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| Proposed variation: | **Distribution Connection and Use of System Agreement (DCUSA) DCP283 – the calculation of generation credits in the CDCM** | | |
| Decision: | The Authority[1] has decided to reject[2] this modification[3] | | |
| Target audience: | DCUSA Panel, Parties to the DCUSA and other interested parties | | |
| Date of publication: | 30 May 2018 | Implementation date: | n/a |

DCP283 seeks to amend the calculation of credits for embedded generators, aiming to more closely reflect the benefits they bring to Distribution Network Operators. This letter sets out the reasons why we have decided to reject the modification proposal.

## Background

In the Common Distribution Charging Methodology (CDCM), embedded generators (EGs) are assumed to offset demand and reduce the requirement for upstream reinforcement. In recognition of this, EGs are awarded credits which are calculated as the inverse of demand charges.

The Proposer considers that the current EG credits are not cost reflective, as they are not awarded for offsetting demand at the voltage level of connection, and because of the treatment of the customer contributions (which reduces charges for demand customers, to reflect any upfront payment made at connection).

## The modification proposal

DCP283 was raised by MVV Environment Services Limited (the Proposer) on 12 October 2016. The proposal recommended two changes that would increase credits for EGs, which the proposer considers would better reflect the benefits they bring to network operators:

a) The first proposed solution is to award credits at the voltage level of connection for low voltage substation (LVS) connected EGs (rather than at the voltage level above that of connection), and to award a share of credits at the voltage level of connection for low voltage (LV) connected EGs.

b) The second proposed solution, to the issue of discounting of credits to take account of customer contributions for demand customers, is to exclude the customer contributions discount in the assessment of credits for EGs in the CDCM. This would result in an increase in the level of EG credits for most tariff categories.

In the Proposer's view, the change proposal better meets charging objective two[4], as the more cost reflective tariffs would provide a more accurate price signal which will result in

[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. This decision is made by or on behalf of GEMA.
[2] This document is notice of the reasons for this decision as required by section 49A of the Electricity Act 1989.
[3] 'Change' and 'modification' are used interchangeably in this document.
[4] Charging objective two: that compliance by each DNO Party with the Charging Methodologies facilitates competition in the generation and supply of electricity and will not restrict, distort, or prevent competition in the transmission or distribution of electricity or in participation in the operation of an Interconnector (as defined in the Distribution Licences)


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a more efficient dispatch of plant and the siting of plant within the distribution network. Both of these would result in the promotion of effective competition in generation.

The Proposer also considered that the change proposal better meets charging objective three[5], as it would increase the cost reflectivity of tariffs within the CDCM by awarding credits to EGs that more closely reflect the benefits they bring to DNOs and thereby encourages the development of efficient, co-ordinated and economical distribution networks.

*Working Group phase (definition procedure)*

The proposal was discussed by a Working Group and was subject to a "Request for information (RFI)" and two industry consultations.

The first consultation, issued on 14 March 2017, focused on issue a), the principle of applying credits at the voltage of connection. Based on the responses to the RFI and the consultation[6], the Working Group sought stakeholders' views on de-scoping this element of the proposal in the second consultation, issued on 1 September 2017. All bar one of the nine respondents agreed with the Working Group's view on the proposal to discontinue work on this element.

The second consultation, issued on 1 September 2017, focused on issue b), the discounting of credits to take account of customer contributions for demand customers. Consultation responses were six against and three in favour of excluding the customer contribution discount from the assessment of credits for EGs.

One respondent to the second consultation, in favour of the proposal, considered that connecting EGs enable future demand customers to connect without the customer or DNO incurring significant reinforcement. The saving achieved by EGs is the total reinforcement cost, not the reinforcement cost less the customer contribution, and hence it is not appropriate to discount the demand charges by customer contributions.

The respondent did however acknowledged that the value to the network of successively connecting EGs may decrease but emphasised that nonetheless such EGs continue to reduce reinforcement-related costs except when connecting in an EG-dominated area.

The Working Group also noted concerns from several respondents not in favour of the proposal, around the level of credits compared to the benefits EGs bring to distribution networks. One respondent highlighted that the proposed change would result in generators receiving larger credits than the equivalent element of the demand tariffs. They considered that this would be inconsistent with the fundamental principles of the CDCM model. Other respondents thought that no evidence had been presented that the proposal would result in improved cost-reflectivity, and that it would be disproportionate to the benefit provided by EGs. Another respondent cited the significant numbers of exporting GSPs in the north of Scotland as a reason to consider the increase in the levels of EG credits to be inappropriate.

The Working Group recorded that the responses were five against, three in favour and one undecided as to whether DCP283 better facilitates the DCUSA Charging Objectives.

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[5] Charging objective three: that compliance by each DNO Party with the Charging Methodologies results in charges which, so far as is reasonably practicable after taking account of implementation costs, reflect the costs incurred, or reasonably expected to be incurred, by the DNO Party in its Distribution Business

[6] The purpose of the RFI was to help establish how DNOs plan their network and the extent to which they rely on EG from a planning perspective. The outcome of the RFI was used to develop the first consultation document.


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The Working Group also commented that consultation respondents had provided only qualitative information in relation to their assessment of the objectives but no quantitative information.

*Working Group impact assessment*

The Working Group commissioned an impact assessment from the DCUSA modelling consultant. The analysis was based on the 2018/19 charging methodology.

The results showed that removing the application of customer contributions from the calculation of credits for EGs would increase credits for the majority of EGs, by up to 40% for LV EGs but by less for HV EGs. The biggest geographical impacts would be seen in the Western Power Distribution (WPD), South West and South Wales areas, and the Northern Powergrid Northeast area. These results are driven by customer contribution levels – in areas of lower customer contributions, the proposed change would result in a smaller increase of EG credits.

There would be a consequential increase in charges for most demand customers, by up to 0.52%. The geographical distribution of these increases is driven by EG levels - areas with high levels of EG connected see a more significant impact on demand tariffs than those with lower EG connected. The biggest impacts are seen in the SSE North of Scotland area (due to distribution-connected wind) and the WPD South West area (due to distribution-connected solar).

Implementation costs were not assessed.

## DCUSA Parties' recommendation

Votes were cast in the DNO, IDNO/OTSO and Supplier categories. DNO and IDNO/OTSO parties rejected the solution unanimously. Supplier parties were unanimously in favour of the solution. No votes were cast in the DG and Gas Supplier categories. In accordance with weighted vote procedure, the recommendation to the Authority is that DCP283 is rejected.

The outcome of the weighted vote is set out in the table below:

| DCP283 | WEIGHTED VOTING (%) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | DNO | | IDNO/OTSO | | Supplier | | DG | | Gas Supplier | |
| | A | R | A | R | A | R | A | R | A | R |
| Change Solution | 0% | 100% | 0% | 100% | 100% | 0% | n/a | n/a | n/a | n/a |
| Implementation Date | 46% | 54% | 0% | 100% | 67% | 33% | n/a | n/a | n/a | n/a |

## Our decision

We have considered the issues raised by the proposal and the Change Declaration and Change Report dated 30 January 2018. We have considered and taken into account the vote of the DCUSA Parties on the proposal which is attached to the Change Declaration and concluded that implementation of this proposal will not better facilitate the achievement of the applicable charging methodology objectives, detailed below.

## Reasons for our decision


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We consider this modification proposal will not better facilitate Applicable Charging Methodology Objectives[7] two and three, and has a neutral impact on the other relevant objectives.

***Second Applicable Charging Methodology Objective – that compliance with the Relevant Charging Methodology facilitates competition in the generation and supply of electricity and will not restrict, distort, or prevent competition in the transmission or distribution of electricity or in the participation in the operation of an Interconnector***

The proposer has argued that the change would result in more cost-reflective tariffs, providing a more accurate price signal which would result in more efficient siting and dispatch of plant, and result in the promotion of more effective competition in generation.

The industry-led CDCM review published in July 2017[8] made reference to the fact that charges to generators provide no incentive on generators to use capacity efficiently, and all generators are awarded unit credits regardless of location. Given the CDCM does not provide locational signals to EG (within a DNO area), we consider that the change report has not explained how awarding generation credits gross of customer contributions (higher than demand) would result in more efficient plant siting and dispatch that are useful to the system. Nor has the change report clarified how the proposal would better facilitate more effective competition in generation in other ways.

We therefore consider it has not been demonstrated that objective two is better facilitated by the proposal.

***Third Applicable Charging Methodology Objective – that compliance with the Relevant Charging Methodologies results in charges which, so far as is reasonably practicable after taking account of implementation costs, reflect the costs incurred, or reasonably expected to be incurred, by a Distribution Services Provider in its Distribution Business***

Both Working Group members' and consultation respondents' views on the proposal were divided on whether the proposal would result in more cost-reflective EG credits or not, with some indicating it could reduce cost-reflectivity in some instances. Neither side, however, provided quantitative evidence for their position over the short or the long term to clearly articulate the overall costs and net benefits to the system as a whole across a range of situations.

We note that Working Group members in favour of the proposal considered that the savings achieved by the presence of EGs is the *total* reinforcement cost, not the reinforcement cost less the customer contribution, and that it would therefore be appropriate to determine the credit for EGs based on the full cost before the customer contribution is deducted.

Conversely, none of the DNOs thought that robust evidence had been provided which demonstrates that the proposal would improve cost-reflectivity, and raised the point that in some cases it might actually reduce it. It was highlighted that in the context of managed connections, the incremental benefits of new EGs connecting decrease as more and more EGs are connected. A Working Group member also questioned the assumption

[7] The DCUSA Charging Objectives (Relevant Objectives) are set out in Standard Licence Condition 22A Part B of the Electricity Distribution Licence.

[8] The CDCM stage 2 report can be found at http://www.energynetworks.org/electricity/regulation/distribution-charging/distribution-charging-working-groups.html


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that the connection of an EG is always of value to the DNO. They highlighted that due to the increase in the connection of EGs, in some areas they do not provide benefit to the local network, but in fact drive reinforcement cost.

The Change Report notes instances where some areas of distribution networks have become generation dominated, with EG driving additional cost for DNOs. An example of this was provided by a consultation respondent who highlighted that due to the significant numbers of exporting GSPs in the north of Scotland, and the extent of network reinforcements being undertaken to accommodate generation rather than demand, a direct correlation of increased EG capacity and reduced network costs had not been proven.

In line with concerns about the impact of EG on reinforcement needs and costs raised in the change report, we note that the CDCM review highlighted the following:

> *"Historically, networks were demand dominated, meaning the cost of a generator holding capacity inefficiently was low and a generator exporting units onto the network was always considered to be beneficial to the DNO. As the level of DG increases, some areas of networks are now designed to meet generation capacity rather than demand, hence the cost of inefficient use of capacity is high, and a generator exporting units onto the network will not necessarily be of benefit and may in fact be driving cost for the DNO."*

We also note that given the intermittency of some EG, output may not coincide with peak network demand congestion, often a trigger for reinforcement.

Under such circumstances, we do not consider it appropriate to increase the levels of EG credits (by up to 18% on average, and 40% maximum), particularly as these would be subsidised by increased charges for demand customers (by around 0.1% on average, and 0.5% maximum), and may occur in situations where EGs are driving reinforcement.

Based on the evidence provided, we conclude that a case has not been made that the proposal improves cost-reflectivity within the CDCM and note that in some instances, it is likely to result in a reduction in cost-reflectivity. We therefore consider that it has not been demonstrated that objective three is better facilitated by the proposal any better than the current arrangements.

**Decision notice**

In accordance with standard licence condition 22.14 of the Electricity Distribution Licence, the Authority has decided that modification proposal DCP283: 'the calculation of generation credits in the CDCM' should not be made.

**Chris Brown**
**Head of Core and Emerging Policy**
Signed on behalf of the Authority and authorised for that purpose