



Incentivisation of the Delivery of Transmission Infrastructure

A Joint Submission by EirGrid and ESB

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Draft for Discussion

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Introduction

This short paper has been prepared by EirGrid and ESB (together “the Companies”) in response to a request issued by the CER on 15th February 2013 that the Companies develop joint proposals for the incentivisation of transmission development. This was in the context of proposals previously submitted by EirGrid on 13th December 2012 and ESB on 6th December 2012. It follows a joint submission made by the Companies on 15th March 2013 in respect of the arrangements to apply in 2013 and which set out a number of principles which would apply to this more enduring mechanism. This previous submission is attached as an annex.

This paper has been prepared by the Companies in the context of the current industry structure; while it has not been bound by the arrangements as set out in the Infrastructure Agreement (IA) it has nonetheless been cognisant of the existing IA architecture in its preparation. It is subject to amendment in the context of any discussions post the European Commission decision on TSO Certification which may require or dictate that it be amended.

It is recognised by CER and the electricity industry that an incentive that rewards the targeted efficient delivery of transmission infrastructure is desirable. The current regulatory framework incentivises development of the system, but doesn’t necessarily reflect the difficulties of delivering certain categories of transmission network; it also incentivises the delivery of certain milestone positions rather than the overall beginning to end lifecycle of a piece of Transmission network infrastructure.

General Principles

In the paper submitted on 15th March 2013 EirGrid and ESB set out a series of principles with which the Companies believed any incentive regime should conform. Following further engagement since that time these are now amended as follows.

- Project Life cycle: End to End Incentivisation
- Control: Incentives should recognise the level of influence and control over the incentivised element
- Risk: Incentives should match the risk at each stage to each party including reputational risk.
- Flexibility: Incentives must be appropriately adjustable in the event that external 3rd party events affect the delivery
- Accountability: Parties should be accorded effective levers of control for those aspects of grid delivery for which they are responsible
- Measurability: Clear and agreed measurement metrics
- Benefit: Mutual benefits to both companies and the customer from optimised delivery of infrastructure
- Efficiency: Incentives should reward value and efficiencies created

EirGrid believes that enhanced benefits would come from a situation where a single party is ultimately held accountable for end to end incentivisation with any incentives applicable to ESB backed off through an amended Infrastructure Agreement. ESB believes that it is preferable that the CER continues to operate the incentive mechanisms on both parties to deliver end to end incentivisation. The Companies however both believe that the proposals as set out in this paper can be delivered under either approach.

Overview

The Current Framework

The current incentive mechanism (set out in the next section) provides for incremental individual milestones accorded to either EirGrid or ESB subject to an *ex post* adjustment framework which protects each party from both the actions of the other and from Third Parties. It is designed to cater for projects that have a very long lead time ensuring that the incentives are earned for specific milestone achievement, and incentives are not unduly delayed until final completion which can be several years for certain projects, and can be also subject to externally influenced delays. It also works where projects are being completed at higher volume levels, to relatively short timelines.

The Revised Framework

Under the revised framework the Companies are proposing three substantive shifts which have the potential to deliver improvements in the incentive regime in accordance with the principles set out above and to meet the CER's objectives:

1. A two tiered approach reflecting the importance of strategic projects
2. Shared incentives between the Companies where there is a degree of interdependency
3. Incentives to be tailored to reflect influence as well as control

In addition, the Companies believe that further refinement can/could be made to the management of outages recognising the importance of outages on out of market constraint costs. This is considered to be outside of the scope of this paper but is something the Companies are potentially interested in formulating a separate proposal on.

A two tiered approach reflecting the importance of strategic projects

The current incentive mechanism does not accord any differentiation in status between those projects which are more "normal and predictable" in nature (line uprates, busbar works, station refurbishments etc..) and the large scale strategic transmission development projects (new station, cable and overhead line build) which are important to the backbone development of the system and necessary for the release of significant Firm Access Quantities (FAQs) to connecting generators.

The Companies are now proposing a two tier incentive mechanism:

- Tier 1 (applying to **all** projects) – specific milestone incentives developed from, and building upon, the approach already in place.
- Tier 2 - applying only to **strategic** projects (those with estimated total capital spend >€40m) with a set of Project Life Cycle Incentive developed that aims to optimise the delivery of **complete projects** based on a generic project life cycle from conception to energisation.

Shared incentives between the Companies where there is a degree of interdependency

The current incentive mechanism provides for the largely independent assessment of each company's performance over those milestones for which it has control.

Under the revised framework the Companies are proposing a new set of 'shared' incentives whereby both parties would be jointly incentivised in respect of milestones where there is a degree of dependence upon each other. This represents a significant step change and a strong signal by the Companies to a commitment to continue to further work together for the delivery of Ireland's vital electricity transmission infrastructure.

The incentives would be designed to reflect mutual benefit to the Companies from delivery and to apply downside risk consistent with each company's ability to manage same.

Incentives to be tailored to reflect influence as well as control

The realisation of time for delivery of transmission projects, particularly large linear EHV projects, is significantly influenced by the actions of Third parties¹ (SIB, local objection groups, landowners, government bodies) and the interaction between them.

The current incentive mechanism is designed to protect both EirGrid and ESB from the impact of Third Parties such that the Companies are incentivised only in respect of those elements over which they can exert a reasonable degree of control. Being in a position to control actions for delivery is a reasonable principle of incentivisation. However, given the potential impact of Third Parties on the delivery of transmission infrastructure, the Companies do not believe this to represent the best approach. While EirGrid and ESB cannot control the actions of Third Parties they can, should, and do seek to influence them.

To the extent that influence of Third Parties is incorporated in incentive design then that design must be tailored to recognise the degree of influence the parties have over the factors concerned and provide an appropriate asymmetric balance of risk and reward. Obviously *force majeure* events² would need to be excluded and adjusted for in any incentive regime.

Summary of the Revised Framework

These three changes taken together will require a re-think of both the design and scale of the incentive mechanism. In this proposal the Companies have concentrated on setting out the framework which, if combined with appropriate incentives, should deliver. If the CER believes the framework has merit then the Companies would be happy to engage further, both between themselves and with the CER, to develop an incentive pot and payment structure which complements the framework design.

Further details on this revised framework and the proposed incentive structure/design there under is set out in further detail in the remainder of this document. As part of this process it also became evident that the assessment of timelines and the choice of a point estimate within the probability distribution of timelines for project delivery ought to be further examined and considered. The Companies have outlined some key considerations in this regard in Box 1 pg. 8.

Current Arrangements

The existing incentive model splits the incentives as follows:

ESB Networks	EirGrid
PIP	Planning Submission
Return of Scheduled Outages	CPP
Construction and Energisation	Project Agreement

As a result of our review, ESB and EirGrid believe that some of project milestones could potentially be achieved in a more efficient manner if a joint/shared incentive were in place for many aspects of the above. This is because delivery of some of the existing milestone, e.g. PIP and CPP, require a great deal of co-operation from the Companies and the milestones would be better achieved with shared incentives.

¹ Third Parties referred to in this context exclude the DSO, Demand or Generator Customers. These parties are 3rd party project drivers, where such drivers or the driver for any project falls away or changes this will have to be taken account of in the ex post framework.

² Including significant and unmanageable or intransigent 3rd party interventions

Proposed Arrangements

Tier 1 Incentive: Volume Transmission Delivery Incentives

It is proposed that these incentives milestones would apply to all projects and be altered as follows:

ESB Networks	Shared	EirGrid
	Preliminary Design	
		Planning Submission
	Project Agreement	
	Detailed Design	
Construction		
Commissioning		
	Energisation	

Further details on the proposals are set out in the following paragraphs. Following discussion of the framework with the CER the Companies would intend to engage further to develop the mechanisms for determining the specific targets/measures and the appropriate means of accessing achievement against same for each of the proposed incentives.

A number of the measures proposed would require further development in relation to definition, measurement and verifiability, which will be important in all instances. Nonetheless in general terms the Companies believe the milestones as presented they represent the most material end to end incentives and an incentive regime around these milestones will therefore deliver the end to end incentivisation of projects that the CER is seeking.

EirGrid Incentive(s)

Planning Submission

The current incentive for submission of planning is propose to be retained. This process is controlled by the TSO and linked to the TSO internal investment planning processes. While the TAO has an interest in this process progressing smoothly the delivery is within the control/influence of the TSO.

Shared Incentive(s)

A number of the following milestones are already explicitly described in the existing IA processes and form part of all existing Transmission Projects. However, some of these milestones has a shared element of responsibility and as such are proposed as shared incentives to be shared between TAO and TSO in a revised incentive mechanism.

Preliminary Design

This is a new incentive that would apply post Capital Approval and is additional to the arrangements that currently pertain under the IA. The intent of this incentive is to ensure early engagement by both parties in project development. Under this heading the Companies would work together on defining the scope of the project, taking into consideration construction methodology etc. Such engagement would mean that when projects move forward to Planning Submission and Project Agreement both parties are aware of the key aspects of the projects and this would reduce the risk of planning permissions requiring amendment.

Project Agreement (PA)

This incentive encompasses the previous incentives of CPP Issue, PIP Issue and PA. The previous incentives were collaborative processes that had interdependencies on both parties. Neither of the incentives could adequately reward the controlling party as they were both heavily dependent on the other to enable achievement of the milestone. The revised shared incentive takes a more holistic approach to achievement of the overall IA process from EirGrid's planning stage into the detailed design stage.

Detailed Design

Currently there is no incentive designed to optimise the Detailed Design process and incentivise the smooth and timely agreement of a detailed project design between the parties. It is felt that these transactions could potentially be more tightly controlled to reduce overall project time lines and therefore a new shared incentive around the detailed design is proposed.

Energisation

The current energisation incentive is placed solely on the TAO as part of a wider incentive also covering Construction. However, the final decision to energise new plant rests with the TSO as does the scheduling of outage dates for the energisation. As such it is proposed that the energisation of plant should now be separated out from the Construction works and become a shared incentive between both parties. This would ensure that both parties co-ordinate their efforts to achieve the soonest possible energisation date notwithstanding the responsibilities of both parties to ensure a safe, secure and reliable transmission system.

ESB Incentive(s)

Construction

The Construction incentive is currently conjoined with Energisation works and is placed solely on the TAO. It is proposed that these two milestones be separated, with a Construction incentive placed on ESB and an incentive in relation to Energisation being shared by both parties. However, while the physical Construction element is carried out by ESB, to advance the construction works in many instances require the cooperation of both parties, as land access for both survey and construction, key enablers for these works, are the responsibility of EirGrid.

It is envisaged that the construction incentive will be operated in a similar manner to the current incentive with ESB Networks being required to deliver network development in the most cost effective manner possible.

Commissioning

The commissioning phases of projects are of significant duration. The Companies agree that there is potential scope for optimisation of this process and are willing to enter into a programme to incentivise this optimisation. This service is provided by TAO and must be managed to achieve the maximum benefit to the overall programme of transmission work in any given time period. In theory, at least, the higher number of projects that can be commissioned within an outage window, the greater level of project completion.

Further Incentives

Outage Management

In addition to the incentives outlined above, the Companies have also considered the concept of incentivisation of outage management; this is over and above the outage requirements to enable energisation of projects as set out in the shared incentive on energisation above. ESB currently has an incentive in respect of Return of Scheduled Outages.

The Companies both believe that further refinement can/could be made to the management of outages recognising the importance of outages on out of market constraint costs. However, such an incentive while relevant to the delivery of grid infrastructure has a much wider ambit and is therefore considered to be outside of the scope of this paper but is something the Companies intend to further explore formulating a proposal on.

Tier 2 Incentive: Transmission Strategic Development Incentives

It is proposed that for Transmission Infrastructure development projects of value greater than €40m, that there would be an additional incentive to reflect the strategic importance of these projects in the development of the system.

It is the shared view of the Companies that these projects should have a “Project Life Cycle” incentive to create an end to end optimisation that can span multiple years and cater for wide ranges of potential external delays and interactions.

There are currently 13 of these projects under way at present in various stages of progress, namely:

- CP0500 North Kerry (Knockanure) 220kV Station
- CP0650 Ballyvouskill (Millstreet) 220kV Station
- CP0651 East Kerry NW Cork (Kishkeam) 220kV Station
- CP0688 Moneypoint 400/220/110kV GIS Station
- CP0421 Binbane Letterkenny 100kV Line
- CP0647 Kilpaddoge 220/110kV
- CP0469 + CP0466 North South 400kV Interconnector
- CP0732 Grid Link (Cork Dublin 400kV)
- CP0721 Grid West 400kV
- CP0726 Moneypoint – North Kerry 400kV project
- CP0585 Laois Kilkenny 400kV station & New Lines
- CP0437 Dublin North Fringe 220kV Reinforcement
- CP0800 Srananagh - South Donegal 220kV line – New Line (first phase of RIDP)

The proposal is that each of these projects will be appraised and tracked against a published timeline. Such projects are likely to be significant in scale and are unlikely to follow “standard timelines”. The appropriate timeframe against which to benchmark such a project should be agreed between the parties (ESB and EirGrid) post Capital Approval taking into account the probability distribution of timelines and associated risks. (Assessing Timelines is looked at in further detail in Box 1 below). For such projects already underway the Companies will engage to determine the appropriate timeline within the probability distribution against which delivery and energisation should be measured.

It is proposed that in general the project start point for such projects would be the receipt of EirGrid Capital Approval and that the project is deemed complete on project energisation. The incentive would be allocated on a per annum basis subject to energisation of the agreed number of projects reaching energised stage. The incentive would be designed to recognise and reflect the significant value created with the delivery of such projects.

It is agreed by the Companies that a separate incentive reporting arrangement needs to be developed to place a greater focus on the agreed strategically important and long life cycle projects. It is agreed that these projects will follow the project life cycle as understood but will, due to the more complex nature of the interactions, phased energisation and extended timelines, be difficult to optimise under the existing incentive arrangement.

This more detailed focus on the >€40m projects can be used by the TSO, TAO and CER to manage proactively the interactions and stages of the delivery to optimise overall completion of the projects. The maintenance and development of the existing Incentive mechanism allows at the same time the continuing optimisation of the general Transmission System Development.

Box 1: Assessing Timelines – A Refinement in Approach

1. Currently transmission projects (and the individual milestones to deliver them) are accorded a single point estimate in time for delivery. This estimate is based upon a ‘standard lead time’ (see further below). This is despite the fact that we know that projects (even those of a seemingly similar type) have a significant distribution in the time for their delivery and therefore a ‘standard’ lead-time and a ‘standard’ project are both something of a misnomer. The current single point estimate accords no recognition to this probability distribution of delivery times.
2. The ‘standard lead time’ for new capital works is currently based upon the timeframes as set out in the Infrastructure Agreement for the early interactions between TSO and TAO and for indicative timelines advised by ESB to EirGrid, following discussion between the parties, for the construction and energisation phase. In general a set of relatively ‘benign’ assumptions is employed and it is assumed that no oral hearing will be required, the necessary consents will be granted relatively expediently and that land access for both survey and construction will be relatively straightforward¹.
3. The ‘standard’ lead-time, the single point estimate quoted for the delivery of projects is therefore not a normally distributed point estimate but a largely best case point estimate against a distribution which has both a significant variance and a positive skew.
4. It remains an open question as to how a point estimate, or a range, is/ should be chosen from such a distribution or indeed whether a point estimate alone represents a reasonable measure of the assessment of time, and risk, to deliver transmission projects. If any estimate is to be based upon the ‘standard’ lead-time how should such a ‘standard’ be determined?
5. Ultimately the Companies believe that while for third parties and the public a general timeframe for delivery of the overall project is what is important, that in engaging with the CER a more refined measurement of project delivery timeframe (point estimate or range) and the reasons why such timeframes may be subject to amendment is more appropriate. In particular such timeframes should typically contain not only a point estimate but also risk based information such that a realistic expectation as to the probability distribution from which the timeline for delivery is derived can be established.
6. In assessing performance against that timeline, and the associated probability distribution, cognisance would be taken as to the factors which influenced its outcome and the collective management of those factors by the parties. This contextual information would form part of the capex reporting environment (quarterly RAG reports, bi-annual meetings and annual outturns) put in place in 2011 as part of the CER’s revised capex monitoring regime².

1. Reviewed by ESB for construction timeframes post Project Agreement/ completion of detailed design

2. Process to be determined.

Incentive Design

It is felt that the proposals at outlined in this document recognise the importance in delivering efficiently and aggressively the smaller projects and maintains a real financial incentive to the Companies to focus and prioritise scarce resources appropriately to deliver these programmes. If the CER believes the framework has merit then the Companies would be happy to engage further, both between themselves and with the CER, to develop an incentive pot and payment structure which complements the framework design. The tables below illustrate how the pot could be split and apportioned against each incentive and provided a clear overview of the potential maximum incentive allocation per annum achievable by each party.

Tier 1 Incentives

A proportion of the overall incentive pot will be dedicated to Tier 1 Incentives. This percentage will then be apportioned against each of the incentives.

ESB	%	Shared	%	EirGrid
	XX	Preliminary Design	XX	
			XX	Planning Submission
	XX	Project Agreement	XX	
	XX	Detailed Design	XX	
Construction	XX			
Commissioning	XX			
	XX	Energisation	XX	
Total	XX		XX	Total
Potential €m	XXX		XXX	Potential €m

Tier 2 Incentives

The remaining portion of the overall incentive pot will be dedicated to the Tier 2 Incentive. On achievement of the target the available incentive will be allocated based on pre-determined proportions.

ESB	%	Shared	%	EirGrid
Total	XX		XX	Total
Potential €m	XXXX		XXX	Potential €m

The overall incentive arrangements for each party under each tier should be designed to reflect:

- Mutual benefits to both Companies and the customer from the delivery of infrastructure
- The level of risk (including reputational risk) and influence
- Efficiency in delivery and the level of value add
- Incentives tailored to the Companies ability to absorb/ manage risk



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Annex: Transmission Delivery Incentive Framework 2013³

³ Joint submission made by the Companies on 15th March 2013 (appended separate document)