

Electricity Networks PR5

EirGrid Response to CRU/19/152

30 January 2020



Executive Summary

EirGrid welcome the opportunity to comment on the CRU's PR5 Discussion Paper (CRU/19/152)¹.

As Transmission System Operator (TSO) for Ireland, we are cognisant of our key role in the delivery of a transformed electricity system following the publication of the Climate Action Plan (CAP).² The positive commitment from CRU regarding the delivery of the ambitious decarbonisation targets is welcomed. In recognition of our key role, we have set out a plan which will facilitate the delivery of the relevant decarbonisation targets for the electricity system set out in the CAP.

The current regulatory framework is based on an *ex ante* provision of revenues to EirGrid to carry out its functions. In the preparation of this control, the CRU indicated it was intending to undertake *ex post* review of EirGrid's performance and expenditure. It effectively operates as a series of individual policy targeted instruments reflecting the largely unique characteristics of the EirGrid business. It has served customers well.

If as part of the *ex post* review EirGrid can at best recover its efficiently incurred costs but has the potential for disallowance in their recovery, then on average EirGrid will not recover its costs and will not earn the expected returns assessed using the Capital Asset Pricing Model (CAPM) framework; even more importantly the CAPM framework used to calculate those returns will no longer hold.

EirGrid confirms its view that the basic framework remains fit for purpose, but that there are three areas where it ought to be adapted and refined to take account of its ongoing evolution and challenges for the future.

¹ <https://mk0cruiefjep6wj7niq.kinstacdn.com/wp-content/uploads/2019/12/CRU19152-Discussion-Paper-on-the-Approach-for-Transmission-Distribution-Price-Review-5.pdf>

² <https://www.dccae.gov.ie/en-ie/climate-action/publications/Pages/Climate-Action-Plan.aspx>

1. The *ex ante* framework should be complemented by the introduction of a Monitoring Committee to enable timely progression of projects where there is insufficient certainty for them to be included in the *ex ante*;
2. Additional customer value should be unlocked and the full Enterprise Value within the EirGrid business recognised through an enhanced performance incentive framework, subject to a cap and collar to ensure ongoing impact on customer bills is modest and EirGrid's financeability protected; and
3. A framework to address the asymmetric risk within the regulatory framework and to do so in a manner which best protects customers' interests.

The PR5 period requires significant transformation of the electricity system if we are to be successful in achieving the targets as set out in the CAP. We have submitted a detailed PR5 submission aimed at facilitating the delivery of the 2030 CAP targets along with enhancing our engagement with customers and ensuring the safe and secure operation of the transmission system. Failure in securing adequate funding will result in us not being in the position to facilitate the delivery of the decarbonisation targets as set out in the CAP. EirGrid welcomes further engagement from CRU regarding the EirGrid proposals on the PR5 regulatory framework.

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1. Introduction

EirGrid is the EU certified Transmission System Operator (TSO) in Ireland with responsibility for the operation, maintenance and development of a safe, secure, reliable, economical and efficient electricity transmission system. Through the decisions we make EirGrid, influences the overall costs of generation dispatch, system balancing, network design, development and operations. Notwithstanding our considerable influence on overall electricity costs, the direct costs of our activities account for c. 1% of a typical annual residential electricity bill. It is this 1% that the Commission for Regulation of Utilities (CRU) is considering as part of PR5. This is approximately €11.39 per annum per electricity customer.

If the transformation of Ireland's electricity sector is to be delivered it is vital it is supported and underpinned by an appropriate regulatory framework.

EirGrid has particular characteristics by virtue of its asset light nature. As a result it is exposed to much greater levels of operational gearing than a traditional network based utility and must manage cash flow differentials significantly greater than its underlying tangible Regulatory Asset Base. It is important the regulatory framework supports these unique characteristics.

In addition, by virtue of its role in the industry, EirGrid is able to deliver significantly greater value through the enhanced outputs and outcomes that it can deliver for consumers than simply through the efficient management of its own internal cost base. A well designed regulatory framework will enable these additional benefits to be unlocked and will encourage and incentivise EirGrid to invest in and seek out these additional sources of value.

1.1 New Initiatives for PR5

In our PR5 submission we set out the initiatives that we need to progress for a decarbonised energy system which is ready to meet the ambitious targets set out in the Climate Action Plan.

We also remain focused on our primary role to operate, develop and enhance the grid and market. This is essential if we are to ensure a safe, reliable and cost effective power system.

We understand the importance of keeping the impact on consumer bills to a minimum. We have therefore adopted a meticulous approach to challenging the new initiatives. This has involved extensive challenge at all levels of our organisation to ensure the right initiatives have been brought forward at the lowest possible costs for our customers. Furthermore we have retained KPMG as independent advisors to assist in this challenge process.

We are part of the wider EirGrid Group and therefore benefit from economies of scale as we share resources and undertake joint procurement initiatives with the Northern Ireland TSO. EirGrid contributes to the overall cost of new initiatives in line with the EirGrid Group Cost Allocation policy. This results in Irish consumers paying less for outcomes and outputs than would otherwise be the case.

These initiatives are linked to our new strategy and are summarised in below. They will deliver the following benefits:

Sustainability and Decarbonisation

- Establish effective processes and tools to operate a power system where the majority of the power comes from non-synchronous intermittent sources;
- Strengthen data and communications networks to secure better access to real-time data and the means to analyse it; and
- Promote more informed choices through an improved approach to investment appraisal and improved engagement with internal and external stakeholders.

Operate, Enhance and Develop the Grid and Market

- Deliver efficient, economic operation of the power grid for the benefit of all customers in Ireland and deliver value for money;

- Improve the resilience of the operation of the power system in Ireland;
- Secure the operation of the grid (in partnership with ESB Networks) in a manner, which is capable of addressing the latest physical and cyber security threats; and
- Meet the core remit of the TSO in a way which complies with changes to the regulatory and legal environment, adhering to emerging changes in industry standards and best practice.

Engage for Better Outcomes for All

- Continue to transform our engagement with customers, communities and the public, and build world class stakeholder relationships; and
- Improve the connection process for new and existing customers.

The total cost of these initiatives is less than €1.60 per year on the average annual domestic customer bill. This is however offset through reductions in costs elsewhere and growing overall energy demand. This will result in overall unit prices falling during the PR5 period.

2. CRU Discussion Questions

2.1.1 CRU Question 1

The CRU seeks stakeholders' views on the CRU's approach to PR5 and in particular stakeholders' views on issues the CRU should consider in order to achieve the objectives set out in this section.

2.1.1.1 EirGrid Response

EirGrid is cognisant of our key role following the publication of the CAP and welcome the positive commitment from CRU regarding the delivery of the ambitious decarbonisation targets.

The challenge to increase renewables penetration to levels exceeding 95% is considerable and without precedence. EirGrid recognise that an enhanced approach will be required to deliver this objective. Our PR5 submission is one that is based on a highly structured and transparent programme management type approach, leveraging appropriate partnerships with world-leading organisations, employing strong collaborative engagement structures with market participants, maximising the deployment of proven and innovative technologies and finally ensuring that the preferred solutions are demonstrably cost effective and efficient.

In terms of increasing efficiency and protecting customers, we recognise and embrace our obligation to improve the efficiency and effectiveness of our performance in the interest of customers and consumers. As part of our PR5 submission, we also proposed a "Benefit Sharing" incentive which if approved by the CRU will deliver improved outcomes to all customers and deliver significant improvements. We also recognise that we must of course be cognisant of our own costs and we have applied rigorous challenges on costs in advance of our submission to CRU.

In terms of resolving local security of supply, maintaining a secure supply of electricity for both today's and tomorrow's customers is one of EirGrid's core functions. We have actively engaged with CRU and implemented innovative measures to address security of supply in the greater Dublin region. As part of PR5, we have proposed significant reinforcement projects to address the security of supply issue affecting Dublin. These projects are at different stages of development and are being progressed in line with our own transformed and improved grid development process putting community and stakeholder inputs and views at the very heart of what we do; whilst we have achieved a lot in this area, this too is a continuous journey of improvement.

We share the CRU's vision of delivering a low carbon future, of increasing efficiency and protecting customers and in delivering local security of supply. To enable this we require an appropriately funded and resourced TSO which is enabled to deliver on Ireland's ambition. Equally, an appropriate regulatory framework which supports the unique nature of the TSO business in a financeable fashion will be key to delivering on our ambition. Key also is recognition that EirGrid is largely a human and intellectual capital business.

We note that the delivery of the ambitious targets will require additional revenue requirements over and beyond that provided for in previous Price Review requests.

In our PR5 submission, we examined the impact of EirGrid's OpEx and Non-Network CapEx to the average domestic customer bills, over the PR5 period. The model shows that the average cost to consumers for the activities undertaken by EirGrid for PR4 was €2.71/MWh. Over the PR5 period the average cost of EirGrid to electricity customers is forecast to average €2.64/MWh, which equates to a 3% reduction in comparison to EirGrid's cost to electricity customers during PR4.

2.1.2 CRU Question 2

What performance targets should the CRU consider for EirGrid and ESBN?

2.1.2.1 EirGrid Response

EirGrid's current regulatory framework has in place a number of performance incentives or KPIs. EirGrid continues to believe that this framework can be enhanced further to benefit customers more and if calibrated appropriately can at the same time address the outstanding issues of remuneration for Enterprise Value whilst at the same time ensuring consumers continue to benefit from EirGrid's actions. In developing this enhanced benefit share framework, EirGrid has drawn on the report prepared by its independent economic consultants and as part of our PR5 submission.

To identify the areas of value potential in its activities EirGrid applied a bottom up approach facilitated by KPMG through a number of workshops with EirGrid managers and staff. This started from the EirGrid activities, assessed the value that can be created for customers in these activities when we go above and beyond what is expected and delivered a list of benefit levers that, when incentivised, can provide a powerful benefit sharing mechanism.

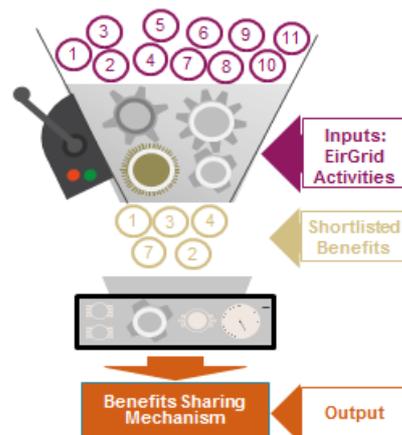


Figure 1 Process to identify areas of EirGrid Enhanced Benefit Share

The process is summarised below.

Stage 1: High level analysis mapping the activities to the quadrants in the benefit sharing framework based on effort and value potential. "Filtering out" activities

where the trade-off between additional cost and benefit does not justify the incremental effort.

Stage 2: Identify value areas that are most impacted by the shortlisted EirGrid activities. Define long list of metrics and to measure the value created by EirGrid activities for customers.

Mechanism design: The selected benefit areas move on to the next stage where the design of benefit sharing mechanism for each will be considered:

- Constraint 1: value accreted > value of the incentive payment; and
- Constraint 2: value of benefit sharing payment > cost of investment.

As a result of this involved and process driven approach, EirGrid narrowed down the areas where greatest value is expected to be deliverable:

Decarbonisation: The decarbonisation of the electricity system is of great importance to customers and a vital component of the energy transition.

Grid Security: A secure and reliable electricity network that is fit for the future of the electricity systems needs is vital to customers and market participants.

Cost: Ensuring customers get value for money and benefit from cost efficiency should be paramount. However the costs for customers should be viewed holistically.

It was evident when undertaking the assessment process that EirGrid's value to customers often comes not only from what we do but by how we do it. Therefore, in addition to the three value areas above, a fourth component needs to be at the centre of our framework:

Performance: Whilst delivering on decarbonisation, grid security and cost, EirGrid will also need to meet the expectations of its stakeholders. Creating a transparent information sharing environment accompanied by the timely completion of our tasks will create frictionless and efficient working relationships between the parties acting in the market.

The inclusion of a specific performance element also helped balance the mechanistic and evaluative based approaches.

In terms of the overall design of the incentive package EirGrid remains of the view that a balance is appropriate; for example between a wholly evaluative or wholly mechanistic approach, or between fully discrete (narrower measures more directly in EirGrid's control) or fully system wide activities (wider measures over which EirGrid has less direct influence and may involve other industry participants).

EirGrid is however clear that it is important that the package is a holistic one and that application of a small number of disparate incentives would be much less likely to deliver benefits and would have the potential to give rise to perverse incentives. EirGrid is also clear that given the need to invest discretionary capital in achieving the desired outputs and outcomes that greater application of financial incentives would be expected to be more beneficial.

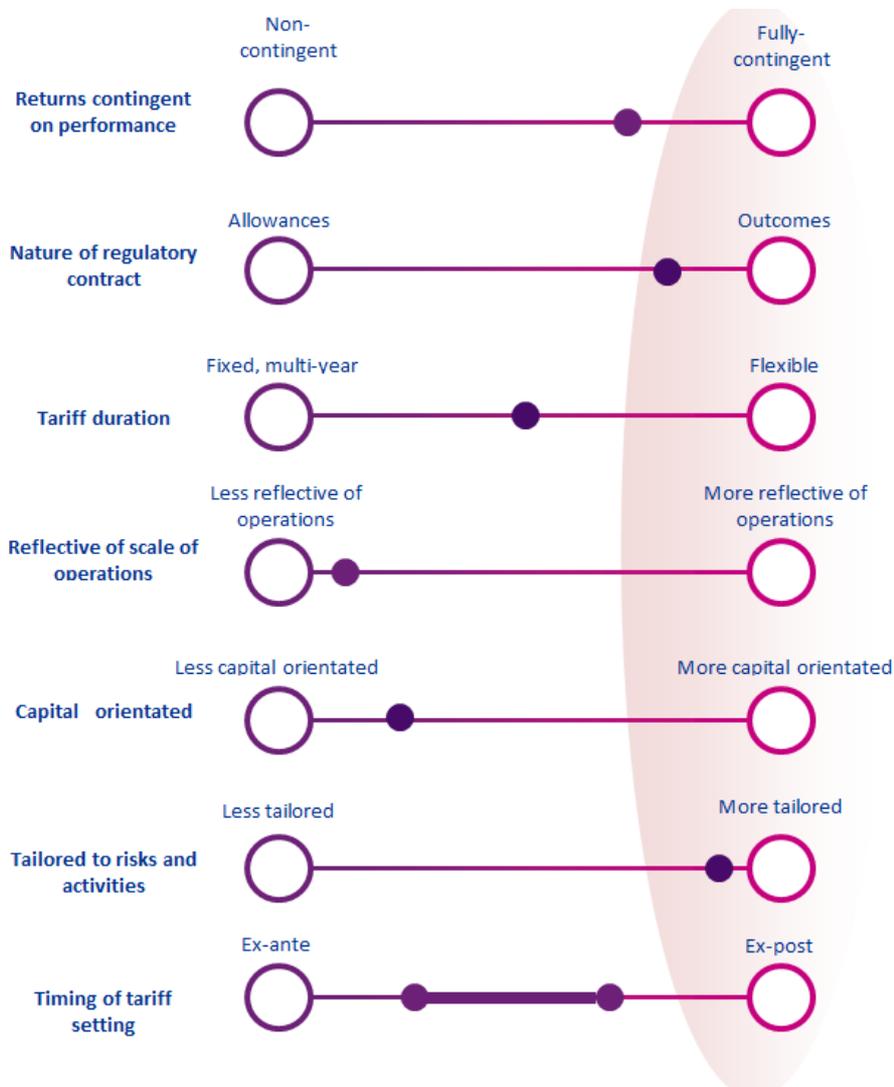


Figure 2 Balance of Framework Considerations

EirGrid therefore believes that a framework based on these benefit components creates a holistic package bringing together all the things that are important to consumers. These benefit components are in natural tension to each other so by bolting all of the components together in the framework we will be incentivised to look at the benefits to customers as a whole rather than focusing on one component to the detriment of another.

Regulatory incentive design incentive packages have often been an additional element to the overall regulatory framework. It is EirGrid's intention with this proposed framework to build the incentives into the very foundation of the regulatory design.

As a result, this changes the price control in an important way to one where every decision made is about doing the right thing for customers. In so doing, and in applying a holistic package, it complements the revenue cap framework. Creating value for customers is no longer an optional extra but integral to the overall framework.

EirGrid is proposing using a combination of quantitative and qualitative assessments to determine the additional value to customers. The assessment of decarbonisation, grid security and costs should be through quantitative assessment, through a defined formula setting out the measure and the counterfactual to calculate the value we have delivered.

The assessment of EirGrid's overall performance could be through qualitative assessment by an independent panel of how each test area meet the qualitative target of 'what good looks like'. Metrics can also be evaluated with a combination of quantitative and qualitative assessments, for example, where the assessment is initially formulaic a qualitative approach can be used to account for changing circumstances and to ensure the target is still appropriate.

If the enhanced benefit share is further aligned in terms of inputs and outputs then it ensures EirGrid is always and everywhere incentivised through the regulatory framework to make the most appropriate choices and to do the right thing.

Whilst EirGrid is not necessarily suggesting the benefit sharing factor should be a common one this level of divergence has the potential for significant value which could otherwise be unlocked for customers to be left on the table. For example, under today's regulatory framework it would not pay EirGrid to invest €100,000 of discretionary capital to unlock consumer savings in terms of DBC of €20m³. This ultimately doesn't feel right. As a result EirGrid is proposing a closer alignment of benefit sharing factors through this process and as a result a greater focus on outputs and outcomes.

Through post submission engagement with CRU and their advisors were we requested to specific the proposed metrics and targets for each year of the PR5 period. EirGrid believe that a balance should be struck when choosing metrics to incentivise. EirGrid has committed to providing these to CRU by mid-February.

Through the proposed value sharing framework we are working to deliver the best result for customers.

When calibrating the package the incentive levels will need to be meaningful and powerful whilst also ensuring financeability. A floor to the overall package is required to ensure that there is a limit to downside exposure and is important to ensure the company is financeable.

A cap to the overall package is required to ensure that there is a limit to the level of exposure for customers. This cap however needs to be meaningful enough for EirGrid to be encouraged to take on the high value adding activities for customers.

As the framework comprises of four distinct areas, decarbonisation, grid stability, cost and performance, each of these areas will need to be individually meaningful as well. To further enable this, the sum of the individual caps and floors for the areas are greater than the total cap and floor on the overall package.

It is important that this framework works for both EirGrid and CRU and is supported by the wider industry. EirGrid will submit detailed metrics to the CRU in mid-February for consideration in advance of the CRU's PR5 consultation.

2.1.3 CRU Question 4

The CRU seeks stakeholders' comments on the PR5 regulatory framework, the principles and the future regulatory framework questions set out above?

2.1.3.1 EirGrid Response

As part of our PR5 submission we sought independent economic advice to assist in the performance of a review in examining the existing regulatory framework.

This review outlined that while the framework is in general robust and well-designed that customers would benefit from a number of modest changes to the existing framework.

These proposed changes include:

- An **Enhanced Benefit Sharing** framework which ensures customers see greater benefits through EirGrid being incentivised to deliver to stretching targets;
- A **Monitoring Committee** to deal with uncertainty and ensure customers are protected from the equally damaging risks of value adding projects not progressing or excessive allowances being provided for;
- The explicit introduction of **Real Price Effects** to help ensure those elements which EirGrid proposes be delivered, and with which CRU agrees, can actually be delivered; and
- Finally the introduction of a premium for **Asymmetric Risk** which enables the CRU to undertake a review of EirGrid's costs *ex post* without compromising its underlying financeability and protects the integrity of the regulatory framework.

Delivering Outcomes and Outputs

Our approach to this price control is focused on outputs and outcomes. The aim of the Enhanced Benefit Sharing framework proposed by us is to enhance the price control in an important way, to one where every decision made is about doing the right thing and unlocking value to the benefit of Irish customers. It also looks at the appropriate trade-off between input and output costs. This is outlined further in our response to CRU question 2.

The purpose of the Monitoring Committee is to review projects that have a high degree of uncertainty. This will prevent EirGrid from being exposed to windfall gain or losses, however will allow essential projects to proceed in a timely basis. We propose that CRU, the Department of Climate Change, Communications and the Environment and EirGrid are on this monitoring committee and that it meets twice a year. We believe that the introduction of the Monitoring Committee will provide the CRU the appropriate level of oversight and provide visibility of the projects that EirGrid is proposing to deliver.

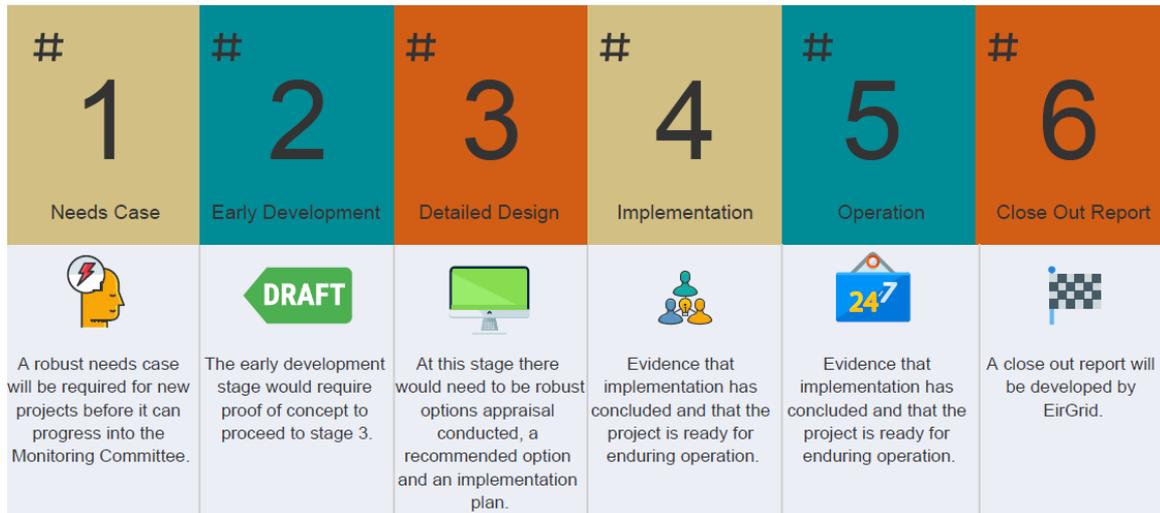


Figure 3 Monitoring Committee

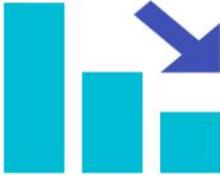
We have retained the existing regulatory framework for the remuneration of capital. Overall, under the proposals in this submission we will see lower returns on capital employed in the forthcoming period than for the current one. This delivers further savings and value to customers. We have sought adjustments to the framework to ensure that there is symmetry in its application. This ensures customers can continue to benefit from regulatory oversight of EirGrid’s activities whilst at the same time EirGrid can continue to source finance to carry out its activities.



The Weighted Average Cost of Capital (WACC) that we are proposing is 4.00%, CIPH indexed.

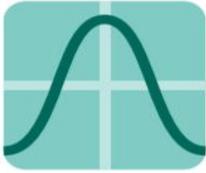
This is a reduction of 1 percentage point (or 20%) from the WACC in PR4.

This reduction in WACC will help deliver cost savings to customers.



Comparing our total return on capital employed using the parameters set out by EirGrid in this submission, to those within the current price control, our required return on capital employed is 13.6%, or approximately €1.5m, per annum lower.

This will reduce the impact on customer bills.



A framework which ensures symmetry in terms of our underlying/expected returns. This will protect the integrity of our regulatory framework and ensure that it is financeable.

Figure 4 Remuneration of Capital

2.1.4 CRU Question 5

Do you have any views on what issues the CRU should consider to ensure the regulatory framework delivers on the principles and questions set out in this section? Also, do you have views on what the CRU should consider when reviewing responses to our future regulatory framework questions?

2.1.4.1 EirGrid Response

See 2.1.3.1 above.

2.1.5 CRU Question 6

The CRU seeks stakeholders' views on retaining PR4 methodologies, set out in this section, for PR5.

2.1.5.1 EirGrid Response

The current regulatory framework is based on an *ex ante* provision of revenues to EirGrid to carry out its functions. In the preparation of this control the CRU indicated it was intending to undertake *ex post* review of EirGrid's performance and expenditure.

If as part of the *ex post* review EirGrid can at best recover its efficiently incurred costs but has the potential for disallowance in their recovery, then on average EirGrid will not recover its costs and will not earn the expected returns assessed using the Capital Asset Pricing Model (CAPM) framework; even more importantly the CAPM framework used to calculate those returns will no longer hold.

EirGrid asked its independent economic advisors to analyse EirGrid's exposure to asymmetric risk in PR5. Our advisors point to the discussions of asymmetry in the SONI appeal to the Competition and Markets Authority (CMA). Effectively due to the nature of the SONI framework on network pre-construction projects, which is almost identical to that applied by the CRU to EirGrid, the underlying distribution was not only asymmetric but in fact fully truncated. The effect of this truncated distribution, when combined with SONI's other asset light characteristics which are again akin to EirGrid's, meant the CMA ultimately determined SONI should be compensated for the asymmetry present through application of a margin to the costs concerned of 3%.

The 3% was calibrated by CMA based on that which it felt to be reasonable, including by reference to CRU's previous disallowance of EirGrid's costs in Price Review 4. The uplift was limited to 3% on the basis that Utility Regulator made clear any such disallowance was limited to Demonstrably Inefficient and Wasteful Expenditure (DIWE) and that clear guidance was published by Utility Regulator on its application.

This truncated distribution applies to early stage network project costs, to significant projects such as I-SEM delivery which was advanced under the Agreed Approach Document (AAD) and to any other areas where the *ex post* review provides that EirGrid can at best recover its costs.

EirGrid understands the CRU's desire to reserve the right to review costs *ex post* in customers' interests. It also reflects the CRU's practice in both setting and during PR4 and the CRU's stated intention as part of this PR5 process. This in itself may provide a level of protection to customers through the regulatory framework. As a result however it passes a level of risk from customers to the regulated entity concerning cost recovery. It is therefore appropriate customers compensate or pay for that transfer of risk.

The ultimate scale of the necessary adjustment for the asymmetry this creates however depends somewhat on CRU's own actions and the clarity of the guidance and decision making it employs. The greater the discretion afforded the CRU to apply asymmetric adjustments to EirGrid's recovery, the greater the necessary asymmetric risk premium. This premium can be minimised by being clear that any *ex post* adjustment is limited simply to finding of DIWE; it can be further reduced in the case that the CRU consults on and publishes clear DIWE guidance.

In terms of adjustment for this PR5 period this could either take the form of:

- Application of an asymmetric risk premium of 6% to both early stage network projects and non-network capital projects; or
- Application of an asymmetric risk premium of 3% to both early stage network projects and non-network capital projects and publication of a paper of clear guidance as to the CRU's proposed application of such review and clear confirmation that any such review shall be limited to DIWE.

EirGrid proposes the second approach and that a lower premium is applied in tandem with the publication by the CRU of clear guidance.

3. Conclusion

The regulatory framework for EirGrid has been developed over a number of price control cycles. It effectively operates as a series of individual policy targeted instruments reflecting the largely unique characteristics of the EirGrid business. It has served customers well.

EirGrid confirms its view that the basic framework remains fit for purpose, but that there are 3 areas where it ought to be adapted and refined to take account of its ongoing evolution and challenges for the future.

1. The *ex ante* framework should be complemented by the introduction of a Monitoring Committee to enable timely progression of projects where there is insufficient certainty for them to be included in the *ex ante*;
2. Additional customer value should be unlocked and the full Enterprise Value within the EirGrid business recognised through an enhanced performance incentive framework, subject to a cap and collar to ensure ongoing impact on customer bills is modest and EirGrid's financeability protected; and
3. A framework to address the asymmetric risk within the regulatory framework and to do so in a manner which best protects customers' interests.

As outlined earlier, the PR5 period requires significant transformation of the electricity system if we are to be successful in achieving the targets as set out in the CAP. We have submitted a detailed PR5 submission aimed at facilitating the delivery of the 2030 CAP targets along with enhancing our engagement with customers and ensuring the safe and secure operation of the transmission system. Failure in securing adequate funding will result in us not being in the position to facilitate the delivery of the decarbonisation targets as set out in the CAP. EirGrid welcomes further engagement from CRU regarding the EirGrid proposals on the PR5 regulatory framework.