

Ofgem
9 Millbank
London
SW1P 3GE

Email to: electricitynetworkcharging@ofgem.gov.uk

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Minded to decision and draft Impact Assessment of industry's proposals (CMP264 and CMP265) to change electricity transmission charging arrangements for Embedded Generators

EDF Energy is one of the UK's largest energy companies with activities throughout the energy chain. Our interests include nuclear, coal and gas-fired electricity generation, renewables, and energy supply to end users. We have over five million electricity and gas customer accounts in the UK, including residential and business users.

We strongly believe that the current TNUoS embedded benefits are creating material market distortions and leading to higher costs for consumers. We have advocated urgent and targeted reform to address this rapidly growing distortion through our CUSC modification CMP265. This distortion increases consumer costs, is likely to cause inefficient despatch and cause inefficient investment in generation capacity.

We welcome Ofgem's minded-to decision to implement reform to TNUoS Demand Residual (TDR) and associated impact assessment. We agree that material reform is needed, which WACM4 delivers.

We agree that investor confidence and general regulatory certainty is important through predictable evolution of industry arrangements. However, market participants will be aware that this has been an active area of review for a number of years with increasing evidence that the existing arrangements were unsustainable. We support Ofgem's view that grandfathering of arrangements, in this particular case, is not appropriate and full implementation from 2020 with phasing-in of the change from 2018 is proportionate.

Our detailed responses are set out in the attachment to this letter. Should you wish to discuss any of the issues raised in our response or have any queries, please contact Mark Cox on 01452 658415, or me.

I confirm that this letter and its attachment may be published on Ofgem's website.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Angela Hepworth".

Angela Hepworth
Corporate Policy and Regulation Director

EDF Energy
40 Grosvenor Place, Victoria
London SW1X 7EN
Tel +44 (0) 20 7752 2200

edfenergy.com
EDF Energy plc.
Registered in England and Wales.
Registered No. 2366852.
Registered office: 40 Grosvenor Place,
Victoria, London SW1X 7EN

Attachment

Consultation on Ofgem's "minded to" decision and draft Impact Assessment of industry's proposals (CMP264 and CMP265) to change electricity transmission charging arrangements for Embedded Generators

EDF Energy's response to your questions

2. Background

Q1. Do you agree with our problem definition and that the Transmission Network Use of System (TNUoS) Demand Residual (TDR) payments to sub-100MW Embedded Generation ("smaller EG") are distorting dispatch, wholesale price, the capacity market (CM) and that they pose an increased cost to consumers?

We agree with the definition and scope of the problem set out. We agree that TDR payments are a growing and costly distortion. TDR payments are not grounded in any economic or technical reality, it is an unintended artifice of the charging arrangements – i.e. they are not cost-reflective. It is the location of generators that drives the required transmission investment, not the voltage at which they are connected, and it is the locational TNUoS charges that are calculated to provide this cost signal; the TDR charge is an artifice used to collect the correct total amount of revenue from demand; there is no logical basis for it being applied to create the distortion in this way via net demand charging under status quo.

We agree that the distortion can encourage or incentivise the benefitting generators to run when it would, without the distortion, not otherwise have been economic to do so; i.e. to run "out of merit". A follow on consequence of this can be distortion of wholesale market prices, suppressing peak pricing signals thus adversely affecting the rest of the market. We agree that there is a distortion of the CM, which can lead to the financing and construction of less efficient, smaller generators in place of potentially more efficient, larger generators. The nature (voltage level) of the electrical connection as well as size choice of new generators can be distorted away from what is technically and economically ideal by the benefit, both for CM-participating, controllable, generation and for other generation.

We agree that in principle this material distortion should be addressed and agree that in practice the distortion will lead to higher costs to consumers; the current approach of charging on a net demand basis reduces the charging base, thus increasing the charge, as the revenue to be recovered is largely invariable. Ofgem's supporting analysis is helpful in setting out the likely scale of consumer impact and while some elements of the analysis and future trends are less certain, the overall consumer case for reform is compelling.

Q2. Do you agree that rising TDR payments to smaller EG is a problem which needs to be addressed?

Yes. We raised CMP265 as a narrow, urgent CUSC modification given the scale and urgency of the distortion and consumer impact. The "benefit" to the relevant subset of embedded generators used to be £11/kW in 2005/6, is currently about £45/kW, and expected to be £66/kW by 2020. This is a very material distortion and it is certainly growing. It has already grown very markedly under status quo, which is why it can no longer remain as a talking

point, something that the industry over the years has repeatedly recognised as needing addressing in the *future*; the distortion can no longer be neglected, it is altering without good reason the balance of new investments on the system, and causing real consumer costs.

4. Assessment against decision making criteria

Q3 Do you agree with our interpretation of the applicable CUSC objectives?

Yes; we agree that your interpretation of the merits against CUSC applicable objectives is accurate.

Q4. Do you agree with our assessment against the applicable CUSC objectives and statutory duties? Please provide evidence for any differing views.

There is not a “level playing field” at the moment due to the distortionary effect of the TDR, and all of the variants go some way to levelling the playing field for at least some generators, or at least partly levelling it. Therefore, we believe that all mods and variants better facilitate (a), although the variants that “grandfather” the distortionary and unwarranted benefits for some plant categories do so to a lesser extent than other variants. Grandfathering also adds complexity of administration/implementation.

We can accept the argument that avoided GSP infrastructure costs probably represent the best assessment of embedded benefit, or close to it, and therefore that CAO (b), cost-reflectivity, may best be met by those variants that retain avoided GSP infrastructure costs, and nought else, as the relevant revenue stream.

We continue to believe that “flooring” is a mistake, as if the locational charges are indeed cost-reflective then they should not be altered in this context; if they are in any way less than cost-reflective then that should be separately addressed. This is why we did not apply a floor to CMP265 original. We also consider that adding the magnitude of the lowest locational charge to alter all effective charges to embedded generators comprises an unwarranted distortion; as the consultation document notes (4.16), this maintains a larger distortion than the best variants (so that variants with this feature should logically be regarded as not meeting CAO (b) as well as variants such as WACM4). However, we accept that these are second order effects relative to the scale of the current distortion.

As regards CAO (c) - Facilitating charges that take account of the developments in transmission licensees' transmission businesses – we understand and recognise your logic that although various variants do better facilitate this CAO, there is overlap with the issues covered by applicable CUSC objective (a) and (b); in the interest of avoiding double-counting, you propose that the variants be identified as neutral in relation to CAO (c). Notwithstanding that EC714/2009 requires that network access charges should be, among other things, cost-reflective, non-discriminatory, and should take into account investment costs, you nonetheless argue, for the same reasons as given for CAO (c), that the variants be identified as neutral in relation to CAO (d) (Taking account of European Legislation). We again understand and recognise your logic.

As regards your wider statutory duties beyond the CAOs, we agree that variants that lead to less distortive effects could lead to some reductions in carbon emissions, as plant will be dispatched in a more efficient manner, which is likely to favour efficient operators. A more efficient market resulting from addressing the distortions, is also likely to lead to lower costs

for most consumers. This alongside overall reductions in TNUoS costs for consumers on average will provide direct benefits to consumers..

Q5. In our assessment against the objectives, do you believe there are any relevant assessments we have not taken into account?

No

Q6. Do you agree with our assessment that, in this instance, grandfathering as set out in the WACMs would be unlikely to best facilitate the CUSC objectives when compared to the other options available to us?

We agree that grandfathered variants are less good against the CAOs than other variants, as they introduce a large and enduring distortion between different classes of embedded generator that is proposed in the relevant variants to last for many years. It will also create a long and enduring additional cost to consumers. Investor confidence and general regulatory certainty is an important issue. We support evolution of industry arrangements in a predictable manner which helps to reduce investment costs. However, we agree that participants will be aware that there is a charging change process in the CUSC via open governance, and should be aware that all charging arrangements can change. Specifically for embedded benefits reform, market participants will be aware that this has been an active area of review for a number of years with increasing evidence that the existing arrangements were unsustainable. Therefore, in this specific case we support the view that grandfathering is not appropriate.

Q7. Do you agree with our assessment that the value of the avoided GSP investment cost best facilitates the applicable CUSC objectives?

Yes, we agree that embedded generators may not entail some modest GSP switchgear costs (avoided GSP infrastructure costs) that are entailed when other generators connect. National Grid has previously undertaken this assessment and identified a benefit and therefore out of all the options, those including avoided GSP investment cost are likely to better meet the CUSC objectives in relation to cost reflectivity.

Q8. Do you agree with our assessment of the impacts on security of supply? Please provide evidence for provided views.

We do not agree that phasing is necessarily warranted from a security of supply perspective, as National Grid and industry parties would be able to manage the behavioural change that comes about, and we have a concern that it could delay consumer benefits and prolong the distortion; however, we agree a notice period for change is important so if phasing is implemented alongside implementation from April 2018 then this concern is ameliorated.

Q9. Please provide evidence to show if there are other cost savings which small EG drive in comparison to larger (over 100MW) EG on the distribution system.

We do not know of any evidence and have seen none provided through the work group process.

Q10. Is there other evidence that payment above avoided GSP/generation residual would better facilitate the applicable objectives?

No. we have not seen any evidence that embedded generation creates benefits above avoided GSP costs.

Q11. Do you believe you have a legitimate expectation or contractual right for the continuation of TDR payments? If so, please provide evidence.

No, there is no contractual right within the industry commercial framework (CUSC) for the TDR payments to continue. In principle we would always support regulatory stability and the need to avoid sudden cost changes in respect of investments made. But, specifically in this case, we do not believe that there was legitimate expectation that the TDR payments would continue. To the contrary, embedded benefits have been reviewed on a number of occasions in recent years with increasing evidence that the arrangements were unsustainable.

5. Distributional Issues

Q12. Do you agree with our assessment of the distributional issues?

Yes

Q13. Are there any sectors that we may have overlooked?

No

6. Quantitative modelling results

Q14. Do you agree with our modelling approach?

Yes. We agree that modelling scenarios is a useful cross-check for the principles-based conclusion that a distortion exists and an indication of the value of that distortion. For the avoidance of doubt, we do not believe any further sensitivities are needed given the strength of the case for reform. We do not therefore advocate more analysis, and the following comments should be read in that context.

We agree with the choice of BEIS and National Grid data as inputs. These are public, transparent and widely recognised and referenced by industry participants and stakeholders

We also agree with the decision not to model the impact of reform of TDR on transmission investment – which is extremely uncertain

We agree with the modelling approach not to consider the possibility of new build embedded generators that have won Capacity Market contracts in the first three auctions cancelling their contracts as a result of TDR reform. The potential for this to occur is highly uncertain.

We note that some of the assumptions may limit the value of the consumer benefit from reform. If Ofgem is to undertake further modelling to perform sensitivities on input assumptions, we encourage Ofgem to ensure they capture a realistic range of future scenarios. For instance, it might be prudent to model scenarios where annual embedded

generation build is not constrained at 1GW; the tight 1 GW limit on annual embedded generation build in the published modelling deployment seems low, as it would be easy for the real world build to be higher than this – from the customer welfare perspective there seems to be a good reason to test the impact of increasing this limit with scenarios allowing a higher build rate, as embedded capacity would go up – increasing customer benefit from reform. Also, a constant TNUoS tariff assumption is used from 2021; a scenario with increasing tariffs may not be unreasonable given the history of tariff rises year on year, and the reduction in the transmission charging base in the ‘status quo’ scenario due to increasing embedded generation capacity.

Overall the modelling numbers may change depending on these (and other) assumptions, but it is very hard to conceive how the result would not show a significant customer benefit from reform.

Nor should changes in the modelling results have any impact on the principles based conclusions of Ofgem that there is a distortion that is causing detriment to customers.

Q15. Do you think that our background assumptions and using FES data is an appropriate approximation for status quo?

We agree with the use of FES data as a public and transparent reference point. We do not see any issues with using the FES Slow Progression scenario, and we consider that the deployment of renewable capacity in that scenario is reasonable. It is not apparent that any of the alternative FES scenarios are more reasonable.

Q16. Where WACMs are not modelled directly, do you think our assessment is appropriate (see appendix 8 for detail)?

Yes, use of the closest modelled scenarios as shown in the table in appendix 8 seems a reasonable approach that is likely to be fairly accurate given the modelling uncertainty.

7. Assessment of shortlisted options

Q17. Of the options available to us, do you agree that WACM4 best facilitates the applicable CUSC objectives?

Yes, we agree that avoided GSP infrastructure costs is likely to represent the best assessment of the TNUoS related embedded benefit, or close to it, and therefore that CAO (b), cost-reflectivity, may best be met by those variants that retain avoided GSP infrastructure costs only as the relevant revenue stream. This is the key component of these CUSC modifications. Combined with limited phasing-in and an implementation date of April 2018, makes WACM 4 the best alternative. Note though, that we do not see a good case for flooring at zero which we did not include in CMP265 original; it dampens the geographical signals faced by smaller EG.

Q18. Do you believe that an implementation date of April 2018 best facilitates the applicable CUSC objectives?

Yes, we would not wish to see the benefits of this change delayed; table 26 in the consultation document highlights considerable costs of delay, to consumers, compared to an implementation date of April 2018. By combining this date with the phased approach, distortion would be phased out relatively quickly and a step change is avoided. We note the

concerns raised that a single step change would cause a sudden alteration in behaviour around the triad, causing Grid operational difficulties. We consider that any such behavioural changes would be manageable by National Grid and industry parties and so a phased approach appears prudent.

EDF Energy
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