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### **Open letter: Charging Arrangements for Embedded Generation**

We welcome the opportunity to contribute our views on the complex issues raised in Ofgem's 29 July letter on the appropriate transmission charging arrangements for embedded generation.

Reliance Energy Limited is an EIS funded company focused on the development of flexible power generation sites in the UK on behalf of our clients.

Broadly, while we acknowledge and recognise concern over the rising level of the demand residual transmission network use of system (TNUoS) tariff, we do not believe that it is appropriate that the timetable for the current initiatives are to be driven by the schedule of the forthcoming Capacity Market auctions: the implications of change are far wider than just this specific policy tool. Furthermore, Ofgem's current approach to focus solely on the TNUoS residual demand tariff threatens to undermine the basis on which investment decisions have been made in good faith and therefore risks significant disruption to existing generation as well as future investment.

More generally Ofgem (or any stakeholder) has not to date presented a convincing case to demonstrate that, when considered as a whole, the current embedded benefit arrangements combined with wider energy market opportunities do not unduly advantage distribution-connected generation over transmission-connected generation.

In particular, we believe:

- the wider commercial arrangements applying to small generation need to be taken into account. This includes distribution and connection charging, as well as the wider ability of different types of generator to compete in the energy market and the many distortions that also exist and favour larger generation; and
- we believe that overall, the increased costs to consumers are an order of magnitude greater than the immediate reduction in transmission charges that reduction in the triad benefit would give rise to;

- investor sentiment in the sector is already severely depressed following the shock withdrawal of LECs last year and other recent government interventions in the energy market, and rushed action here will impact very adversely on existing and planned generation schemes.

Given this, Ofgem needs to have particular regard to the unintended consequences of rushed changes to merchant generator earnings and the investor confidence which would be damaged, consequently resulting in a threat to the security of supply. To properly unpack these issues and open the way for enduring change that is fair and sustainable to all generators and consumers, Ofgem should take forward a Significant Code Review to deliver the in-depth look it promised in 2011.

An Appendix setting out our more detailed observations and responses to your 29 July is attached.

One of our clients, Plutus Powergen, is a sponsor of Cornwall Energy's most recent work on embedded benefits and its latest report *Embedded Benefits: Addressing Market Distortions*, which we understand is being submitted separately but which we commend for your attention, and which provides deeper comment than we do here.

Please let me know if I can provide any further comment or clarification on the contents of this letter.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Neil Drake'.

Neil Drake  
Director, Reliance Energy Limited



**Open letter: Charging Arrangements for Embedded Generation**  
**Supplementary comments by Reliance Energy**

**Case for a fuller embedded benefits review**

While Ofgem states that it has had concerns about the transmission charging arrangements for sub-100MW embedded generation for a number of years, we believe its proposed approach to addressing the issue is rushed and inappropriate due to the complexity and interaction of the matters involved, the impact of which extend well beyond the boundaries of the energy industry. There are important and multi-faceted questions to be considered around the contribution of embedded generation to the electricity system and to wider investment in UK plc. We contend, therefore, that a piecemeal approach that seeks only to resolve a single part of the current arrangements is likely to have a number of serious detrimental or unintended consequences.

Embedded generation now constitutes over 24GW of capacity, having grown significantly in recent years, and is an integral and significant part of the energy mix. Therefore, changes to the arrangements which affect current capacity, and any capacity under development or consideration must be managed and carefully coordinated, particularly given the complexity of the charging arrangements and of the issues involved.

Going forward, there is the prospect that a hurried and insufficiently considered change greatly increases the perception of regulatory risk and further damages the confidence of investors, which is already brittle following the withdrawal of LECs. This could ultimately have detrimental impacts on security of supply and on progressing the low-carbon agenda. Reducing the value paid to embedded generators would also increase the clearing price of the Capacity Market and thereby increase costs to consumers particularly, given the cost recovery arrangements, domestic consumers and those least able to reduce consumption during the peak periods.

***We urge Ofgem to conduct a Significant Code Review (SCR) or, at a minimum, to conduct a more comprehensive review, as was foreshadowed in 2011.***

While any changes as a result of that review may take longer to implement than a potentially rapid change through a blunt CUSC code modification, it would be able to properly consider the impacts and interactions of any change on all the relevant industry codes, including the charging arrangements at distribution level. Any changes might then be made in an orderly way that does not risk significant market disruption, wider UK plc impact or further diminution of investor confidence at a vital point in the UK energy market's development.



While this considered and comprehensive review is conducted, we support the proposal by Infinis Energy/Cornwall Energy for a Workgroup Alternative CUSC Modifications (WACM) to place a transitional cap on the level of the residual component of the Triad during the review. We hope that this will be included in the WACMs that are taken forward for recommendation by the Panel and then determination by Ofgem.

In summary, by capping the residual component and conducting a review and clearly signalled process for change that minimises disorder would be ultimately to the benefit of customers. We have summarised below some key issues and areas which need to be included in such a review.

#### **Areas a full review should consider**

The Cornwall Energy report highlights a number of areas that need to be considered before any changes are made. These include areas where the value of embedded generation may be understated and where a substantial change to reduce the value of embedded benefits could overbalance the playing field in favour of transmission connected generation:

- the different connections policy between transmission and distribution potentially favours transmission over embedded generation because transmission generation connects under a shallower connection policy and therefore pays lower initial charges. However, this results in higher TNUoS which, in turn, feeds into the Triad charging regime. Therefore, if the Triad benefit were to be substantially altered without aligning the transmission and distribution connection charging regimes, this could provide transmission-connected generation with a cost advantage;
- the potential for the generation residual element of TNUoS to become negative as a result of the cap on generator charges imposed by European legislation and the recovery of local costs for onshore windfarms is a development that would not be cost-reflective and would provide transmission-connected generation with a further cost advantage. We note that Ofgem intends to consider this issue further as part of related work, on which it will set out further thinking in the autumn. However, we do not consider this should be considered as a separate matter but as part of an overall review, as it is likely to be significant and trigger other market distortions, and the total effect of any changes can then be seen and the right solution determined; and
- transmission-connected generators tend to have full access to the wholesale market and Balancing Mechanism that enables them to achieve an additional revenue stream that is not open to the majority of embedded generators. The potential impact is to lower its marginal cost and confer an advantage when bidding into the Capacity Market and CfD auctions.

The avoided costs provided by embedded generation need to be more fully considered. The Cornwall report puts forward various arguments as to why the true local value extends well



beyond the current transmission locational charge. For example, one area outlined in the Cornwall report is the value of the optionality that is created by connecting embedded generation, and this should be included in any consideration.

In addition, National Grid has identified that embedded generation reduces the need for local reinforcement at a GSP. This saving should be identified separately within the charging methodology to increase transparency and cost reflectivity. This could be achieved by splitting out a local charge from the residual to reflect the value to the transmission owner from embedded plant.

Such analysis also needs to be set in the context of the actual level of embedded benefits that generators receive. Previous analysis by Cornwall Energy (provided confidentially to Ofgem) suggests that the level of the embedded benefits which flows to embedded generators of different vintages through suppliers may not be as high as is being assumed. Understanding the split between suppliers and embedded generators of embedded benefit and the value received by generators is clearly a necessary pre-requisite to determining whether change is required.

The current transmission charging methodology should also be reviewed. Ofgem has said that it supports the current approach of forward looking locational signals being provided to network users, and it thinks this should continue to apply to embedded generation in relation to its impact on the transmission system. However, the calculation of the locational charge needs to be re-examined if it is to be used as a proxy for the avoided costs of embedded generation. The locational element of the triad charge is derived using a number of assumptions which have an impact on the level of the locational charge. These assumptions – for example that every circuit has infinite capacity – may mean that the locational charge is not representative of the true avoided cost of embedded generation.

More broadly, there is a strong argument for examining the methodology for the recovery of TNUoS revenue as a whole. Currently, the methodology does not take into account any spare capacity on the transmission system: the long-term costs of the entire transmission system are recovered from short term demand so that, if spare capacity increases, the level of the charge rises and with it the level of embedded benefit. We think the methodology should include some element of capacity-based charging. Under this regime, for example, the Triad charges could be based on the maximum demand over a ten year period. A key principle must be that the level of Triad charges are the same for both demand and generation.



Finally, consideration must be given and views sought from medium and large energy users about the commercial incentives for them to remove or move demand to avoid peak times – simply put, the reward for changing consumption practices must outweigh the commercial risk such changes generate.

An analysis of actual behaviour by such industries shows that the benefits need to be much higher than the proposed levels for a meaningful quantum of demand to move out of peak periods. A drop in that incentive is likely to result in that demand moving back into peak, thereby reducing or even exceeding any benefit to consumers that the proposed arrangements seeks to create.

### **Timing and transitional arrangements**

Ofgem has invited views on the timing of any changes and whether there is a need for transitional arrangements. Its initial thinking is that new arrangements arising from a CUSC modification should be in place by 2019-20 and that any grandfathering arrangements could be difficult to justify given the significant costs and distortions that this would likely cause.

We do not share the regulator's view of the urgency for change for two main reasons.

- Firstly, the proposed changes have been established in the absence of a full review, which would include establishing the benefits of embedded generation and whether the overall charging methodology needs also to change; and
- Secondly, imposing a rapid change on the industry will cause market disruption and will also create a climate of regulatory uncertainty, damaging future investment. In particular, it is likely to mean that further changes are subsequently found to be required – in addition to those areas already identified by Ofgem for future work – that create further and ongoing disjointed change.

A range of Workgroup Alternative CUSC Modifications (WACMs) are being considered by the CUSC workgroup, and it must decide which of these should be taken forward for consideration by the Authority following the Panel recommendation. The details of all these proposals are not currently publicly available and are subject to change during workgroup discussion. We support the inclusion of a transitional cap, as proposed in the Infinis Energy WACMs, which would enable a period of time to develop an enduring solution. This cap could be sensibly based on an average of recent past year charges. This could then lead to the introduction of gross charging but see embedded generators also receive an element that reflects additional credit for the local and wider reinforcement benefits they provide.

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We note the areas that Ofgem has identified for further work and that it expects to provide further details on this in the autumn. It also lists the work that is progressing on charging arrangements both at transmission and distribution level. Clearly co-ordination on these areas will be of critical importance, and there is a need for transparency in the process and timescales.