

*Commission for Regulation of Utilities (CRU)*

## **Commission for Regulation of Utilities (CRU) Price Review Six (PR6) – Consultation Response**

03/07/25

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### **About Trifecta Ireland**

Trifecta Ireland is an independent, non-profit initiative working to accelerate Ireland's transition to a clean, secure, and affordable energy future.

We provide bold, evidence-informed leadership to address systemic failures in the energy sector. Grounded in global systems change theory, Trifecta identifies what enables successful large-scale transformations and applies these principles to Ireland's unique energy context.

Our niche is connecting global insight with local action. We bring together stakeholders across government, industry, science, and civil society to co-design and drive integrated, system-wide solutions. By fostering collaboration and aligning incentives, we aim to unlock opportunities and remove barriers to Ireland's energy transformation.

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Trifecta Ireland would like to thank CRU for the opportunity to provide its comments to the consultation on Price Review Six (PR6).

We welcome the proposed increase in funding by 86% to €14 bn, compared to PR5 and the flexible approach allowing funding to adjust as projects develop in return for accountability and transparency. Significant investment in our grid infrastructure, though overdue, is critical to ensure a modern, fit for purpose and resilient network, and an optimization of Ireland's uniquely abundant natural resources. The proposed investment goes some way towards that.

Trifecta Ireland appreciates that the PR6 proposal is based on a thorough Network Needs Assessment that reflects national and EU policies, targets and directives, historic trends in demand and generation in Ireland. Notwithstanding this, it should be acknowledged that historic trends may ill prepare us to forecast future needs in an increasingly digital electrified world, and as such Trifecta Ireland would support anticipatory investment that errs on the side of over-capacity.

Trifecta appreciates the five overall strategic objectives of the Irish Network Development:

- Increased Network Capacity: Facilitate growth in connections to meet rising demand.
- Priority Projects: Unlock significant additional generation capacity, focusing on renewable sources.
- Offshore Wind Infrastructure: Develop new capabilities to support offshore wind energy projects.
- Electrification Support: Enable infrastructure for electric vehicles and heat pumps.
- Resilience and Smart Grid: Invest in storm-resilient and smarter grid technologies.

In particular, we find the PR6 support to accelerate offshore wind, enhance grid and storage, and grid modernisation, particularly helpful for Ireland to achieve its energy and climate targets. To support delivery at pace and maximise value for the consumer, we believe PR6 should more strongly emphasise outcome-focused incentives that reward timely energisation, reduced dispatch down, and integration of low-carbon generation. Regulatory incentives should drive not just infrastructure delivery, but measurable system performance- particularly in smart grid rollout, curtailment

reduction, and cost efficiency. Increased public transparency through regular reporting against delivery milestones and system metrics would also strengthen accountability.

We encourage CRU to adopt a framework that rewards innovation, anticipatory investment, and more efficient use of the existing network. This includes reducing barriers to technologies already proven in peer systems abroad, as well as rethinking the balance of risk between system operators, developers and end users to ensure that long-term costs— particularly operational and constraint-related—are fairly managed and clearly communicated on consumer bills.

Given the appropriate focus on the consumer, an ongoing consideration of affordability and competitiveness drives the following recommendations and observations for the CRU's consideration. Trifecta Ireland notes that Irish consumers are exposed to some of the most expensive energy in the world, and Energycloud Ireland reports 550,000 households are impacted by fuel poverty. Businesses are similarly impacted.

### **Cost of Capital and Financing**

Trifecta Ireland recommends that all possible avenues to reduce the WACC assumed for EirGrid and ESBN are explored and leveraged as appropriate. Such measures might include but are not limited to: utilizing government lending rates; issuance of bonds; commercial sustainable finance solutions; tax and other mechanisms supported under European Clean Industrial Deal such as those highlighted by PwC in their insight series published April 10th 2025 including accelerated depreciation for clean tech assets, and relevant tax credits<sup>1</sup> ; use of funding for targeted measures for vulnerable people and groups under the Social Climate Plan; etc.

Further, consideration should be given to a reduction of taxation levels on electricity to offset the net cost to consumers and taxpayers as encouraged by the EU.

### **Standardisation of Designs – “LEGO” principles**

Trifecta welcomes the CRU's recognition of the importance of new substation investment in PR6, including the commitment to fund 27 new 110kV substations as part of enhancing network resilience and capacity. However, we believe there are important related issues that remain insufficiently addressed in the Draft Determination - specifically the potential for cost reduction through standardisation of design

particularly for substations as demonstrated in other countries, the impact of contestable versus non-contestable connection arrangements, and the scope for innovative grid technologies to further improve efficiency and delivery.

Stakeholder evidence suggests a material cost differential between Irish and international practice when building assets to enable renewable generation, with one 5MW solar project reporting being quoted a 5-10X cost differential for the same outcome in an Irish project as compared with the same project in Denmark. This anecdotal example is in spite of the findings on ESN unit costs in comparison to the WSP benchmark in the report produced by GHD as part of PR6.

Trifecta Ireland suggests that that this could merit further investigation. Such a divergence could be due to a range of factors, including the level of specification of projects such as substations in Ireland: it is not clear to us that this would necessarily show up in the benchmarking and cost comparison exercise as performed, which seems to be based on the unit cost of components, rather than the total cost for a particular outcome for the customer. It also appears to focus on CAPEX rather than TOTEX – or total cost of ownership and use over the lifetime: since OPEX is typically passed onto consumers.

At this point it is worth commenting on the more fundamental points: the structural lack of competitive tension in the system given ESN is a state owned monopoly; the CAPEX-based revenue models common to DSO' and TSO's which have misaligned incentives versus delivering value to customers in particular in our increasingly digital world; that OPEX costs are typically passed through to consumers, in a nontransparent manner: rolled up into a single line item system charge on an electricity bill; and few consumers are equipped to technically challenge the state body.

During an interview with world-leading expert on delivering mega projects, Dr. Bent Flyvbjerg explained how building wind turbines in Denmark went from several years to a single day:

*"By shifting from bespoke construction to modular fabrication, you move from construction sites to assembly sites. The more you can eliminate construction sites, the faster and more effective we'll be... Modularity is a proven way to reduce complexity."*

It is unclear from the material provided whether CRU or its consultants have explicitly considered the scope for standardisation as a cost-reduction and time-saving measure. We recommend that CRU explicitly assess the opportunities for standardisation of substation design and set out how this could be incentivized within PR6. For further information and examples of standardisation in practice, the CRU might refer to an

interview here with industrial power developer Jeremy Kent, CEO of One Power about experiences in the US.

### **Contestable vs Non-Contestable Connections**

We note that SI226 (2009) provides generators with contestable options to construct all or part of their grid connection as an alternative. However, in practice ESB Networks' requirement that certain equipment be purchased from nominated suppliers creates monopoly positions, with suppliers serving a captive market. Without standardized designs the requirement in that case is to also procure and fund spare parts – rather than avail of a common bank of strategic spare parts procured for standard design. The net result is a limit to competitive pressure, resulting in inflated costs which are ultimately passed on as higher charges for electricity to the consumer and the undermining of the intended benefit of the contestable route. We encourage CRU to examine whether PR6 sufficiently addresses these structural barriers to competition. Resolving this issue would also unlock human resource constraints where alternative experts can be contracted.

### **Innovative Grid Technologies**

Given the challenges and delays associated with planning new overhead power lines, grid enhancing technologies such as dynamic line rating, flow controls, advanced monitoring, sensors and storage, are desperately needed as they can unlock more capacity from our existing grids, support the build-out of wind and solar, and increase resilience. Common for these innovative grid technologies are that they are commercially available and can be installed and in operation in a matter of months, which is also acknowledged in the CRU's Network Needs Assessment which forms the basis for the PR6 proposals.

The Needs Assessment recognises that grid capacity can be optimized through innovation:

*“The investments provide an opportunity to deploy advanced grid management technologies and innovative solutions. This includes the use of flexibility services, energy storage, and smart grid technologies to enhance the efficiency and reliability of the electricity network. Embracing innovation can lead to more resilient and adaptable energy systems, capable of meeting future challenges.”*

Trifecta Ireland acknowledges that the proposed Agile Investment and Monitoring Framework may provide an element of incentive and reduce regulatory lag in accelerating innovative grid technologies. However, we do not believe that the proposed PR6 provides sufficient incentives or sends strong enough signals of urgency to Eirgrid and ESB Networks in accelerating the buildout of smart grids and innovation.

Rather than embedding innovative grid technologies in the €14.1–18.1B total funding package, Trifecta Ireland would have liked to see performance-linked smart grid incentives and a dedicated innovation / Flexibility Fund introduced. This could, for example be modelled on Britain’s Ofgem, which runs the Strategic Innovation Fund (SIF) in partnership with UKRI, supporting early-stage smart grid/digitalisation projects.

Fast-track cost recovery could also serve as a possible incentive. Benchmarking Eirgrid and ESB Networks’s use of Innovative Grid Technologies against peer TSOs abroad, including Britain, Denmark and Germany, should also be considered.

The future increase in electricity demand, combined with increasing shares of variable wind and solar and challenges of building new grids fast enough, necessitates that Ireland start moving from a general funding framework (PR6) towards a performance and innovation-driven model that explicitly rewards the deployment of smart grid technologies.

In this context, it is important to stress that most smart grid technologies have already been tried and tested and are operating in other jurisdictions outside Ireland. There is a tendency for system operators to require a full demonstration of technologies before they are applied to their grid. This is often regardless of whether the innovative technology in question has already been demonstrated many times before in other jurisdictions and have been operating successfully in other grids.

For most of the commercially and technically mature grid enhancing technologies, ESB Networks and Eirgrid could save valuable time and cost, by applying Hardware-in-the-Loop testing, connecting the hardware to a real-time simulated environment.

### **Tariff effects**

The +8% (domestic) and +7% (small non-domestic) figures in table 5 are tariff impact estimates between the last full year of PR5 (2024/25) and the last full year of PR6 (2029/30). It indicates that the tariff consequence of increasing investments by app. 85% to €14.1–18.1bn is a 7-8% rise in network charges, or about a 2% increase in the overall bill.

PR6 does not explicitly show the cost of not investing smartly, e.g. in innovative grid technologies, or the full impact on tariffs of using the existing grid more efficiently or 7 deferring / avoiding traditional network expansion. It would have been a useful signal to consumers if reference had been made to these positive long-term effects in PR6.

Furthermore, Trifecta Ireland suggests that the current lack of transparency of all the costs that make up the “system charge” on the electricity bill is unhelpful and suggests that a breakdown should be provided for consumers. This should be fully aligned with the CRU’s objectives towards transparency and the treatment of consumers.