



Placing customers first means scrapping embedded benefits

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Answers on a postcard due this week to Ofgem regarding embedded benefits – the exemptions from transmission charges provided to embedded generation (EG) and off-takers who contract them. Growing transmission charges together with greater levels of EG have vastly increased the prize on offer in recent years leading to distortions in the energy and capacity markets. We argue these distortions are a result of charging arrangements inadequately reflecting the security of supply service the transmission network provides.

Ramping residuals

Ofgem list a range of potential issues with embedded benefits arising from the current charging arrangements.

Asymmetry in generation and demand zones, the 100 MW capacity split in how embedded generation is treated and exemption from balancing charges are all potential sources of distortion. However, greatest concern surrounds the demand residual component.

Calculation of this “Residual Tariff” – the top-up required upon marginal locational prices to ensure cost recovery for National Grid (NG) – constitutes a tiny sub-section of the 138 page charging methodology. Yet at £45/kW for demand this now dominates overall costs. Embedded generation is currently exempt. Should it be?

Security of supply benefits all

The main argument for the exemption is cost reflectiveness of actual use of the transmission system. If the system is not used during triad peak periods, then it is claimed to be cost reflective not to charge. However, this ignores the key metric that drives planning and investment in the transmission network – provision of security of supply.

An off-taker that remains connected to the transmission system benefits from the security of supply that connection offers, even where it is not used. It has been sized and built in consideration of their potential need for its use.

The issue has interesting similarities to the debates raging in the US and Australia over whether net metered installations should pay a fixed charge representing the benefits they derive from distribution networks. Again costs are determined by the connection requirements at the time of establishment, not by flows observed subsequently during peak.

Price based on forecast demand

Just as generators face charges based upon their booked Transmission Entry Capacity (TEC) so off-takers should face charges based upon forecast rather than actual off-take as this is the basis for network planning.

Under this approach the peak security locational element will act purely as a signal that in aggregate sums to zero with actual cost recovery coming through a security of supply residual component. Cost recovery of assets identified under the “Year Round” element of locational charges as providing a route to market rather than contributing to security could potentially be ring-fenced and charged back to the generators which benefit.

Peak shaving services in this structure will be contracted directly by NG who are then incentivised to consider the trade-off between such services and new investments.

Affordability is paramount for cost recovery

A potential objection to this approach may come in the form of redundant infrastructure arising from the inevitable gap between forecasts and reality.

NG are required to make investments without protection from demand risk through long-term contracts with off-takers prior to construction. Risk of poor

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planning is therefore implicitly socialised across all connected consumers.

In allocating these sunk costs Ofgem is bound to consider what is most cost efficient as opposed to what is most cost reflective should these concepts clash. Offering portfolio benefit to enable avoidance of charges and distort markets does not meet this criteria.

Triad avoidance is inconsistent with security of supply service

Security of supply remains the primary driver for network planning - a fact poorly reflected by the triad approach to charging. All those who benefit from such security through the existence of grid connections should be liable to pay for this service. Where network expansion plans do not meet reality then if Ofgem has accepted investments were made prudently, costs should be recoverable and shared in a manner that is most efficient for consumers. That does not involve enabling those on whose behalf investments were made being permitted to avoid paying for them.

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