

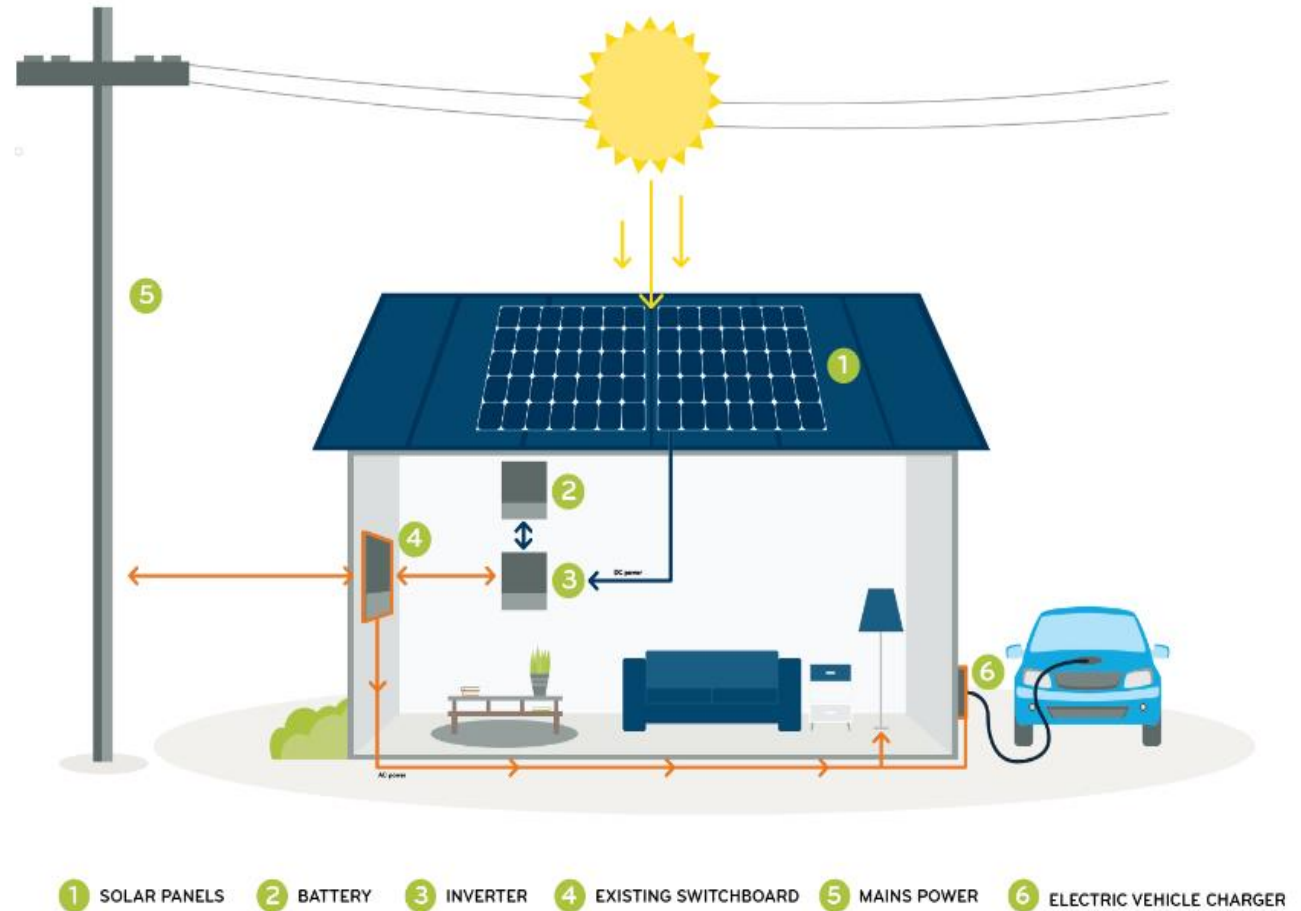
# COMMERCE COMMISSION OPEN LETTER – INTENTION TO GATHER INFORMATION ON EMERGING TECHNOLOGY

VECTOR COMMENTS



# INTRODUCTION

- This response captures Vector's feedback to the Commerce Commission's (Commission's) open letter on its intention to gather information relating to emerging technology. Vector is willing to assist with this important issue for the industry.
- We encourage the Commission not to overburden stakeholders with unnecessarily extensive information demands. Responding to such requests requires significant effort and resources to be diverted from business needs.
- We recommend the Commission consider discussing its objectives with stakeholders to ensure its information request is clear and directed at meeting its information needs. Indeed, where the Commission can demonstrate a problem/issue requiring attention, it has a greater ability to clearly articulate its information needs. Otherwise it risks requesting information from EDBs that is irrelevant to its learning objective.



# THE SCOPE OF THE COMMISSION WITH EMERGING TECHNOLOGY

- We see importance for the Commission in developing an informed understanding of emerging technologies. New energy technologies are breaking many of the norms associated with the industry that were sacrosanct more than a decade ago. Accordingly, Vector considers it incumbent for all stakeholders to have a better understanding of the impact technology will have on the sector. Emerging technologies offer transformative benefits and risks for networks and electricity users. They have the potential to redefine system growth drivers, empower consumers and reduce greenhouse gas emissions.
- As discussed in Vector's 2018 Asset Management Plan new technology is having a profound impact on asset management decision-making with new models and frameworks needed for investment. We have moved our asset management strategy to forecast and account for new technologies. However, new technologies are creating more uncertainty to make accurate forecasts for network needs. **Table 1** shows the differences between historical asset management and new asset management strategies.
- We are actively engaged in energy scenario planning to develop insights as to how our network and asset management strategies need to evolve in response to customer changes. Our AMP considered a number of differing scenarios to forecast the needs over the AMP planning horizon. Continuous monitoring of customer behaviour will help to determine whether scenarios remain fit for purpose or if new future scenarios can better reflect customer needs as we learn more. Information is essential to support informed network and asset management decisions.

Table 1: Differences to asset management as a result of emerging technology

Input	Historical asset management	New asset management
Information	Reliable	Uncertain
Assumptions	Predictable	Unpredictable
Investment Needs	Clear	Contingent – scenario driven
Investment recovery risk	low	Rapidly increasing

# SCOPE CONTINUED – RECOGNISING THE CHALLENGE OF NEW TECHNOLOGIES

- Vector is not alone with our desire to understand the impact of emerging technology on our networks. Distribution networks globally are grappling with this issue. The *Electricity Network Transformation Roadmap (2017-2027)* produced by the Commonwealth Scientific Industrial Research Organisation (CSIRO) and the Electricity Networks Association of Australia is dedicated to this issue. In that document they note network transformation will be driven by customers who will dictate system expenditure spent by utilities in contrast to today.
- Similarly the United Kingdom ENA Innovation Strategy recognises:  
**We will need to develop commercial models and technical solutions that will facilitate customers choice in a cost-effective way, while at the same time managing the impact on networks.**
- Accordingly, networks are attuned to the risks, challenges and opportunities presented by emerging technology to the system in terms of technical and commercial challenges which are intimately related.
- However there is an important need for regulators to understand how such technologies will affect network regulation going forward. The changes presented by new technology have as much implication for the financial capital maintenance principles underpinning network regulation as they do with the technical engineering challenges.
- The issue of new technologies are directly relevant for EDBs but also have direct implications for other stakeholders operating in the

supply chain; such as Transpower and grid connected generators. We see great benefit with the Commission gaining better insight as to how these businesses are preparing for the impact of new technology.



# COMMENTS ON THE SCOPE

- We recommend the Commission is clear about matters it would like to develop a further understanding about to ensure stakeholders can cooperate and deliver information to meet the Commission's needs.
- We recommend the Commission makes full utilisation of the suite of information EDBs are required to provide under the Information Disclosure Determination.
- AMPs are produced to give an indication of the forward-looking network requirements for the future. These should have some discussion about how networks intend to respond to the opportunities and challenges emerging technology presents.



# DELIVERING CERTAINTY TO INDUSTRY

- We will assist the Commission's inquiry for more information on emerging technology. We consider the issue of emerging technology a pivotal issue for network management with a profound effect on asset management strategies and investor confidence.
- Accordingly, we do have some reservations about the Commission indicating it will continue to review IMs or policy settings. As part of the recent IM review the Commission provided a clear view as to what it considers relevant for whether a commissioned asset may be included within the electricity lines service asset base. At the time the Commission noted (using battery storage as an example):

**We consider the key question to be whether the storage battery is used for, or in support of, the regulated service (i.e. conveyance of electricity by line). If the answer is yes, in our view the storage battery can be included in the RAB. It is not the nature of the battery itself (i.e. that it is a storage device) that determines whether it may be included in the RAB.**
- We supported this view as it is consistent with requirements of section 54Q of the Commerce Act which provides an express obligation to provide incentives and avoid disincentives for EDBs to invest in energy efficiency and demand side management as part of the lines service. The IM discussion on emerging technology provided clear direction for how EDBs should be considering emerging technology for their businesses.
- In this respect, consistent with the above there is a legitimate need for EDBs to trial and learn from the impact of technology that can have a profound effect on the design and architecture of networks. Without such capability EDBs may only speculate about the resulting impact of change.
- At the same time, we caution the Commission from its expectation of continuing to make changes to the Part 4 framework or policy settings. Continuous changes to the Part 4 framework is contrary to the Commerce Act which constructed the IMs with the express purpose of providing certainty to consumers and suppliers in relation to rules, requirements and processes.
- Whether policy settings do need changing is a matter that is most appropriately addressed through legislation. We do have reservations about policies limiting the "rate of diffusion" of new technology especially as noted by Professor George Yarrow, "diffusion issues tend, however, to be relatively neglected in public policy" – from *Adaptation in Regulatory Policy with Specific Reference to Energy Networks*
- The matter of emerging technology is creating a volume of work with no end. The Electricity Authority's Innovation Participation Working Group is also being tasked with inquiring into the use of new technologies by networks.
- This is one such matter where the industry would benefit from a clear delineation of responsibility between the independent regulators. Otherwise there is a clear risk of double jeopardy, unclear statutory mandates and conflicting feedback to industry.

# STAKEHOLDER ENGAGEMENT AND THE INFORMATION REQUEST

- Vector has considerable experience assessing the impact emerging technologies pose for asset management. We are also a pioneer in New Zealand of using new technologies to address network needs. Accordingly, Vector is willing to impart and share our learnings in this space with the Commission.
- As discussed above, we recommend the Commission consider stakeholder engagements prior to issuing its statutory information requests. This will assist with ensuring the Commission asks for the right information that is proportionate to its learning interests as opposed to requesting unnecessary information which will create significant effort.
- We also note any section 53ZD information request will be actioned by the same personnel involved with the preparation of annual electricity information disclosure (EID) filings. Accordingly, we encourage the Commission to limit the resourcing effort required to respond to this ad-hoc request by minimising the overlap with EID.
- Any questions in relation to this response or on Vector's interests in emerging technology, please contact Richard Sharp on: (09) 978 7547 or [Richard.Sharp@vector.co.nz](mailto:Richard.Sharp@vector.co.nz)

