Orion

2 July 2021

Re: Infrastructure for a better future

Introduction

Orion owns and operates the electricity distribution network that provides power to central Canterbury. As one of the largest electricity distribution networks in New Zealand, we cover remote rural areas, regional towns and the city of Christchurch.

Our network extends over 8,000 square kilometres across central Canterbury from the Waimakariri River in the north to the Rakaia River in the south. We deliver electricity to more than 207,500 homes and businesses.

Orion welcomes the opportunity to provide feedback on the New Zealand Infrastructure Commission document titled "Infrastructure for a better future".

We agree with the following key points made in the paper;

All decision making about infrastructure must be guided by the principles of the Treaty of Waitangi and that there is an obligation to partner with Maori.

That years of under-investment and a growing and ageing population is putting pressure on the country's infrastructure.

- There is a significant gap between the infrastructure that we need and what we can afford.
- We must utilise our existing infrastructure better.
- The future of our planning needs to be a step change from what we do today.
- Delivery of the infrastructure for the future needs to be resilient to stresses and shocks that can result due to change eg in climate change initiatives that increase need for infrastructure.

General comments on the three main action areas;

1 **Building a Better Future**

- In order to prepare our infrastructure for climate change, Regulators will need the mandate to include this in their considerations and revenue assessments e.g. Commerce Commission, Infrastructure Commission.
- We support partnering with Maori and recommend investment to build capacity and capability within Runanga to enable this to have optimum positive impact and lasting effect.

2 **Enabling Competitive Cities and Regions**

- Electricity Distribution Businesses will need access to relevant data and will need to ensure that there are processes to provide EDBs with insight about the forecast quantity and timing of infrastructure, transportation shifts and housing. This is vital to ensure coordination and appropriate planning by them to deliver what is in the long-term interest of the customer and our communities.

[redacted]

3 Creating a Better System

- Authorities who plan housing and roading development need to consider existing electrical distribution infrastructure and the implications of their planned works on and near this. This includes where existing infrastructure exists and may be underutilised or needs to be relocated.

General comments on the three main action areas;

1 Institutional and Governance Reform

- We agree that better integration and coordination between local and central government infrastructure functions will significantly improve decision making, both streamlining and making efficient decisions on planning, funding, and delivery.

2 Getting the Price Right

- Energy affordability is a key consideration to the future of the electricity supply model along with the balance of that to security and sustainability.
- The community will continue to want a reliable and resilient service and may wish to contribute to this from a system perspective. However, customers are also willing to pay for good environmental outcomes.
- The trade-offs within the electricity energy trilemma (equity, security of supply and sustainability)will be challenging. Managing peak demand is one way of achieving this as it optimises the use of our electricity infrastructure, before having to build more and access to the controllable aspects of appliances (such as EV chargers) will Enable better use of demand management as a tool. Sending the right price signals is another way to influence consumer behaviour, however the transition to a model that includes such price signals will need to be managed carefully.

It is important to recognise that an infrastructure built carries an embodied carbon 'cost'. Therefore any steps or governance to incentivise the optimal use of built infrastructure is a vital part of any infrastructure strategy.

3 Supporting Housing Supply

- We support a consistent approach to national planning rules being standardised to reduce the fragmented approach to district planning rules. It is important that any new housing should incentivise as a minimal, the optimal energy efficiency of the building envelope.
- We believe that support and encouragement of collaboration with EDBs as secondary input to the big picture on this.

4 Supporting a zero-carbon economy and preparing for climate change

We consider that we are the guardians of an important resource - our service is vital to the wellbeing and livelihood of the people and businesses in our region and is vital to the low carbon transition. This responsibility drives us to understand more about the impacts of climate change on our operations, both physical and transitional. It is vital that our planning and adaptation ensures our network and our business can continue to be safe, reliable and resilient while meeting the needs of our community.

Orion Group face a period of significant uncertainty, which demands a new level of resilience and agility in response. Our actions to support the low carbon transition should be focussed, impactful and flexible enough to allow easy change. In order to do this, we also require an enabling and supportive national approach to infrastructure. In particular we require:

1. Cross party and cross government support for shifts in how enabling legislation works together, in order to optimise:

    a. *Deployment and retirement of physical assets* to deliver the transition to a low carbon economy, for example lines or cables – or batteries and solar generation; and
    b. *Digital assets*, for example control software, mapping and modelling software
    c. *Human assets*, to design, deliver, maintain and explain the physical and digital assets and
    d. *The flow of energy use information*, used to support customer behaviour [feedback loops] and optimise pricing to incentivise desired demand behaviour

    e. Behaviour change, which is facilitated by a co-ordinated government approach and assists with management of demand.

2. Distribution

    a. Management of demand for energy – in terms of the amount demanded and the time it is required, through efficiency and behaviour change action, in order to maintain:

        i. availability
        ii. quality
        iii. affordability

3. Generation

    a. Increasing the supply of energy to deliver on demand, both:

        i. Traditional 'linear' generation
        ii. Enabling low emission distributed generation

To provide some context, our FY20 peak demand was 606MW and early indications are that there is up to 340MW of non-renewable load from thermal boilers in the Canterbury region, This figure is yet to be validated and we expect the final figure to be lower, as electric heat pump systems have co-efficiency of performance which will reduce the electricity demanded, but it does give an indication of the nature of the challenge distributors (and the broader sector) face in matching our infrastructure with the scale of demand we are likely to face in the future.

- We agree with the following being enablers to achieve our 2050 net-zero carbon target. As an EDB we are ready to assist the country in achieving these;
    - Electrification of transport and greater use of public transport and active travel (walking, cycling and micro-mobility) will be essential in cities.
    - Cost-effective solutions must be found to decarbonise heating used in industrial processes (such as drying milk powder and smelting steel) and significant investment is needed in the energy sector to meet the growing demand for electricity.
    - The planning system must be enabling of the infrastructure necessary for climate- change mitigation and adaptation.

5 A Digital Future

- We support focus on data and digitisation including cybersecurity.
- We are seeing this challenge in our sector now where access to data and the ability to combine that data with other data for planning insights is being unnecessarily restricted.

In addition, an understanding of the primary charging location of EVs is important for EDB management and decision making with respect to our low voltage networks and for housing planning.

Q1. What are your views on the proposed 2050 infrastructure vision for New Zealand?

- This is an extremely ambitious plan for the infrastructure of New Zealand. It is however necessary for New Zealand to be sustainable, net-zero and efficient in our planning and delivery of the infrastructure required to implement this.

Q2. What are your views on the decision-making principles we've chosen? Are there others that should be included?

- The decision-making principles make sense and will benefit the country if realised. Other considerations should also be that decisions need to be on a "no regrets" basis, timely and consider all options, including non-traditional options.

Q3. Are there any other infrastructure issues, challenges or opportunities that we should consider?

- The time required to fund and deliver infrastructure projects should not be underestimated. As an EDB we are only have funding certainty via revenue allowance for a 5-year regulatory period . This may not be conducive to the fast paced environment expected in the next decade or so given the expectations of electricity as an important enabler as d the country works toward net-zero carbon.
- EDB supply chains rely heavily on overseas partners, and at a time when the world is demanding these same goods, this will further delay our progress unless carefully considered.
- The regulatory environment needs to be agile to allow EDBs to invest for the future to meet demand and recover the investment.

Q4. For the 'Building a Better Future' Action Area and the Needs:

- What do you agree with?
  - We agree with all action areas and needs.
- What do you disagree with?
  - Centralised asset management, this is better to be advisor / supporter than regulator
- Are there any gaps?
  - If not explicit, all funding models should be considered e.g. public private partnerships where foreign companies build infrastructure and NZ pays it off over time, or leases.
  - Energy solutions should be coordinated and in the best interest of NZ Inc.

Q5. How could we better encourage low-carbon transport journeys, such as public transport, walking, cycling, and the use of electric vehicles including electric bikes and micro-mobility devices?

- Better access to fast charging of mobility solutions. The barrier to installation cost should be considered and managed in a coordinated way, as installing this infrastructure is not cheap for the return offered.

- Operate a hub and spoke public transport system

Q6. How else can we use infrastructure to reduce waste to landfill?

- No Comment

Q7. What infrastructure issues could be included in the scope of a national energy strategy?

- Remove consenting delays where infrastructure planned is consistent with a national approach. These delays add cost and impact on deliverability in a rapidly moving environment. The bearer of these additional costs are the customers that the infrastructure serves.

Q8. Is there a role for renewable energy zones in achieving New Zealand's 2050 net-zero carbon emissions target?

- Yes

Q.9. Of the recommendations and suggestions identified in the Ministry of Business, Innovation and Employment "accelerating electrification" document, which do you favour for inclusion in the Infrastructure Strategy and why?

- Acceleration of electrification of process heat will be necessary
- Innovation and Building capability
- Support of renewable generation applications

Q10. What steps could be taken to improve the collection and availability of data on existing infrastructure assets and improve data transparency in the infrastructure sector?

- Promotion of the benefits that will come from this
- Setting up of a national database with rules around access and use of data, specific to the efficient and economic building and operating of an electricity network for the long-term benefit of customers.
- We need open access to data such as retailer owned smart meters at the home (avoid duplication of investment).
- Consider EDB access to EV data and street level location to assist with infrastructure decision making on low voltage networks.

Q11. What are the most important regulatory or legislative barriers to technology adoption for infrastructure providers that need to be addressed?

- The cost involved in investing in technology either via adoption or facilitation needs consideration as current model do not have an immediate benefit where the need is not currently there (e.g. seeding new infrastructure to get to a critical mass).

Q12. How can we achieve greater adoption of building information modelling (BIM) by the building industry?

- This could be achieved through incentivising those that invest in the modelling of the data to provide it to inform the future and as such reduce inefficient investment as modelling will inform need.

Q13. How should communities facing population decline change the way they provide and manage infrastructure services?

- No comment.

Q14. Does New Zealand need a Population Strategy that sets out a preferred population growth path, to reduce demand uncertainty and improve infrastructure planning?

- No comment.

Q15. What steps can be taken to improve collaboration with Māori through the process of planning, designing and delivering infrastructure?

- Infrastructure owners could be incentivised through return on investments for authentic and genuine engagement and collaboration with Māori. Don't just say you have, demonstrate you have.

Q16. What steps could be taken to unlock greater infrastructure investment by Māori?

- Emphasise the low risk and intergenerational benefits of infrastructure investments.
- Look to highlight the benefit of this to Māori.
- Partnerships will generate investment and build capability.

Q17. What actions should be taken to increase the participation and leadership of Māori across the infrastructure system?

- The infrastructure industry needs to be seen as an attractive option for both engagement and careers.
- The establishment of positive discrimination targets for Māori involvement / engagement.

Q18. For the 'Enabling Competitive Cities and Regions' Action Area and the Needs:

- What do you agree with?
- What disagree with?
- Are there any gaps?
    - No Comment.

Q19. What cities or other areas might be appropriate for some form of congestion pricing and/or road tolling?

- No Comment.

Q20. What is the best way to address potential equity impacts arising from congestion pricing?

- No Comment

Q21. Is a 10-year lapse period for infrastructure corridor designations long enough? Is there a case for extending it to 30 years consistent with spatial planning?

- 10 years is too short for a plan that should consider out to 2050 and beyond. As a minimum, 30 years is required to ensure that effective and efficient planning of infrastructure projects can take place.

Q22. Should a multi-modal corridor protection fund be established? If so, what should the fund cover?

- No Comment.

Q23. What infrastructure actions are required to achieve universal access to digital services?

- Critical infrastructure should be guaranteed access to digital platforms as priority to private sector.
- Full access to digital platforms, with seamless transfer between systems in different geographic regions should be a priority. Location should not be a barrier to someone being connected digitally.
- Remote working incentives for professionals will keep people living in the rural areas? Rural communications upgrades will facilitate this.

Q24. For the 'Creating a Better System' Action Area and the Needs:

- What do you agree with?
- Procurement needs to be consistent and not lumpy in order to match resource to projects and reduce costs.
- What do disagree with?
- Integration is not necessary if closer collaboration can deliver the outcomes.
- Are there any gaps?
- Capabilities development to deliver complex infrastructure projects at pace.

Q25. Does New Zealand have the right institutional settings for the provision of infrastructure?

- One of the factors driving future development is the ability to have sufficient scale to deliver an equitable electricity distribution system to all communities – this could require structural reform or a step change in collaboration in our industry.

Q26. How can local and central government better coordinate themselves to manage, plan and implement infrastructure?

- No comment.

Q27. What principles could be used to guide how infrastructure providers are structured, governed and regulated?

- Avoid centralisation of providers.
- Local knowledge and interests are useful.
- Open Collaboration encouraged.

Q28. What steps could local and central government take to make better use of existing funding and financing tools to enable the delivery of infrastructure?

- No comment

Q29. Are existing infrastructure funding and financing arrangements suitable for responding to infrastructure provision challenges? If not, what options could be considered?

- Yes

Q30. Should local authorities be required to fund depreciation as part of maintaining balanced budgets on a forecast basis?

- No comment.

Q31. What options are there to better manage and utilise existing infrastructure assets?

- Demand management remains a good option for electricity distribution.
- Peak charging to enable customer choice.
- Access to data would enable better decision making around planning and operation.

Q32. Are there benefits in centralising central government asset management functions? If so, which areas and organisations should this apply to?

- Only where it can be demonstrated that the asset owner is not capable of performing their own asset management at a high level and responsibly. Upskilling the existing asset management capability would also deliver benefits.

Q33. What could be done taken to improve the procurement and delivery of infrastructure projects?

- Within the electricity sector, standardisation of equipment and delivery standards could deliver lower cost to customers.
- Long term planning and communication to delivery partners develops a strong and consistent pipeline of work that is carefully planned, not lumpy and will see efficiency in pricing.

Q34. Do you see merit in having a central government agency procure and deliver infrastructure projects? If so, which types of projects should itcover?

- Not within the electricity distribution sector.
- Possibly those of national significance, such as large roading projects crossing multiple regional areas, large scale generation.

Q35. What could be done to improve the productivity of the construction sector and reduce the cost of delivering infrastructure?

- More sharing of knowledge on success and failure to generate learnings in pursuit of efficiency.
- Reduce compliance costs for delivery of critical infrastructure.

Q36. What components of the infrastructure system could have been improved to deliver effective stimulus spending during the Covid-19 pandemic?

- The regulatory model binding electricity distribution infrastructure spend, did not encourage nor enable an electricity business to speed up projects or deliver early on projects in the wider interest of NZ inc workforce. This could have been changed to encourage infrastructure spend and to lift employment rates.

Concluding remarks

Thank you for the opportunity to provide this feedback and information. We do not consider that any part of this feedback is confidential. If you have any questions please contact [redacted] (GM Infrastructure), [redacted] email [redacted]

Yours sincerely

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General Manager Infrastructure