

Modification proposal:	Connection and Use of System Code (CUSC) CMP266: Removal of Demand TNUoS charging as a barrier to future elective Half Hourly settlement		
Decision:	The Authority ¹ directs that this modification be made ²		
Target audience:	National Grid Electricity Transmission PLC (NGET), Parties to the CUSC, the CUSC Panel and other interested parties		
Date of publication:	20 December 2016	Implementation date:	22 December 2016

Background

We have agreed with government to take forward a project to reform the electricity settlement arrangements in Great Britain. As part of this, we are looking to remove barriers to cost-effective Half-Hourly Settlement (HHS) of domestic and smaller non-domestic customers (those currently in Profile Classes 1-4) on an elective basis. We sought stakeholder views on barriers to elective HHS in December 2015,³ and held a stakeholder workshop in April 2016, before publishing a conclusions paper in May 2016. One barrier to elective HHS identified in our conclusions paper was that there can be overcharging for transmission charges⁴ in the year a customer moves to HHS.⁵ We said that, depending on the point in the year a customer migrates to HHS, this could be worth up to £17 in relation to a domestic customer in the year they migrate.

This modification proposal seeks to address the defect that when a customer in Profile Classes 1-4 moves from Non Half-Hourly (NHH) to Half-Hourly (HH) settlement, suppliers are overcharged for transmission charges in the year the customer migrates. This is because transmission charges are different for NHH and HH demand. NHH transmission charges are based on the total volume consumed between 4 and 7pm over the course of the year. HH transmission charges are based on the consumer's average demand during the three 'Triad' periods between November and February.⁶ HH transmission charges for the entire year are therefore determined during a particular period of the year.

These different charging methodologies open up the prospect of overcharging if a customer moves within the charging year. For example, a consumer moving to HHS on 1 August would already have incurred four months of NHH transmission charges. Their HH transmission charges would then be determined during the Triad periods between November and February. These HH charges would be calculated in exactly the same way as a consumer who began the year on HHS, with no discount to reflect the NHH charges already paid. This creates overcharging.

When suppliers elect to settle consumers HH who are currently in Profile Classes 1-4, the majority will move into either measurement class⁷ F or G.

- Measurement class F is used for HH domestic consumers.
- Measurement class G is for HH non-domestic consumers with whole current

¹ References to the "Authority", "Ofgem", "we" and "our" are used interchangeably in this document. The Authority refers to GEMA, the Gas and Electricity Markets Authority. The Office of Gas and Electricity Markets (Ofgem) supports GEMA in its day to day work.

² This document is notice of the reasons for this decision as required by section 49A of the Electricity Act 1989.

³ https://www.ofgem.gov.uk/sites/default/files/docs/final_open_letter_on_hhs.pdf

⁴ Transmission Network Use of System (TNUoS) charges

⁵ Chapter 4 of: https://www.ofgem.gov.uk/system/files/docs/2016/05/elective_hhs_conclusions_paper.pdf

⁶ The three periods of peak system demand between November and February which are at least ten days apart.

⁷ A measurement class is a way of categorising meters under the settlement arrangements. Measurement classes are important because they determine the scope of the CMP266 options.

meters.

- A few small business customers will move into measurement class E, which is for HH non-domestic consumers with current transformer meters.⁸
- Both measurement classes E and G will also have larger business consumers who have migrated as a result of Balancing and Settlement Code (BSC) Modification P272.

The modification proposal

National Grid Electricity Transmission (NGET, the 'proposer') raised CMP266 in June 2016 in order to address the defect set out above. As part of this, NGET noted Ofgem's intention to remove barriers to elective HHS from early 2017. NGET said that CMP266 would better facilitate applicable CUSC objective (a)⁹ by removing a blocker to elective HHS, and would better facilitate applicable CUSC objective (b)¹⁰ by calculating transmission charges based on actual HH demand, which is more accurate than profiling.

Under the Original proposal, suppliers would be charged for measurement classes E-G under the NHH charging methodology until 2020. Although suppliers would be charged under the NHH charging methodology (ie 4-7pm), the volumes would be based on their customers' actual HH demand in these time periods (rather than their profiled demand).

The CMP266 workgroup assessed, examined and made comments on various alternative options within the proposal, settling on eight Workgroup Alternative CUSC Modifications (WACMs). The eight WACMs can be grouped broadly into two approaches:

- charging suppliers for all customers in a given measurement class using the NHH charging methodology until 2020; or
- only changing the charging arrangements to the NHH charging methodology in the year that a given customer moves to HHS (and therefore charging suppliers under the HH charging methodology thereafter).

These options also vary in terms of the scope, as they apply to different measurement classes, and whether a transitional solution is used for the 2017/18 charging year in order to allow time for the implementation of supporting changes. However, all options are intended to remove the defect by the start of the 2017/18 charging year.

Scope – measurement classes	Approach			
	NHH until 2020		NHH in year customer migrates to HHS	
E, F and G	Original		WACM2	WACM6 (transition)
F and G	WACM1	WACM5 (transition)	WACM3	WACM7 (transition)
F and G (different approaches for each)			WACM4	WACM8 (transition) ¹¹

⁸ Each of measurement class E, F and G is restricted to customers with a maximum demand below 100kW.

⁹ (a) that compliance with the use of system charging methodology facilitates effective competition in the generation and supply of electricity and (so far as is consistent therewith) facilitates competition in the sale, distribution and purchase of electricity.

¹⁰ (b) that compliance with the use of system charging methodology results in charges which reflect, as far as is reasonably practicable, the costs (excluding any payments between transmission licensees which are made under and in accordance with the STC) incurred by transmission licensees in their transmission businesses and which are compatible with standard condition C26 (Requirements of a connect and manage connection).

¹¹ WACM4 would charge suppliers for customers in measurement class F using the NHH charging methodology until 2020, and would charge suppliers for customers in measurement class G using the NHH charging

The Workgroup discussed that some of the WACMs are dependent on BSC modification P339¹², which allows separate identification of consumption data for individual sub-100kW measurement classes. This would allow ELEXON to provide data that allows National Grid to charge different measurement classes in different ways. BSC modification P339 was approved on 8 December 2016.

The options that would charge a supplier using the NHH charging methodology in the year their customer migrates to HHS would also be dependent on an additional change. We discuss this further below.

CUSC Panel¹³ recommendation

At the CUSC Panel meeting on 25 November 2016, a majority of the CUSC Panel considered that each option was better than the baseline. The original, WACM1 and WACM5 received the most votes. The Panel's view was split as to which option was best, with WACM5 receiving three votes, and WACM1, WACM6 and WACM7 receiving two votes each. The Panel's views are set out in full in the Final Modification Report (FMR).¹⁴

Our decision

We have considered the issues raised by the modification proposal and the final Modification Report (FMR) dated 30 November 2016. We have considered and taken into account the responses to the Workgroup and Code Administrator consultations on the modification proposal which are attached to the FMR¹⁵. We have concluded that:

1. implementation of WACM1¹⁶ will better facilitate the achievement of the relevant charging objectives of the CUSC compared to the CUSC baseline and other options (the original and WACMs 2-8);¹⁷ and
2. directing that WACM1 be made is consistent with our principal objective and statutory duties.¹⁸

Reasons for our decision

We consider that all options will better facilitate CUSC objective (a) compared to the baseline, and that WACM1 is the best option in relation to this objective. We consider that all options will better facilitate CUSC objective (b) compared to the baseline. We consider that WACMs 2-4 and 6-8 do not better facilitate CUSC objective (e) compared to the baseline, and that the other options have a neutral impact on this objective. We consider

methodology in the year a customer migrates to HHS only. We have placed this option in the right-hand column because it has the same implementation considerations as the options above it. Likewise, WACM8 is in the right-hand column as it is simply WACM4 with a transition period.

¹² <https://www.elexon.co.uk/mod-proposal/p339/>

¹³ The CUSC Panel is established and constituted from time to time pursuant to and in accordance with the section 8 of the CUSC.

¹⁴ <http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=8589937823>

¹⁵ CUSC modification proposals, modification reports and representations can be viewed on NGET's website at <http://www.nationalgrid.com/uk/Electricity/Codes/systemcode/amendments/>

¹⁶ In summary, WACM 1 involves charging all customers in measurement classes F and G using the NHH charging methodology from April 2017 until March 2020.

¹⁷ As set out in Standard Condition C5(5) of NGET's Transmission Licence, see:

<https://epr.ofgem.gov.uk/Content/Documents/Electricity%20transmission%20full%20set%20of%20consolidated%20standard%20licence%20conditions%20-%20Current%20Version.pdf>

¹⁸ The Authority's statutory duties are wider than matters which the Panel must take into consideration and are detailed mainly in the Electricity Act 1989 as amended.

that all options have a neutral impact on the other applicable objectives. We consider WACM1 best facilitates the applicable CUSC objectives relative to the baseline and the other options.

(a) that compliance with the use of system charging methodology facilitates effective competition in the generation and supply of electricity and (so far as is consistent therewith) facilitates competition in the sale, distribution and purchase of electricity;

All the options are intended to address the overcharging defect. As set out by the proposer, this would better facilitate effective competition by allowing suppliers to innovate and introduce new products linked to elective HHS. We therefore consider that they all better facilitate applicable objective (a), compared to the baseline.

However, in practice, it appears highly unlikely that WACMs 2-4 could be implemented by April 2017. As noted in the FMR and by several stakeholders, these options rely on an additional change, which has not been scoped or raised. As WACMs 2-4 do not appear able to address the defect for the 2017/18 charging year, we consider that they are not as positive in relation to objective (a) as the other options (which would address the defect for 2017/18), although they are still better than the baseline. We note that none of the CUSC Panel Members considered that these options were the best.

In response to the Code Administrator consultation, one stakeholder said that it disagreed with a requirement that would apply the NHH charging methodology to customers settled HH. It said that there would be costs associated with this. However, we have not seen sufficient evidence to substantiate this view.

Two stakeholders put forward a number of arguments why the NHH charging methodology is more appropriate for smaller consumers, including suggestions that these customers are less able to respond to Triad signals (and suppliers are less able to provide such signals to them), that the more regular switching within contract of these customers (compared to larger ones) would increase risks for suppliers under the HH charging methodology, and that Triad costs might have particular impacts on domestic consumers who rely on electric heating. However, one respondent to the Code Administrator consultation disagreed, saying that suppliers should easily be able to educate consumers about Triads. We consider that there are questions which will need to be evaluated further before the HH charging methodology is applied to domestic consumers, and that the original, WACM1 and WACM5 provide time for this.

Some stakeholders said that the options which involve applying the NHH charging methodology to all customers in a given measurement class until 2020 would reduce consumers' ability to load manage, particularly those already migrating to HHS under P272. One respondent to the Workgroup consultation said that this change was being raised late in the process of P272 implementation. While these options would not allow affected customers to load manage under the Triad arrangements, these consumers would still be able to shift load under the NHH charging methodology (given that their supplier would be charged based on the consumer's actual HH demand),¹⁹ as well as benefitting from shifting load in relation to wholesale prices and distribution charges. On balance, we therefore disagree that these options would have a negative impact on competition by reducing the ability to load manage. In relation to the point on P272, we

¹⁹ In paragraph 4.14 of the May conclusions paper, we said that consumers could save up to 6p/kWh in some regions by shifting load outside the 4-7pm period where NHH charges are determined.

have to balance the impact of further regulatory changes on these customers against trying to remove barriers to elective HHS for smaller non-domestic customers, for example by considering which measurement classes should be included.

The Workgroup discussed whether charging measurement classes E and G differently based on the type of meter installed (current transformer or whole current) was discriminatory. We consider that there is a rationale for treating measurement classes E and G differently. The defect identified by the proposer relates to meters within Profile Classes 1-4. The vast majority of these would move into measurement classes F and G, and only a small number would move into measurement class E. The majority of customers with current transformer meters who were historically NHH are scheduled to move to HHS under P272 by 1 April 2017.²⁰ Including measurement class E is therefore not necessary to address the defect. Stakeholders noted that customers in measurement class E tend to be larger. We therefore consider that WACM1 best facilitates applicable objective (a) because it avoids an impact on measurement class E customers migrating under P272 (for example on the range of products offered by suppliers to them) that is not required to address the defect. WACM5, WACM 7 and WACM8 are also targeted at customers in measurement classes F and G, but would additionally have an impact on measurement class E during the transition period in the 2017/18 charging year. On this basis, WACM1 is marginally preferable to WACMs 5, 7 and 8.

(b) that compliance with the use of system charging methodology results in charges which reflect, as far as is reasonably practicable, the costs (excluding any payments between transmission licensees which are made under and in accordance with the STC) incurred by transmission licensees in their transmission businesses and which are compatible with standard condition C26 (Requirements of a connect and manage connection);

All options have the objective of removing the defect of overcharging in the year a consumer moves to HHS. By its nature, overcharging is not cost-reflective, and so all options would better facilitate applicable objective (b).

As set out above, it does not appear that WACMs 2-4 can be implemented by April 2017, and therefore would not address the lack of cost-reflectivity for the 2017/18 charging year. We therefore consider that these options are less positive than the other options against this objective (though they are still better than the baseline).

Some stakeholders said that the HH charging methodology is more cost-reflective for HH-settled customers, and therefore that options which only change the charging arrangements to the NHH charging methodology in the year that a given customer moves to HHS would better facilitate applicable objective (b), whereas the other options would not. The HH charging methodology is the current prevailing methodology for charging suppliers for customers who are settled HH. However, there are a number of other considerations which apply in this particular case.

First, as HHS is elective for domestic and smaller business customers in Profile Classes 1-

²⁰ July 2014 data provided under Distribution Connection and Use of System Agreement (DCUSA) Change Proposal 179 suggested that there were 42,116 customers with CT meters in Profile Classes 1-4. This is lower than the 71,012 customers with CT meters in profile classes 5-8, who will move HH under P272. In contrast, there were over 2.2 million customers with WC meters in Profile Classes 1-4. (Data available in attachment 9 of: <https://www.dcu.co.uk/Documents/DCP%20179%20Change%20Report%20v1%200.zip>).

4, suppliers remain able to move these customers from HH to NHH.²¹ This was highlighted by a Panel Member. Two respondents to the Code Administrator consultation noted this could lead to undercharging.²² We are concerned with any suggestion that certain options would potentially allow suppliers to game the transmission charging arrangements to avoid paying their share of the costs, particularly given that any avoided costs would end up being paid by all consumers in future charging years.

Second, the FMR notes that there is a need to forecast the number of customers moving to elective HHS in order to set cost-reflective tariffs, by adjusting the NHH demand and considering how these customers may respond to the HH charging methodology. The FMR suggests that there may be greater uncertainty in tariff setting under options which apply the HH charging methodology. One Panel Member said that this would cause volatility in tariffs, leading to increased risk premiums for suppliers. This point is again related to the elective nature of HHS for these customers.

Third, this modification relates to customers who are currently settled NHH and whose suppliers are charged under the NHH charging methodology based on profiling. As set out by the proposer, the cost-reflectivity of charges is likely to be improved by charging suppliers based on these customers' actual data, even if under the NHH charging methodology. The options which charge certain measurement classes under the NHH methodology to 2020 are therefore at least better than the current situation.

On balance, and in the particular case of elective HHS, the options which do not use the HH charging methodology for measurement classes F and G (the original, WACM1 and WACM5) are at least as cost reflective as the options which do (WACMs 6-8), and potentially more so.

(e) promoting efficiency in the implementation and administration of the system charging methodology.

WACMs 2-4 and 6-8 would introduce different charging arrangements within at least some measurement classes, depending on whether a meter had undergone a Change of Measurement Class (CoMC) in that charging year or not. To implement these options, NGET would need ELEXON to provide consumption data split by the CoMC year. However, ELEXON does not receive this information at present, and this will not be provided by P339. An additional change to the industry rules therefore would be required to implement these options.

No additional change has been raised, meaning that there is uncertainty about what this would involve, how long it would take, and how much it would cost. The FMR reports initial discussions with ELEXON, which suggested that a Data Transfer Catalogue Change Proposal might be required. The strawman proposal would require a new data flow, changes to the systems of HH Data Aggregators, and a new Supplier Volume Allocation Agent reporting table. Several stakeholders said that WACMs 2-4 and 6-8 would be more difficult to implement or would add complexity compared to the other options.

On the basis of the information currently available to us, WACMs 2-4 and 6-8 risk adding complexity to the implementation of the charging methodology, and would be likely to

²¹ Historically most HH customers were required to be settled HH due to exceeding the 100kW threshold, and so their suppliers would not have had the option of moving them to NHH.

²² For example, if a consumer started the charging year being settled HH, and was then changed back NHH at the end of October, the supplier would only pay five months of NHH transmission charges over the entire year (and would avoid all HH transmission charges).

increase costs and decrease efficiency, which is not essential given that there are other options which would address the defect. We therefore consider WACMs 2-4 and 6-8 would not better facilitate applicable objective (e).

The remaining options (the original, WACM1 and WACM5) do not require this additional change – we therefore consider that they are neutral against this objective.

Additional point

Some stakeholders said that there should be a review (possibly a Significant Code Review) to consider changes to the transmission charging methodology. Our recent update letter on embedded benefits²³ included information about our approach to further review of network charging arrangements. Any new arrangements that come out of further reviews of network charging may supersede the changes put in place by CMP266.

Decision notice

In accordance with Standard Condition C10 of NGET's Transmission Licence, the Authority, hereby directs that the WACM1 option for modification proposal CMP266: *Removal of Demand TNUoS charging as a barrier to future elective Half Hourly settlement* be made.

Cathryn Scott
Partner, Energy Systems

Signed on behalf of the Authority and authorised for that purpose

²³ https://www.ofgem.gov.uk/system/files/docs/2016/12/update_letter_-_charging_arrangements_for_embedded_generation.pdf