centrica energy

Centrica plc
Millstream East
Maidenhead Road
Windsor
Berkshire SL4 5GD

Telephone +44 (0)1753 431000
Facsimile +44 (0)1753 431010
www.centrica.com

ERGEG

By email: losses@ergeg.org

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ERGEG – Public Consultation on the Treatment of Losses by Network Operators

Dear Sir, Dear Madam

I refer to your July 2008 consultation on the treatment of electricity losses by network operators, both transmission and distribution. The purpose of this consultation is to help shape the development of Guidelines of Good Practice on losses, which will serve as the basis for more detailed work on technical rules or codes following the proposed amendment of Regulation 1228/2003.

We support the work of ERGEG in the development of energy liberalisation across the European Union. We have contributed to a number of Guidelines of Good Practice related consultations in the past on a variety of subjects.

In addition to our activities in our home market of Great Britain, Centrica and its affiliates is also active in the electricity markets in Belgium, the Netherlands, Germany, Spain and France. We thus support ERGEG's work in attempting to level the playing field across the European Union.

In response to your consultation, we have set out below our response to the individual questions raised. I trust that you find this response from Centrica helpful. Please do not hesitate to contact me if you would like to discuss any issue raised in more detail.

Yours faithfully,

Carys RHIANWEN

European Regulatory Manager

Email: carys.rhianwen@centrica.com
Tel: +44 (0)7979 566325

ERGEG Public Consultation on Treatment of Losses by Network Operators

1. *What is considered an acceptable definition of losses?*

All categories of losses should be accounted for across the system. For definitional purposes, it is important to separate out and assess the different types of losses in order to better target their reduction, where possible. These different categories can then be aggregated to give a single figure for overall power losses. What is important is not merely the definition of losses but the treatment of losses within the regulatory regime.

2. *Should power losses refer only to technical losses or is it acceptable to include also non-technical losses?*

Both technical and non-technical losses should be included in the overall losses assessment. However, it is important to separate them out into the different components (see response to question 3 below) in order to design the most appropriate incentive regime for losses management and reduction.

3. *Which are the key components for defining losses?*

We agree with the components of losses identified in the ERGEG paper – technical and non-technical; transmission and distribution network; network losses and commercial losses; physical losses, hidden non-technical losses, theft, non-metered public lighting and differences in metering billing and data processing.

In addition we would include unregistered supplies. This is a site recorded on the distribution network database but has no supplier appointed to it. If this site is connected and is taking electricity from the grid but no supplier is billed for this electricity, it will be included as losses and the cost paid by others through the national losses regime.

Further, it may be good to separate network losses into two sub categories: distance related (i.e. lost over the wires due to distance, heat, load etc.) and transformer losses (i.e. on-off loss at the transformer point). Work on the transmission zonal losses modifications in Great Britain suggested that there was about a 50/50 split between the two items. This split will vary according to network design.

4. *What ways exist to improve the evaluation of losses in distribution networks?*

Without detail of the current evaluation processes it is difficult to suggest concrete improvements. In general, the recommendations for best practice in evaluation of losses would include at least the following elements.

Where metering is available, this should be used. It is not however practical to meter fully across the electricity system, but some improvements in metering could potentially be introduced at certain grid supply points. If new

metering equipment is to be installed then losses should form part of the cost benefit analysis.

In developing methodologies for analysing losses, these should be simple, transparent, predictable and reasonably cost reflective. It is clear that on a forward looking basis, losses can only be estimated. Because all meters will never be read at the same time, an actual loss figure can never truly be determined. Nonetheless the estimated figure will be improved upon following analysis of available data: this could be termed 'assessed losses'.

It is unclear under option B of Section 6.4 of the consultation, what is meant by 'effective loses'.

As methodologies for calculating losses are improved, it is important to ensure that any changes in the methodology are governed so that improvements in losses can be monitored and comparisons conducted over time.

5. *What should be a reasonable and acceptable level of power losses at the distribution level and the transmission level?*

The level of losses will vary due to a number of factors – distance covered, type of assets, age of network components, etc. All of these components will affect the level of the power losses. It is therefore not possible to state for a generic country what is a reasonable and acceptable level of power losses. In comparing power losses between countries, it is important to try and compare like with like, or at least to take account of the differences that may apply.

Although tables A2.1 in the consultation document sets out the elements considered by each Member State within its definition of losses, it is still not entirely clear why such variances exist in the level of losses as shown in table A2.2. The differences could in part be due to the evaluation methodologies and not only due to network characteristics or efforts undertaken to manage or reduce losses in the national systems.

The losses figure across Member State varies widely. It is important to remember that the level of losses will also vary by region within each country as well due to a number of factors.

The acceptable level of losses will depend on the cost benefit assessment and resulting accepted role of losses in the efficient construction and operation of the network. For example if a Member State decides to build a large volume of wind power offshore or in rural regions with low population levels, it may have to accept an increased level of losses overall as this power is transported to customers.

6. *Which types of losses could be most easily reduced?*

To help reduce losses, incentives can be designed to address many aspects. The incentives should be placed on those best placed to effect the required change.

Thus for example the network losses incentives should be placed on network operators. Not all network losses are as easily reduced however. Depending

on the network design, those that are distance related may be easier to reduce than those linked to the transformer through improvement in insulation or line quality.

For commercial losses, the incentives are perhaps best shared between the suppliers and distribution network operators. Incentives can be designed to reduce theft, improved metering and reduction in unmetered supplies.

As an example, theft can be mitigated through a number of measures, and we would encourage greater regulatory scrutiny of obligations and incentives on theft, including:

- stronger obligations on both suppliers and distributors to detect theft
- better incentive schemes to encourage suppliers to detect theft
- improved codes of practice to ensure best practice is followed
- better network owner incentives to share data and investigate theft
- better mechanisms to capture reports on theft, e.g. a telephone hotline service

7. *Who should be responsible for procuring electric energy to cover losses?*

In our opinion it is more important to ensure that the procurement of electricity to cover losses is done through a market based mechanism than it is to identify a single buyer for the losses. As the consultation document sets out there are a number of different models in place, some where the network operator purchases the power and others where the suppliers each ensure procurement of sufficient electricity through their own procurement activities. Both of these models should ensure that the price paid is market based.

8. *How should electric energy to cover losses be procured in a market-oriented way? Which solution is the most efficient?*

It is important to use a market based mechanisms to procure electricity for losses. The solution chosen should be transparent and non-discriminatory.

9. *Should the costs of losses be covered by a special tariff?*

We are not in favour of a special tariff to cover the costs of losses as we believe that this does not necessarily ensure that the procurement cost is market based.

If the supplier is the responsible party for the procurement of losses, then this does not need to be included in any regulated tariff but will be included by the supplier in its prices to end-user customers.

If the costs are to be included within the network tariff, then an allowance should be included within the network costs that can be adjusted within certain boundaries at the end of the tariff period to take account of unexpected wholesale price fluctuations. A tariff allowing for pass through of

costs to customers should only be allowed where a stiff incentive is also applied on the network operators to reduce the level of losses.

10. What are the advantages and disadvantages of the aforementioned incentive mechanisms?

Losses incentives must be designed to address the losses as directly as possible. Thus as there are numerous types of losses, a number of incentive regime variations may need to be developed to ensure that the individual incentives mechanism is as targeted as possible.

Where the losses type relates to network performance then an efficiency factor may be suitable to encourage the operator to improve system performance over time. However an efficiency factor may not be as suitable for other non-technical losses such as theft or non-metered consumption such as public lighting. For such elements of losses, improved estimation or test metering can be used to improve understanding of their contribution to electricity losses.

11. Which key elements should be considered when assessing different regulatory incentive mechanisms?

An incentive mechanism must be specific, measurable, achievable, realistic and timely. That is, the incentive must target the type of losses and the actor most responsible for achieving a reduction; it must be measurable and monitorable in order to be able to reward good progress; a target that is too large may not be achievable or realistic and could dissuade the actors concerned from attempting any improvements at all; it must be timely in designating a long term target over a long term period with potential interim targets at shorter intervals.

Furthermore, any regulatory incentive must be suited to the national industry structure and wider regulatory regime. Where a country has a number of network operators, comparative regulation could play a role in sharing best practice and making performance transparent.

It is important that the reward elements in incentive mechanisms are correlated to network operator performance. Targets must be realistic and should not be over generous, that is network operators should not be incentivised to do something they would do anyway through network operations or investment plans. It is also important that the mechanisms are not designed in such a way that operators could receive rewards even if losses increase. Furthermore the reward level should not be greater than the benefit of the losses.

As there is likely to be a number of obligations and incentives placed by regulatory authorities on various market participants to address different issues including losses, it is important that the relationship between these measures is considered to ensure that they work together.

12. *Are there advantages in setting separate mechanisms for technical and non-technical losses?*

There are clear advantages in setting separate mechanisms for technical and non-technical losses. The actors best placed to address the losses may be different, e.g. network operators or suppliers; the work that can be undertaken to reduce the losses may be different, e.g. installing more efficient equipment or improving internal data processes. A global incentive mechanism to reduce all losses will be too generic and lack the ability to target the most appropriate actors to carry out their activities in any particular way in order to reduce losses. To succeed, an incentive must be designed to be specific, measurable, achievable, realistic and timely.

13. *Are there advantages in setting separate mechanisms for transmission and distribution?*

Where the losses are of a different types then the incentive programme should differ. Where technical losses are being considered then both the transmission and distribution operators should be incentivised to manage the losses on their own networks. The level and costs of achieving these reductions will most likely differ however but the general mechanism could be the same, where appropriate.