

User Guidance Note

Customer Analytics Reporting



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1 Background and Scope

SEC Mod 122A introduced performance monitoring against key DCC Customer Business Processes at a global level. Discussion with SEC Parties through the development of this Modification identified the following business requirements:

- Reporting at SEC Party level of their performance against key business processes;
- Benchmarking of this performance against other (anonymised) SEC Parties in the same User Role;
- Improved ability to diagnose the cause for lower performance where it occurs.

To that end, DCC and SECAS have worked closely with customers to identify their business requirements and to develop a framework for Customer Analytics Reporting that meets customer requirements.

This document will cover guidance for SEC Parties regarding the use, frequency and change process for Customer Analytics Reporting.

2 Document Control

2.1 Revision History

Revision Number	Revision Date	Summary of Changes	Name
0.1	25/01/22	Initial Draft	Mike Fenn and Easton Brown
0.2	25/02/22	Working Group review	Mike Fenn and Easton Brown

2.2 Related Documents

Document	Version	Author	Date
Smart Energy Code (SEC)	55.0	SECAS	08/11/2018

3 Overview of Reporting

- For each relevant User Role (as described in section 5), Users active in DCC systems will receive the following on a monthly basis:
 - Inventory Reporting (as described in section 5.1 of this document)
 - Monthly snapshot reporting packs which identify performance against key business processes and provides various benchmarks against other anonymised industry participants in the same User Role (as described in section 5.2 of this document);
 - Monthly CSV files for each business process, identifying successes and failures and additional information on the transactions to allow improved diagnosis of issues affecting performance (as described in section 5.3 of this document).
 - Reporting on alerts (as described in section 5.4 of this document).
- Change Processes for Customer Analytics Reporting are also contained within this document and governed by this document.

4 Change Process

4.1 Requesting New Reporting

Any SEC Party which is active in DCC Systems can request a new report to be added to the Customer Analytics Reporting suite by making a request to Datascience&Analytics@smartdcc.co.uk. The DCC will review requests as they are received and consult its customers on the necessary changes and associated costs before taking one of the following actions:

- i. if the majority of consultation respondents agree that the new reporting is required, the DCC will deliver the reporting, update reporting guides and advise all affected customers via a communication at the cost quoted in the consultation; or
- ii. if the majority of consultation respondents disagree that the new reporting is required, the originating SEC Party (or any other SEC Party) can request the new reporting from the DCC as an additional service.

In all instances the DCC will feedback to the originating Party identifying the resolution route, and if new reporting is to be created will communicate the details to all affected Parties.

4.2 Requesting Changes to Reporting Criteria

Any SEC Party which is active in DCC Systems can request a change to an existing report in the Customer Analytics Reporting suite by making a request to Datascience&Analytics@smartdcc.co.uk. The DCC will review requests as they are received and where the change is deemed necessary will deliver the amended reporting criteria at no additional cost.

If the change is deemed unnecessary then the originating SEC Party or any other SEC Party can request the revised reporting from the DCC as an additional service. The DCC will quote for the amended criteria.

4.3 Identifying Corrections to Existing Reporting

The DCC seeks to produce high quality reporting and to this end will seek to validate Customer Analytics Reporting with all recipients. It is obviously possible however that Service Users may at any point identify that the logic used for a particular report has not included or excluded particular business exceptions.

Any SEC Party which receives Customer Analytics Reporting may report any queries about the validity of the reporting and data to the DCC by making a request to Datascience&Analytics@smartdcc.co.uk. The DCC will review these requests as they are received and consult its customers on the necessary changes before taking one of the following actions:

- i. if the majority of consultation respondents agree that the existing reporting logic is incorrect, the DCC will correct the business logic, update reporting guides and advise all affected customers via a communication at no additional cost; or
- ii. if the majority of consultation respondents disagree with changing the existing reporting logic, the originating SEC Party (or any other SEC Party) can request the revised reporting from the DCC as an additional service. The DCC will quote for the amended reporting logic.

In all instances the DCC will feedback to the originating Party identifying the resolution route.

5 Reporting Contents

Reporting will be output on a monthly basis for the following categories; reporting may be developed for additional User Roles, or new User Roles may be added as recipients for existing reporting, subject to a successful change request:

5.1 Inventory Reporting

For the User Roles: Import Supplier, Export Supplier, Gas Supplier and Electricity Distributor, the DCC will provide monthly inventory reporting identifying the User's Metering Estate. This reporting will be provided in each of the following formats.

1. A single bar graph for each Device Type (Electricity Smart Metering Equipment (ESME), Gas Smart Metering Equipment (GSME), In Home Display (IHD), Pre-Payment Meter Interface Device (PPMID), Other) identifying each Device Model (along the x-axis) and the volume of meters and of each firmware model (on the y-axis).
2. A single Device Model bar graph, giving an anonymised breakdown of each SEC Party's estate firmware version, highlighting the report recipient and the industry average.
3. The DCC will for provide for each customer a CSV data file identifying all Devices on their estate with the following data fields:
 - Device Identifier;
 - Smart Metering System (SMS) Identifier;
 - Device Type;
 - Device Model;
 - Firmware version;
 - Communication Service Provider (CSP) Id;
 - Energy Supplier Id;
 - Distribution Network Operator (DNO) Id;
 - MPxN;
 - Postcode;
 - Last Meter Read time/date;
 - Last Alert time/date;
 - Last Alert Code (only if sent to report recipient);

- Commissioned Status;
- Power Outage Alert Count in last month (including Polyphase Supply Interrupted Alerts);
- Prepayment flag;
- SMETS version;
- whether the Device expires on the Central Products List (CPL) within 30 days;
- Devices whose Security Certificates are due to expire; and
- Change of Supplier Start and End dates.

5.2 Business Process Reporting

The DCC shall provide reporting to its Users on the business processes defined in the table below, which will include a view of the Users' performance against anonymised performance data for all Parties in the same User Role.

Business Process	SRV	Description	Roles
Install and Commission	8.11	Update HAN Device Log	IS, GS
	6.21	Request Handover of DCC Controlled Device (Update Supplier Certificates)	IS, GS
	8.1.1	Commission Device	IS, GS
	8.7.2	Join Service (Join GPF with GSME)	GS
	6.20.1	Set Device Configuration (Import MPxN)	IS, GS
	1.1.1	Update Import Tariff (Primary Element)	IS, GS
	6.8	Update Device Configuration (Billing Calendar)	IS, GS
	8.14.1	Communications Hub Status Update Install Success	IS, GS
	8.7.1	Join Service (Critical)	IS, GS
	No Meter Read received within 30 days of 8.14.1		IS, GS
	Measure daily total volume of installs for the period against the predicted number of installs based upon historic install volumes		IS, GS
	Measure daily total volume of Install and Commission (SRV 8.14.1) versus Install and Leave (SRV 8.14.2).		IS, GS
Change of Supplier (Gain)	6.23	Update Security Credentials (CoS)	IS, GS
	1.1.1	Update Import Tariff (Primary Element)	IS, GS
	6.8	Update Device Configuration (Billing Calendar)	IS, GS
	Identification of whether there was a successful read within 30 days prior to CoS Gain		IS, GS
	Identification of whether 8.14.1 or 8.14.2 was sent by old supplier prior to CoS Gain		IS, GS

Business Process	SRV	Description	Roles
Change of Tenancy	3.2	Restrict Access for Change of Tenancy	IS, GS
Tariff Updates	1.1.1	Update Import Tariff (Primary Element)	IS, GS
	1.2.1	Update Price (Primary Element)	IS, GS
Pre-Payment	1.6	Update Payment Mode (Payment Mode = Prepayment)	IS, GS
	2.1	Update Prepay Configuration	IS, GS
	2.2	Top Up Device (Update Balance with positive value)	IS, GS
	2.3	Update Debt	IS, GS
Security and Key Management	6.15.2	Update Security Credential (Device)	IS, GS
	6.17	Issue Security Credentials	IS, GS
	6.21	Request Handover of DCC Controlled Device (Update Supplier Certificates) – other than use in Install and Commission process.	IS, GS
Update Device Firmware	11.1	Update Firmware	IS, GS
	11.3	Activate Firmware (Individual SR for each GUID for firmware activation)	IS, GS
Logistics CH Ordering and Returns	8.14.3	Communications Hub Status Update – Fault Return	IS, GS
	8.14.4	Communications Hub Status Update – No Fault Return	IS, GS
Distribution Networks Post I&C Activity	6.15.1	Update Security Credentials (Update Network Operator Certificates)	IS, GS, ED
	6.5	Update Device Configuration (Voltage)	ED
	6.22	Configure Alert Behaviour (Update ENO Alter Configuration)	IS, GS, ED
Meter Reads	4.6.1	Retrieve Import Daily Read Log	IS, GS
	4.6.2	Retrieve Export Daily Read Log	ES
	4.8.1	Read Active Import Profile Data	IS, GS, ED, OU
	4.8.2	Read Reactive Import Profile Data	IS, ED, OU
	4.8.3	Read Export Profile Data	ES, ED, OU
	4.10	Read Network Data	IS, GS, ED
	4.17	Retrieve Daily Consumption Log	IS, GS, ED, OU
Read Registers	4.1.1	Read Instantaneous Import Registers	IS, GS, ED

Business Process	SRV	Description	Roles
	4.1.2	Read Instantaneous Import TOU Matrices	IS, GS, ED
	4.1.3	Read Instantaneous Import TOU With Blocks Matrices	IS, ED
	4.2	Read Instantaneous Export Registers	ES, ED
	4.12.1	Read Maximum Demand Import Registers	IS, ED
	4.12.2	Read Maximum Demand Export Registers	ES, ED
	4.15	Read Load Limit Data	IS, ED
	4.16	Read Active Power Import	IS, ED
Scheduling	5.1	Create Schedule	IS, ES, GS, ED, OU
	5.2	Read Schedule	IS, ES, GS, ED, OU
	5.3	Delete Schedule	IS, ES, GS, ED, OU
Read Device Information	6.2.2	Read Device Configuration (Randomisation)	IS, ED
	6.2.4	Read Device Configuration (Identity Exc MPxN)	IS, ES, GS, ED, OU
	6.2.7	Read Device Configuration (MPxN)	IS, ES, GS, ED, OU
	6.13	Read Event Or Security Log	IS, GS, ED, OU
	7.4	Read Supply Status	IS, ES, GS, ED, OU
	8.2	Read Inventory	IS, ES, GS, ED, OU
	11.2	Read Firmware Version	IS, ES, GS, ED, OU
Maximum Demand	6.18.1	Set Maximum Demand Configurable Time Period	ED
	6.18.2	Reset Maximum Demand Registers	ED
Auxiliary Load	7.7	Read Auxiliary Load Switch Data	IS, ED, OU
	7.14	Read Auxiliary Controller Configuration Data	IS, ED, OU
	7.15	Read Auxiliary Controller Operational Data	IS, ED, OU

Business Process	SRV	Description	Roles
Other SRVs	4.4.2	Retrieve Change Of Mode / Tariff Triggered Billing Data Log	IS, GS
	6.27	Update Device Configuration (RMS Voltage Counter Reset)	ED
	8.4	Update Inventory	IS, ES, GS, ED, OU
	12.1	Request WAN Matrix	IS, ES, GS, ED, OU
	12.2	Device Pre-notification	IS, ES, GS, ED, OU

Roles Key:

- **IS – Import Supplier**
- **ES – Export Supplier**
- **GS – Gas Supplier**
- **ED – Electricity Distributor**
- **OU – Other User**

The DCC will report for each of the requirements noted in this section, identifying in separate graphs:

1. A monthly average benchmark of success or failure against other Users operating in the same User Role.
2. A monthly view of Round Trip Time or Alert delivery time, identifying User best, worst, mean and median against those same metrics at an industry level for other Users operating in the same User Role.
3. A daily average view of success/failure and average Round Trip Time for that User compared to the industry average of Users acting in that role. Where appropriate, performance will be broken down by meter type, Region and SMETS1/SMETS2, and 'Category 1 & 2' Incidents will be highlighted. The report will identify all failures by Reason Code alongside all additional signifiers to enable Users to diagnose common themes.

'Success' will be determined by the receipt of a 'Successful' Response code that has not timed out. 'Failure' will be determined by the receipt of an 'Exception' or 'Timeout' Response code.

5.3 CSV Analytical reporting

The DCC will also provide a monthly CSV data file for each Service Reference Variant (SRV), identifying at an aggregated level the following criteria:

- Response code;
- Communications Hub Manufacturer;
- Communications Hub Model;
- Communications Hub Function;
- Communications Hub Firmware;
- Device Type;
- Device Manufacturer;
- Device Model;
- Device Firmware Version;
- Region; and
- Round Trip Time.

5.4 Alert Reporting

For the User Roles: Import Supplier, Export Supplier and Gas Supplier, the DCC shall provide reporting on DCC and Device Alerts received, consisting of a total of all Alerts and individual reporting for each Alert. This reporting will provide the following views:

1. A daily average view of success/failure of Alert sending and average delivery time for that customer compared to industry average.
2. A monthly summary of success compared to industry average.
3. A monthly CSV data file for each Alert type, identifying at an aggregated level the following criteria:
 - Success/Failure;
 - Communications Hub Manufacturer;
 - Communications Hub Model;
 - Communications Hub Function;

- Communications Hub Firmware;
- Device Type;
- Device Manufacturer;
- Device Model;
- Device Firmware Version;
- Region; and
- Round Trip Time.

'Success' will be determined by the receipt of a 'Successful' Response code that has not timed out. 'Failure' will be determined by the receipt of an 'Exception' or 'Timeout' Response code.

Electricity Distributors will receive reporting on the following subset of Alerts:

- AD1 – Power Outage Alert;
- 8F35 – Supply Outage Restored;
- 8F36 – Supply Outage Restored - Outage \geq 3 minutes;
- 8F58 – Supply interrupted on Phase 1;
- 8F59 – Supply interrupted on Phase 2;
- 8F5A – Supply interrupted on Phase 3;
- 8F37 – Supply Outage Restored on Phase 1;
- 8F38 – Supply Outage Restored on Phase 1 Restored - Outage \geq 3 minutes;
- 8F39 – Supply Outage Restored on Phase 2 Restored;
- 8F3A – Supply Outage Restored on Phase 2 Restored - Outage \geq 3 minutes;
- 8F3B – Supply Outage Restored on Phase 3 Restored;
- 8F3C – Supply Outage Restored on Phase 3 Restored - Outage \geq 3 minutes;
- 8F0C – Clock not adjusted (adjustment greater than 10 seconds);
- 81C6 – Clock not adjusted (outside tolerance);
- N12 – Failure to deliver Command to Device;
- N13 – Failure to receive Response from Device;
- N53 – Command not delivered to ESME; and
- N55 – SMETS1 Service Provider (S1SP) Service Request Validation Failure

Reports for the Electricity Distribution role for the Alerts N13 'Failure to receive Response from Device' and N55 'S1SP Service Request Validation Failure' will receive an additional view identifying a breakdown of the Alerts split by Meter Make, Model, and Firmware Version.

In addition, the following reports will be produced specifically for the Electricity Distribution role:

- a) Report comparing the daily monitoring of N16 'Device Identity Confirmation' Alerts with N42 'Security Credentials Updated on the Device' Alerts identifying volumes which have met seven days service level agreement (SLA) for receipt of the N42 following N16 and those that have failed this metric, identifying the associated Responsible Supplier;
- b) Standardised Reporting identifying Power Outage Alerts with no Power Restoration Alerts:
 - i) AD1 with no 8F35
 - ii) AD1 with no 8F36
 - iii) 8F35 with no AD1
 - iv) 8F36 with no AD1