a full 10 months ahead of the Initial Delivery Month, SEC Transitional Arrangements allowed an interim process which allows forecasts to be submitted via DCC's SharePoint service as the enduring solution was still in development at the time forecasts were required. DCC is required to combine all forecasts into a single prediction for each External Service Provider for each month and each Region. Parties will then refine these forecasts to improve accuracy on a month by month basis. Subsequent orders must be within +/-50% of the volume forecasted 10 months before the delivery month and +/-20% of the volume forecasted 7 months before the delivery month. The interim service requires Parties to submit completed spreadsheet templates to DCC. The lifespan of the interim service was extended due to delays with the enduring service. SEC reference: sections X3 and F5.	Satisfactory performance. DCC received 75[5] Communications Hubs Forecast submissions from Parties during PY 2015/16.	May 2015

[5] Data available from when the service went live (May 2015) up to and including February 2016

Service	Description of Service	Performance for PY 2015/16	Date Available to Parties
Interim Process for Communications Hubs Ordering	Similar to the Interim Process for Communications Hubs Forecasting, this Service allows Parties to submit Communications Hubs orders to the DCC. It encompasses processes for the submission, receipt, validation, analysis, consolidation, aggregation and forwarding to the respective External Service Providers of monthly orders for Communications Hubs. The interim service requires Parties to submit completed spreadsheet templates to DCC. It was originally intended that the enduring solution for this service would be available in advance of the first orders being submitted; however delays to the Order Management Service meant that an interim process was required to support Parties submitting orders. SEC reference: sections X3 and F5.	DCC took the decision to provide an interim service very close to the date that the enduring solution was meant to be made available to Parties. This resulted in communications to Parties about the interim service being issued later than would be normally expected for the introduction of a new service. Once the service was operational, the service performed satisfactorily. Lessons learned exercise was carried out after the service went live to improve the process of service readiness and related communications with parties. DCC received 5[6] Communications Hubs Orders from Parties during PY 2015/16.	Oct 2015

[6] Data available from when the service went live (October 2015) up to and including February 2016

Service	Description of Service	Performance for PY 2015/16	Date Available to Parties
Communications Hubs Ordering & Forecasting (Enduring solution for Central & South Regions only)	The Order Management System (OMS) developed by External Service Provider Telefonica replaces the interim solution for Communications Hubs Forecasting and Ordering in the Central and South Regions only. The OMS for the North Region provided by Arqiva went live in April 2016, which is outside of the PY 2015/16 and consequently will not be covered by this report. SEC reference: section F5.	The OMS was originally planned to be made available to Parties by 1 Oct 2015. However, DCC decided that the OMS solutions were not ready for live operation and communicated this to Parties on 30 September 2015. The reasons for this decision were: - The functionality provided did not fully match the DCC and SEC requirements - OMS Business Acceptance Testing had not been completed - User guides and training required further development - Some setup and Transition activities had not been completed. The above issues were resolved before the OMS was made available to Parties and once live the service performed satisfactorily.	Feb 2016

Smart Metering Key Infrastructure (SMKI) Services - Service Overview

SMKI provides the means by which Parties and Registration Data Providers (RDPs) form the basis of trust across the DCC network and is one of the primary mechanisms by which communications between DCC Users and devices are secured. The SMKI service, one of the largest public key infrastructures in the world and the largest in Europe, is provided by BT, while CGI provides the repository where the certificates are stored.

SMKI services were available to support testing phases and transitioned to support live transactions in March 2016.

Service	Description of Service	Performance for PY 2015/16	Date Available to Parties
SMKI Registration	In order for any Party or RDP to use the SMKI Service they will need to register their organisation and named Responsible Officers. Once their registration is verified the Authorised Responsible Officers (AROs) will receive credentials to authenticate to the SMKI Interfaces. This service will also enable Parties to register test SMKI Authorised Responsible Officers (AROs) and gain credentials to access the test interfaces. SMKI Credentials are required by Parties as a pre-requisite to the commencement of SMKI Repository Entry Process Testing (SREPT). The SMKI Registration service will also provide access to the SMKI Repository interfaces using a combination of username and password for the Portal and SFTP interfaces and API Key for the web service interface. SEC reference: section L.	Due to a delay in testing the creation of SMKI credentials, the service was launched in two stages. The first stage made live the sending of SMKI Registration forms to DCC, with the second stage following shortly after to make available SMKI credentials. Overall, once live the service performed satisfactorily. However, Parties experiences of the service were impacted by the SMKI Repository not always being available when Parties required (see section 4.5.4 below).	Sep 2015

Service	Description of Service	Performance for PY 2015/16	Date Available to Parties
SMKI Certificate Signing Requests	SMKI Certificates secure messages between Parties / RDPs and Devices by providing assurance of the identity of each entity. They are also used to sign DCC User Interface Specification (DUIS) commands sent to the DCC. A Certificate Signing Request (CSR) is a message sent from an applicant to a certificate authority in order to apply for a unique digital identity certificate. For the SMKI Service, CSRs will be sent to the DCC's Trusted Service Provider (BT) to apply for unique digital identities for Organisations, and Devices. It is possible for Authorised Subscribers to submit Batched Device CSRs for up to 50,000 individual Devices at once. Organisation CSRs can only be sent to the DCC via the SMKI Portal, however Device CSRs can be sent via the SMKI Portal or the Web Service Interface. Once CSRs have been validated by the DCC SMKI Registration Authority team, the Organisation Certificate Authority or Device Certificate Authority will generate and lodge the relevant corresponding certificates in the SMKI Repository, and make them available for download on the SMKI Portal. This service is also used to enable Parties to gain SMKI Certificates that could be used for testing purposes. SEC reference: section L.	Satisfactory performance. Overall, this service performed satisfactorily. As with SMKI Registration, Parties experiences were impacted by the SMKI Repository not always being available when Parties required (see section 4.5.4 below).	Nov 2015 to support testing services + Mar 2016 for Live services

Service	Description of Service	Performance for PY 2015/16	Date Available to Parties
SMKI Repository, Management and Interim Recovery Services	The SMKI Repository, Management and Interim Recovery Services cover the processes around the mainstream SMKI activities that are required to manage the performance and delivery of the core SMKI services of Registration and the Production of SMKI Certificates. This includes the Interim Recovery measures that are required during the initial stage of Live SMKI, before the DCC Service is in live operation. SEC reference: section L.	Operation of the SMKI Repository by CGI experienced some performance issues during PY 2015/16. Issues included (see section 4.5.4 below): - Availability of the SMKI Repository - Disruption to services caused by testing and implementing fixes in the live environment. DCC actively managed these issues with CGI and overall, these services performed satisfactorily.	Mar 2016
Quarterly SMKI CSR Forecasts Service	The DCC collects a range of forecasting information from Parties who are Authorised Subscribers on a monthly and quarterly basis. This service allows Authorised Subcribers to provide SMKI Certificate Signing Request (CSR) Forecasts to be submitted. Quarterly SMKI CSR Forecasts are only required from Authorised Subscribers in respect of Device Certificates. Authorised Subscribers in respect of Organisation Certificates are not required to submit these forecasts. SEC reference: sections L8 and H3.	Satisfactory performance.	Feb 2016

Other DCC Services – Service Overviews

In addition to the services described above, DCC operated the following services in PY 2015/16:

- Ordering of Remote Test Lab facilities - this service enables a Testing Participant to request a Remote Test Lab connection
- Ordering of Prototype Communications Hubs - Testing Participants can use this service to order Prototype Communications Hubs to support Device and User System testing in the End-to-End Testing stage
- Interim SMWAN Coverage Service - will support upload of coverage data from the External Service Providers, receipt and verification of that data, and the publication of that data on the DCC SharePoint system where it can be accessed by Parties
- DCCKI Registration Service - will provide formal arrangements under which a Party or RDP will register their Organisation via a Nominating Officer, will nominate a DCCKI Senior Responsible Officer and a DCCKI Authorised Responsible Officer. The service will allow a Party or RDP to become a DCCKI Authorised Subscriber
- Parse and Correlate Service - software to carry out checking that the xml/GBCS conversion has not changed the underlying request
- Interim Incident Management - manages the logging of incidents and service requests from nominated contacts of Parties and the resolution of these incidents and requests
- Nominated Contact Management - the collection and storage of Party nominated contacts into a spreadsheet that can be used for validation in other services
- GBCS Interface Testing for Industry (GFI) - allows users to emulate the sending and receipt of GBCS messages and help identify any potential differences with users interpretation of the specifications.

Each service is described in the relevant section of the table below.

Service	Description of Service	Performance for PY 2015/16	Date Available to Parties
Ordering of Remote Test Lab facilities	Parties, including Energy Suppliers and other Parties such as Device Manufacturers and Test Houses can undertake Device and User System testing on a voluntary basis. This testing may be carried out in a External Service Provider Test Lab or by using a remote testing service. The remote testing option enables a Testing Participant to install its own devices and Communications Hubs into its own test lab (at a location of its own choice). This service enables a Testing Participant to request a Remote Test Lab connection and will include a quotation for the Remote Test Lab set up and the monthly support charges applicable. SEC reference: sections F5 and H14.	Satisfactory performance. Service Desk received 7 applications for Remote Test Lab facilities during the PY 2015/16.	Sept 2015
Ordering of Prototype Communications Hubs	Testing Participants can use this service to order Prototype Communications Hubs to support Device and User System testing in the End-to-End Testing stage. Although designed for Testing Participants, Prototype Communications Hubs can be ordered by any Party. SEC reference: sections F5 and H14.	Satisfactory performance. Service Desk received 12 applications for Prototype Communications Hubs during the PY 2015/16.	Sept 2015

Service	Description of Service	Performance for PY 2015/16	Date Available to Parties
Interim SMWAN Coverage Service	External Service Providers (Arqiva and Telefonica) are required to maintain coverage information regarding availability of the Services at the Communications Hub Installation Point in Consumer Premises in each postcode in the Region. This information will be used by Energy Suppliers carrying out strategic planning activities regarding the roll out of Smart Metering Systems. The interim SMWAN Coverage service will support upload of coverage data from the External Service Providers, receipt and verification of that data, and the publication of that data on the DCC SharePoint system where it can be accessed by Parties. The interim solution will be used until SMWAN Coverage Data can be provided by the External Service Providers directly, via the Self Service Interface (SSI) or other web-based mechanism. SEC reference: sections H8 and X3.	Satisfactory performance. SMWAN Coverage information was made available to Parties throughout 2015/16.	Aug 2015

Service	Description of Service	Performance for PY 2015/16	Date Available to Parties
DCCKI Registration Service	The DCC Key Infrastructure (DCCKI) was introduced at Stage 4a of the SEC to formalise the governance of arrangements by which communications between DCC Users and DCC over the DCC User Interface Specification (DUIS), Self Service Interface (SSI) and Registration Data Interface (REGIS) interfaces are secured. DCCKI Registration Service will provide formal arrangements under which a Party or RDP will register their Organisation via a Nominating Officer, will nominate a DCCKI Senior Responsible Officer and a DCCKI Authorised Responsible Officer. The service will allow a Party or RDP to become a DCCKI Authorised Subscriber. The DCC and its External Service Providers will also need to go through the DCCKI Registration process. SEC reference: section L13.	Satisfactory performance.	Mar 2016

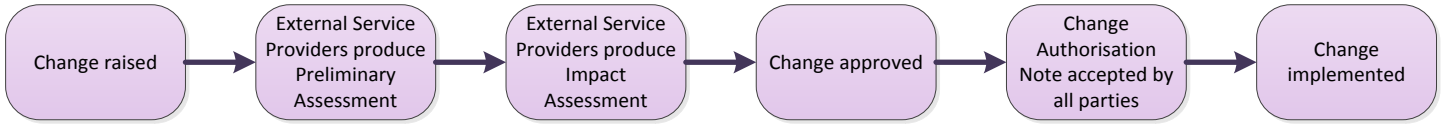
Service	Description of Service	Performance for PY 2015/16	Date Available to Parties
Parse and Correlate Service	All critical service requests that are sent across the DCC User Gateway will be converted from xml into GBCS format. The Parse and Correlate software is software produced by Critical Software that DCC is making available to interested Parties to carry out checking that the xml/GBCS conversion has not changed the underlying request. Parties are not obliged to use the Parse and Correlate software; instead they can develop the functionality to do this themselves. The software is issued on a 'No Liability' basis and is available to both SEC and non SEC Parties. New versions of Parse & Correlate will be made available when new versions of the SEC Subsidiary Documents DCC User Interface Specification (DUIS) and Message Mapping Catalogue (MMC) are issued. When a new version of the Parse and Correlate software has been approved by the DCC the DCC website will be updated and a communication sent to all organisations that have downloaded previous versions of Parse and Correlate. SEC reference: section H11.	Satisfactory performance. The following versions of the software were released during PY 2015/16: • Parse and Correlate v1.0 aligned to GBCS v0.7.6 available in May 2015 • Parse and Correlate v1.1 aligned to GBCS v0.8.0 available in July 2015 • Parse and Correlate v2.0 aligned to GBCS v0.8.1 available in October 2015 • Parse and Correlate v0.8.2 aligned to GBCS v0.8.2 available in March 2016.	May 2015

Service	Description of Service	Performance for PY 2015/16	Date Available to Parties
Interim Incident Management	The Interim Incident Management service manages the logging of incidents and service requests from nominated contacts of Parties and the resolution of these incidents and requests. Parties are required to provide a list of people that are their nominated contacts for the purpose of incident management as covered by the Nominated Contact Management service. The process also covers the logging and management of contact queries from the wider SEC Party community. To support this process SEC requires the DCC to provide a live Service Desk and to publish its contact details on the DCC website. SEC reference: section X7.	Satisfactory performance. The Service Desk operated from 08:00 to 18:00 hrs Monday to Friday during PY 2015/16. Service Desk's telephony, ticketing and email systems were 100% available.	Jan 2016
Nominated Contact Management	Parties are required to provide a list of people that are their nominated contacts whom DCC will recognise as being authorised to raise incidents and service requests on their Party's behalf. This service covers the collection and storage of Party nominated contacts into a spreadsheet that can be used for validation in other services, including the Incident Management Process. SEC reference: section X7.	Satisfactory performance. During PY 2015/16, 124 SEC Parties provided details of 582 individual nominated contacts. DCC has confirmed email connectivity with each nominee.	Jan 2015

Service	Description of Service	Performance for PY 2015/16	Date Available to Parties
GBCS Interface Testing for Industry (GFI)	GBCS Interface Testing for Industry (GFI) is a software tool, developed by Critical Software, to share DCC's interpretation of GBCS for SMETS 2 Smart Electricity and Gas meters with SEC and non-SEC Parties. The tool allows users to emulate the sending and receipt of GBCS messages and help identify any potential differences with users interpretation of the specifications. GFI is not available as a download but delivered on a USB memory stick along with a specifically-programmed USB - connected ZigBee radio; which allows GFI to communicate with the intended meter. GFI also includes meter simulators. SEC reference: sections H14 and X3.	Satisfactory performance. Significant take-up from manufacturers wishing to test their interpretation and implementation of GBCS and also from other users, such as software houses wishing to test their software and energy suppliers in preparation for use of GFI to test the meters they plan to install.	Jun 2015

3.1.6 Performance of Change Management

65. DCC has an established change management process operated by DCC Project Management Office. The process covers changes to the latest DCC design baseline and consequently any systems already developed, with handoffs to various other teams within DCC as required. External Service Providers are intrinsic to the change process and each stage is supported by timescales outlined in the External Service Provider contracts. A high level description of the change process is included in the diagram below.



66. The main tool that drives the change process is the Change Request form that provides a description of the change required. The Preliminary Assessment and Impact Assessment, with increasing levels of detail, then provide a description of the solution proposed to achieve the requirements outlined in the Change Request along with implementation timelines, costs, and other information.

67. The change process has been thoroughly challenged during PY 2015/16, both in terms of the volume and complexity of Change Requests. During PY 2015/16, 87 Change Requests were active, with 78 of these being new Change Requests raised. Out of the new Change Requests, 17 directly impacted more than one External Service Provider. Some of the difficulties experienced included:

- Poor quality or incomplete information
- Timescales for all stages of the process exceeded by both DCC and External Service Providers
- Resource conflicts as same small group of subject matter experts are required on several Change Requests as well as maintaining focus on other priorities
- Aligning External Service Provider responses when multiple External Service Providers are impacted by a single Change Request
- Pressure to deliver the change before the change process has been completed.

68. Several process improvement exercises were completed during PY 2015/16 and improvements put into action included:

- Improving the process for gathering and challenging information provided, for example through holding workshops with all impacted parties early on in the change process
- Introducing additional quality and completeness checks with the power to halt the process until the required standard of information is achieved
- Improving the governance structure by removing the weekly Change Implementation Board attend by CGI, Telefonica and Arqiva to discuss outstanding changes and substituted it with weekly individual sessions with External Service Providers. External Service Providers are now more able to share information about the challenges that they are facing which is

improving DCC's understanding of the issues, complexities involved and next steps with follow up actions easier to identify. In addition, commercially sensitive matters can now be discussed in the context of the change helping to improve the efficiency of the change process.

69. The change process enabled the SMETS2 Programme to continue at pace and to effectively control the introduction of the GBCS IRPs and DCC led Change Requests into the design of the solution during PY 2015/16. The timescales involved in completing the various stages of the change process by DCC and External Service Providers continued to exceed those specified in the External Service Provider contracts and this is being taken forward as an area for improvement in PY 2016/17.

3.1.7 Performance of Commercial Management on Major Contracts

70. DCC actively manages the contracts of its External Service Providers and every change to the contracted baseline, irrespective of the source of change, must go through as contractual change process with commercial negotiations and agreement sought from all parties. Despite having agreed processes in place between DCC and its External Service Providers for assessing and agreeing changes to the contracted baseline (as described in section 3.1.6 above), it proved challenging throughout PY 2015/16 to reach agreement between DCC and the three main External Service Providers (CGI, Arqiva and Telefonica) on contractual matters.

71. The move of DCC Live to 1 April 2016 as approved by the Secretary of State in March 2015[7] took eight months from the Change Request (CR091) being raised in December 2014, to all the Change Authorisation Notes (CANs) being signed by DCC and External Service Providers. Similarly, the commercial negotiations to move to a multiple release strategy and shift of DCC Live to 20 July 2016, as approved by the Secretary of State in December 2015[8], began in October 2015 when the Change Request (CR160) was raised and is forecast to take over eight months to reach signed CANs with the impacted External Service Providers.

72. The complexity of the contractual change process was driven from the complexity of the technical solution and the interdependency between External Service Providers from both a technical and delivery plan perspective. In addition, each CAN could be made up of many individual Change Requests to maximise efficiencies, however that again increased complexity and added dependencies between the changes.

73. The length of time taken to reach agreement was in part driven by the maturity of the technical solution as time was required for the technical design teams to investigate the right solution and to work through any solution integration issues between the External Service Providers. DCC also took time over the assessment of the cost submissions in order to be satisfied that the overall cost of change represented good value for money.

74. Some of the challenges experienced during the commercial negotiations included:

- Reaching an agreed technical solution
- Reaching an agreed delivery timeline and agreed wording for the testing schedule
- Reaching an agreed cost for the change.

[7] DCC redesign approved by the Secretary of State, March 2015: https://www.smartdcc.co.uk/media/205577/dcc_replan_-_sofs_direction_v1_0_-_final.pdf

[8] DCC redesign approved by the Secretary of State, December 2015: https://www.smartdcc.co.uk/consultations/dcc-consultations/dcc-plan-and-implementation-milestones/

75. During PY 2015/16 the contractual change process and commercial negotiations did not block progress against delivery plans and milestones were achieved despite them not yet being contractually binding. However, due to the complex nature of the changes the commercial process drew heavily on the technical design, testing and delivery teams from within DCC and its External Service Providers which increased resourcing pressures within the impacted teams.

76. To seek ways to improve the process of managing contractual change, DCC has conducted lessons learned reviews, commissioned an independent quality assurance review of DCC's approach to contract negotiations with its External Service Providers and carried out a review of the contractual change process. These reviews led to a series of recommendations that were taken forward by DCC during the PY 2015/16.

3.1.8 Performance Against Milestones

77. The Smart Metering Implementation Programme (SMIP) key planning artefact is the Joint Industry Plan (JIP) which is made up of critical path milestones, activities and dependencies across Industry delivery parties e.g. energy suppliers, meter manufacturers, DECC and the DCC. This is governed by DECC and monitored via the Implementation Managers' Forum.

78. As well as the Joint Industry milestones set out in the table below, DCC achieved two key Implementation Milestones in September 2015: IM8a – Licensee is ready for Systems Integration Testing in the North Region; and IM8b - Licensee is ready for Systems Integration Testing in the Central and South Region.

79. The requirement to meet IM8a and IM8b, and indeed all of the Implementation Milestones, is set out in the Implementation Performance Regime in Schedule 3 of the Licence. This regime is used to incentivise DCC to achieve a set of implementation incentives. Each of those incentives carries an agreed amount of risk on the Baseline Margin earned by DCC. In May 2015[9], DCC consulted on proposed changes to all of the remaining Implementation Milestones and the conclusions of that consultation were submitted to the Secretary of State on 29 July 2015[10]. DCC will consult on further changes to the Implementation Milestones during PY 2016/17 to ensure alignment with the new multiple release strategy and revised DCC Live date.

80. To support the assurance of Implementation Milestones, DCC appointed a Performance Auditor that assured the above milestone and provided an independent report to confirm achievement. The ultimate decision relating to achievement will be part of the Ofgem Price Control determination for PY 2015/16.

81. Since April 2015, there has been one redesign exercise that included drawing down on contingency arrangements put in place by the Secretary of State and was a result of including GBCS IRPs and DCC Change Requests into the Programme scope. This move from a single release approach to a multiple release approach impacted the DCC Live date and DCC Live, based on a non-contingent plan, moved from 1 April 2016 to 20 July 2016, with a further release on 26 September 2016.

Performance Against the Joint Industry Plan Milestones

82. Table 1 shows all milestones due during the PY 2015/16 as at 31 March 2016. The milestones were adjusted for CR091 (move of DCC Live to April 2016) and CR160 (move of DCC Live to July

[9] DCC, 8 May 2015, 'Proposed changes to DCC's Implementation Milestones': https://www.smartdcc.co.uk/consultations/dcc-consultations/proposed-changes-to-dccs-implementation-milestones/
[10] DCC, 29 July 2015, 'Proposed changes to DCC's Implementation Milestones: DCC conclusions and application to the Secretary of State': https://www.smartdcc.co.uk/consultations/dcc-consultations/proposed-changes-to-dccs-implementation-milestones/

2016). The commercial arrangements to support CR160 are not yet complete and so the CR160 milestones reflect DCC's working assumptions.

Milestone	Milestone Description	CR091	CR160	Date Complete / Forecast to Complete	Status
JM_2019	DSP (CGI) Solution Build Complete (Release 1.0)	N/A	29/01/2016	29/01/2016	Complete[11]
JM_2077	SMKI Repository Testing 2B Complete (incl. Apex Contingency Key)	N/A	19/02/2016	19/02/2016	Complete
JM_2013	Communications Hubs Forecasting and Ordering Mechanism Active – Telefonica	01/10/2015	01/02/2016	01/02/2016	Complete
JM_2014	SMKI Test Service & Repository Go Live (for Users)	02/11/2015	11/11/2015	11/11/2015	Complete
JM_2015	SMKI Service and Repository Go-Live	15/02/2016	20/04/2016	21/04/2016	Due in PY 2016/17
JM_2047	SMKI Live Certificates Available	04/01/2016	09/03/2016	09/03/2016	Complete
JM_2048	Parse & Correlate Software Available (v1.1 beta)	N/A	Complete	24/07/2015	Complete
JM_2051	Parse & Correlate Software Available (v1.0)	30/04/2015	Complete	30/04/2015	Complete
JM_2053	Parse & Correlate Software Available (v2.0)	02/11/2015	27/11/2015	27/11/2015	Complete
JM_2059	SMKI Design Complete	29/07/2015	N/A	29/07/2015	Complete
JM_2074	Parse & Correlate Software v0.8.2 into Systems Integration Testing	N/A	07/03/2016	07/03/2016	Complete
JM_2084	Parse & Correlate Software v0.8.2 available to Parties	N/A	21/03/2016	21/03/2016	Complete
JM_2086	Communications Hubs Forecasting and Ordering Mechanism Active – Arqiva	01/10/2015	01/04/2016	01/04/2016	Due in PY 2016/17
JM_4060	Start SMKI & Repository Entry Process Testing (SREPT)	N/A	11/11/2015	11/11/2015	Complete

[11] Although this milestone has been met, a minor documentation element relating to CGI milestone D15.1 remains outstanding and is subject to a remediation plan as described in sections 4.5.2 and 4.5.3 below.

3.1.9 The Operational Performance Regime

83. The Operational Performance Regime will be set out in Schedule 4 of the Licence, and will be used to incentivise DCC to achieve a set of (yet to be agreed) operational incentives. Each of those incentives would carry an agreed amount of risk on the Baseline Margin earned by DCC.

84. The current arrangements to ensure that DCC efficiently manages costs whilst successfully delivering is managed by linking DCC's Baseline Margin to successfully achieving the Implementation Milestones (IMs). The Operational Performance Regime will take over from the Implementation Milestones when the milestones are complete. Ofgem is currently developing the Operational Performance Regime and consulted on scope, principles and possible performance metrics between 22 March 2016 – 6 May 2016[12].

3.1.10 SEC Code Performance Measures

85. Section H13 of the SEC sets out the requirements for performance standards and reporting. The Code Performance Measures provide a numerical assessment of the compliance of the DCC against a set of Target Service Levels and Minimum Service Levels as defined in the SEC H13.1 (Code Performance Measures 1 – 6) and L8.6 (Code Performance Measures 7 and 8) as detailed below.

SEC Ref	Code Performance Measure	Performance Measurement Period	Target Service Level	Minimum Service Level
1	Percentage of On-Demand Service Responses delivered within the applicable Target Response Time.	Monthly	99%	96%
2	Percentage of Future-Dated Service Responses delivered within the applicable Target Response Time.	Monthly	99%	96%
3	Percentage of Alerts delivered within the applicable Target Response Time.	Monthly	99%	96%
4	Percentage of Incidents which the DCC is responsible for resolving and which fall within Incident Category 1 or 2 that are resolved in accordance with the Incident Management Policy within the Target Resolution Time.	Monthly	100%	85%
5	Percentage of Incidents which the DCC is responsible for resolving and which fall within Incident Category 3, 4 or 5 that are resolved in accordance with the Incident Management Policy within the Target Resolution Time.	Monthly	90%	80%

[12] Ofgem consultation on Operational Performance Regime: https://www.ofgem.gov.uk/publications-and-updates/dcc-operational-performance-regime-principles-and-objectives

SEC Ref	Code Performance Measure	Performance Measurement Period	Target Service Level	Minimum Service Level
6	Percentage of time (in minutes) when the Self-Service Interface is available to be accessed by all Users during the Target Availability Period.	Monthly	99.5%	98%
7	Percentage of Certificates delivered within the applicable Target Response Time for the SMKI Services.	Monthly	99%	96%
8	Percentage of documents stored on the SMKI Repository delivered within the applicable Target Response Time for the SMKI Repository Service.	Monthly	99%	96%

86. DCC consulted upon the methodology for calculating each Code Performance Measure in its consultation on the Performance Measurement Methodology that ran from the 29 October 2015 – 4 December 2015[13].

87. At the end of PY 2015/16 Code Performance Measures 7 and 8 described above came into effect when the SMKI service went live on 9 March 2016. Due to the proximity of the SMKI service being live with the end of the PY 2015/16 reporting period, the results of performance against these measures with be covered in the PY 2016/17 Annual Service Report.

3.2 Additional Projects Supporting the Roll-out of Smart Meters

88. DCC is undertaking two additional projects which it has been directed to undertake by the Secretary of State. These fit with its strategic objective to support the roll-out of Smart Meters. Directions for both projects was received in March 2015 and both projects continued during PY 2015/16.

3.2.1 Dual Band Communications Hubs

89. At DCC Live there will be a single band Communications Hub capable of operating a Home Area Network (HAN) radio in the 2.4GHz frequency range. Trials carried out by DECC suggest that smart metering equipment in some premises may not be able to establish a communication link between devices[14]. Further DECC trials suggest that Communications Hubs using a different frequency range (868MHz) provide increased coverage and increase the likelihood of establishing communications link between all smart metering equipment[15]. DECC concluded that a Dual Band Communications Hubs capable of operating a HAN radio at both 2.4GHz and 868MHz should be provided by the DCC[16].

90. DCC mobilised a project team, separate to the main Programme, to manage the process of engaging with its External Service Providers to secure delivery of Dual Band Communications

[13] DCC Performance Measurement Consultation, Oct – Dec 2015: https://www.smartdcc.co.uk/more/news/performance-measurement-methodology-consultation/
[14] Smart Meter RF Surveys - final report by Red-M. April 2012 : https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/136124/smart-meters-rf-surveysfinal-report.pdf
[15] Ofcom Smart Meter HAN 868MHz RF Coverage Campaign - Measurement Report. December 2015: https://www.gov.uk/government/consultations/consultation-on-home-area-network-solutions
[16] Government Response on Home Area Network Solutions: Implementation of 868MHz: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/486052/Government_Response_on_Home_Area_Network_Solutions__Implementation_of_86___.pdf

Hubs in accordance with the direction to DCC from Secretary of State. DCC's project team and its External Service Providers have made good progress during PY 2015/16, however the project has experienced delays due to factors outside of DCC's control. DCC requires that the ZigBee standard ZigBee GB868 v0.7 to be complete before it can progress with an impact assessment for the Dual Band Communications Hubs solution. ZigBee is the wireless language that everyday devices use to connect to one another and is specified in a set of ZigBee standards. The ZigBee GB868 plan experienced over twelve months' worth of delays during PY 2015/16 and impacted DCC's ability to complete an impact assessment with External Service Providers on time.

91. The project has regular engagement with Industry to ensure that all parties are kept up to date with progress and changes to the project timeline. An updated project plan for Dual Band Communications Hubs that takes account of the new ZigBee timelines will be agreed with the Project Board in early PY 2016/17.

3.2.2 Enrolment and Adoption

92. DCC has established a project, separate to the main Programme, to consider how to 'enrol' SMETS1 meters into its infrastructure. This would allow energy suppliers and other authorised parties to communicate with both SMETS2 and SMETS1 meters via the DCC network. Adoption of SMETS1 meters take place when the contracts that energy suppliers have already established to communicate with these meters are transferred to DCC. Adopting the contracts is just one of the options that DCC could consider in order to provide a common infrastructure for SMETS1 meters.

93. During PY 2015/16 the Enrolment and Adoption project has focused on engaging with Industry and carrying out an analysis on the options for providing a common infrastructure for SMETS1 meters. This analysis will form a feasibility report that will be subject to a public consultation in PY 2016/17.

94. The project has made good progress during PY 2015/16 and there were no factors to be considered that adversely affected performance.

3.3 Centralised Registration Service

95. Both Ofgem and the Government have made faster, reliable switching for energy consumers a priority. Reliable switching should improve customers' experience of changing their energy supplier, leading to greater engagement in the retail energy market.

96. The arrangements for faster switching will be delivered through an Ofgem-led programme to transform current switching arrangements. The new arrangements will be supported by a new Centralised Registration Service, which Ofgem concluded[17] that activity to design and procure a Centralised Registration Service should form part of DCC's Mandatory Business.

97. During PY 2015/16 DCC mobilised a project team, separate to the main Programme, to initiate the work on designing and procuring a Centralised Registration Service. The project has made good progress during PY 2015/16 and there were no factors to be considered that adversely affected performance.

[17] Ofgem conclusions published on 16 May 2016:
https://www.ofgem.gov.uk/system/files/docs/2016/05/dcc_statcon_decision_publication_final.pdf

4 External Service Provider Performance

98. DCC has a strong set of External Service Providers delivering a range of services including: recruitment, auditing, consultancy and technology solutions. The External Service Providers have all performed satisfactorily during PY 2015/16 meaning that they have met or exceeded DCC expectations and delivered a professional service within agreed timescales and quality standards. Some areas of performance improvement were identified with External Service Providers and in some cases remediation plans were put in place, however these were still within the overall rating of satisfactory performance given the scale and complexity of agreed deliverables.

99. The table below shows the performance of all of the External Service Providers in alphabetical order that DCC engaged during PY 2015/16. In sections 4.1 – 4.7 below a more detailed narrative is included on the following External Service Providers:

- Arqiva Smart Metering Limited
- British Telecommunications Plc
- Capita Business Services Limited
- Capita IT Enterprise Services
- CGI IT UK Limited
- Critical Software
- Telefonica UK Limited

External Service Provider	Role	Summary of Performance
Absolute Organisation Limited	Consultancy services to carry out organisation development reviews.	Satisfactory performance
Across-the-Board	Recruitment services – sourced a successful candidate for a permanent position within DCC.	Satisfactory performance
Actica Consulting Limited	Consultancy services - provided two Security Architects to support the Enrolment and Adoption project.	Satisfactory performance
Acuity Risk Management LLP	Provision, training and support for a Governance, Risk and Compliance tool known as STREAM to assist in meeting DCC's Licence obligation to obtain certification to the ISO27001 Information Security standard.	Satisfactory performance
Anderson Young	Recruitment services – sourced two successful candidates for permanent positions within DCC.	Satisfactory performance

External Service Provider	Role	Summary of Performance
Arguile Search Limited	Recruitment and resourcing services - sourced two successful candidates for permanent positions within DCC and sourced a contractor for the Commercial Analyst position within the Enrolment and Adoption project.	Satisfactory performance
Arqiva Smart Metering Limited	Arqiva Smart Metering Limited (Arqiva) is the chosen supplier for the Communications Service Provider (North) contract, with an effective date of 23 December 2013. Arqiva is building the communications infrastructure to connect smart meters to DCC systems in the North Region of Great Britain. Arqiva is covered in more detail in section 4.1 below.	Satisfactory performance
Avolution (UK) Ltd	Consultancy services to analyse and make recommendations on maximising the benefits of DCC's Enterprise Architecture model using ABACUS software.	Satisfactory performance
Baringa Partners LLP	Consultancy services, including providing a Solution Architect / Project Manager for the Dual Band Communications Hubs project and a Release Manager to complete the initial set up and establishment of Release 1.2.	Satisfactory performance
Bird and Bird	Legal services and advice.	Satisfactory performance
BMT Hi-Q Sigma Limited	Resourcing services – sourced a Communication Architect contractor for the Enrolment and Adoption project.	Satisfactory performance
British Telecommunications Plc	British Telecommunications Plc (BT) is the selected contractor for the SMKI Service, with an effective contract date of 2 April 2014. BT provides the SMKI Service, which provides the means to encrypt and authenticate messages between Parties and Devices across the DCC Network through the use of digital certificates. BT is covered in more detail in section 4.2 below.	Satisfactory performance
Capita Business Services Limited	Capita Business Services Limited (CBSL) is the Parent Company of Smart DCC Ltd. DCC receives two types of services from CBSL: • Billing System service provider • Office space / facilities, resources and consultancy services provider. CBSL is covered in more detail in section 4.3 below.	Satisfactory performance

External Service Provider	Role	Summary of Performance
Capita IT Enterprise Services	Capita IT Enterprise Services (ITES) has supplied a range of services to DCC, including: • DCC Enterprise Reporting Application • File Transfer and Networks Solution Service Provider • Fabric Solution: Cloud Hosting • DCC Service Desk. Capita ITES is covered in more detail in section 4.4 below.	Satisfactory performance
CGI IT UK Limited	CGI IT UK Limited (CGI) holds the Data Service Provider contract, with an effective date of 1 November 2013. CGI is supplying the solution in respect of communication with devices, alerts to system users, the SMKI Repository and DCC Service Management. CGI is also contracted as the Systems Integrator and is responsible for integrating the solution across all External Service Providers. CGI is covered in more detail in section 4.5 below.	Satisfactory performance, with a small number of performance improvement areas identified
Cigital Limited	Consultancy services to carry out an Independent Code Review of the Parse and Correlate software that provides a full, formal inspection of the software and a report detailing the findings.	Satisfactory performance
Consultancy Group	Resourcing services – sourced two contractors for DCC Finance Analyst and Finance Manager positions.	Satisfactory performance
Cordant Dynamic Ltd	Resourcing services – sourced contractor for the position of DCC Industry Liaison Manager.	Satisfactory performance
Critical Software Technologies Limited	Critical Software has supplied a range of services to DCC, including: • Parse and Correlate software • GBCS Interface Testing • File Signing Utility • Enrolment Options Testing. Critical Software is covered in more detail in section 4.6 below.	Satisfactory performance

External Service Provider	Role	Summary of Performance
DCS Group	Resourcing services – sourced business analyst contractors for the DCC Operations team.	Satisfactory performance
Deloitte LLP	Consultancy services, including: • Acting as DCC's Compliance Officer. It is a requirement of Licence Condition 12 to appoint an independent Compliance Officer to report on DCC's compliance with its obligations under Chapter 3 of the Licence. The contract was awarded to Deloitte LLP in April 2014 and Deloitte has continued in this position throughout PY 2015/16 • Undertaking a review of Ofgem's Rate of Return Methodology, including additional high level research on potential comparators • Commencing a review of DCC's Corporate Overhead Charge that includes a high level quantification of benefits and standalone costs for services received from Capita.	Satisfactory performance
Deloitte MCS Limited	Consultancy services – continued to perform the role of Competent Independent Organisation (CIO) after being awarded the contract in June 2014. CIO activity is split into three different phases: Design, Build and Test and involves carrying out an assessment of how well DCC has met the requirements of the SEC and fulfilled its Licence obligations. A report of the CIO assessment is produced and stakeholders, such as TSEG and SEC Panel, are kept informed throughout the process.	Satisfactory performance
EarthStream Global	Resourcing services – sourced a contractor for the Security Architect position in the Enrolment and Adoption project.	Satisfactory performance
EHS Consulting	Consultancy services, including a Project Manager / Release Manager and business analysts for the DCC SMETS2 Programme team and PMO support for the Enrolment and Adoption project.	Satisfactory performance
Ernst & Young LLP	Consultancy services for technical accounting advice with respect to revenue recognition.	Satisfactory performance
ERSG	Resourcing services – sourced Test Analysts and Test Leads for 16 contractor positions with the DCC Test Assurance team.	Satisfactory performance

External Service Provider	Role	Summary of Performance
Energy & Utility Skills Limited	Consultancy services to carry out a review of Installer Training Plans.	Satisfactory performance
Foundation SP Limited	Provided the design and implementation of a new DCC document management solution, with a contract for services lasting through to 2018/19 PY.	Satisfactory performance
Fox IT Resourcing Ltd	Resourcing services – sourced a contractor for the position of Process Architect for the DCC Service Design team.	Satisfactory performance
Gemserv Ltd	Consultancy services to support Programme performance assurance. Gemserv Ltd acted as DCC's Performance Auditor to provide independent verification to the Authority that DCC has achieved the Implementation Milestones 8a and 8b during PY 2015/16 as per the Licence (Implementation Milestones are set out in Schedule 3 Part E of the Licence).	Satisfactory performance
Genisys	Resourcing services – sourced Test Analysts and Test Leads for 3 contractor positions with the DCC Test Assurance team.	Satisfactory performance
Get Work Experience	Recruitment services - sourced 7 successful candidates for permanent positions within DCC.	Satisfactory performance
Hudson and Yorke Limited	Consultancy services – provided a technical Architect for the DCC Architecture team and a technical Architect for the Dual Band Communications Hub project.	Satisfactory performance
Hunter Macdonald Ltd	Consultancy services, including a review of Systems Integration Testing activity resulting in a series of short and medium term recommendations. Further consultancy to support the implementations of actions from the Systems Integration Testing review.	Satisfactory performance

External Service Provider	Role	Summary of Performance
Innovation Digital Ltd	Provided website building and hosting services to DCC. Innovation Digital Ltd is under contract to host, support and maintain DCC's website. In addition, as part of the project to launch an updated DCC website during PY 2015/16, Innovation Digital Ltd provided the design and technical solution for the new website. DCC also commissioned a number of separate development projects from Innovation Digital including new transactional pages to host Parse and Correlate software, DCC newsletter design and integration and a demonstration project for the Communications Hub Order Management System user front end.	Satisfactory performance
Interim Partners	Resourcing services – sourced a contractor to manage a programme of work within the DCC Operations team to ensure operational readiness for DCC Live and development of the enduring operations service, including further development of the DCC target operating model.	Satisfactory performance
Investigo Ltd	Resourcing services – sourced 8 contractors for Finance Analyst and Finance Manager positions within the DCC Finance team.	Satisfactory performance
Ippon Management Consulting Ltd	Consultancy services, including directing the work of DCC Industry team and supporting DCC Systems Integration activity.	Satisfactory performance
itecopeople	Recruitment services - sourced a successful candidate for a permanent position within DCC.	Satisfactory performance
Kennedy Pearce	Recruitment services - sourced a successful candidate for a permanent position of within DCC.	Satisfactory performance

External Service Provider	Role	Summary of Performance
KPMG LLP	Audit and audit related services to carry out the following activities in PY 2015/16 as DCC's Appropriate Auditor: ▪ Audit of our statutory and regulatory annual report for PY 2014/15 (Licence Condition 30 Part D) ▪ Completion of Agreed Upon Procedures for PY 2014/15 (Licence Condition 30 Part F) ▪ Providing a report to the Authority on any inconsistencies between our Certificate of Financial Resources and information it obtained during their audit work under Licence Condition 30.	Satisfactory performance
Lloyd's Register Quality Assurance Limited	Consultancy services as a 27001:2013 certification body to certify Smart DCC business in respect of ISO/IEC 27001:2013 certified Information Security Management System, including subsequent surveillance audits.	Satisfactory performance
Mason Advisory Limited	Consultancy services, including supporting the Target Response Times and Message Size Project and providing a Test Auditor for Systems Integration Testing Exit as part of DCC's SEC requirement to appoint an independent auditor to report on the conduct and outcome of Systems Integration Testing.	Satisfactory performance
Meadean Ltd	Consultancy services providing a specialist Regulatory Drafter consultant for the SEC Subsidiary Document project.	Satisfactory performance
Mosaique Limited	Provision, training and support for a web based Project Management Office tool, Aspyre, that DCC use exclusively for risk and issue management.	Satisfactory performance, with some areas of performance improvement identified. Remediation plan put in place and performance under review.
Oak Ridge Associates Ltd	Consultancy services, including initiating an Operational Readiness Assurance Review to investigate the DCC's readiness in making the transition from programme delivery to provision of operational services.	Satisfactory performance

External Service Provider	Role	Summary of Performance
Oxford8 Ltd	Resourcing services – sourced 4 contractors for Project Manager and Project Planner positions within the DCC SMETS2 Programme team and DCC Operations team.	Satisfactory performance
PA Consulting Services Limited	Consultancy services, including providing consultancy support in the production of the Price Control submission for RY2015/16. PA Consulting Services Limited also conducted a Contract Change Review on behalf of DCC. The project included reviewing the current change process operated by DCC across the major External Service Providers.	Satisfactory performance
PricewaterhouseCoopers LLP	Consultancy services, including the annual audit of CGI, Arqiva and Telefonica contract activities. PricewaterhouseCoopers LLP (PwC) conducted the annual audit of CGI, Arqiva and Telefonica contracts under an agreement dated 10 November 2014. Work to audit CGI, Arqiva and Telefonica under the terms of Schedule 8.4 (Records and Audit Provisions) of their respective contracts has been ongoing since the agreement date with the first stage report being delivered in PY 2015/16 and the audit completed within PY 2015/16. A further call off under the same contract covered Audit of CGI 'WCC2' Charges in CGICAN030 (CR091) and was completed in PY 2015/16.	Satisfactory performance
Rinedata Limited	To design, build, test and deploy into live an ERP solution for the DCC Finance team as part of the DCC FABRIC project.	Satisfactory performance
Steelhenge	Consultancy services providing a specialist BCDR consultant for the DCC Operations team.	Satisfactory performance
Stott and May Professional Services Ltd	Resourcing services - sourced a contractor for the Security Consultant position within the DCC Information Security team.	Satisfactory performance

External Service Provider	Role	Summary of Performance
Telefonica UK Limited	Telefonica UK Limited (Telefonica) is the contractor for both the Communications Service Provider (Central) and Communications Service Provider (South) contracts, with an effective date for both of 1 November 2013. Telefonica is building the communications infrastructure to connect smart meters in the Central and South Regions of Great Britain. The technology solution is primarily based on Telefonica's existing cellular network augmented by mesh technology for connections in hard to reach areas. Telefonica is covered in more detail in section 4.7 below.	Satisfactory performance
Trilliant Networks (UK) Ltd	Consultancy services to review the SMIP Hand Held Terminal Interface, including a review of DCC External Service Provider specifications, testing arrangements and test results.	Satisfactory performance
Visualise That LLP	Creative marketing agency providing services to DCC Industry and Communications team.	Satisfactory performance

4.1 Arqiva Smart Metering Limited

100. Arqiva Smart Metering Limited (Arqiva) is the chosen supplier for the Communications Service Provider (North) contract, with an effective date of 23 December 2013. Arqiva is building the communications infrastructure to connect smart meters to DCC systems in the North Region of Great Britain.

101. As with other External Service Providers and as described in section 2.2, the main factors affecting Arqiva's performance in PY 2015/16 were the number and complexity of defects (IRPs) raised against GBCS v0.8.1 and the volume of DCC led Change Requests.

102. Similar to other External Service Providers, Arqiva Release 1.0 development commenced at the beginning of 2015 and was aligned to GBCS v0.8.1 released in November 2014 and the DCC design baseline as set out in Change Request CR091. The further release of GBCS v0.8.2 that included the 59 essential IRPs was made in November 2015 and this coupled with DCC Change Requests resulted in Arqiva implementing a new delivery plan in late 2015 that staggered delivery over multiple releases and delivered the design baseline as set out in the DCC Change Request CR160.

103. The volume and complexity of Change Requests that required analysis, costing and agreement on solutions was challenging for Arqiva. Agreed timescales for completing this activity were exceeded, which impacted DCC's resources and ability to reach contractual agreement for the increased scope and new delivery plans.

104. During PY 2015/16, DCC raised 22 new Change Requests that impacted Arqiva. Out of the 22 new Change Requests, 8 were withdrawn or superseded.

105. The Order Management System (OMS) for the North Region was developed by Arqiva and went live in April 2016. The OMS was originally planned to be made available to Parties for the North Region by 1 Oct 2015. However, due to a number of factors including the volume and complexity of change impacting the Arqiva solution as a whole and the solution provided by Arqiva not fully meeting DCC and SEC requirements, DCC took the decision to delay launch to allow additional time to prepare the solution for live operations.

106. Remediation plans were put in place and a number of workarounds were agreed before the OMS for the North Region went live in April 2016.

107. During PY 2015/16, Arqiva achieved:

- Asserted 70% SMWAN coverage on a premises basis
- Solution Design (Release 1.0 CR091 baseline) completed
- Communications Hub specifications and support materials completed
- Designed, built, tested and ZigBee certified Communications Hubs for Release 1.0
- Built and configured test lab for Release 1.0
- Entered Systems Integration Testing for Release 1.0
- Design and build of Release 1.2 and Release 1.3 scope commenced.

4.1.1 Remediation Plans

108. A six month remediation plan was put in place to ensure that the OMS solution (North Region) satisfied DCC and SEC requirements and met Parties expectations. Arqiva focused on putting in place workarounds in order to increase SEC compliance and to increase usability for Parties.

4.1.2 Milestone Analysis

109. The milestone table below shows all milestones due during PY 2015/16 and provides a status against each entry.

110. As the Change Authorisation Note for CR160 has not yet been agreed between DCC and Arqiva (as described in section 3.1.7), the milestones described under CR160 are a working assumption only and not yet formalised as contractual milestones.

Milestone	Milestone Description	CR091	CR160	Date Complete / Forecast to Complete	Status
B7	Coverage 0715 - 70.00%	02/11/2015	Complete	01/07/2015	Complete
C7a	Unit and Link testing complete	11/06/2015	Complete	25/08/2015	Complete
C7a3	Unit and Link Testing Complete (Release Stream 3)	N/A	12/02/2016	02/03/2016	Complete
C8a	System Testing Complete	05/10/2015	Complete	28/09/2015	Complete
C8a3	System Testing Complete (Release Stream 3)	N/A	19/02/2016	02/03/2016	Complete
C9a	FAT complete	05/10/2015	Complete	28/09/2015	Complete
C9a3	FAT Complete (Release Stream 3)	N/A	19/02/2016	02/03/2016	Complete
C10a	Pre-integration Testing Complete	05/10/2015	Complete	28/09/2015	Complete
C10a3.1	Pre-Integration Testing (PIT) Complete (Stream 3.1)	N/A	Complete	13/01/2016	Complete, new milestone
C10a3.2	Pre-Integration Testing (PIT) Complete (Release Stream 3.2)	N/A	19/02/2016	02/03/2016	Complete, new milestone
C12a	Ready for Integration Testing with DSP	07/10/2015	Complete	02/10/2015	Complete
C12a3	Ready for Integration Testing with DSP (Stream 3)	N/A	Complete	15/01/2016	Complete
C13a	Solution Testing Complete	04/03/2016	30/03/2016	30/03/2016	Complete
CH4a	Comms Hub Protocol Certification Complete	21/08/2015	25/09/2015	25/09/2015	Complete
CH6a	Comms Hub volume for system integration testing	05/10/2015	25/09/2015	25/09/2015	Complete

4.1.3 Operational Performance

111. There were no live services during PY 2015/16.

112. The OMS for the North Region provided by Arqiva went live in April 2016, which is outside of the PY 2015/16 and consequently will not be covered by this report.

4.2 British Telecommunications Plc

4.2.1 Overall Performance

113. British Telecommunications Plc (BT) is the selected contractor for the SMKI Service, with an effective contract date of 2 April 2014. BT provides the SMKI Service, which provides the means to encrypt and authenticate messages between Parties and Devices across the DCC Network through the use of digital certificates.

114. In the PY 2015/16 BT have continued to develop the SMKI Service by implementing a series of change requests issued by DCC to account for updated regulatory obligations, design changes arising from Design Forums, DCC Chief Information Officer and CESG review.

115. During PY 2015/16, BT achieved:

- Developed and delivered solution in three releases with the third supporting Systems Integration Testing
- SMKI and Repository Testing (SRT) Part 1 was completed enabling SMKI and Repository Entry Process Testing (SREPT) to start on 11th November 2015
- Provided systems to support DCC SMKI Registration service in order to issue test credentials to individuals acting on behalf of Parties in respect of SMKI
- Developed a fourth release of the SMKI systems, which was implemented into the Systems Integration Environment
- Supported DCC's testing of the SMKI Apex Contingency Key in SRT Part 2b in order to fulfil the Secretary of State's direction (December 2015) that the ability of a Device to validate a recovery command using this key should be proved prior to the issuance of Live SMKI Certificates
- Completed all required activities required prior to the issuance of Live SMKI Certificates.

4.2.2 Milestone Analysis

116. The milestone table below shows all milestones due during PY 2015/16 and provides a status against each entry.

117. As the Change Authorisation Note for CR160 has not yet been agreed between DCC and BT (as described in section 3.1.7), the milestones described under CR160 are a working assumption only and not yet formalised as contractual milestones.

Milestone	Milestone Description	CR091	CR160	Date Complete / Forecast to Complete	Status
JM_2014	SMKI Test Service & Repository Go Live (for Service Users)	02/11/2015	11/11/2015	11/11/2015	Complete
JM_2015	SMKI Service and Repository Go-Live	15/02/2016	20/04/2016	21/04/2016	Complete
JM_2047	SMKI Live Certificates Available	04/01/2016	09/03/2016	09/03/2016	Complete

4.2.3 Operational Performance

118. BT supported the operation on SMKI services as outlined in section 3.1.5 above:

- SMKI Registration
- SMKI Certificate Signing Requests
- SMKI Repository, Management and Interim Recovery Services.

119. BT systems performed satisfactorily during PY 2015/16.

4.3 Capita Business Services Limited

120. DCC receives two types of services from Capita Business Services Limited (CBSL):

- Billing System service provider
- Office space / facilities, resources and consultancy services provider.

121. As well as being a provider of services to DCC, CBSL is also the Parent Company of Smart DCC Ltd. The services will be considered separately in the sections below.

4.3.1 Billing System Service Provider

Overall Performance

122. CBSL supply the SAP SD Billing System, which is to be used to invoice DCC Users for their consumption of DCC services, in line with the SEC Charging Methodology, on a monthly basis. CBSL is responsible for developing, hosting and maintaining the necessary software applications and hardware infrastructure to enable the DCC to meet its SEC obligations for the billing of DCC Users.

123. The implementation of the Billing System was split into two phases – a 'Phase 1 Transitional' solution and a 'Phase 2 Integrated' solution to integrate with CGI in order to invoice for post-DCC Live services, to participate in the programmes System Integration Testing phase. The purpose of the Transitional Solution was both to de-risk Systems Integration Testing with multiple tests of core functionality, and to replace the manual invoicing process in use by DCC Finance team.

124. During PY 2015/16, CBSL completed:

- Factory Acceptance Testing for DCC Billing System

- Test Assurance Board approval for DCC Billing System
- Implementation of Phase 2 functionality.

125. Release 1.2 activities to be progressed in PY 2016/17:

- Technical Readiness Testing
- System Integration Testing
- Operational Acceptance Testing
- Business Acceptance Testing

4.3.2 Office Space / Facilities, Resources & Consultancy Services Provider

126. In PY 2015/16 a trading agreement existed between CBSL and DCC. This trading agreement is in place to govern delivery, performance and payment for the services provided. The list of services below is illustrative of the type and range of services provided to DCC from CBSL, but is not exhaustive:

- Capita IT Professional Services - to deliver and operate Testing and Security services
- Capita Transformation and Procurement Services - to support the strategic direction of DCC by providing consultancy services and aid procurement of key programme deliverables
- Company Secretarial Services - to support DCC board meetings to include agenda production, board pack production and distribution, meeting attendance, minute taking, compilation of action points etc
- Permanent staff - including payroll services, benefits management and expense processing and payments
- Contract staff - including resourcing and payroll services as required
- Office accommodation - to ensure that all DCC staff and visitors have a suitable working environment to carry out business activities
- Financing and insurance - requirements relating to financing, credit and performance bonds. CBSL has entered into a Keep Well Deed with the DCC. The purpose of this Deed is to formalise an arrangement between Capita plc and the DCC whereby Capita plc (the DCC's parent company) provides both the necessary operation resourcing support for the day to day operation of the DCC as well as, if necessary, financial support in the form of a source of liquidity up to a maximum of £5 million to help DCC's cash flow requirements
- Professional and legal services - including Statutory and Regulatory audit services. Provided audit services to support the production and signing off of Smart DCC Ltd Statutory and Regulatory accounts for the year-ended 31 March 2016.

127. The delivery of these services was to time and the expected level of quality.

4.4 Capita IT Enterprise Services

128. Capita IT Enterprise Services (Capita ITES) has supplied a range of services to DCC, including:

- DCC Enterprise Reporting Application
- File Transfer and Networks Solution Service Provider
- Fabric Solution: Cloud Hosting
- DCC Service Desk.

129. The services will be considered separately in the sections below.

4.4.1 DCC Enterprise Reporting Application (BI/MI)

130. Capita ITES is the supplier of the DCC Enterprise Reporting Application (BI/MI) for the DCC Operations Reporting Function. The DCC Operations Reporting Function will provide Operational Reporting across DCC and its Service Providers to measure and report on the Smart Metering services. Capita ITES was selected to provide this service as part of the overall submission that formed part of the original bid process.

131. In PY 2015/16, Capita ITES achieved:

- Delivery of the required data load processes to populate the BI/MI solution and reporting output to meet the objectives of Release 1.0
- Delivery of the required Unit and Link Testing to support Release 1.0
- Delivery of the required Integration environment to be utilised for SIT testing as part of Release 1.0
- Delivery of the required Production environment to be utilised once the BI/MI service is live
- Delivery of the Release 1.2 data loads in support of the Release 1.2
- Delivery of relevant technical documentation to in support of development work undertaken.

4.4.2 File Transfer and Networks Solution Service Provider

132. Capita ITES was selected as the supplier of the File Transfer and Networks Solution in March 2014. The solution provides a secure file server solution to be used to receive data files from CGI, for processing by the DCC Billing System and the DCC Operational Reporting Solution, and to send report files generated by the DCC Operational Reporting Solution to CGI. The service also includes access to DCC Service Management System via the SSMI, for the DCC Service Desk, and each of the Capita projects' resolver groups (Billing, BI/MI, File Transfer and Networks, and Service Desk) and the appropriate networking infrastructure and configuration to facilitate the above. This service has performed satisfactorily during PY 2015/16 with no issues raised or outages.

4.4.3 Fabric Solution: Cloud Hosting

133. Capita ITES is supporting the DCC FABRIC project to deploy into live an ERP solution. Capita ITES were contracted to provide remote access for Rinedata Limited to enable them to support the business remotely. Difficulties establishing a good service for remote access persisted during PY 2015/16 and resolved by June 2016 through collaborative working between Capita ITES, Rinedate Limited and DCC.

4.4.4 DCC Service Desk

Operational Performance

134. Capita ITES is the supplier of the DCC Service Desk, which is located at Ruddington in Nottinghamshire. The role of the Service Desk is described in section 3.1.4 above. The Service Desk has performed satisfactorily throughout PY 2015/16 achieving all contracted Service Level Agreements.

135. In advance of the enduring DCC Service Management System being deployed, interim telephony, Incident and Request ticketing and email connectivity has been implemented. This platform during PY 2015/16 provided 100% system availability. Service desk processed a total of 10,497 emails and 457 telephone enquiries during PY 2015/16.

136. The Service Desk was originally stood up with six analysts to focus on establishing operations and to support the small number of live services at the beginning of 2015. As the year progressed and more services were transitioned to live, the Service Desk team grew to match demand with fifteen team members by end of March 2016.

137. The Service desk team will expand again in PY 2016/17 to respond to 24 x 7 hour working that will be introduced prior to DCC Live.

4.5 CGI IT UK Limited

4.5.1 Overall Performance

138. CGI IT UK Limited (CGI) is the chosen supplier for the Data Service Provider contract, with an effective date of 1 November 2013. CGI is supplying the solution in respect of communication with devices, alerts to system users, the SMKI Repository and DCC Service Management. CGI is also the chosen Systems Integrator and is responsible for integrating the solution across all External Service Providers.

139. The main factors affecting CGI's performance in PY 2015/16 were the number and complexity of defects (IRPs) raised against GBCS v0.8.1 and the volume of DCC led Change Requests (as described in section 2.2).

140. CGI Release 1.0 development commenced at the beginning of 2015 and was aligned to GBCS v0.8.1 released in November 2014 and the DCC design baseline as set out in Change Request CR091. The further release of GBCS v0.8.2 that included the 59 essential IRPs was made in November 2015 and a change was raised to align the CGI solution to this version. CGI implemented a new delivery plan in late 2015 that staggered delivery over multiple releases and delivered the design baseline as set out in the DCC Change Request CR160.

141. The volume and complexity of change to the CGI Release 1.0 design baseline was very challenging as CGI was required to propose, cost and seek agreement on solutions many of which interfaced with other External Service Providers. Agreed timescales for completing this activity

were exceeded, which impacted DCC's resources and ability to reach contractual agreement for the increased scope and new delivery plans.

142. During PY 2015/16, DCC raised 27 new Change Requests that impacted CGI. Out of the 27 new Change Requests:

- 25 represented significant levels of change to the contractual baseline
- 5 Change Requests were superseded, rejected or withdrawn
- 8 were delivered in 2015/16, in addition to 22 Change Requests contracted for up to and including CR091, which were delivered during 2015/16 as part of R1.0

143. The CGI development teams who had expected to be nearing the end of their phases of work, took on the task of uplifting design artefacts across three new releases to incorporate the changes. Completing this activity while maintaining progress on Release 1.0 impacted CGI resourcing models and plans.

144. CGI's execution of its Systems Integration activities did experience difficulties in PY 2015/16. The role of the Systems Integrator, as specified in the contract, was defined to a lesser extent than other contractual obligations and CGI had not scaled the service to adequately manage the volume and complexity of its activities. DCC engaged Hunter Macdonald Ltd to review Systems Integration Testing progress in October 2015 (section 3.1.3 above), which led to the implementation of a 31 point action plan across DCC and External Service Providers. Following on from the Hunter Macdonald review and as part of CGI's response to CR160, CGI defined and stood up a Systems Integration organisation towards the end of PY 2015/16 and into PY 2016/17 and performance of this activity will be included in the PY 2016/17 Annual Service Report. This organisation covered:

- Design assurance and release management
- Environments and configuration management
- Full testing capabilities
- A Systems Integration Project Management Office

145. During PY 2015/16, CGI achieved the following Live Service deployments:

- SMKI Repository Go live on 9 March as part of SMKI Live
- DCCKI Registration Authority live for User Interface Testing on 24 March 2016.

146. During PY 2015/16, CGI achieved the following activities in Design, Build and Pre-Integration Test:

- Solution Design (Release 1.0 CR091 baseline) completed
- DCC Data Systems build Pre-Integration Test completed against subset of GBCS v0.8.1 (CR091 baseline) and entered into solution test (prior to redirection onto CR160 plan)

- DCC Service Management System build and Pre-Integration Test completed and entered into solution test
- SMKI repository build and Pre-Integration Test completed and entered into SMKI repository solution test
- Design and build of additional Release 1.0 and Release 1.1 scope completed
- Design and build of Release 1.2 scope completed
- Design of Release 1.3 scope commenced.

147. In PY 2015/16, CGI Systems Integration function has achieved:

- The Systems Integration Testing Approach Document v5.0 was approved by the SEC Panel on 11 December 2015 and outcome published on the DCC website[18]
- Systems Integration Testing for Release 1.0 has been conducted in three stages: SIT1, SIT2 and SIT3 (see section 3.1.2 above)
- SMKI recovery testing has been proven which supported the SMKI service transition to live operations
- Release 1.0 was formally closed by DCC at the end of March 2016.

4.5.2 Remediation Plans

148. During 2015/16 remediation plans were put in place for:

1. **Partial delivery into Solution Test in September 2015**. CGI did not deliver the full expected scope of Stream 2 into solution test on 29 September 2015. The remedial plan was superseded by the Secretary of State direction in December 2015 to deliver multiple releases with additional scope.
2. **Delay to completion of Stream 1 and Stream 2 work off plans** and **revocation of Milestones D12.1, D14.1, D19.1 – D19.4, D20 and D21**. The Test certificates for System Testing and PIT complete were revoked on 8 February 2016 following a Test Assurance Board to review the status of outstanding actions. This resulted in the milestone achievements also being revoked. CGI proposed to defer completion of some work off items to Release 1.2. This remediation plan was still active and being managed by DCC in PY 2015/16, with CGI completing outstanding actions in May 2016.
3. **Failure to deliver all the contractual documentation for Unit and Link testing resulted in failure to achieve D15.1**. The remediation plan to achieve this requires delivery of some additional documentation (complete) and updates to Test Approach (outstanding). This remediation plan was still active and being managed by DCC in PY 2015/16, with CGI completing outstanding actions in May 2016.

[18] Systems Integration Approach Document consultations: https://www.smartdcc.co.uk/implementation/test-assurance/systems-test-assurance/systems-integration-testing/

4.5.3 Milestone Analysis

149. The milestone table below shows all milestones due during PY 2015/16 and provides a status against each entry. The completed status of a number of the milestones below was later revoked by DCC following a DCC Test Assurance Board in February 2016. The DCC Test Assurance Board found that CGI had failed to complete work off plans within the agreed timescales of the contract. Remediation Plans were put in place (section 4.5.2 above).

150. As the Change Authorisation Note for CR160 has not yet been agreed between DCC and CGI (as described in section 3.1.7), the milestones described under CR160 are a working assumption only and not yet formalised as contractual milestones.

Milestone	Milestone Description	CR091	CR160	Date Complete / Forecast to Complete	Status
D8B	SMS Solution Design Stream 2 complete	N/A	31/05/2015	31/05/2015	Complete
D10	Solution Design Complete (Stream 2)	31/05/2015	31/05/2015	31/05/2015	Complete
D10E	Solution Design complete (Release 1.0)	N/A	30/10/2015	Complete	Complete
D11.1	Link Test (Stream 1) complete	30/04/2015	30/04/2015	30/04/2015	Complete
D11.2	LinkTest (Stream 2) complete	31/08/2015	N/A	N/A	Never completed, Superseded by CR16
D11E	Build, Unit, Link test complete (R1.0)	N/A	18/12/2015	18/12/2015	Complete
D11F	Build, Unit, Link test complete (Release 1.2)	N/A	29/03/2016	29/03/2016	Complete
D12.1	System Test (Stream 1) complete	31/07/2015	28/08/2015	28/08/2015	Complete
D12E	System Test Complete (R1.0)	N/A	29/01/2016	29/01/2016	Complete
D13.1	FAT (Stream 1) complete	31/07/2015	28/08/2015	28/08/2015	Complete
D13E	FAT Complete (R1.0)	N/A	29/01/2016	29/01/2016	Complete
D14.1	PIT (Stream 1) complete	31/07/2015	28/08/2015	28/08/2015	Complete
D14E	PIT Complete (Release 1.0)	N/A	29/01/2016	29/01/2016	Complete
D15.1	Solution Build (Stream 1) complete	31/08/2015	Complete	31/08/2015	Subject to remediation plan
D16	Service Management System Build Complete	30/09/2015	11/11/2015	11/11/2015	Complete

Milestone	Milestone Description	CR091	CR160	Date Complete / Forecast to Complete	Status
D19.1	DSP Ready for Integration Testing with CSPN R1.0	31/08/2015	29/09/2015	29/09/2015	Complete, new milestone description
D19.2	DSP Ready for Integration Testing with CSPC R1.0	31/08/2015	28/08/2015	28/08/2015	Complete, new milestone description
D19.3	DSP Ready for Integration Testing with CSPS R1.0	31/08/2015	28/08/2015	28/08/2015	Complete, new milestone description
D19.4	DSP Ready for Integration Testing with at least one CSP	31/08/2015	28/08/2015	28/08/2015	Complete
D19E	DSP Ready for Integration Testing (Stream 3)	N/A	01/02/2016	01/02/2016	Complete
D20	DSP Ready for Integration Testing with DCC	31/08/2015	28/08/2015	28/08/2015	Complete
D21	DSP Ready for Integration Testing with Industry Registration Systems	31/08/2015	28/08/2015	28/08/2015	Complete
D22E	Solution Test Complete (Release 1.0)	N/A	31/03/2016	31/03/2016	Complete
D28E	DSP Ready for SMKI Live	N/A	09/03/2016	08/03/2016	Complete
JM_2019	DSP Solution Build Complete (R1.0)	N/A	29/01/2016	29/01/2016	Complete[19]
JM_2077	SRT2B Complete (incl. Apex Contingency Key)	N/A	19/02/2016	19/02/2016	Complete

4.5.4 Operational Performance

151. For PY 2015/16, the scope of CGI's operational services was limited to the ordering and provision of DCC Gateway Connections, SMKI Repository, and DCCKI Registration Service. Delivery performance for the provision of DCC Gateway Connections (using third party supplier Gamma) was deemed on 20 March 2015 to not meet DCC expectations, as CGI struggled to fully support the provision of initial quotations and the arrangement of site surveys in a timely manner as required in SEC H15. This was primarily due to the lack of dedicated resources to support and manage all activities that formed part of this live service at the 'hands on' level required.

152. Parties site access policies vary significantly which further complicated the arrangement of site visits (e.g. a requirement for two weeks' notice with named engineer in some cases); however

[19] Although this milestone has been met, a minor documentation element relating to CGI milestone D15.1 remains outstanding and is subject to a remediation plan as described in sections 4.5.2 and 4.5.3.

CGI's progress updates lacked clarity and management of its third party access providers (BT Openreach and Virgin) was inconsistent and reactive.

153. CGI's operation of the SMKI Repository experienced some performance issues during PY 2015/16. DCC raised with CGI issues with the availability of the SMKI Repository as the SMKI Repository was not always available when Parties required. Due to the test and live environments for the SMKI Repository being different, when problems were identified with the live environment investigations and testing of fixes occurred in the live environment which caused further disruption to services. Despite the disruptions in the service the average completion times for transactions did not fall outside of the target processing times outlined in the CGI contract and with DCC's agreement CGI put in place measures to identify the potential cause of the shortfall.

154. CGI are the DCCKI Registration Authority and were able to receive registration forms from 24 March 2016, with the process for creating certificates following in April 2016. As this service went live at the end of the PY 2015/16 reporting period, a description of performance will be included in the PY 2016/17 Annual Service Report.

Remediation plans

155. The performance issues identified in the process for the ordering and provision of DCC Gateway Connections have been mitigated by both change of process and personnel, with senior-level service reviews between CGI and DCC established on 27 March 2015 and continued during PY 2015/16.

4.6 Critical Software Technologies Limited

156. Critical Software Technologies Limited (Critical Software) has supplied a range of services to DCC, including:

- Parse and Correlate software
- GBCS Interface Testing
- File Signing Utility
- Enrolment Options Testing.

157. The services will be considered separately in the sections below.

4.6.1 Parse and Correlate

158. Critical Software is the selected contractor for the Parse and Correlate service, with an effective contract date of 29 April 2014. Critical Software provides the Parse and Correlate service, which provides the means for Parties to interact with devices without the need for their systems to understand GBCS.

159. In PY 2015/16 Critical Software have issued four releases of the Parse and Correlate software, using an agile development methodology, enabling the development to absorb a proportion of the impact from updates to GBCS.

160. Following the CR091 re-plan as a result of GBCS 0.8.1, Critical Software made an additional interim release of the Parse and Correlate software available to Parties in order that Parties may

begin early testing against GBCS 0.8.1. Critical Software has delivered a further release against GBCS 0.8.1 in November 2015, and a Live release against GBCS 0.8.2 in March 2016.

Milestone Analysis

161. The milestone table below shows all milestones due during PY 2015/16 and provides a status against each entry.

162. The milestones described under CR160 are a working assumption and not yet formalised as contractual milestones.

Milestone	Milestone Description	CR091	CR160	Date Complete / Forecast to Complete	Status
JM_2048	P&C Software Available (V1.1 beta)	N/A	Complete	24/07/2015	Complete
JM_2051	P&C Software Available (V1.0)	30/04/2015	Complete	30/04/2015	Complete
JM_2053	P&C Software Available (V2.0)	02/11/2015	27/11/2015	27/11/2015	Complete
JM_2074	P & C V0.8.2 into SIT	N/A	07/03/2016	07/03/2016	Complete
JM_2084	P & C V0.8.2 available to Parties (P&C Software Available for Service Users V0.8.2)	N/A	21/03/2016	21/03/2016	Complete

4.6.2 GBCS Interface Testing

163. During PY 2014/15 DCC developed a tool to improve the integrity of GBCS, which is used by the DCC Systems and smart metering devices. During PY 2015/16 this tool has been developed into the product GBCS Interface Testing for Industry (GFI). GFI is available to both Parties and non SEC Parties, with significant take-up from manufacturers wishing to test their interpretation and implementation of GBCS and also from other users, such as software houses wishing to test their software and energy suppliers in preparation for use of GFI to test the meters they plan to install.

164. The first release of GFI was made available in summer 2015 and during 2015 DCC has hosted meter manufacturers on site to help test their devices with GFI at GFI test events. This has involved engineers from Critical Software working with the engineers from meter manufacturers to identify issues with GBCS, meter firmware or with GFI. The working arrangements have been collaborative and very beneficial.

165. Critical Software have made enhancements to GFI during the year, the most significant being the uplift of GBCS to v0.8.2 – the version of the protocol that will be used for the deployment of meters. This has provided an early tool to identify any further problems and help the meter market converge on a single interpretation.

166. GFI is currently being enhanced further to replicate actions of the Communications Hub to support further testing of gas meters and also to support testing of other, non-meter, devices on the HAN such as IHDs, PPMIDs and CADs.

167. GFI continues to be a very welcomed tool by Industry and DECC. GFI's popularity was proved by responses to DECC's consultation which has led to formalising the requirements to develop and support GFI, which is helping to develop the market for meters and other devices.

4.6.3 File Signing Utility

168. Critical Software produced a File Signing utility that enables Parties to sign CSV files prior to submission to the DCC Service Desk as email attachments. This utility relates to specific scenarios where Parties need to send DCC signed emails. Critical Software produced the required utility to time and quality.

4.6.4 Enrolment Options Testing

169. In October 2015 the DCC Enrolment and Adoption project identified the need to conduct some technical research to prototype integration of SMETS1 meters into a central DCC service. Through a competitive procurement, Critical Software were appointed in December 2015 to deliver Enrolment Options Testing. The project remit was to build a software test environment to connect to and exchange Service Requests with multiple SMETS1 Head End Systems and Communications Hubs.

170. Critical Software mobilised a team and together with DCC the teams planned the scope, scale and activities in the time boxed 12 week Enrolment Options Testing project. As the project was research and inherently collaborative, Critical Software required inputs from DCC and Industry participants including meter manufacturers and SMSOs. Where timing of these contributions differed to plan, Critical Software were flexible and rescheduled activities to keep the team busy at all times.

171. The project included specific research goals for technical achievement and knowledge transfer to DCC. Acknowledging that this was a research project and that results were uncertain, Critical Software managed to complete a significant majority of the research tasks and provided DCC with a robust test of the feasibility of SMETS1 integration. Critical Software also provided deep documentation of their work and actively transferred knowledge to DCC. DCC retains the ability to replicate the tests that Critical Software developed.

172. Critical Software performed satisfactorily and the Enrolment Options Testing project completed successfully to time and quality.

4.6.5 Operational Performance

173. Critical Software supported the operation of the following services as outlined in section 3.1.5 above:

- Parse and Correlate service
- GBCS Interface Testing.

174. Critical Software systems performed satisfactorily during PY 2015/16.

4.7 Telefonica UK Limited

4.7.1 Overall Performance

175. Telefonica UK Limited (Telefonica) is the contractor for both the Communications Service Provider (Central) and Communications Service Provider (South) contracts, with an effective date for both of 1 November 2013. Telefonica is building the communications infrastructure to connect smart meters in the Central and South Regions of Great Britain. The technology solution is primarily based on Telefonica's existing cellular network augmented by mesh technology for connections in hard to reach areas.

176. As with other External Service Providers and as described in section 2.2, the main factors affecting Telefonica's performance in PY 2015/16 were the number and complexity of defects (IRPs) raised against GBCS v0.8.1 and the volume of DCC led Change Requests.

177. Similar to other External Service Providers, Telefonica Release 1.0 development commenced at the beginning of 2015 and was aligned to GBCS v0.8.1 released in November 2014 and the DCC design baseline as set out in Change Request CR091. The further release of GBCS v0.8.2 that included the 59 essential IRPs was made in November 2015 and this coupled with DCC Change Requests resulted in Telefonica implementing a new delivery plan in late 2015 that staggered delivery over multiple releases and delivered the design baseline as set out in the DCC Change Request CR160.

178. The volume and complexity of Change Requests that required analysis, costing and agreement on solutions was much greater than forecast and was challenging for both DCC and Telefonica. Consequently, in some cases this resulted in contractual timescales for completing activity to be exceeded. Telefonica worked closely with DCC and kept DCC fully informed of the progress and status of any Change Request that exceeded the contractual timescales. The complexity and volume of interdependent change also impacted on Telefonica and DCC's resources and ability to reach contractual agreement for the increased scope and new delivery plans.

179. During PY 2015/16, DCC raised 19 new Change Requests that impacted Telefonica. Out of the 19 Change Request raised, 7 were withdrawn or superseded during 2015/16.

180. The Order Management System (OMS) for the Central and South Regions was developed by Telefonica and went live in February 2016. The OMS was originally planned to be made available to Parties for the Central and South Regions by 1 Oct 2015, however due to many factors including the volume and complexity of change impacting the Telefonica solution as a whole, DCC took the decision to delay launch to allow additional time to prepare the systems and services for live operations.

181. Remediation plans were put in place and completed before the OMS for the Central and South Regions went live in February 2016.

182. During PY 2015/16, Telefonica achieved:

- Solution Design (Release 1.0 CR091 baseline) completed
- Achieved 80% SMWAN coverage according to drive-by measurements (100% of drive-by measurements to validate coverage completed). Culminating in the award of the B9 milestone in January 2016
- Successfully delivered the Smart M2M core application and deployed the core increments of the solution for Install and Commission on time to Systems Integration Testing
- Telefonica successfully deployed its OMS solution to live service operation, accompanied by OMS training for DCC service desk and Users
- Design and build of Release 1.2 and Release 1.3 scope commenced
- Telefonica have formally submitted their Communications Hubs for evaluation and certification under CESG's Commercial Product Assurance (CPA) scheme. Telefonica's manufacturing lines are now stood up for both User Integration Testing and Production Communications

Hubs, with the Production Communications Hubs on order for Release 1.2 with new SMKI Certificates

- Telefonica have completed internal pen testing, and are working with DCC to get a viable Operational Acceptance Testing / Business Acceptance Testing joint ecosystem plan to be carried out later in the Programme.

4.7.2 Remediation Plans

183. A four month remediation plan was put in place to ensure that the OMS solution (Central and South Regions) was fit for purpose and met Parties expectations. Telefonica met all the conditions of the remediation plan and solution was transitioned to live in February 2016.

4.7.3 Milestone Analysis

184. The milestone table below shows all milestones due during PY 2015/16 and provides a status against each entry.

185. As the Change Authorisation Note for CR160 has not yet been agreed between DCC and Telefonica (as described in section 3.1.7), the milestones described under CR160 are a working assumption only and not yet formalised as contractual milestones..

Milestone	Milestone Description	CR091	CR160	Date Complete / Forecast to Complete	Status
B8, BI	Coverage 1015, Initial Coverage - 80.00%	N/A	Complete	01/10/2015	Complete
B9	Coverage 0116 - 80.00%	01/08/2016	Complete	01/01/2016	Complete
C3Bb & c	Laboratory Based Field Trials Complete (Comms Hub)	03/06/2015	Complete	Complete	Complete
C4Ab & c	Solution Design complete aligned to GBCS v0.8.1 submitted to DCC	31/03/2015	Complete	31/03/2015	Complete
C4Bb & c	Solution Design for R1.2 complete	N/A	29/01/2016	29/01/2016	Complete
C4Cb & c	Solution Design for R1.3 complete	N/A	29/01/2016	05/02/2016	Complete
C6Ab & c	Core Unit testing complete	N/A	13/08/2015	13/08/2015	Complete, replacement milestone for C6b & C6c
C6Bb & c	Increment 1 Unit testing complete	N/A	Complete	19/10/2015	Complete, replacement milestone for C6b & C6c
C6Cb & c	Increment 2 Unit testing complete	N/A	Complete	12/10/2015	Complete, replacement milestone for C6b & C6c

Milestone	Milestone Description	CR091	CR160	Date Complete / Forecast to Complete	Status
C6Db & c	Increment 3 Unit testing complete	N/A	Complete	12/10/2015	Complete, replacement milestone for C6b & C6c
C6Eb & c	R1.2 Unit Testing Complete	N/A	30/03/2016	30/03/2016	Complete
C7Ab & c	Core Link testing complete	N/A	10/08/2015	10/08/2015	Complete, replacement milestone for C7b & C7c
C7Bb & c	Increment 1 Link testing complete	N/A	Complete	19/10/2015	Complete, replacement milestone for C7b & C7c
C7Cb & c	Increment 2 Link testing complete	N/A	Complete	12/10/2015	Complete, replacement milestone for C7b & C7c
C7Db & c	Increment 3 Link testing complete	N/A	Complete	12/10/2015	Complete, replacement milestone for C7b & C7c
C7Eb & c	R1.2 Link Testing Complete	N/A	30/03/2016	30/03/2016	Complete
C8Ab & c	Core System Testing Complete	N/A	Complete	31/08/2015	Complete, replacement milestone for C8b & C8c
C8Bb & c	Increment 1 System Testing Complete	N/A	Complete	27/10/2015	Complete, replacement milestone for C8b & C8c
C8Cb & c	Increment 2 System Testing Complete	N/A	Complete	27/10/2015	Complete, replacement milestone for C8b & C8c
C8Db & c	Increment 3 System Testing Complete	N/A	Complete	27/10/2015	Complete, replacement milestone for C8b & C8c

Milestone	Milestone Description	CR091	CR160	Date Complete / Forecast to Complete	Status
C9Ab & c	Core FAT complete	N/A	Complete	31/08/2015	Complete, replacement milestone for C9b & C9c
C9Bb & c	Increment 1 FAT complete	N/A	Complete	27/10/2015	Complete, replacement milestone for C9b & C9c
C9Cb & c	Increment 2 FAT complete	N/A	Complete	27/10/2015	Complete, replacement milestone for C9b & C9c
C9Db & c	Increment 3 FAT complete	N/A	Complete	27/10/2015	Complete, replacement milestone for C9b & C9c
C10Ab & c	Core Pre-integration Testing Complete	N/A	Complete	31/08/2015	Complete, replacement milestone for C10b & C10c
C10Bb & c	Increment 1 Pre-integration Testing Complete	N/A	Complete	27/10/2015	Complete, replacement milestone for C10b & C10c
C10Cb & c	Increment 2 Pre-integration Testing Complete	N/A	Complete	27/10/2015	Complete, replacement milestone for C10b & C10c
C10Db & c	Increment 3 Pre-integration Testing Complete	N/A	Complete	27/10/2015	Complete, replacement milestone for C10b & C10c
C11b & c	Service Management Ready	01/09/2015	11/11/2015	11/11/2015	Complete
C12Ab & c	Core Ready for Integration Testing with DSP	N/A	Complete	01/09/2015	Complete, replacement milestone for C12b & C12c

Milestone	Milestone Description	CR091	CR160	Date Complete / Forecast to Complete	Status
C12Bb & c	Increment 1 Ready for Integration Testing with DSP	N/A	Complete	28/10/2015	Complete, replacement milestone for C12b & C12c
C12Cb & c	Increment 2 Ready for Integration Testing with DSP	N/A	Complete	28/10/2015	Complete, replacement milestone for C12b & C12c
C12Db & c	Increment 3 Ready for Integration Testing with DSP	N/A	Complete	28/10/2015	Complete, replacement milestone for C12b & C12c
C13b & c	Solution Testing Complete R1.0	29/01/2016	Complete	31/03/2016	Complete, new milestone description
CH3b & c	Comms Hub Spec Complete	29/05/2015	03/08/2015	03/08/2015	Complete
CH4b & c	Comms Hub Protocol Certification Complete	28/08/2015	Complete	28/08/2015	Complete
CH6b & c	Comms Hub volume for system integration testing	28/08/2015	Complete	14/08/2015	Complete
JM_2013	CH Forecasting & OMS Active - Telefonica	N/A	01/02/2016	01/02/2016	Complete

4.7.4 Operational Performance

186. Telefonica only had one live service in operation during PY 2015/16. The OMS for Central and South Region had been operating for 2 months by the end of the PY and have performed satisfactorily during that period.

Appendix A – External Service Provider Feedback PY 2015/16

External Service Provider	Feedback	DCC Response
Absolute Organisation Limited	No comments provided.	No action required.
Across-the-Board	Reviewed the report and are content with the description of their performance for the reporting period.	No action required.
Actica Consulting Limited	Reviewed the report and are content with the description of their performance for the reporting period. Actica raised one comment on the report: 1. Please note that the full name of the organisation is Actica Consulting Limited.	Updated the name of the organisation in all relevant sections.
Acuity Risk Management LLP	Reviewed the report and are content with the description of their performance for the reporting period.	No action required.
Anderson Young	Reviewed the report and are content with the description of their performance for the reporting period.	No action required.
Arguile Search Limited	No comments provided.	No action required.

External Service Provider	Feedback	DCC Response
Arqiva Smart Metering Limited	Arqiva agrees with DCC summary of Arqiva's performance. With respect to the CR160 milestone table, Arqiva would emphasise that the dates were working assumptions that included for the delivery of non-contracted DCC Changes. Such dates were largely met or missed by a few days.	Milestones for External Service Providers include the working assumptions for CR160 and this approach is consistent across the report. DCC agrees that these milestones were our best forecast at a time of significant change and were not contracted against at the time they were achieved. No action required. The milestone description for milestone B7 was incorrect in the report and has been amended from 80% coverage to 70% coverage (section 4.1.3 Arqiva Smart Metering Limited: Milestone Analysis, milestone B7).
Avolution (UK) Ltd	Reviewed the report and are content with the description of their performance for the reporting period.	No action required.
Baringa Partners LLP	Reviewed the report and are content with the description of their performance for the reporting period.	No action required.
Bird and Bird	No comments provided.	No action required.
BMT Hi-Q Sigma Limited	Reviewed the report and are content with the description of their performance for the reporting period.	No action required.
British Telecommunications Plc	Reviewed the report and are content with the description of their performance for the reporting period.	No action required.
Capita Business Services Limited	Reviewed the report and are content with the description of their performance for the reporting period.	No action required.

External Service Provider	Feedback	DCC Response
Capita IT Enterprise Services	Capita ITES provided the following feedback: 1. Paragraph 132 (section 4.4.2 File Transfer and Networks Solution Service Provider) – replace "This service has performed satisfactorily during PY 2015/16", with "This service has performed well during PY 2015/16 with no issues raised or outages". 2. Paragraph 133 (section 4.4.3 Fabric Solution: Cloud Hosting) – replace "Difficulties establishing a good service for remote access persisted during PY 2015/16 and are planned to be resolved during PY 2016/17", with "Difficulties establishing a good service for remote access persisted during PY 2015/16 and were resolved by joint Capita ITES and Rinedata working". 3. Paragraph 134 (section 4.4.4 DCC Service Desk: Operational Performance) – replace "The Service Desk has performed satisfactorily throughout PY 2015/16", with "The Service Desk has performed well throughout PY 2015/2016 achieving all contracted SLAs".	DCC provide the following response to the feedback received: The phrase 'performed satisfactorily' is used across all External Service Providers throughout the report and is defined in paragraph 97. In the Annual Service Report 'satisfactory' means that the External Service Provider has met or exceeded DCC expectations and delivered a professional service within agreed timescales and quality standards. To ensure consistency across all External Service Providers "performed satisfactorily" in paragraphs 132 and 134 has not been amended. 1. Narrative updated to include reference to no issues raised or outages. 2. Issues in establishing a good service for remote access were resolved in PY 2016/17 and will be included in next year's Annual Service Report. Updated paragraph 133 to: Difficulties establishing a good service for remote access persisted during PY 2015/16 and resolved by June 2016 through collaborative working between Capita ITES, Rinedate Limited and DCC. 3. Narrative updated to include reference to achieving all contracted SLAs.

External Service Provider	Feedback	DCC Response
CGI IT UK Limited	CGI provided the following feedback: 1. Paragraph 12 (section 2.2 SMETS2 Programme Performance Factors) – [The DCC Live] date need[s] to be changed to August 2016. The diagram [on scope and release approach] below also needs to be updated to reflect August 2016 [DCC Live date]. 2. Paragraph 144 (section 4.5.1 CGI IT UK Limited: Overall Performance) - Add the following to the end of the existing paragraph: As part of CR160 CGI defined and stood up an SI [Systems Integration] organisation that was capable of supporting the requirement. This organisation covered: a. Design assurance and release management b. Environments and configuration management c. Full testing capabilities d. An SI PMO [Project Management Office] 3. Paragraph 147 (section 4.5.1 CGI IT UK Limited: Overall Performance) - Add the following bullet points: a. Release 1 was formally signed off by DCC b. Release 1.2 Testing phase was commenced on schedule 4. Paragraph 148 point 2 (section 4.5.2 CGI IT UK Limited: Remediation Plans) - Change "This remediation plan is still active and being managed by DCC" to "Remediation plan actions are now complete and with Jane Eccles [DCC Testing lead] for agreement."	DCC provide the following response to the feedback received: 1. The preparations for DCC to draw down further time contingency and move DCC Live to August 2016 occurs in PY 2016/17, which is outside of the scope of this report. Any Secretary of State decisions to approve a change in DCC Live date will be included in next year's Annual Service Report. 2. Additional narrative on Systems Integration activity included in the report with timeframes added to illustrate that this activity occurred towards the end of this reporting period and into PY 2016/17. Performance information for this activity is not included in this report, but will be reported in the PY 2016/17 Annual Service Report. 3. A new bullet point stating that DCC formally closed Release 1.0 at the end of March 2016 included in the report. Activity on R1.2 testing falls within PY 2016/17 and will be reported in next year's Annual Service Report. 4. The remediation plan actions were completed by CGI in PY 2016/17 and will be reported in next year's Annual Service Report. Updated paragraph 148 point 2 to: This remediation plan was still active and being managed by DCC in PY 2015/16, with CGI completing outstanding actions in May 2016.

External Service Provider	Feedback	DCC Response
	5. Paragraph 148 point 3 (section 4.5.2 CGI IT UK Limited: Remediation Plans) - Change "This remediation plan is still active and being managed by DCC" to "Remediation plan actions are now complete and with Jane Eccles [DCC Testing lead] for agreement." 6. Paragraph 153 (section 4.5.4 CGI IT UK Limited: Operational Performance) - Whilst it is true that SMKI Repository V1.0 didn't perform as well as in testing, at no time did average completion times fall outside of those target processing times outlined in schedule 2.2. With the DCC's agreement we added additional logging to try to identify the potential cause of the shortfall but were unable to identify root cause. A decision was made to test V1.2 in pre production for this specific issue. To date we have not been able to replicate the exact issue.	5. The remediation plan actions were completed by CGI in PY 2016/17 and will be reported in next year's Annual Service Report. Updated paragraph 148 point 3 to: This remediation plan was still active and being managed by DCC in PY 2015/16, with CGI completing outstanding actions in May 2016. 6. Paragraph 153 updated to include the actions CGI took to resolve the issues experienced with the SMKI Repository.
Cigital Limited	Reviewed the report and are content with the description of their performance in the reporting period.	No action required.
Consultancy Group	Reviewed the report and are content with the description of their performance for the reporting period.	No action required.
Cordant Dynamic Ltd	Reviewed the report and are content with the description of their performance for the reporting period.	No action required.
Critical Software Technologies Limited	Reviewed the report and are content with the description of their performance for the reporting period.	No action required.
DCS Group	Reviewed the report and are content with the description of their performance for the reporting period.	No action required.

External Service Provider	Feedback	DCC Response
Deloitte LLP	Reviewed the report and are content with the description of their performance for the reporting period.	No action required.
Deloitte MCS Limited	No comments provided.	No action required.
EarthStream Global	No comments provided.	No action required.
EHS Consulting	No comments provided.	No action required.
Ernst & Young LLP	No comments provided.	No action required.
ERSG	No comments provided.	No action required.
Energy & Utility Skills Limited	Reviewed the report and are content with the description of their performance for the reporting period.	No action required.
Foundation SP Limited	No comments provided.	No action required.
Fox IT Resourcing Ltd	Reviewed the report and are content with the description of their performance for the reporting period.	No action required.
Gemserv Ltd	No response received.	No action required.

External Service Provider	Feedback	DCC Response
Genisys	Reviewed the report and are content with the description of their performance for the reporting period. Genisys provided the following statement: This year has given Genisys a welcome opportunity to enter the Smart metering arena, having previously worked for many years in various other aspects of the electricity supply industry. We believe we have contributed significantly to the industry testing arena in particular via the three senior staff employed at DCC over this period… we appreciate the opportunity to comment.	No action required.
Get Work Experience	Reviewed the report and are content with the description of their performance for the reporting period.	No action required.
Hudson and Yorke Limited	No comments provided.	No action required.
Hunter Macdonald Ltd	Reviewed the report and are content with the description of their performance for the reporting period.	No action required.
Innovation Digital Ltd	No comments provided.	No action required.
Interim Partners	No comments provided.	No action required.
Investigo Ltd	No comments provided.	No action required.
Ippon Management Consulting Ltd	No comments provided.	No action required.
itecopeople	Reviewed the report and are content with the description of their performance for the reporting period.	No action required.

External Service Provider	Feedback	DCC Response
Kennedy Pearce	Reviewed the report and are content with the description of their performance for the reporting period.	No action required.
KPMG LLP	KPMG raised one comment on the report: 1. [Section 4 External Service Provider Performance] where for KPMG LLP [in the table] you refer to 'consultancy services'. This should be 'Audit and audit related services'.	DCC has updated the report as requested.
Lloyd's Register Quality Assurance Limited	No comments provided.	No action required.
Mason Advisory Limited	Reviewed the report and are content with the description of their performance for the reporting period.	No action required.
Meadean Ltd	No comments provided.	No action required.
Mosaique Limited	Reviewed the report and are content with the description of their performance for the reporting period.	No action required.
Oak Ridge Associates Ltd	No comments provided.	No action required.
Oxford8 Ltd	Reviewed the report and are content with the description of their performance for the reporting period. Oxford8 Ltd raised one comment on the report: 1. Appendix B [and all other references in the report] - 'Oxford 8' is changed to 'Oxford8 Ltd'.	DCC has updated the report as requested.
PA Consulting Services	No comments provided.	No action required.

External Service Provider	Feedback	DCC Response
Limited		
PricewaterhouseCoopers LLP	No comments provided.	No action required.
Rinedata Limited	No comments provided.	No action required.
Steelhenge	No comments provided.	No action required.
Stott and May Professional Services Ltd	Reviewed the report and are content with the description of their performance for the reporting period.	No action required.
Telefonica UK Limited	Telefonica raised one comment on the report: 1. Telefonica propose the following amendment to paragraph 178 [section 4.7.1 Telefonica UK Limited: Overall Performance] – *'*The volume and complexity of Change Requests that required analysis, costing and agreement on solutions *exceeded the reasonably planned capacity and was challenging for both Telefonica and DCC. As a consequence, and in some cases, contractual timescales for completing this activity were exceeded. In such cases, Telefonica kept DCC fully informed of progress and status. The complexity and volume of interdependent change impacted on Telefonica and* DCC's resources and ability to reach contractual agreement for the increased scope and new delivery plans.'	DCC has amended the report in alignment with the text provided. Paragraph 178 (section 4.7.1 Telefonica UK Limited: Overall Performance) now reads: The volume and complexity of Change Requests that required analysis, costing and agreement on solutions was much greater than forecast and was challenging for both DCC and Telefonica. Consequently, in some cases this resulted in contractual timescales for completing activity to be exceeded. Telefonica worked closely with DCC and kept DCC fully informed of the progress and status of any Change Request that exceeded the contractual timescales. The complexity and volume of interdependent change also impacted on Telefonica and DCC's resources and ability to reach contractual agreement for the increased scope and new delivery plans.
Trilliant Networks (UK) Ltd	No comments provided.	No action required.

External Service Provider	Feedback	DCC Response
Visualise That LLP	Reviewed the report and are content with the description of their performance for the reporting period.	No action required.

Appendix B – List of External Service Providers PY 2015/16

External Service Providers	
Absolute Organisation Limited	Gemserv Ltd
Across-the-Board	Genisys
Actica Consulting Limited	Get Work Experience
Acuity Risk Management LLP	Hudson and Yorke Limited
Anderson Young	Hunter Macdonald Ltd
Arguile Search Limited	Innovation Digital Ltd
Arqiva Smart Metering Limited	Interim Partners
Avolution (UK) Ltd	Investigo Ltd
Baringa Partners LLP	Ippon Management Consulting Ltd
Bird and Bird	itecopeople
BMT Hi-Q Sigma Limited	Kennedy Pearce
British Telecommunications Plc	KPMG LLP
Capita Business Services Limited	Lloyd's Register Quality Assurance Limited
Capita IT Enterprise Services	Mason Advisory Limited
CGI IT UK Limited	Meadean Ltd
Cigital Limited	Mosaique Limited
Consultancy Group	Oak Ridge Associates Ltd
Cordant Dynamic Ltd	Oxford8 Ltd
Critical Software Technologies Limited	PA Consulting Services Limited
DCS Group	PricewaterhouseCoopers LLP
Deloitte LLP	Rinedata Limited
Deloitte MCS Limited	Steelhenge
EarthStream Global	Stott and May Professional Services Ltd
EHS Consulting	Telefonica UK Limited
Ernst & Young LLP	Trilliant Networks (UK) Ltd
ERSG	Visualise That LLP
Energy & Utility Skills Limited	
Foundation SP Limited	
Fox IT Resourcing Ltd	

Appendix C – IRP Categorisation PY 2015/16

Impact Category (CAT)	Description	Number of IRPs at 31/07/2015
CAT 1	DCC believe the implementation of these IRPs are essential to the correct functioning of the overall DCC solution and/or SMIP service and therefore will be scheduled into the initial DCC release. The implementation of these changes have the potential to impact the (non contingent) DCC delivery timescales but are subject to formal impact assessment.	48
CAT 2	DCC believe the implementation of these IRPs are essential to the correct functioning of the overall SMIP service and therefore will be scheduled into the initial DCC release. The implementation of these changes are unlikely to impact the (non contingent) DCC delivery timescales but are subject to formal impact assessment. Implementation of these changes will possibly impact the wider Industry Processes, Systems or products and should be impacted by industry parties.	11
CAT 3	DCC believe the implementation of these IRPs are NOT essential to the correct functioning of the overall DCC solution and/or SMIP service and therefore will NOT be scheduled into the initial DCC release. If scheduled for DCC initial release the implementation of these changes are likely to impact the (non contingent) DCC delivery timescales but are subject to formal impact assessment. The implementation of these changes will be scheduled in a later DCC release to be prioritised during the close of requirements for that release.	8
CAT 4	DCC believe the implementation of these IRPs are NOT essential to the correct functioning of the overall SMIP service and therefore will NOT be scheduled into the initial DCC release. These IRPs are subject to "DCC Design Assumptions" stated for each IRP to provide the rationale for why these are NOT considered essential for inclusion in the initial DCC Release. If scheduled for DCC initial release the implementation of these changes are NOT likely to impact the (non contingent) DCC delivery timescales but are subject to formal impact assessment. The implementation of these changes will be scheduled in a later DCC release to be prioritised during the close of requirements for that release.	100
Withdrawn	IRPs that are raised and then withdrawn.	7