Electricity Settlement Reform

DCC Impact Considerations

June 2014

Purpose of the DCC

- The role of the DCC is to provide communication services between smart meters and the business systems of energy suppliers, network operators and other authorised service users

- DCC will provide a B2B service and has no direct contact with consumers

- To achieve this, the DCC will put in place the shared data and communications infrastructure necessary for smart meters to:
    - operate consistently for all customers regardless of their energy supplier
    - provide smart metering data to network operators in support of smart grids
    - permit authorised third parties to provide services to consumers once they have granted permission to use their data, offering new routes for consumers to receive energy services and advice on how to reduce their energy usage
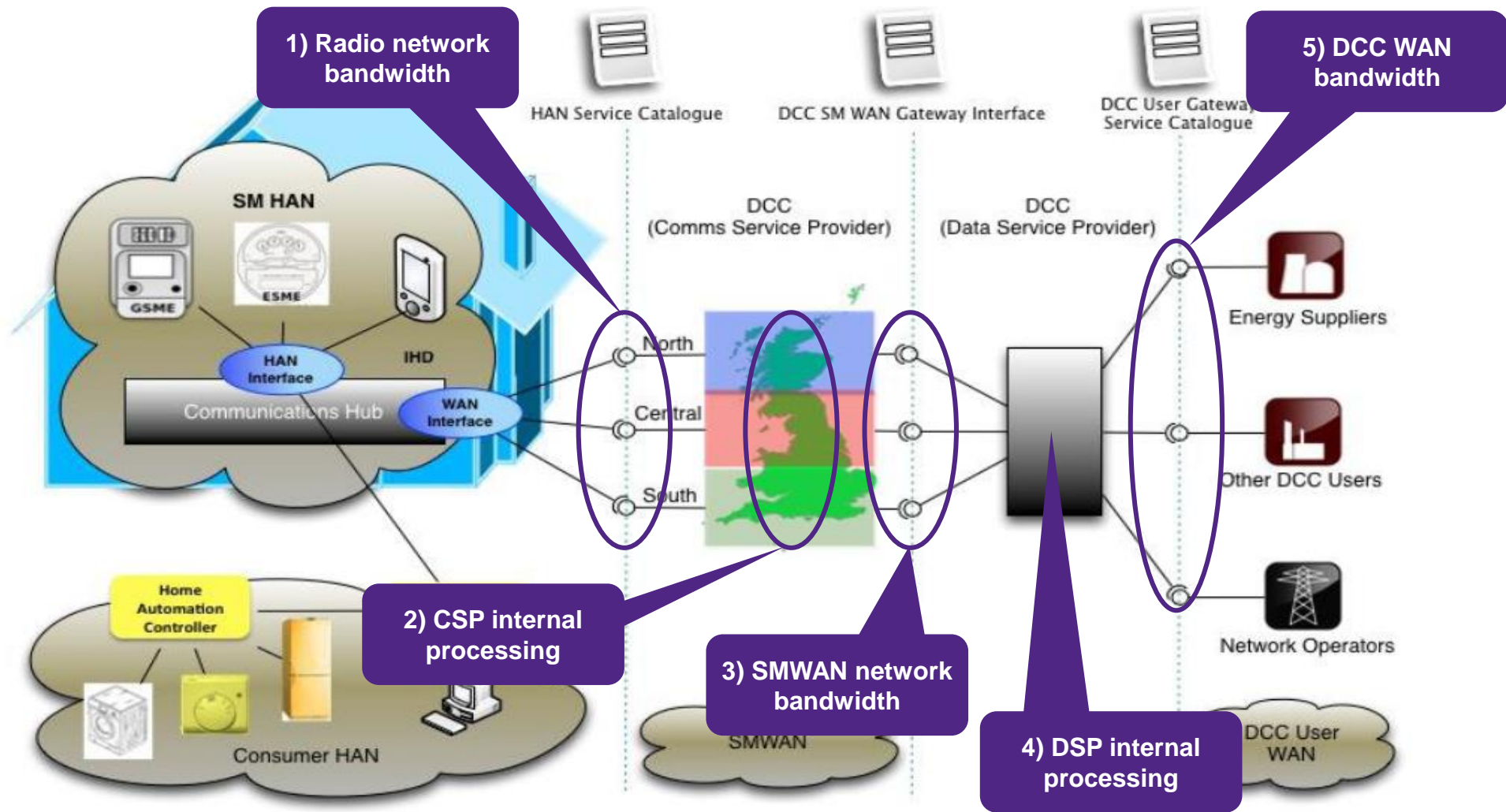
Data Process

Consumption Data

Collection → **Validation** → **Aggregation** → **Settlement**
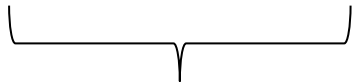
DCC scope

Potential Impacts

Data Communications Company

DCC Capacity Profiles

- DCC is dimensioned to support the "Expressed Demand" profile which were created for the DSP/CSP procurements

- DSP and CSPs were required to have the ability to scale to meet the "High Demand" profile

- DCC is commencing an updated demand modelling activity which will re-assess assumptions

Data Communications Company
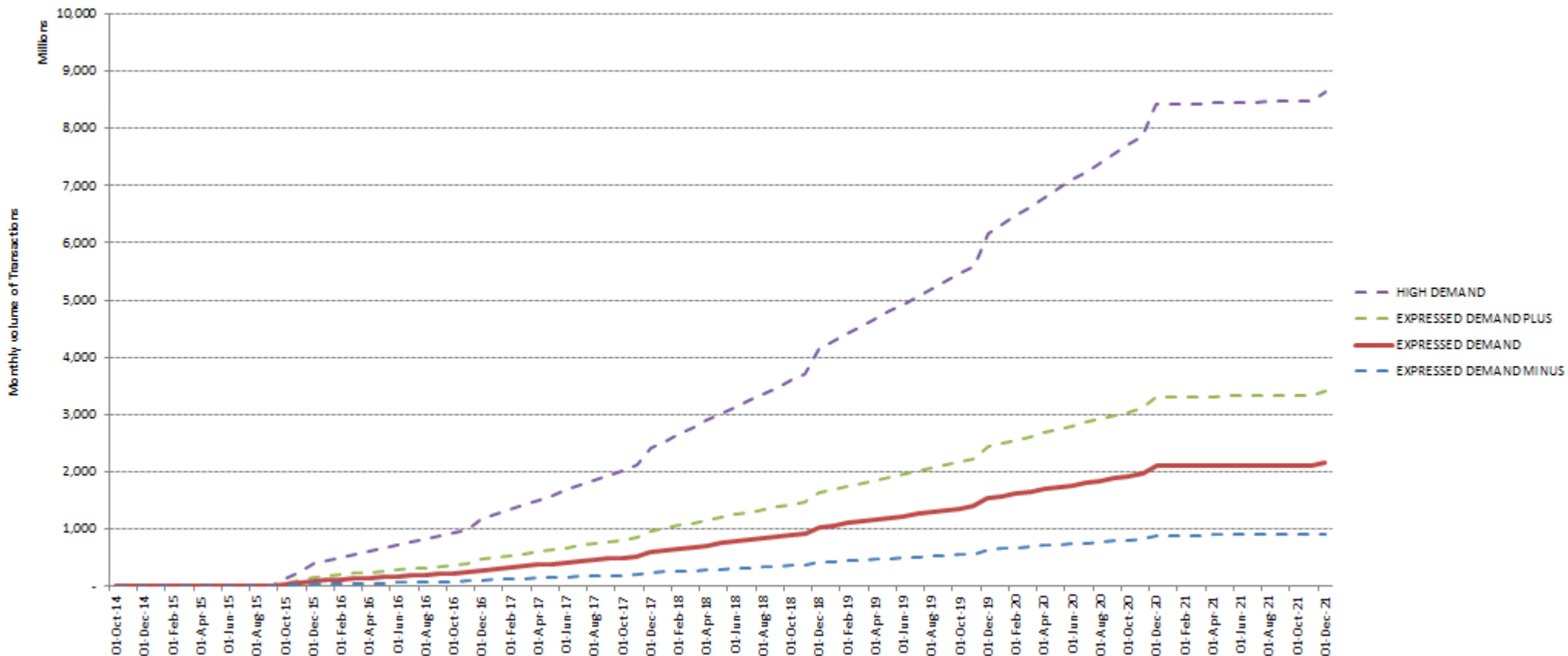
Potential Options

- Enhance Meter Calendar to support half-hourly schedule readings
  - Pros:
    - Data can be scheduled (e.g. weekly, monthly) and pushed from the meters, thus reducing the extra load on the DCC components and networks
  - Cons:
    - Requires changes to SMETS, meter firmware and DCC User Interface

- Issue "Read Profile Data" Service Request to get half-hourly information
  - Pros:
    - Command already exists and can be used to report on up to 13 months of half-hourly data
    - Requests can be scheduled in the DSP (but not in the meter) which will reduce slightly the overhead on the DCC WAN and DSP message queue
  - Cons:
    - Does not reduce load on the SMWAN/CSP infrastructure when requesting the half-hourly data
    - On-demand requests will further increase the network traffic

Data Communications Company

HAN Message Sizes (excluding protocol/security overheads)

- Service Request profiles are mapped to the following HAN Payload Groups
  - Standard billing log retrievals (on-demand and scheduled) are classified as group 4 messages
  - Profile data reads are classified as Group 2 – 4 depending on the volume of half hourly data entries returned (e.g. 30 mins, daily, weekly, monthly, yearly)

HAN INTERFACE COMMAND PAYLOAD SIZE			
GROUP	LOWER (Bytes)	UPPER (Bytes)	MEDIAN (Bytes)
1	312,500	750,000	531,250
2	75,854	75,854	75,854
3	5,952	5,952	5,952
4	151	374	262.5
5	1 4	56	35

DCC – engagement with options

- DCC capacity constraints can inform overall impact assessment and decision-making, but should not drive option development

- DCC can impact assess the capacity implications of each option and report back to build the overall cost-benefit analysis