

MEMO

FOR DISCUSSION

To: TCMF

CC: Paul Mott, EDF Energy

From: David Scott, Energy Regulation

Date: 17/04/2007

RE: SQSS Design variations – exploratory ideas



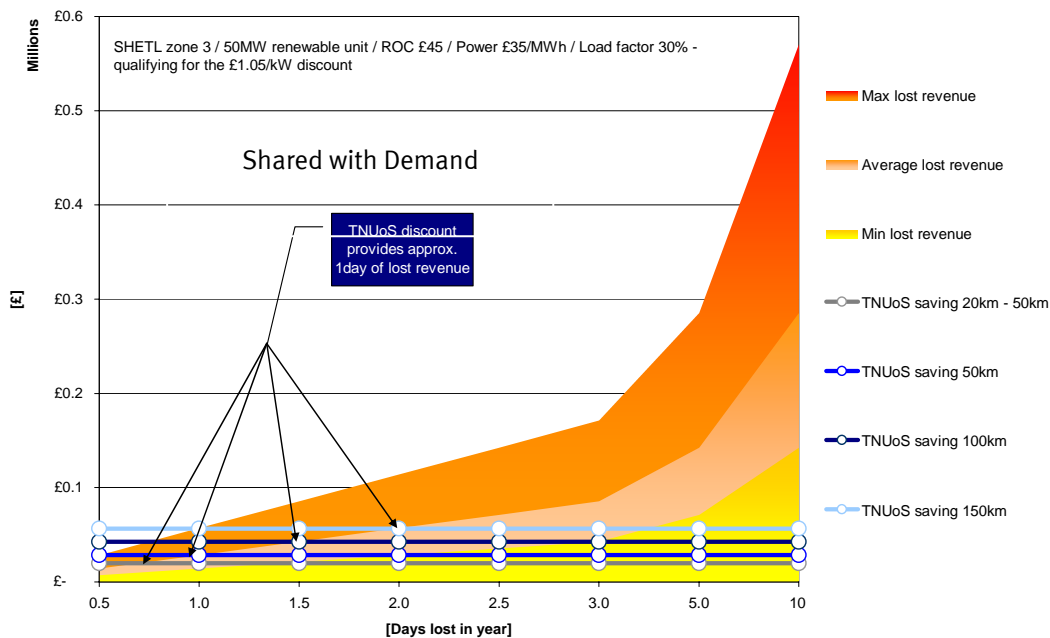
Purpose of note

To outline some potential ideas (for discussion by the TCMF) that may encourage generators to elect for a non-compliant connection to the transmission system. None are recommendations of EDF Energy.

A: NGET's TNUoS design variations discount shared with Demand.

The combined circuit and substation discount (before sharing) provides approximately 3-7 days of lost transmission access per annum for a ROC accredited wind farm, which we believe is easily enough incentive and risk for a project to accept. If a project qualifies for a £3.12/kW substation discount then the generator is provided with 6-12 days of lost transmission access.

However, if we then adjust the discount (multiply it by 27%), the discount represents only about 1 day of lost revenue (or 3 days if it has the higher substation discount). Is this too low?



If we consider an onshore 50MW wind farm, connected in zone 3 (SHETL), the range of discount increases linearly from £73k flat at 20km to £210k at 150km. This pattern is similar in all SHETL managed zones, where the station qualifies for a substation discount at £1.05/kW and is connected on a 132kV line.

This is shown in the figure above and the table below, where three levels of revenue accrued at 15%, 30% and 60% load factor (indicated by the yellow, amber and red shaded areas), are

overlaid with lines that indicate the savings in annual TNUoS charges at different km line lengths.

Days lost	0.5	1.0	1.5	2.0	2.5	3.0	5.0	10.0
Average lost revenue	£14,274	£28,548	£42,822	£57,096	£71,370	£85,644	£142,740	£285,480
Max lost revenue	£28,548	£57,096	£85,644	£114,192	£142,740	£171,288	£285,480	£570,960
Min lost revenue	£7,137	£14,274	£21,411	£28,548	£35,685	£42,822	£71,370	£142,740
Under no sharing with demand								
TNUoS saving 20km - 50km	£73,451	£73,451	£73,451	£73,451	£73,451	£73,451	£73,451	£73,451
TNUoS saving 50km	£104,878	£104,878	£104,878	£104,878	£104,878	£104,878	£104,878	£104,878
TNUoS saving 100km	£157,256	£157,256	£157,256	£157,256	£157,256	£157,256	£157,256	£157,256
Under 27% sharing with Demand								
TNUoS saving 20km - 50km	£19,832	£19,832	£19,832	£19,832	£19,832	£19,832	£19,832	£19,832
TNUoS saving 50km	£28,317	£28,317	£28,317	£28,317	£28,317	£28,317	£28,317	£28,317
TNUoS saving 100km	£42,459	£42,459	£42,459	£42,459	£42,459	£42,459	£42,459	£42,459

B: Payment per annum of value that encourages variation.

The payment need not be cost-reflective in its charge, but only needs to be large enough to encourage generators to elect for the single circuit. This could be a published rate or a commercial negotiation depending on the savings made by building the single circuit. The value saved could be split over numerous years of the operating life of the plant, or given as a payment upfront.

C: One off payment (Intertrip payment).

In the event of a generator being tripped off a payment can be made to the generator, in a similar manner to an intertrip payment. This would have to represent a “windfall” to the generator. A baseline of £400,000 for a trip of over 1 day recovered in exactly the same manner as Intertrip could be applied to a theoretical generator of [500MW] and increased/decreased pro-rata with the size of the generator actually affected.

The good thing about this is that it is only exceptional circumstances (disconnection) whereby any payment would be made, so the total cost is unlikely to be high. This may take the costs through to BSUoS, which may be unpalatable.

D: One off payment (lost revenue payment).

A gold-plated insurance policy for the generator that selects a single circuit – it could be paid, in the event of disconnection, for an assumed level of output and all certificates/subsidies it is eligible for. For instance an assumed level of output – MIP + ROCs + LECs (all at 40% load factor). The good thing about this is that it would only be in exceptional circumstances (disconnection) that any payment would be made, so the total cost is unlikely to be high.

E: Compulsion – change SQSS for exempt generators.

It is the SQSS, an associated document to the Grid Code, which provides the generators with the “right” to have a double circuit connection. By removing this requirement for a defined class of exempt generators, one could remove the obligation for the GBSO to offer compliant connections.