

18th September 2020

National Grid ESO response to electricity retail market-wide half-hourly settlement consultation

Dear Anna,

We welcome the opportunity to respond to your electricity retail market-wide half-hourly settlement consultation.

This response is on behalf of National Grid Electricity System Operator (NGESO) and is not confidential. National Grid ESO is the Electricity System Operator for Great Britain. We balance electricity around the country second by second to ensure that the right amount of electricity is where it's needed, when it's needed – always keeping supply and demand in perfect balance. As Great Britain transitions towards a low-carbon future, our mission is to enable the sustainable transformation of the energy system and ensure the delivery of reliable, affordable energy for all consumers. We use our unique perspective and independent position to facilitate market-based solutions which deliver value for consumers.

We welcome the introduction of market-wide half-hourly settlement (MHHS) as we believe it has the potential to provide real benefit to consumers by facilitating the transition towards a flexible and decarbonised electricity system. It will remove barriers to offering innovative products such as Vehicle to Grid (V2G) more widely, and provide new system flexibility opportunities for technologies such as battery storage.

MHHS will also facilitate the delivery of new market-based solutions such as heat services. NGESO and Scottish & Southern Electricity Networks have been working on the '4D Heat' project as part of the Network Innovation Allowance (NIA). This looks to encourage electric residential heating consumers to turn up their heating load at times of constraint issues (due to excess generation of renewable wind energy on the transmission network). We believe that the success of solutions such as these and potential cost benefits to end consumers (through reducing the Balancing Services Use of System element of bills) is heavily reliant on energy suppliers being able to offer Time of Use (ToU) tariffs that provide meaningful signals which can be accelerated by the introduction of MHHS.

Delivering MHHS will require changes to industry codes such as the Connection Use of System Code (CUSC) and subsidiary documents. As the code administrator for the CUSC the ESO would be happy to support Ofgem and industry in identifying and facilitating any required changes. The implementation of MHHS will also potentially change the frequency and format of data the ESO uses for calculating network tariffs. Modifications to our IT systems will be required in order to accommodate any changes to this data.

The MHHS reform also has the potential to provide the ESO access to significantly more data, which would support more efficient system operation. An example of this can be seen in our future strategy for procurement of frequency response services, as more granular data would enable procurement of services in settlement periods rather than 'blocks' of multiple periods i.e. 24-hour contracts. This should provide the opportunity of more flexibility and efficiency in both our processes and approaches.

Our detailed response to your questions is appended to this letter.

We welcome the opportunity to further discuss the points raised in this response. Should you require further information please contact James Stone in the first instance at James.Stone@nationalgrid.com.

Yours sincerely



Mark Herring
Senior Manager, Code Change Delivery
National Grid Electricity System Operator

Appendix

Target Operating Model (chapter 3)

1. We propose to introduce MHHS on the basis of the Target Operating Model recommended by the Design Working Group last year. Do you agree? We welcome your views.

We are comfortable with the new proposed functions set out under the Target Operating Model as we believe the ESO should still be able to receive the required data from ELEXON to meet our obligations.

2. Ofgem's preferred position is that HH electricity consumption data should be sent to central settlement services in non-aggregated form. Do you agree? We welcome your views.

In the context of electricity charging arrangements, we are responsible for setting both Transmission Network Use of System (TNUoS) tariffs and recovering the BSUoS charge to recover the cost of day-to-day operation of the transmission system. Currently, the data we receive from Balancing and Settlement Code (BSC) central services which is used to settle TNUoS and BSUoS charges is aggregated at a Balancing Mechanism Unit (BMU) level. As such NGENSO do not necessarily require more granular settlement data for charging purposes but would require the format of files currently received from ELEXON to remain the same. Should the format of any data files received for calculating charges change then additional costs may be incurred due to changes being required to our Charging & Billing (CAB) systems. It is also worth noting that we would need 18 months minimum for any CAB changes to be implemented.

However, we do agree that the proposed requirement for supplier agents to share consumption data in a non-aggregated form with central settlement services could have its benefits. The ability for more flexible aggregation should provide opportunity to support the use of different data for network charging if required in the future. The proposed additional validations at a market-wide whole system level as well as the ability to feed this data into settlement systems at increased frequency should allow data issues (i.e. missing data or duplicates) to be highlighted earlier. Any exceptions or inaccuracies being identified in advance of any scheduled reconciliation run should ultimately improve the quality of data available to industry.

In addition, improving availability of non-aggregated data will provide better visibility of whole system usage (for example where there is spare capacity or constraints) which should lead to more informed and co-ordinated network reinforcement investment decisions being made. More meaningful signals driven by better visibility of data could also further incentivise investment in renewable energy where it is most appropriate to be deployed on the network. This will help support the transition to net zero at least cost to consumers. Access to such data is also key to enabling the ESO to use this operationally in terms of planning and forecasting, both long and short term. For example, it will allow us to identify how effective operational measures are under different demand, weather and time of year conditions.

Settlement timetable (chapter 4)

3. We propose that the Initial Settlement (SF) Run should take place 5-7 working days after the settlement date. Do you agree? We welcome your views.

The Initial Settlement (SF) run is the first financial settlement run that results in money being exchanged between parties. Prior to this there is a significant amount of credit cover lodged by parties to cover estimated positions. We agree that bringing forward the SF run to take place 5-7 working days after settlement date would be beneficial as earlier settlement would lead to reductions in the associated risks and value of BSC credit cover required by parties. In addition, the earlier settlement timetable for the SF run would allow more time for validation checks as part of the demand reconciliation process performed by the ESO which compares monthly charges paid by users against actual outturn.

4. We propose that the Final Reconciliation Run (RF) should take place 4 months after the settlement date. Do you agree? We welcome your views.

The Connection Use of System Code (CUSC) specifies that the ESO settles charges using Final Reconciliation Run (RF) data and as such, currently this can only be achieved in the relevant charging year +2. We agree that the RF run should be shortened to 4 months after settlement date as this would allow us to settle charges in charging year +1 which would be desirable as it would bring users earlier certainty on charges and ensure liabilities would be settled faster, thus reducing both credit and cashflow risk for the ESO and potentially Transmission Operators (TOs). Shortening the RF run to 4 months would mean that both the RF and SF reconciliations would then be performed in quick succession. Therefore, it may be prudent to

remove the need for a reconciliation to take place at SF and only reconcile at RF. This would require changes to the CUSC but would provide process efficiency gains with potential for resource to be used for other priorities. It will also mean that the most up to date and accurate data was used for any reconciliation performed.

5. We propose that the post-final (DF) settlement run should take place 20 months after the settlement date, with the ratcheted materiality proposals described in chapter 4. Do you agree? We welcome your views on this proposal, and in particular about its potential impact on financial certainty for Balancing and Settlement Code parties.

We do not consider the post-final (DF) settlement run taking place 20 months after the settlement date to be any more appropriate than current arrangements.

Export-related meter points (chapter 5)

6. We propose to introduce MHHS for both import and export-related MPANs. Do you agree? We welcome your views.

Currently electricity exported from small-scale generation (<30kW) is not required to be settled and as such is reallocated to suppliers via the Grid Supply Point Group (GSPG) Correction process. We agree that export meters should be introduced into MHHS as this would potentially reduce the volumes of energy that need to be reallocated. Volumes which could potentially be even higher should the predicted growth of small-scale generation on the network be realised. Settling export meter points would improve cost reflectivity of charges and ensure suppliers face the true costs of serving their customers.

The introduction of export meter point data within settlement may also provide the benefit of more accurate supplier forecasting and matching of supply and demand. This may result in a reduction in the imbalance that we as the ESO would be required to resolve and subsequently the costs (recovered via consumers) of doing so. However, it should be noted any potential cost reductions would be heavily reliant on the level of improvement to suppliers forecasting ability.

In addition, it may be sensible to take account of the mix in generation in any export data. This combined with having access to export-related half-hourly consumption data would allow the market to provide clearer price signals and incentives for deployment and participation of small-scale generation in flexibility markets. This is something that we believe will be a crucial step in achieving a net zero energy system.

7. We propose that the transition period to the new settlement arrangements should be the same for import and export-related MPANs. Do you agree? We welcome your views.

We agree that MHHS should be introduced with the same transition period for both import and export meters. We believe that implementing at the same time may be more efficient and assume that any associated costs would be similar regardless of whether or not MHHS includes export meters.

Transition period (chapter 6)

8. We propose a transition period of approximately 4 years, which at the time of analysis would have been up to the end of 2024. This would comprise an initial 3-year period to develop and test new systems and processes, and then 1 year to migrate meter points to the new arrangements. Do you agree? We welcome your views.

We believe a transition period of 4 years from the point of decision to be prudent. The transition is particularly important given the scale of change industry are seeing over the coming years relating to charging, faster switching and European development. The proposed transition period should enable industry to develop new dynamic tariffs at the earliest opportunity. Such meaningful price signals will encourage consumers to shift their consumption and participate in flexibility markets i.e. by incentivising EV owners to charge their EVs at times when demand for electricity is lower. This increased flexibility being realised at the earliest opportunity should help enable the most cost-effective transition to net zero.

We consider the proposed transition period provides the correct balance to realise the potential benefits of MHHS whilst also allowing industry enough time to adapt business models where necessary, make any IT changes, time for testing, changes to industry codes and to ensure the transition is managed appropriately to reduce any implementation risk.

In addition, from a system change perspective it may be beneficial if any changes required for implementation were aligned with those changes as part of other industry reforms such as access reform (potentially due to be implemented in 2023) as this could be dealt with as one development piece, thus avoiding the need for rework and potential further costs being incurred.

9. We have set out high-level timings for the main parties required to complete a successful 4-year transition to MHHS. Do you agree? We welcome your views, particularly if your organisation has been identified specifically within the timings

Please see response to question 8 above.

10. What impact do you think the ongoing COVID-19 pandemic will have on these timescales?

Based on the proposed 4-year transition period we do not currently have any concerns relating to COVID-19 and the MHHS project timescales. However, there may be unforeseen factors arising from the ongoing COVID-19 situation which could potentially impact delivery of the project.

Data access and privacy (chapter 7)

11. We propose that there should be a legal obligation on the party responsible for settlement to collect data at daily granularity from domestic consumers who have opted out of HH data collection for settlement and forecasting purposes. Do you agree that this is a proportionate approach? We welcome your views.

No comment.

12. Existing customers currently have the right to opt-out to monthly granularity of data collection. We are seeking evidence about whether it is proportionate to require data to be collected at daily granularity for settlement and forecasting purposes for some or all of these consumers. We welcome your views.

No comment.

13. Should there be a central element to the communication of settlement / forecasting and associated data sharing choices to consumers? For example, this may be a central body hosting a dedicated website or webpage to which suppliers may refer their customers if they want more information. If yes, what should that role be and who should fulfil it? We welcome your views.

No comment.

Consumer impacts (chapter 8)

14. Do you have additional evidence which would help us refine the load shifting assumptions we have made in the Impact Assessment?

We consider the lower and upper bounds within the Impact Assessment to be reasonable.

15. Do you have any views on the issues regarding the consumer impacts following implementation of MHHS? Please refer to the standalone paper we have published for more detailed information.

No comment.

Programme management (chapter 9)

16. Do you agree we have identified the right delivery functions to implement MHHS? We welcome your views.

Yes, we believe the delivery functions proposed by Ofgem to implement MHHS have been correctly identified. The requirement for a Programme Management Office (PMO) function is essential as this should allow end-to-end project coordination and should ensure that any risks, dependencies across industry parties and the various workstreams are effectively managed and that progress against agreed milestones is achieved.

17. We have set out some possible options for the management of the delivery functions, and a proposal on how these would be funded. We welcome your views on this.

The introduction of MHHS is one of the most significant changes made to electricity settlement. It will not only need industry codes and licence change but it will also require significant changes to central IT systems and services as well as integration testing with many industry parties. To ensure successful delivery of MHHS we believe that any party undertaking the role of PMO will require an in-depth technical knowledge and understanding of electricity settlement arrangements (including MHHS) and relevant knowledge of the Balancing and Settlement Code (BSC). It may also be preferable that any organisation assuming the role of PMO has experience of working alongside industry to manage and deliver similar large-scale reforms.

We believe that it would be prudent for whoever provides the delivery functions to implement MHHS recovers their costs via the existing BSC funding structure. Using the existing structure would allow these costs to be included alongside other BSC parties funding of central arrangements.

Other (chapter 10)

18. Do you have any comments on the draft Impact Assessment published alongside this document, or any additional evidence that you think we should take into account?

The current Non-Half Hourly (NHH) charging methodologies will cease following successful migration of meter points from current arrangements to then being settled under the new TOM. This removal of NHH methodologies may result in the ESO incurring costs due to the impact on CAB systems. In addition, costs could also arise if further changes were required to systems as a result of Ofgem's Access and Forward-Looking Charges SCR, which may be enabled by any MHHS decision.