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Report

Electricity Settlement Reform Significant Code Review:
Preliminary decision on the Architecture Working Group recommendation for the reference architecture of the Market-Wide Half-Hourly Settlement Target Operating Model

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This report is in response to the final TOM recommendation report delivered by the Architecture Working Group (see footnote 1)

Ofgem is making a preliminary decision that industry should proceed on the basis of the Architecture Working Group (AWG) recommended reference architecture, subject to further information supporting this conclusion.[1] The AWG's recommendation sets out its preferred reference architecture, as an Event Driven Architecture (EDA), to enable the Market-Wide Half-Hourly Settlement (MHHS) Target Operating Model (TOM). This recommended reference architecture was broadly supported by industry consultation.[2]

In order to reach a final decision on the target architecture of the TOM Ofgem will require further information, in particular on the costs, interactions with other energy industry systems and consequential impacts. We have set out a number of questions which we require further information and clarity on, prior to making a final decision. We expect these

[1] The recommendation report from the AWG can be found here on the ELEXON website
[2] You can see the non-confidential responses on the BSC website.

questions to be resolved prior to any commencement of procurement and/or build of the systems, and expect the final decision to be reserved to us.

Outstanding questions:

In line with a number of responses to the AWG consultation, and based on the information provided by the AWG so far, we broadly agree with the principles of an EDA as a suitable solution for the MHHS TOM. However, we require further information on a number of important aspects before we are able to make a final decision. We have set these questions out below:

1.) Before making a final decision on the proposed architecture we would need to understand further the costs of building and operating such a system, and how these costs compare to the alternative options.

2.) Specifically, we need to understand better the alternative costs and benefits of the different scope of options. Many of the responses noted a potential complexity and cost associated with maintaining the Data Transfer Network (DTN) alongside any new data integration system (the EDA). We would like to understand further the cost differentials between a full replacement of the DTN vs a partial replacement of the DTN.

3.) The conclusions from the CCDG detailed design consultation noted that the CCDG would revisit whether any changes are needed to the design or transition approach for its new appointments process following the AWG consultation.[3] We note there are some responses that suggest it is not necessary to change the agent appointment process or to move it onto the EDA as this could drive unnecessary complexity and cost. What would be the costs and benefits of moving all DTN related traffic to the proposed EDA vs moving only those items required to enable the MHHS TOM, including looking at the different options around appointment of agents?

4.) We would like to understand further the interaction between the different communication systems (eg DTN, Central Switching Service (CSS), smart

[3] The CCDG detailed design consultation can be found here. The CCDG main conclusions can be found here.

communications via the DCC etc) and the EDA and the potential impacts a 'near real time' processing capability of the EDA may have on these corresponding systems, some of which will be carrying out batch processing. In particular, are there any process integration or end-to-end data integrity risks associated with the AWG recommendation and how would they be mitigated?

5.) We recognise further information is required on the security aspects of any new system. Specifically, we would like further assurance that the EDA is capable and suitable for providing the security requirements needed for handling settlement related data. For example if end-to-end encryption of data is required (as it is in relation to the new Central Switching Service), will that be compatible with a publish/subscribe architecture?

Next steps:

Following this preliminary decision, we expect Elexon, as proposed Programme Manager of MHHS implementation, to start work on the next phase of design with industry and to provide the answers to the questions above as a priority. In commencing this next phase we would also like to ensure that the detailed design of the EDA remains true to the principles set out by the AWG. In particular, we would not support any move towards centralising business logic, and believe that the EDA needs to be kept pure to its task of providing a data routing service. Any development of additional services should be undertaken separately, outside of the EDA.

It is important that a final decision on the EDA can be taken in good time to fit with the transition timetable that we have published, and Elexon should produce a plan that shows how these questions will be answered and the next phase of design work will be undertaken in accordance with the transition timetable. As stated above, no procurement and/or build of the system should commence before the information to the questions we have set out has been provided and Ofgem has taken a firm decision on the reference architecture. We ask Elexon to confirm to us at the earliest opportunity as to when they can provide this additional information, and if any of this requires further work that they set out the plan for when they can deliver this information to us. We continue to expect industry to work alongside the transition timetable we set out in our decision document on MHHS, with the

baseline design being completed by May 2022, and following the above preliminary decision we now expect to see this next phase of design commence.[4]

[4] The decision document can be found here on the Ofgem website