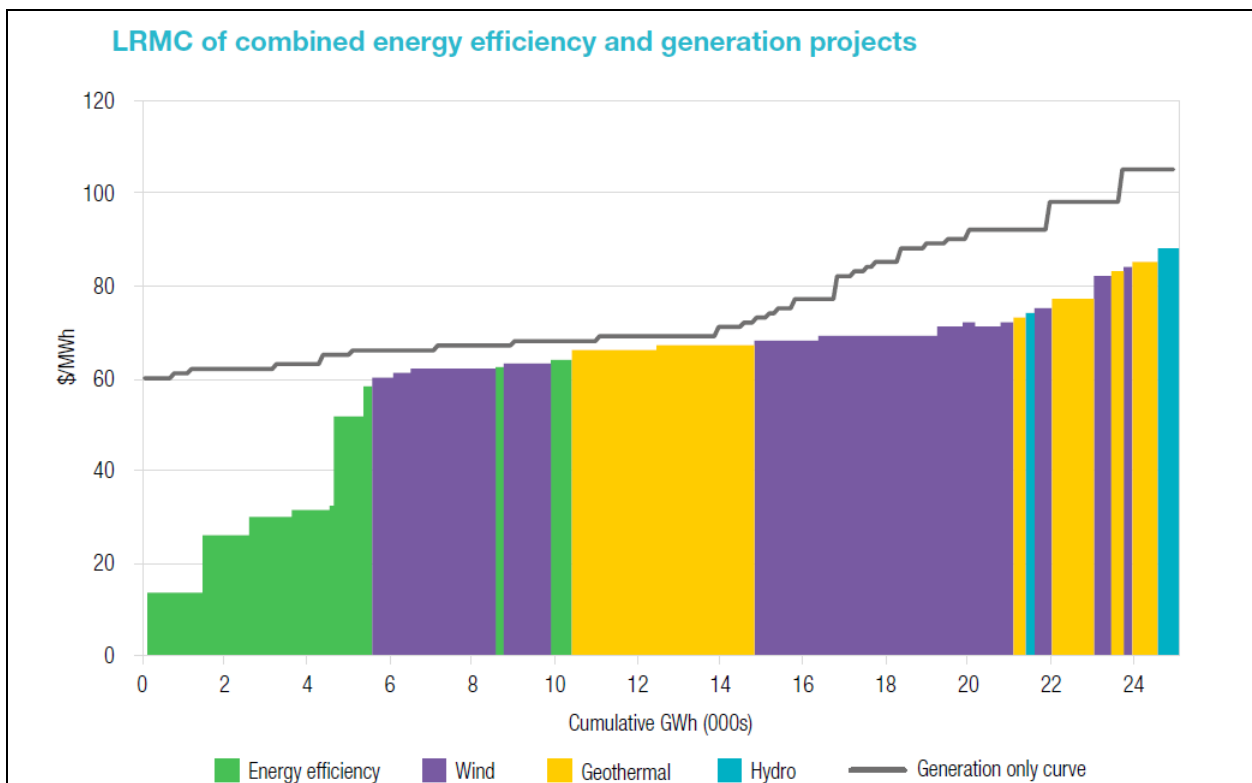


27 July 2024

ECOBULB[®]

Cross Submission on EDB DPP4 Draft Decision



New Zealand has an abundant energy efficiency opportunity equating to about 15 percent of New Zealand’s electricity generation, delivered at less cost than building new renewable generation capacity. Source: “Energy Efficiency First, The Electricity Story”, Overview Report, EECA, July 2019.

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1. SUMMARY OF OUR CROSS SUBMISSION

The Commerce Commission is seeking cross submissions on its 29 May 2024 “Default price-quality paths for electricity distribution businesses from 1 April 2025 – Draft decision”.

It is with pleasure that Ecobulb Limited submits its cross submission.

We welcome the opportunity to discuss our cross submission in person and/or provide further information that might be required by the Commission. Contact details are:

Dr Chris Mardon, Managing Director, Ecobulb Limited
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Ecobulb’s July 2 submission¹ provided four recommendations to the Commission on its DPP4 Final Determination for Electricity Distribution Businesses. These related to the Commission’s Innovation and Non-Traditional Solutions Allowance (INTSA). After reviewing other organisations’ submissions on the DPP4 Draft Decision, Ecobulb retains these four recommendations and adds an additional two recommendations.

Ecobulb’s updated recommendations to the Commission on the DPP4 Final Determination are:

- 1. That the more ambitious option – including maximum permissible INTSA² expenditure of up to 5% of MAR – becomes part of the Commission’s DPP4 Final Determination. Combined with recommendation two, a 5% allowance** would strongly incentivise non-exempt EDBs to undertake larger and more ambitious energy efficiency initiatives, which would **reduce** consumer power bills.
- 2. At least half of the (5% of MAR) “INTSA³” spending should be ring fenced for energy efficiency projects.** This avoids the risk of non-exempt EDBs spending all their INTSA on high-tech devices and systems to aggregate load and control devices such as batteries to reduce system peaks – rather than on energy efficiency.
- 3. Up to 100% of project expenditure be recoverable for energy efficiency INTSA projects.** This is consistent with Commission’s outline in Paragraph D126.2 of the Commission’s Reasons Paper.
- 4. Allow investment in energy efficiency devices in homes and businesses to replace less efficient devices (which defer CAPEX) to be included in non-exempt EDBs Regulated Asset Bases.** Our July 2 submission provided a detailed justification on why EBD-installed, behind-the-meter solutions like residential batteries and LED light bulbs qualify for Section 54Q Incentives and inclusion in the Regulated Asset Base.
- 5. (Added Recommendation 1) Replace the Commission’s proposed “riskier than business as usual” criteria for a project to be eligible for INTSA funding with the replacement criteria outlined in the Electricity Networks Aotearoa submission.**
- 6. (Added Recommendation 2) That the Commission clarifies what energy efficiency products and services are eligible for the DPP4 INSTA through references to reputable international lists, such as the Victorian Energy Upgrades list.**

¹ [Ecobulb-Submission-on-EDB-DPP4-draft-decisions-2-July-2024.pdf \(comcom.govt.nz\)](#)

² The “Innovation and Non-Traditional Solutions Allowance” in the Commerce Commission’s DPP4 Draft Decision.

2. SUPPORT FOR HIGHER INTSA AND INCENTIVISING ENERGY EFFICIENCY

Ecobulb has reviewed submissions to the Commerce Commission’s “Default price-quality paths for electricity distribution businesses from 1 April 2025 – Draft decision” dated May 29, 2024.

Table 1 is Ecobulb’s assessment of each submitters’ support for INTSA and submitted changes to INTSA.

Table 1: Summary of DPP4 Draft Decision Submitters Support for INTSA

ORGANISATION	INTSA	> 0.6% MAR	5% MAR	Ring Fence	Recover 100%	On RAB
Alpine Energy						
Aurora Energy						
Business Energy Council						
EA Networks						
Ecobulb						
EECA						
ENA						
Energy Trusts NZ						
ERANZ						
Flick Electric						
Fonterra						
Horizon Energy						
King Country Trust						
Major Electricity Users Group						
Mercury Energy						
Orion						
Powerco						
Powerswitch Consumer NZ						
Rewiring Aotearoa						
Solar Zero						
Trust Horizon						
Unison Networks						
Vector						
Wellington Electricity						
TOTAL	24	13	8	3	3	3

2.1 24 submitters supported the establishment of INTSA

There was widespread support for the Commerce Commission to establish an Innovation and Non-Traditional Solutions Allowance.

Table 1 shows that 24 submitters supported INTSA. These included non-exempt EDBs, electricity retailers, energy trusts, industry bodies for EDBs, electricity retailers and energy trusts, business groups, consumer groups, industry associations and energy efficiency providers.

2.2 Thirteen submitters proposed a maximum permissible INTSA greater than 0.6% of MAR

Thirteen of the 24 submitters supported a maximum permissible INTSA expenditure greater than 0.6% of MAR, as listed under the heading “>0.6% MAR” in Table 1. This group included:

1. Non-exempt EDBs Alpine Energy, Orion and Powerco.
2. The Energy Efficiency and Conservation Authority.
3. The Business Energy Council, the Major Electricity Users Group and Consumer New Zealand.
4. The Energy Trusts of New Zealand, the King Country Trust and Trust Horizon.
5. Ecobulb, Rewiring Aotearoa and Solar Zero.

Business Energy Council submitted that:

“We are concerned that the innovation allowance is low compared to the significant need for non-network solutions in the face of large demand for capex. The innovation allowance cap must provide enough room to invest in non-network solutions and unleash innovation. We believe it would be beneficial for the Commission to increase the cap.”

The Energy Efficiency and Conservation Authority echoed a similar sentiment, submitting that:

“We would like to see a strong push to incentivise and prioritise demand management and energy efficiency, and see the INTAA playing an important role in this. However, we are concerned that the innovation allowance cap of 0.6% is small and will be insufficient to address the significant need for innovative solutions. We recommend increasing the INTSA cap.”

2.3 Eight submitters proposed increasing the maximum permissible INTSA expenditure to 5%

Eight submitters proposed that the maximum permissible INTSA expenditure should be increased to 5% of MAR. These are under the heading “>5% MAR” in Table 1. Five percent of MAR was the “*more ambitious option*” in the Commission’ DPP4 draft decision.

The eight submitters were Orion, the Major Electricity Users Group, Consumer New Zealand, Energy Trusts of New Zealand, King Country Trust, Trust Horizon, Solar Zero and Ecobulb.

Orion stated in its submission:

“We submit that the Commission should provide EDBs with the opportunity to access allowances up to 5% of their maximum allowable revenue. Providing for a higher allowance will incentivise EDBs to be innovative, utilise non-traditional solutions when feasible and encourage EDBs to be ambitious for the development of such projects.”

Orion also submitted that:

“A higher allowance will ensure that EDBs are not constrained when they have appropriate projects throughout the regulatory period, while the criteria and approval process will mean that EDBs cannot use this allowance inappropriately. If EDBs do not have appropriate projects, they will not be able to access the full amount of funding.”

This sentiment was supported by the Major Electricity Users Group, which said:

“The proposed INTSA is set at a very low rate (0.6%) and may not be material enough to drive the change that is needed. An INTSA up to a rate of 5% may be needed to drive the change that is needed.”

Energy Trusts of New Zealand submitted:

“We encourage the Commission to adopt the maximum permissible level of up to 5% of MAR.”

Consumer New Zealand said:

“We agree with the Commission’s outline in D126 of its Reasons Paper, including the significant step change expenditure to up to 5% of maximum allowable revenue (MAR). We agree this more ambitious option would strongly incentivise EDBs to undertake larger scale energy efficiency initiatives. EDBs having an innovation and non-traditional solution allowance (INTSA) of 5% of MAR allows them to undertake larger and more innovative energy efficiency and demand-side initiatives.”

Trust Horizon was also supportive of setting INTSA expenditure at up to 5% of MAR, submitting that:

“The maximum permissible INTSA expenditure is increased up to 5% of MAR – and this becomes part of the Commission’s DPP4 Final Determination. This would strongly incentivise EDBs to undertake larger and more ambitious energy efficiency initiatives. Limiting the INSTA to 0.6% of MAR has the potential to severely limit the ability to scale successful opportunities and benefits to consumers within the DPP period.”

It was also pointed out that the Commission could restrict the eligibility to well below five percent, if it chose to. Trust Horizon said:

“Furthermore, the risk of increasing the maximum expenditure appears limited as the Commission is the gatekeeper for approval of the funding.”

2.4 Three submitters proposed half of the (5% of MAR) INTSA be ringfenced for energy efficiency

King Country Trust, Trust Horizon and Ecobulb proposed that half of the (5% of MAR) INTSA be ringfenced for energy efficiency, as listed under the heading “Ring Fence” in Table 1.

Trust Horizon submitted that:

“At least half of the INTSA spending should be ring fenced for energy efficiency projects. This encourages non-exempt EDBs to actively explore both energy efficiency initiatives as well as demand management – which operate on different timescales to reduce overall energy system costs.”

2.5 Three submitters proposed 100% of project expenditure be recoverable for energy efficiency

Consumer New Zealand, the King Country Trust and Ecobulb proposed up to 100% of project expenditure be recoverable for energy efficiency INTSA projects, as listed under heading “Recover 100%” in Table 1.

Consumer New Zealand submitted:

“To ensure EDBs are encouraged to invest in non-lines alternatives, 100% of project expenditure should be recoverable for INTSA projects. This includes investment in strategic distributed generation systems, in energy efficiency devices in homes and businesses, and in replacing less efficient devices, for the purpose of deferring lines spending.”

2.6 Three submitters proposed investment in energy efficiency devices be allowed on the RAB and therefore recoverable expenditure in the long term

Consumer New Zealand, the King Country Trust and Ecobulb proposed that the Commission allow investment in energy efficiency devices in homes and businesses to replace less efficient devices for the purpose of deferring CAPEX, to be included in non-exempt EDBs Regulated Asset Bases, as listed under the heading “On RAB” in Table 1 above.

Consumer New Zealand submitted that:

“The incentive for non-exempt EDBs to undertake energy efficiency projects for the benefit of consumers could be further enhanced by allowing energy efficiency devices to replace less efficient devices in residential and commercial buildings for the purpose of deferring the CAPEX to be included in non-exempt EDBs’ regulated asset bases.”

Orion stated in its submission that:

“We would encourage the Commission to be clear in this guidance what costs are able to be captured in the INTSA allowance. It is important that the Commission enables a sufficiently broad range of costs to be captured to ensure that EDBs are incentivised to undertake INTSA projects.”

2.7 Amending the Criteria for an INTSA eligible project to be “riskier than business as usual”

Electricity Networks Aotearoa and a number of non-exempt EDBs highlighted the issue that the proposed criteria for a project to be eligible for INTSA funding included the requirement to be “*riskier than business as usual.*”

Ecobulb supports ENA’s position and its proposed amendments, including the following content in this section.

Electricity Networks Aotearoa submitted that:

“Under the proposed criteria 5(c) for a project to be eligible for INTSA funding it must be “riskier than business as usual.” ENA is concerned that this criterion is not well aligned with the purpose of the INTSA; and the requirement to show that the EDB would not otherwise undertake the project risks further disincentivising EDBs from pursuing that or similar projects in the event the INTSA application is not successful.”

Electricity Networks Aotearoa therefore proposed that:

“Rather than use “riskier than business as usual,” which is an ambiguous phrase, difficult to interpret with any precision and harder to substantiate with evidence, ENA recommends the Commission replace criteria 5(c) with the following:

(c) either-

- (i) the financial benefits to the EDB of the project or programme are uncertain; or*
- (ii) there is a material risk that the project or programme may not result in:
 - (a) any financial benefit to the EDB; or*
 - (b) a sufficient financial benefit to justify the investment.**

If the Commission does not adopt the above and decides to retain a criterion that attempts to capture the idea of innovation as a relatively ‘riskier’ activity, then the Commission should consider either elaborating on the definition or including a non-exhaustive list of indicative factors and practical examples of the circumstances in which a project or programme will be considered riskier than business as usual.”

Wellington Electricity supported Electricity Networks Aotearoa’s alternative criteria, stating:

“We think this alternative criteria captures the idea of innovation as an activity that has inherently uncertain benefits. The alternative definition simplifies the criteria and avoids having to define the ‘Riskier than BAU’ criteria which is difficult and potentially subjective to interpret.”

On the same topic, Vector submitted:

1. *“Greater clarity is needed around how the EDB can demonstrate the eligibility criteria (i.e., that a project is riskier than ‘business as usual’) would better support applications.*
2. *Regarding the guidance the Commission is looking to develop on the INTSA we would encourage the Commission to co-develop that guidance with suppliers and possibly other stakeholders. During the DPP reset process there has been clear benefits derived from working together e.g. the opex step change workshop between ENA members and Commission staff. We therefore encourage the Commission to embrace more of this type of engagement and consider the INTSA guidelines a good candidate for this.*

3. *Another consideration which we believe would add value to the guidance are specific examples of projects which fit the criteria and examples of projects which do not, including reasons why. This will remove ambiguity and ensure EDBs are putting effort into project proposals which are meeting the Commission's expectations for the scheme.*
4. *Vector suggests that when INTSA guidance is issued, that there is an opportunity for stakeholders to feedback and ensure there are not interpretation issues ahead of the guidelines being finalised."*

Powerco stated in its submission that:

"We are also concerned about the effectiveness of the INTSA to fulfil the objectives of Section 54Q as demand side management and energy efficiency initiatives are unlikely to meet the criteria of the INTSA, because the more certain the energy loss reduction benefits, the less likely the INTSA is available. We suggest the Commission considers the scope of the INTSA and whether the criteria are broad enough to meet Section 54Q objectives."

Powerco also proposed:

"Specifying a timeframe of 20 working days for the Commission to decide whether to approve an INTSA proposal. As an ex-ante process, having certainty on process timing is critical for project planning."

Ecobulb supports the views expressed that there needs to be greater clarity on what would be eligible for the INTSA. Section three below explores this further.

3. INTSA INCLUSION AND DEFINITION OF ENERGY EFFICIENCY

3.1 Background to Section 54Q

Section 54Q of the Commerce Amendment Act 2008 states:

“The Commission must promote incentives, and must avoid imposing disincentives, for suppliers of electricity lines services to invest in energy efficiency and demand side management, and to reduce energy losses, when applying this Part in relation to electricity lines services.”

The Commission acknowledges the broad view by it and stakeholders of the benefit of Section 54Q, stating in its reasons paper:

“We (the Commission) agree with stakeholders that energy efficiency and demand side management in particular are important and should be incentivised.”⁴

To comply with Section 54Q, the Commerce Commission’s draft decision for the *“Default price-quality paths for electricity distribution businesses from 1 April 2025”* includes a proposed allowance for innovation and non-traditional solutions.

The Commission says that energy efficiency, in addition to demand side management, would be incentivised under the draft INTSA scheme. Paragraph D148 of the reasons paper says:

“...we consider energy efficiency projects would be incentivised under the draft INTSA scheme, where such projects meet the eligibility criteria”.

3.2 What is Energy Efficiency?

At this point it is important to clarify what is *“energy efficiency”*, which are the exact words used in Section 54Q. A clarification is needed as often there is confusion between *“efficiency”*, *“system efficiency”*, and *“energy efficiency”*.

This confusion is compounded by Section 54Q saying that energy efficiency should be promoted in the context of *“electricity lines services”*.

“Energy efficiency” involves reducing the amount of energy required to provide products or services. Higher energy efficiency can be achieved through better use of energy, such as modern appliances (e.g. LED bulbs, heat pumps, hot water heat pumps) that use less electricity than old appliances (incandescent bulbs and resistance heaters).

A reliable definition is that provided by the United States’ Office of Energy Efficiency and Renewable Energy, which states the following about energy efficiency⁵:

“Energy efficiency is the use of less energy to perform the same task or produce the same result. Energy-efficient homes and buildings use less energy to heat, cool, and run appliances and electronics, and energy-efficient manufacturing facilities use less energy to produce goods.

⁴ P285, para D146. [Default-price-quality-paths-for-electricity-distribution-businesses-from-1-April-2025-Draft-reasons-paper-29-May-2024.pdf \(comcom.govt.nz\)](#)

⁵ [Energy Efficiency: Buildings and Industry | Department of Energy](#)

It says the benefits of energy efficiency are:

Energy efficiency saves money, increases the resilience and reliability of the electric grid, and provides environmental, community, and health benefits.”

Importantly, energy efficiency is **not** the same as “*system efficiency*”, which is actually about increasing the efficiency of electricity infrastructure through load shifting. Load shifting reduces peak load and the investment in infrastructure required to meet peak demand.

In discussions with stakeholders, investment in load management (e.g. grid or household batteries, hot water load control, controllable EV chargers) was often seen as “*energy efficiency*”. This is incorrect. These devices are ways of improving system efficiency, but not energy efficiency.

This is an important distinction, as Section 54Q specifically cites “*energy efficiency*”, not “*system efficiency*”.

3.3 European Union Directive Strongly Supports Energy Efficiency

The European Union has recently adopted policy to reflect the importance of energy efficiency. The directive clarifies that energy efficiency is about using less energy, as opposed to system efficiency. Its Energy Efficiency Directive says:

1. The Directive establishes the principle of “*energy efficiency first*” as a fundamental principle of the EU’s energy policy, emphasizing its vital role in implementing energy policies and investment decisions.
2. The Directive sets a target of an **11.7% reduction in final energy consumption by 2030 compared to the reference year of 2020** (Ecobulb emphasis), while introducing a range of measures to accelerate energy efficiency applications.
3. It includes a legal basis for the “*energy efficiency first*” principle. EU countries are now legally obliged to prioritize “*energy efficiency*” in policy-making, planning, and significant investments.
4. Moreover, EU countries have agreed to nearly double their annual energy savings obligations in the coming years. According to the recast Directive, they must increase their average annual energy savings rate from the current 0.8% to 1.49% from 2024 to 2030. This includes targeting increased energy savings in critical sectors such as buildings, industry, and transportation.
5. The legislation includes a definition of energy poverty, making EU countries responsible for prioritizing energy efficiency improvements for vulnerable customers, low-income households, and individuals living in social housing, and this has been included as part of the energy savings obligation.

3.4 Why Should Energy Efficiency Be Incentivised By INTSA?

The importance of energy efficiency, and for clear DPP incentives for energy efficiency, was raised by a number of submitters.

The Energy Efficiency and Conservation Authority pointed out the importance of energy efficiency, submitting that:

“It is essential that cost-effective energy efficiency and distributed flexibility measures are used to a much larger extent than is the case today. To avoid the full extent of expensive electricity infrastructure upgrades and the consequent high consumer power bills, energy efficiency measures are an essential first step. The cheapest form of energy is the energy we do not use.”

Vector also submitted on the importance of energy efficiency, stating:

“Investing in energy efficiency and demand side management have the potential to provide significant benefits for consumers from a whole of energy system cost perspective (something Vector has long advocated). For example, EDB involvement in energy efficiency of buildings, vehicles and appliances having the effect of maximising energy use, minimising energy loss and reducing customer costs as it pertains to electricity service is beneficial across the energy system.”

Consumer New Zealand submitted that:

“We believe that stronger incentives are required for EDBs to undertake energy efficiency projects. We submit that, in order to help mitigate large household power bill increases, lines companies should be able to fully use their maximum allowable expenditure on efficiency and demand-side initiatives and this should be stipulated in the final DPP4 determination.”

The Energy Trusts of New Zealand submitted that:

“We believe strongly that energy efficiency projects should be eligible for funding under this (INSTA) mechanism.”

The Major Electricity Users Group submitted that:

“It is important that the Commission ensure sufficient focus is given to energy efficiency, as this is something that will benefit all consumers in the long-term. We need to avoid the risk of regulated EDBs spending the majority of the INTSA on high-tech devices and systems to aggregate load and control devices such as batteries, EV chargers and hot water cylinders to shift peak load (that don't reduce consumer bills) – rather than on energy efficiency (which does reduce consumer bills). The INTSA needs to be deployed for a range of options.”

In conclusion, there is clear stakeholder support for energy efficiency, and that this should be incentivised through the INTSA. What is less clear is what would qualify as expenditure on energy efficiency by EDBs under the INTSA approval process. This is explored in the next section.

3.5 Clarifying what qualifies as energy efficiency

In discussion with and submissions to the Commission, there seemed a lack of clarity about what would qualify as an incentive for energy efficiency in relation to a lines service. The Commission pointed out what would **not** qualify as energy efficiency in relation to an electricity lines service (such as putting on a jumper) but could give limited examples of EDB investment which **would** qualify.

One put forward was transformers, which is more about system efficiency (e.g. matching the right transformer to the right load, weight and cost reduction, power factor correction, avoiding low loads and therefore core losses) than about energy efficiency.

To help the Commission gain a clear idea on what might qualify as energy efficiency – and not system efficiency - incentives, we refer the Commission to the successful and effective “*Victorian Energy Upgrades*” Programme run by Victorian State Government’s Department of Environment, Land, Water and Planning since January 2009.

It includes the following prescribed energy efficiency activities that have been delivered in high volumes:

1. Residential Lighting: Replacing inefficient residential incandescent and halogen lighting with LEDs.
2. Commercial Lighting: Replacing inefficient commercial building lighting with LED luminaires.
3. Shower Heads: Replacing inefficient shower heads with efficient shower heads.
4. Water Heaters: Replacing inefficient water heaters with Heat Pump Water Heaters.
5. Electric Motors: Replacing inefficient electric motors with high efficiency electric motors.
6. Pool Pumps: Replacing inefficient pool pumps with high efficiency pool pumps.

Ecobulb therefore proposes that the above Victorian Energy Upgrades list, or a similarly reputable list of energy efficiency products and services, would qualify as “energy efficiency” with respect to Section 54Q and be eligible for the DPP4 INTSA incentive.

4. ECOBULB'S UPDATED DPP4 RECOMMENDATIONS

We commend the Commission for proposing additional incentives to trial new solutions, including energy efficiency, in its draft decision on the “*Default price-quality paths for electricity distribution businesses from 1 April 2025*”.

However, it is critical that the actual energy efficiency incentives and associated methodologies for accessing these incentives maximise the likelihood that non-exempt EDBs deliver energy efficiency that reduce peak loads and consumer bills.

Ecobulb provided four recommendations to the Commission for its DPP4 Final Determination in our 2 July 2024 “*Submission on EDB DPP4 Draft Decision*” relating to the Commission’s “*Innovation and Non-Traditional Solutions Allowance*” (INTSA).

Upon review of the other organisations submissions to the DPP4 Draft Decision, we retain these four recommendations and add an additional two recommendations.

Ecobulb’s updated recommendations to the Commission for their DPP4 Final Determination are:

- 1. That the more ambitious option – including maximum permissible INTSA expenditure of up to 5% of MAR – becomes part of the Commission’s DPP4 Final Determination. Combined with recommendation two, a 5% allowance** would strongly incentivise non-exempt EDBs to undertake larger and more ambitious energy efficiency initiatives. Furthermore, rather than this increased expenditure increasing consumer bills within the DPP4 period, the most cost-effective energy efficiency projects would actually **reduce** consumer power bills overall.
- 2. At least half of the (5% of MAR) INTSA spending should be ring fenced for energy efficiency projects.** This avoids the risk of non-exempt EDBs spending all their INTSA on high-tech devices and systems to aggregate load and control devices such as grid-scale batteries to reduce system peaks – rather than on energy efficiency.
- 3. Up to 100% of project expenditure be recoverable for energy efficiency INTSA projects.** This is consistent with Commission’s outline in Paragraph D126.2 of the Commission’s Reasons Paper.
- 4. Allow investment in energy efficiency devices in homes and businesses to replace less efficient devices for the purpose of deferring CAPEX, to be included in non-exempt EDBs Regulated Asset Bases.** Our July 2 submission provided a detailed justification as to why EBD installed behind the meter solutions like residential batteries and LED light bulbs qualify for Section 54Q Incentives and inclusion in the Regulated Asset Base.
- 5. (Additional recommendation 1) Replace the Commission’s proposed “riskier than business as usual” criteria for a project to be eligible for INTSA funding with the replacement criteria outlined in the Electricity Networks Aotearoa submission.**
- 7. (Additional recommendation 2) That the Commission clarifies what energy efficiency products and services are eligible for the DPP4 INSTA through references to reputable international lists, such as the Victorian Energy Upgrades list.**