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10 August 2007

Dear Mr Hull

Zonal transmission losses - the Authority's 'minded-to' decision
Scottish Renewables' response

Scottish Renewables is the trade association for Scotland's renewable energy industry. We work on behalf of more than 200 members across the range of renewable energy technologies. If you would like to find out more about Scottish Renewables log onto our website www.scottishrenewables.com.

The social, economic and environmental benefits of developing renewable energy in Scotland are clear and they are the principle drivers behind renewable energy policy in Scotland and the UK. It is with full consideration of these benefits that Scottish Renewables makes this representation on behalf of its membership.

This response has been drafted in collaboration with the Scottish Renewables membership and in particular the Scottish Renewables' Grid & Regulation Work Group.

Scottish Renewables has engaged with the discussion on Zonal Losses for some time and now that the process is drawing to a close we remain concerned about the position that has been adopted by Ofgem on this issue.

We continue to believe that a move to zonal transmission loss charges with a methodology based on proximity to demand centres is a locational signal to investors in renewable electricity projects which they are unable to respond to.

We do not believe that Ofgem has conducted a full and proper impact assessment and has failed to properly consider the cumulative effects of a range of increased regulatory charges that generators in the SHETL area are facing and will be facing in the short to medium term.

Based on our own calculations and using figures provided by Ofgem we believe that an onshore wind farm in the SHETL area would potentially see the equivalent of nearly a quarter of its turnover accounted for by transmission use of system charges, new transmission loss charges, new distribution use of system charges and increased business rates introduced in 2005.

Further, the view that higher than average wind speeds would more than balance the increased charges is a misconception. Higher average wind speeds mean that there are more

potentially appropriate locations to build a wind farm not that wind farms across the north of Scotland benefit from a significantly higher wind speed.

Also, the view taken by Ofgem appears to be based on a 'typical' onshore wind farm but does not account for other renewable technologies which are likely to look to resources, like biomass, tidal stream or wave power, which are comparable in 'productivity' to other parts of the UK.

Given the signals being sent by Ofgem, a wave power developer is, all other things remaining equal, likely to locate projects off the Cornish coast rather than the Western Isles.

This clearly underlines the impact on renewables of the cumulative effect of a range of charges designed to promote development in certain areas by reducing the value of generation in others. This undermines UK Government policy on climate change and undermines Scottish Executive policy on renewables, which also looks to capture the economic benefit of renewables.

Further, it appears that Ofgem has not adequately considered what impact there will be on generation from conventional power stations in the south of England. By making it cheaper to generate in the south it seems logical that conventional power stations will tend to generate more and in doing so emit more carbon. This could offset set any 'carbon savings' predicted by Ofgem due to the imposition of zonal loss and use of system charging.

Therefore, Ofgem must look to its secondary principles on sustainability as a guide in decision making and balance it with the need to protect consumer interest. Whilst no panacea, we believe that Ofgem should approach issues like this with a more positive and understanding attitude towards renewables.

Longer term, the UK Government should explore options to amend the Ofgem remit so that carbon reduction is equal in status to consumer interests in its decision making.

For further information please find attached a briefing we have produced on this issue. It provides the working-out on the *quarter-of-turnover* figure above and expands further on why Ofgem should change its mind and maintain the current uniform pricing regime for zonal transmission loss charges. I would also like to refer you to our previous responses on this issue last April and last year. These are also annexed for ease of reference.

If this letter, or the briefing, prompts any questions please do not hesitate to contact me.

Yours sincerely

Jason Ormiston
Chief Executive
Scottish Renewables

Annex Scottish Renewables Briefing

Charging for Zonal Losses – a straw that breaks industry's back?

The regulator of electricity markets, Ofgem, is consulting on zonal transmission loss charges[1] which are based on the location of the generator and its assumed power losses in using transmission lines.

To date, this charge has been levied on a uniform basis across Great Britain with all generators paying the same amount wherever they are located. Ofgem is now minded to approve levies on transmission losses on generators based on their proximity to demand. The logic being that the further a generator is from demand the further power has to travel and therefore greater the potential losses.

Ofgem want to encourage development closer to demand and also want to incentivise an increase in demand for electricity in areas where there is a 'surplus' of generation.

In its regulatory impact assessment on proposed modifications to this system earlier this year Ofgem acknowledged that a range of new charges would hit generators in the north of Scotland hardest but that UK renewable electricity targets would not be threatened even if the economics of a number of Highland renewables generators changed so much that a number of projects could no longer proceed.

This is a rerun of the transmission charging issue, with northern Scottish generators paying £20.52 per kilowatt installed in 2007 whilst southern English generators receive payments of up to £9 per kW installed. The UK Government has retained powers to cap charges for projects in Scotland's islands although it is unclear what level of protection they will be afforded and for how long.

On their own charges for losses are not large with generators currently charged 2% of generation (on the uniform basis). New charges in the Highlands will rise to 3% of generation, while generators in southern England see losses reduced to zero. However, when combined with other charges, especially transmission use of system charges, distribution use of system charges introduced in 2005 which can range £5 to £8 per kilowatt installed[2] and new increased business rates for renewables generators then the **cumulative effect** of these charges is likely to be significant on generators in the north of Scotland.

In combination, generators in the north of Scotland will endure transmission charges, losses charging and new business rates which lead to, on average, 22%[3] of turnover going on regulatory costs whilst in southern England, except business rates, generators will in effect receive a subsidy.

This figure excludes distribution use of system charges. There is a double jeopardy for embedded generators which pass some of its generation onto the transmission network. An embedded generator in this situation will have to pay full transmission and distribution charges even if only a small proportion of generation passes to the transmission network. Therefore by including distribution charges the combined cost for embedded Highland generators also using the transmission network would rise to around 27% of turnover.

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[1] Zonal transmission loss charges are likely to be implemented from 1 October, 2008.

[2] Distribution use of system charges were introduced in 2005 for projects connecting after this date, whilst projects that connected before that will face the new charges from 2010.

[3] Take a 100MW wind farm with a 30% capacity factor and 93% availability and earning £60 per MW/h generated. The calculation is as follows: 100x8760x0.30x60x0.93=£14.7m turnover. Then look at charges: (100x20.52k) + (14.7x0.015) + 100x10k) = £3.4million per year. Charges now account for 23% of turnover from a 100MW project [n.b. 8760 is the number of hours in a year].

Ofgem is unclear about the impact that these charges will have on Highland generators. On the one hand it believes that generators in the Scottish Highlands benefit from higher average wind speeds and therefore can easily accommodate these charges. It concludes that it does not expect any Highland generator to have its project prevented from deploying with these combined higher charges. Further, it argues that there is a benefit to encouraging southern English based generators, even if sites are not as productive as Scottish development prospects.

But not only are sites on average less productive there are fewer opportunities to develop large scale projects in the south of England due to the population density in the region. Therefore the signal to develop projects in the south of England is a mirage signal that onshore wind farm developers cannot in reality respond to.

On the other hand, the cumulative effect of a range of regulatory charges faced by industry means that the economics of a number of projects in northern Scotland will now become more marginal and it is possible that a number of these will not make it to deployment. Ofgem also acknowledges this but does not believe that this will have a significant detrimental effect on GB wide green electricity production, though oddly has not sought to assess its impact nor the impact of charges on embedded generators using the distribution network.

This opinion begs the question: if location pricing signals will have little or no effect on Highland generators' decisions to deploy why impose such hefty charges?

Also, this is a charge on all northern Scottish generators, including conventional power stations, and the charges make the Scottish generation portfolio uncompetitive compared with the rest of GB. Given the need for a balanced generation portfolio in Scotland to ensure security of supply these combined charges create a risk of imbalance in the Scottish portfolio.

Looking into the future, Scotland is currently developing exciting new renewable electricity technologies in the wave and tidal sectors. What will be the effect of these new burdens on the rate of deployment of this strategically important sector? Ofgem does not know because it failed to assess this in its impact assessment nor did it make any assessments of the resource advantage that Scotland may or may not have compared to the rest of GB in this sector.

Also, the unnecessary burden of these combined charges creates some uncertainty about Scotland's future ability to help meet demand in Europe and become a world leader in renewables.

It is worthwhile noting that there are well established plans, backed by the European Commission and being investigated by the Scottish Executive to connect major centres of European demand to the Scottish resource. It therefore is unhelpful to encourage generation to locate near UK demand, when we should be encouraging generators to locate in resource rich Scotland and aligning the UK's energy export potential with European demand.

Staying with the European theme, the European directive on the promotion of electricity from renewable resources[4] calls on Member States to ensure that the charging of transmission and distribution fees does not discriminate against electricity from renewable energy sources, *"including in particular electricity from renewable energy sources produced in peripheral regions, such as island regions and regions of low population density"*[5]*.*

Clearly then, the range of charges being approved by Ofgem and targeted at the north of Scotland, we believe, contravenes the Renewables Directive and European policy.

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[4] Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources in the internal electricity market

[5] Ibid, Article 7 (6)

The industry cannot help concluding that these are unreasonable charges which will strike at the heart of the profitability of Scotland's renewable electricity sector. A particularly frustrating impost when one considers that generators, land owners and communities do not have any choice in the location of renewable electricity resources and cannot respond to locational signals.

Scottish Renewables has consistently argued that Ofgem's principle remit of maintaining competitive prices in the electricity market does not fit well with government policy which places equal emphasis on carbon emissions reduction.

We have therefore called on the remit of Ofgem to be changed so that carbon emission reduction and prices are given equal weight in decision making. This change would need to come from the UK Government.

We also believe that charges need to be proportionate so that measures do not unduly penalize all electricity generators, including renewables. The industry strongly feels that the new charges outlined above will unduly penalize Highland generators.

With community wind farm projects in northern Scotland not enjoying the same economies of scale as larger projects it will be these projects, if they use the transmission networks – and many will - which will suffer the severest blow from the cumulative effect of these charges.

Also, the market for electricity, like any commodity is potentially volatile and any observer since market liberalization in 1989 will tell you that the electricity market in GB has been especially unpredictable. Against this background more and more unwarranted regulation will have an impact on financing decisions and it is the community projects in the Highlands which are likely to struggle the most to raise finance.

In addition, the value of Renewable Obligation Certificates (ROCs) are currently relatively high due to the under supply of ROCs across GB. The UK Government is seeking to address this by providing greater support to near commercial and fledgling technologies. It is a concern that the proportion of use of system charges will be even greater if and when the value of ROCs falls, especially for onshore wind and hydro.

Scottish Renewables does not believe that Ofgem has effectively assessed the cumulative impacts of regulatory charges, and how it disadvantages Highland generators in an open market, and therefore it has arrived at the wrong conclusion.

It seems odd to Scottish Renewables that there is no mechanism for recognizing the social, environmental and economic benefits that renewable electricity can bring to the Highlands of Scotland when considering issues like these.

A change in the Ofgem remit would be a good start to addressing issues like these but may prove to be too late for some.

April 2006

Dear Sir/Madam

Zonal Transmission Losses: Consultation on P198 & P200 and proposed changes to the Balancing & Settlement Code

Scottish Renewables is Scotland's leading renewables trade body with over 190 members involved in the renewable energy business in Scotland. While not a Balancing and Settlement Code party, our representative nature makes it important that we respond to your consultation on proposed changes to the BSC.

We would like to make the following points as part of this consultation.

1. We would like Elexon and Ofgem to confirm that gross generation as still metered will still qualify for ROCs. We would assume that the netting off of any losses will happen after the gross generation has been registered for ROC purposes. If this is not to be the case, then Elexon and Ofgem must realise that the Scottish contribution to the overall UK Renewables Obligation and targets will be reduced, and the financial cost of operation on Scottish renewable project operators will be increased.

2. On page 71 of paper no.106 it is noted that there are several proposals to introduce new generation in the south, which would have the effect of reducing transmission losses to zero by 2010. If it is the case that all this is planned already, then it is worth questioning why the proposed alterations in P198 and 200 are needed, given that the market is already moving to deliver a dispersed mix of generation in the GB market.

3. One relevant issue raised by proponents of transmission loss charging is that it sends a signal to developers to locate generation in areas where such charges can be avoided or minimised. On this we would like to note that transmission use of system charges already do this effectively, and provide very strong locational charges within Scotland. The cost of transmission use in Scotland must surely be acting as a negative incentive on project to developers to seek to alternative sights where low or even negative transmission charges are available.

   However, we would note that despite the introduction of higher transmission charges into Scotland, there remains substantial interest in the development of new renewables generation here. This is not because the charges do not impose a real penalty to developers in these sites compared to equivalent sites in southern England, but because such developers in Scotland have little choice but to pay such charges. Essentially this is because the development of renewables is being stimulated by Government targets and delivery of the Renewables Obligation. To ensure delivery renewables operators must seek sites that have good resource, network access, and a reasonable chance of seeing planning success for any application. Given that a substantial element of the renewables resource of GB is in Scotland, there is therefore little option on developers to move to lower charge areas. This is because they would need to move to areas of low resource or areas unsuitable in planning terms.

4. Our fear over the introduction of transmission loss charging would be that its imposition would not send the appropriate signal for renewables generation, and the best sites tend to be in areas where such charges will be highest. Developers will therefore have to pay the penalty of such charges, as in reality they cannot respond. Because of this factor we do not see that implementation of P198 or P200 would achieve its purpose of providing a location signal for siting of generation and demand so as to reduce system losses and improve transmission operation efficiency.

5. In comparing the two options we note that P200 varies from P198 in that it gives an option for a transition period to the existing generators and allows them to opt in or out of the new scheme. As far as we can see, this will mean that generators in the north will seek to opt out to save costs while those in the south will opt in to increase revenue. Under such circumstances it is hard to see that the changes will be workable.

6. Our overall concern is that this change is being looked at in isolation without being able to consider all related facts of influencing factors. To ensure that this happens we therefore call on Ofgem to conduct a **Regulatory Impact Assessment** before any change is made. The BSC Panel will be unable to consider this wider picture: only the defined issues surrounding loss charging.

   We would note that there is a cumulative accretion of additional costs and charges facing northern generators. Individually each might be acceptable, but none are acceptable if they are delivered as a loose ill-coordinated package. Relevant issues that need to be considered are as follows.

   a. TNUoS which could vary from circa £10-40 per kW per annum depending on overall GB plant balance and level of decommissioning. Future impacts to charges include the development of transmission links to Scottish islands and the connection of offshore technologies into the grid.
   b. While not yet applicable, by 2010 distribution use of system charges (DUoS) could be as high as £5-10 per kW per annum.
   c. Zonal losses could vary between 0 & 5% plus depending on the amount of generation connected and conclusions of the BSC

   All of the above charges or proposed are variable, meaning annual prices ranging from £15 to £52 per annum per kW for renewable site operators in Scotland. These only cover regulatory burdens which are known to date. The probable outcome is a regulatory charge per annum of £30 per kW per annum which is equal to 33% of the total capital costs of onshore wind every year for the right to generate. Given this it is hard to see longer term viability of renewables in northern Scotland. .

7. We also note that the cost benefit analysis that has been conducted as part of this consultation is constrained by examining the charges that relate to the current charging system, not other expected changes, and the cost benefit analysis also makes no examination of any impacts on the environment or on consumers.

   Furthermore, while the cost benefit analysis includes modelling of a range of renewable technologies, the total resource and build costs are only examined for onshore wind. We think this is inappropriate, given the expected developments of offshore wind, bioenergy, wave and tidal within Scotland, where the introduction of transmission losses will be most

keenly felt. In particular, Scotland has significant resource in wave and tidal which is focused on the western and northern parts of Scotland. While developers of onshore wind have some flexibility of site location, the resource of wave and tidal is highly focused, leaving almost no flexibility for site location away from these peripheral areas.

In conclusion, we are of the view that the debate on appropriate levels of charge and charging systems should start with discussion on whether our charging system is based on introduction of locational signals that an important class of generation – i.e. renewables – that cannot easily respond to these signals, or whether our charging system is are more equitable balance of ensuring value to the consumer alongside delivery of wider Government Energy Policy objectives.

If locational charges remain high in the area of GB with greatest potential for delivery of Government renewables targets then this will necessitate Government providing additional support or at least support over a longer time period for renewables projects in these locations, to ensure that targets are delivered.

Given this we feel that it is important that before making any recommendations for changes in line with P198 or P200, Elexon first clarifies whether the remit of the consultation has considered the wider issue of whether renewable generation should be subject to Zonal Transmission Losses given that they are less able to respond to locational signals due to resource constraints.

I trust that this submission will be of benefit to you in your work. If you would like any further details please do feel free to contact me for more information.

Yours sincerely

Maf Smith
Chief Executive

April10, 2007

Dear Mr Hull

Zonal Transmission Losses Consultation: Scottish Renewables' response

I am writing to you on behalf of the Scottish renewable electricity sector in response to your consultation on proposed modifications to charging for zonal losses in the GB transmission network.

Scottish Renewables is the trade association for the renewable energy industry in Scotland. We enjoy the support of over 200-members many of which are developers and operators of renewable electricity projects across Scotland and as such have a clear interest in the conclusions to this process.

The Scottish renewable electricity sector is currently developing and operating 13.7GW of installed capacity in Scotland across a range of technologies, and Scottish Renewables represents members who are developing more than 75% of that capacity. As such we play a crucial role in presenting a unified voice on renewable energy issues.

First of all I would like to thank you for the opportunity to respond to this consultation. We note that you have not yet arrived at a "minded to" position; that this consultation explains the issues around transmission losses; the proposed modifications; and, their potential impacts.

Our conclusions have been arrived at with the support of the Scottish Renewables' Grid Working Group, with Jeremy Sainsbury (Natural Power Consultants) and Keith MacLean (Scottish & Southern Energy) as joint chairs.

Scottish Renewables supports the conclusions of the Balancing & Settlement Code Panel to reject the four proposed modifications and the two additional alternatives to the BSC. We believe that the current position where transmission loss factors are set at zero and a 'flat rate' is paid across the entire GB network is appropriate and reflects the fact that renewable electricity generators - especially community projects - cannot choose the region that they work in.

This lack of choice means Scotland is driving the growth in the onshore wind, hydro and the emerging wave and tidal sectors. Scottish Renewables members have regularly and consistently communicated their concerns to us that increased uncertainty has an impact on their decision making. Therefore, changes must be considered very carefully, they must be transparent and Ofgem must be confident that increased charges will not have an adverse affect on the renewables industry in Scotland.

The Ofgem consultation discusses in some detail the Oxera impact assessment of the proposed modifications which concludes in the medium term out to 2015/16 that some projects in Northern Scotland will not go forward because of the modifications but the impact will be marginal when compared to the difficulties of receiving a planning consent or higher Transmission Use of System (TUoS) charges. Oxera also concludes that the uncertainties of looking longer term mean that there is the potential of a significant impact on development activity in Scotland. Given this conclusion and also given that the horizon for developing all renewable technologies extends well beyond 2015, Ofgem need to consider very carefully how to best proceed.

Ofgem also notes Oxera's conclusion that the locational charging for zonal losses should strengthen the signal to potential generators to develop closer to demand (4.18). This may be true across the whole electricity sector but with regard to the renewables sector it will merely penalise prospective renewables generators in the north of Scotland which have little by way of choice on where they develop due to the need to build where the resource is.

Unfortunately, the Oxera assessment does not consider the cumulative impact of the growing number of current and potential regulatory and political hurdles that the industry must consider when considering the risk profile of a project. These include planning and lengthening determination times, TUoS and rising charges, the grid queue, changes to the RO, rising community benefit payments, higher business rates and political uncertainty. We believe that this is a missed opportunity and that conclusions may have been different if another regulatory hurdle, however small, is added to that list. The Oxera report does not consider this and given that there remains considerable uncertainty about the impact of the proposed modifications we believe that Ofgem should agree with the conclusions of the BSC Panel.

The report also notes a discussion about risk and what scenario there would need to be to reduce the risk profile. It states:

> *Conversely, if the approval of a proposal was interpreted as the sensible implementation of a soundly based proposal that had been developed through an open and rigorous process of consultation, then the decision might be viewed as reducing perceptions of regulatory risk going forward. It would be evidence that the regulatory and commercial regime could handle complex and contentious changes in an organised way. A decision to approve one of the proposals would be likely to reduce uncertainty in respect of the specific issue of transmission losses.*
> ***Page 35***

This is as close as Ofgem comes to suggesting it is minded to implement one of the modifications and from the perspective of the Scottish renewable electricity sector a decision to ignore the recommendations of the BSC panel and the views of the industry would be a surprise and will run counter to the principles described above.

The Oxera report also assesses the carbon emissions attributed to 2% transmission losses across the GB network and concluded this amounted to 700,000 tonnes of carbon and whilst this calculation forms no part of the BSC objectives and is only a secondary issue for Ofgem, it is nevertheless an important point.

The Oxera report has modelled a range of 46,666 tonnes to 153,000 tonnes of carbon saved due to annual savings in transmission losses from 2006 to 2011.

Scottish Renewables is clear that the social, environmental and economic impacts that the development of renewable electricity projects will bring to Scotland and the UK means that the Oxera analysis shows a marginal benefit and does not model the impacts of projects not proceeding. Against that background and using the top of the Oxera range (153,000 tonnes of carbon), it would require just 248MW at a 30% capacity factor of installed capacity to not go forward due to the cumulative effect of all regulatory hurdles to wipe out the modelled carbon savings.

The renewable electricity sector in Scotland is clear: as far as locational signals go transmission use of system charges are high but do not provide a locational signal as renewable electricity project development and operation is dictated by where the resource is not what charges have to be paid. Therefore any additional charges due to location will be punitive and ultimately disproportionate.

As we noted in our response to the Elexon consultation on the modifications last year, the cost of using networks in Scotland are set to get higher. We pointed out:

- TUoS could vary from circa £10-40 per kW per annum depending on overall GB plant balance and level of decommissioning. Future impacts to charges include the development of transmission links to Scottish islands and the connection of offshore technologies into the grid.
- While not yet applicable, by 2010 distribution use of system charges (DUoS) could be as high as £5-10 per kW per annum.
- Zonal losses could vary between 0 & 5% plus depending on the amount of generation connected and conclusions of Ofgem

All of the above charges or proposed charges are variable, meaning annual prices ranging from £15 to £52 per annum per kW for renewable site operators in Scotland. These only cover regulatory burdens which are known to date. The probable outcome is a regulatory charge per annum of £30 per kW per annum which is equal to 33% of the total capital costs of onshore wind every year for the right to generate. Given this it is hard to see longer term viability of renewables in northern Scotland.

In conclusion then, we would like to re-iterate our belief that there is, in total, a potential disproportionate charge being placed on an important class of electricity generation – renewables – due to a commitment by the regulator to cost reflective charging that runs counter to Government objectives to promote renewables and help tackle climate change. Choice is limited when identifying renewable electricity sites and we have yet to see this principle adequately considered by the regulator when it investigates charging regimes for all generators.

We note that you will arrive at a “minded to” position in May and that there will be a subsequent consultation. Please ensure that I am contacted directly so that I am aware of this further consultation (by phone or post please). It would appear that many in the industry have been unaware of this consultation and we are concerned that many stakeholders have not had an opportunity to respond to this consultation in a timely fashion.

I hope that I will be kept informed of developments at Ofgem in the future and that Scottish Renewables has an opportunity to respond to relevant consultations.

If you would like any clarification on any of the points made above please get in touch.

Yours sincerely

Jason Ormiston
Chief Executive
Scottish Renewables