ElectraLink's response to the BPDG DCC 'User Gateway' Options

ElectraLink welcomes the opportunity to respond to the recent questions raised by the BPDG regarding the options for establishing a DCC "user gateway". Our response below will hopefully reiterate our approach and reinforce why we believe the extension of the Data Transfer Network (DTN) is the most cost effective and lowest risk option to industry.

> **Q1.** Should we extend the mandate of an existing industry network (i.e. DTN) to cover DCC user gateway requirements? What would be the merits in this approach?

As the Central Body responsible to industry for the procurement and management of the DTN, ElectraLink is well placed to summarise the benefits of extending the DTN to provide for an interim period the DCC user gateway. A summary of the benefits to industry and the SMIP of doing this are:

- The DTN is already connected to 100% of Suppliers trading in the domestic electricity market and 55% of Gas Suppliers that are expected to require connection to the DCC;
- Connectivity to the DTN is an established process offering three types of connection based on user requirements.
- In 2011, the DTN infrastructure, including all servers, network, applications and databases underwent a full technology refresh, resulting in a modern, robust service capable of fully meeting the requirements of the DCC user gateway.
- The DTN will be providing enduring network services to industry post 2014 as a consequence of:
  - The large number of industry flows that are not impacted by SMIP which will continue, for instance around settlement
  - Half-hourly metered customers are not automatically covered by the SMIP and therefore all flows relating to meter readings, registration, change of supplier etc. will need to continue;
  - Settlement of the current non half-hourly market will need to continue using the current arrangements until sufficient customers have had smart meters are installed and the market arrangements have changed; and
  - Suppliers have the choice to use or not to use the DCC for SME customers.
- The current service is understood and valued by industry and supported by DECC;
- Extending the DTN will reduce implementation costs to the SMIP and to the DCC users; Extending the DTN will significantly reduce risk to implementation timescales to SMIP and that of industry parties that will need to connect to DCC, by not requiring new systems to interface to the gateway, and by the opportunity to use the DTN validation functionality to reduce system testing time;
- The Data Transfer Service (DTS) already provides a fully managed end to end security model for its users. Extending the DTN will automatically extend this security to encompass the DCC to Industry communication, providing features such as encryption, key management and independent file delivery audit.

- The DTS provides a functionally rich toolset to its users to securely manage the transmission and receipt of data.
- The recent DCC Consultation confirmed that there is no overlap between the DCC Obligations (data Retrieval) and the current DNO licence obligation in respect of Data Transfer. A gateway supporting gas and electricity smart metering could be enabled through minimal change to existing regulatory frameworks and a commercial agreement between ElectraLink and Xoserve.

In August ElectraLink commissioned an independent review of the DTS by PA consulting; their remit was to engage with our customers to understand their requirements of how the DTN will need to evolve to support smart metering. The report, published in October 2011, titled "The Future of ElectraLink's regulated Data transfer Service", provides a comparison against other industry networks, namely the IX and CVA networks, determining that neither is architecturally appropriate to provide a DCC gateway solution. The report also provided comparison against the proposal of building a 'green field' network solution, concluding that the DTN provided the most cost effective and least risk solution to industry summarised in the above bullets. The report also went on to provide indicative projected costs of the changes needed to support the SMIP based on a number of volumetric and timescale assumptions.

> **Q2.   What would be the merits of including the development of a new DCC user gateway in the DSP contract?**

Development of a new DCC user gateway can be provided via a number of options, the two most likely are a portal solution, where Market Participants are required to arrange for their own connections to that portal along with the management and IT processes that this would involve. The other would be the development of a green field network consisting of network connectivity with upfront investment to establish both the physical links to participants and the network operations centre, which will manage the overall network and the applications that serve it. Investment may also be required to design, implement and test functionality within the network service, for example audit, acknowledgements, security management, routing, etc should these be required.

As previously mentioned ElectraLink undertook an independent review of its services and part of that review was a direct comparison against both a 'portal' and 'green field' development of a new DCC user gateway.

Whilst there are some benefits of starting afresh and building a network designed specifically to meet the requirements of smart metering, including real time services and greater bandwidth capacity. The review showed that these perceived benefits would be outweighed by the following:

Area of Impact	Portal / Greenfield Solution	Enhanced DTN
Message Validation	New development - DCC and all participants	Standard feature
Communications Lines	Individual procurement by each market participant and ongoing management of commercial relationship and upgrade path with provider	Provided as part of the standard DTN package. Central procurement likely to be more cost effective overall
Testing	Full commissioning tests of new lines at each participant and commensurate connectivity and functional testing at both the DCC and participant ends.	Tried and tested routines for implementing new connections DCC treated the same as any new party wishing to connect to the DTN. NB - DTN testing mechanisms enable continuous system availability
Disaster Recovery	All participants would need to switch their own communications lines to the DCC disaster recovery site should there be a need	Automatic switching of all communications as a standard feature
Re-send/Re-collect	DCC may have to re-collect data to re-send to participants Participants would need to develop their own routines and procedures to manage file re-sends	Standard features of the DTN. Files can be re-sent without data regeneration and re-collected without the sender having to re-send the data.
User Management	New routines at DCC and Market Participants	Standard feature of the DTN. Participant ID and Role Codes could be used to provide the DCC with pre-validated messages
Request ID	New build requirement	DTN provides unique identification of inbound requests
Receipt Confirmation	Would require development and potentially doubles messaging requirements	Confirmation of receipt of inbound request is standard DTN functionality
Audit Trails	DCC and Market Participants would both need to develop processes and software to manage audit trails	Standard feature of the DTN that logs all messages in a robust manner
On-line services	Not proposed under the Portal Solution. Probably more of an issue for smaller participants with less mature IT systems	Some online services already exist within the DTS. Both development and operational costs would be shared across the industry rather than being incurred by each Market Participant.
Security Architecture	Internal Architecture within the DCC but participants would need to manage security between the DCC, across the connection and through their firewalls.	End-to-end architecture provided as standard. Would start within the DCC and extend beyond the participants' firewalls.

Message Translation	Would need to be developed from scratch by the DCC Service Provider	Can already be partially delivered by the DTN and could be expanded to cover remaining gas market messages and new messages to/from DCC
Experience	New Service Provider unlikely to be completely familiar with data transfer requirements around the gas and power markets and would therefore be likely to incur a significant learning curve	Experienced personnel, some of whom have operated the service since its inception in the 1990's

Electralink has been working closely with the BPDG, SMDG and more recently WG4 to support the Smart Metering Implementation Program. We have used our experience in running the DTN service as input to these groups and more importantly to understand how the requirements of SMIP will affect the industry going forward. We have proactively engaged with our suppliers and specialist consultancies determine what would need to change within the DTN to best support the emerging requirements of the SMIP.

To this end we have a scheduled DTN improvement and evolution plan that will be introducing flow prioritisation, class of service and real-time messaging capability on the network.

To Summarise

Whichever solution is ultimately chosen for the DCC to communicate with Market Participants, our high level analysis suggests that an enhanced DTN will be the most effective means of Market Participants communicating with the DCC. Our reasons for this conclusion are set out below.

The DTN meets Market Participants' commercial imperatives; from our engagements with Market Participants, we identified some high-level commercial drivers for the optimal solution to connect to the DCC, and these were:

- Cost-effectiveness - Our high level analysis suggests that the DTN offers a cost-effective solution to the GB power and gas sectors. The DTN offers a more cost effective solution than the procurement of a green field network.
- A new green field network development would bring significant risk and extra cost and particularly expand implementation testing. In our view, this is likely to be most significant for smaller industry participants;
- Re-use rather than re-invent - The DTN is capable of re-use to provide the desired services due to its design and its ability to provide inter participant data exchange. It is well known by Market Participants and has strong governance and robust change processes that are well understood;
- The DTN would provide a single means of access to the DCC for both gas and electricity transactions.

The DTN meets Market Participants' technical requirements:

- Scheduled communications - this is the core of the current DTN and has proven effective over the years since the introduction of retail competition into the electricity sector;
- Near real-time messaging - this is currently available on the DTN and being demonstrated to Market Participants and Potential DCC DSP's;
- Online access - the DTN already provides this type of access to its users for current services e.g.webtools.

Electralink is committed to supporting the SMIP and we are keen to continue to share our expertise and knowledge with the Programme. If you would like to discuss any areas of our response, or other areas of smart metering, please contact Paul Gath on 020 7432-3006, or email paul.gath@electralink.co.uk.