Targeted Charging Review: minded to decision

Response from Regen and the Electricity Storage Network

Introduction

Regen and the Electricity Storage Network (ESN) have 180 members from business, local authority, community energy, consultants, academic institutions, and research organisations across the energy sector.

Regen is an independent, not-for-profit centre of expertise on sustainable energy with 15 years frontline experience of working in the renewable energy sector. Regen manages the ESN - the UK industry group formed in 2008 dedicated to electricity storage.

This response to Ofgem's Targeted Charging Review (TCR) proposals represents the views of Regen and the ESN as informed by members and by our mission to transform the whole energy system.

We agree that the energy system is rapidly changing and that the way we pay for the network needs to be reformed to adapt to these changes. In 2016 Regen published a paper on "Network Charging for Flexible Future"[1] making the case for change. We participate in the Charging Futures Forum and will sit on the upcoming Access SCR Challenge Group. We have, however, significant concerns about the proposed changes and the impact it will have on business and the wider energy system.

Our response to the consultation is set out below.

Summary of key points

1. We disagree with the principles behind the Targeted Charging Review, in particular, the decision not to focus on carbon reduction

The objective of the way energy networks are regulated and funded should be to support the UK's key energy policy aims in the most efficient way – not a chimerical search to reduce 'harmful distortions'.

The objective of reducing 'distortions' in one part of the energy system whilst ignoring all the other distortions in the system is flawed. There are numerous factors that affect the signals sent to energy users and generators, from extensive subsidies for all types of energy generation to market failures such as the cost of pollution to the economy and society. For example, fossil fuels currently annually receive around £2.6bn more support from the UK government than renewables[2].

Energy networks are key to underpining the smart, decentralised and decarbonised energy system of the future. Network charging is a crucial method for sending signals to the system, the market and beyond. To protect existing and future consumers the objective of the TCR should be to support government energy policy goals in a fair, efficient and practical way.

[1] https://www.regen.co.uk/project/network-charging-for-flexible-future/

[2] Based on £9.4bn (€11.62bn) in support for fossil fuels compared to £6.8bn (€8.43bn) in support for renewables, 2016 data. EC Trinomics report, 2018, page 429 https://ec.europa.eu/energy/sites/ener/files/documents/energy_prices_and_costs_-_final_report_-_annexes_v12.3.pdf

In particular, reducing carbon emissions is a key societal and government policy goal. Ofgem's failure to make decarbonisation a principle of its reviews of network charging is an egregious failure to meet its statutory and moral duties to protect future consumers.

Feedback and analysis from our membership has shown that these proposals will increase costs for renewable generators, storage and other flexible technologies resulting in decreased investment and potential failure of existing projects. This will lead to more fossil fuel generation. If carbon reduction were considered as a principle, the impacts on renewables and storage deployment that we outline in this consultation response would be factored into the decision, rather than referred to as a side effect.

Recommendation: the principles behind the TCR should be reconsidered to ensure the changes support government energy policy goals and include carbon reduction as a key principle.

2. Renewable generation and flexible technologies are disproportionately affected

2.1. Removal of incentives for demand reduction

We agree that the way we pay for the electricity network should be adapted to better suit the current and future structure of the network.

However, the proposals to make such a large part of network charging a fixed cost will penalise large energy users who have invested to reduce their energy demand in line with government policy. As a result, incentives to invest in storage, onsite generation or demand side response will be reduced and the business case for such technologies will be affected.

2.2 Embedded benefits

Combined with previous reductions to embedded benefits, the changes to Balancing Services Use of System (BSUoS) charge will reduce revenue prospects for distribution connected assets. Coupled with the uncertainty of the forward-looking reforms, leading UK assets owners and investors have predicted that renewable energy and storage project deployment will slow due to reduced competitivity and the cost of finance will rise due to increased risk. Our members have provided evidence to support this assessment which can be found in specific question responses below.

Faced with ever reducing revenues and an uncertain climate, renewable generation and flexible technologies are being disproportionately affected by these changes.

Recommendation: no decision should be taken on whether to implement the proposed changes to BSUoS under the TCR until the Taskforce has made its recommendations and industry have been consulted.

Recommendation: Ofgem should undertake further analysis on the impact of these changes on renewable generation, storage and other flexible technologies.

3. The review is out of step with the Forward-looking and Access review

Residual and forward-looking charges are explicitly linked, and it is difficult to assess changes to one without knowing the structure of the other. The split between the two reviews results in different timescales, different teams within Ofgem and different analytical assessments – and creates uncertainty for the industry.

The impacts that the reforms will have on both elements of charging must be assessed together. By removing incentives to residual charges before deciding how it will be re-apportioned through forward-looking charges is preventing industry from accurately modelling future business cases. This in turn is deterring investment.

Recommendation: the two reviews should be aligned so that the debate, analysis, decisions and implementation occur together.

Consultation questions

Q2. Do you agree with how we have assessed the impacts of the changes we have considered against the principles? If you disagree with our assessment, please provide evidence for your reasoning.

We strongly disagree with the principles Ofgem have chosen for the TCR. As set out above, the principles fail to meet Ofgem's duties to future consumers and instead narrowly focus on reducing 'distortions' in one part of the system while ignoring those that exist outside of it. In particular the principles;

1. fail to support and align with government energy policy objectives.
2. do not take carbon emissions into account and as a consequence do not support decarbonisation.

Recommendation: the principles of the TCR should be rethought with carbon reduction adopted as a key principle.

Recommendation: Ofgem should undertake further analysis on the impact of these changes on renewable generation, storage and other flexible technologies.

Q5. Do you agree that similar customers with and without on-site generation should pay the same residual charges? Should both types of users face the same residual charge for their Line Loss Factor Class (LLFC)?

We agree with the overarching principle of the Targeted Charging Review that everyone should pay fairly for the residual costs incurred in building and running network infrastructure.

> *CoGen is a developer of baseload energy recovery facilities. We feel strongly that these proposals will reduce investment in renewable energy infrastructure and related behind the meter connections. From our analysis, cost incentives could be reduced by 96%. Despite uncertainties, the intentions of the current proposals are likely to discourage renewable generation for industrial users. This is an example of an innovative, low carbon generator being hit by both reduction in Triads and reduction in embedded benefits.*
>
> Isabella Gaupmann, Project Development Manager, CoGen

Renewable onsite generation can help reduce carbon emissions and reduce network infrastructure costs. CoGen, a developer of baseload energy recovery facilities, note that the proposals will reduce cost incentives by as much as 96% thereby negatively impacting investment in renewable energy infrastructure and related behind the meter connections[3].

Storage performs a similar function by helping to reduce demand at peak times

[3] Isabella Gaupmann, Project Development Manager, CoGen

and contributing to security of supply. Quarry Battery, a pumped hydro developer, have already seen the effects of reduced Triad payments pushing back by at least 2 years a 100 MW/700 MWh pumped hydro scheme, with the project at greater risk of failure[4].

Ecotricity, a renewable supplier, believe that Triad payments made up as much as 50% of the business case for storage assets[5]

> *"Infrastructure investors are no longer investing in the UK due to policy and regulatory uncertainty in the energy sector. The risk and cost of capital has increased and this uncertainty is pushing investors and debt funders away. When modelling for an asset, revenues from network charges have to be assumed at zero because it's impossible to know what the changes will bring."*
>
> Dave Holmes, Managing Director, Quarry Battery Company

Onsite renewable generation and storage does help to reduce carbon emissions and costs for the network and they should be rewarded fairly for doing so in the forward-looking charging element of network charging. However, industry is being asked to agree to these significant changes without knowing how they might be rewarded through forward-looking charges. This uncertainty is raising costs for investors and driving away debt funders.

Recommendation: Ofgem should undertake further analysis on the impact of these changes on renewable generation, storage and other flexible technologies.

Recommendation: ensure that onsite generation and storage are appropriately rewarded by the forward-looking charge for reducing costs to the network.

Q8. Do you agree with the approaches set out for banding (either LLFC or demanding for agreed capacity)? If not please provide evidence as why different approaches to banding would better facilitate the TCR principles.

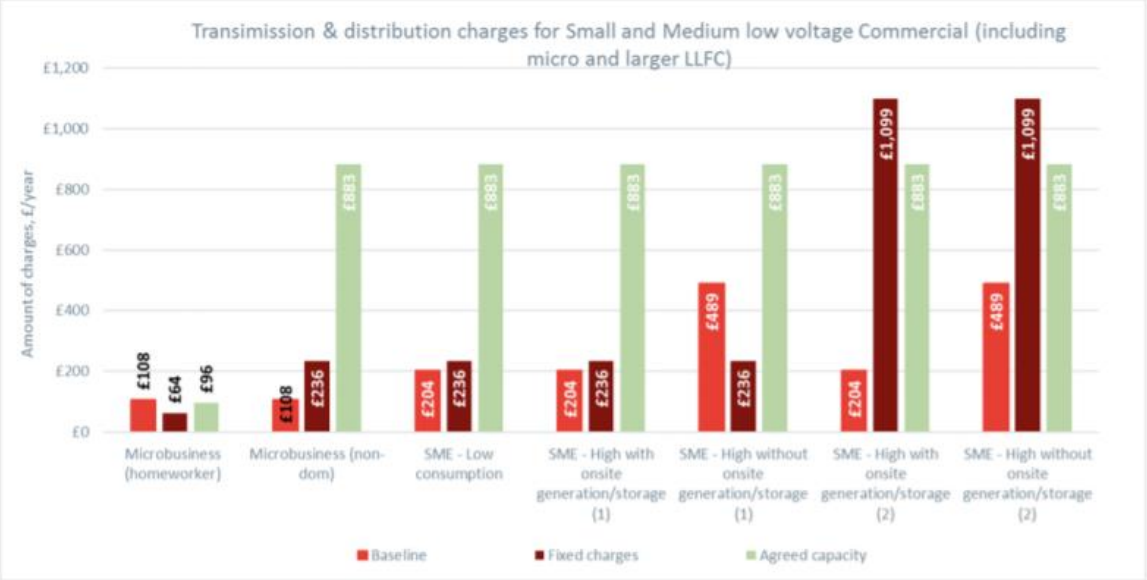
Q9. Do you agree that LLFCs are a sensible way to segment residual charges? If not, are there other existing classifications that should be considered in more detail?

Answers to questions 8 and 9

The decision to base the fixed charge on Line Loss Factor Class (LLFC) is difficult to assess as there is very little information provided by Ofgem on what this segmentation represents. Given what information there is available on how the Line Loss Factor is calculated by DNOs, it can be assumed that the segment based on LLFC will vary depending on where a user is connected to the network. This increases locational distortion and should be made clear to stakeholders so that a full assessment of the impact can be made. An example given in the consultation aptly illustrates this; figure 10 shows the difference in impact between two SMEs with a different Line Loss Factor is vastly different. One is charged £236/year while the other is charged £1,099/year, solely based on the Line Loss Factor.

[4] Dave Holmes, Managing Director, Quarry Battery Company
[5] Peter Dennis, Smart Grid Aggregation Analyst, Ecotricity

Figure 10 Small medium low voltage (LV) commercial user groups – Transmission & Distribution residual charges for baseline and basic options



Source: Ofgem, Targeted Charging Review: minded to decision and draft impact assessment, November 2018

It is unclear why the difference is so great, and it is assumed that most demand customers will have little control over their LLFC. Being unable to understand the reasons why the charge would vary so greatly makes it very difficult for anyone to make an assessment of whether these charges are fair.

Recommendation: Ofgem should provide further clarification on the LLFC.

Q11.Do you agree with our proposed approach to the reform of the remaining non-locational Embedded Benefits?

Q13.Are there any reasons we have not included that mean that the remaining Embedded Benefits should be maintained?

Distribution connected generation and storage can reduce network costs; embedded benefits are intended to provide the necessary signal to ensure such assets are built where and when they are needed. Embedded benefits make up a significant portion of income and business cases have been designed to include such costs - BSUoS benefits alone could save 4% of total costs for an embedded renewable generator[6].

The changes to BSUoS could cost distributed assets as much as £4-5/MWh[7], but given that the structure of the BSUoS charge is under review by the Balancing Services Charges Taskforce, it isn't possible to predict what the new charge might be for renewable generators. For vertically integrated suppliers, this loss may be passed back to the consumer, something that has not been taken into consideration under the analysis for the impacts of the TCR. We ask that no decision is taken on

[6] Based on £2.50/MWh BSUoS charge and £65/MWh levelised cost for onshore wind. BEIS Electricity Generation Costs, 2016 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/566567/BEIS_Electricity_Generation_Cost_Report.pdf

[7] Based on £2 - 2.50/MWh average BSUoS payment

whether to implement the proposed changes to BSUoS under the TCR until the Taskforce has made its recommendations and industry have been consulted.

Combined with previous reductions to embedded benefits, this potential BSUoS swing will reduce revenue prospects for distribution connected assets and, coupled with the uncertainty of the forward-looking reforms, leading UK assets owners and investors have predicted that new build solar project deployment will slow due to reduced competitivity, and this is before taking into account the increase in the cost of finance due to increased risk.

Faced with ever reducing revenues and an uncertain climate, renewable generation and flexible technologies are being disproportionately affected by these changes and we ask that Ofgem undertake further analysis to fully understand the effect this is having on the industry.

Recommendation: no decision should be taken on whether to implement the proposed changes to BSUoS under the TCR until the Taskforce has made its recommendations and industry have been consulted.

Recommendation: Ofgem should undertake further analysis on the impact of these changes on renewable generation, storage and other flexible technologies.

Q15.Do you agree with our minded to decision set out? If not please state your reasoning and provide evidence to support your answer.

No, we do not agree.

Network Residual Charges

We believe the fixed charge could prevent the most efficient and cost-effective use of the network if not complemented by strong signals in the forward-looking charge. It is difficult for the industry to make an assessment of the fixed charge proposal without knowing further detail of the forward-looking element. For example, there is no clear indication from Ofgem how costs will be distributed between TNUoS, DUoS and BSUoS[8] following these reforms and whether the total amount in the residual pot would increase or decrease relative to the forward-looking charge.

Fixed charge vs agreed capacity charge

The fixed charge may be feasible for lower demand users, such as domestic or SME customers, if forward-looking charges send the right signals.

For higher demand users, it would be more effective to base the charge on agreed capacity levels with penalties for breaching that level of capacity. This would have the intended effect of preventing demand customers from avoiding paying towards the network but would still incentivise some reduction in overall demand. It may also free up unused capacity if penalty charges are applied in the right way.

Reduced revenues and incentives for onsite storage and renewable generation

The fixed charge removes Triads and the incentive for onsite generation. As described above, this can amount to 50% of the business case for a storage asset and will reduce behind the meter cost incentives by 96%. This change will severely affect the business case of a nascent storage industry

[8] Transmission Network Use of System (TNUoS), Distribution Use of System (DUoS) and Balancing Services Use of System (BSUoS)

and reduce low carbon, onsite generation. An agreed capacity charge for higher demand users would retain some incentive for investment in storage, renewable onsite generation and other flexible technologies.

Recommendation: if Ofgem decide on the fixed charge, it should be applied to low demand users only with the agreed capacity charge applied to higher demand users.

Embedded Benefits

We disagree with the changes to BSUoS charges.

There has been a lack of consideration of the wider impact on renewable, storage and flexible technologies and we believe the changes will have adverse effects on the industry due to:

- increased costs for technologies already operating at zero-marginal costs;
- inability to model a business case due to lack of information on the change to BSUoS;
- increased cost of finance due to risk to investors and debt funders;
- decreased deployment due to all of the above.

Recommendation: no decision should be taken on whether to implement the proposed changes to BSUoS under the TCR until the Taskforce has made its recommendations and industry have been consulted.

Recommendation: Ofgem should undertake further analysis on the impact of these changes on renewable generation, storage and other flexible technologies.

Regen & Electricity Storage Network
Bradninch Court
Castle Street
Exeter
EX4 3PL

Tel: 01392 494399
Email: mgreenhalgh@regen.co.uk

February 2019