IWEA Response to the Proposed RAs option for all-island harmonised Transmission Loss Adjustment Factors (TLAFs)

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The Irish Wind Energy Association (IWEA) welcomes the review of the All Island Transmission Use of System Charging and Loss Factors currently underway and appreciates the opportunity to comment.

1. Introduction

IWEA welcomes the review of TLAFs currently underway and, in particular, the move towards a uniform TLAF as this will address concerns about the volatility and unpredictability of the current methodology.

As indicated in responses to previous consultations on this matter, the volatility and lack of transparency of the current methodology of the All-Island Transmission Use of System Tariffs and Losses are a matter of serious concern to IWEA members. The volatility of the TLAF mechanism is disrupting proper investment decisions and risk analysis processes. In particular the current methodology of transmission charging contains a set of volatile and arbitrary tariffs that seem to unduly discriminate against wind generators. It is unclear how these signals are linked to the objective of efficient development of the energy infrastructure on the island.

The lack of predictability adds costs to investment in the industry. This in turn has a material effect on the competitiveness of the industry on the island. Most renewable generators use project finance, and the volatility of TLAFs could trigger project default. This would undermine broader investor confidence.

It is important to note that the overall policy framework is very complex and interlinked. With the industry on the cusp of significant investment over the next ten years there is significant benefit in having a joined up approach to network planning and generation development. The issue of transmission losses is just one of many areas that need to be tackled to provide a stable investment framework. The level of risk it is introducing is disproportionate to its importance.

IWEA appreciates the recognition in this paper that transmission arrangements should be predictable, non-volatile (to the greatest possible extent) and be transparent to stakeholders, and welcomes the review currently underway. We welcome the move to a uniform TLAF for reasons outlined above, however we believe that this needs to be a permanent and enduring solution to provide stability and predictability to investors going forward.

IWEA has argued to date that the cost of losses should be socialised for wind generators as the TLAF does not achieve its purpose as a locational signal and generator sites have already been decided through the Gate process in Ireland and significantly determined by the planning process in Northern Ireland. By the time a generator has completed these processes, the TLAF may have changed significantly. As such, the relevance of cost reflectiveness as a primary objective is diminished and should not be a deciding factor in terms of methodology selection as it would be unfair to discriminate between adjustment factors for generator losses when developers were unable to take this consideration into their investment decision.

The current proposal which proposes a potential move towards splitting following analysis returns uncertainty to the issue. This uncertainty needs to be removed by moving to an enduring solution of uniform TLAFs.

IWEA proposes a uniform TLAF of 1.0 to add greater transparency and simplicity to the SEM with the potential to reduce system costs, and to ensure appropriate revenue for wind generators as REFIT support is based on a TLAF of 1.0.

2. Context

There is a large amount of generation due to come on stream in the next 10 years. Approximately 1000MW of wind generation is to emerge in the near future from the planning process in NI. There is approximately 6,500MW new generation (including renewable and conventional) in the RoI offer pipeline. This is a large amount of generation and investment and it is imperative that there is a stable investment framework in place for these projects.

There are a number of strategic developments also taking place which will have a large impact on new generation developments. The National Renewable Energy Action Plan outlines how Ireland intends to reach its renewable energy obligations under the EU Renewables Directive, while the Strategic Energy Framework outlines the targets required in Northern Ireland. Grid 25 in the RoI and the NI Grid Strategy outline the development of the grid infrastructure required to accommodate the increase in electricity generation.

There are a number of review processes ongoing in parallel with the review of TLAFs including the review of the treatment of wind in the SEM, capacity payments and ancillary services. The ongoing SEM consultation on the principles of Dispatch and Market Schedule needs to clarify the definition for Priority Dispatch to ensure that wind farms with non-firm connections are not disadvantaged by this change in TLAFs. Priority dispatch is currently not qualified so it is important that a change in the thermal dispatch pattern should not influence the level of non firm constraint as this is a minor economic point and should not impinge a legal requirement. It is also important that there are incentives on the TSO to deliver priority dispatch.

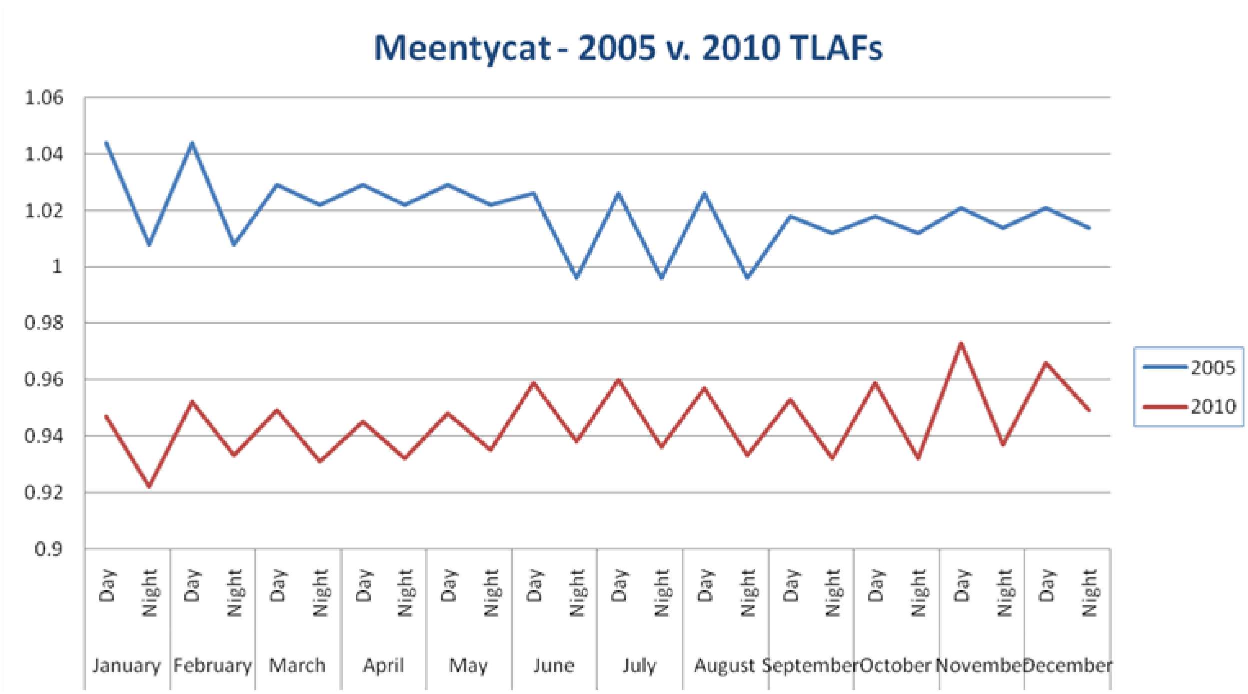
The results of the initial studies into the facilitation of renewables show that large scale renewable integration will increase the levels of non-dispatch/ indicating a minimum figure of approximately 6% non dispatch could have a serious impact on the viability of wind farm developments.

In this context it is clear that the review of TLAFs is one of many issues that are being reviewed at the moment. TLAFs are not the biggest part of this but are having disproportionate impact. A lot of time has already been spent on this process and it is important that an enduring decision is reached and that the volatility and unpredictability of TLAFs are removed. This needs to be done in a timely manner so that investment decisions can be made sooner rather than later. Some IWEA members are of the view that no further analysis is needed, whilst others are of the view that the SEM committee need to publish quickly relevant information on prices and constraints to demonstrate the basis for a proposed decision on TLAFS.

3. Costs and Benefits

The approximate production cost of the Single Electricity Market is €842,487,588 (this information was provided by SEMO). If the transmission losses are in the region of 2% (this figure is just an estimate of the losses) this attributes a value of under €17m to these losses. There will always be losses on any electricity system, and the potential savings associated with creating more efficient use of the system would only realistically be in the region of 10-15%, assuming a well functioning methodology, resulting in a saving of approximately €1.7 – €2.5 million per annum. It is worth noting that this is probably less than the margin of error in current estimates of the volume of losses. It would be difficult to measure the actual savings associated with improved efficiencies due to the fact that the losses are not currently robustly measured. It is likely that the cost associated with developing and administering any methodology would be more than the potential savings that could be made.

The following graph shows and example of the volatility of the existing methodology. The example shows the change in TLAFs for Meentycat wind farm between 2005 and 2010, with a change of approximately 10%. This is a very significant change in charges and has serious impacts on the cost of finance for projects.



While the impact of this volatility is most noticeable for wind farms that have experienced large changes in TLAFs, it is important to note that this volatility imposes a cost on everyone. These locational signals are unpredictable and this adds to the difficulty of financing projects. Financial institutions will want as little risk as possible, and will add a premium to the finance to hedge against the volatility of TLAFs. The banking crisis has resulted in more stringent due diligence and stress testing on risk requirements. IWEA would like to emphasise that any methodology that introduces variable risks adds to investment costs and costs of capital for existing assets.

Appendix A contains an extract from the “IWEA Response to SEM-09-107 Preferred Options to be considered for the Implementation of Locational Signals on the Island of Ireland”, 8th January 2010, which outlines a simple cost/benefit analysis that could be carried out in relation to TLAFs.

4. Case for TLAF of 1.0

The SEM Committee has proposed the setting of a uniform TLAF of 0.98 for all generators on the island. While IWEA welcomes the move towards a uniform TLAF, IWEA members believe that a value of 1.0 is required to ensure that marginal projects remain financially viable. The reasons behind having a TLAF of 1.0 are outlined in the following paragraphs:

- The REFIT support scheme is based on a TLAF of 1.0. The calculation of the REFIT base price/MWh was based on industry standard costs and an assumed energy volume based on a predicted average technical availability and capacity factor. The calculation of that energy volume did not discount for transmission losses. Information provided by DCENR to support the EU state aid clearance application for REFIT base price of €57/MWh assumed a P50 output level of 34% with an availability assumption of 97%. No adjustment was made for TLAFs in that calculation, which was reasonable at that time in the context of some windfarms having positive TLAFs and others having negative TLAFs. However if a uniform TLAF of 0.98 was implemented, the effective support of REFIT would be reduced by 2% for the vast majority of REFIT supported projects which are settled at the Trading point . This is because they will suffer a 2% reduction in volume, but the REFIT price has not been set to compensate for this. For a small number of REFIT PPAs settled at the meter point, this dimunition would not apply. As the calculations around the REFIT support were based on a TLAF of 1.0, there is not sufficient payment within REFIT to account for these losses and there is a strong possibility that marginal projects will no longer be viable if a TLAF of 0.98 is introduced. This would impinge on Ireland’s ability to meet its EU and international commitments. As the application for the extension to REFIT has already been sent to the European Commission, this issues needs to be addressed in this decision.
- A TLAF of 0.98 introduces a North-South distortion as ROCs are counted at the gate and REFIT is counted at the trading point. A TLAF of 1.0 would ensure that this distortion is removed and that the support mechanisms are not adjusted for transmission losses.

- A TLAF of 1.0 would add greater transparency and simplicity to the SEM with the potential to reduce system costs. Examples where a TLAF of 1.0 would have added greater simplicity to the SEM include Mod 12-09: Loss Adjustments in Constraint and Make Whole Payments, and Mod 45-09: Loss Adjustments in the calculation of the Cost of running in the Procedure to calculate final Uplift values. For both these cases a TLAF of 1.0 would have removed the requirement for a modification.
- A TLAF of 1.0 would enjoy more "acceptability". There are a number of generators that would experience a large swing by applying a uniform TLAF of 0.98. If the TLAF of 1.0 was introduced they would be more likely to support the proposed decision.

One concern around the setting of a uniform TLAF of 1.0 seems to be around the cost to the consumer of energy. This is probably unwarranted, to a first order. If you consider the alternatives to be a uniform TLAF of 0.98 or of 1.0 it would appear that the following differences occur (to a first order):

- The total electricity demand will remain unchanged
- The volume of energy at the trading point will be different. If the Global TLAF is 1.0 there will be 2% more energy traded between generators and suppliers than if the uniform TLAF were 0.98.
- Generators incorporate their TLAFs into their energy price bids. If the TLAF is 1.0 rather than 0.98 then a generator will sell 2% more energy for the same metered quantity, hence the price bid should be 2% less. If all generators have the same TLAF then bids should be 2% less in the case of a uniform TLAF of 1.0 rather than one of 0.98.
- As the energy volume setting the price in EPUS is unchanged and the merit order etc is unaffected then the SMP should be 2% less (there may be exceptions around negative pricing and zero price but the overall argument still holds in those cases).
- It is possible that the total volume of money exchanged may vary due to second order effects such as unexpected changes to the profiling of uplift, potential changes to Make Whole payments (this would seem unlikely).
- Hence the overall effect would be that 2% more electricity is traded but at prices 2% less, there should be no difference (to a first order) in the total payment level between generators and suppliers and hence no argument for higher costs to consumers/business etc.

4.1. Other Impacts

Setting loss factors for all generatos to 1 or any other constant number across the island will result in a reduction in the energy imbalance we currently see in the SEM.

While there are a number of contributors to the energy imbalance, one known issue is around the way in which payments and charges are balanced. Payments to generators are based on Market Schedule Quantities while charges to suppliers are based on metered quantities. This means that locational issues between how the market schedules generators against how the TSO dispatches generators figure in how the market balances. Effectively, the total payments to generators are based on the unconstrained schedule, while it could be said that charges to suppliers are based on the constrained RCUC schedule.

5. Splitting Option

Option 6 looks at the splitting of the treatment of losses on the market schedule and in dispatch, with losses taken into consideration in dispatch. This could cause divergence between the market schedule and the dispatch schedule. IWEA is also concerned that the cost of implementing such a mechanism correctly would outweigh the benefits that could be accrued. For example, if the cost is estimated to be in the region of €1m, and the maximum benefit is estimated to be in the region of €2.4m, allowing for creep in costs and savings, and taking into account the extra administration involved, this would not appear to be a worthwhile investment. There would need to be a significant difference in the costs and the savings for this to be the case.

It was noted that in section 2.6 of the proposed decision paper that there is a stated intention that "In the market schedule of Splitting, the RAs are proposing that the uniform approach to losses should be adopted." However it is also noted that "The implementation of the 'Splitting' proposal is to be contingent on a satisfactory outcome from an Impact Analysis, as outlined above, to be carried out by the RAs on the separation of the market schedule from dispatch". IWEA is concerned at the uncertainty that this may introduce and request that this uncertainty is mitigated at this point.

In Section 2.4.4 the RAs request comments from stakeholders in relation to Generators receiving individual loss factors which may or may not vary with time. IWEA would not be supportive of this measure as the location of generators has already been largely determined through the connection and planning processes and these signals would not have any influence on the location of projects. As outlined in the paper, these factors may become less accurate in the long term and would therefore no longer serve their intended purpose.

6. Conclusions

There is strong agreement within the industry that there is a need to remove the existing methodology of TLAFs as the values are volatile and unpredictable. This lack of predictability is of significant material impact as it increases the cost of finance for all generators. The TLAF is no longer effective as a locational signal as the location of new generation is restricted according to the offer process in Gate 3 and the planning process in NI.

IWEA welcomes the move to a uniform TLAF as this will provide more stability and predictability. Removing the volatility of TLAFs is essential to ensure proper investment decisions and risk analysis processes can be carried out.

The uniform TLAF should be introduced in a timely manner and should be a permanent solution. Prolonging the consultation process will not provide the certainty that is required so that investments can be made in the short term. There has been some debate within the industry as to whether this process has already gone on long enough and a move should be made to an enduring solution immediately, or whether further analysis needs to be carried out to support a sustainable regulatory decision. If it is decided that further analysis is required this should be carried out as quickly as possible and the decision published so that investment decisions can be made with confidence.

Based on the above analysis, IWEA proposes that a uniform TLAF of 1.0 would be preferable in the case that the SEM committee decide to apply a uniform TLAF as it would add simplicity to a large number of other processes such as regulated bidding etc. It would also provide a level of transparency to the market by making it easier for investors to understand transactions and remove a large number of variables that seem similar but are different. In practical terms no changes to systems would be envisaged so quantities with and without TLAFs applied would still exist however it would be much easier to conceptually follow transactions and proposed changes going forward.

A uniform TLAF of 1.0 would also simplify debates around issues such as whether TLAFS should be applied to units start up and no load price bids.

It is possible that setting TLAFS to 1.0 may simplify future systems changes and eliminate the need for some changes. Although this would require an acceptance that SEM was not being future proofed for a potential future reversal of this decision.