

To - electricitynetworkcharging@ofgem.gov.uk

Andrew Self
Head of Electricity Network Charging
Ofgem
9 Millbank
London
SW1P 3GE

18 April 2017

Dear Andrew

Ofgem Minded to decision CMP264 and CMP265

Alkane Energy Limited (Alkane) welcomes the opportunity to submit a response to Ofgem's consultation on its "minded to" decision to change electricity transmission charging arrangements for Embedded Generators (EG), a decision which Ofgem is required to make in order to conclude the CUSC CMP264/5 process.

Alkane is a member of the Flexible Generators Group (FGG) and has participated fully in the development of FGG's response to that consultation. We are in support of the vast majority of the content of that response, and any lack of repetition here of points made there should not be taken as meaning we do not consider them important.

We would like to thank Ofgem and LCP/Frontier for providing further insight into the LCP Model and its results, first through organising the public workshop on Tuesday 21st March and second for allowing FGG to commission a further half day on Wednesday 5th April to explore some issues in more detail, and for accommodating our request for an extra day to respond.

In summary Alkane:

- A. acknowledges that the forecast rise in Triad payments presents an issue which it is necessary for Ofgem to address
- B. does not accept Ofgem's assertion that the CUSC Code Modification process is an appropriate mechanism to bring about a highly complex and contentious change that has such material commercial impact across the industry
- C. believes that the framing of the defects in CMP264 and CMP265 are so discriminatory that they should be rejected on principle under Ofgem's statutory obligations
- D. believes that, notwithstanding the above point, the rushed Workgroup process during the second half of 2016 did not give parties adequate time or opportunity to challenge "evidence" and proposals brought forward and so industry failed to reach a consensus understanding of reasonable and appropriate change
- E. has through this process, drawing particularly on the more detailed investigative work of its peer companies PeakGen and Welsh Power, achieved a corporate understanding now of transmission charging that leads it to conclude the current charging arrangements are completely unfit for purpose and it is these that need addressing, not one symptom of them

- F. believes Ofgem has been negligent in (a) not recognising the magnitude of the problem earlier itself given its statutory responsibilities, and (b) having recognised it, not acting earlier in instigating the Significant Code Review (SCR) which is so evidently necessary
- G. is now rushing to a decision that is discriminatory and not only highly damaging to individual businesses, but in the short term risks security of supply, increasing costs to consumers and increased carbon emissions, whilst in the long term damaging investor confidence in such a fundamental way it can only lead to a higher cost of capital across the industry
- H. notes Ofgem has been offered an alternative, in CMP276 raised by Alkane, that would provide a proportionate, non-discriminatory, interim charging arrangement during the period of an SCR, which could be put in place with negligible change to industry systems, but has so far frustrated Alkane's attempts to become designated as a Materially Affected Party let alone accepted Alkane's request that CMP276 should be considered as Urgent so it can provide this alternative to any CMP264/5 option
- I. requests Ofgem to reject all options on CMP264/5 on the basis that CMP276 has now been brought forward and this offers a materially better outcome against both the CUSC Objectives and Ofgem's statutory duties
- J. believes now that WACM7 offers the least bad of the other alternatives open to Ofgem, given the evidence being provided by PeakGen and Welsh Power as to the additional value of EG above that identified in WACM4, and its own scrutiny of the LCP/Frontier analysis which is sufficiently flawed as to cast doubt on the robust basis of the decision.

We have responded in more detail to Ofgem's specific questions below.

Yours sincerely,

Paul Jenkison
CEO Alkane Energy Limited

Question 1: 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?

The current TNUoS charges are not cost reflective, being based on a locational signal that is only marginally directionally correct but has been demonstrated by PeakGen to fail to recover real system costs to anything like the degree it should. Further the EU cap on generator charges further distorts by failing to recover costs from those incurring them (the remote renewables that are driving the 40% increase in transmission cost recovery over the coming five years).

We do not think there is evidence Triad payments are distorting dispatch. Generation running to satisfy peak demand may reasonably expect higher prices. Ofgem has not provided evidence that such generators are receiving energy revenue below their marginal cost. Ofgem does not specify on what price it is basing its judgment. The wholesale price at any time is a complex fix of forward prices set at different times by bilateral trades. LCP in its modelling assumes historic price shapes at peak will not change materially if at all by the removal of Triad. It is an assumption, but made by an independent price forecast expert. Once correction of Gas reciprocating engine (GRE) efficiency is made in the LCP modelling to a more reasonable level (39% HHV not 32% HHV) we believe it shows most GRE would beat most CCGT in the capacity market auctions, as they have to date, so this would not change the plant mix. If Triad revenue for smaller EG drives down the CM this is a distortion but one that benefits consumers.

We know for a fact that the CM payments in 2020 arising from the T-4 2016 auction are £236million higher (£4.50 x 52.4GW) than those arising from the 2015 T-4 which cleared at £18. Ofgem acknowledge that the modelling suggests increased CM clearing prices in the future if Triad payments are reduced. The logic that says an increased cost to consumers will result overall is based on Ofgem taking no action under its SCR and no further CUSC mods coming forward to modify the charging regime during the next 16 years.

Question 2: Do you agree that rising TDR payments to smaller EG is a problem which needs to be addressed?

The rising TDR payment needs to be addressed as it has become obvious it is no longer appropriate to allow this to capture costs spilling out of a flawed locational cost allocation and nor is it appropriate to recover those costs from peak demand. The payment of TDR to EG is a symptom, not the underlying problem. If the problem is properly fixed the payments to EG become irrelevant.

"...as the proposals that have been put forward to us mainly make changes..." The alternative proposals can only make changes to TDR because of the defect definition which prohibits reconsidering the structure of demand charging. This is an inherent defect in using the CUSC in general, and these mods in particular, to address the problem.

We agree a negative feedback loop exists in the current charging framework and we agree it needs fixing. Targeting EG is not the answer. Putting in place a more cost reflective charging arrangement for all demand side TNUoS is what is required.

Question 3: Do you agree with our interpretation of the applicable CUSC objectives?

No. The solution distorts competition with DSR/BTM generation. Current locational charging is not sufficiently cost reflective and needs fixing. New investment to connect remote renewables should not be charged on a Triad via demand residual.

OFGEM HAS WAITED A YEAR SINCE THIS ISSUE WAS FIRST RAISED BY DECC/BEIS BEFORE LAUNCHING A CONSULTATION ON A TCR/SCR. IF PROMPT ACTION WERE REQUIRED, WHY THIS DELAY??

We do not believe the CUSC is the right place to address the issue, as it is open to the prejudicial approach adopted particularly in the definition of CMP265. To the extent a holding position is appropriate that is different from the status quo, Alkane has put forward CMP276 as a non-discriminatory alternative that provides much easier implementation than any CMP264/5 option. We do not understand Ofgem's prevarication in licensing Alkane as a Materially Affected Party and urge Ofgem to grant CMP276 urgency if the position here is believed to be such a concern.

The issues raised in para 2.16 WILL CONTINUE TO APPLY TO DSR. Ofgem is being unaccountably hypocritical and acting in a discriminatory way by targeting EG.

We agree the level of Triad payment based on peak demand is wrong, but we do not believe a justification for a distinction between DSR and EG has been made and Ofgem is therefore acting against its statutory duties. We also believe the locational element needs to be fixed to better reflect the true costs of connecting to the system. That this is failing is a big contributor to the problem that CMP264/5 is purporting to fix.

Question 4: Do you agree with our assessment against the applicable CUSC objectives and statutory duties? Please provide evidence for any differing views.

No. Ofgem is failing in its statutory duty to act in a non-discriminatory way.

The modifications are defined in a discriminatory way which means they should be rejected if Ofgem is to behave in line with its statutory obligations. CMP276 offers Ofgem a non-discriminatory alternative which could be brought forward with urgency if Ofgem is minded to determine that timetable.

Ofgem correctly highlights the driver behind CMP264. It was only during the Workgroup phase that Ofgem finally disclosed it wanted an enduring solution to emerge from CMP264/5 as it was not certain it would conduct a subsequent TCR. Industry was united in its amazement and dismay that Ofgem felt so able to absolve itself from its clear responsibility to take a lead on such a material, emotive and commercially sensitive issue. One year on the consultation on a TCR has only just been launched, in very belated recognition that this was an unacceptable position to hold.

All the options viewed as being the best by Ofgem were rejected by the majority of Workgroup members. Ofgem has totally dismissed the competitive position of peak EG and DSR/BTM and purely focused on the TG/EG issue.

The defect definition left Workgroup members no choice in what they could influence within a WACM.

Ofgem took over three months to consider the final Workgroup report before issuing its consultation on 1 March. We consider the consultation period to be inadequate to respond fairly to the contents of this document.

We note in the CUSC Panel voting that the Workgroup voting was completely overturned, and not one of the Workgroup supported modifications was supported by the CUSC Panel.

Ofgem does have the opportunity now to steer the debate within CMP276 towards issues and evidence it would seek in order to make a robust decision. This would assist the Workgroup in bringing forward modification options that offer Ofgem appropriate choice.

Ofgem makes the factual statement that transmission charges are increasing without seeking to ask why, and more specifically why the locational charge is doing such a bad job of revenue recovery. It is this that is leading to the main element of growth in the TDR, of which EG is undoubtedly a beneficial recipient, but it is not a cause. The failure is not in EG receiving a negative peak demand charge, but rather in that charge being totally not cost reflective to ANYONE, including all demand DSR, BTM and independent EG. CMP271 is welcome as it seeks to analyse the costs and properly allocate them including revisiting the charging base. As such it presents a much more appropriate framework for an enduring fair solution than can possibly be delivered by CMP2654/5.

If Ofgem decide on any option under CMP264/5 Ofgem are immediately imposing costs on industry to deliver a gross charging solution. There is no in-principle justification for gross charging of transmission. The boundary distinction on who to charge and not to charge becomes arbitrary, as evidenced by the exclusion of DSR and BTM, as well as further flung generators who may be taking advantage of Triad via interconnectors.

Question 5: In our assessment against the objectives, do you believe there are any relevant assessments we have not taken into account?

We think Ofgem has materially underplayed the investor confidence effect and impact on cost of capital across the industry, and the cost of implementation of gross charging.

Owing to the defect definition it was impossible to consider options that did not involve gross charging. The dismissal of net charging as the most appropriate way to charge for the transmission system is in our view a fatal flaw in the defect definition.

In the latest NG forecast of TNUoS published in February 2017 the TGR is negative and forecast to remain negative (and increase) for the next five years.

It is worth also noting that demand charging is time based over 3 fixed half hours each year, whereas generation charging relates to an individual generator behaviour. There is no requirement on TG to generate at peak to receive its negative revenue from TNUoS.

Question 6: 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?

No. We think there is a case for investors that made decisions in good faith should have their position protected in the interests of fair competition, albeit we recognise the valid counter arguments.

We note that alongside rejection Ofgem has a “send back” option. In view of the flaws identified in the LCP analysis, and the evidence submitted by Welsh Power and PeakGen, we suggest this may be

an appropriate outcome. It would allow CMP276 to be brought forward alongside as intended and so Offer Ofgem an alternative that addresses many of the compromises described in this document.

Question 7: Do you agree with our assessment that the value of the avoided GSP investment cost best facilitates the applicable CUSC objectives?

No. We think Welsh Power has demonstrated material other avoided costs arising from EG, and further that the competitive discrimination between exporting EG and DSR/BTM has been totally ignored.

We would wish to highlight the investigative work of Welsh Power in highlighting (i) the incomplete capture of the avoided cost arising from EG by reference to NG's RIIO price control, and the unjustifiable exclusion of the cost of the supergrid transformer.

Question 8: Do you agree with our assessment of the impacts on security of supply? Please provide evidence for provided views.

No. We do not believe the Frontier/LCP modelling to be robust. The plant that forms most smaller EG CMUs is readily transportable and trades internationally. It will not necessarily stay in its location for the benefit of a new owner, even supposing it gets built. Ofgem will need to look for evidence on the amount of new capacity not delivered. It is extremely unlikely that any owner will wish to publicly disclose it will fail or intends to fail on delivery of a CM commitment before it is forced to do so. Security of supply may be maintained by older coal plant remaining connected to the system and setting higher CM prices in T-1 auctions to fill a shortfall – this hardly seems in the interests of consumers, or in line with Government stated policy about the phasing out of coal.

Question 9: 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 note the work done by Welsh Power in this area as disclosed to Ofgem.

Question 10: Is there other evidence that payment above avoided GSP/generation residual would better facilitate the applicable objectives?

Ofgem is seeking "evidence" for what it says is an "in principle" decision it proposes to make on the basis of little evidence and material flaws in the set of assumptions behind its modelling. EG does not obtain constraint payments in the way that TG does when it sits on a constrained part of the T-network. It effectively cannot connect where the system will be constrained, as noted by Welsh Power in its information provided on the Statement of Works process. We believe that WACM7 provides the least worst outcome of all the options available (other than outright rejection) measured against the CUSC Objectives.

Ofgem have made the statement in 3.25 without providing any evidence or robust justification for holding this view. Negative generator TNUoS charges for some zones have been a feature of the charging regime since privatisation. The fundamentally important factor is to retain proper relative cost reflectivity. The absolute under or over recovery of costs by generation will flow through to floating revenue streams such as wholesale price, otherwise competition doesn't work. The only justification we are aware of put forward by Ofgem is that negative charges would encourage generation that would otherwise shut to continue to remain connected to the network. In the absence of a Capacity Market this may be a valid argument, but in a world post

EMR when payments are being made to generators precisely to accomplish this it no longer seems to have any credibility. This is a vitally important point of principle which and Ofgem should provide substantive evidence on why this distorts either the transmission network or the wholesale market when relative cost signals are maintained and a Capacity Market exists.

We view the principle of avoiding an artificial floor as a key one and do not understand how Ofgem can be so dismissive of it.

Footnote 33 deserves highlight. The demand residual is NOT capturing merely sunk network costs, but IS capturing costs of new network investment that are failing to be caught elsewhere because of the inadequacy of the existing “cost reflective” locational signal and the EU generator cap.

Question 11: Do you believe you have a legitimate expectation or contractual right for the continuation of TDR payments? If so, please provide evidence.

Ofgem had expressed concern but had done nothing to address the issue until its open letter of July 2016 and the recent consultation on a TCR. Net Charging for transmission had been reviewed several times and was consistently seen as the most appropriate way to charge for transmission. It is hard to see how this principle can have been so easily abandoned by vested interests given their support for it only 2-3 years ago, during the NG informal review. We think the rising level of TDR payments was a problem that needed to be addressed and the belated TCR/SCR is the right approach to do that. We do not support the use of CMP264/5 as the approach to put in place an interim solution whilst that review takes place.

Question 12: Do you agree with our assessment of the distributional issues?

We think the statement in 5.2 that says “*in addition* the reduced payments by suppliers to consumers will reduce consumer costs” is double counting. The full cost effect is shown in the lower £/kW demand charge and that is it. We note there is likely to be some offsetting benefit on reduced CM clearing prices and we think consumers have saved money through having a smaller transmission system than would otherwise have been necessary.

Paragraph 5.6 is an explicit statement of deliberate discrimination with no justification against the CUSC objectives or Ofgem’s statutory duties. It totally contradicts the opening sentence of 4.5: “Competition is best facilitated by non-discriminatory arrangements that do not inherently favour particular market participants.” What is Ofgem’s real position on this?

Ofgem’s quote of a £47/MWh BSUoS value in 5.13 is exceptional and out of context it is misleading: these levels of prices are not routinely accessible. In the 2015/6 settlement date published by National Grid for 2015/6 the highest BSUoS value was £11.57/MWh and the top 10% of half hours averaged less than £5.80/MWh. Ofgem also concludes with a throwaway remark suggesting an increase in peak power prices. There is absolutely no evidence provided to support this statement. On the contrary, LCP’s report on its own independent modelling on which Ofgem seeks to rely states its assumption that historic price shapes will not change and the forward market reflects a lower absolute price (second bullet p38 Chapter 7 Limitations).

Paragraph 5.16 states an aim that innovation should be based on “cost reflective no discriminatory arrangements that support competition”. CMP264/5 fails this test because it ignores DSR and BTM

which will continue to benefit from the high Triad charges. We do not accept that a reduction from c£45/kW to £2/kW can be considered a proportionate response when Ofgem has failed to take the opportunity to address the issue as the TDR payments climbed from just above £10/kW in 2005/6 to £30/kW in 2014/5, and shows in Appendix 4 a complete removal of payments for some generators. Ofgem offers no objective definition of what it considers “proportionate” but a rational independent observer would surely question whether such a reduction could remotely be considered so.

Question 13: Are there any sectors that we may have overlooked?

Para 2.13 again prejudicially mentions EG in a context which applies to all those who respond to Triad by reducing their natural demand or running BTM generation.

We believe Ofgem has totally underestimated the impact on RO plants running baseload (such as waste to energy and biomass) who may reasonably have factored Triad revenue into their financial forecasts. The revenue assessments in Appendix 4 ignore costs. Waste to Energy and biomass plants typically have high capital cost per kW and a halving of £/kW EB revenue would be expected to be very harmful. Such revenue would have been taken into account when setting ROC bands and to remove it now without recalculating the necessary banding appears retrospective. As RO plant is prohibited from participating in the CM and its RO support is an incentive to maximise output and operate inflexibly it is hard to see how it can recover this lost revenue.

Question 14: Do you agree with our modelling approach?

In simple terms – No. In 2.12 Ofgem lists four distortions/outcomes which we think is not proven or justified by any analysis or modelling.

Dispatch – Ofgem suggests smaller EG operate “out of merit” – this is not proven and we dispute it, certainly for GRE.

Wholesale Price – distortion of the wholesale price at peak is also not proven, and undermined by LCP’s own long term modelling assumption which assumes no change to peak price shape over time or between scenarios. Ofgem should have commissioned analysis to test the hypothesis rather than simply relying on a “history repeats itself” assumption.

Capacity Market – to the extent smaller EG bids depress capacity prices this is true it benefits consumers. A £5 Triad payment paid to 10GW of EG/DSR has the same cost to consumers as a £1 uplift in the CM paid to 50GW of CM capacity. This is not to defend a non cost reflective payment to EG to the detriment of other market players, but merely to point out that the maths indicates a benefit to consumers from the current arrangements, as does LCP modelling even with the flaws in its assumptions. We have done simple analysis that shows a gas recip to be the most economic new plant option at load factors lower than 10-15%, which (based on existing and published load duration curves) would suggest the system would benefit from 10-15GW of this type of capacity being built.

System Connection – Welsh Power have provided evidence to show that EG can only connect where there is space on the network. The benefits do not justify the cost of network upgrade to the extent this may be required. This is a difference/distortion between EG and TG but it is not in EG’s favour.

Question 15: Do you think that our background assumptions and using FES data is an appropriate approximation for status quo?

No.

Ofgem have used a time period to 2034 for the measurement of benefits (para 6.1). This is totally unjustifiable in the context of an announced SCR/TCR which could effect the same change, albeit later. The only justification for CMP264/5 offered by Ofgem is the need for earlier action. The calculation of benefits should therefore be confined to the period that benefits from earlier action, not to a long term that could be affected anyway by a published statement of a review process.

We find the statement in 6.2 that the regulatory regime is “predictable” laughable. We and our investors did not see complete removal of Triad payments as even a remote outcome two years ago in the context of statements made up to that point. We prudently considered sensitivity analysis around the level of Triad, but there was no indication it would disappear completely.

We disagree that all the assumptions used are conservative (6.3). We have already highlighted the erroneous efficiency used for new gas reciprocating engines. We note the £24/kW levelised cost for a gas reciprocating engine in Figure 10 of the LCP report is based on a 32% HHV efficiency. A 39% HHV efficiency machine would, all other things being equal, have variable costs of £19.60/kW. This would reduce its “Required Payment” below £29/kW, making it more competitive than a new CCGT in a CM auction. We believe this 39% number to be conservative based on our experience and on published manufacturer data sheets.¹

On the contrary the elusive 60% LHV efficiency CCGT has yet to be reliably and consistently achieved, certainly for flexible operation. Although promised in the early 2000s, such machines have yet to be delivered into reliable commercial service. False promises have littered the development².

We do not believe the ongoing efficiency benefit of new CCGT development as assumed by LCP can be justified by reference to this track record. New CCGTs being built have claimed efficiency little different from machines being built 15-20 years ago. Major maintenance will restore efficiency to close to the new build state, and can often take advantage of improvements in blade design and materials to improve efficiency slightly beyond the as built guarantee. LCP’s claim that system costs will reduce over time if new CCGTs are built is a view but not one substantiated by the facts of history of the last two decades.

A small detail point would also question why transmission losses have not been applied to transmission connected large CCGT to equalise their competitive position with EG that operates closer to load. We would suggest a CCGT should have its efficiency reduced by a further 1% in the LCP modelling to provide a fair comparator of energy delivered at “NBP” (or as the CM defines it the boundary of the transmission system).

We have highlighted to Ofgem and LCP our concern that the assumed stable generation across a day arising from intermittent wind undervalues the fast response time of a gas recip compared with the slower ramp rates of a CCGT. We believe the failure to start risk is invariably undervalued in forecast economics compared with the practice of operators of real plant faced with real time penalties of failure that outweigh the cost of running inefficiently at part load.

¹ See for example https://powergen.gepower.com/content/dam/gepower-pgdp/global/en_US/documents/product/Reciprocating%20Engines/Jenbacher/Type%206/jenbacher-type-6-fs-en-metric-2016.pdf

² See for example quote from RWE npower http://www.etn-gasturbine.eu/fileadmin/01_ABOUT_ETN/Articles_about_ETN/GTT_Magazine_IGTC_article.pdf

For all the above reasons we have significant questions over the forecast savings to system costs that LCP are forecasting for Ofgem. We do not believe that these exist and would welcome publication of revised analysis that shows whether a gas recip with performance as available now would be shown as more competitive in future CM auctions even without Triad revenue.

Question 16: Where WACMs are not modelled directly, do you think our assessment is appropriate (see appendix 8 for detail)?

Compared with what we see as major flaws in base case assumptions, the approximations here appear second or third order.

Question 17: Of the options available to us, do you agree that WACM4 best facilitates the applicable CUSC objectives?

CMP264/5 fail Ofgem's statutory duties on grounds of promotion of effective competition, non-discrimination and proportionality. Ofgem should reject CMP264/5 on this basis.

CMP276 offers an alternative holding position which addresses all these concerns and we would urge Ofgem to license Alkane Energy to raise it and grant it urgency, so as to achieve a more reasonable holding position for charging whilst Ofgem undertakes its SCR/TCR.

The growth in the transmission system cost is no longer driven by peak demand but rather by connection of remote renewables. The charging methodology is no longer fit for purpose. CMP271 recognises this and is attempting an evidenced robust review. CMP264/5 fail to define the defect appropriately and so fail against objective (c).

Net charging is simpler and all CMP264/5 options fail against CUSC objective (e).

Question 18: Do you believe that an implementation date of April 2018 best facilitates the applicable CUSC objectives?

We support a date that gives the earliest possible certainty of a long term position on network charging that enables all businesses to plan and invest for the future without facing the sort of price shock that has been created by this process. We do not think the case for early action via CMP264/5 has been made, in that we have shown the outcome from CM bids is likely to be higher prices but the same plant mix, and the bulk of the savings forecast are post the date when we would expect the TCR/SCR to have concluded and set a more robust and cost reflective long term charging regime.

Alkane's proposed CMP276 has the same implementation date which we continue to believe is realistic and feasible if urgency is granted promptly.