

## **Incentivising efficient expenditure**

### **Questions regarding TOTEX, IRIS and innovation**

*For use by external stakeholders*

This document provides questions to guide feedback on our 7 November 2022 workshop “*Forecasting and incentivising efficient expenditure for EDBs*”. These questions focus on TOTEX, IRIS, and innovation and are intended to inform our review of the Part 4 input methodologies (IM Review).

Along with these questions we have published:

1. a model that demonstrates the broad financial equivalence of the treatment of OPEX and CAPEX in the respective IRIS incentive mechanisms; and
2. a brief companion staff paper.

The workshop slides and staff working paper (*Electricity distributors’ expenditure incentives under the current Part 4 approach and under a TOTEX approach*) we published before the workshop are available [here](#) along with the recording of the workshop.

It would be useful if you could take these into account when answering the questions that follow.

Completed forms should be sent to [im.review@comcom.govt.nz](mailto:im.review@comcom.govt.nz), with ‘INCENTIVES SUBMISSION – [your submitter name]’ in the subject line of the email. Please provide us with your feedback by 5pm Tuesday 6 December 2022.

If you have supporting documents that you consider would improve our understanding of the issues, please attach them with your response and reference them in your feedback below.

All completed forms and supporting documents provided to us in this context will form part of the record for the IM Review. We intend to publish completed forms and supporting documents provided to us to enable other stakeholders to engage with them throughout the IM Review. Any request that we not publish content in a completed form or supporting document provided to us must be clear and explicit with reasons supporting why that content is confidential or commercially sensitive. We will consider any such requests on their merits.

## A. Questions relating to the problem of CAPEX bias

In paragraph 12 of our staff working paper,<sup>1</sup> we define ‘CAPEX bias’ as arising where the regulatory approach to setting price-quality paths financially incentivises investment in assets (CAPEX) over alternatives such as demand response (OPEX), where those alternatives are more efficient. We do not use the term ‘CAPEX bias’ to refer to situations where favouring a traditional network solution over a non-network alternative results in greater net benefits to consumers.

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**A1. Do you consider that we have accurately described the general problem of CAPEX bias? If not, please provide further description.**

Answer: No.

We understand the Commerce Commission’s goal is to ensure that CAPEX and OPEX are treated and incentivised equally, however, the issues that support EDBs taking a CAPEX approach are more complex and diverse than covered in this paper. Whilst the NZCC staff paper in paragraph 9 refers to technological progress and innovation are changing the options for distributors to meet investment needs<sup>2</sup>, such OPEX alternatives are not always available or practical for small, provincial EDB’s such as Horizon Networks.

For example, the ability to control demand on the LV network (as an alternative to CAPEX investment) is limited. There are not a complete set of transmitting smart meters, so even if Horizon Networks could get access to smart meter information, it would not provide a complete picture of the low voltage network in order to make OPEX alternative decisions. Similarly, there is only limited relays to control hot water systems across the network.

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**A2. Do you consider we have accurately described the potential issue with regulatory financial incentives resulting in or reinforcing CAPEX bias? If not, please provide further description.**

Answer: No.

In addition to financial incentives, through mechanisms such as IRIS, there are cash flow advantages and network valuation advantages. These provide a higher incentive for EDBs to invest in assets because CAPEX investments are recovered in a way that has greater benefit to the network than OPEX alternatives.

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<sup>1</sup> [https://comcom.govt.nz/\\_data/assets/pdf\\_file/0025/296233/Staff-paper-for-Workshop-Forecasting-and-incentivising-efficient-expenditure-for-EDBs-1-November-2022.pdf](https://comcom.govt.nz/_data/assets/pdf_file/0025/296233/Staff-paper-for-Workshop-Forecasting-and-incentivising-efficient-expenditure-for-EDBs-1-November-2022.pdf)

<sup>2</sup> [https://comcom.govt.nz/\\_data/assets/pdf\\_file/0025/296233/Staff-paper-for-Workshop-Forecasting-and-incentivising-efficient-expenditure-for-EDBs-1-November-2022.pdf](https://comcom.govt.nz/_data/assets/pdf_file/0025/296233/Staff-paper-for-Workshop-Forecasting-and-incentivising-efficient-expenditure-for-EDBs-1-November-2022.pdf)

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Additionally, the paper appears to assume that OPEX solutions will be cheaper than CAPEX solutions. That is not automatically the case, particularly when considered over the whole life of the asset.

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**A3. If relevant, we would welcome examples of CAPEX bias from your business. Please explain the source(s) of the CAPEX bias.**

Answer: We model the comparative CAPEX and OPEX outcomes on IRIS, network valuation, and cashflow impacts to inform investment decisions. These types of modelling typically create asymmetric outcomes for CAPEX and OPEX due to the range of variables and scenarios considered, including timing of CAPEX / OPEX and length of time over which the CAPEX / OPEX will be incurred and recovered.

While static examples can be helpful to illustrate a single point, the dynamics of IRIS complexity and the time over which CAPEX investments versus OPEX alternatives are recovered, can result in unequal outcomes for CAPEX and OPEX.

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**A4. In your view, do regulatory financial incentives under Part 4 DPP/ CPP regulation (RAB-based building blocks approach with WACC uplift, with OPEX and CAPEX IRIS) contribute to CAPEX bias (if any) in your business?**

Answer: Yes.

Our modelling has identified that the timing of increased OPEX has a different impact on MAR and IRIS and can create asymmetrical outcomes for CAPEX and OPEX. For example, if a new ongoing OPEX amount is first incurred in the base (4<sup>th</sup>) year of a DPP period, then this extra OPEX cost will be added into the Base, Step & Trend calculations input into the OPEX allowances and MAR pricing for the following DPP, however if the OPEX starts in the 3<sup>rd</sup> or 5<sup>th</sup> year, then the outcomes for the business are different, the OPEX allowances and MAR are not increased, even though the actual costs to deliver distribution services do not change.

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**A5. How important are regulatory financial considerations to your business when choosing between different solutions? We would welcome specific examples (reflecting information from actual business decisions) that illustrate how regulatory financial considerations have been considered.**

Answer: Very important. A key consideration is how we can provide a long-term efficient return to our shareholder, which includes consideration of regulatory financial considerations such as IRIS, MAR, OPEX, and allowances in the DPP reset.

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**A6. To help us understand the overall size of the problem of CAPEX bias, we would appreciate your assessment of *current* opportunities where OPEX solutions would be more efficient – for example, from your most recent asset management plan. We are also interested in your expectation of how (quantitatively or directionally) the opportunities might change over the *next decade*, for example, due to emerging technologies.**

Could you please advise or estimate:

- the aggregate size of the pool of expenditure (CAPEX and OPEX) where interchangeable CAPEX and OPEX solutions are currently available

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- of that overall pool of expenditure, the total value of OPEX solutions chosen.

**If you expect this to change in the future, please estimate the future values.**

Answer:

We have limited examples of current opportunities as OPEX alternatives are not always practical for small, provincial EDB's such as Horizon Networks, due to our size and distance from OPEX alternative providers.

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## **B. Questions relating to a potential solution to CAPEX bias: TOTEX approach**

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**B1. Should we consider introducing a TOTEX approach for EDBs as a solution to CAPEX bias and/or simplification of financial incentive mechanisms? Should we introduce a TOTEX approach for other regulated services? Please provide your reasons.**

Answer: Conditional support for a simplified TOTEX approach, however Horizon Networks will not support any solution that moves away from following GAAP for regulatory reporting purposes.

Horizon Networks supports the use of a simplified TOTEX approach, where it is only used for the purposes of calculating IRIS incentives. This simplified approach could effectively give a yearly annual total expenditure allowance that can be split between CAPEX and OPEX as actually incurred. Horizon Networks considers it critical that any TOTEX solution does not require EDBs to alter their actual accounting practices or inputs into the RAB or non-IRIS regulatory disclosures.

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**B2. If you consider we should adopt a TOTEX approach, do you agree with the approach described in the staff working paper? If not, please explain why not and what you would change.**

Answer: No we do not agree with the approach in the staff working paper.

Horizon Networks understands that the staff working paper TOTEX approach assumes a fixed share is capitalized and that the inputs into the RAB and accounting systems will not follow generally accepted accounting practices (GAAP).

Horizon Networks strongly opposes any move away from GAAP. Moving away from GAAP would result in inefficient and poor business decisions. Our business and investment decisions rely on clear, accurate accounts in order to measure and understand the impact of the actions we are considering. Such a change would also change comparability with prior periods already disclosed under existing Information Disclosure regulations.

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**B3. If you consider we should adopt a TOTEX approach, please provide your views on:**

- expected benefits for your business (relative to the current RAB-based building blocks approach with WACC uplift, OPEX and CAPEX IRIS)
  - expected implementation costs and timelines for your business
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- **any other considerations**

Answer: Horizon Networks do not support adopting an approach to TOTEX that moves regulatory reporting away from GAAP.

We question if the problem of CAPEX bias is so difficult to address that the only solution is to require EDBs to operate outside of generally accepted accounting practices.

It is not practical to forecast implementation costs and timelines until a firm decision is made and greater details of how it would operate are available. However, we would assume there would be a need to modify our financial systems which is a significant development and the ongoing additional costs that would eventually be borne by consumers.

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### **C. Questions relating to current expenditure incentive mechanisms<sup>3</sup>**

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**C1. The model and paper published with these questions are intended to demonstrate the effects of the CAPEX and OPEX IRIS incentives on investment choices. With this information now available, do you consider that there is broadly financial equivalence between the incentives on OPEX and CAPEX?**

Answer: No.

The example provided by the Commission is based on a static view with only one variable changed and all other factors considered equal. In reality, the IRIS and DPP resetting models are dynamic and depend upon numerous variables being considered.

However, other considerations such as cash flows, full cost recoveries and the valuation of the Network can create inequality between the total cost impact of OPEX compared to the total cost impact of a CAPEX investment alternative.

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**C2. Some suppliers submitted to us that expenditure allowances are not currently substitutable between CAPEX and OPEX (i.e., the incentives are not financially neutral).<sup>4</sup> However, with equalised incentive rates, the effect (over the relevant period of the saving or overspend) should make suppliers financially indifferent to substituting between OPEX and CAPEX solutions.**

**If you consider CAPEX and OPEX are not substitutable under the current IRIS settings, please provide some examples from your business demonstrating why you were not financially indifferent in choosing between OPEX and CAPEX solutions.**

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<sup>3</sup> See "IRIS equivalence staff paper"

<sup>4</sup> We set a revenue cap for each non-exempt EDB within which they may choose OPEX and CAPEX as they see fit. We have separate incentive mechanisms for OPEX and CAPEX, so the EDBs choice affects the incentive amount they receive. If incentive amounts for OPEX and CAPEX are equivalent, then these EDBs should be financially indifferent between OPEX and CAPEX.

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Answer: Current OPEX allowances are driven by a combination of growth in circuit length and household numbers, however for Horizon Networks circuit length, household numbers and residential consumption growth is relatively flat. Our growth is generally from step changes in new connections industrial consumption.

OPEX solutions to these step changes do not result in an increase in OPEX allowances with the DPP, while CAPEX solutions allows us to recover costs via capital contributions and an increase in the RAB.

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**C3. How important is the fact that IRIS does not capture the impact of savings that extend beyond the IRIS horizon (i.e., the carry-forward term of five years)? Can you provide us with examples of projects where future savings are not included within the IRIS horizon? Could you propose potential solutions to this problem (including through the IRIS mechanisms)?**

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Answer: It is quite important that IRIS is carried forward beyond the single DPP regulatory period IRIS horizon. When we consider a CAPEX spend we look at the impact over the entire standard life of the assets. Where there is an ongoing OPEX spend (as an alternative to CAPEX) it needs to be able to be modelled beyond the carry-forward term of five years.

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**C4. Do you consider IRIS in your business decision-making processes? If so, which stage(s) of your decision-making processes consider IRIS when contemplating substitutable solutions (whether OPEX or CAPEX)?**

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Answer: Yes. The impact of IRIS is considered at all relevant stages of planning.

AMP 10-year planning usually aims to constrain OPEX to a similar nominal level over the 10-year time horizon, then allow for assumed inflation factor.

Decisions are considered with the benefit of understanding IRIS impacts.

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**C5. Suppliers have noted that the complexity of the current incentive mechanisms is a problem in the regulatory regime. How could the incentive mechanisms be simplified while still achieving the desired outcomes?<sup>5</sup>**

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Answer:

The incentive mechanisms could be simplified by allowing incentive mechanisms to reward efficiency savings beyond the next five years, (when the reduced OPEX / CAPEX allowances are reset in the next DPP reset process).

If innovation / technological costs to save on CAPEX solutions are lumpy, consider averaging IRIS savings over multiple years to improve the predictability of IRIS. The current IRIS mechanism creates peaks and troughs that are then reflected in pricing oscillations, making it difficult for consumers to predict how distribution prices will change year-on-year. It creates unstable pricing.

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<sup>5</sup> The desired outcomes are set out in Section 52A (1) (a)–(d) of Part 4 of the Commerce Act 1986.

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**C6. Changing the current IRIS mechanisms to apply different incentive rates to different types of expenditure (such as connection CAPEX) would likely increase the complexity of the incentive schemes. Would the benefits of this change outweigh the increased complexity?**

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Answer: No.

The increased complexity would further cloud the understanding of IRIS impacts, which are already complicated and not well understood.

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**C7. If we were to remove or make significant changes to IRIS, what would an appropriate alternative approach be that would better promote one or more of the overarching objectives of our IM Review?<sup>6</sup>**

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Answer:

An appropriate alternative would be to use the productivity formula in DPP resets to highlight the expected reduction in total expenditure (TOTEX). Calculate the allowances for the 5-year DPP period set at a percentage of base year or last 5-year averages of TOTEX.

This can create a mechanism that sets expected efficiency levels and allows measurement of TOTEX reduction in real terms. Note: This needs to be considered in light of projected expenditure growth due to greater electrification, carbon zero requirements.

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**C8. If we were to move to a TOTEX approach, we would need an amended incentive mechanism. What could an incentive mechanism look like? One example is Ofgem's TOTEX incentive mechanism (TIM).<sup>7</sup>**

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Answer: Refer to the staff paper (Attachment C: Totex incentive mechanism, pages 27 to 30) for Workshop Forecasting and Incentivizing efficient expenditure for EDBs 1-Nov-2022. It is a TOTEX incentive mechanism (TIM) and the incentive values are shared between 50 to 85% shared by the consumers, be they under- or overspend. A NZ version of this could be developed that could replace the existing IRIS.

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**C9. For Transpower's IPP, we understand from stakeholders that the determination of the 'baseline adjustment term' has introduced significant complexity and uncertainty, potentially undermining incentives to achieve efficiency savings. If we were to remove this adjustment term, what other adjustments to the IPP IRIS mechanism do you consider would be necessary to achieve its purpose?**

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Answer: Not answered.

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<sup>6</sup> The three overarching objectives for the IM Review are set out at para X20 of the [Part 4 Input Methodologies Review 2023 decision-making framework paper](#), which we published on 13 October 2022.

<sup>7</sup> See section 10 of Ofgem's Decision – RIIO-2 Final Determinations – Core Document [https://www.ofgem.gov.uk/sites/default/files/docs/2020/12/final\\_determinations\\_-\\_core\\_document.pdf](https://www.ofgem.gov.uk/sites/default/files/docs/2020/12/final_determinations_-_core_document.pdf).

## D. Questions relating to innovation and sandboxing<sup>8</sup>

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**D1. Currently, the implementation details of the innovation project allowance and the size of the allowance paid out following successful projects are determined as part of the DPP reset rather than in the IMs. Are there any changes to the IMs<sup>9</sup> we should consider to better enable innovation?**

Answer: Suggest this be set at 1% of DPB revenue over the 5 years and allow EDBs to spend up to this value as a five-year allowance. Have the innovation expenditure audited under the ID process. If independent audit fails to express a clean opinion, due to lack of supporting records and lack of valid innovation objective, then this innovation allowance would be clawed back in the next DPP period reset.

If innovation projects have proved valid / auditable in prior DPP period (five years) then raise allowance to 2% in next DPP period.

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**D2. Are there innovative projects or initiatives in the supply of electricity distribution services that you consider the current IM and DPP settings prevent you from doing? If so, it would be helpful if you could give examples of business cases you did not take forward or that you consider would not be possible under the current regime.**

Answer: The current regulatory settings around innovation make it difficult to claim the cost of innovation projects. This is a barrier that limits the innovative projects we look into, generally limiting the work to low-risk innovation such as technologies for LV monitoring.

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**D3. Innovative activities and projects can be riskier than business-as-usual activities and projects. Can you describe the downside risks associated with innovation under the current regulatory rules, and if possible, quantify those risks?**

Answer: Innovation projects have a current limit set for each EDB in DPP3. The EDB has a risk of covering 100% of the innovation expenditure if the drawdown request is not approved. The resources of time / cost to produce the report inhibit smaller EDBs from requesting funds from the innovation allowance.

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**D4. Given that innovation is risky, who do you consider is better suited to bear the downside risk under Part 4 regulation – suppliers or consumers? What is your rationale for this?**

Answer: Risk should be shared by both the EDB and the consumers, as these are the beneficiaries of any benefits from innovation. The split could be at a similar level to the IRIS sharing rates.

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<sup>8</sup> See “Forecasting and incentivising efficient expenditure for EDBs” slides 54-59: [https://comcom.govt.nz/\\_data/assets/pdf\\_file/0029/298055/Forecasting-and-incentivising-efficient-expenditure-for-EDBs-Full-slide-deck-07-November-2022.pdf](https://comcom.govt.nz/_data/assets/pdf_file/0029/298055/Forecasting-and-incentivising-efficient-expenditure-for-EDBs-Full-slide-deck-07-November-2022.pdf)

<sup>9</sup> See clause 3.1.3(1)(x) and the definitions of ‘innovation project’ and ‘innovation project allowance’ under clause 1.1.4(2) of the Electricity Distribution Services Input Methodologies Determination 2012: [https://comcom.govt.nz/\\_data/assets/pdf\\_file/0017/60542/Electricity-distribution-services-input-methodologies-determination-2012-consolidated-20-May-2020-20-May-2020.pdf](https://comcom.govt.nz/_data/assets/pdf_file/0017/60542/Electricity-distribution-services-input-methodologies-determination-2012-consolidated-20-May-2020-20-May-2020.pdf)



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**D5. What should compensation look like for the downside risk retained by suppliers? What level of compensation is required to enable efficient innovation considering these downside risks?**

Answer: If use the IRIS sharing rates, then EDB would wear 23.5% of the risk. Alternatively share the risks 50/50 between EDB and consumers. Note any innovation project where the EDB is facing risk should not be subject to IRIS penalties as otherwise the EDB is penalised for both the unsuccessful project and again through IRIS.

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**D6. What are they key ingredients of an effective regulatory sandbox? What aspects of the regulatory sandboxes implemented by the AER<sup>10</sup>, OEB<sup>11</sup> and Ofgem<sup>12</sup> do you consider should be implemented under Part 4 regulation and why are these elements important for your business?**

Answer: Agree with the concepts shown in staff presentation, slide 58 where Commission can provide advice and help without breaching regulatory rules, provide waivers from specific regulatory rules for a set period and provide a framework to test changes to the existing regulatory rules.

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**D7. To what extent should a regulatory sandbox regime under Part 4 focus on each of the following: advice, rule exemptions, trial rule changes and financial incentives?**

Answer: A collaborative approach where the EDBs can discuss innovation ideas with and seek advice from the Commission would be helpful and provide a shared understanding of the sandbox process, where rule exemptions and trial rule changes could be made for a short-term trail. If good learnings and a positive outcome occurs, then an agreed sharing to other EDBs could occur. The EDBs would benefit from an IRIS incentive if reduced expenditure results. Some consideration of reclaiming R&D expenditure could occur with the EDB that has designed the successful innovation could on sell their solution to other EDBs or alternately offer their learnings without charge if they wish. However, shared learnings, even if a charge is made, is likely to be more efficient than all EDBs separately developing their own solutions.

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**D8. What projects do you have planned that would benefit from the implementation of a regulatory sandbox?**

Answer: Horizon Networks welcomes the idea, however due to the regulatory settings we have historically limited our planning to those projects that will work within the current regulatory settings, but could review this considering any changes that could better enable regulatory sandboxes.

Horizon Networks is a small EDB with limited resources. We focus on our consumers and seek to be a fast follower of innovation, and work on small-scale trials when considering innovative projects.

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<sup>10</sup> Regulatory Sandboxing – Energy Innovation Toolkit: <https://www.aer.gov.au/networks-pipelines/regulatory-sandboxing-%E2%80%93-energy-innovation-toolkit#:~:text=Regulatory%20sandboxing%20aims%20to%20help,cheaper%20energy%20options%20for%20consumers>

<sup>11</sup> OEB Innovation Sandbox: <https://www.oeb.ca/html/sandbox/index.php>

<sup>12</sup> Ofgem – What is a regulatory sandbox?: <https://www.ofgem.gov.uk/publications/what-regulatory-sandbox>

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