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Anthony Bivens  
Energy Networks Association,  
6<sup>th</sup> Floor, Dean Bradley House,  
52 Horseferry Road,  
London,  
SW1P 2AF

16 May 2014

Dear Anthony,

**Re. 'Demand Side Response Shared Services Framework Concept Paper' (April 2014)**

ElectraLink Ltd is pleased to respond to the Energy Network Association's (ENA's) consultation entitled 'Demand Side Response Shared Services Framework Concept Paper' (April 2014). In accordance with our central role as service controller of the Data Transfer Service (DTS) to the GB electricity market we have focused our response on those areas most closely aligned with our experience, knowledge and core competencies. As such we do not feel it is appropriate to respond to the individual questions as they cover areas where it would not be appropriate for ElectraLink to express a view. However, we believe that it is important for us to give our views on how the framework could be implemented in the most cost effective manner for industry.

ElectraLink is supportive of the work of the ENA's Electricity Demand Side Response Shared Services Group (DSR Group). ElectraLink believes that it is important to develop effective arrangements for managing the provision and use of DSR. Furthermore, we believe that these arrangements will work most effectively and efficiently for market participants and consumers if they are common to all users, providers and intermediaries of DSR and if they use common infrastructure to support delivery. We believe that the use of the Data Transfer Network (DTN) will meet the communication requirements of the service and represents the most cost effective and lowest risk solution for industry.

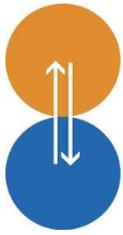
Based on ElectraLink's existing role at the heart of the electricity market as provider of the DTS and DTN, and potential future role supporting Elexon as the settlement body for the Electricity Market Reform's Capacity Mechanism and Contracts For Difference, we believe we are well situated to support the development and operation of common DSR arrangements. Therefore our response focuses on demonstrating the value of the services we provide, particularly in terms of providing an existing, common electricity industry infrastructure with the key attributes to support the transition to wide scale use of Demand Side Response (DSR).



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## Context

The DSR Group's concept paper is timely given the growing attention from the industry and government in DSR as a way of managing changes in consumer behaviour and network use. These changes are being driven primarily by the move to a low-carbon economy which is resulting in increasing volumes of renewable distributed generation, use of electricity for heating and electric vehicles, which could increase the size of daily peaks in demand and the variability of demand and generation output. As noted in the ENA's consultation document, DSR may provide an effective means of mitigating the adverse effects of changes in consumer and generation behaviour on networks and new ways for suppliers to manage their trading and demand forecasting operations. For example, encouraging consumers to use more, less or shift their load may be a cost effective approach for many different parties.

Because of the value to different parties at different times and in different circumstances, and the potential for these uses to conflict, there is clearly a need to understand how DSR may be used and coordinated effectively and efficiently by market participants and in the interests of consumers. We believe the ENA's Electricity Demand Side Response Shared Services Group, government and other industry participants are right to consider options for developing an effective and efficient shared services framework.

In its concept paper the ENA's DSR Group set out a potential sharing framework which would enable the electricity Distribution Network Operators (DNOs) and the National Electricity Transmission System Operator to access and share demand side response resources.

## About ElectraLink

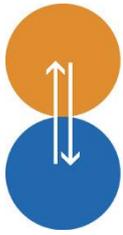
ElectraLink is owned by the electricity DNOs and its core business is to provide the regulated DTS on behalf of the DNOs. The DTS underpins the communication of information between different electricity retail market participants, which is necessary to support core electricity retail market processes, e.g. the change of supply and settlement processes. In addition, ElectraLink uses the underlying infrastructure that supports the DTS, the DTN, to provide other commercial network services to electricity and gas market participants (e.g. DUoS e-billing and the RGMA data transfer services).



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Our provision of network services means that the DTN is used by a growing number of retail electricity market and gas retail market participants. Figure 1 below illustrates the 60% growth in users of the DTN since January 2010. Growth over the last two years has been driven primarily by the connection of Green Deal Providers, which are required to use the DTN to communicate with the Green Deal Central Charge Database. The number and types of party is set to grow further as, following consultation by Elexon, the implementation of the government's EMR Capacity Mechanism and Contracts For Difference scheme will potentially result in the connection and use of the DTN by new market participants, such as generators, the Transmission System Operator and DSR providers. The value of the DTN in providing secure, auditable and cost effective transfers between market participants can be made available to support DSR.

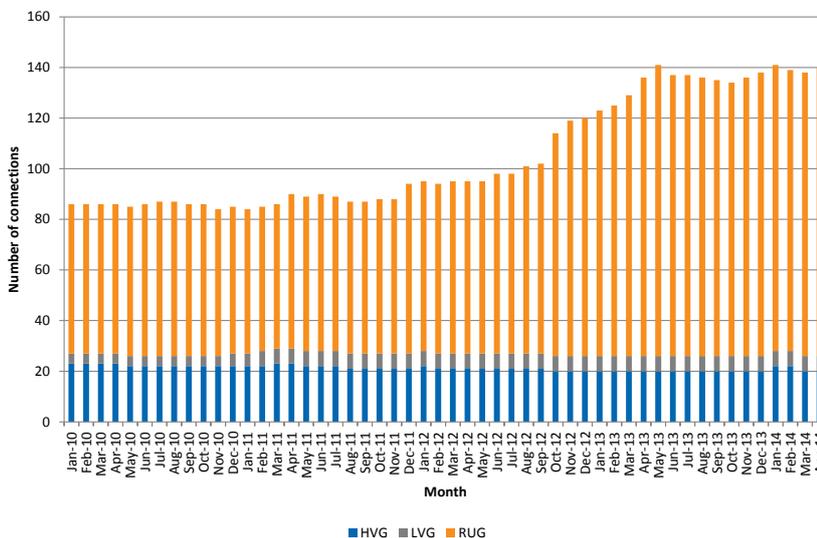


Figure 1 - Growth in connections to the Data Transfer Network

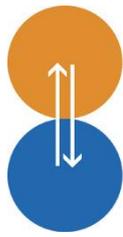
The electricity industry is undergoing considerable change, so ElectraLink is actively engaged in supporting the industry and government's exploration and development of arrangements to support these changes, for example in relation to DSR, Smart Metering and Smart Grids. We have actively contributed through our membership of industry fora such as the Smart Grid Forum, BSC and other working groups as well as responding to recent consultations on DSR and other related areas.



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## How Can ElectraLink Assist?

The ENA's concept paper recognises that both the Alignment Path and Asset Sharing Path options will require clearly defined arrangements to support a shared services framework. For example, the concept paper considers the need to define data exchange and complementary contractual arrangements, and to define monetary flows to enable DSR parties to send invoices and pay for services.

Based on the descriptions of the Alignment Path and Asset Sharing Path, a framework is likely to require the exchange of data between parties in order to negotiate and agree contracts for DSR provision, to dispatch requests for DSR provision and to financially settle accounts between DSR users and providers. We believe that this level of data exchange should be supported by common infrastructure with the following key attributes:

- Secure – ensure that all communications between DSR users, providers and intermediaries are sent in accordance with agreed security requirements to ensure integrity and trust;
- Fast – should be capable of enabling close to real-time communications;
- Multiparty – enable a range of different parties to connect to and use the infrastructure to communicate with one another;
- Easily scalable – to allow the infrastructure to scale-up and adapt to growth and changes in the use of DSR;
- Auditable – to enable parties to perform administrative functions ensure clear visibility of financial transactions, and assess overall use and performance;
- End to end – to ensure a DSR framework is cost effective, the infrastructure should be capable of supporting all elements of the framework's operation, e.g. DSR contract request and agreement, dispatch for DSR provision and settlement of DSR contracts and financial positions post event.

With these attributes in mind, we believe ElectraLink's network and data services can effectively support the development and operation of a DSR framework.



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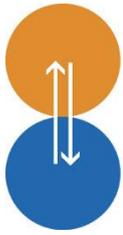
## Network Services

The Shared Services Framework envisages parties sharing data with each other or a central intelligent scheduling service/mechanism to enable the efficient allocation of DSR resources. It is recognised that a set of defined data exchange arrangements will be required to enable communication between network operators and DSR providers.

ElectraLink provides the DTN, which is a secure communications network used by all electricity retail market participants and 75% of domestic retail gas market participants. The regulated DTS uses the DTN to enable interoperability in the electricity retail market by enabling all retail market participants to send and receive data flows that are essential to the operation of core industry processes, e.g. settlement, change of supply, meter operation and Green Deal processes. In addition to the DTS, the DTN supports commercial network services. For example, the DTN also carries a large proportion of gas 'RGMA' messages.

We believe any DSR framework would be best served by a common, regulated network service built on existing infrastructure, such as the DTS. This approach would have the following advantages:

- Consistency, transparency and certainty – A single, common set of arrangements ensures that all users have the certainty and confidence needed to design and operate a single set of business rules to communicate with other DSR parties. This enables users to avoid the costs of designing multiple systems and processes, and the risks of diverging processes and systems developed to support different technical solutions, which could adversely affect the effective delivery of a DSR framework;
- High levels of existing and proposed DSR connection - Figure 2 shows how the existing overlap between the users of the DTN and likely DSR providers, users and interested parties. Of course the implementation of the governments EMR proposals will potentially see generators and DSR providers also connect to the DTN;
- Cost efficient – A single service that re-uses existing infrastructure would avoid the costs of duplicating infrastructure. As illustrated below, connection to and use of the DTN and DTS is already commonplace for a large number of parties who are likely to be affected by DSR;



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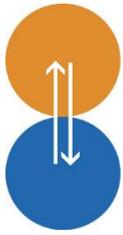
- Range of connection solutions - ElectraLink offers a range of DTS/DTN connection options to suit the circumstances and budgets of different parties, e.g. a small or low volume participant can access the DTN using a shared remote gateway, whereas larger participants or those with significant volume requirements can use a dedicated high volume gateway. This low cost of access, together with secure and auditable delivery, was one of the key reasons why the DTS was chosen as the mandatory network for Green Deal messaging;
- Secure, fast, scalable and reliable – The DTS uses Public Key Infrastructure (PKI) encryption to ensure that data flows are sent securely from one participant to another; the DTN is able to send data flows between participants in close to real-time, enabling effective communication of urgent or time sensitive information; the underlying infrastructure that supports the DTS, the DTN, has been designed to ensure that it can easily and quickly respond to changes in its use, e.g.
  - In the next few months we will complete a migration of the DTN infrastructure to a secure private cloud to enable easy expansion of capacity, e.g. the Implementation of half hourly settlement for additional profile classes;
  - Different message formats can be used to enable communication (this will include XML, the implementation of which is scheduled to be completed later this year)
  - Figure 3 below illustrates how the DTN's use has already grown by over 30% since 2010.
- Low risk - By using an existing infrastructure and existing message structures, there is much more certainty in the development of processes and less new components to be developed and tested;
- Auditable – the DTS provides an effective audit function which enables its users to have independent records of the successful transmission and receipt of messages. This is particularly important where these messages impact commercial arrangements. It should be noted that ElectraLink already securely carries DUoS e-billing flows;
- Fast implementation - A particular benefit of using ElectraLink's network is the ease and speed with which new messages can be created, trialled and implemented. This would for instance enable new communication processes and message formats to be tested prior to full regulated roll out;



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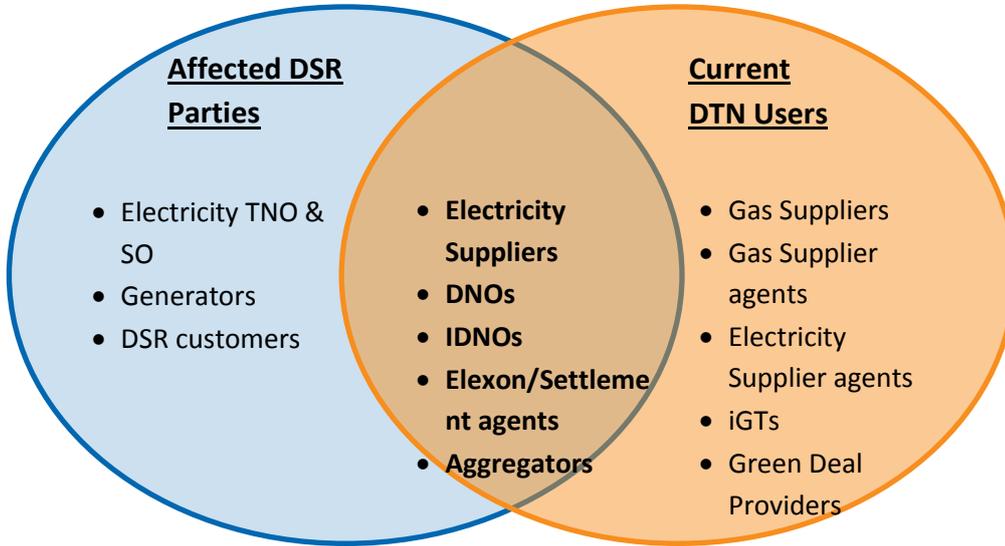


Figure 2 - Overlap of DSR Parties and DTN Users

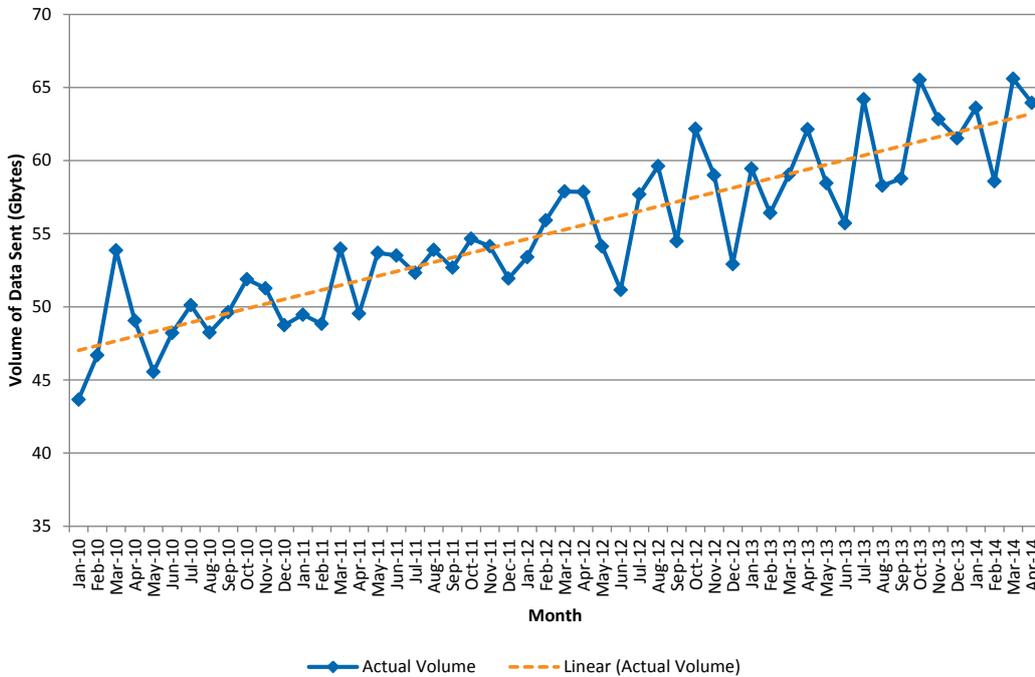


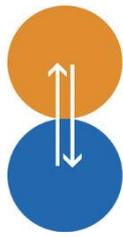
Figure 3 - Growth in DTN use



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## Data Services

With the permission of the Data Transfer Service (DTS) users, ElectraLink has developed analysis and reporting services specifically using DTS data flows sent over the Data Transfer Network (DTN) to help industry and market participant monitor and improve performance and services.

By using the DTN for DSR communication, easy access to analysis and reporting on its use can be achieved by both central bodies and individual parties.

This approach to analysis and reporting would have the following advantages:

- Market wide – A centralised approach to reporting would mean that all transactions between parties would be processed together providing a single, complete view of activity;
- Accurate, consistent and timely - By analysing the actual messages sent and avoiding the need to collate sources of data compiled by different parties, ElectraLink can accurately and consistently report on what is really happening in the market;
- Efficient - ElectraLink's central reports avoid the costs, complexities and disjointed nature of individual companies developing and operating their own self-reporting;
- Secure – DSR communications will be commercially sensitive. ElectraLink already implements strict rules on the provision of its analysis and reporting to ensure that commercial confidentiality is preserved.

ElectraLink already has experience providing both central and market participant specific reports every month to industry.

## Summary

In summary, we believe that the DTN would make an excellent communication infrastructure for Demand Side Response, demonstrating as it does the key attributes required by such a service:

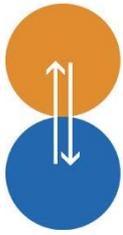
- Secure;
- Auditable;
- Low risk;
- Cost effective;
- Flexible;
- Already used by key DSR market participants;
- Fast implementation.



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ElectraLink would be very happy to work with the ENA and network operators to support the development of a framework for DSR. If you would like to discuss how ElectraLink could support the development of a DSR framework, please contact my CTO Paul Gath on [paul.gath@electralink.co.uk](mailto:paul.gath@electralink.co.uk).

Yours sincerely,

Stuart Lacey  
Chief Executive Officer



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