



VIRIDIAN

Power & Energy

**Response by Viridian Power & Energy to
the Single Electricity Market Proposed
Decision Paper SEM-10-039**

***Proposed RAs option for all-island harmonised
Transmission Loss Adjustment Factors (TLAFs)***

13th August 2010

Executive Summary

In their proposed decision the RAs have focussed exclusively on trying to ‘fix’ what they have wrongly perceived to be a ‘broken’ current TLAF methodology. The unjustified and unnecessary proposal excessively focuses on the incorrectly defined problem of volatility in derived TLAF values. This provides for an unnecessary and inappropriate solution that is coupled with a procedurally deficient process. Implementation of this proposed decision is expected to increase costs for consumers; increase emissions; reduce efficiency and remove cost reflectivity. Such a result is clearly contrary to the objective and duties of the RAs and of the RAs’ defined workstream.

The only analysis presented on the derivation of TLAFs under the current methodology confirms the approach is fit for purpose. TLAFs based on marginal loss factors are appropriate when considering losses on the system, how these relate to the level of total losses or incremental losses are an unnecessary and erroneous comparison. This is the view of both VPE and independent expert Graham Shuttleworth of NERA. Such a comparison attempts to confuse the issues under consideration, efficient decision making is determined by marginal effects. This has consistently been recognised by the RAs in relation to TLAFs and their operation in the SEM since its inception. The appropriateness of locational marginal loss factors are included in the HLD decision paper and in subsequent decision papers published annually, this includes most recently the RAs published decision for TLAFs in 2010, wherein they recognise the current approach as the one most likely to promote efficiency and bring about “the most cost effective dispatch for consumers on average each month”.

The analysis presented by ESB has also served to allay fears that TLAFs are unpredictable and volatile. ESB were capable of modelling the impact of new capacity being located in Cork and the plants’ resulting TLAFs. Volatility correctly refers only to the risk or uncertainty associated with how TLAFs change. As a regulatory objective stability in approach is a recognised regulatory criterion, (excessive) stability of outputs is not. Attempting to impose this on the market will have a number of adverse effects that are wholly avoidable, including compensating investors for predictable adverse effects arising from irrational investments. NERA share this view stating, “There is no reason to compensate an investor for a locational cost, whilst allowing the investor to capture a locational benefit.” We note there are a number of locational benefits to locating a new plant Cork.

To date, no analysis has been presented to indicate that the current approach is broken, in fact it has vindicated its continued use. It is recognised that there is an issue for investors over changing TLAF values and how these may be affected by new investment but there are recognised solutions to such problems to allow investors to hedge such risks. A selection of such solutions are contained the report prepared by NERA.

Notwithstanding the RAs failure to address the appropriate issue in relation to TLAFs, the process they have engaged in is procedurally deficient, irresponsibly lacking an objective and empirical assessment, and ultimately is not in accordance with best regulatory practice or with the RAs stated duties and objectives. Their decision process fails to consistently consider the objective criteria in evaluation of each option. Selective arguments are subjectively argued to reject certain options that more readily apply to the uniform loss factors. The surprising and unjustified elimination of objectives, especially within the proposed decision and arguments used to arrive at a uniform conclusion, is a further significant failure of the regulatory process.

The most glaring omission from the RAs' process is that of any analysis undertaken on the expected impacts of such a change. Such analysis should be incumbent on the RAs given their duties as outlined in the relevant legislation from which they derive their powers and in accordance with their own regulatory decisions (SEM/08/089). All analysis possible in the short timeframe given by the RAs to respond to this consultation indicated that a change to a uniform loss factor of 0.98 for the upcoming year 2010/11 would;

- increase electricity costs for consumers;
- cross-subsidise predictably poor investments;
- increase regulatory uncertainty; and
- increase the cost of capital for investment which is expected to erode investor confidence and deflect investment from the SEM.

The increase in SMP is a consistent result from analysis undertaken by VPE, Redpoint, NIE PPB and BGE. VPE have estimated increases in costs for consumers of at least €81.4 million. The adoption of the proposed decision would also likely;

- increase losses;
- increase constraint costs;
- increase imperfection charges;
- increase cost of the ESU;
- increase harmful environmental emissions; and
- harm competition in the SEM.

The implications of adopting an unproven change to such a significant variable in the market is considered to amount to nothing more than a 'live trial' of a pricing variable and is wholly irresponsible.

Based on the information contained in the proposed decision and made available by the RAs, one must conclude that the decision to adopt a uniform loss factor is based solely on conjecture and may have been influenced by misleading analysis that attempts to confuse the acknowledged objectives of the TLAF approach. This analysis has been provided by parties who stand to materially benefit from a move to uniform TLAFs. Therefore, VPE do not consider there to be any evidence to change the current methodology. We also contend that any change from the current methodology arising out of the RAs incomplete and procedurally deficient review of TLAFs would be susceptible to legal challenge.

1. Introduction

Viridian Power and Energy (VPE) welcomes the opportunity to respond to this significant Proposed Decision to implement a uniform transmission loss adjustment factor (TLAF) in the all-island Single Electricity Market (SEM). This proposed change is the single most significant change to the SEM since its inception.

This response provides VPE's views on a number of aspects of the proposed decision and draws on expert independent analysis commissioned by VPE from Redpoint Energy Limited and NERA Economic Consulting. Their reports are included in the appendices of this submission. Expert legal advice was also provided by Arthur Cox on the process followed by the RAs.

The remainder of the submission is structured as follows; firstly we consider what the Regulatory Authorities (RAs) are trying to achieve in proposing the implementation of a uniform TLAF with reference to the objectives of the workstream; we then consider the process engaged in by the RAs; before finally considering the likely impacts of the proposed change on a number of key aspects of the market.

The appendices of the report include an independent review of the proposed decision by Graham Shuttleworth of NERA ("NERA Report"), a further information note from NERA based on presentations given at the RAs organised Workshop (26 July 2010) ("NERA Note"), and an independent study by Redpoint on the impact of uniform TLAFs on the SEM ("Redpoint Report") based on the RAs validated model.

2. Objectives of the RAs Review of TLAFs

The RAs proposed decision on the TLAF methodology is based on a premise that the current approach is 'broken', so much so that it is no longer fit for purpose and thus requires immediate change for the upcoming year. This premise is ill-informed, unsupported by fact or analysis and is contrary to the opinions expressed by the RAs in previous decisions. The proposed decision to adopt a uniform loss factor relies on subjective arguments of selective objectives that are found to be inconsistent, unconvincing and even self-contradictory.

2.1. *Where is the problem?*

In their proposed decision the RAs outlined three concerns with the current TLAF methodology;

- The derived values have, in some cases, been volatile with significant year-on-year variations;
- They do not represent prevailing conditions on the system at the time of dispatch as they are calculated year-ahead; and,
- Increased dispatch efficiency cannot be obtained without increased TLAF volatility.

Clearly, volatility is the RAs principal concern in relation to the current methodology and we note that volatility has long been an issue in relation to TLAFs. Interest in addressing this issue has increased in recent times with an acknowledgement that an increased penetration of wind is likely to affect the suitability of the current methodology to meet its objectives. However, it is unclear that the level of wind penetration has reached a critical level and we further note that the step-change caused by the lumpy increase in capacity in Cork is a one-off effect. With no further lumpy investment planned, such step-changes will not arise in coming years and there will be a broad return to stability and predictability in derived TLAF values. This provides the RAs with the scope to deliver a reasoned decision that addresses the issue specifically and ensures the enduring solution meets the objectives of TLAFs in the SEM.

Previous submissions from VPE have indicated the need to address the issue of volatility and it remains a concern for generators who are unable to mitigate the possible risks of unexpected TLAF changes, year-on-year. The issue of volatility is however misspecified (or erroneously asserted) in arguments supporting a change to a uniform loss factor, and thus in the proposed decision, leading to a false assertion that the current approach is 'broken' and requires immediate change. Correctly defined, volatility refers to the amount of uncertainty or risk associated with future changes in TLAFs, not to the fact that TLAF values can predictably change year-on-year, even by large amounts.

The current approach is fit for purpose but there remains a need to address the volatility of the derived TLAF values, using market mechanisms that address the issue of volatility specifically. Such mechanisms exist but have not been considered by the RAs.

On the supposed problem, to date there has been no evidence presented to support assertions that the current TLAF methodology is 'broken' and requires immediate change. The analysis presented by ESB at the Dundalk Workshop (26th July) purports to do this but an independent assessment by NERA (NERA Note) found that the analysis;

- confirms that the TLAF correctly measures the costs that generators in Cork impose on the system;
- represents little more than a complaint that its plant is suffering a loss of revenue from a disadvantageous location;
- contradicts the view that TLAFs are unpredictable or volatile in the short term;
- provides no grounds for moving away from marginal loss factors, let alone for adopting a uniform TLAF.

On the issue of volatility specifically, NERA note that;¹

“The ESB presentation did not explicitly discuss any concept of volatility, since it analyses the predictable effect of increasing output from particular plants, not random effects.”

In presenting an analysis of incremental losses, ESB have attempted to impose a false logic into the discussion, one that dangerously moves away from the promotion of efficient dispatch. As discussed further in the note provided by NERA (Appendix 2), any consideration of losses attributable to different levels of output from plants, other than that at full output, is erroneous as the marginal cost of producing the marginal unit does not typically equal the inframarginal cost of producing other units, or the average cost of producing all units taken together. Marginal loss factors support efficient decision making and total transmission losses do not represent any standard by which to judge marginal losses. As noted by the RAs in consideration of the treatment of losses in the SEM, TLAFs based on marginal costs represent “the fair cost of the generator not reducing its output”.²

The independent analysis provided by NERA (Note; Appendix 2) also provides that unless ESB and BGE explicitly collude over the operation of their Cork plants, there is no rationale for adopting an approach that considers the incremental losses from the output of two different plants owned by two different companies.

¹ NERA Economic Consultants (2010), Comments on the TLAF Workshop of 26 July 2010 – A report for Viridian Energy Ltd, p.5. (See Appendix 2 of this submission)

² All-Island Project (2006), The Single Electricity Market: Treatment of Transmission Losses – Decision Paper, August 2006 (AIP/SEM/112/06), p.A.12.

Furthermore, the analysis indicates that it is disingenuous to claim that the resulting TLAFs for the two Cork plants are volatile and unpredictable. The analysis shows that one 400MW CCGT unit was optimal in Cork and that the resulting impact on TLAFs was foreseeable from such a modelling exercise, something one would expect was engaged in at the time of planning and financing. We note that successive Transmission Forecast Statements from Eirgrid favoured the location of one 400MW CCGT in Cork.³

There is a recognised issue with the volatility of the derived TLAF values under the current approach but this refers to uncertainty and unpredictability in TLAF values, not to year-on-year changes in the values. There is similarly a degree of volatility in relation to the price of electricity in the SEM, however nobody is suggesting a uniform price or that incremental prices be applied to different levels of output. This is principally because people can hedge price risk. The report prepared by NERA (Appendix 1) outlines a number of options for appropriately dealing with the issue of changing annual TLAFs, changes that are unforeseen by investors at the time of their investment and changes that are due principally to the introduction of new capacity on the system.

The current methodology is not ‘broken’ it is just not supported by the requisite facilities to allow the associated risks of volatility (correctly specified) in derived TLAFs to be managed. By claiming the current methodology is broken, misspecifies the problem and, as a result of invalid examples and flawed logic, the proposed decision is to impose an unnecessary and inefficient change to uniform TLAFs.

In conclusion to this point, NERA have noted;⁴

“The ESB presentation therefore provides no indication that the current method is fundamentally flawed. Neither the sensitivity of the TLAF to the capacity in Cork, nor the values of the Cork TLAF relative to total losses indicate any problem related to the objectives driving the RAs’ decision.”

We now address these objectives, specifically how the objectives of the workstream are applied in the proposed decision.

2.2. Objectives of the workstream & the proposed decision

The objectives of this workstream were first set-out in January 2009 as part of a more general workstream considering all-island transmission use of system charges and loss factors.⁵ The RAs stated that the seven published objectives were based on a

³ See Eirgrid Transmission Forecast Statements 2003-2009, 2004-2010 & 2005-2011. Reports are available at <http://www.eirgrid.com/transmission/transmissionforecaststatement/>

⁴ NERA Economic Consultants (2010), Comments on the TLAF Workshop of 26 July 2010 – A report for Viridian Energy Ltd, p.5. (See Appendix 2 of this submission)

⁵ SEM Committee (2009), All-island Transmission Use of System Charging & Loss Factors, 16th January 2009, SEM-09-001.

review of best practice and were designed to ensure the proposed methodology would be;

1. Transparent;
2. Cost reflective;
3. Encourage efficient use of the network and efficient investment in infrastructure; and,
4. The charges should be predictable.

As well as;

5. Cover the cost of providing the service;
6. Non-discriminatory; and,
7. Consistent with shallow connection policy.

The proposed decision shares some of these objectives (1-4), but also introduces further objectives of stability (non-volatility) and fairness. Furthermore, the RAs state in the proposed decision that the principal objective of TLAFs in the SEM is to deliver an efficient generation dispatch.

As part of an independent assessment of the RAs proposed decision, NERA conclude that the workstream objectives (1-7) all show a commitment to efficiency and predictability. NERA also noted that;⁶

“References to the desire to avoid volatility seem to place undue emphasis on the stability of prices (and TLAFs in particular), as opposed to stability and transparency in the method of calculation, as a component of predictability. In conditions where the underlying costs vary from time to time, attempts to give undue weight to the stability of prices will conflict with the objectives of efficiency (both short and long term), cost-reflectivity and competition.”

After consideration of the RAs evaluation of the short-term options, principally the RAs rejection of options, NERA have subsequently found that;⁷

“According to the analysis set out in the Proposed Decision Paper, the RAs have not carried out a thorough or consistent evaluation of the various options under consideration by reference to efficiency and related criteria. They present efficiency arguments for rejecting some options which apply even more strongly to the option that they propose to select, with no objective justification for the final ranking.”

This is most readily observed in relation to the RAs rejection of the compression option, wherein they argue that such an approach may reduce the efficiency of short

⁶ NERA Economic Consultants (2010), Review of Proposed Decision on Transmission Losses in the Irish Electricity Market – A report for Viridian Energy Ltd, p.9. (See Appendix 1 of this submission)

⁷ Ibid, p.15.

term dispatch and dilute cost reflectivity. However, as a matter of fact, the uniform approach is an extreme form of compression and as such, the criticisms of compression apply even more compellingly to uniform, yet this goes unnoticed by the RAs.

In conclusion on the application of the objectives in considering the short term options, NERA have concluded that;⁸

“[T]he evaluation process carried out by the RAs is not thorough or consistent, does not provide an objective justification for their eventual decision and does not correspond to best regulatory practice.”

Additionally, the NERA assessment goes on to state that in introducing new objectives to produce a narrow range of stable TLAFs, the RAs have introduced criteria that do not properly apply to regulatory decision making. To this end, NERA have defined ‘best regulatory practice’ as decision making that is transparent and objective, in which the regulator evaluates all options against pre-specified criteria and the regulator designs its criteria in order to ensure it takes decisions on the basis of objective evidence, including economic costs and benefits. NERA conclude on this issue that, in this instance, the RAs have failed to meet this standard in their decision making.

On the RAs proposed decision to adopt a uniform loss factor, the justification for this is bizarre and departs from the norm in the document of considering the relative merits of the option vis-à-vis the objectives (albeit typically a selective number of these). Instead the RAs provide a critique of locational loss factors to arrive at the proposed decision of a uniform loss factor. Contrary to the RAs suggestion, a rejection of the current methodology (something we have already shown is not a valid criticism given the weight of evidence to the contrary) is not a rejection of locational loss factors per se and thus is not an argument for uniform loss factors. The adoption of uniform loss factors is an extreme solution that fails to acknowledge the objectives of the review, including its principal objective of efficient dispatch.

On the issue of efficiency and cost-reflectivity, the NERA Report highlights an apparent change in the RAs’ views on how the approach underlying TLAFs is likely to affect the market. In the proposed decision the RAs inconclusively argue that that it is possible the current approach is not much more representative of real time losses than a uniform loss factor. As well as implicitly accepting that the current approach is more reflective of real time losses in this argument, the view is directly opposed to that expressed by the RAs in relation to the 2010 TLAF Decision Paper wherein they asserted that the current approach should produce the most cost effective dispatch for customers. NERA have noted that there is no evidence presented by the RAs for why their views may have changed in the interim.

⁸ Ibid, p.15.

On the longer term issue of locational decisions for new investment and the signals provided by TLAFs, NERA have concluded that it will be important to preserve these to ensure an efficient development of the system. Arguments over the lack of locational choice in the proposed decision are challenged in the NERA Report and found to be self-contradictory. As investors, VPE have been provided with a number of options for locating new capacity throughout Ireland. However, we note there is generally acceptance that the locational options for renewable generation are somewhat limited.

Further to this point on locational signals and the proposed removal of them by adopting a uniform loss factor, the Note on the RAs Workshop prepared by NERA asserted the following;⁹

“None of the RAs’ objectives call for individual investors to be protected against the consequences of their own poor decision-making, particularly if the protection comes at the expense of investors who chose to locate plant in advantageous locations. In any case, the disadvantageous TLAF facing BGE may have been offset by a benefit in other locational costs, such as a lower cost of land, labour or other inputs. There is no reason to compensate an investor for a locational cost, whilst allowing the investor to capture a locational benefit.”

We note that there are also a number of wider operational benefits available to generators in Cork that will bring about additional cost savings, namely through; access to significant lifetime benefits such as water cooling facilities and access to distillate facilities, as well as facilitated access to the electricity and gas networks. In the case of ESB it is also noted that the presence of a previous plant in this location is likely to confer a number of additional benefits in terms of staffing and operations.

The development of just one 400MW CCGT plant in Cork, in accordance with Eirgrid’s Transmission Forecast Statements, would have benefited from these advantages while also having a TLAF close to 1. These additional advantages are invariant to the number of new plants commissioned in Cork but the TLAFs of any additional plants (as derived under the current methodology) are not. The current TLAF methodology provides an important locational signal and as previously stated, is something that is predictable through modelling and should be foreseen by any rational investor.

In relation to a long term enduring solution, we note that the RAs have not included a definitive long term solution in their proposed decision. It is proposed that the benefits of a ‘splitting’ approach be assessed as part of a full cost benefit analysis but at this point the RAs have not included specific details of how such an approach would be implemented in practice, or how the characteristics of such an approach satisfy the objectives of the review. This proposal unnecessarily introduces uncertainty in the market arrangements one year hence, it is poorly defined by the

⁹ NERA Economic Consultants (2010), Comments on the TLAF Workshop of 26 July 2010 – A report for Viridian Energy Ltd, p.6. (See Appendix 2 of this submission)

RAs and furthermore, it is not justified on the basis of the objectives set out at the start of the process.

The lack of detail in the proposed decision has prevented discussion of this option in the independent report prepared by NERA. NERA have simply commented that; the proposed option is unclear; there is no justification given for why a cost benefit analysis is appropriate for considering this option but not the short term options; and in rejecting the TSO's preferred option of purchasing losses, no objective justification is given and it relies on an additional criterion of practicality that appears to have been introduced by the RAs. These general criticisms of the proposed decision are common throughout the proposed decision and reflect the concerns of VPE.

In conclusion on the application of the workstream objectives by the RAs in considering the short term options and arriving at the proposed decision, we share the views and concerns expressed in the NERA Report. The RAs decision process fails to consistently consider the objective criteria in evaluation of each option. Selective arguments are subjectively argued to reject certain options that more readily apply to the uniform loss factors. As already noted, the arguments forwarded by the RAs in rejection of compression (reduced efficiency in dispatch and dilution of cost-reflectivity) can be seen to more aptly apply to the uniform option, as uniform is an extreme form of compression. Uniform loss factors are not argued for by the RAs but rather they make a false and misleading association between the current methodology and locational loss factors more generally, and from this point reject locational loss factors in favour of uniform loss factors. In doing so, the RAs dismiss their stated principal objective of TLAFs, efficient dispatch. The arguments against locational loss factors were also found to be unconvincing and even self-contradictory.

The proposed decision has also relied on criteria that were not part of the workstream and do not properly apply to regulatory decision making. For this, as well as the reasons already outlined, the RAs decision is considered to not correspond to best regulatory practice. This poor decision has significant implications for future regulatory decisions and regulatory risk, thereby increasing the cost of capital and discouraging future investment. This increased risk is considered in the context of the wider regulatory process in the following section.

Finally, the additional uncertainty and lack of clarity surrounding the long term solution and the failure of the RAs to justify this proposed approach on the basis of the objective criteria, is a further example of poor regulatory practice that is detrimental to the market and regulatory risk.

3. Regulatory Process

The most glaring omission from this 18-month long process investigating the potential options for revision of TLAFs is that of any analysis on the part of the RAs. To date the RAs have not published any empirical analysis considering the potential impacts of a change from the current TLAF methodology on any aspect of the market, such as; consumers, losses, generation cost, emissions, and more generally the operation of the SEM and related regulatory decisions. This is even more incredible when one considers that this is the single most significant proposed change to the SEM since its inception.

Specifically, the RAs have not empirically assessed the suggested 'broken' nature of the current methodology (a false and misspecified claim) or informed their proposed decision to adopt a uniform loss factor with an assessment of the implications for groups such as those already suggested. Based on the information contained in the proposed decision, one must conclude that the decision to adopt a uniform loss factor is based solely on conjecture and possibly to some extent on false and misleading analysis provided by those who stand to materially benefit from a move to uniform TLAFs. The independent assessment of presentations at the workshop provided by NERA (Appendix 2), states that it is not unreasonable that the Cork plants bear all the losses on the system at any particular time, this is an economically efficient outcome and validated the continued use of the current TLAF methodology in the short to medium term.

Any further work on TLAFs that the RAs are to engage in should adhere to best regulatory practice and in this regard we consider it necessary for the RAs to publish a scoping paper, inviting comments from market participants, on options for an enduring solution. This process may include splitting but should be wider in scope with options for detailed analysis being objectively justified.

Furthermore, we wish to stress that although the overall timeframe of this review is already 18-months, we refute any assertion that this represents 18-months of work by the RAs on this issue. The majority of this process has involved scoping work (and related consultations) undertaken by the TSOs. The TSOs preferred options, and the associated comments on these options by market participants, have been largely disregarded by the RAs. Principally this includes the RAs unjustified rejection of compression in the short term and the majority of market participants' calls for the RAs to conduct detailed analysis on the options. The RAs haphazard involvement in this review considerably reduces the effective duration of it such that it is inappropriate to consider this as an 18-month regulatory process.

In relation to the analysis that it is appropriate for the RAs to undertake in relation to this most significant change to the SEM, VPE requested the expert independent views of Redpoint on what analysis would likely form part of a complete suite of analysis. Based on this response, VPE consider it necessary that the RAs should quantitatively consider (as a minimum) the impact of any change to TLAFs on; transmission losses; system constraints; imperfection charges; the Error Supply Unit

(ESU); capacity payments; demand responses; as well as the impact on Green House Gas (GHG) and other emissions (e.g. CO₂, SO₂, NO_x). The overall timeframe for this analysis is indicated by Redpoint to take several months. Furthermore, we note that in the Great Britain market, an 18-month window was assigned to fully investigate the impact of proposed changes to the treatment of TLAFs in the GB market. This process included an independent cost benefit analysis of the proposed change. Similar to the approach taken in GB, a full industry wide consultation on the scope of the CBA should also be engaged in.

The failure of the RAs to fully assess and consider the impacts of this proposed decision can be seen to be directly in conflict with their principal objective of protection consumer interests, as outlined in the relevant legislation. In the RAs 2010 TLAF decision paper (published in December 2009) they have implicitly acknowledged that uniform loss factors would harm efficiency and as a consequence increase prices for consumers.¹⁰

“The purpose of ex-ante TLAFs calculated by this method and that are reflected in a generator’s commercial offer data is to ensure that the System Operators make the correct dispatch decisions regarding the marginal plant on the island in any given trading period. Given the increasing volumes of wind on the system, the RAs acknowledge that there is a limit to how effective any ex-ante calculation of marginal losses can be. However, this method should produce the most cost effective dispatch for customers on average in each month.”

We note there are further additional costs associated with the proposed decision that are also likely to adversely impact on consumers, such as those indicated by Redpoint that require further analysis.

In relation to this, legal advice on the proposed decision received from Arthur Cox considers the RAs process and proposal to be tantamount to authorising a ‘live trial’ of a significant price setting variable in the electricity market. Furthermore, their view were that it could reasonably be argued that these actions are deeply irresponsible, particularly in the context of the current economic climate where there is significant sensitivity (particularly among large energy users) to fluctuations in the delivered cost of energy.

This advice also referred to the changing set of objectives considered by the RAs throughout the review process. The original seven objectives were reduced to five as part of the TSO review, and this has materially been reduced to just one as part of the proposed decision (predictability). The surprising and unjustified elimination of objectives, especially within the proposed decision and arguments used to arrive at a uniform conclusion, is a significant failure of the regulatory process.

The RAs, through the SEM Committee, have a number of other objectives that are similarly not followed in relation to this decision. Specifically, but not exhaustively,

¹⁰ SEM Committee (2009), Transmission Loss Adjustment Factors for 2010 – Decision Paper, 17th December 2009, SEM-09-113.

the RAs proposed decision and the process engaged in to arrive at this decision is considered to ignore other objectives of the RAs, including;

- Efficiency – the proposed decision is directly in conflict with the SEM Committee’s duty to promote and encourage efficiency.
- Environmental sustainability – the proposed decision fails to consider the likely increase of environmentally harmful emissions attributable to the change to uniform loss factors.
- Transparency – the proposed decision introduced a socialisation and cross-subsidisation of transmission losses that serves to harm transparency in the pricing;
- Non-discriminatory – the proposed decision looks to apply the same conditions to dissimilar generators. This is similarly an objective of the workstream that appears to have been ignored.

Furthermore, we note that transparency and non-discrimination are central principles of the European Directive (2003/54/EC) and procedural issues similarly arise in relation to this. Additionally, the Directive calls for market based procedures to be implemented in systems wherein TSO’s purchase losses. Although this is not the system proposed by the RAs, this proposed decision suggests a move away from a market based apportionment of losses (cost-reflectivity) to one of socialising network costs imposed by poorly located generators. We also note that the proposed decision would likely fail to satisfy a number of the articles contained in the European Commission’s Third Directive on Energy Markets that shall come into force in Ireland in March 2011 (including, inclusively but not exhaustively, Articles 15 & 36).

Procedurally the RAs have also engaged in a haphazard approach to the consultation surrounding this proposed decision. We note that published consultation guidelines by the RAs indicate a minimum timeframe for consultation to such papers and although the initial 4 week indicated timeline for responses falls within the CER’s guidelines of 28 days¹¹, this was significantly shorter than the 8 weeks outlined by NIAUR for technical consultations and 12 weeks for policy matters¹². We note this period may be considered for extension if the consultation falls during a holiday period (e.g. public holidays in Northern Ireland on 12 & 13 July). Given the significance of this proposed change, a change affecting the SEM HLD, it is as a policy matter and as such NIAUR’s involvement in the consultation remain contrary to their own published guidelines.

An initial extension to this consultation of two weeks was granted and this was subsequently followed by a further extension of two more weeks. VPE notes its original call for an extension to allow for minimum level of analysis to be undertaken was at least one month. The haphazard notifications of extensions have impaired

¹¹ See, CER (2008), Review of CER Public Consultation Process – A Response and Decision Paper, 6th June 2008, CER/08/089. Available at: <http://www.cer.ie/GetAttachment.aspx?id=2c2b5689-cacd-4371-8dbb-4d40efabee4c>

¹² NIAUR, Communications Briefing – Consultation, available at: http://www.uregni.gov.uk/uploads/publications/Consultation_Guidance.pdf

our attempts to commission further work. Such uncertainty in the regulatory process and timetable is a further example of the RAs to engage in regulatory best practice, another duty the SEM committee have failed to adhere to.

We also note that contained in the referenced CER Decision Paper on Public Consultation Process (CER/08/089), the Commission's Decision on regulatory impact assessments is as follows;

"The Commission will work over Quarter 3 2008 to develop a simple, clear and user friendly RIA process. This will be based on the Government's Guidelines in this area. Revised government guidelines are expected to be published in late Summer 2008; the Commission's processes will be developed following this.

A full RIA will be carried out for all major CER consultations with a less formal process applying to all other issues. This will ensure a balance is found between analysing the impact of regulatory decisions and available resources."

It is somewhat inconsistent that this is the single most significant change to the SEM since its inception, yet such an impact assessment has not be undertaken.

Considering this proposed decision and the regulatory process more generally, there has been a clear and consistent precedent in relation to TLAFs in the SEM that they are to be based on marginal loss factors to ensure cost-reflectivity and efficiency in the all-island electricity market. This approach is enshrined in the SEM High Level Design (HLD) Decision Paper and has consistently been argued for and implemented by the RAs in subsequent annual Decision Papers on TLAFs, including most recently for the 2010 TLAF values (published in December 2009). A change of the magnitude being proposed, absent of any analysis, is a dangerous and harmful precedent moving away from evidence based decision making and undermining regulatory certainty in the market with the effect of substantially increasing regulatory risk. This is considered to far outweigh any supposed benefits of the change proposed by the RAs.

For the purpose of investors, regulatory certainty and regulatory precedent are important contributory factors to any decision to invest and in raising finance. Although market participants' views in relation to TLAFs may have changed over time, these are not investment signals. The decisions of regulators and regulatory precedent are investment signals and to this extend the RAs should only consider change, if all impacts of the change are fully understood and justified. This is not the case in relation to the RAs proposed decision and such a decision will damage regulatory certainty and investors willingness and ability to invest in Ireland.

A further failure of regulatory process engaged in by the RAs can be seen in their failure to implement a reasoned decision that has consideration for prevailing and agreed regulatory decisions in other related areas. Among these, we note that the calculations for the Capacity Payments pot for 2011 contained in the RAs recent decision paper (SEM-10-053) was based on the current TLAF methodology. The same applies for Directed Contract and the calculation of the relevant prices, as well

as for imperfection charges for the upcoming year. Therefore, this ensures a legacy of the current approach irrespective of the adoption of uniform loss factors and this represents a further procedural failure on behalf of the RAs to implement a joined-up review of this issue and likely a product of the RA apparent rush to implement a wholly irresponsible and unjustified 'live trial' of uniform loss factors.

In conclusion on the regulatory process engaged in by the RAs, it is clear that it is markedly deficient, it ignores duties and objectives they are beholden to observe, it represents a dangerous precedent in moving away from evidence based decision making and threatens to undermine regulatory certainty by failing to provide a reasoned justification for this considerable proposed change. The process is clearly not in keeping with regulatory best practice as highlighted in the independent reports accompanying this submission. Furthermore, we wish to reiterate that throughout this process the RAs have misspecified the problem to be addressed, have proposed a misguided and extreme solution based on inconclusive, inconsistent and sometimes flawed and contradictory reasoning and risk imposing significant, unquantified harm to the market.

On the regulatory process engaged in by the RAs, NERA's independent assessment concludes;¹³

"I would define "best regulatory practice" as decision-making that is transparent and objective, in which the regulator evaluates all options against pre-specified criteria and the regulator designs its criteria in order to ensure it takes decisions on the basis of objective evidence, including economic costs and benefits. The RAs failed to meet this standard in their decision making."

In relation to any further attempts to address the issue of TLAFs, and in regulatory decisions more generally, we urge the RAs to address the procedural deficiencies apparent in this proposed decision and associated process and to ensure such issues are avoided in future. In the current environment, focus on regulatory risk should be to minimise such risk through the publication of reasoned decisions and adherence to best regulatory practice, failure to do so will have significant negative implications for regulatory certainty and investment risk in the SEM. The implications of this and other effects of the proposed decision are considered in the next section.

Unfortunately at this late stage in the process, we note the RAs are continuing to adopt poor regulatory practice with the publication of an information note on an 'expected' uniform TLAF value just two days prior to deadline for submission of responses. Furthermore, with the publication of this 'expected' uniform value at this stage it lends additional support to our understanding that the RAs have not undertaken any detailed quantitative assessment of the proposed change to TLAFs,

¹³ NERA Economic Consultants (2010), Review of Proposed Decision on Transmission Losses in the Irish Electricity Market – A report for Viridian Energy Ltd, p.9. (See Appendix 1 of this submission)

either in the lead up to the publication of the proposed decision or subsequently, as it would not be consistent with the timing if this latest note.

Furthermore, we note the RAs proposed decision includes a timetable for further work to be completed, this includes reference to the RAs presenting their proposed decisions on both TUoS and TLAFs in the workshop in July. There has been no indication of a proposed TUoS decision from the RAs and this is further reflective of a disjoint in approach to this review undertaken by the RAs.

4. Impact of the Proposed Change

As already noted, the RAs have to date not published or presented any quantitative analysis of how their proposed decision to change to a uniform loss factor is expected to affect key market variables and the efficiency and functioning of the SEM more generally. Given the magnitude of this proposed change to the market, VPE considered it both suitably important and prudent to consider these effects. To this end we have undertaken our own in-house modelling on the impacts of proposed decision and have also commissioned an independent report from Redpoint to consider the same, based on the RAs validated model¹⁴.

The relevant base case models considered by both VPE and Redpoint indicated an increase in SMP in 2010/2011, the only period in the RAs proposed decision for which a uniform loss factor is definitively proposed.¹⁵ All of the models considered indicated an increase in the shadow price of electricity arising from the change to a uniform loss factors. This is a significant result as both Redpoint and VPE note the variability of Uplift in the modelling and consider it unreliable as a variable for consideration in policy analysis. Changes in shadow prices reflect reliable, economically driven impacts of the proposed change.

The overall size of the effect on consumers is expected by VPE to be of the order of an €81 million increase in costs for consumers, in the relevant one-year period (2010/2011). In accordance with our submission, this increase is considered to be unnecessary, unjustified and is likely to have further negative effects for consumers, generators and the SEM more generally.

For ease of comparison, Redpoint were asked to consider the impact of a change to a uniform loss factor in the SEM using the RAs' validated model and PLEXOS modelling. It was accepted that the RAs validated model may not accurately reflect up to date information in relation to the functioning of the market but was considered useful nevertheless as an analysis based on an accepted benchmark. Using the current forward curve for commodity prices, and Redpoint's own assumptions on start costs, VOM costs and maintenance rate, Redpoint's analysis found definitively that shadow prices are expected to increase under a uniform TLAF of 0.98.

Redpoint's base case comparison of the current and uniform (0.98) approaches found that in relation to energy costs only;¹⁶

“On a generation volume adjusted basis, uniform TLAFs lead to an increase in the annual energy costs associated with Shadow Price of about 27 €mn in 2010/11.”

¹⁴ Redpoint Energy (2010), Impact of uniform TLAFs on SMP and MSQs – a report for Viridian. (See Appendix 3 of this submission).

¹⁵ Just one of five additional sensitivity scenarios run by Redpoint indicated a result contrary to this base case result. VPE consider this scenario to be the least reflective of generator characteristics in the SEM of the scenarios considered.

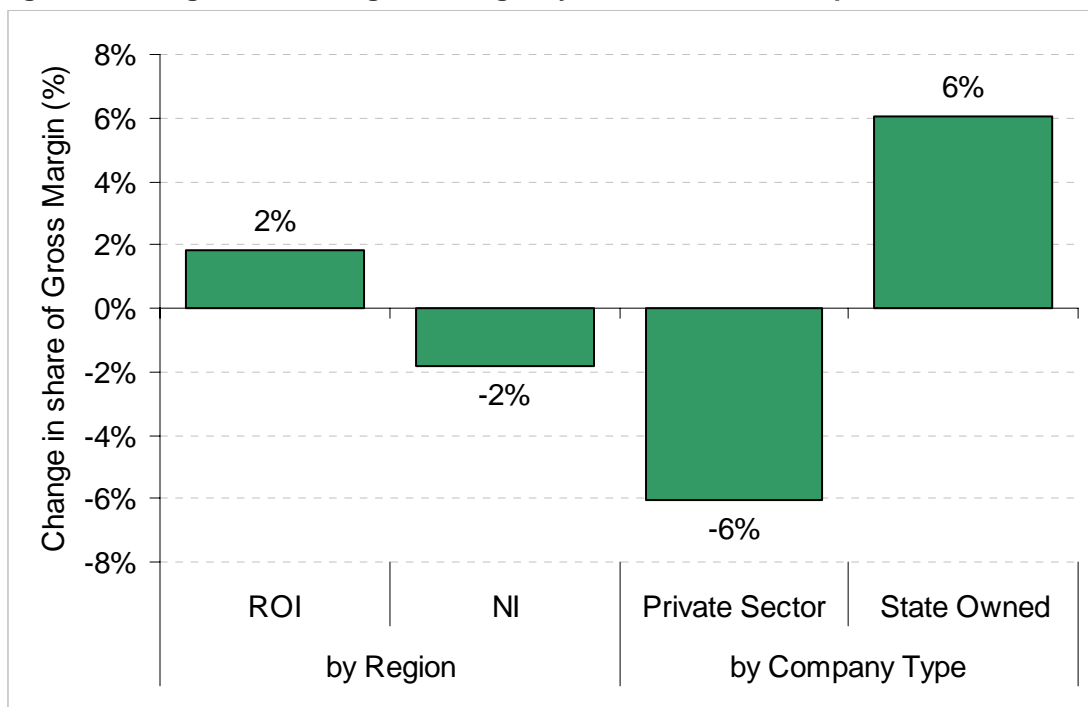
¹⁶ Ibid. p.12.

Furthermore, Redpoint’s analysis indicates the impact of removing locational signals and the resulting impact of cross-subsidisation of predictably poor locational investment decisions;¹⁷

“On average, those companies owning generation assets with currently unfavourable TLAFs will gain considerably, while companies with currently favourable TLAFs can expect to see a significant drop in their gross margin levels.”

Figure 1 represents the implications of Redpoint’s independent findings based on generator location and ownership structure. These results have significant implications for investor confidence and transparency in the market.

Figure 1: Change in share of gross margin by location & ownership structure



Source: Redpoint analysis (2010)

In addition to these results Redpoint have also indicated that;¹⁸

“Further, although the RAs’ consultation document does not specifically mention how capacity payments would be treated, a move to uniform TLAFs could also affect the distribution of capacity payments. If the same uniform TLAFs were directly applied in the eligible availability for capacity payment calculations, directionally there would be a similar redistribution of capacity payment funds as is the case with energy gross margin levels.”

¹⁷ Ibid. p.14

¹⁸ Ibid. p.4.

This indicates a further significant cross-subsidisation of predictably poor locational investment decisions and is not limited to these effects. Redpoint have also indicated a significant amount of further modelling work that would need to be undertaken to fully understand the impact of the RAs proposed decision. The haphazard timescale of the consultation has not allowed for this.

Noting the potential shortcomings of using the RAs validated model, VPE's own in-house modelling of the expected impact of moving to a uniform loss factor of 0.98 is based on the most up to date information on observed market behaviour. The results of our in-house modelling indicate an increase in the cost of electricity to consumers of at least €31.4 million. This figure includes;

- €54.2 million increase in SMP;
- €19.2 million increase in capacity payments arising from a change in the current TLAF applied to a BNE generator in Northern Ireland and the uniform value;¹⁹ and,
- €8 million increase in PSO costs in Northern Ireland.

In further support for the expected increase in SMP, modelling presented by BGE at the RAs Workshop (26 July), as well as analysis presented by NIE PPB, all indicated an expected increase in SMP for the year 2010/11 arising from adopting uniform loss factors, relative to the current approach.

Further to this, and in an appropriate timescale, both Redpoint and VPE consider it important to consider a number of additional potential costs, including those arising through imperfection charges and the ESU. It is also considered important to fully analyse and understand the impact of any change to TLAFs on losses, system constraints, dispatch, demand responses and emissions. In addition to this, the introduction of uniform TLAFs would have significant implications for trading behaviour, as all contractual positions and related trading behaviour are based on the current approach. Such an inappropriate and unjustified change to uniform can be expected to introduce legacy issues for market participants.

In addition to the quantified effects of the proposed change indicated in this section, the impact of the poorly reasoned and unjustified decision coupled with a substantial cross-subsidisation of predictably poorly located investment decisions from the private sector to state-owned generators will substantially erode investor confidence and increase the cost of capital. This effect will far outweigh any supposed benefits of extreme stability in the TLAF value as recommended by this proposed decision. This view is shared by VPE and independently by NERA.

Such erosion of private investor confidence has significant knock-on implications for the SEM and the respective objectives of each Government in achieving both renewable investment and emission reduction targets. Importantly, such a poor and

¹⁹ VPE consider that whilst there are arguments to disregard TLAFs in the BNE calculation when investors can choose a favourable location with a TLAF of 1 or more, this would be no longer the case with a uniform TLAF of 0.98 and we would dispute any decision not to reflect a uniform TLAF in the BNE calculation. As such it is considered to be an appropriate cost inclusion.

unjustified decision can be expected to extend the harm to regulatory certainty and investor confidence to all areas under the remit of the RAs. Clearly, this is undesirable.

More immediately, unjustified and unnecessary increases in electricity prices, transmission losses and harmful environmental emissions should all similarly be avoided and as such the weight of evidence implores the RAs to conduct a full detailed assessment of the options for reform of TLAFs. We contend that the current review has misspecified the problem. On the basis of evidence presented, it attempts to implement an unnecessary change to the current TLAF approach. Finally, the proposed decision has a number of harmful implications for the SEM, consumers and the environment, that to date are not understood by the RAs or market participants.

5. Conclusions

The RAs proposed decision has focussed exclusively on trying to ‘fix’ what they have wrongly perceived to be a ‘broken’ current TLAF methodology. The unjustified and unnecessary proposal excessively focuses on the incorrectly defined problem of volatility in derived TLAF values. This provides for an unnecessary and inappropriate solution that is coupled with a procedurally deficient process. Implementation of this proposed decision is expected to increase prices for consumers; increase emissions; reduce efficiency and remove cost reflectivity. Such a result is clearly contrary to the objective and duties of the RAs and of the RAs’ defined workstream.

ESB’s analysis of the current TLAF approach only serves to confirm the approach is fit for purpose. TLAFs based on marginal loss factors are appropriate when considering losses on the system, how these relate to the level of total losses or incremental losses are an unnecessary and erroneous comparison. This is the view of both VPE and independent expert Graham Shuttleworth of NERA. Such a comparison attempts to confuse the issues under consideration; efficient decision making is determined by marginal effects. The RAs have consistently recognised this and found it appropriate for adopting in the SEM (HLD Decision Paper). They have continued to approve the use of this approach including most recently in the published decision for TLAFs in 2010, wherein they recognise the current approach as the one most likely to promote efficiency and bring about “the most cost effective dispatch for consumers on average each month”.

The analysis presented by ESB has also served to allay fears that TLAFs are unpredictable and volatile. ESB were capable of modelling the impact of new capacity being located in Cork and the plants’ resulting TLAFs. Volatility correctly refers only to the risk or uncertainty associated with how TLAFs change. As a regulatory objective stability in approach is a recognised regulatory criterion, (excessive) stability of outputs is not. Attempting to impose this on the market will have a number of adverse effects that are wholly avoidable, including compensating investors for predictable adverse effects arising from irrational investments. NERA share this view stating, “There is no reason to compensate an investor for a locational cost, whilst allowing the investor to capture a locational benefit.” We note there are a number of locational benefits to locating a new plant Cork.

To date, no analysis has been presented to indicate that the current approach is broken, in fact it has vindicated its continued use. It is recognised that there is an issue for investors over changing TLAF values and how these may be affected by new investment but there are recognised solutions to such problems to allow investors to hedge such risks. A selection of such solutions are contained the report prepared by NERA.

Notwithstanding the RAs failure to address the appropriate issue in relation to TLAFs, the process they have engaged in is procedurally deficient, irresponsibly lacking an objective and empirical assessment, and ultimately is not in accordance with best regulatory practice or with the RAs stated duties and objectives. Their decision

process fails to consistently consider the objective criteria in evaluation of each option. Selective arguments are subjectively argued to reject certain options that more readily apply to the uniform loss factors. The surprising and unjustified elimination of objectives, especially within the proposed decision and arguments used to arrive at a uniform conclusion, is a further significant failure of the regulatory process.

The most glaring omission from the RAs' process is that of any analysis undertaken on the expected impacts of such a change. Such analysis should be incumbent on the RAs given their duties as outlined in the relevant legislation from which they derive their powers and in accordance with their own regulatory decisions (SEM/08/089). All analysis possible in the short timeframe given by the RAs to respond to this consultation indicated that a change to a uniform loss factor of 0.98 for the upcoming year 2010/11 would;

- increase electricity costs for consumers;
- cross-subsidise predictably poor investments;
- increase regulatory uncertainty; and
- increase the cost of capital for investment which is expected to erode investor confidence and deflect investment from the SEM.

The increase in SMP is a consistent result from analysis undertaken by VPE, Redpoint, NIE PPB and BGE. VPE have estimated increases in costs for consumers of at least €81.4 million. The adoption of the proposed decision would also likely;

- increase losses;
- increase constraint costs;
- increase imperfection charges;
- increase cost of the ESU;
- increase harmful environmental emissions; and
- harm competition in the SEM.

The implications of adopting an unproven change to such a significant variable in the market is considered to amount to nothing more than a 'live trial' of a pricing variable and is wholly irresponsible.

Based on the information contained in the proposed decision and made available by the RAs, one must conclude that the decision to adopt a uniform loss factor is based solely on conjecture and may have been influenced by misleading analysis that attempts to confuse the acknowledged objectives of the TLAF approach. This analysis has been provided by parties who stand to materially benefit from a move to uniform TLAFs. Therefore, VPE do not consider there to be any evidence to change the current methodology. We also contend that any change from the current methodology arising out of the RAs incomplete and procedurally deficient review of TLAFs would be susceptible to legal challenge.

APPENDICES

A.1 NERA Economic Consulting – Review of Proposed Decision on Transmission Losses in the Irish Electricity Market

[Report accompanies this submission]

A.2 NERA Economic Consulting – Comments on the TLAF Workshop of 26 July 2010

[Note accompanies this submission]

A.3 Redpoint Energy Limited – Impact of Uniform TLAFs on the SEM

[Report accompanies this submission]