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DP248

‘RDP Entry Requirements for DCC Gateway Connections’

Modification Report

Version 0.1

12 September 2023

Corporate member of
Plain English Campaign
Committed to clearer
communication

592



About this document

This document is a draft Modification Report. It currently sets out the background, issue, and progression timetable for this modification, along with any relevant discussions, views and conclusions. This document will be updated as this modification progresses.

Contents

1. Summary.....	3
2. Issue.....	3
3. Assessment of the proposal	5
Appendix 1: Progression timetable	5
Appendix 2: Glossary	6

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1. Summary

This proposal has been raised by Rahul Mudliar from EP Tech Solutions.

The Smart Energy Code (SEC) requires a physical Data Communications Company (DCC) Gateway Connection at the SEC Parties' premises to allow secure data transfer with the DCC. This is the case for all Registration Data Providers (RDPs) as well as all DCC Users. This is not feasible for most emerging market participants who operate on virtual cloud-based infrastructure. This is also preventing established market participants from transitioning to operate on a cloud-based infrastructure, that would not require physical premises.

2. Issue

What are the current arrangements?

What is a DCC Gateway Connection?

SEC Section H 'DCC Services' covers the requirements for both RDPs, and DCC Users on how to interact with the DCC.

It currently states that this requires a DCC Gateway Connection, which by definition, is placed within the organisation's premises. This will require a site visit, equipment costs and can take approximately four months or greater to set up. This is to enable data being sent from the DCC to RDP to be transferred securely.

What is an RDP?

Originally, Gas and Electricity Network Parties were responsible for transferring registration data on their respective networks to the DCC. They had the option to fulfil this requirement themselves or delegate it to another entity to act as the Registration Data Provider (RDP) on their behalf. The DCC is also required to provide Smart Metering data to the RDP, for the relevant premises on their respective networks.

However, as part of the Switching Programme, the Central Switching Service (CSS) Provider has taken over the responsibility of providing registration data to the DCC. Thus, data now only flows from the DCC to the RDP.

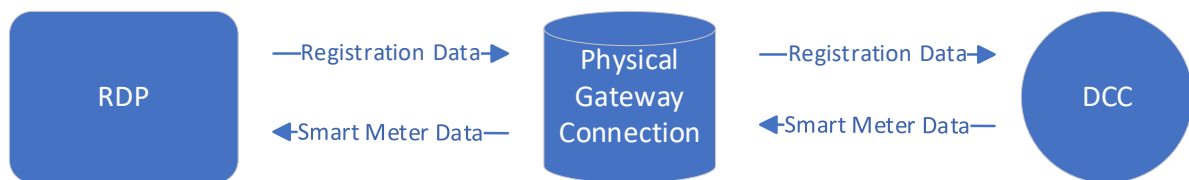
What is the CSS, and how is it linked to the DCC?

The CSS is part of a larger system for managing switching services. The CSS itself consists of two main components, the Registration Service and the Address Management Service. These services work together with the Electricity Retail Data Service and the Gas Retail Data Service to facilitate the switching of services for customers.

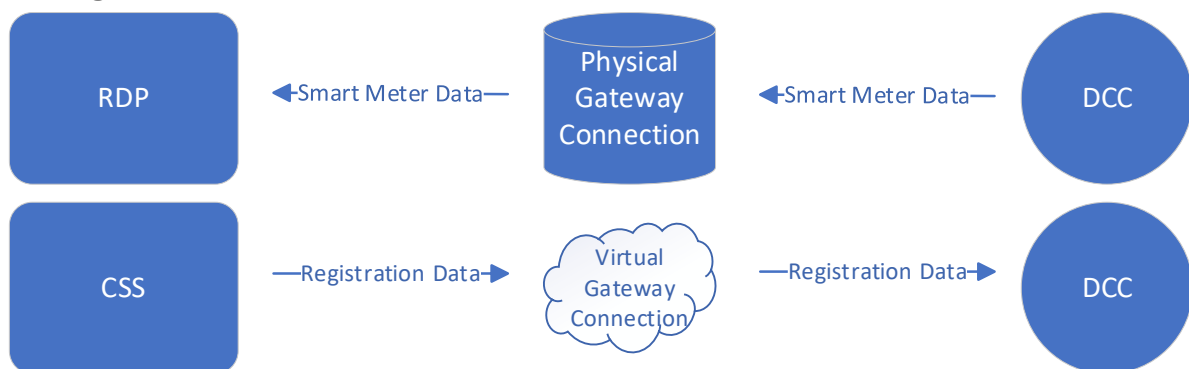
The DCC currently hold the CSS licence however, the CSS part is cloud based and is managed by a CSS Provider on behalf of the DCC.

The below diagram shows the interactions between these entities.

Original Arrangements



Post REC Go-Live Arrangements



What is a DCC User?

A DCC User is any Party who wishes to utilise the DCC system to communicate with smart metering equipment. To interact with the DCC, every User needs to access a DCC Gateway Connection. The SEC currently specifies that a DCC User must have a physical gateway connection.

What is the issue?

The existing code requirements may lead to a waste of resources if the same thing can be achieved via virtual cloud-based connections. When using a physical data centre, there are expenses associated with purchasing hardware, setting up infrastructure, maintaining equipment, providing cooling and power, and ensuring physical security. On the other hand, running a virtual data centre entails fewer upfront costs for hardware, as it relies on shared resources within a cloud provider's infrastructure. Operating costs may also be reduced since the cloud provider typically handles tasks like hardware maintenance and security. Additionally, virtual data centres offer greater flexibility and scalability, allowing resources to be scaled up or down according to demand, thereby optimising cost-efficiency.

When the SEC was first came into effect in September 2013, it did not cater for a virtual cloud-based infrastructure. However, technology has advanced, and the CSS is an example of a secure industry system that is cloud based. The current wording in the SEC creates an obstacle for new entrants who prefer a more cost-effective option rather than building a physical infrastructure to establish transfer of information via their DCC Gateway Connection.

As currently written, the SEC does not allow for direct virtual gateway connectivity between any Party and the DCC.

What is the impact this is having?

New entrants

New entrants to the Gas or Electricity Network markets must continue to act, or contract a third party to act, as the RDP. This requires a DCC Gateway Connection at their premises which can be costly. Their only reason for needing to become an RDP for this is to receive a monthly data file from the DCC of smart metering systems on their network.

New market entrants who wish to become DCC Users face similar issues, although they can benefit more from using the system. Prospective market participants will face challenges in establishing connections with the DCC via a gateway connection due to the impracticality of physical network infrastructure. This includes the amount of time and resources used to put the physical network infrastructure in place. Along with the dedicated floor space the physical infrastructure takes. The shelf life of having a physical infrastructure in comparison to that of a virtual cloud-based infrastructure is also noticeably large.

Existing RDPs or DCC Users

While existing Parties have these connections, the costs of maintaining physical infrastructure and not completely transitioning to a cloud-based gateway can also be great. However, some existing participants are transitioning their infrastructure to online cloud-based platforms. Unfortunately, they cannot fully achieve this while still requiring a DCC Gateway Connection to be physically established. This misalignment of code requirements with the industry trend toward virtual cloud infrastructure hampers innovation, efficiency, and cost-effectiveness for market participants.

Impact on consumers

There are no impacts on consumers from this modification.

3. Assessment of the proposal

Areas for assessment

Can cloud based connections provide the same level of security?

When gateway connections were originally defined, there were no considerations of virtual connections. As technology has advanced it has become apparent that having a virtual cloud-based infrastructure would be beneficial from a cost perspective. It is also argued that they can be considered just as secure. This assumption will need to be tested and agreed by industry.

Sub-Committee input

SECAS will engage the Chairs from the Operations Group (OPSG), the Technical Architecture and Business Architecture Sub-Committee (TABASC), the Security Sub-Committee (SSC) and the Smart Metering Key Infrastructure Policy Management Authority (SMKI PMA) to confirm what input is required from these forums. SECAS believes the following Sub-Committees will need to provide the following input to this modification:

Sub-Committee input	
Sub-Committee	Input sought
OPSG	To provide views on operational impacts from changing to a virtual connection
SMKI PMA	Review the SMKI encryption protocols
SSC	To approve the security architecture
TABASC	To review the technical and business architectural approach to this modification

Appendix 1: Progression timetable

Timetable	
Event/Action	Date
Draft Proposal raised	12 Sep 2023
Presented to CSC for initial comment	19 Sep 2023

Italics denote planned events that could be subject to change

Appendix 2: Glossary

This table lists all the acronyms used in this document and the full term they are an abbreviation for.

Glossary	
Acronym	Full term
CSC	Change Sub-Committee
CSS	Central Switching Service
DCC	Data Communication Company
DNO	Distributor Network Operator
IDNO	Independent Distributor Network Operator
OPSG	Operations Group
RDP	Registered Data Provider
SEC	Smart Energy Code
SECAS	The Smart Energy Code Administrator and Secretariat

Glossary	
Acronym	Full term
SMKI PMA	Smart Metering Key Infrastructure Policy Management Authority
SSC	Security Sub-Committee
TABASC	Technical Architecture and Business Architecture Sub-Committee