

Submission

to

**Finance and Expenditure
Select Committee**

on

Water Services Entities Bill

July 2022

1. Introduction

1.1 Communities 4 Local Democracy - He hapori mō te Manapori ("C4LD") is a coalition of like-minded territorial and unitary local authorities formed to develop and propose a set of reforms to Three Waters policy settings that will deliver similar outcomes to those proposed by the Government whilst respecting community property rights and local voice.

1.2 The 31 participating councils are:

1. Far North District Council;
2. Kaipara District Council;
3. Whangarei District Council;
4. Matamata-Piako District Council;
5. South Waikato District Council;
6. Thames-Coromandel District Council;
7. Waipa District Council;
8. Kawerau District Council;
9. Opotiki District Council;
10. Whakatane District Council;
11. South Taranaki District Council;
12. Central Hawke's Bay District Council;
13. Napier City Council;
14. Wairoa District Council;
15. Horowhenua District Council;
16. Manawatu District Council;
17. Ruapehu District Council;
18. Tararua District Council;
19. Masterton District Council;
20. Upper Hutt City Council;
21. Marlborough District Council;
22. Grey District Council;
23. Westland District Council;
24. Ashburton District Council;
25. Christchurch City Council;
26. Hurunui District Council;
27. Kaikoura District Council;
28. Mackenzie District Council;
29. Timaru District Council;
30. Waimakariri District Council; and
31. Waimate District Council.

1.3 Taken together, C4LD participating councils democratically represent approximately 1.3 million people.

1.4 All participating councils are the current owners of Three Waters assets on behalf of their respective communities. These assets have been bought and paid for by these communities over many generations. In all cases, C4LD participating councils wish to retain meaningful control and influence over the property that they own on behalf of their communities. The Water Services Entities Bill (“the Bill”) before the Select Committee strips our communities of these rights. It also will lead to the serious deprivation of communities’ rights to participate democratically in the development and enhancement of the four well-beings (social, economic, environmental and cultural). The well-beings are critical to support thriving sustainable communities locally, regionally, and nationally. A key concern for C4LD is the loss of effective local influence and control inherent in the model set out in the bill.

1.5 To be clear, C4LD supports reform of the Three Waters sector. Our disagreement with the Government is centred on its approach to asset reconfiguration in the sector. We do not disagree with achieving appropriate health and environmental outcomes nor do we disagree with ensuring local iwi and hapū have appropriate input into Three Waters decision-making at a local level.

2. Recommendations

2.1 C4LD has one primary and two secondary recommendations to make to the Select Committee. They are as follows:

Primary Recommendation

2.2 C4LD opposes this Bill and recommends that it not proceed any further.

Secondary Recommendations

“Establishment Date”

2.3 If the Bill proceeds, C4LD recommends that the “establishment date” either be simply 1 July 2024 or be the earlier of either 1 July 2024 or a date set by Order in Council provided that such an Order in Council occurs after the date of the General Election that follows the 2020 General Election (this phraseology is to cater for the unknown date of the next General Election).

Stormwater

2.4 Additionally, and if the Bill does proceed, our other secondary recommendation is that the scope of the Bill be confined to drinking water and wastewater assets and that stormwater assets remain with territorial and unitary authorities.

2.5 If stormwater is to be included, then the Select Committee should amend the Bill to allow for the establishment of bespoke council by council pathways for this transfer and include a clear definition of “stormwater services and assets.”

2.6 **A delegation from C4LD wishes to appear before the Select Committee to speak to its submission.**

3. C4LD Advocacy

3.1 As noted above, C4LD supports appropriate reform of the Three Waters sector. Consequently, C4LD recognised from the outset that simply saying “no” was not enough and that there was an obligation to develop a set of alternative policy proposals that would advance a constructive reform agenda but in a manner that meaningfully respects community property rights and local voice. Our approach throughout has been to be constructive to obtain a durable and bi-partisan approach to Three Waters reform. Even now we are willing to partner with the Government to achieve that goal if the Bill before the Select Committee was paused to enable that to occur.

3.2 C4LD engaged water regulatory infrastructure experts Castalia to provide that advice. Castalia has a 40-year history as the world’s preeminent advisors on reform in the water sector. Castalia is headquartered in New Zealand and has a global presence. Castalia is expert in the major institutional structures for water (French, British, and US), and has advised on more than 300 water projects in over 96 countries. Castalia’s advice in 2021-22 ultimately resulted in a set of material that was presented to the Minister and other political parties, and in a substantive submission on economic regulation in the Three Waters sector. Additionally, the Government and each Member of Parliament was sent a letter outlining our approach. As background C4LD attaches:

- a. Its presentation to the Minister of Local Government dated 4 April 2022 (**Appendix 1**);
- b. Its letter to the Government dated 10 April 2022 (**Appendix 2**);
- c. Its submission to the Ministry of Business, Innovation and Enterprise on economic regulation dated 20 December 2021 (**Appendix 3**); and
- d. Its letter to Members of Parliament dated 26 April 2022 (**Appendix 4**).

3.3 In addition to the above, C4LD has presented its position to all main political parties and, at the Minister’s invitation, C4LD presented to the Ministerial Working Group on Representation, Governance and Accountability. These presentations reflected the documentation appended to this submission.

3.4 As this material illustrates, C4LD’s alternative set of reform proposals are credible and supported by independent expert analysis.

3.5 The decision for the Select Committee is whether either to support C4LD's reasonable alternative reform package, or to acquiesce in the expropriation without compensation of assets owned by the local communities of New Zealand.

4. Critique of the Government's Case for Change

4.1 Attached as **Appendix 5** is a report to C4LD from Castalia that sets out the analytical and policy flaws which underpin the reform model set out in the Bill. We encourage Select Committee members to read the full report contained in **Appendix 5**. However the key points are summarised below.

4.2 There are five key flaws in the Government's proposal, namely:

- i. The belief that massive investment is needed in New Zealand water services. Unfortunately, the analysis it relies upon is flawed, as numerous case studies illustrate. These are set out in section 2 of **Appendix 5**;
- ii. There are high risks of higher water charges. This is because the Government's claimed cost savings are highly implausible, and its institutional structure will be ill-suited to managing costs. This is outlined in section 3 of **Appendix 5**;
- iii. Critically, the proposed water service entities will be unaccountable to the public and communities of interest, which undermines their long-term sustainability. This is addressed in section 4 of **Appendix 5**;
- iv. The reforms also increase fiscal risk because the Crown is providing a fiscal backstop for the four water service entities who will become some of the largest corporates in New Zealand. Given the weak accountability framework, the risks are elevated and it is possible that the Crown takes a more direct governance interest in the entities over time, further weakening local involvement (as has occurred overseas where similar reform models were experimented with). This is addressed in section 5 of **Appendix 5**; and
- v. Finally, because of the Government's critical process flaws, available alternative reform options were not properly considered. Moreover, the evidence base the Government used was skewed towards a high-risk reform option. This is addressed in section 6 of **Appendix 5**.

Claimed capital investment amounts likely to be biased and unreliable

4.3 Investment estimates are difficult over 30 years. All stakeholders, including C4LD, acknowledge that additional investment is needed in the water sector. However, the Government's estimates are highly likely to be biased and overstated. This is because only a

single point of reference (Scotland) is used to determine what expenditure is needed for New Zealand.

4.4 The Government hired the Scottish water regulator Water Industry Commission for Scotland (“WICS”), to carry out the analysis. WICS uses a top-down approach using Scotland as its comparator rather than using the bottom-up estimates by the 67 councils (and council-controlled organisations like Watercare) for needed capital investment. Scotland has a very different urban geography with closely linked towns and cities, compared to New Zealand with a highly urbanised population but long distances between its towns and cities. Scotland is, therefore, an inappropriate comparator (see Figures 2.3, 2.4 and 2.5 of **Appendix 5**).

4.5 Castalia has carried out case studies of several councils to show the vast gap between WICS’ top-down model and the bottom-up council estimates. Councils widely regarded as having maintained appropriate investment levels and with relatively new assets differ from WICS’ estimates by several orders of magnitude. The likely bias and unreliability of the WICS approach is borne out by the findings of other peer reviewers.

Average household water charge claims are implausible

4.6 The Government’s claims are based on implausible assumptions and faulty modelling that exaggerates the benefits of mega entity reform.

4.7 The Government’s modelling claims that household bills will be significantly higher without reform. To portray the proposed reform in the best possible light, a series of modelling assumptions are used. Ultimately, the WICS advice to the Government claims that the reform will achieve the same level of service with **half** the expenditure than a scenario where councils retain ownership and make no improvements.

4.8 The efficiency assumptions are highly implausible, and not backed by robust evidence. Capex and opex efficiencies are derived from inappropriate comparisons with UK water utilities. Significant capex efficiencies from “economies of scale” are not available in the New Zealand water sector where water services are not physically proximate. Opex efficiencies above 50 percent are not plausible. The Government has promised that all operational staff in council organisations will be retained and bespoke arrangements made for those in management positions, and the outsource provider market is already competitive.

4.9 Further assumptions exaggerate the benefits of the mega-entity reform. The modelling assumes additional efficiencies that are not justified. These seemingly innocent assumptions further distort the comparison between the mega-entity reform and a council-owned model.

Mega entities will have poor accountability to the public

4.10 Accountability to the public is important because water services are natural monopolies and essential for community wellbeing. The typical ways that customers hold a service provider

accountable are not available. Unfortunately, the complex governance structure chosen for the mega entities undermines accountability to the public and key communities of interest. The Government's advisors have added more command-and-control mechanisms to the mega entity model which are likely to complicate governance, rather than improve accountability to consumers and communities.

4.11 Local variability matters in water services. Climate change will have different impacts in different areas. The definition of "resilience" depends on local geographies and demographics. Water sources and wastewater treatment options are different between different parts of the country. This means water services need to be responsive and adaptable to local needs.

4.12 The mega entity model is also ill-suited to interacting with economic regulation. Unfortunately, the Government has not advanced the design and regulatory settings for the proposed economic regulator ahead of implementing its reform proposal.

Mega entities significantly increase Crown fiscal risk

4.13 The proposed reform will create four of the largest firms by asset value in New Zealand. The Crown will provide a fiscal backstop under the proposed reform model, according to Standard & Poors' latest report to the Government. Significant risk will be transferred to the Crown without the typical control and accountability mechanisms.

4.14 The mega entity borrowing programmes will ultimately be the Crown's responsibility if there is any risk of default. The complex accountability mechanisms mean the Boards of the mega entities will have multiple 'masters'. Management will have multiple accountability documents, including various important socio-cultural obligations that need to be balanced against cost efficiency and maintaining minimum service levels. This creates room for mismanagement or worse, compared to a more straightforward council-owned, corporate state-owned enterprise or Crown Entity model.

4.15 Council debts are effectively quarantined from the Crown. Creditors of a defaulting council can appoint a receiver to recover debts via special rates and, ultimately property sales (although no local authority has ever failed in New Zealand). Under the proposed mega entity model, the Crown will have a clearer obligation to step in. Therefore, it is conceivable that council and Iwi influence over the mega entity governance could be diluted in future were the Crown to ever have concerns about the mega entities' financial health. Indeed, central government stepped in to assert greater control occurred after similar mega reforms were undertaken in England and Wales in 1972 (see paragraph 4.16 below).

4.16 In other words, a possible outcome of these reforms, once the increased Crown fiscal risk is made apparent (for example, during a period of high interest rates and significant debt repayment obligations), is that the Crown directly intervenes in the governance and management of the entities, since core Crown creditworthiness could be at stake. This is exactly what occurred when England and Wales reformed from hundreds of municipal water entities to ten regional

water boards in 1972. By 1983, with rising debt costs and the poorly performing regional boards, the UK central government stepped in and removed all local authority influence. By 1989, the ten water boards needed new capital and were privatised by the Thatcher government.

4.17 C4LD accordingly observes that the UK reforms ultimately set those UK entities on a track to privatisation. C4LD considers that the Government's current proposals therefore open the door to future privatisation (even if it is some years down the track, as it was in the UK). This is a door which is not open currently.

4.18 The final point under this heading is to note that mega entity "shareholders" have no right to an equity return, directly or indirectly. This means the equity risk and obligation to provide equity capital is unclear. The mega entities will also be financed by the private sector (quite unlike Scottish Water, the model this has been based on, which is financed by the Scottish government). Mega entities will face market interest rates and creditors that assess the creditworthiness in terms of core financial metrics, not socio-cultural or wellbeing objectives.

4.19 The model is untested and globally unique. It is unclear what will happen if the mega entities face rising financing costs and are unable to raise revenues to match costs. This leaves a range of unanswered questions:

- i. Will the councils listed as "shareholders" be obligated to provide additional equity capital? There is a prohibition under the Bill on providing "financial support;"
- ii. Will iwi within the mega entity boundary be able or obliged to provide additional capital? and
- iii. Why would either councils or iwi provide any capital since there is no effective control over governance (and hence management) and no financial return?

Government failed to consider credible alternative options

4.20 The Government prematurely selected a highly risky mega merger option without properly considering credible alternative options. Water services are critical to wellbeing. Policy development to reform water services should therefore follow a standard policy process. Not following standard policy processes creates a risk that the model selected could fail, and lead to reforms that do not meet the agreed public policy objectives, or that produce unintended consequences. The Government did not establish the reform objectives and instead focused on only one among a range of important factors - "scale". This contributed to premature selection of a preferred model following a relatively cursory review of the international experience.

4.21 Presently, C4LD observes, other Government centralisation "reforms" appear to be under stress, most notably the polytechnic reforms into the mega-entity Te Pūkenga. Inadequate understanding of other available policy reform options to those based on "scale," arguably is a contributing factor to this position. It would be a disaster for New Zealand if similar policy failures

were to replicate themselves in the water infrastructure sector because a similarly flawed approach to policy analysis was adopted.

4.22 The Government failed to consider the impact of improving the regulatory regime that enforces minimum national standards for water quality, environmental outcomes and economic performance. The Havelock North Inquiry pointed out that the water quality regime has been deficient for many decades. Increasing scrutiny and improving regulations creates real incentives on local government and councillors to improve water service management and increase investment. This is obvious as the case study of Hastings District Council at section 6.2 of **Appendix 5** illustrates.

5. Introducing a Better Approach – C4LD’s Alternative Reform Proposals

5.1 On 12 December 2019 the Productivity Commission publicly issued its 30 November 2019 report on “Local Government Funding and Financing.” Chapter 11 of that report dealt specifically with the Three Waters sector. The Productivity Commission made the following observations and recommendations:

- i. The Three Waters sector has substantial room for improved performance;
- ii. A key contributing factor to this state of affairs is a poor regulatory framework governing water quality (health and environmental);
- iii. The Government should encourage (but not direct) aggregation and improved governance over 3 Waters service delivery;
- iv. The performance of the three-waters sector would substantially improve by using an approach that:
 - rigorously enforces minimum performance standards; and
 - is permissive about the way councils structure and operate their three-waters businesses;
- v. The Government should consider also having backstop arrangements to deal with councils that fail to lift performance sufficiently to meet minimum health and environmental performance standards; and
- vi. Financial assistance to communities will likely be needed to assist deprived communities meet minimum health and environmental standards. The assistance needs to be designed to avoid rewarding past inaction and instead reward action for sustainably lifting the performance of water providers to these communities.

5.2 These recommendations followed approximately 18 months of analysis and evidence gathering (the inquiry commenced on 16 July 2018). C4LD supports the Productivity Commission’s analysis and recommendations. In contrast, the Government’s Bill departs from the Productivity Commission’s recommendations in significant respects, most notably asset configuration.

5.3 C4LD’s approach to Three Waters reform is built upon, and extends, the Productivity Commission’s recommendations. Accordingly, C4LD’s approach is neither frivolous nor unusual. Most importantly it is based on expert analysis carried out not only by our own contracted experts in water services infrastructure reform, but also on the Government’s own expert body on regulatory and economic reform matters.

5.4 C4LD has taken the Productivity Commission’s approach and produced a 10-point Three Waters reform plan. C4LD’s alternative Three Waters reform plan is centred around this 10-point plan. Its components are:

- i. As a foundation principle, community property rights in Three Waters assets should be both respected and meaningful;
- ii. The Government should agree to amend its current reform process and allow time for the revised approach to be reflected in draft legislation;
- iii. With respect to investment decision-making, asset owners should actively seek to initiate authentic discussions with mana whenua at a local level that consider co-design and partnership arrangements that acknowledge and enable Te Tiriti based pathways at a local and regional level;
- iv. Asset owners agree to commit to meeting health and environmental standards, once regulatory and performance standards are in place, within an appropriate time frame, for example five years;
- v. The regulatory framework should specify a “backstop” provision that identifies a set of circumstances which would justify future Crown intervention if an asset owner was not making acceptable progress towards meeting those regulatory requirements;
- vi. Progress should be reported on annually by asset owners and be benchmarked across the sector;
- vii. To further incentivise sector progress, a formal process might be established that requires an asset owner to prepare a plan that would map out the steps it proposes to take to meet the required standards in a financially viable and sustainable manner;

- viii. A process to finance and allocate funds to areas that will require financial assistance be designed that is national in application and independently administered accordingly to objective and transparent criteria;
- ix. This subsidy scheme will be designed to meet investment shortfalls until such time as sufficient progress has been made. At which point the scheme will cease and asset owners will finance matters on a business-as-usual approach; and
- x. A sector-wide sector best-practice improvement process be created and membership made compulsory.

5.5 C4LD's 10-point Three Waters reform plan is expanded on in the following sections of this submission.

6. Water Services Entities Bill Expropriates Property Rights without Compensation

6.1 Territorial and unitary authorities are body corporates with perpetual succession (s.12(1) Local Government Act 2002). They have the full capacity to carry on or undertake any activity or business, do any act, or enter any transaction and have full rights, powers, and privileges (s.12(2) Local Government Act 2002). In other words, they are legal persons capable of owning property and do so on behalf of their communities (s.12(4) Local Government Act 2002).

6.2 Without question, territorial and unitary councils are the present legal owners of their Three Waters assets (see section 130(3)(c), Local Government Act 2002). They have all the rights and obligations that go with ownership. Under current law, that is only capable of changing if Parliament intervenes to strip owners of those rights and obligations. Clearly, Parliament has the power to do this – Parliament is supreme and sovereign.

6.3 When this occurs, that act of property “taking” is known legally as expropriation. The usual obligation on the expropriating Government is to pay fair compensation to the previous owners of the expropriated property.

6.4 This principle of compensation lies, for example, at the heart of the Public Works Act (see s.60, Basic Entitlement to Compensation, Public Works Act 1981). By way of further example, in 2021 the current Government gave itself the power to expropriate the capacity of private laboratories for COVID related matters. However, in doing so it provided also for compensation to be paid should that power be exercised (see s.11A COVID 19 Public Health Response Act 2020). This was right and proper.

6.5 Under the Bill before the Select Committee, the assets of territorial and unitary authorities are to be compulsorily transferred to the four new water services entities. It is a

compelled transfer not an agreed transfer. Further, the Bill only allocates to these councils a “share” in one of the new water service entities proportionate to their population size, rather than being proportionate to the true value of the transferring assets. This “share” only entitles them to vote on a possible (but highly unlikely) privatisation proposal. ***All other rights and obligations of the present owners of the Three Waters assets are extinguished.*** This is most obviously seen in Clause 166 of the Bill which states as follows:

166 Financial independence

(1) A territorial authority owner (in its capacity as a holder of shares in a water services entity, or any other capacity), a regional representative group, or a regional representative—

- (a) has no right, title, or interest (legal or equitable) in the assets, security, debts, or liabilities of a water services entity (and the constitution cannot 25 confer any such right, title, or interest; and*
- (b) must not receive any equity return, directly or indirectly, from a water services entity; and*
- (c) must not give a water services entity any financial support or capital; and 30*
- (d) must not lend money or provide credit to a water services entity; and*
- (e) must not give any person any guarantee, indemnity, or security in relation to the performance of any obligation by a water services entity.*

6.6 Clause 166 itemises the common and usual rights and obligations associated with ownership. **They will no longer exist.**

6.7 More egregiously, the Bill does not contain a compensation clause such as that used in the COVID 19 Public Health Response Act 2020.

6.8 To avoid paying compensation, the Government is resorting to sophistry when it says that the present owners will continue to own their Three Water assets. This is patently untrue.

6.9 Quite simply, this Bill is expropriating without compensation the assets of councils held on behalf of their communities. This is legislation of the worse kind. The Select Committee should enquire as to why this is occurring contrary to usual practice.

6.10 Finally on this point, the Bill states that the four new waters services entities will be “separate from the entity’s board members, the entity’s employees, the Crown, the entity’s regional representative group, and the entity’s territorial authority owners.” While the Bill states that these entities will be “co-owned” by territorial authorities in the service area, the shares cannot be sold or otherwise transferred for any reason.

6.11 In light of this structure, Standard & Poors find that the Crown is the ultimate fiscal backstop. Since the Government re-designed the entities to have council “shareholders”, Standard & Poors stated in May 2022 “there is an ‘extremely high’ likelihood that the New Zealand sovereign will provide timely support to the new water services entities if they were in

financial distress.” Therefore, Standard & Poors assign the likely credit rating of A-/Stable. This is effectively a guarantee or at least a contingent liability on the Crown’s balance sheet—as Standard & Poors confirms. Standard & Poors’ analysis confirms that these new water services entities will be deemed Crown liabilities (and assets). The only way this will have been able to occur is by this Bill expropriating water infrastructure assets that the Crown does not presently own.

6.12 Having made those points, the question arises as to whether this most egregious of intervention in property rights is necessary to achieve productive reform of the Three Waters sector? Quite simply it is not. An alternative approach is considered in the next section of the submission.

7. An Alternative Reform Model

7.1 Set out in **Appendix 6**, is a report to C4LD from Castalia which identifies an alternative set of reform arrangements that would achieve (consistent with the recommendations of the Productivity Commission) the change that all agree is necessary, ***but which would crucially, respect community property rights and local voice***. The key aspects of **Appendix 6** are set out in this section of the submission, but we would encourage the Select Committee to read **Appendix 6** in full.

7.2 The C4LD reform model is based on setting clear objective and evaluation criteria. It includes core features of sound regulation, improving accountability to the community and improving financing. In order to implement the model, a five-year timeframe with a combination of “sticks” and “carrots” is proposed which would drive higher performance by local government and ensure locally and regionally appropriate models are developed in response to incentives. When the end-state institutional structure is evaluated against the evaluation criteria, C4LD’s model performs much better than the Government’s centralisation model.

7.3 The C4LD reform model has four core elements. These include central government actions and local government actions:

- i. Improving the regulatory framework

The regulatory framework is essential to the proper functioning of the water sector. Effective water quality regulation has been absent for six decades but has already significantly improved with the creation of Taumata Arowai. Effective economic oversight through regulation is also necessary. Finally, environmental outcome regulation is important (but the settings need improvement in New Zealand).

ii. Separate water service accounts

This is a relatively minor and easy fix, however, councils will need to retain separate financial and operational records for council water services to ensure the regulation can be effective.

iii. Ensuring accountability to communities

The success of the public ownership model in meeting the public interest depends on how the entity is governed, and the incentives inherent in the governance design. Direct ownership and operation of water services by councils/municipalities provides strong customer and community accountability.

iv. Improving the financing conditions where necessary

In **Appendix 6**, Castalia finds that the Government's modelled \$97 billion capital expenditure under the mega entity reform ***is financeable for 20 years under the C4LD reform model without increasing water bills or changing council debt caps***. Castalia's modelling matches exactly the WICS mega entity capex programme in terms of timing and amount spent.

Further, a range of financing options are available that would make financing even more accessible. These include revenue bonds, increasing debt caps for the water service provider (for example by achieving balance sheet separation from councils under existing accounting rules through C4LD's council-owned regional enterprise model), or under the Infrastructure Funding and Financing Act 2020.

In other words, right now, there are 20 years to find additional financing models and arrangements without sacrificing any of the capex the Government's modelling predicts is needed. Furthermore, a modest increase in current water rates under C4LD's model would make the capex financeable without needing to change current debt limits. This outcome fundamentally undermines the foundations of the Government's reform proposals.































7.4 So what then are the structural and contractual arrangements that might prevail if the C4LD model was adopted?

7.5 When the C4LD reform is implemented, the end-state for the sector is likely to be a combination of council-owned water entities and council-owned regional entities. An additional option, which exists today in some areas and is allowed for in the Bill before the Select Committee, is a contracting out model. Each of the possible end-states outperform the Government's current proposal. The figure below (taken from **Appendix 6**) shows how on a

rating scale of 1 (dark red) to 5 (dark green), the C4LD reform end-state options perform better on the six performance criteria than the Government's mega entity proposal.

7.6 The six performance criteria are:

- i. Is the water delivery service accountable to customers?
- ii. Does the model improve competence of management and operations?
- iii. Are incentives aligned with objectives?
- iv. Are providers able to reliably raise the finance needed for investment?
- v. Does the model achieve economies of scale and scope?
- vi. Will the model be flexible and adapt to change and new information?

	Council-owned model	Council-owned regional entity	Contractual outsourcing	Mega-entity proposal
 Accountability to customers				
 Incentives of management and governance				
 Management and operational performance				
 Access to financing				
 Scale and scope efficiencies				
 Flexibility for the future				

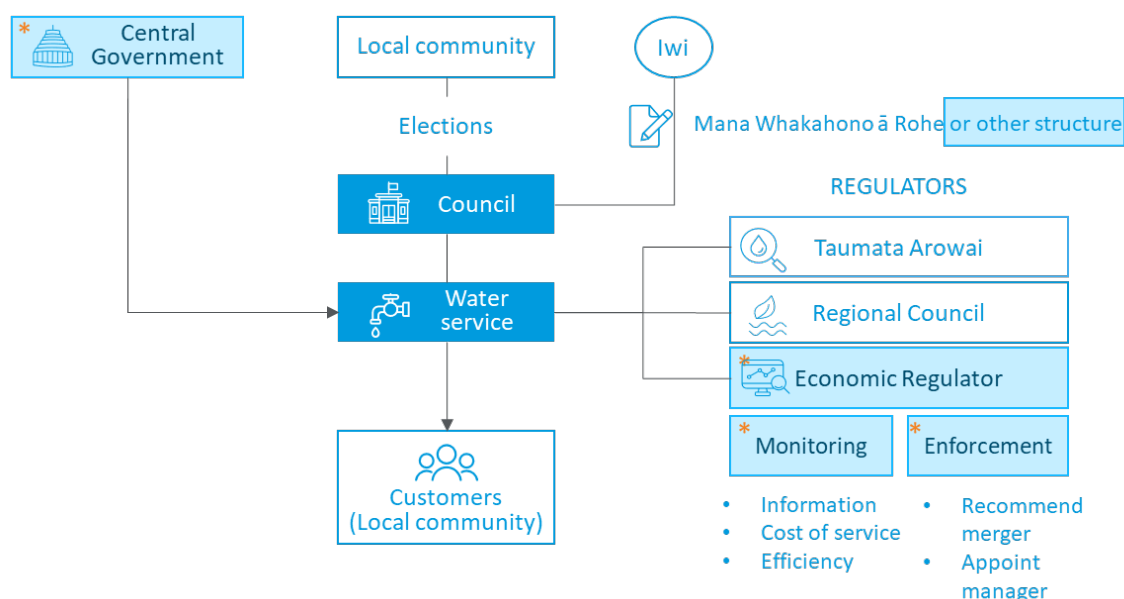
7.7 In summary, the three available models are:

- i. A council-owned entity, with enforced, high-quality regulation;
- ii. A council-owned regional enterprise ("CORE"), with enforced, high-quality regulation; and
- iii. Contracting of services to specialist third-party providers, with enforced, high-quality regulation (see section 5.1.3 of **Appendix 6**).

7.8 Of the three available models, it is C4LD's view that the first two are the most likely to be adopted (allowing this choice is consistent with the recommendations of the Productivity Commission). These models are described further below.

Council-Owned Model

7.9 This model would see that water services remained in the ownership and control of an individual council directly. However, the water service provider would have to comply with the regulatory requirements and consistently demonstrate compliance against the threat of the back-stop regulatory intervention (for not meeting regulatory requirements) which might determine a more appropriate ownership and management model to achieve regulatory compliance. This model is depicted in the diagram below.



7.10 As noted earlier, the council-owned model, where implemented and provided that the regulatory standards are met, scores highly across all six metrics.

Improved accountability to customers and the public interest

7.11 Accountability to customers is generally high with council ownership and responsibility for water services. Elected councillors are responsible for the water service, and therefore can be held to account for poor performance by voters. Local councils also tend to have a sound understanding of local investment needs and idiosyncrasies of local service delivery.

7.12 Regulation will enhance the council-owned model. Information disclosure and benchmarking allows voters to evaluate and compare performance across councils. Economic regulation will also be committed to ensuring consumers' long-term interest. Water quality regulation will ensure water service providers have incentives to provide safe water.

Improved management and operational performance

7.13 Councils with high-performing asset management systems are likely to opt for this model. Where management and operational performance are constrained by size, councils have the option to merge regionally to attract and retain talent or contractually outsource to access world-class expertise.

7.14 Good governance and regulation will enhance asset management performance. With information disclosure regulation and benchmarking, managers will compete on performance. Good governance ensures asset managers are held to account for their performance.

7.15 Clarity of policy priority and enforcement of breaches by the water quality regulator will lift management and operational performance.

Alignment of incentives with objectives

7.16 Regulation and governance are important to ensure incentive alignment in the council-owned model. Fit-for-purpose regulation can incentivise local government-owned water services' management (and staff) to act in the public interest. Governance bodies that are experienced in monitoring and holding managerial performance to account and carrying out good financial governance play an essential role in ensuring incentives are aligned.

Improved access to financing

7.17 Councils at, or close to, debt limits will continue to be constrained by self-imposed debt limits and a desire to remain within LGFA targets. However, the sector will have vastly improved water quality and economic regulation. This will make lenders more comfortable with higher levels of debt for water services. It may mean more can be borrowed without affecting council credit ratings.

7.18 In any case, and as noted earlier, Castalia's modelling shows that the \$97 billion capex modelled by the Government is financeable under the C4LD model for 20 years without increasing water bills or changing any other existing settings (including the LGFA's 2.8 debt to revenue cap). The C4LD model could be financeable over the full 30 year period without increasing water bills by a combination of the following common measures:

- i. A Water Financing Facility to solve genuine affordability challenges using money already committed to the reform (see **Appendix 6**);
- ii. If needed by 2042, relaxing debt caps for the water-related activities of councils. The sector will have vastly improved water quality and economic regulation. This will make lenders more comfortable with higher levels of debt

for water services. It may mean more can be borrowed without affecting council credit ratings;

- iii. Revenue bonds (as opposed to standard general obligations bonds) that are subordinated and tied to water charge revenues; and
- iv. Infrastructure Funding and Financing Act 2020 enables the use of an infrastructure levy.

Available scale and scope efficiencies are maximised

7.19 Councils that are meeting the regulatory standards and have exhausted available regional scale and scope efficiencies will opt for this model. A competitive outsource service provider market can also provide any productivity improvements or future benefits of scale to council-owned entities.

Flexibility to change

7.20 Councils have a range of options to respond to change and new information. They can merge, outsource services, delegate management, and change delivery technology in response to local demands (expressed directly) and with knowledge of local conditions. Councils do not need to get consensus at a national level to try something new.

7.21 Information disclosure and benchmarking will enhance flexibility to change. Councils can learn what works in different situations by comparing one local council's water service to another. Greater transparency will also safeguard councils from flexibility to change being prevented by parochial interests.

Council-Owned Regional Enterprise Model

7.22 The CORE model would see a regional enterprise co-owned by relevant councils in proportion to assets or number of connections. It would require that no single council would own or control 50 percent or more of the voting rights, or otherwise control the organisation for accounting purposes.

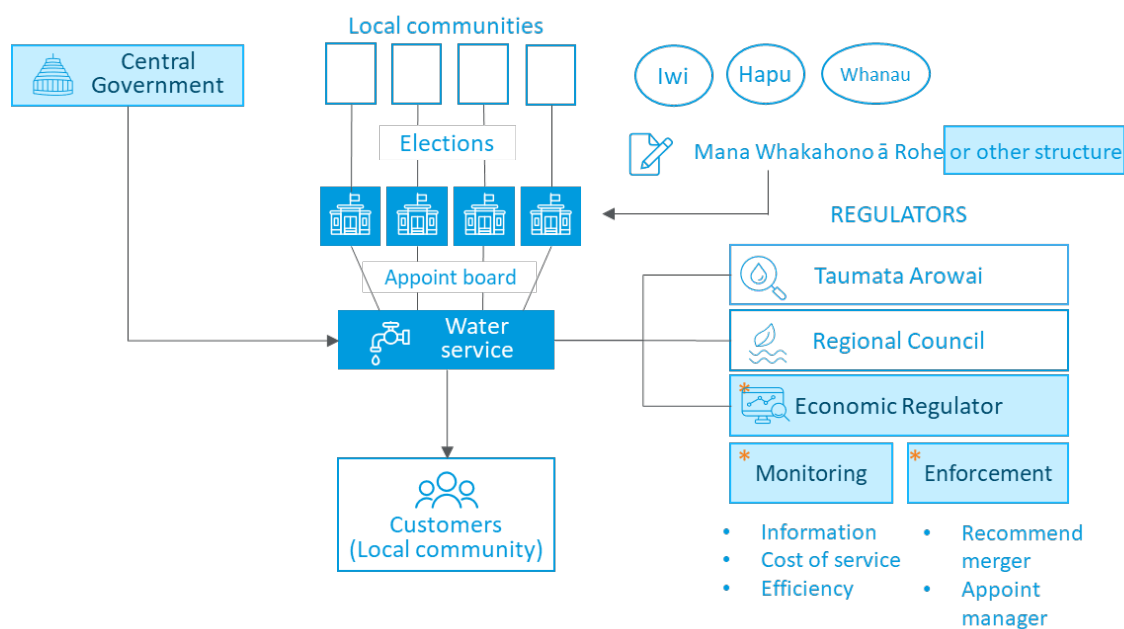
7.23 This model has been proposed in Hawkes Bay (as a result of the efforts of Hastings District Council, Napier City Council, Wairoa District Council and Central Hawkes Bay District Council). Those councils have identified management efficiencies, and social inclusion gains.

7.24 Other regional amalgamation models have been explored for:

- i. Northland (Whangārei District Council, Kaipara District Council and Far North District Council);

- ii. Central and South Canterbury (Ashburton District Council, Timaru District Council, Mackenzie District Council, Waimate District Council, Waitaki District Council);
- iii. Southland;
- iv. West Coast;
- v. Wellington Region (Wellington Mayoral Forum); and
- vi. Canterbury Region (Canterbury Mayoral Forum).

7.25 The analysis for those regional groups was carried out at various levels of sophistication and using differing quality information. Some regional groupings relied on WICS modelling or none at all. However, under the C4LD reform model, high quality and consistent information will be available from the three branches of regulators to show the extent to which regional groupings can improve services by exploiting any available economies of scale and scope, improving utilisation of management and operational staff, improving staff recruitment and so on. Therefore, regional water service merger investigations will have a better evidence base to proceed. This model is depicted in the diagram below.



7.26 Where benefits from merging are available, councils will merge to the CORE model. Provided regulatory standards are met, the regional entity scores highly across all six metrics.

Improved accountability to customers and the public interest

7.27 Accountability to the customer remains high. Elected councillors, accountable to the public, elect the board of the council-owned regional entity.

7.28 Fit-for-purpose regulation will enhance performance. Information disclosure and benchmarking allow voters to evaluate and compare performance. The regulator will be more effectively able to benchmark when there are multiple entities. Economic regulation will also be committed to ensuring the long-term interest of consumers.

Alignment of incentives with objectives

7.29 The council-owned regional entity provides similar outcomes to the council-owned model. For regional entities, it is even more important that there is sound governance and fit-for-purpose regulation to ensure incentives are aligned.

7.30 Governance bodies that are experienced in monitoring and holding managerial performance to account and carrying out good financial governance play an important role in ensuring incentives are aligned. Fit-for-purpose regulation can drive incentives of management (and staff) of local government-owned water services to act in the public interest.

Improved management and operational performance

7.31 Asset management maturity varies across councils. Council water services that struggle to attract and retain staff will merge. A larger asset base will improve recruitment and retention of staff.

7.32 Good governance will improve management and operational efficiency. Regional public companies tend to improve competence in management and operations where those charged with governance can hold management accountable.

7.33 Fit-for-purpose regulation will enhance management and operational performance. Asset management performance will increase as breaches of water quality, environmental and financial performance standards are enforced. Information disclosure and benchmarking will raise the level of asset management maturity. Asset managers will compete in performance and be held to account for poor performance.

Improved access to financing

7.34 Higher rates of borrowing and easier access to finance for investment is likely to be possible under the CORE model. If no council owns or controls 50 percent, there is no balance sheet consolidation under International Financial Reporting Standards (IFRS) accounting rules. The CORE entity could be financed as an independent company.

7.35 The sector will also have vastly improved water quality and economic regulation. This will make lenders more comfortable with higher levels of debt for water services. It may mean more can be borrowed without affecting council credit ratings. Fit for purpose regulation is likely to attract lenders.

7.36 Again, and as outlined above and in **Appendix 6**, the Government's modelled \$97 billion capex is financeable under the C4LD model for 20 years without increasing water bills and maintaining the current settings (debt caps).

Available scale and scope efficiencies are maximised

7.37 Council water operations will merge where the benefit from scale and scope efficiencies are greatest. There are minor scale efficiencies available in procurement, and operating functions and scope efficiencies are possible from integrating regional urban and transport planning.

Flexibility to change

7.38 Regional entities have a good understanding of local conditions to adapt. The effectiveness is reduced somewhat by need to reach a regional consensus.

7.39 Information disclosure and benchmarking will enhance flexibility. With multiple regional entities, entities can learn what works in different situations by comparing one entity's water service to another. Greater transparency will also safeguard flexibility to change being prevented by parochial interests.

8. Reform Timetable

8.1 As **Appendix 5** and **Appendix 6** show, the Government's case for change is irredeemably flawed. It is a house built on quicksand.

8.2 Minor amendments to the Bill before the Select Committee cannot correct that position. ***For that reason, C4LD's primary recommendation is that the Bill does not proceed.***

8.3 A completely new approach built on the C4LD 10-point plan is required. It is acknowledged that this will take extra time, but this position is a product of the flawed policy process that has undertaken. Essentially three years have been wasted.

8.4 Whilst the need to take further time to achieve reform is unfortunate, it is nonetheless important that the underlying reform framework be effective, workable, and durable because of the inter-generational nature of the assets concerned. But the Bill achieves none of these things. This is because a bipartisan approach to reform has not materialised. The Opposition has already publicly committed to repeal and replace the reform outcome that this Bill purports to introduce.

8.5 Notwithstanding the delay in any reform timetable, we should take the time to get things right. New Zealand can do much better than this Bill. The C4LD model provides a framework that delivers enduring and sustainable improvements in the delivery and performance of Three Waters assets and services.

“Establishment Date”

8.6 A timetabling aspect of the Bill concerns the definition of “establishment date” in Clause 1(1) of Schedule 1 to the Bill. Under the Bill the “establishment date” for the new water service entities is regarded as the earlier of 1 July 2024 or a date set by Order in Council.

8.7 However, C4LD considers that the proposal, that will, in effect, strip communities of their property rights in Three Waters assets, is proceeding without a clear electoral mandate. The Labour Party’s 2020 Election Manifesto simply stated: *“Labour will reform New Zealand’s drinking water and wastewater system and upgrade water infrastructure to create jobs across the country.”* This is a high-level statement that in no way justifies the extensive nature of the reform set out in the Bill.

8.8 C4LD supports reform too; just not the Government’s current proposal. Public polling strongly suggests C4LD’s perspective is not an isolated one.

8.9 As noted earlier, both the National Party and ACT have publicly committed to repeal this Bill (if passed) should they be successful at the next General Election. Consequently, the proposal lacks bipartisan support. Accordingly, the framework delivered by this Bill is not durable and is likely to give rise to additional risks for the ongoing safe delivery of water services. Given the long-term regulatory and investment uncertainty this position gives rise to, the Bill should not be rushed, and C4LD makes the following recommendation.

Secondary Recommendation #1

8.10 If the Bill proceeds, C4LD recommends that the “establishment date” either be simply 1 July 2024 or be the earlier of either 1 July 2024 or a date set by Order in Council provided that such an Order in Council occurs after the date of the General Election that follows the 2020 General Election (this phraseology is to cater for the unknown date of the next General Election).

9. Mana Whenua

9.1 Councils throughout Aotearoa-New Zealand have strong and locally varied relationships with mana whenua. Accordingly, C4LD supports the involvement of mana whenua in Three Waters decision-making. To be clear on this point, C4LD has released a position statement on Iwi/Māori partnership in the context of Three Waters reform. This is attached in **Appendix 7**.

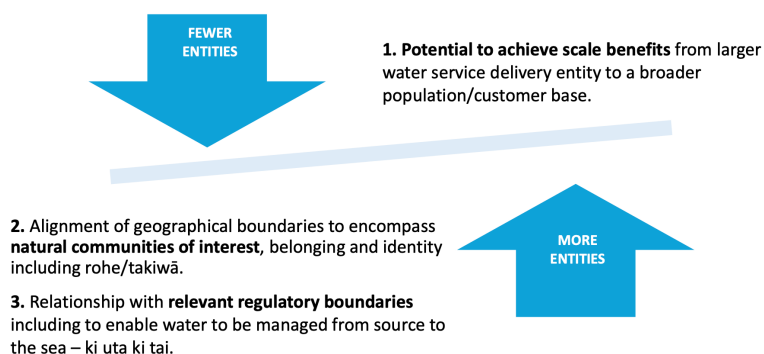
9.2 Under C4LD's approach, the Three Waters assets would remain under community ownership. As part of the regulatory framework, Three Waters asset owners would be required to engage with mana whenua on what role in decision-making best suits mana whenua. Under our approach the spectrum of possible outcomes ranges from co-governance through to consultation and involvement that is Te Tiriti centric between councils and mana whenua on Three Waters decisions. These outcomes are dynamic and evolving and clearly recognises the journey we are all on in terms of acknowledging and enabling Te Tiriti based pathways at a local and regional level. It is a position that allows for the local arrangements between councils and mana whenua to be co-designed locally so that they are more direct and meaningful. The four-entity model (particularly in the North Island) cannot achieve that as there are simply insufficient governing positions for all the many and varied views of all iwi and hapū to be accommodated.

9.3 Iwi, hapū and whanau place significant cultural value in water and waterways. Overall, a paradigm shift of *Te Mana o te Wai* has been introduced across freshwater and three waters policy at all levels of government. Different iwi, hapū and whanau have common values in water and waterways, but also unique perspectives and relationships with particular water sources, waterways, marine environment and other parts of the land and environment that interacts with three waters infrastructure.

9.4 Accountability of the people responsible for governance, management, and operations in three waters to iwi, hapū and whānau is more likely to be achieved where the water service entity boundaries match the boundaries of local communities of interest. A smaller entity design, as proposed by C4LD, ensures greater efficiency and accountability of the governance and management to local communities of interest. Therefore, iwi, hapū and whanau within the smaller entity boundaries are more likely to have their diverse needs and interests matched. Indeed, this is acknowledged by the Department of Internal Affairs ("DIA") in its March 2021 slide decks presented to local government and mana whenua when DIA was considering number and boundaries of the mega entities (see DIA (March 2021), slide deck "March 2021 Local Government and Iwi/hapū engagement"). On pages 29 and 33-35 DIA makes clear that if a smaller number of mega entities is chosen, this is worse for recognising rohe/takiwa and communities of interest. Copies of slides 29 and 35 are below.

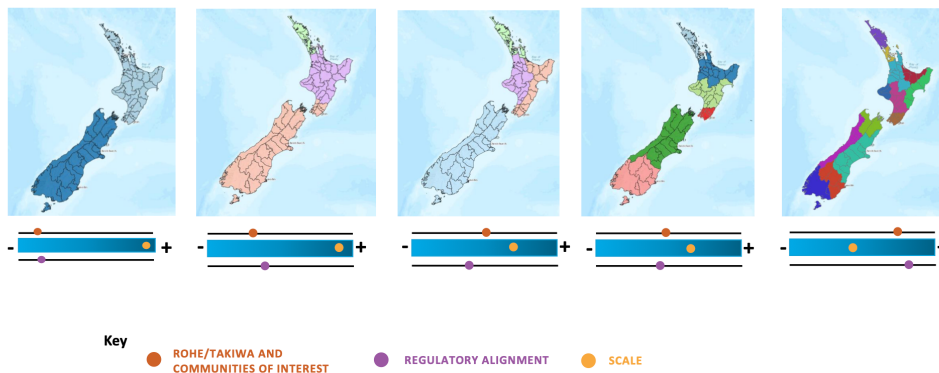
Number and boundaries

Advice to Ministers and the Joint Central/Local Government Steering Committee will consider the following factors:



A range of scenarios are being examined

ILLUSTRATIVE



Three Waters Reform Programme – March 2021

NOT GOVERNMENT POLICY

35

9.5 The Government has made iwi and hapū representation a priority in Three Waters services. It may ensure better outcomes if this is implemented at the local or smaller regional level. C4LD agrees with DIA that the water service entity can better respond to the needs and interests of diverse iwi, hapu and whanau (rohe/takiwa and communities of interest) the closer it is to those communities. In contrast, the four mega entity Regional Representative Groups have to represent 34 (Entity A), 68 (Entity B), 35 (Entity C) and one (Entity D) iwi respectively. At the level of territorial authorities, the number of iwi in each local government area can be as low as one or two, and up to 15 (Rotorua District and Western Bay of Plenty District) or 18 (Auckland Council) (analysis is based on Statistics New Zealand statistics of Iwi and local authority boundaries).

10. Improved Regulation

10.1 A key part of the C4LD 10-point plan is an improved regulatory framework. An effective regulatory regime will provide a strong incentive to asset owners to ensure that investment is made in a timely manner to avoid breaching minimum regulatory standards related to health and the environment.

10.2 Providing a fit for purpose regulatory regime is a key task of Central Government. For decades Central Government has failed in this task, particularly for drinking water where enforcement of minimum standards effectively was absent. Accountability for the overall state of Three Waters infrastructure lies with Central Government as much as it might do with local government.

10.3 Nonetheless progress has been made in recent times. In the drinking water sector this has seen the creation of Taumata Arowai. Taumata Arowai is the regulator of drinking water standards. Failure to meet the required standards is likely now to result in vigorous enforcement. This will provide a powerful incentive on asset owners to keep investment up to date.

10.4 C4LD accordingly congratulates the Government on the creation of Taumata Arowai and fully supports that body provided it remains independent and able to make evidence-based decisions and rules.

10.5 In the environmental space, there is likely more work to be done to ensure that the regulatory regime sends appropriate and timely signals to asset owners to invest appropriately.

10.6 C4LD supports the Productivity Commission's idea of a backstop regulatory intervention power. This would be capable of use if asset owners do not move with appropriate speed to address investment concerns. Such an approach would provide a further incentive to asset owners to reform governance and operational models in the sure knowledge that if they did not, the Crown would have the ability to intervene and force outcomes to occur.

10.7 This is not a novel idea. A similar approach was used in the gas industry to incentivise gas market participants to improve consumer outcomes themselves. If they did not, the Crown reserved to itself the right to further intervene (and a create an Energy Commission) to force better outcomes for consumers. In the event the gas industry responded, and the regulatory backstop was not required (see the former subpart 3 of Part 4A of Gas Act 1992). The regulatory backstop approach was very effective at sending a powerful incentive to asset owners to respond appropriately.

10.8 For further thoughts on how to improve the regulatory framework see section 3.1 of **Appendix 6**.

11. Sector Collaboration, Benchmarking, and Financial Assistance

11.1 To assist in the achievement of improved outcomes in the Three Waters sector, C4LD considers that there is a need for a specialist sector organisation comprised of asset owners and consumer representatives. Membership would not extend to those companies and organisations with current or future commercial interests in Three Waters contracts. Such an organisation would assist with helping councils response to, and implementation of, the new regulatory framework.

11.2 Additionally, and to support the Productivity Commission's recommendation on financial assistance to economically deprived areas, the organisation also would be responsible for identifying those communities that will need financial and other support to reach the regulatory standards in a timely fashion. This organisation would assist also with bringing councils into compliance with the requirements imposed by future economic regulation.

11.3 A financial assistance framework will require both an allocation mechanism (criteria) and a source of funding.

11.4 The transport sector provides a model of what this could look like in practice with a financial assistance which is supported by:

- i. A user pays funding system;
- ii. A set of approved investment criteria (known as a “Financial Assistance Rate”);
- iii. A process whereby investment bids being made through a local or regional planning system with decisions made nationally by a board;
- iv. An approval and administration process to support the Financial Assistance Rate for activities, or contribution to activities, for approved organisations in accordance with any criteria set by the Minister of Transport; and
- v. Variable Financial Assistance Rates to approved organisations based on factors that materially impact on their ability to deliver the required transport outcomes for communities.

11.5 That approach is supported by a Road Efficiency Group which is a collaboration between Waka Kotahi, Road Controlling Authorities (all local authorities and the Department of Conservation) and Local Government New Zealand (“LGNZ”). It is focused on change to transform the sector, implement the findings of the Road Maintenance Task Force and local sector improvement initiatives. These include data quality, asset management, the classification system for the network (ONRC, ONF), levels of service, and benchmarking. Attached are two Road Controlling Authority summary reports which provide some of this information in a format that is of value to decision makers and customers (**Appendices 8 and 9**).

11.6 Using that example, a national competency and skills based board could be established in the Three Waters sector to identify criteria for investment approve the financial assistance to qualifying districts. In addition to asset owners and consumer representatives this could include Crown representatives if the Crown chose to invest also in the reformed water system (for example through reallocation of the announced \$2.5 billion package provisionally to local authorities to assist with transition to the regime established by the present Bill). For the purposes of this section we refer to this new body as the Water Owners and Consumers Board (“WOCB”).

11.7 **Figures 1 and 2** outline two relationship maps which could apply based on the two broad models C4LD is putting forward i.e. a council owned entity and the CORE model. The WOCB would need to have knowledge, experience, and expertise in relation to:

- i. Perspectives of mana whenua, mātauranga, tikanga, and te ao Māori;
- ii. Performance monitoring and governance;
- iii. Network infrastructure industries;
- iv. Asset Management;
- v. Procurement;
- vi. Service Delivery;
- vii. Customer service;
- viii. The environment; and
- ix. Investment decision-making

11.8 The WOCB might have five to eight members; five if local authorities and consumers were on their own, or eight if the Crown was involved. Local authorities would need to agree a method to select the board members and relevant Ministers (Environment, Local Government, and Health) might agree on the Crown appointed board members.

11.9 The WOCB would need to be supported by a small secretariat which would assist the Board to develop an investment framework based on agreed criteria. To meet regulatory standards and timeframes these might include:

- i. A deprivation index;
- ii. Population projections to identify static or declining population/commercial bases which impact on an ability to pay;
- iii. Network condition assessment including timeframe required to meet regulatory standards;
- iv. Support for tourism destinations with peak day pressures and a small number of water connections;
- v. Consideration of current debt and future debt profiles and debt limits; and
- vi. Criteria that would support continuous improvement, benchmarking, and appropriate levels of service.

11.10 Funding for the WOCB and the financial assistance regime might come from a number of sources ranging from consumers (through a connection charge, the Crown by way of grant, or a combination of these.

11.11 In terms of the connection charge option, C4LD understands that the number of connections for the different three waters assets approximately are:

Water	1,742,876
Waste	1,677,912
Stormwater	<u>1,894,271</u>
<u>Total</u>	5,314,059

11.12 A charge applied to water connections is likely to raise substantial funds annually. The quantum would need further evaluation. This of course assumes that this funding model applies. Allocation by the Crown, the already indicated amount of \$2.5 billion to water infrastructure investment is likely to cover financial assistance for some years given the ability of the construction industry to actually deliver on work programmes in addition to business as usual investment (our modelling of which shows can be funded – see **Appendix 6**).

11.13 C4LD recognises that its approach is a form of cross subsidisation. However, it is transparent to consumers with decisions made based on a national assessment of local and regional need and risk. As the quality of the three water system improves the need for financial support to meet standards should decline.

11.14 The Government’s water services entities model also has at its heart a cross-subsidy approach. Funding for the Government’s approach will also be through water prices set by the water service entities but this approach is very likely to be non-transparent to consumers. If subsidies are required, then transparency about their levels should be required.

11.15 Experience in the transport and other sectors has also shown that benchmarking is a critical tool to lift performance as such information disclosure provides an incentive to improve. Council led collaboration of this kind would also support effective economic regulation.

11.16 There are a number of mandatory reporting rules (standards) already approved by the Secretary of the Department of Internal Affairs (see s.261B Local Government Act 2002) which could be built on as they include safety, maintenance, customers (e.g. faults, response times, satisfaction), regulatory compliance, demand management, system adequacy (stormwater). It is critical any measurement has a strong focus on an Iwi/Māori, customer, health, environmental, and economic benchmark approach to levels of service and performance. They also need to drive the effective and efficient delivery of the three waters services.

11.17 the nature of the possible relationships between the various bodies and the regulatory framework is set out below in Figures 1 and 2.

Figure 1

COUNCIL OWNED ENTITY – RELATIONSHIPS MAP

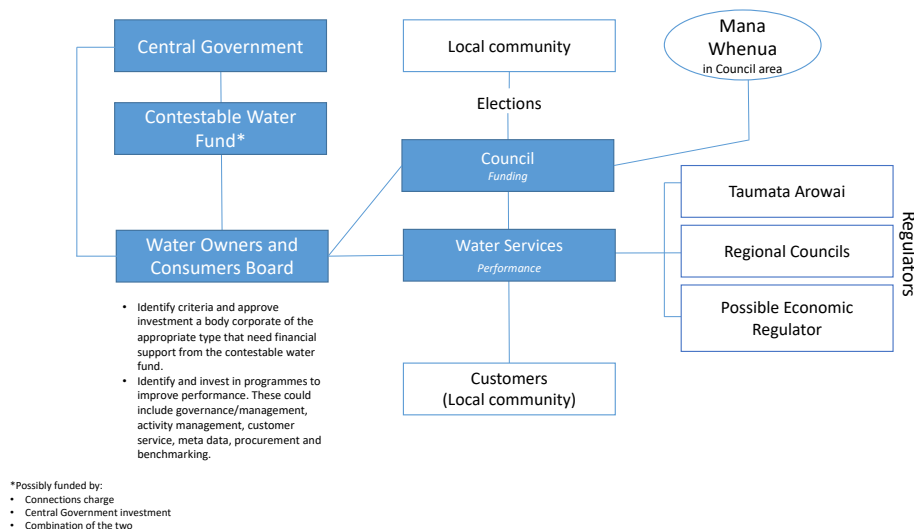
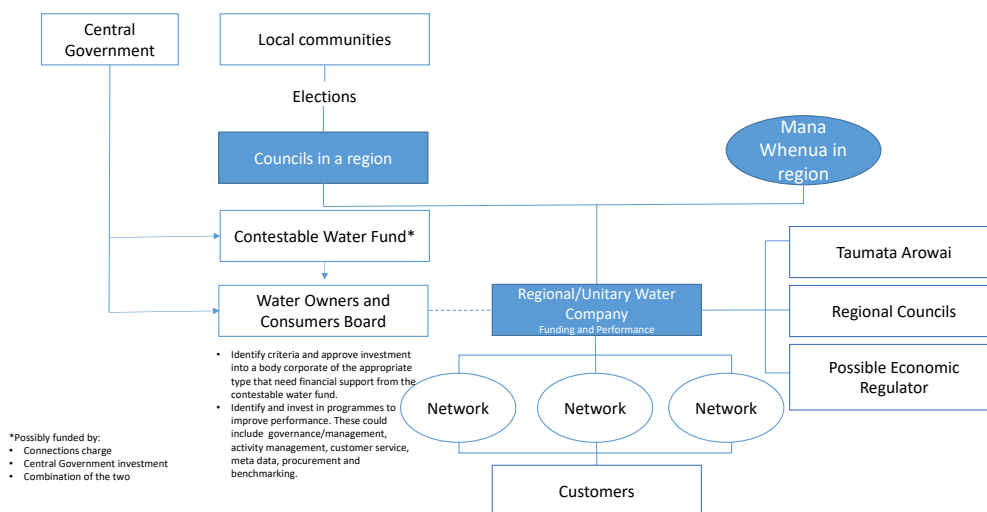


Figure 2

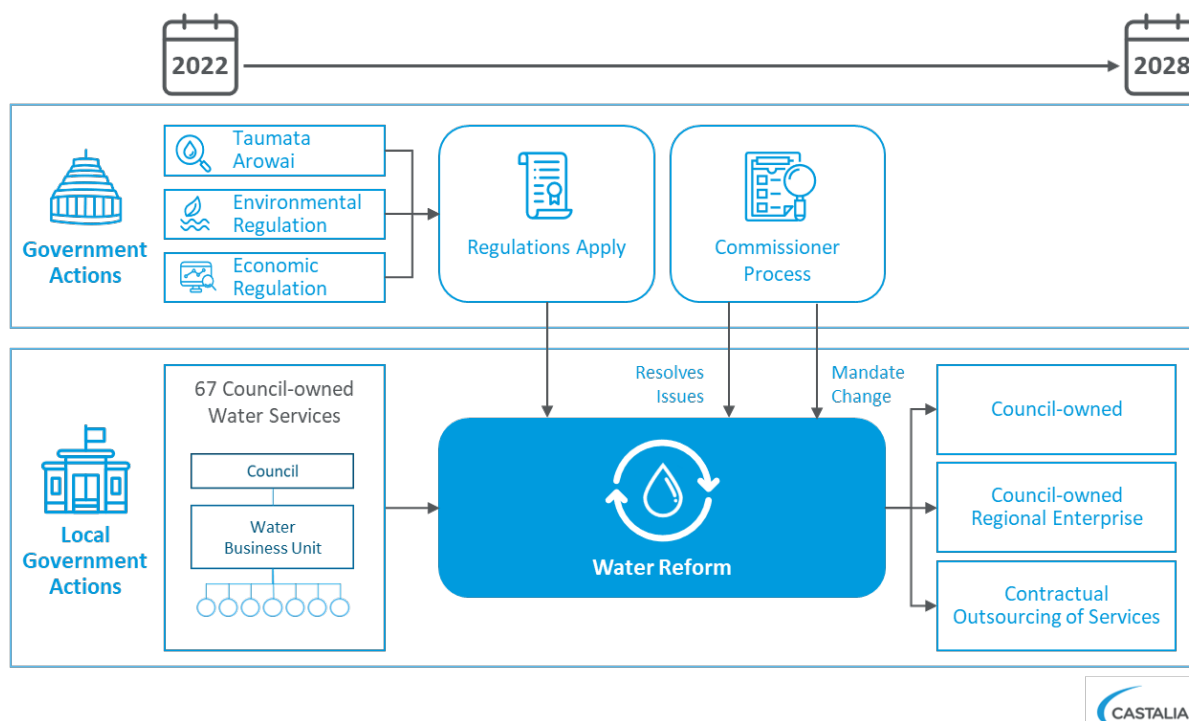
CORE MODEL – RELATIONSHIPS MAP



12. Implementation Process for C4LD Model

12.1 As noted earlier, C4LD supports appropriate reform to Three Waters policy settings. As part of that approach, it is acknowledged that the Government will require confidence that C4LD's approach would result in a meaningful change to Three Waters asset governance and management across New Zealand.

12.2 As noted earlier, the C4LD model can be implemented with a combination of incentive-based policies. The C4LD model will enable \$97 billion of capital investment to be made over 20-30 years by remaining broadly within current institutional and policy settings. To achieve this, a combination of incentives are proposed. These combine penalties for failing to comply ("stick") with financial benefits for meeting minimum standards ("carrot"). The diagram below (taken from **Appendix 6**) illustrates the government actions (top) and the local government actions (bottom). It shows how high-quality regulation by the central government can incentivise councils to reform into stand-alone, council-owned regional enterprises or enter into contractual arrangements to improve water services at the same level of efficiency as the government's reform model.



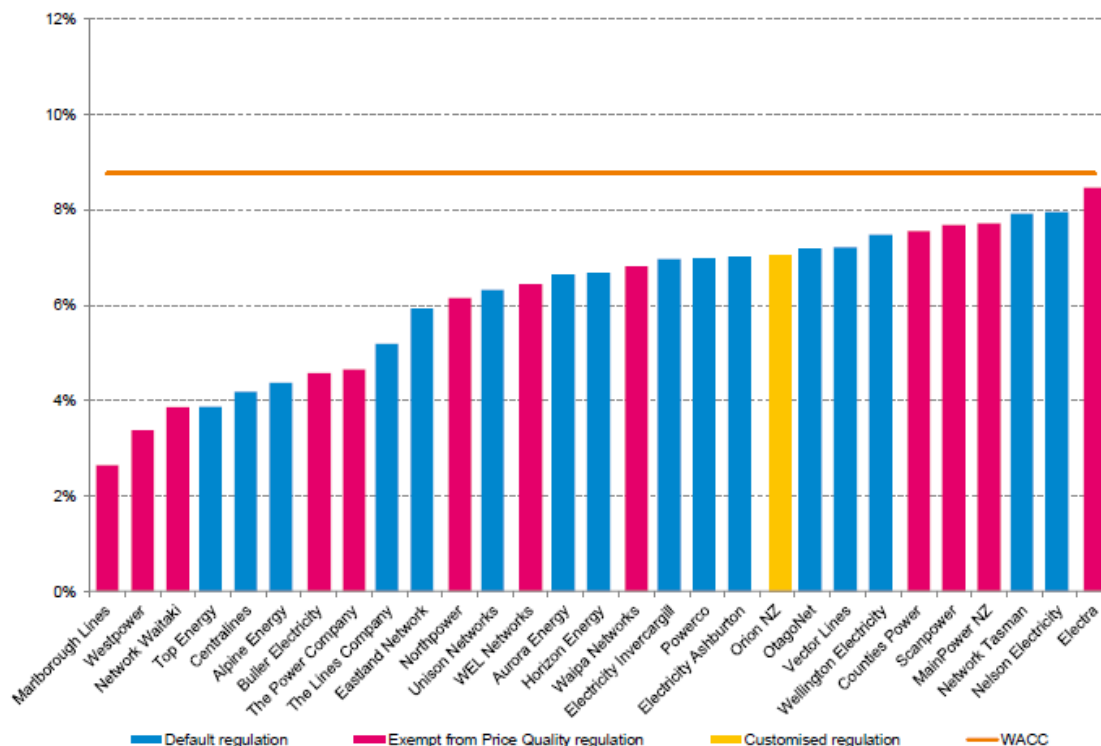
12.3 **Appendix 6** expands on this incentive-based approach.

12.4 Notwithstanding the incentives approach, C4LD accepts that in the current environment the local government sector would need to provide a level of confidence that it was working quickly to achieve appropriate reform to meet the revised regulatory framework. To provide this needed level of confidence, C4LD has looked to the precedent contained in the Energy

Companies Act 1992. That statute outlined a restructuring process for the then owners of electricity lines businesses to reconfigure themselves into a more effective form of corporate governance as part of an overall effort to improve outcomes in that sector. The key point to note is that while the statute required asset owners to prepare, for ministerial approval, a plan to improve governance, the Government did not intervene to strip owners of their property rights as is the case with the present Bill.

12.5 The outcome of this restructuring approach endures to the present day. For example, Orion New Zealand Limited remains a subsidiary of Christchurch City Holdings Limited (89.3%) and Selwyn District Council (10.7%). Orion is a professional and expert body that provides effective and expert governance and management of lines assets in Canterbury. It serves over 210,000 homes and businesses across a 8000 square kilometre area. Orion demonstrates that effective services can be delivered to consumers whilst maintaining community property rights. Many other electricity lines businesses remain in local authority and community trust ownership, delivering returns in line with the privately-owned lines businesses, as the figure below illustrates:

Figure: EDBs' profits compared with 8.77 percent WACC (2013–15)



Source: Government's Electricity Price Review, First Report for Discussion (2018)

12.6 The approach set out in the Energy Companies Act 1992 had several key components most of which could be easily adapted (with modifications – for example to allow for a single council owned model, and to provide for a possible Commissioner to resolve implementation

disputes – see section 4.3 of **Appendix 6**) to apply to Three Waters assets. A possible framework might look as follows:

1. Not later than an appointed, but, reasonable, date each territorial and unitary authority must prepare and submit to the Minister, for the Minister's approval, an establishment plan relating to the creation and/or operation of a Three Waters asset owning entity in respect of the assets that territorial or unitary authority owns;
2. The Establishment Plan might be required, inter alia, to:
 - i. Identify with reasonable precision the Three Waters assets to be vested in the relevant Three Waters entity;
 - ii. Value a Three Waters entity on an appropriate basis;
 - iii. Contain a share allocation plan to the local authority owner or owners;
 - iv. Indicate whether or not any debt securities should be issued by the relevant Three Waters entity to any person on the vesting in the Three Waters entity of the relevant Three waters assets;
 - v. Contain, in draft form, the governing documents in respect of the Three Waters entity;
 - vi. Indicate the time within which the relevant Three Waters assets should be vested in the relevant Three Waters entity;
 - vii. Identify a fair and equitable system for the transfer of appropriate employees from a local authority to the Three Waters entity; and
 - viii. Contain such other details as either the Minister or territorial or unitary authority considers appropriate.
3. The framework should allow an establishment plan to be prepared and submitted jointly by two or more local authorities;
4. The framework should allow for an existing corporate entity to be used if that is appropriate in the circumstances;
5. There should be public consultation by local authorities on the proposed establishment plan;
6. The future financial stability of the Three Waters entity should be a criterion for the Minister to consider;
7. The Minister should have the ability to require a proposed establishment plan to be revised if the Minister is not satisfied with part of the original establishment plan; and
8. There should be enforcement consequences for failing to submit an establishment plan to the Minister by the set deadline.

12.7 C4LD considers that such an approach would deliver to Government the required level of assurance that council owner-led reform would deliver the required level of improvements over time.

13. Stormwater

13.1 Three Waters assets are composed of three asset classes: drinking water; wastewater; and stormwater. Drinking water and wastewater assets are (for the most part) readily identifiable and it is these asset classes on which the bulk of policy work has focused. However, stormwater assets are quite another thing.

13.2 Although this point is likely to be picked up in individual council submissions and in submissions from sector organisations, broadly speaking, the concerns are:

- i. The net benefits of the case for transferring stormwater infrastructure to the proposed new water entities has not been made with sufficient robustness, nor have the implications of doing so been fully understood. Consequently, the proposals for stormwater are under-developed and the scope and impacts are uncertain;
- ii. Stormwater facilities are key parts of a city and districts greenspace and provide significant co-benefits through recreational, ecological and cultural services. Considerable drainage infrastructure is in the road corridor – kerbs and channels and some blue-green infrastructure such as tree pits, rain gardens, and parks and reserves, and swales. This also means that some of the key expertise in relation to stormwater management sits within a council’s parks/planning and transport teams;
- iii. Often a stormwater system is a fully integrated system which includes public and private land, roads, parks and reserves, and waterways, meaning that ownership and management of the stormwater system is complex and fragmented – key owners include council, transport authorities and private property owners. This all makes it very difficult to identify “users” in the same way as other services, and to determine who would drive priorities for flood management under the proposed new structure; and
- iv. Stormwater is intrinsically linked to placemaking and closely connects with a number of other council roles, functions, and services. Many of these involve material overlaps: they serve different functions at different times which may it difficult to immediately transfer.

13.3 If stormwater is to be included in the new regime, then C4LD would (as C4LD understands it at the date of drafting) support LGNZ’s proposal to undertake a staged transition of

stormwater, or to have a “joint arrangement” (between entities and council(s)) to establish a unique transition pathway. It will be important that there is a negotiated approach to the transition, to take into account the individual circumstances of our stormwater assets and service delivery.

Secondary Recommendation #2

13.4 Accordingly, C4LD supports the following recommendations, namely that:

- i. The transfer of stormwater to the four new water service entities should be deferred until full assurance of the feasibility of including stormwater in this model can be provided; or
- ii. If stormwater is to be included, then:
 - Establish bespoke council by council pathways for this transfer; and
 - Include a clear definition of “stormwater services and assets”

14. Conclusion

14.1 The Water Services Entities Bill is poor legislation. In particular:

- i. It expropriates, without compensation, council owned community assets contrary to all principles of law;
- ii. It is widely opposed by communities across New Zealand because it removes local voice in favour of a centralised approach contrary to all principles of localism;
- iii. It is based on data and analysis that is incorrect or, at best, seriously flawed;
- iv. In an asset class that requires regulatory certainty to achieve investment certainty, it has failed to achieve bipartisan support across political parties meaning it will not deliver a durable and sustainable basis for reform; and
- v. Alternative approaches to reform (as described in this submission) could achieve a more durable outcome to the long-term benefit of the country.

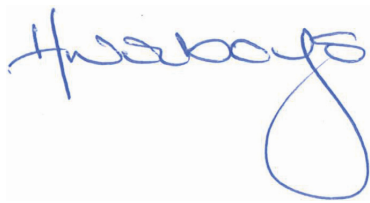
14.2 Accordingly, C4LD strongly opposes the Water Services Entities Bill and its primary recommendation to the Select Committee is that the Water Services Entity Bill not proceed.

14.3 For the reasons described above C4LD’s secondary recommendations are:

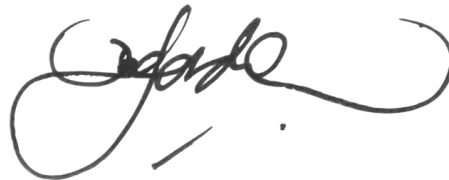
- i. If the Bill proceeds, C4LD recommends that the “establishment date” either be simply 1 July 2024 or be the earlier of either 1 July 2024 or a date set by Order in Council provided that such an Order in Council occurs after the date of the General Election that follows the 2020 General Election;
- ii. That the scope of the Bill be confined to drinking water and wastewater assets and that stormwater assets remain with territorial and unitary authorities;
- iii. If stormwater is to be included within the scope of the Bill, then the Select Committee should amend the Bill to allow for the establishment of bespoke council by council pathways for this transfer and include a clear definition of “stormwater services and assets.”

A delegation from C4LD wishes to appear before the Select Committee to speak to its submission.

Ngā mihi nui,



Mayor Helen Worboys
Chair
Manawatu District Council



Mayor Dan Gordon
Deputy Chair
Waimakariri District Council



Mayor Ash Tanner
Matamata-Piako District Council



Mayor Bruce Smith
Westland District Council



Mayor Craig Little
Wairoa District Council



Mayor Craig Mackle
Kaikoura District Council



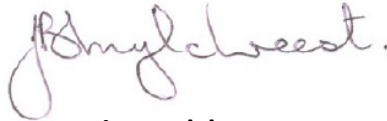
Mayor Craig Rowley
Waimate District Council



Mayor Jason Smith
Kaipara District Council



Mayor Jenny Shattock
South Waikato District Council



Mayor Jim Mylchreest
Waipa District Council




Mayor John Carter
Far North District Council



Mayor Kirsten Wise
Napier District Council



Mayor Lyn Riesterer
Opotiki District Council



Mayor Malcolm Campbell
Kawerau District Council



Mayor Marie Black
Hurunui District Council



Mayor Neil Brown
Ashburton District Council



Mayor Nigel Bowen
Timaru District Council



Mayor Phil Nixon
South Taranaki District Council



Mayor Sheryl Mai
Whangarei District Council



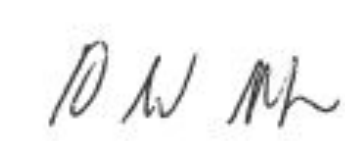
Mayor Tania Gibson
Grey District Council



Mayor Tracey Collis
Taranua District Council



Deputy Mayor Andrew Turner
Christchurch City Council



Cr Brent Muggeridge
Central Hawkes Bay



Mayor Graham Smith
Mackenzie District Council



Mayor John Leggett
Marlborough District Council



Mayor Bernie Wanden
Horowhenua District Council



Deputy Mayor Graham McClymont
Masterton District Council



Mayor Don Cameron
Ruapehu District Council



Mayor Wayne Guppy
Upper Hutt City Council



Mayor Judy Turner
Whakatane District Council



Mayor Sandra Goudie
Thames-Coromandel District Council

Communities 4 Local Democracy - He hāpori mō te Manapori

LIST OF APPENDICES TO THIS SUBMISSION

Appendix 1

- C4LD Presentation to Minister of Local Government

Appendix 2

- C4LD Letter to Prime Minister

Appendix 3

- C4LD Submission on Economic Regulation

Appendix 4

- C4LD Letter to Members of Parliament

Appendix 5

- Castalia – “Flaws in Water Services Entities Bill”

Appendix 6

- Castalia – “Better Water Reform Options”

Appendix 7

- C4LD Position Statement on Iwi/Māori Partnership

Appendix 8

- REG 1

Appendix 9

- REG 2

Appendix 1

C4LD Presentation to Minister of Local Government

Communities **4** Local Democracy
He hāpori mō te Manapori

**Fresh ideas.
Better water.**

3 WATERS REFORM: AN ALTERNATE APPROACH THAT EVERYONE CAN SUPPORT

Presentation to Hon. Nanaia Mahuta,
Minister of Local Government
4 April 2022

INTRODUCTION

- Thank you for the opportunity to meet with you.
- The 31 Partner Councils of Communities 4 Local Democracy representing 1.4 million people, came together to work collectively to find a better way to achieve the health and environmental outcomes that we all desire.
- It is our view that the Government should be specifying the required health and environmental policy outcomes but it should not be micro-designing how to achieve those outcomes.
- The obligation should be on council asset owners, working, partnering, and co-designing with mana whenua, to structure and operate their assets to achieve those outcomes, with clearly understood consequences if they do not.
- This approach would better support local voice and protect community property rights.
- The current set of proposals do not achieve that goal. Opposition parties have publicly committed to repeal them if they become Government. Public polling continues to show widespread dissatisfaction with the proposed set of reforms.
- However, if the Government were open to our alternative approach, Communities 4 Local Democracy would champion that approach standing alongside the Government.
- It is a way to achieve a durable and bipartisan regulatory framework.
- It is not too late to find a middle ground.

PART A ALTERNATIVE MODELS: KEY ASPECTS

WE SUPPORT THE RECOMMENDATIONS OF THE PRODUCTIVITY COMMISSION

1. The 3 Waters sector has substantial room for improved performance
2. A key contributing factor to this state of affairs is a poor regulatory framework governing water quality (health and environmental)
3. The Government should encourage (but not direct) aggregation and improved governance over 3 Waters service delivery
4. The performance of the three-waters sector would substantially improve by using an approach that:
 - i. rigorously enforces minimum performance standards
 - ii. is permissive about the way councils structure and operate their three-waters businesses
5. The Government should consider also having backstop arrangements to deal with councils that fail to lift performance sufficiently to meet minimum health and environmental performance standards
6. Financial assistance to communities will likely be needed to assist deprived communities meet minimum health and environmental standards. The assistance needs to be designed to avoid rewarding past inaction and instead reward action for sustainably lifting the performance of water providers to these communities

ORGANISATIONAL DESIGN

Jointly Owned Council Enterprise

- Protects community property rights and community voice
- IFRS 10 achieves balance sheet separation if no one council holds more than 50% (deals substantially with the Government's desire for balance sheet separation)
- Allows for co-design with mana whenua
- Establishment process potentially subject to ministerial oversight (e.g. through Energy Companies Act 1992 type process to provide comfort to Government)

Single Council Owned Enterprise

- Protects community property rights and community voice
- Would require commitment to a credible financing plan to ensure needed investments proceed
- Allows for co-design with mana whenua
- Establishment process potentially subject to ministerial oversight (e.g. through Energy Companies Act 1992 type process to provide comfort to Government)

Both options were independently reviewed and assessed by Castalia as workable approaches that can address the core policy issues

WORKING WITH MANA WHENUA

- All our members value the importance of developing strong and meaningful partnerships with Iwi Māori for the future of 3 Waters

BUT

- The Government's 'one size fits all' model does not reflect local realities and communities of interest and, importantly, iwi and hapū rohe and areas of interest.
- We believe any arrangements will be more effective if they reflect common local interests, decision-making and build on existing relationships.
- We actively seek to initiate authentic discussions with mana whenua at a local level that consider co-design and partnership arrangements that acknowledge and enable Te Tiriti based pathways at a local and regional level.
- We seek a pause so we can have more time to work on a way forward that works for everyone.

REGULATORY BACKSTOP

- To assist with creating a strong incentive on asset owners to improve outcomes, Communities 4 Local Democracy agree with the Productivity Commission's recommendation to include in the legislative framework a "regulatory backstop" provision
- A regulatory backstop provision requires careful design to take account of consenting and construction timeframes BUT it would require certain outcomes to be achieved by a fixed point in the future
- Failure to achieve the required outcomes would justify further Crown intervention (see for example: former subpart 3 of Part 4A of Gas Act 1992)

BALANCE SHEET SEPARATION

- Where financing requirements necessitate this, then NZ International Financial Reporting Standard 10 delivers the required outcome provided no one council in a regional grouping holds more than 50% of the shareholding in a combined entity
- An Auckland specific regime would require design as IFRS 10 would not work for Auckland
- Where a single council owned model applies, council would have to show a credible financing strategy and if not, would need to move to join a larger collective

FINANCIAL ASSISTANCE TO COMMUNITIES

- Two key aspects:
 - Allocation mechanism
 - Funding source
- Allocation mechanism could be built on principles used to allocate financial assistance (FAR) in transport (not suggesting that this involves Waka Kotahi in any funding allocation role)
- Allocation decisions should support best practice in service delivery
- Allocation regime should be supported by a Road Efficiency Group/One Network Framework type regime for 3 Waters
- Funding could be built on a per connection charge across the country (C4LD has had limited time to design more options but consider this an appropriate model with precedent in other regimes)
- This is a form of cross-subsidisation but it is transparent to consumers and the funding pool is spread nationally rather than regionally

WATER EFFICIENCY GROUP

An owners organisation with a competency based board, funded by a levy on three water connections responsible for:

1. Identifying and approving investment criteria and distribution of funding to three water delivery agencies (identified by the criteria) as having challenges to meet regulatory standards in a suitable timeframe or other reasons. Criteria could include:
 - A high level of deprivation
 - A static or declining population / commercial base which impacts on their ability to pay
 - Condition of the network the timeframe needed to bring it up to a regulatory standards
 - Support for tourism destinations with peak day pressures and a small number of water connections.
 - Would potentially breach borrowing debt limits (LGFA or self improved)
2. Investing in programmes continuous improvement in governance/ management and sector performance these would include activity asset management standards, meta data, procurement, training and development, benchmarking

PART B ASSESSMENT OF WORKING GROUP RECOMMENDATIONS

ASSESSMENT (1)

Shareholding model:

- Does not address the core legislative taking of property rights – “With ownership comes rights, responsibilities and obligations” – Mayor Goff

Accountability to communities and customers:

- Remains weak (despite new sub-committees idea)
- Complex governance arrangement - diagrams in the paper oversimplify what is a messy accountability framework. This will weaken the incentives on management to meet the objectives (safe, resilient, environmentally sound water services at least cost)
- Retains the flawed uniform pricing and cross-subsidy at the level of the whole Water Services Entity

Management and operational performance:

- Likely to be weakened as even more complex oversight

ASSESSMENT (2)

Access to financing:

- Any improvements in access to financing will require **explicit** Crown support.
- Undermines the financing concerns that drives the case for the mega-entity approach
- **Increases** the likelihood of Crown intervention in future since fiscal risk would be directly and explicitly linked to the Crown. England and Wales from 1972-1989 had exactly this issue: Whitehall took over financing and investment decisions to manage Crown fiscal risk, and ultimately privatised the Regional Water Boards into 10 private companies

Diseconomies of scale or loss of economies of scope:

- Fails to address the valid critique that significant economies of scale not available
- Fails to address the loss of coordination and scope benefits from planning, transport and water services being aligned (Mayor Goff picks up those points)

Inflexible to change and new information due to sprawling and complex nature

Working group does not explain how the large Water Services Entity model improves affordability

PART C PARAMETERS OF A POSSIBLE REVISED REFORM PROPOSAL

A 10 Point Plan

COMPROMISE PROPOSAL: 10 POINT PLAN

1. Foundation principle - community property rights in Three Waters assets are to be both respected and meaningful
2. The Government agree to pause its reform process to allow time for the revised approach to be refined
3. With respect to investment decision-making, asset owners should actively seek to initiate authentic discussions with mana whenua at a local level that consider co-design and partnership arrangements that acknowledge and enable Te Tiriti based pathways at a local and regional level.
4. Asset owners agree to commit to meeting health and environmental standards, once known, within an appropriate time frame
5. The regulatory framework should specify a "backstop" provision that identifies a set of circumstances which would justify future Crown intervention if an asset owner was not making acceptable progress towards meeting those regulatory requirements
6. Progress should be reported on annually by asset owners and be benchmarked across the sector
7. To further incentivise sector progress, a formal process might be established that requires an asset owner to prepare a plan that would map out the steps it proposes to take to meet the required standards in a financially viable and sustainable manner
8. A process to finance and allocate funds to areas that will require financial assistance be designed that is national in application and independently administered accordingly to objective and transparent criteria
9. This subsidy scheme will be designed to meet investment shortfalls until such time as sufficient progress has been made. At which point the scheme will cease and asset owners will finance matters on a business-as-usual approach
10. A sector-wide sector best-practice improvement process be created and membership made compulsory

Communities **4** Local Democracy
He hapori mō te Manapori

**Fresh ideas.
Better water.**

www.communities4localdemocracy.co.nz

Appendix 2

C4LD Letter to Government April 2022

10 April 2022

Hon. Nanaia Mahuta
Minister of Local Government
Parliament Buildings
WELLINGTON

By email: n.mahuta@ministers.govt.nz
Copy to: Rt. Hon. Jacinda Ardern, Prime Minister
Hon. Grant Robertson, Minister of Infrastructure

Tēnā koe e te Rangatira,

ALTERNATIVE PROPOSAL TO ADVANCE THREE WATERS

Thank you for your letter dated 8 April 2022 and for meeting with the representatives of Communities 4 Local Democracy - He hapori mō te Manapori ("C4LD") on 4 April 2022.

We received your 8 April letter just prior to the dispatch of our own letter to you setting out in summary form C4LD's proposals and, in particular, our offer to partner and champion a revised set of policy proposals that are more likely to achieve multi-party support in Parliament. Multi-party support would deliver a set of reforms that would be more durable and provide better outcomes for our country.

We have accordingly taken the time to consider the points in your letter and to reflect to you our immediate perspective on them, as well as making the points we originally intended to convey to you on Friday. This has necessitated responding in the weekend as we are anticipating early Cabinet consideration of your proposals, perhaps as soon as Monday.

As we mentioned at our meeting with you, C4LD is comprised presently of Partner Councils, representing 1.4 million people. We came together to work collectively to find a better way to achieve the health and environmental outcomes that we all desire. However, the Government should clearly understand that, quite apart from the Partner Councils of C4LD, there are many other councils that do not support the mandated four entity model. Most notably Auckland Council representing 1.7 million people. And there are many others.

In this letter we record the parameters formally of an alternative set of reform proposals which would achieve the health and environmental policy outcomes that most parties agree are desirable. More importantly, and as signalled above, it is our view that the set of proposals outlined in this letter are likely to achieve multi-party support in Parliament; indeed, this is an outcome we are prepared to champion with all Members of Parliament.

Without multi-party support the Government's reforms will not be durable. Without regulatory certainty there cannot be investment certainty. Without investment certainty there will not be investment. Such an outcome accordingly fails the chief measure of success for any set of infrastructure policy reform. The result is that needed improvements to health and environmental settings will once again be delayed.

As we outlined in our meeting with you (the presentation is appended in **Attachment 1**), our alternative proposal has 10 high-level components. They are:

1. Foundation principle - community property rights in Three Waters assets are to be both respected and meaningful;
2. The Government should agree to amend its current reform process and allow time for the revised approach to be reflected in draft legislation;
3. With respect to investment decision-making, asset owners should be required to actively seek to initiate authentic discussions with mana whenua at a local level that consider co-design and partnership arrangements that acknowledge and enable Te Tiriti based pathways at a local and regional level;
4. In return, asset owners agree to commit to meeting health and environmental standards, once known, within an appropriate time frame;
5. The regulatory framework should specify a "backstop" provision that identifies a set of circumstances which would justify future Crown intervention if an asset owner was not making acceptable progress towards meeting those regulatory requirements;
6. Progress should be reported on annually by asset owners and be benchmarked across the sector;
7. To further incentivise sector progress, a formal process might be established that requires an asset owner to prepare a plan for ministerial approval that would map out the steps it proposes to take to meet the required standards in a financially viable and sustainable manner (a similar process that respected property rights was used in the Energy Companies Act 1992);
8. A process to finance and allocate funds to areas that will require financial assistance, be designed that is national in application and independently administered accordingly to objective and transparent criteria (this is consistent with the recommendation of the Productivity Commission in November 2019);
9. This subsidy scheme will be designed to meet investment shortfalls until such time as sufficient progress has been made. At which point the scheme will cease and asset owners will finance matters on a business-as-usual approach; and
10. A sector-wide sector best-practice improvement process be created and membership made compulsory (in similar manner used to implement successfully the One Network Road Classification Framework and now One Network Framework in the road infrastructure area; and governed by Waka Kotahi (NZTA) and the Local Government Sector).

Our analysis (**Attachment 2**) prepared by our independent consultants, Castalia, show that alternative structural arrangements to that proposed by the Government are perfectly capable, and in most cases, more capable, of achieving the desired policy outcomes. Importantly, these alternative structural arrangements protect local voice, respect community property rights, and

just as importantly, are a far more effective protection against privatisation than any legislation which could be easily unwound by a future Parliament. As we all know, a current Parliament cannot bind a future Parliament.

We proposed to you two broad approaches:

1. A regional multiply-owned council water enterprise. Such an approach achieves your goal of balance sheet separation provided no one council owns more than 50% of that enterprise. This is specifically provided for in International Financial Reporting Standard 10. The proposed Hawkes Bay regional model is a good example of the type of enterprise that could be established and which would have local community support; and
2. A single council owned water enterprise. We accept that this option would not achieve balance sheet separation. Accordingly, we think proponents of this approach would have to satisfy you that it would be backed by a financially viable investment plan (using the proposed process noted above). But in principle, if a single-council owned entity is viable and could achieve the health and environmental outcomes required, then the Government ought to be agnostic about organisational design, particularly for assets it neither owns nor is proposing to purchase.

Mana whenua involvement in investment decision-making (as opposed to regulatory decision-making) is a key aspect of the reforms for your Government. The Partner Councils of C4LD support that objective consistent with the protection of both local voice and community property rights. Indeed in our view, the Government's proposal will not reflect local realities and communities of interest and, importantly, iwi and hapū rohe and areas of interest, in most parts of the country. We consider that a more local approach gives better representation to mana whenua, particularly in the North Island where there are very many iwi and hapū.

We are conscious that there is significant and mischievous comment currently circulating about C4LD's approach to mana whenua involvement in investment decision-making. We reject categorically such comment. To clarify matters, Partner Councils have prepared the attached statement (**Attachment 3**) which clearly sets out our position.

Turning now to some of the points raised in your letter of 8 April.

Your summary of the points of agreement between C4LD and the Government is generally correct. However there is one significant point of clarification required.

C4LD believes that 3 Waters assets should continue to be owned by councils either directly or through real shareholding arrangements that confer the usual rights and obligations that go with equity ownership. The Government's approach does not do that. Further it is our view that the Government's approach amounts to the expropriation of council assets without true value compensation. We note that this matter is at issue in the litigation being pursued by some councils at present.

We note your comments that regulatory levers alone are unlikely strongly to incentivise improvements. Clearly we disagree on this point. But again we emphasise that our view is also the view of the Productivity Commission. It is a conventional viewpoint and one that protects community property rights. This is why the Government's approach ultimately will not be durable.

On our proposal for a FAR type approach to assisting deprived areas, you have misunderstood our suggestion. This approach would not require additional taxes. It would require additional revenue, but this could be sourced, for example, contractually through connection charges which would reduce over time. Connection charges are very common in utility markets.

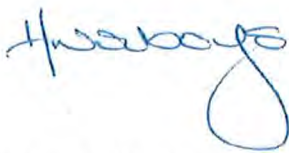
All Partner Councils are budgeting significant expenditure on 3 Waters in their Long Term Plans (which we understand to be many billions of dollars). We are confident that with the regulatory backstop, the direct charge for services that the Council entities would be putting in place, and the sector wide best practise improvement process – that your concerns that future Councils will not vote appropriate budget for the investment required would not be an issue.

In terms of the Working Group, we must, we think, agree to disagree. We do not think that the Working Group has developed proposals that address our fundamental concerns. The fact that one member (Hon Phil Goff Mayor of Auckland representing 1.7 million people) wrote a minority report and another has dissociated himself from the Working Group indicates that the Working Group's approach is not the breakthrough it has been presented as being. We will be developing further our critique of the Working Group in due course depending on the degree of take-up by the Government of the Working Group's recommendations.

Minister, at this point in time, the Government's proposals are widely opposed across the country and as others have noted, the Government simply has failed to bring the people with it on this initiative. Whilst presently, you have the Parliamentary majority to achieve your preferred position, this does not mean that the position is durable. It is not. The Opposition Parties have already publicly committed to repeal any such legislation. Our preference, and we think the country's preference is to achieve a multi-party and durable approach. In our view our proposal can achieve that with the Government's support. We commend it to you.

As we discussed it is not too late to rectify matters. We are not that far apart in our objectives. Indeed, what we are offering in our 10 point plan is an approach that we believe would achieve broad support. We ask that you take the time to allow for a revised approach to be refined. We are prepared to partner and work with you and the Government to turn this around and find a lasting solution that we can all support.

Nāku noa, nā



Mayor Helen Worboys
Manawatu District Council
Chair
helen.worboys@mdc.govt.nz



Mayor Dan Gordon
Waimakariri District Council
Deputy Chair
dan.gordon@wmk.govt.nz

Att 1: Presentation to Minister of Local Government 4 April 2022

Att 2: Castalia Report - Improved Options for Three Waters reform January 2022

Att 3: Communities 4 Local Democracy He hapori mō te Manapori (C4LD) Position on Iwi Māori Partnership

Appendix 3

C4LD Submission on Economic Regulation

Communities **4** Local Democracy He hapori mō te Manapori

20 December 2021

Competition and Consumer Policy
Building, Resources and Markets
Ministry of Business, Innovation & Employment\PO Box 1473
WELLINGTON 6140

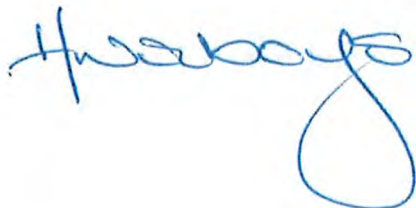
Re: Submission on Economic Regulation and Consumer Protection for Three Waters

On behalf of the Partner Councils of **Communities 4 Local Democracy - He hapori mō te Manapori**, we provide, as an attachment to this letter, a submission on the above matter prepared for Partner Councils by Castalia.

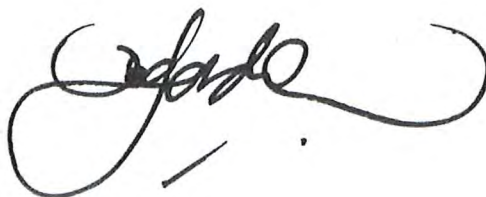
Communities 4 Local Democracy - He hapori mō te Manapori is a newly formed group of 24 councils (as at 20 December 2021) from around the country. The group was created in response to serious concerns about the nature of aspects of the Government's Three Waters reforms. Information about our group may be found at:
<https://www.communities4localdemocracy.co.nz>.

If you would like to discuss points arising from this submission, please contact in the first instance, Andreas Heuser at: andreas.heuser@castalia-advisors.com.

Yours faithfully



Mayor Helen Worboys
Chair
Communities 4 Local Democracy



Mayor Dan Gordon
Deputy Chair
Communities 4 Local Democracy



Improving Three Waters Regulatory Regime

Submission on behalf of the Partner Councils of

Communities **4** Local Democracy
He hapori mō te Manapori

DECEMBER 2021

Copyright Castalia Limited. All rights reserved. Castalia is not liable for any loss caused by reliance on this document.
Castalia is a part of the worldwide Castalia Advisory Group.

Table of contents

Executive summary	5
1 Introduction	9
2 Overall objectives of water reform and need for change	10
3 New Zealand's proposed WSE model is complex	11
3.1 Governance of the WSEs is highly complex, novel and untested	11
3.2 WSEs will have various socio-cultural objectives	14
3.3 WSE management will be centralised and operations will remain dispersed	15
3.4 Claimed cost efficiencies from administrative merger	16
4 Role of regulation and public ownership in water services	17
4.1 Economic regulation can improve water services under certain conditions	18
4.2 Public ownership and sound governance of natural monopoly utilities can also improve consumer welfare	20
5 Regulatory model will not achieve objectives	21
5.1 Regulator will face challenges improving availability of relevant information	21
5.2 Regulator will have issues incentivising management and governance to optimise costs and quality of service	22
5.2.1 Price-quality regulatory model will not incentivise management to be efficient	22
5.2.2 Regulatory model could risk tariffs remaining too low	22
5.2.3 Regulator can inadequately monitor over-spending or corruption	23
5.2.4 Uniform tariffs can hide inefficiencies	23
5.2.5 Regulator has no viable way to enforce breaches	24
5.3 Regulator cannot adequately address socio-cultural outcomes	24
5.4 Costs of regulation likely to materially exceed benefits	25
6 Public ownership and governance model must be improved to enable effective economic regulation	26
6.1 Other public ownership and governance options deliver direct accountability	26
6.2 Information disclosure and benchmarking would support public ownership model	27
6.3 Better governance can enable incentive-based regulation	28
6.3.1 Better governance and targeted regulation will align incentives with reasonable tariffs	29
6.3.2 Better governance can ensure incentives to improve efficiency and provide a service at a quality that reflects consumer demands	29
6.3.3 Ensure benefits of efficiency gains shared with consumers, including through lower prices	30
6.4 Better governance can reduce costs of regulation	30

Appendices

Appendix A : Analysis of economic regulation in selected jurisdictions	32
---	-----------

Appendix B : Maps of Water Service Entities and population centres 34

Tables

Table A.1: Analysis of economic regulation in selected jurisdictions	32
--	----

Figures

Figure 0.1: Proposed WSE entity governance and accountability structure	6
Figure 0.2: Cities and towns in Entity C with population densities	7
Figure 3.1: Proposed WSE governance and accountability model	12
Figure 4.1: Accountability for water services and issues in New Zealand	17
Figure 4.2: Factors in economic regulation and public ownership that determine reaching objectives	18
Figure 6.1: EDBs' profits compared with 8.77 percent WACC (2013–15)	28
Figure B.1: Cities and towns in Entity A with population densities	34
Figure B.2: Cities and towns in Entity C with population densities	34
Figure B.3: Cities and towns in Entity D with population densities	35

Definitions

WSE	Water Service Entity
CCO	Council Controlled Organisation
EDB	Electricity distribution businesses
ISP	Independent Selection Panel
LGFA	Local Government Funding Agency
LGNZ	Local Government New Zealand
MBIE	Ministry of Business, Innovation and Employment
NPS	National Policy Statement
RRG	Regional Representative Group
WSE	Water Service Entity

Executive summary

The government is reforming the drinking, waste and stormwater (Three Waters) sector. It intends to create four new large water service entities (WSEs) that will hold all Three Waters assets and provide the Three Waters services currently provided directly by local authorities or, in some cases, by council-controlled organisations. The WSE proposal will create four new statutory entities, and amalgamate the water services of 67 local authorities into them.

The Three Waters sector has had poor water quality regulation and enforcement, some local authorities have under-charged for services, and some have under-invested in assets and renewals. A new water quality regulatory regime is being established under Taumata Arowai. The government also intends to improve environmental outcomes by improving the regulatory regime.

An economic regulation regime is now proposed to complement these structural reforms. Policy makers expect that economic regulation will lift performance of water service providers and ensure that the customers of monopoly utilities receive services of a satisfactory quality for a reasonable price.

Communities 4 Local Democracy - He hapori mō te Manapori is making a constructive contribution to improve water sector outcomes for all affected communities

Communities 4 Local Democracy - He hapori mō te Manapori is group of councils (together referred to in this submission as "Partner Councils") that includes local authorities of large cities, provincial and rural communities from across New Zealand. The Partner Councils have appointed Castalia to prepare an in-principle submission on the core design features of the economic regulation regime proposed in the Ministry of Business, Innovation and Employment's (MBIE's) Discussion Paper: Economic Regulation and Consumer Protection for Three Waters Services in New Zealand (the Discussion Paper). Castalia has also been appointed to advise Partner Councils whether the proposed regime will achieve the objectives sought.

Partner Councils want to make a constructive contribution to designing a modern, effective, and cost-efficient economic regulatory system for the Three Waters sector. Partner Councils support the provision of safe and environmentally sound, resilient, reliable, and customer responsive water services, at least cost. They recognise that economic regulation can play a key role in ensuring that the quality of service is optimal and tariff levels are reasonable so that consumers' interests are served.

Local authorities like the Partner Councils are the best representatives of the interests of current and future water consumers, ratepayers and affected communities in this reform process. No other organisations represents the voice of the consumer in this important, but technical, reform process. Mayors and councillors have been elected by their communities to oversee the water services of the respective local authorities, and represent their interests in national reform processes such as this.

In light of this proposed major change to the way water services are delivered, it is critical that the proposed regulatory regime is tested to ensure it will deliver satisfactory quality services and reasonable prices for New Zealanders, as well as achieving the other outcomes sought from reform. This submission highlights some of the risks, and shows how changes to ownership and governance of water services, and changes to the economic regulation regime can improve outcomes for all affected communities.

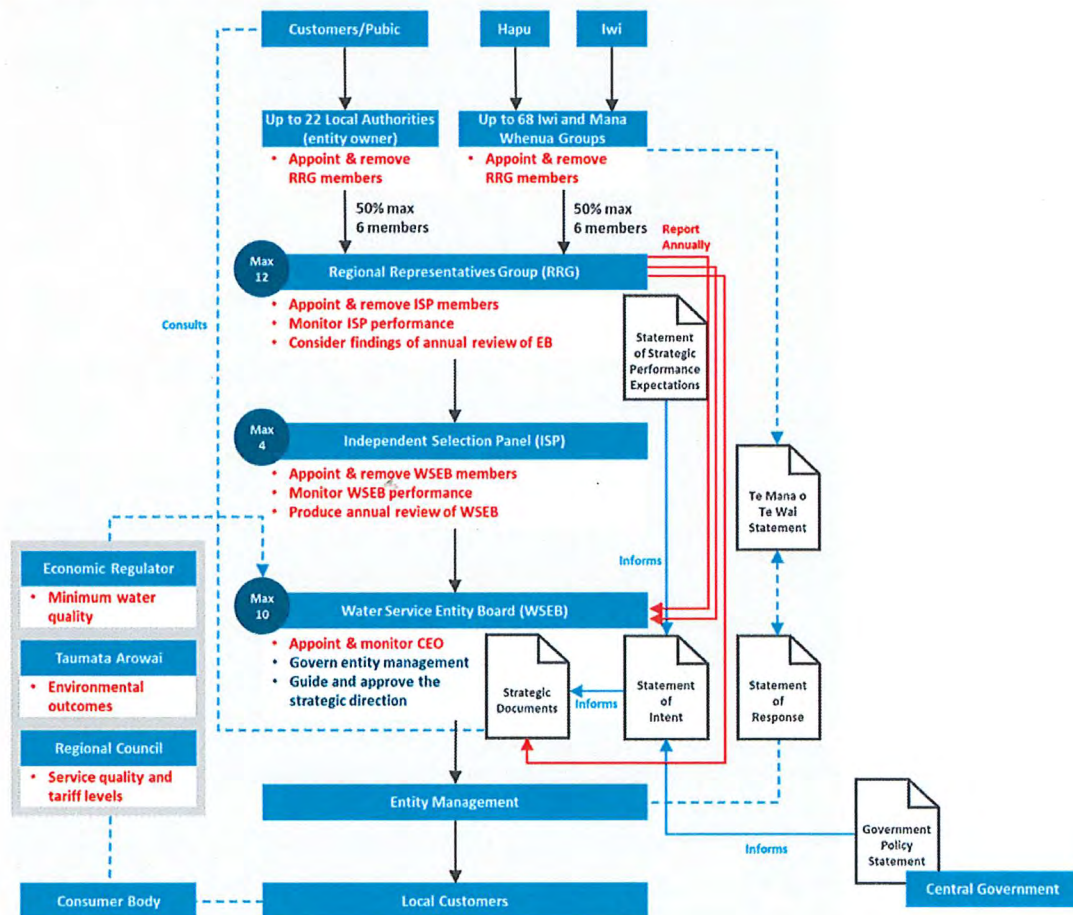
Economic regulation needs to be in balance with public ownership and governance

Economic regulation and public ownership are both used to overcome the problem of monopoly provision in the water sector. Economic regulation uses an independent party to monitor whether the cost of service is optimal for the price-quality combination consumers want, and that prices are reasonable. This outcome can also be achieved by the public owning the water utility and holding those overseeing it to account. Complex economic regulation is often unnecessary because public accountability through effective governance can ensure that acceptable services and reasonable prices are provided.

However, the chosen WSE model is highly complex, multi-layered and with competing accountability mechanisms

However, the public accountability mechanism under the proposed WSE design is highly complex. The WSEs have unusual governance, accountability, and incentive structures. The WSE management will be four steps removed from those who have direct accountability to the consumers served. Several accountability documents and statements then overlay this arrangement. Figure 0.1 shows the complexity and disconnect between customers, communities, mana whenua and the WSE management (which is tasked with improving the service).

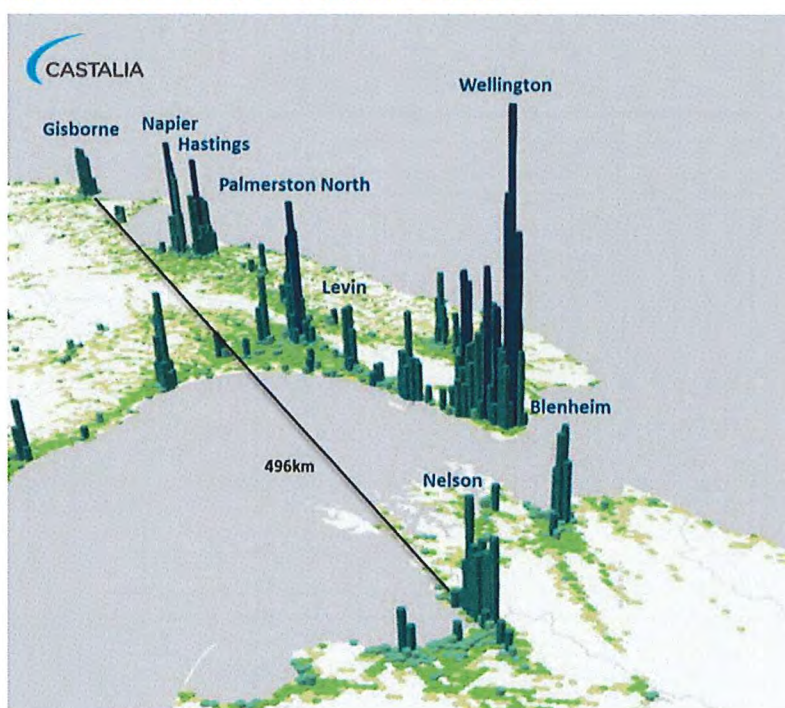
Figure 0.1: Proposed WSE entity governance and accountability structure



WSEs will have to serve a mix of diverse interests across dozens of idiosyncratic networks—all with a harmonised single water price

In addition, the WSEs will serve highly diverse populations ranging from large cities to rural settlements. The spatial distances are significant. Management is intended to be centralised into four locations. While administration will be merged, no meaningful physical joining of water networks will occur (as Figure 0.2 illustrates for Entity C). Dozens of discrete networks will have to be managed, each with highly idiosyncratic physical, engineering, topographical, environmental and climatic conditions. The government has also required that WSEs must charge uniform, harmonised tariffs.

Figure 0.2: Cities and towns in Entity C with population densities



Castalia adapting Statistics New Zealand visualisation

Economic regulation as designed will not achieve the water sector outcomes all parties seek

The net result of the regulatory regime proposed in the Discussion Paper will be a system that is unlikely to be net-benefit justified. Customers will receive fewer benefits for more costs compared to if the ownership and governance structure was better balanced with regulation.

Designing an effective economic regulation regime for the WSEs—as currently structured—will be an immensely difficult task. The regulatory regime will be globally unique. By overlaying the proposed regulatory framework over the complex WSE structure, New Zealand risks introducing a regulatory structure that will not overcome the underlying policy problems.

Conventional regulation works by channelling private, profit-seeking incentives towards publicly beneficial ends. However, the WSEs for New Zealand will be not-for-profit and will have a range of socio-cultural objectives to meet that cannot be measured easily with typical financial and economic toolkits used by regulators. All of New Zealand's usual comparator

countries use economic regulation where water utilities have a profit motive, with a single exception. In New Zealand, our fully community-owned electricity distribution businesses (EDBs) are not subjected to price-quality regulation. This is because governance arrangements are considered adequate.

Fit-for-purpose regulation is more likely to succeed if changes to governance and the reform model are made

The Partner Councils have proposed reform options that will achieve the balance of public ownership and fit-for-purpose regulation. The two Partner Councils Options are:

- **Council-owned plus regulation:** Amending the current local authority-owned and operated model with targeted interventions to address financing, funding constraints and credible enforcement mechanisms from water quality, environmental and economic regulators
- **Council-owned organisation:** Local authorities would own shares in a regional organisation. The local authorities would remain democratically accountable to voters (and water customers), and would exercise appointment rights over the organisation board. The organisation would own and manage the three waters service for the area.

Adopting these reform models will deliver on the objectives sought, and also allow a well-designed regulatory framework to work effectively. Relevant global experience with water and energy networks, and with New Zealand EDBs, highlights that balancing public ownership and governance arrangements with regulation leads to good outcomes for consumers. Adopting the Partner Councils Options will focus regulation on information disclosure, benchmarking and incentive-based oversight, at lower cost than the complex and ineffectual regulatory system that will result if the government's flawed mega-WSE model is pursued.

1 Introduction

This submission is made on behalf of 24 local authorities (as of 20 December 2021) that represent diverse communities in Aotearoa/New Zealand called Communities 4 Local Democracy - He hapori mō te Manapori (the Partner Councils). Partner Councils reflect the full spectrum of New Zealand's local authorities, and the group includes large cities, provincial centres, and predominantly rural communities.

This submission is intended to assist policy-makers and MBIE with the difficult task of designing an appropriate regulatory regime. The complex governance and ownership model of the WSEs creates globally unique challenges for economic regulation. In this submission, Partner Councils provide constructive suggestions that will avoid the risks of this regime failing.

This paper makes the following points:

- The objective for reform should be water services that are safe and environmentally sound, resilient, reliable, and customer responsive, at least cost (section 2)
- However, the government intends to reform the water sector into the four WSEs with complex governance and accountability arrangements (section 3)
- Economic regulation and public ownership in water services need to be in balance to achieve the objectives (section 4)
- The proposed regulatory regime—as designed for the WSEs—will not achieve the objectives (section 5)
- Therefore, the public ownership structure and governance regime must be improved to enable a fit-for-purpose regulation to work (section 6).

2 Overall objectives of water reform and need for change

The ultimate objective for New Zealand's water services reform should be to achieve safe and environmentally sound, resilient, reliable, and customer responsive water services, at least cost. Partner Councils agree that there are deficiencies, and that regulation needs to be improved. Central and local government mostly agree about the root causes for the need for change, and that better water services should be achieved.

Safe water provision through ensuring minimum quality standards are met

Central and local government both agree that drinking water quality levels should meet minimum standards so that everyone in New Zealand has access to safe drinking water.¹ The Government has already undertaken significant steps to overhaul the Ministry of Health's failures in regulating water quality and has created Taumata Arowai via legislation in 2020.² Partner Councils support it becoming a responsive and proactive water quality regulator of the 67 local authorities, water CCOs and any future water service providers.

Improve environmental outcomes associated with Three Waters services

Central and local government representatives agree that the regulatory reform should also improve the environmental performance of water service delivery.³ However, this has received less attention, and the improvement of environmental outcomes related to wastewater treatment and discharge/disposal still requires policy attention.

Resilient and reliable services

Government and local authorities agree that the reform should improve the resilience of the Three Waters sector to both short-term and long-term shocks. This includes climate change and changes in population.^{4 5}

Customer responsive

Local government wants the reformed water service entities to be governed by community preferences.⁶ Central government, in contrast, has not made this a priority.

¹ LGNZ Three Waters 101: Available online at: <https://www.lgnz.co.nz/assets/Three-Waters-101-Infographic.pdf>; DIA report, page 2. Available online at: [https://www.dia.govt.nz/diawebsite.nsf/Files/three-waters-reform-programme-2021/\\$file/transforming-the-system-for-delivering-three-waters-services-the-case-for-change-and-summary-of-proposals-30-june-2021.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/three-waters-reform-programme-2021/$file/transforming-the-system-for-delivering-three-waters-services-the-case-for-change-and-summary-of-proposals-30-june-2021.pdf)

² Taumata Arowai—the Water Services Regulator Act 2020

³ DIA report, page 2. Available online at: [https://www.dia.govt.nz/diawebsite.nsf/Files/three-waters-reform-programme-2021/\\$file/transforming-the-system-for-delivering-three-waters-services-the-case-for-change-and-summary-of-proposals-30-june-2021.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/three-waters-reform-programme-2021/$file/transforming-the-system-for-delivering-three-waters-services-the-case-for-change-and-summary-of-proposals-30-june-2021.pdf); LGNZ Three Waters 101: Available online at: <https://www.lgnz.co.nz/assets/Three-Waters-101-Infographic.pdf>

⁴ DIA report, page 2. Available online at: [https://www.dia.govt.nz/diawebsite.nsf/Files/three-waters-reform-programme-2021/\\$file/transforming-the-system-for-delivering-three-waters-services-the-case-for-change-and-summary-of-proposals-30-june-2021.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/three-waters-reform-programme-2021/$file/transforming-the-system-for-delivering-three-waters-services-the-case-for-change-and-summary-of-proposals-30-june-2021.pdf)

⁵ LGNZ Three Waters 101: Available online at: <https://www.lgnz.co.nz/assets/Three-Waters-101-Infographic.pdf>

⁶ LGNZ Three Waters 101: Available online at: <https://www.lgnz.co.nz/assets/Three-Waters-101-Infographic.pdf>

Least-cost services

Central government has stated that the reform should drive productive efficiency.⁷ However, this is subject to a functional economic regulation regime. All parties agree that cost-effective water services are desirable. All parties agree that the financial sustainability of water service providers should improve. This includes both access to financing and ensuring funding sources are adequate.^{8 9}

3 New Zealand's proposed WSE model is complex

In response to problems with the water sector, the government has proposed a reform model. The model deserves analysis in this paper because it is important to lay out how the designers of the model expect it to work to deliver on the policy objectives.

The government's proposal for reform into four mega water service entities (WSEs) is highly complex, novel and untested. The governance model also requires balancing various socio-cultural objectives.

3.1 Governance of the WSEs is highly complex, novel and untested

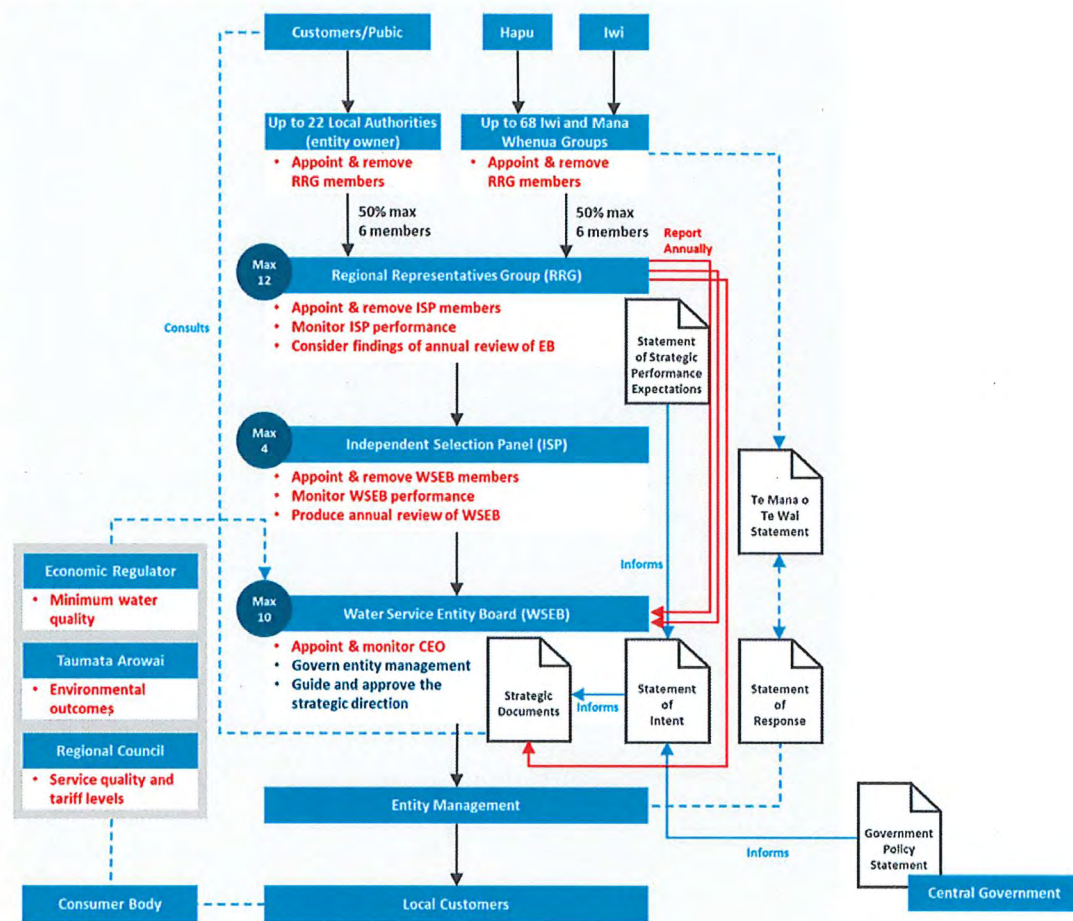
The proposed WSE will have unique and complex governance mechanisms. Those charged with governance of the WSEs will have diverse interests to serve. The management of the entity is four steps removed from local voters and Iwi members. There are also a variety of accountability documents issued by various parties. In addition, three regulators (water quality, environmental and economic regulators) will have to monitor compliance with their standards and rulings and attempt to enforce breaches.

⁷ DIA Regulatory Impact Assessment Decision on the reform of three waters service delivery arrangements. Page 115

⁸ DIA report, page 2. Available online at: [https://www.dia.govt.nz/diawebsite.nsf/Files/three-waters-reform-programme-2021/\\$file/transforming-the-system-for-delivering-three-waters-services-the-case-for-change-and-summary-of-proposals-30-june-2021.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/three-waters-reform-programme-2021/$file/transforming-the-system-for-delivering-three-waters-services-the-case-for-change-and-summary-of-proposals-30-june-2021.pdf)

⁹ LGNZ Three Waters 101: Available online at: <https://www.lgnz.co.nz/assets/Three-Waters-101-Infographic.pdf>

Figure 3.1: Proposed WSE governance and accountability model



WSE will be unique entities under New Zealand law with no shareholders, and will not disburse surpluses to any owners

The WSEs will be creatures of statute and unique in New Zealand law and government practice.¹⁰ There will be no shareholders. The statute will deem that the local authorities within the WSE area will “own” the entity on behalf of their communities.¹¹ However, local authorities will not have typical rights of ownership such as rights of use, to gain a return, to dispose, control it or control its use. Surplus earnings must be retained by the WSE and can be reinvested in delivery of water services. That is, the WSEs will be not-for-profit.

WSEs will have independent balance sheets. Each WSE will own all three waters assets and associated debt.¹² This will increase the level of borrowing in the sector as it will remove water service providers from the financial restraints of debt limits imposed by LGFA and council

¹⁰ 14 June 2021, Cabinet Paper: Designing the New Water Service Delivery Entities: Paper Two, Office of the Minister Local Government, p. 7

¹¹ We are advised that this definition of “ownership” is subject to ongoing legal proceedings as the claimants do not consider that it complies with the common law definition.

¹² LGNZ website: Three Waters, available online at : <https://www.lgnz.co.nz/reforms/three-waters/#ownership>

balance sheets. WSEs will be able to independently raise finance from a variety of sources, including, but not limited to local and international retail and wholesale capital markets or the LGFA.¹³

This will, however, also transfer the risk of poor investment choices and costs not being recovered to the WSEs customers.

WSE governance regime is complex, novel and untested

The governance regime is detailed and has multiple people holding different roles.¹⁴ The WSE board will be made up of no more than 10 members, and the chair will hold a casting vote. The board appointment process requires multiple steps.

The requirements of the Companies Act 1993, including fiduciary duties and associated penalties, will not apply. It is unclear if the statute creating the WSEs will impose similar duties as typical Companies Act duties.

Appointments to the WSE board will be made by an Independent Selection Panel (ISP) made up of four members who are independent and appropriately qualified.¹⁵ ISP members are in turn appointed by the Regional Representative Group (RRG). The RRG will be required to conduct performance reviews of the ISP every three years. RRG members are appointed by local authorities and mana whenua in the WSE area via a complex nomination and voting process. Member local authorities and mana whenua must collectively vote at a meeting for the relevant entity for RRG appointees.¹⁶ The RRG will be made up of no more than 12 members, of which 50 percent are represented by local authority representatives and 50 percent by mana whenua representatives.

The RRG is then responsible for appointing a four-member ISP. The ISP appoints the board of the WSE. It is intended that the WSE Board will comprise professional directors. The ISP is supposed to conduct a performance review of the WSE board annually.

WSE accountability framework is also multi-faceted and complex

The government has proposed additional measures to try and hold the WSE board and RRG accountable to certain additional requirements. These requirements are imposed by central government as command and control mechanisms in which certain requirements are set out which the WSE board and RRG must report on. The net result is that WSEs are more accountable to central government, than the local authorities that are deemed to be “owners” in the proposed legislation.

The government may define certain outcomes it seeks in a National Policy Statement (NPS). WSEs may retain operational autonomy in how they will give effect to the NPS.¹⁷ The NPS is

¹³ 14 June 2021, Cabinet Paper: Designing the New Water Service Delivery Entities: Paper Two, Office of the Minister Local Government, p. 5

¹⁴ 14 June 2021, Cabinet Paper: Designing the New Water Service Delivery Entities: Paper Two, Office of the Minister Local Government, p. 15

¹⁵ 14 June 2021, Cabinet Paper: Designing the New Water Service Delivery Entities: Paper Two, Office of the Minister Local Government

¹⁶ 14 June 2021, Cabinet Paper: Designing the New Water Service Delivery Entities: Paper Two, Office of the Minister Local Government

¹⁷ DIA Three Waters Regulatory Impact Assessment – Strategic RIA – May 2021

intended to provide strategic direction to WSEs at a high level and communicate government expectations for WSEs to address inequalities and deliver in relation to Māori interests.

The RRG must prepare a Statement of Strategic Performance Expectations at least once every three years which is used to monitor the performance of the WSE against the Statement of Intent.

In response to the NPS and Statement of Strategic Performance Expectation, the WSE board will have to produce a Statement of Intent. WSEs must then report against the Statement of Strategic and Performance Expectations annually.

Each WSE will also produce an investment prioritisation methodology. This does not require approval by the RRG, although it could be influenced by the Strategic and Performance Expectations. In addition, the ISP will conduct an annual performance review of WSE boards.

The government has acknowledged that the command and control accountability mechanisms it has designed are not capable of completing the governance arrangements. Cabinet stated: “the level of independent governance proposed requires the addition of appropriate consumer protection and accountability mechanisms.”¹⁸

3.2 WSEs will have various socio-cultural objectives

Socio-cultural objectives in the delivery of utility services are common. Governments often have policy objectives that are realised through the provision of essential infrastructure services like drinking water, wastewater, electricity distribution and so on. This is often why governments choose to own essential infrastructure service providers.

However, it is unusual for water utilities to provide a range of potentially competing socio-cultural objectives, and for the entity to be subjected to price-quality economic regulation (that is, regulation aiming to broadly improve consumer welfare and service efficiency). The WSEs will be tasked with achieving a range of socio-cultural objectives from the outset. These include Iwi-Māori objectives and equity, affordability objectives and any others that the government may specify in a National Policy Statement.

Iwi-Māori objectives will be prioritised

The governance framework will promote Iwi-Māori influence on the WSEs’ objectives. First, since Iwi-Māori will have one half of the appointment rights to the RRG, it is expected that those appointees will represent the priorities and objectives of Iwi-Māori. The Government’s WSE design is intended to ensure that WSEs “engage meaningfully with Iwi/Māori to inform understanding of Treaty rights and interests”.¹⁹ The WSEs will also be required to adhere to operating principles that relate to “partnering and engaging early and meaningfully with

¹⁸ 14 June 2021, Cabinet Paper: Designing the New Water Service Delivery Entities: Paper Two, Office of the Minister Local Government. Page 5

¹⁹ DIA (2021), Transforming the system for delivering three waters services: The case for change and summary of proposals report, p. 21.

Māori, local government and communities”²⁰ and “supporting and enabling matauranga Māori and tikanga Māori and kaitiakitanga to be exercised.”²¹

The WSEs will attempt to give effect to Te Mana o te Wai.²² The government intends to achieve this through ensuring that the WSE boards have relevant competencies and through reflecting “Te Mana o te Wai Statements” prepared by mana whenua. The WSE will be required to prepare and publish a formal reasonable response to such statements with a prescribed timeframe.²³

The WSEs do not earn any profit (and “owners” do not receive dividends). Therefore, the WSE board and its appointing entities (RRP, ISP, local authorities and mana whenua) will have to measure performance in terms of the delivery of the outcomes for Iwi-Māori set out in these accountability documents.

Improved services in areas where affordability challenges exist

The government also intends that the new WSEs will ensure “affordable” services in areas where affordability is a challenge. It has said that the reform should address affordability challenges that currently exist in the sector and ensure all New Zealanders have access to affordable three waters services.²⁴ This includes ensuring an acceptable level of service can be delivered affordably in smaller, rural communities²⁵. The government recognises this will require cross-subsidisation—metropolitan areas where the average cost of service is typically lower will effectively support an improvement in water service delivery in more rural areas.²⁶ However, many provincial centres, smaller cities and more rural communities have well-functioning water services and may end up effectively cross-subsidising some metropolitan areas too.

Further socio-cultural aims are to address inequality and support housing and urban development.

3.3 WSE management will be centralised and operations will remain dispersed

The introduction of a new regulatory system in New Zealand will coincide with large-scale administrative mergers. The proposed WSEs will oversee geographically dispersed areas, from

²⁰ DIA (2021), Transforming the system for delivering three waters services: The case for change and summary of proposals report, p. 24.

²¹ DIA (2021), Transforming the system for delivering three waters services: The case for change and summary of proposals report, p. 24.

²² Te Mana o te Wai is defined by Taumata Arowai as follows: a universal concept for all Aotearoa New Zealanders. It refers to the fundamental importance of water and recognises that protecting the health of freshwater protects the health and wellbeing of the wider environment. It protects the mauri of the wai. Te Mana o te Wai is about restoring and preserving the balance between the wai, the wider environment and the community

²³ Cabinet Paper “Protecting and Promoting Iwi/Māori Rights and Interests in the New Three Waters Service Delivery Model: Paper Three, CAB-21-MIN-0228

²⁴ DIA (2021), Transforming the system for delivering three waters services: The case for change and summary of proposals report, p. 2.

²⁵ DIA (2021), Transforming the system for delivering three waters services: The case for change and summary of proposals report, p. 15.

²⁶ DIA (2021), Departmental Regulatory Impact Assessment, Decision on the reform of three waters service delivery arrangements, p. 106

a centralised head office. Management and administration will be centralised to four main centres in each WSE area. The head offices are expected to be Auckland (Entity A), Hamilton (Entity B), Wellington (Entity C) and Christchurch (Entity D). It is expected that key management staff will be co-located.

This means that sophisticated management and reporting mechanisms will be needed to ensure that the multiple discrete networks report cost and quality information back to head office.

Policy-makers should understand the differences between water and other infrastructure: Unlike the national electricity networks, water networks are highly localised. The environmental conditions are very different between networks. For example, some regions draw drinking water from multiple bores from a large aquifer (like Christchurch), whereas other regions take surface water from purpose built dams (like Auckland) or from rivers. The drinking water reticulation network and waste water networks are highly localised because water has a low value to weight ratio. This is unlike electricity where the network covers the whole country.

Appendix B contains 3D maps of New Zealand communities and the population densities in each. The maps show the physical distances between towns and illustrate the challenge of managing dozens of physically separate drinking water, wastewater and stormwater networks and production facilities.

3.4 Claimed cost efficiencies from administrative merger

The reform, and the regulatory design, are premised on an assumption that cost efficiencies will emerge from an administrative merger, and that those cost efficiencies are only available at a particular size (800,000 connections is cited). Department of Internal Affairs and its consultants claim that 50 percent capex and up to 60 percent opex efficiencies will be achieved following the reform. That is, the government's advisors claim that the WSEs will pay half as much for capex as smaller entities might pay, for the same outcome and that operating costs will fall by over half (in spite of assurances that no jobs will be lost). MBIE has cited these claimed scale benefits uncritically.²⁷

There is, in fact, a body of academic literature and previous Castalia analysis²⁸ that shows that production cost savings are not available from administrative mergers of discrete networks. Therefore, the premise of mergers being required for cost savings should not be accepted as a necessary condition of the regulatory design.

²⁷ For example, at paras 4, 5, 7-9, 35, 55 of the Discussion Paper

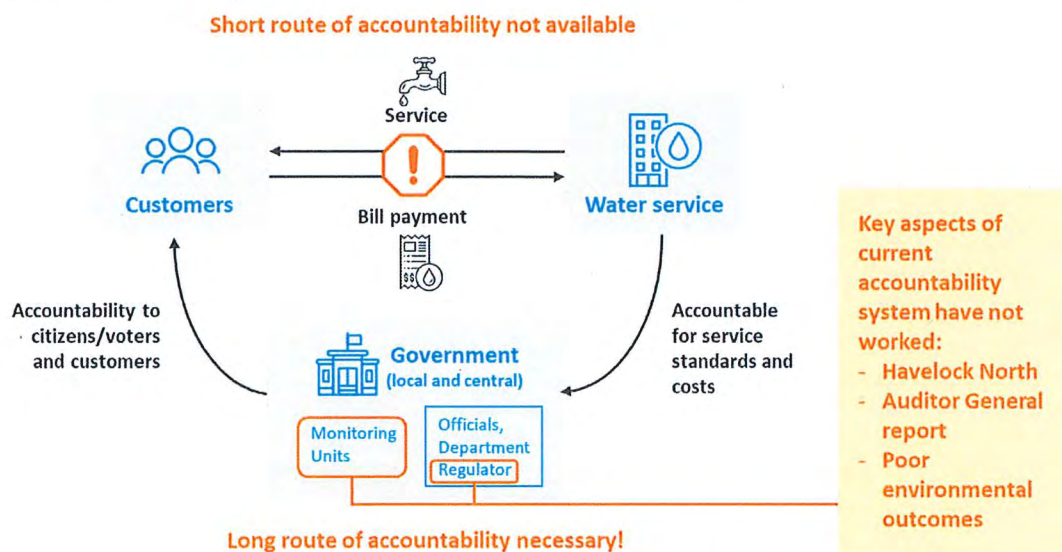
²⁸ Castalia's reports for Local Government New Zealand and the Joint Steering Committee, available at: <https://www.lgnz.co.nz/assets/LGNZ-release-of-Castalia-reports-context-and-response-v2.pdf>; Castalia's analysis for various local authorities, for example: <https://www.wdc.govt.nz/Whats-new/News-and-notice/Faulty-Assumptions-Three-Waters-20210903>

4 Role of regulation and public ownership in water services

It is useful to outline the role of regulation, and the role of public ownership in water services. Governments are involved in water services because drinking, waste and stormwater networks are natural monopolies and essential for community wellbeing. High fixed costs mean that it is more efficient for one service provider to take up the whole market.²⁹ So consumers cannot choose between competing suppliers. Water is also valuable to consumers and the costs of alternatives are often very high. Therefore consumers are willing to pay much above the cost of delivery for water services. This is a classic market failure. It means that the typical way that customers hold a service provider accountable (by choosing an alternative, reducing consumption or demanding better service) are not available.

As a consequence, governments own water services, regulate them, or both. In any case, a long route of accountability to customers is needed. Government (local and/or central) needs to play a role. Figure 4.1 illustrates the short and long routes to accountability.

Figure 4.1: Accountability for water services and issues in New Zealand

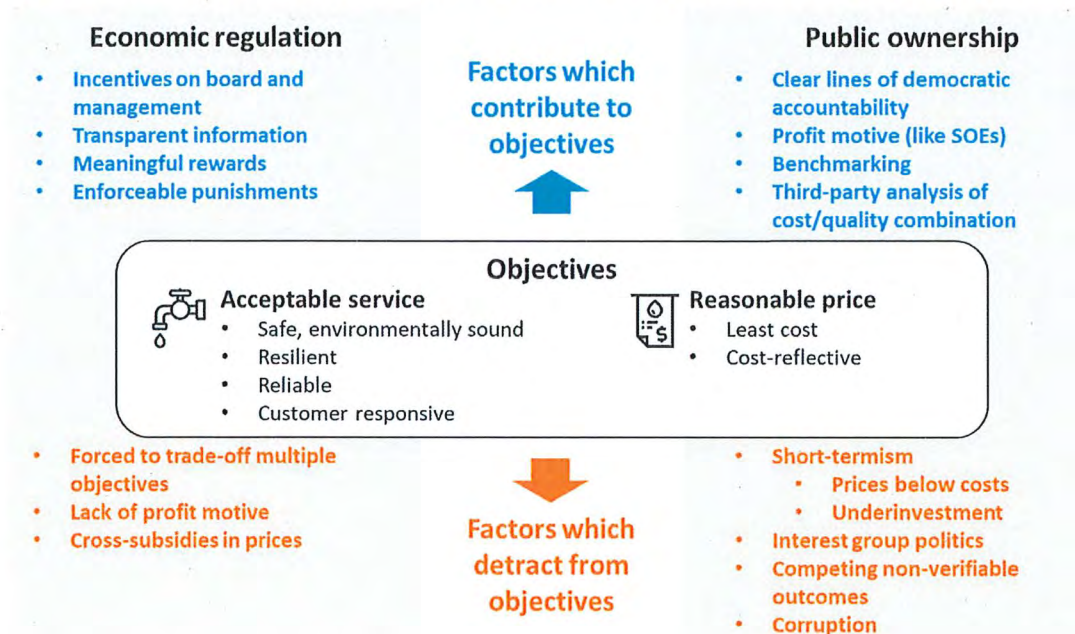


Castalia, adapted from Water Sector Board, *Improving Governance and Fighting Corruption in the Water Supply and Sanitation Sector*

The role of regulation and public ownership in providing accountability to customers for water services must be balanced. There are factors that can positively impact economic regulation, and factors that detract from it. Public ownership also has factors that positively contribute to objectives, or detract from achieving those objectives. Figure 4.2 illustrates these factors.

²⁹ Discussion Paper, para 17

Figure 4.2: Factors in economic regulation and public ownership that determine reaching objectives



In the following, we discuss how economic regulation of water services can improve water services. We then discuss how government ownership can improve water services.

4.1 Economic regulation can improve water services under certain conditions

Economic regulation of water services has been proposed to support the reform objectives. As the Discussion Paper notes, well-designed economic regulation should have the primary objective of promoting the interests of consumers. A secondary objective is economic efficiency.

It is important for policy-makers to understand the core function of economic regulation, and how using price-quality regulation for not-for-profit, government-owned water utilities is rare. Evidence suggests that the performance of economic regulation for public-owned water utilities is poor, with few exceptions. Therefore, when considering how to use economic regulation for publicly-owned water utilities, MBIE, and other government policy-makers should take care.

Regulation can protect consumers from lower quality and higher-priced services due to monopolistic behaviour arising from market power

Economic regulation aims to protect consumers from the exercise of monopoly power by a utility. We agree with MBIE's core definition of the reason for regulating water utilities.³⁰

³⁰ Discussion Paper, pp. 14 and 15

The voices of consumers and communities should be incorporated throughout the design of the three waters regulatory system, to ensure it is responsive and accountable. For example, consumers should be able to expect a certain level of service when they contact a water supplier with a query or complaint. Consumers should also expect clear communication about planned or unplanned network outages, and transparency from their supplier about how water services are billed.³¹

Regulation exists to achieve consumer welfare outcomes in the water sector that exist regardless of country. There are also New Zealand-specific outcomes that regulation can support.

The monopoly problem in water services is much more obvious when a water utility is a profit-seeking private firm. The firm can overcharge and/or deliver poorer quality service at the expense of consumers unless there is regulatory intervention. Economic regulation can be an effective tool to address this problem. MBIE is correct to note:³²

Overseas experience regulating water services, as well as domestic experience regulating other utilities, suggest that price-quality regulation is a highly effective tool in attaining the sorts of outcomes the Three Waters Reform aims to achieve, i.e. incentivising suppliers to provide affordable, high-quality water services. In particular, price-quality regulation often plays a crucial role in driving economic efficiency within regulated suppliers to ensure that water services are as affordable as possible for consumers.

Price-quality economic regulation for not-for-profit, government-owned utilities is rare

While MBIE is correct to note that price-quality regulation is generally effective, it is almost exclusively successful where the regulated water utilities have:

- Profit motive
- Clarity of purpose focussed on price and quality of service.

We reviewed the regulatory regimes in many jurisdictions that have been examined by New Zealand policy-makers in the reform process. In Tasmania, New South Wales, Victoria, England and Wales, Florida, large publicly-owned water companies have a profit motive that supports achieving the desired regulatory outcomes. Price-quality regulation is only applied to not-for-profit utilities in a minority of cases. The analysis is contained in Appendix A.

Research into the question of how economic price-quality regulation works for publicly-owned, not-for-profit water utilities is rare. This is because there are few examples. However, a 2010 study examining five countries, found that price-quality regulation has done little to boost the performance of government-owned utilities, and those systems typically fail.³³

³¹ MBIE (2021), Economic regulation and consumer protection for three waters services in New Zealand, Summary Document

³² Discussion Paper, para 72.

³³ Ehrhardt, D, Janson, N (2010), Can Regulation Improve the Performance of Government-Controlled Water Utilities, Water Policy 12 Supplement 1 (2010) 23–40

4.2 Public ownership and sound governance of natural monopoly utilities can also improve consumer welfare

Public ownership is the obvious alternative to overcoming the monopoly problem in water services. Newbery (1999) points out that regulation and public ownership are alternative (not complementary) approaches:

*The conventional analysis of network industries starts from...market failure, which justifies regulation or public ownership to restrain prices...*³⁴

The success of the public ownership model in meeting the public interest (and achieving the commonly accepted objectives we outline above) depends on how the entity is governed, and the incentives inherent in the governance design. Success requires that the management is accountable to the body charged with governance, and therefore that management has suitable incentives to perform well. In New Zealand, elected councillors currently hold the council CEO and senior management to account for water services.

Success of the public ownership model also requires that the body charged with governance is also appropriately incentivised to meet the objectives. This should occur via elections, where elected members respond to the interests of voters (customers) and implement their wishes.

However, the accountability mechanism of public ownership often does not work adequately. There are four systematic conceptual reasons for this:

- Selective representation of customer needs: governments may represent the interests of some constituencies more than others. Poor or marginalised communities that do not have electoral representation can be overlooked
- Short-term political aims: Higher water tariffs are usually politically unpopular in the short-term, while longer-term deterioration in service quality due to longer-term decline in viability of the water provider is less noticeable. Short-term political motives can drive government owners to hold water tariffs below cost
- Capture of the utility for personal ends: The governance and management can inflate their own salaries or transfer resources to personal or party-political ends. Staff can engage in corrupt practices for personal enrichment
- Provider capture: The entity is co-opted to serve the commercial, ideological, or political interests of a particular constituency. This can include the service providers to utilities, or a particular profession.

Therefore, when designing the governance and regulatory framework for publicly-owned water utilities, it is important that the regime addresses these issues. In the remainder of this submission, we outline how the regulatory model cannot achieve the agreed objectives, given the chosen ownership and governance structure, and then how better options would enable a fit-for-purpose regulatory regime to work.

³⁴ Newbery, D. M., "Privatization, Restructuring, and Regulation of Network Industries". Cambridge, MA: MIT Press, 1999. p.2.

5 Regulatory model will not achieve objectives

The regulatory model anticipated in the Discussion Paper is incapable of achieving the outcomes sought for water services. Furthermore, it cannot be adapted due to the fundamental problems with the design and accountability framework of WSEs. The regime is unlikely to improve consumer welfare or lift economic efficiency. We explain why in the following.

5.1 Regulator will face challenges improving availability of relevant information

Information is required for a regulator to determine the efficient costs of the WSE. The information asymmetry between managers of monopoly utilities is compounded by idiosyncratic water sector regulation issues, and a current lack of accurate information in New Zealand.

The New Zealand regulator will have to gather information from highly complex WSEs, that themselves will attempt to hold and record information about a vast array of networks and local conditions. This will be a challenge for the proposed economic regulator.

Information asymmetry in water services

The typical economic regulation challenge is the information asymmetry between managers of the utility and the regulator. The managers have the best information about the utility, and know its costs and factors that influence prices. This challenge would apply to the WSEs here in New Zealand.

Idiosyncratic challenges in water sector

Water services are highly idiosyncratic. Regulating water services is a different challenge from the experience that New Zealand policy-makers are familiar with in electricity, gas and telecommunications. Water networks are designed around natural features—access to water sources for drinking water, and access to suitable locations to treat wastewater and dispose of it. This is why networks are local, and do not extend over long distances, unless serving a contiguous urban area.

Exposing information for regulatory purposes from water service providers, therefore, has unique challenges. The regulator will need to independently judge whether the WSEs costs are fairly attributable to the different typographies, geographies, water sources and so on that will apply differently in across its jurisdiction. This is different to other utility regulation, like electricity, which has fewer idiosyncrasies.

New Zealand-specific challenges compound challenges to obtain information

However, there are additional challenges in New Zealand. There is a lack of relevant and accurate information on the current value and state of water assets and networks. There is also limited information on the volumes of water consumed (or lost as non-revenue water). A large number of water networks in New Zealand remain unmetered.

The management of proposed WSEs will have very poor information for the first few years of the regulatory regime. Managers will struggle as they have to integrate information from multiple legacy local authority water services.

New Zealand water services have also not accurately calculated the cost of service. In some cases, the financing related to water assets is not clearly linked. Local authorities have raised finance for general purposes. Opex can be shared across different local government functions. Given the existing information, there is less scope for a regulator to drive efficiencies than in, for example, the electricity sector.

5.2 Regulator will have issues incentivising management and governance to optimise costs and quality of service

Regulation should mimic the pressures that competition provides in other markets. Regulation should make providers offer services that customers want at reasonable prices. Reasonable prices are prices that cover the reasonable cost of service, including a reasonable return on capital used, but no more. To get a corporation (even a publicly owned one) to behave as if it were in a competitive market requires incentives on the people working in the organisation—principally, management.

5.2.1 Price-quality regulatory model will not incentivise management to be efficient

Typically, price-quality regulation incentivises management to improve efficiency by setting the prices that water utilities can charge at a level that reflects reasonable costs. Under the discussed price-quality model, the regulator would set a price or revenue cap at the level of the water utility's expected reasonable costs, based on the cost of capital, plus depreciation and operating expenses, and allow the utility to retain any outperformance against the allowances. Therefore, in profit-seeking entities, the management has an incentive to reduce costs because cost savings translate into higher profits.

However, the WSEs do not have a profit motive. There will be no commercial incentive to reduce costs (or increase revenues). Managers will receive no rewards for innovating, finding ways to save resources, or the myriad of other efficiencies that profit-maximising managers might identify. In fact, managers might even be incentivised to increase some costs, which we discuss below.

5.2.2 Regulatory model could risk tariffs remaining too low

In profit-maximising water utilities, the dominant incentive is to increase tariffs to increase profits. Without a profit motive for WSEs, there is no basic incentive to increase tariffs. This is a problem for the proposed New Zealand WSEs because, in some cases, local authorities failed to charge tariffs that cover the cost of service. This is one of the government's justifications for sector reform.

Therefore, the regulator will need to actively monitor tariff-setting to ensure that tariffs are set at a level that covers cost. This is an unusual position for a New Zealand regulator, yet it is not acknowledged in the Discussion Paper as a possible outcome, nor are any options discussed for addressing this issue. We are happy to discuss international examples of this problem with MBIE to ensure policymakers are receiving the full range of global evidence.

Those tasked with governance of the WSEs, at any level of the four layers between voters and WSE management, could have incentives to keep tariffs low. This is a particular risk given the significant cross-subsidies that will exist. Voters in metropolitan areas that experience tariff rises due to the need to cross-subsidise costlier rural water services may put pressure on elected MPs or Ministers (who can influence the National Policy Statement content), or on local councillors for lower tariffs. Unless the regulator itself initiates tariff increases, even in the absence of WSEs proposing such increases, typical price or revenue cap regulation may prove ineffective.

5.2.3 Regulator can inadequately monitor over-spending or corruption

The WSEs will control substantial resources, and will access significant new capital for the claimed new investment (up to \$180 billion over 30 years is claimed). The not-for-profit WSEs have no in-built incentive to focus management attention on lowering costs and identifying innovative processes. Without such a profit-motive, and because the WSEs will be large with myriad reporting mechanisms and accountabilities, the incentive and opportunity will arise for individuals to overspend or even engage in corrupt practices. While rare, blatant corruption can occur in New Zealand.³⁵ Much larger budgets and more complex accountability mechanisms is likely to increase opportunities for corrupt practices.

New Zealand's economic regulators are unaccustomed to monitoring such conduct.

5.2.4 Uniform tariffs can hide inefficiencies

The government promotes tariff harmonisation as a feature of the proposed WSEs. It claims it is desirable that tariffs will be the same between low cost and high cost of service areas. This makes the task of effective economic regulation difficult for a regulator.

The regulator will be required to understand the differences between idiosyncratic networks to be able to judge whether costs are justified. However, the regulator will be unable to analyse price differences between localised networks because tariff harmonisation is a feature of the WSEs. The large-scale tariff harmonisation of the sort proposed will create opportunities for inefficiencies and improper conduct to be concealed because both the governance bodies and regulator will be unable to monitor it.

There are significant differences in the cost of service between different local authorities. The highly idiosyncratic nature of water networks means costs can vary greatly between different parts of New Zealand. There are different costs associated with the features of natural water sources. For example, Christchurch has 150 water bores around the city that feed the network whereas Auckland takes water from two large dams and the Waikato river. Topography influences costs as pumping requires a lot of energy—hillier areas have higher energy costs. Typically, more rural areas have a higher average cost of service due to dispersion of population.

In infrastructure regulation, zonal pricing recognises that the location of consumers, particularly relative to production facilities, can affect the cost of service. Zonal pricing can

³⁵ For example, the Murray Noone and Stephen Borlase case where a local authority manager colluded with a supplier on roading contracts and received undisclosed payments and gratuities. See: [https://www.rnz.co.nz/news/national/325076/pair-jailed-over-\\$1m-bribery-case](https://www.rnz.co.nz/news/national/325076/pair-jailed-over-$1m-bribery-case)

enhance the efficiency of the utility. However, the government has specifically ruled out WSEs being able to charge zonal prices.

Typically, a regulator can add value by monitoring that zonal prices reflect costs, and that different parts of the utility are not cross-subsidising others. Since the regulator cannot perform this function, it makes little sense to pay the regulatory costs.

5.2.5 Regulator has no viable way to enforce breaches

As the Discussion Paper notes, “[e]ffective compliance and enforcement is essential for any regulatory regime to achieve its purpose and objectives.”³⁶ Effective regulation requires the ability to reward good performance and punish poor performance. The purpose of the warnings, reprimands, injunctions, orders, financial penalties and criminal penalties listed in paras 136-139 of the Discussion Paper is to incentivise management and governance to provide the services at least cost for a fair price.

As the Discussion Paper notes, conventional civil penalties are likely to be ineffective in addressing WSE misconduct due to a lack of profit motive. Indeed, the costs of any sanctions will ultimately be borne by customers. If the regulator punishes a WSE for inefficient performance by refusing a tariff increase, the WSE will have to cover the deficit through retained funds, or cut back on service. In either case, the consumer suffers. While, in theory, this might result in the WSE board changing management, or the RRG influencing the ISP which may then replace board members, in reality it is likely that repeated breaches would be needed to prompt any action.

5.3 Regulator cannot adequately address socio-cultural outcomes

The economic regulator will be required to monitor the socio-cultural outcomes sought from these reforms. It is an inevitable consequence that the regulator will have to judge the trade-offs between different values. An economic regulator is ill-suited to the role of determining whether investments and tariffs are appropriate in light of socio-cultural objectives.

In MBIE’s view, it *“is an open question as to whether the economic regulator should have regard to a broader range of objectives, including things such as Te Mana o te Wai (the vital importance of water) and climate change.”* However, in economic theory, and in practical reality, the economic regulator will be unable to escape having to evaluate the WSEs’ choices between different socio-cultural objectives.

Improving the performance of water utilities is generally cost-benefit justified, but not Pareto efficient. In other words, there are winners as well as losers. The regulator is tasked with defining the level of productive efficiency—best service for least cost. The regulator therefore has to understand how to value the socio-cultural matters that will be traded off.

The WSE will have to evaluate its investment decisions *ex-ante* (before investing). This will involve weighing up complex socio-cultural matters against customers’ diverse demands and interests (and groups of customers). For example, a wastewater treatment scheme discharge may require design features to realise Te Mana o te Wai outcomes. There will inevitably be

³⁶ Discussion Paper, para 136.

choices about different designs to address the problem, with different costs and different benefits. Each WSE will have to carry out an ex-ante evaluation and justify its decisions to the regulator.

This will be complex. The WSEs will be required to make investment decisions that reflect the different needs of over 60 Iwi (for Entity B), and many more hapu groups. As the Government itself acknowledges, to realise the objective of improved kaikiakitanga, the WSE will have to connect governance with delivery on the ground at a hapū/whānau level.³⁷

There are risks the regime reflects interest group politics

We have established that regulators will face challenges determining whether the WSE's decisions are cost-benefit justified. This, in turn, gives rise to risks that political incentives may emerge for the WSE's management to suggest investments for board approval that serve particular interest groups.

For example, the WSEs are required to prioritise investment in rural communities. This creates an incentive to expand or upgrade networks in some places, whether or not that is justified on a cost-benefit basis or under the direction received under the accountability mechanisms. This can be at the expense of other investments that meet objectives for lower cost. Incentives to secure political support will follow.

5.4 Costs of regulation likely to materially exceed benefits

New Zealand regulatory law and practice requires that regulation is only imposed where the benefits of regulation materially exceed the costs.³⁸ The highly complex, unworkable, nature of the proposed WSE governance structure and how it interacts with the economic regulator will impose additional costs than would be necessary if a different governance regime were chosen. The regime also materially reduces the scope for creating benefits through regulation.

The net result of the regulatory regime proposed in the Discussion Paper will be a system that is unlikely to be net-benefit justified. Customers will receive fewer benefits for more costs compared to if the ownership and governance structure was better balanced with regulation. The deficiencies will require extensive adjustments and additional investment in the economic regulatory regime. However, the regime cannot be improved to adequately regulate the sector. If it proceeds, future attempted changes will become necessary, which impose additional costs.

³⁷ DIA (2021), Departmental Regulatory Impact Assessment, Decision on the reform of three waters service delivery arrangements, p. 296

³⁸ For example, Section 52G Commerce Act 1986

6 Public ownership and governance model must be improved to enable effective economic regulation

The proposed ownership and governance of the WSEs will prevent economic regulation from being effective. Instead, the governance structure needs to be improved to a more direct relationship between customers, voters and those tasked with governance and management of the WSEs.

We outline how Castalia is working with Partner Councils on developing options that provide a better governance regime. This will then enable fit-for-purpose regulation to work.

6.1 Other public ownership and governance options deliver direct accountability

In parallel to this submission, Castalia has prepared an analysis of options to structure the New Zealand water reforms. In that analysis, improved public ownership and governance models are identified that provide more direct accountability between consumers. The Castalia analysis highlights how two options can address local and central government's shared objectives for safe, environmentally sound, resilient, customer-responsive water services at least cost. The detailed analysis will be available shortly.

In summary, two options would provide customer accountability, and drive appropriate incentives of governance and management. These are the "Partner Council Options":

- **Council-owned plus regulation:** Amending the current local authority-owned and operated model with targeted interventions to address financing, funding constraints and credible enforcement mechanisms from water quality, environmental and economic regulators
- **Council-owned organisation:** Local authorities would own shares in a regional organisation. The local authorities would remain democratically accountable to voters (and water customers), and would exercise appointment rights over the organisation board. The organisation would own and manage the three waters service for the area.

In both Partner Council Options, the improved models remove the multi-layered governance and appointment systems, as well as the competing priorities in performance accountability instruments. This is all replaced with simple democratic accountability of elected councillors. This would be supported by the regulatory regime which sets and enforces minimum quality standards, environmental outcomes, and economic performance benchmarks.

In the remainder of this section, we explain how an improved economic regulation regime would work with the Partner Council Options.

6.2 Information disclosure and benchmarking would support public ownership model

If one of the proposed Partner Council Options is pursued, then an information disclosure regulatory regime would be appropriate. It would already be a significant improvement on the status quo.

Information disclosure should include relevant, timely and understandable cost, revenue and quality metrics which is standard between water entities

This would require water service providers (whether local government or regional corporation-owned) to disclose the costs of service, revenues, and other performance metrics. Such information would provide all levels of management, governance and the ultimate owners (the public) with information about how the utility is performing:

- Utility management can assess performance of different functions within the organisation
- Those tasked with governance (councillors or the board) would have information to understand how the utility and its management is performing
- Ultimate owners and customers (the public) would be able to evaluate the performance of their elected representatives.

However, it is important that the information disclosed is relevant, timely and understandable. Therefore, imposing regulatory standards for the information to be disclosed is important. Standardised disclosures of asset values, investment plans, financing and other opex provides basic information about costs. Water quality monitoring results, environmental performance, customer complaint records, outages and similar information provides basic information about service quality.

Benchmarking is a critical tool to lifting performance

Benchmarking involves the economic regulator publishing the information gathered and presenting it in a way that enables comparison between utilities. Benchmarking should enable voters, customers and elected officials to understand the performance of utilities, and also insights into what is possible in the way of service and efficiency. OFWAT benchmarks the water and sewage companies and water-only companies in England and Wales, enabling comparison. As MBIE notes, the New Zealand Commerce Commission benchmarks EDBs in terms of quality of service and costs.³⁹

Information disclosure has performed very well in New Zealand for customer-owned EDBs

Information disclosure already performs very well in New Zealand. An empirical analysis published in the globally respected *Energy Economics* journal in 2020 found:⁴⁰

[E]mpirical analysis of New Zealand EDBs suggests customer ownership is associated with lower prices, and also with higher quality, efficiency and welfare. These empirical findings are comparable with those of Kwoka (2005a), who found public ownership – rather than

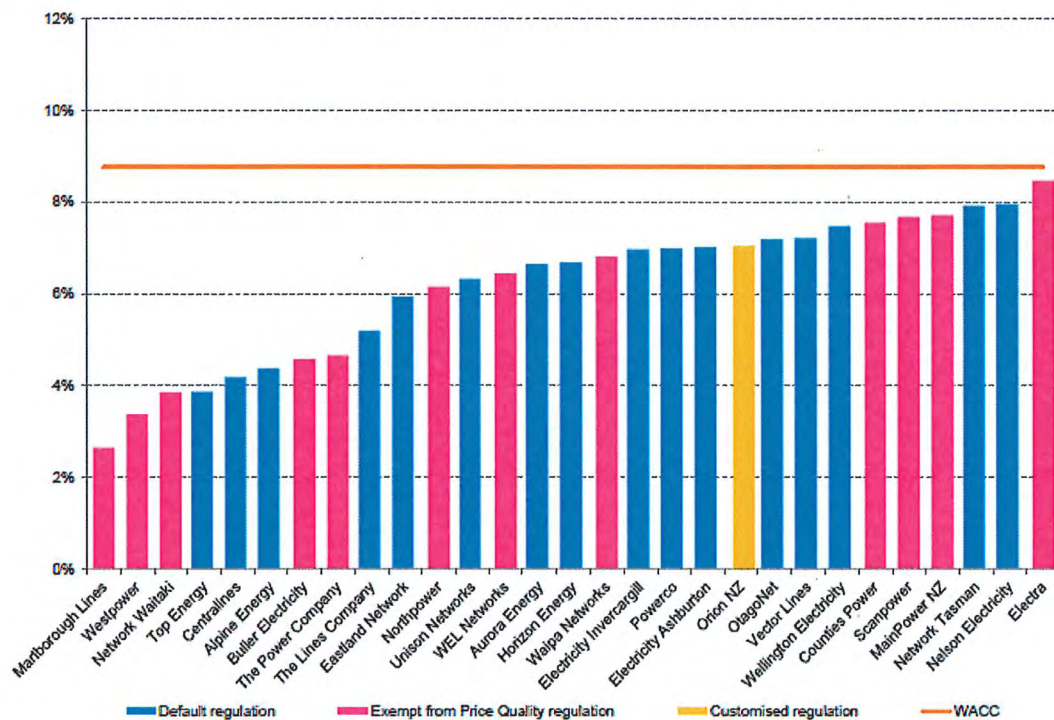
³⁹ Figure 4 in the Discussion Paper shows that the 12 EDBs subject to information disclosure-only regulation have a similar performance to those also regulated for price and quality.

⁴⁰ Meade, R, Söderberg, M, (2020), Is welfare higher when utilities are owned by customers instead of investors? Evidence from electricity distribution in New Zealand, *Energy Economics*

customer ownership per se – of US electric utilities to be associated with lower costs and higher quality relative to investor ownership.

Analysis in the government's Electricity Review (overseen by MBIE) at Figure 6.1 also shows that the profits of the 12 EDBs subject only to information disclosure were not structurally dissimilar from the EDBs subject to information disclosure and price-quality regulation.

Figure 6.1: EDBs' profits compared with 8.77 percent WACC (2013–15)



Electricity Price Review, First Report for Discussion (2018)

This evidence is consistent with the economic theory and the policy rationale that justifies for the regulatory regime for customer-owned EDBs. Where customers have direct accountability is that because of customer ownership, a reduced regulatory burden is sufficient.

6.3 Better governance can enable incentive-based regulation

Improving the ownership structure and governance of water service entities can improve the incentives on governance and management. The best outcomes from government economic oversight and regulation occurs when regulatory interventions work hand-in-hand with the underlying incentives of the owners of the regulated firms.

If an appropriate governance model is confirmed—in line with Castalia's analysis for Partner Councils—the regulatory model will be able to work better. This is because the incentives of

governance and management of future water entities will be better aligned with the interests of customers.

The key desirable incentives that improve outcomes are:

- Incentives to charge reasonable tariffs
- Incentives to improve efficiency and provide a service that reflects consumer demands
- Incentives to share benefits of any efficiency savings with customers
- Incentives to innovate and invest in replacement, upgraded and new assets.

6.3.1 Better governance and targeted regulation will align incentives with reasonable tariffs

There are limited incentives on publicly-owned water utilities to impose high and extractive prices on customers (who are also voters). The regulatory system, therefore, needs to provide the conditions for prices that recover the cost of service, for the services at the quality and the cost that citizens want (subject to meeting safety standards).

The regulator can assist by identifying the optimal trade-off between cost and quality. It can use the business plans disclosed to it under information disclosure to ensure that services are provided at a quality and cost that citizens want, and to optimize the trade-off between cost and quality. The real value of such an exercise for publicly-owned entities would be in helping customers (voters) and elected decision-makers understand what is reasonably possible. The regulator could publicise the consequences of failing to set adequate tariffs in the form of deteriorating assets and service.

6.3.2 Better governance can ensure incentives to improve efficiency and provide a service at a quality that reflects consumer demands

In principle, firms in natural monopoly industries have a strong incentive to minimise costs and ensure productive efficiency, because their owners wish to maximise surplus available to them. Hence, even in the absence of competitive pressures, owners have no incentive to permit waste. This is true of both investor-owned and consumer-owned firms: investors wish to earn the greatest profits, while consumers wish to take advantage of the lowest possible prices. Modern economic literature, however, highlights the fact that managers and workers do not share the owners' objectives.⁴¹ Managers may prefer an easy life, or may have other objectives, which would tend to raise costs and reduce productive efficiency. In competitive industries, managers face both direct supervision from business owners and pressure from competitors. Investor-owned utilities also face take-over threat, which in principle puts management at risk of being replaced. This combination serves to align their behaviour with the interests of owners.

⁴¹ Jensen, M. and Meckling, W. "Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure", 1976. *Journal of Financial Economics* 3. pages 305-60; Buchanan, J. M., & Tullock, G. (1965). *The calculus of consent: Logical foundations of constitutional democracy* (Vol. 100). University of Michigan press, Von Mises, L., & Morris, R. (1944). *Bureaucracy* (p. 47). New Haven: Yale University Press; Niskanen, W. A. (2017). *Bureaucracy & representative government*. Routledge; Dunleavy, P. (2014). *Democracy, bureaucracy and public choice: Economic approaches in political science*. Routledge. We note that MBIE confirmed by e-mail to Castalia that it cited this literature for its para 19 of the Discussion Paper.

In natural monopoly industries, the absence of competitive pressures may give managers more leeway, allowing them to be less efficient. For this reason, regulators often believe that their interventions can contribute to productive efficiency of regulated firms, over and above the pressure from the owners.

However, this is not always true for consumer-owned or public firms. It is difficult for regulators to construct the cost models which are supposed to reflect efficient costs of an efficient firm.⁴² By setting prices with reference to those efficient costs, regulators force managers and owners of regulated firms to recognise gaps in performance—a regulated firm which is not able to earn reasonable returns at regulated prices would, by definition, be less efficient than the benchmark used by the regulators. Hence, this gap would provide owners with the information needed to demand improved performance from managers.

A consumer-owned or publicly-owned water entity will have as much incentive as the regulator to set prices which maximise consumer surplus. This would improve allocative efficiency.

Finally, if the governance and ownership structure delivers the closer alignment of customers, owners, governance and management, it can be a good mechanism for ensuring that the price-quality trade-offs selected by the distributor reflect those desired by its consumers.

6.3.3 Ensure benefits of efficiency gains shared with consumers, including through lower prices

Publicly-owned or consumer-owned water entities, with the governance changes Partner Councils seek, can ensure that benefits from efficiency gains are passed on to customers, rather than dispersed among management (through inefficiencies or inflated salaries) or particular sub-sets of customers. Even if earnings are not distributed as dividends, retained earnings benefit consumers through enhanced services, or reduced future borrowing.

There are a number of ways to align incentives to ensure efficiency gains are shared with consumers. The Castalia advice on Partner Council Options is the first step in identifying the appropriate model for the sector. Thereafter, the economic regulation mechanisms that align the incentives for efficiency gains with the optimal ownership and governance model should be explored.

6.4 Better governance can reduce costs of regulation

By aligning the incentives of public ownership and accountability to the public through governance mechanisms, the costs of regulation can be reduced. Under the government's proposed WSE model, the regulator would have to assess each WSE's business plans and costs against efficiency benchmarks. The regulator also has to overcome the information gaps it has in understanding the highly complex networks and competing socio-cultural and efficiency objectives of each WSE.

New Zealand regulators have experience regulating almost 30 EDBs, and using cost-effective tools to do so where governance is accountable to customers. There is every reason to expect

⁴² Or by using benchmarking, which is supposed to reflect efficient prices.

that a regime that balances ownership and governance with regulatory tools can achieve a similar cost-effective outcome in water services.

CONFIDENTIAL

Appendix A: Analysis of economic regulation in selected jurisdictions

Table A.1: Analysis of economic regulation in selected jurisdictions

Jurisdictions (Entity name)	Economic regulator	Total entities	Number of customers (range)	Profit motive	Tariff setting	Monitor and enforce tariffs	Monitor and enforce service standards	Water quality, Environmental protection
Tasmania (TasWater)	Office of the Tasmanian economic regulator	1	522,000	Yes	Sets tariffs	Yes	Yes	Public Health Services, Environmental Management and Pollution Control Act
New South Wales	IPART	5	600,000 – 5,000,00	Yes	Sets tariffs	Yes	Yes	WaterNSW, NSW Department of Planning, Industry and Environment
Victoria	Essential Services Commission (ESC)	15	17,265 – 839,516	Yes	Sets price caps	Yes	Yes	Environmental Protection Authority, Department of Environment, Land, Water, and Planning, Department of health and human services (drinking water quality standards)
Scotland (Scottish water)	WICS	1	5,000,000	No	Sets price caps	Yes	No	Drinking water quality regulator (DWQ), Scottish Environment Protection Agency (SEPA)

CONFIDENTIAL

England and Wales	OFWAT	32	Over 50 million	Yes	Sets price caps	Yes	No	Drinking water inspectorate, Environment Agency
Ireland (Irish water)	The commission for regulation of Utilities (CRU)	1	1,800,000	No	Reviews and approves tariffs	Yes	Yes	Environmental protection agency (EPA)
Florida	Florida Public Service Commission	147	Up to 2,000,000 customers	Yes (for Investor-Owned Utilities)	Sets tariffs	Yes	Yes	US Environmental protection agency (EPA), Florida Department of Environmental protection (FDEP)
Jamaica (National water commission Jamaica)	Office of utilities regulation (OUR)	National water commission, other water and sewerage providers, and national irrigation commission	2,000,000	No	Sets tariffs	Yes	Yes	None
Columbia	'CRA' and 'Basic sanitation regulatory commission'	Numerous entities (High degree of fragmentation)	Wide range	Yes (for private/public stock corporations)	Sets tariffs	No ⁴³	No	Vice Ministry of water and sanitation defines sector standards. Multiple regulators (CEA, SSPD, Basic sanitation regulatory commission)

Sources: TasWater, ESC, IPART, OFWAT, WICS, OUR, CRU, Scottish Water, Irish Water and Castalia research

⁴³ Enforced by Superintendencia de servicios Públicos Domiciliarios (SSPD).

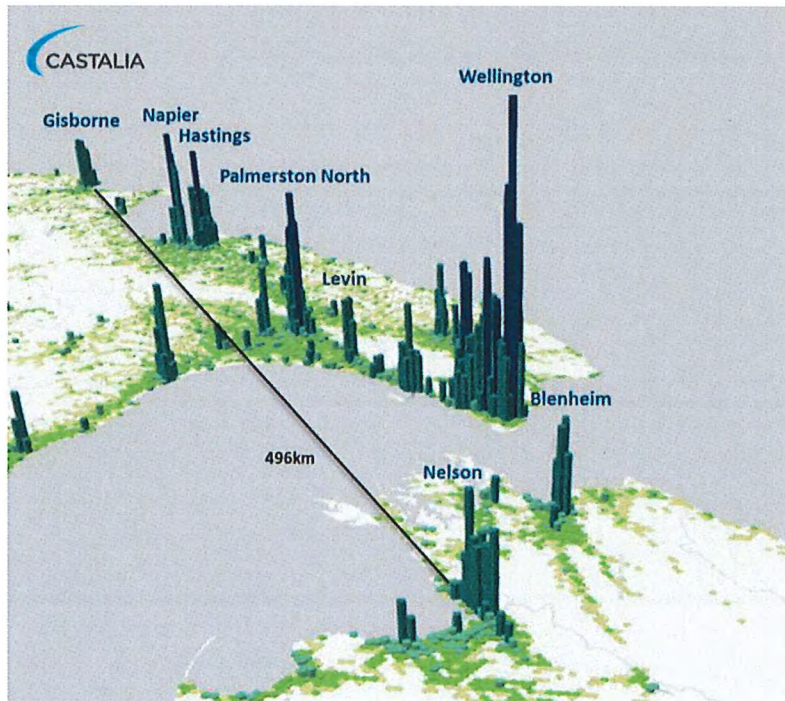
Appendix B: Maps of Water Service Entities and population centres

Figure B.1: Cities and towns in Entity A with population densities



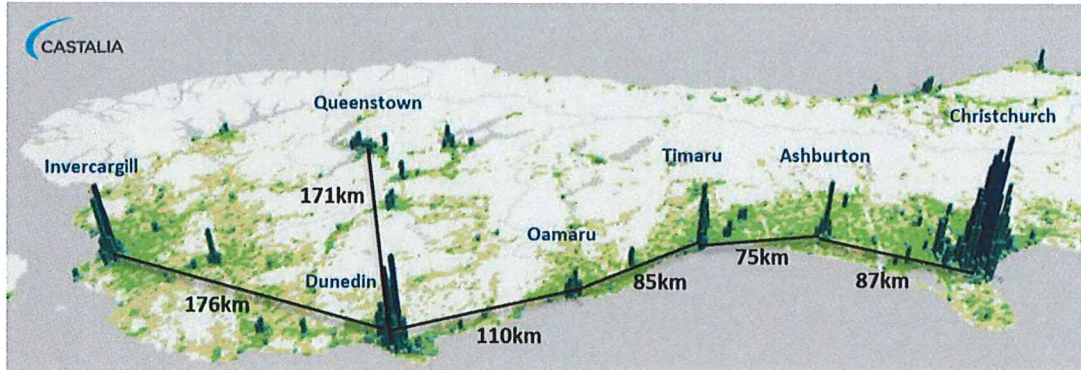
Castalia adapting Statistics New Zealand visualisation

Figure B.2: Cities and towns in Entity C with population densities



Castalia adapting Statistics New Zealand visualisation

Figure B.3: Cities and towns in Entity D with population densities



Castalia adapting Statistics New Zealand visualisation



Castalia is a global strategic advisory firm. We design innovative solutions to the world's most complex infrastructure, resource, and policy problems. We are experts in the finance, economics, and policy of infrastructure, natural resources, and social service provision.

We apply our economic, financial, and regulatory expertise to the energy, water, transportation, telecommunications, natural resources, and social services sectors. We help governments and companies to transform sectors and enterprises, design markets and regulation, set utility tariffs and service standards, and appraise and finance projects. We deliver concrete measurable results applying our thinking to make a better world.

**Thinking
for a better
world.**

WASHINGTON, DC

1747 Pennsylvania Avenue NW, Suite 1200
Washington, DC 20006
United States of America
+1 (202) 466-6790

SYDNEY

Suite 19.01, Level 19, 227 Elizabeth Street
Sydney NSW 2000
Australia
+61 (2) 9231 6862

AUCKLAND

74D France Street, Newton South
Auckland 1010
New Zealand
+64 (4) 913 2800

WELLINGTON

Level 2, 88 The Terrace
Wellington 6011
New Zealand
+64 (4) 913 2800

PARIS

64-66 Rue des Archives
Paris 75003
France
+33 (0)1 84 60 02 00

enquiries@castalia-advisors.com
castalia-advisors.com

Appendix 4

C4LD Letter to Members of Parliament

26 April 2022

Member of Parliament
Parliament Buildings
WELLINGTON

By email

Dear

ALTERNATIVE PROPOSAL TO ADVANCE THREE WATERS REFORM

The Government intends to soon introduce into Parliament a Bill that will reorganise extensively the Three Waters sector (drinking water, wastewater, and stormwater) in New Zealand.

The purpose of this letter is to outline to you as a Parliamentarian who soon may be considering that Bill, the views of the member Councils of Communities 4 Local Democracy - He hapori mō te Manapori ("C4LD") on the Government's proposals.

C4LD is comprised presently of 32 Partner Councils, representing approximately 1.4 million people. We came together to work collectively to find a better way to achieve the health and environmental outcomes that most people desire. However, quite apart from the Partner Councils of C4LD, there are many other councils that do not support the Government's mandated four entity model. Most notably Auckland Council, representing another 1.7 million people.

In this letter we set out the broad parameters of an alternative set of reform proposals which would achieve the health and environmental policy outcomes that most parties agree are desirable. It is our view that the set of proposals outlined in this letter are likely to achieve multi-party support in Parliament; indeed, this is an outcome we are prepared to champion with all Members of Parliament.

Without multi-party support the Government's proposed reforms will not be durable. Without regulatory certainty there cannot be investment certainty. Without investment certainty there will not be investment. Such an outcome accordingly fails the chief measure of success for any set of infrastructure policy reform. The result is that needed improvements to health and environmental settings will once again be delayed.

We presented our alternative proposal to the Minister of Local Government Hon Nanaia Mahuta and her officials when we met at Parliament on the 4th of April and followed this up with a letter.

Our alternative proposal has 10 high-level components. They are:

1. Foundation principle - community property rights in Three Waters assets are to be both respected and meaningful;
2. The Government should agree to amend its current reform process and allow time for the revised approach to be reflected in draft legislation;
3. With respect to investment decision-making, asset owners should be required to actively seek to initiate authentic discussions with mana whenua at a local level that consider co-

design and partnership arrangements that acknowledge and enable Te Tiriti based pathways at a local and regional level;

4. In return, asset owners agree to commit to meeting health and environmental standards, once known, within an appropriate timeframe (for this reason we fully support the drinking water regulator Taumata Arowai);
5. The regulatory framework should specify a “backstop” provision that identifies a set of circumstances which would justify future Crown intervention if an asset owner was not making acceptable progress towards meeting those regulatory requirements;
6. Progress should be reported on annually by asset owners and be benchmarked across the sector;
7. To further incentivise sector progress, a formal process might be established that requires an asset owner to prepare a plan for ministerial approval that would map out the steps it proposes to take to meet the required standards in a financially viable and sustainable manner (a similar process that respected property rights was used in the Energy Companies Act 1992);
8. A process to finance and allocate funds to areas that will require financial assistance, be designed that is national in application and independently administered accordingly to objective and transparent criteria (this is consistent with the recommendation of the Productivity Commission in November 2019);
9. This subsidy scheme will be designed to meet investment shortfalls until such time as sufficient progress has been made. At which point the scheme will cease and asset owners will finance matters on a business-as-usual approach; and
10. A sector-wide sector best-practice improvement process be created and membership made compulsory (in similar manner used to implement successfully the One Network Road Classification Framework and now One Network Framework in the road infrastructure area; and governed by Waka Kotahi (NZTA) and the Local Government Sector).

Our analysis ([Attachment 1](#)) prepared by our independent consultants, Castalia, shows that alternative structural arrangements to that proposed by the Government are perfectly capable, and in most cases, more capable, of achieving the desired policy outcomes. Importantly, these alternative structural arrangements protect local voice, respect community property rights, and just as importantly, are a far more effective protection against privatisation than any legislation which could be easily unwound by a future Parliament. As we all know, a current Parliament cannot bind a future Parliament.

We propose two broad approaches:

1. A regional multiply-owned council water enterprise. Such an approach would achieve the Government’s goal of balance sheet separation provided no one council owns more than 50% of that enterprise. This is specifically provided for in International Financial Reporting Standard 10. The proposed Hawkes Bay regional model is a good example of the type of enterprise that could be established and which would have local community support; and
2. A single council owned water enterprise. We accept that this option would not achieve balance sheet separation. Accordingly, we think proponents of this approach would have to satisfy the Government of the day that it would be backed by a financially viable investment plan (using the proposed process noted above). But in principle, if a single-council owned entity is viable and could achieve the health and environmental outcomes required, then a Government ought to be agnostic about organisational design, particularly for assets it neither owns nor is proposing to purchase.

Mana whenua involvement in investment decision-making (as opposed to regulatory decision-making) is a key aspect of the reforms for the Government. The Partner Councils of C4LD support that objective consistent with the protection of both local voice and community property rights. However, in our view, the Government's proposal will not reflect local realities and communities of interest and, importantly, iwi and hapū rohe and areas of interest, in most parts of the country. We consider that a more local approach gives better representation to mana whenua, particularly in the North Island where there are very many iwi and hapū.

We are conscious that there is significant and mischievous comment currently circulating about C4LD's approach to mana whenua involvement in investment decision-making. We reject categorically such comment. To clarify matters, Partner Councils have prepared the attached statement ([Attachment 2](#)) which clearly sets out our position.

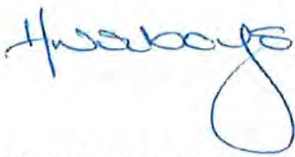
C4LD believes that Three Waters assets should continue to be owned by communities through their councils either directly or through real shareholding arrangements that confer the usual rights and obligations that go with equity ownership. The Government's approach does not do that. Further it is our view that the Government's approach amounts to the expropriation of council assets without true value compensation. We note that this matter is at issue in the litigation being pursued by some councils at present.

The Government's proposals are widely opposed across the country. Whilst presently, the Government has the Parliamentary majority to achieve its preferred position, this does not mean that the position is durable. It is not. Opposition Parties have already publicly committed to repeal any such legislation. Our preference, and we think the country's preference is to achieve a multi-party and durable approach. In our view our proposal can achieve that with your support. We commend it to you.

It is not too late to rectify matters. We are not that far apart in our objectives. Indeed, what we are offering in our 10 point plan is an approach that we believe would achieve broad support. We are prepared to partner and work with the Government and all political parties to turn this around and find a lasting solution that we can all support.

We would be happy to meet with you to further explain the detail of our alternative approach to Three Waters reform if you would find that helpful.

Yours sincerely



Mayor Helen Worboys
Manawatu District Council
Chair
helen.worboys@mdc.govt.nz



Mayor Dan Gordon
Waimakariri District Council
Deputy Chair
dan.gordon@wmk.govt.nz

Att 1: *Castalia Improved Options for Three Waters reform January 2022*

Att 2: *Communities 4 Local Democracy - He hapori mō te Manapori (C4LD) Position on Iwi Māori Partnership*

Appendix 5

Castalia Flaws in Water Services Entities Bill



Flaws in Water Service Entities Bill

Report to Communities 4 Local Democracy

JULY 2022

Copyright Castalia Limited. All rights reserved. Castalia is not liable for any loss caused by reliance on this document.
Castalia is a part of the worldwide Castalia Advisory Group.

Table of contents

Executive summary	5
1 Introduction	9
2 Investment needs significantly overstated	10
2.1 Top-down approach to estimating investment is flawed	10
2.2 Bottom-up estimates by experts show much lower needed investment	14
2.3 Experts' reviews of the government's analysis highlight flaws	18
3 The government's average household water charges claims are implausible	18
3.1 Mega entity efficiencies are highly implausible	19
3.1.1 Capex efficiency estimates are implausible	20
3.1.2 Opex efficiency estimates are implausible	22
3.2 Additional assumptions are invalid	24
3.3 Peer review highlights flaws	26
4 Mega entities will have poor accountability to the public	27
4.1 Complex governance structure removes accountability to public and communities of interest	27
4.2 Local variability, resilience and responsiveness will be lost	28
4.3 Mega entity interaction with regulation is poor	29
5 The reform increases fiscal risk	31
5.1 Mega entities are effectively guaranteed by the Crown	31
5.2 Local authority debt is quarantined from Crown	31
5.3 Mega entities will increase Crown fiscal risk	32
6 The government failed to consider alternative options and evidence	33
6.1 Government and its consultants did not appropriately review options	34
6.2 Impact of improved regulatory regime not properly considered	35
6.3 Historical reform lessons ignored	37

Appendices

NO TABLE OF CONTENTS ENTRIES FOUND.

Tables

Table 2.1: Urban population statistics of New Zealand and Scotland	14
Table 3.1: Impact of additional assumptions on the mega entity modelling	24

Figures

Figure 0.1: Population densities and distances between towns in Scotland and New Zealand	6
Figure 2.1: Asset value per connected citizen for selected water utilities	11
Figure 2.2: Population density (persons per square kilometre) in Scotland	12
Figure 2.3: Major cities within the proposed Entity A and the distances between them	13
Figure 2.4: Major cities within the proposed Entity D and the distances between them	13
Figure 3.1: Estimated average household bill in 2051 under reasonable capex and opex efficiency assumptions	20

Figure 3.2: Impact of removing WICS favourable assumptions on the estimated average household bill in 2051	25
Figure 3.3: Impact of adopting reasonable efficiency assumptions, and removing WICS favourable assumptions on the estimated average household bill in 2051	26
Figure 4.1: Complex mega entity governance structure	28
Figure 6.1: Standard policy development process	34

Boxes

Box 2.1: Waimakariri District Council case study	15
Box 2.2: Auckland Watercare case study	17
Box 6.1: Hastings District Council case study	35






Definitions

AER	Australian Energy Regulator
Bill	Water Services Entities Bill
Capex	Capital expenditure
LGA	Local Government Act
LGFA	Local Government Funding Authority
LTP	Long-term plan
OFGEM	Office of Gas and Electricity Market
OFWAT	Water Services Regulation Authority
Opex	Operating expenditure
RFI	Request for Information
TfP	Total factor productivity
WICS	Water Industry Commission for Scotland
WSE	Water service entity

Executive summary

The government proposes to reform the New Zealand drinking, waste, and stormwater (three waters) sector. It has introduced the Water Services Entities Bill (the Bill) to Parliament. The Bill has been referred to the Finance and Expenditure Select Committee.

This report identifies the key flaws with the government's Bill and the policy and economic analysis that underpins it. There are five flaws with the Bill.

01		Overstated investment	<ul style="list-style-type: none"> Based entirely on Scottish investment level Council and expert analysis is more reliable Peer review has highlighted serious flaws
02		Risk of higher bills	<ul style="list-style-type: none"> Claimed cost savings are highly implausible Government expert backtracked on cost saving 60% opex saving claimed, but no jobs will be lost
03		Poor accountability	<ul style="list-style-type: none"> Accountability to public is weak Local variability for resilience and climate change lost Regulation cannot fix the accountability flaws
04		Increased fiscal risk	<ul style="list-style-type: none"> Crown fiscal increases due to poor accountability and overstated investment need and debt Mega entities are effectively Crown guaranteed No equity obligations on councils
05		Poor policy process	<ul style="list-style-type: none"> DIA's poor process failed to consider options Impact of improvements in regulation not properly considered Historical reform episodes overlooked

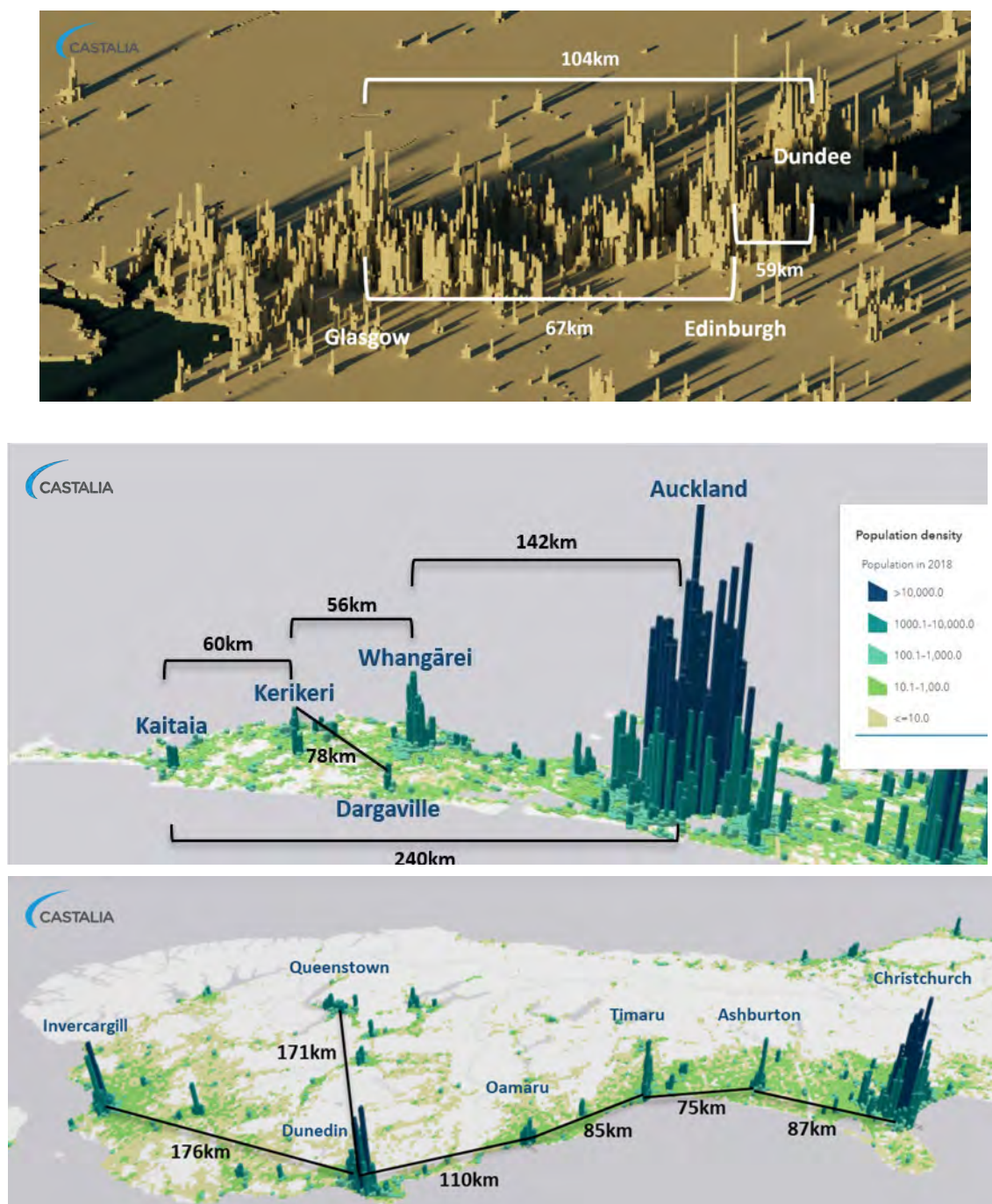


Investment needs likely to be biased and unreliable

Investment estimates are difficult over 30 years. All stakeholders, including Communities 4 Local Democracy, acknowledge that additional investment is needed in the water sector. However, the government's estimates are highly likely to be biased and overstated. This is because only a single point of reference (Scotland) is used to determine what expenditure is needed for New Zealand.

The government hired the Scottish water regulator Water Industry Commission for Scotland (WICS), to carry out the analysis. WICS uses a top-down approach using Scotland as its comparator rather than using the bottom-up estimates by the 67 councils (and council-controlled organisations like Watercare) for needed capital investment. Scotland has a very different urban geography with closely linked towns and cities, compared to New Zealand with a highly urbanised population but long distances between its towns and cities. Scotland is, therefore, an inappropriate comparator, as Figure 0.1 illustrates.

Figure 0.1: Population densities and distances between towns in Scotland and New Zealand



Castalia has carried out case studies of several councils to show the vast gap between WICS' top-down model and the bottom-up council estimates. Councils widely regarded as having maintained appropriate investment levels and with relatively new assets differ from WICS' estimates by several orders of magnitude. The likely bias and unreliability of the WICS approach is borne out by the findings of other peer reviewers.

Average household water charge claims are implausible

The government's claims are based on implausible assumptions and faulty modelling that exaggerates the benefits of mega entity reform.

The government's modelling claims that household bills will be significantly higher without reform. To portray the proposed reform in the best possible light, a series of modelling assumptions are used. Ultimately, the WICS advice to the government claims that the reform will achieve the same level of service with **half** the expenditure than a scenario where councils retain ownership and make no improvements.

Efficiency assumptions are highly implausible, and not backed by robust evidence. Capex and opex efficiencies are derived from inappropriate comparisons with UK water utilities. Significant capex efficiencies from "economies of scale" are not available in the New Zealand water sector where water services are not physically proximate. Opex efficiencies above 50 percent are not plausible. The government has promised that all staff in council organisations will be retained and the outsource provider market is already competitive.

Further assumptions exaggerate the benefits of reform. The modelling assumes additional efficiencies that are not justified. These seemingly innocent assumptions magnify the cost savings in the mega entity reform scenario.

Mega entities will have poor accountability to the public

Accountability to the public is important because water services are natural monopolies and essential for community wellbeing. The typical ways that customers hold a service provider accountable are not available. Unfortunately, the complex governance structure chosen for the mega entities undermines accountability to the public and key communities of interest. The government's advisors have added more command-and-control mechanisms to the mega entity model which are likely to complicate governance, rather than improve accountability to consumers and communities.

Local variability matters in water services. Climate change will have different impacts in different areas. The definition of "resilience" depends on local geographies and demographics. Water sources and wastewater treatment options are different between different parts of the country. This means water services need to be responsive and adaptable to local needs.

The mega entity model is also ill-suited to interacting with economic regulation. Unfortunately, the government has not advanced the design and regulatory settings for the proposed economic regulator ahead of implementing the reforms.

Mega entities significantly increase Crown fiscal risk

The proposed reform will create four of the largest firms by asset value in New Zealand. The Crown will provide a fiscal backstop under the proposed reform model, according to Standard & Poors' latest report to the government. Significant risk will be transferred to the Crown without the typical control and accountability mechanisms.

The mega entity borrowing programmes will ultimately be the Crown's responsibility if there is any risk of default. The complex accountability mechanisms mean the Boards of the mega entities will have multiple 'masters'. Management will have multiple accountability documents, including various important socio-cultural obligations that need to be balanced against cost efficiency and maintaining minimum service levels. This creates room for

mismanagement or worse, compared to a more straightforward council-owned, corporate state-owned enterprise or Crown Entity model.

Council debts are effectively quarantined from the Crown. Creditors of a defaulting council can appoint a receiver to recover debts via special rates and, ultimately property sales (although no local authority has ever failed in New Zealand). Under the proposed mega entity model, the Crown will have a clearer obligation to step in. Therefore, it is conceivable that council and Iwi influence over the mega entity governance could be diluted in future was the Crown to ever have concerns about the mega entities' financial health. Indeed, the central government stepped in to assert greater control occurred after similar mega reforms were undertaken in England and Wales in 1972.

Government failed to consider credible alternative options

The government prematurely selected a highly risky mega merger option without properly considering credible alternative options. Water services are critical to wellbeing. Policy development to reform water services should therefore follow a standard policy process. Not following standard policy processes creates a risk that the model selected could fail, and lead to reforms that do not meet the agreed public policy objectives, or that produce unintended consequences. The government did not establish the reform objectives and instead focused on only one among a range of important factors—"scale". This contributed to premature selection of a preferred model following a relatively cursory review of the international experience.

The government failed to consider the impact of improving the regulatory regime that enforces minimum national standards for water quality, environmental outcomes and economic performance. The Havelock North inquiry pointed out that the water quality regime has been deficient for many decades. Increasing scrutiny and improving regulations creates real incentives on local government and councillors to improve water service management and increase investment. This is obvious as our case study of Hastings District Council illustrates.

1 Introduction

The government proposes to reform the New Zealand drinking, waste and stormwater (three waters) sector. It has introduced the Water Services Entities Bill (the Bill) to Parliament. The Bill has been referred to the Finance and Expenditure Select Committee.

This report identifies the key flaws with the government's Bill and the policy and economic analysis that underpins it. There are five flaws. The government claims that massive investment is needed in New Zealand water services. Unfortunately, numerous case studies illustrate that the analysis relied upon is flawed, as set out in section 2. Consumers risk paying high water charges as a result of this high-risk reform. This is because the government's claimed cost savings are highly implausible, as outlined in section 3. Critically, the mega entities will be unaccountable to the public and communities of interest, which undermines their long-term sustainability. This is addressed in section 4.

In section 5, we identify the elevated Crown fiscal risk from these reforms. Whereas local governments currently provide security to lenders, the Crown will provide a fiscal backstop for the four entities. The entities will become some of the largest corporations in New Zealand. Given the weak accountability framework, the risks are elevated. Therefore, the Crown may take a more direct governance interest in the entities over time, weakening local involvement. Finally, in section 6, we outline how critical process flaws mean that available reform options were not properly considered. The evidence base the government used was skewed towards a high-risk reform option.

2 Investment needs significantly overstated

Capital investment is needed in some parts of New Zealand now and in the next 30 years to meet growth demands and due to historical deferred and underinvestment. There have been high-profile asset failures. However, it is not plausible that the required investment is as high as the government claims.

The government—based on Water Industry Commission of Scotland (WICS) modelling—claims New Zealand water services require \$120-185 billion of capital investment over the next 30 years.¹ This is based on a top-down New Zealand-wide assumption, driven by inappropriate United Kingdom (UK) comparators, that a massive nationwide investment programme is necessary for all council water services. This is despite all local councils submitting Request for Information (RFI) documents that include detailed bottom-up information about planned capital investment.

Peer reviews of the government's analysis do not conclude whether the government's crude modelling results in a reasonable prediction of a New Zealand-wide investment requirement. When experts, including Castalia, have reviewed the modelling on a council-by-council basis, those experts find serious flaws with the analysis.

2.1 Top-down approach to estimating investment is flawed

The government's estimate of New Zealand's water investment need is underpinned by the assumption that it must match per capita investment levels in Scotland. This single assumption drives the claims of how much money must be spent. This is justified on the grounds that New Zealand has a relatively lower level of urbanisation than Scotland.² However, urbanisation figures are not used in the analysis. Instead, population density is used, which is a different concept.

Because only a single point of reference (Scotland) is used to determine what expenditure is needed for New Zealand, it is highly likely to be biased.

Flawed metrics are used to determine needed investment which do not stack up to other comparators

The government's analysis projects New Zealand investment needs to rise significantly based on a correlation between English and Scottish drinking water and wastewater asset value levels and population density. The government does not show how the weak correlation in Scotland and England might predict water investment needed in New Zealand. A causal link is not determined.

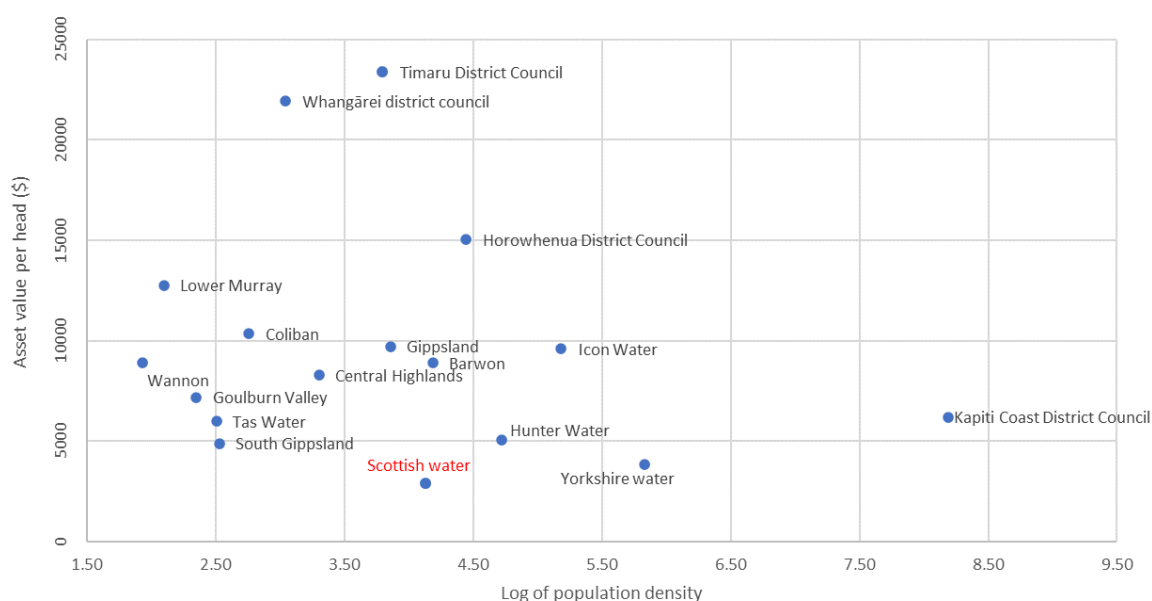
Castalia has previously analysed other regulated water utilities, including in Australia, to verify whether there was a clear relationship between asset level per connected citizen and population density. We found a very weak relationship between population density and asset value per connected citizen. Australia has some similarities with New Zealand in that its

¹ <https://threewaters.govt.nz/affordability/>

² WICS supporting material 1 – required investment (slide 19), [https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/\\$file/wics-supporting-material-1-required-investment.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/$file/wics-supporting-material-1-required-investment.pdf)

population is highly urbanised, but the overall population density is quite low, because towns are far from each other. Australia's towns developed at a similar time to New Zealand's and therefore follow the same typical geography (detached houses on suburban sections). When Castalia included Australian water utilities, New Zealand councils and UK water utilities in the 'asset value per capita' analysis, we find that **no conclusive relationship** between urbanisation and asset value:

Figure 2.1: Asset value per connected citizen for selected water utilities



Note: Castalia could not reconcile WICS' estimated asset value per connected citizen for Scottish Water and Yorkshire Water based on those entities' annual reports. It is possible that WICS may be using unde depreciated replacement values for the assets of those entities. For our analysis, we used asset values from the relevant entities' annual reports. We included all vertically integrated Australian water utilities where recent replacement values were available.

The preferred model applied to predict New Zealand's investment requirement is highly selective

WICS is highly selective in the approach it chose to model New Zealand's investment needs. While it reviewed options that were more in line with local authorities' own estimates, it decided to base its analysis on Scottish assumptions that reported significantly higher required levels of investment. This approach is based on the assumption that Scotland is the most appropriate guide for the required level of investment because of New Zealand's low population density compared to other areas in the United Kingdom.

There are significant differences between Scotland and New Zealand geographies

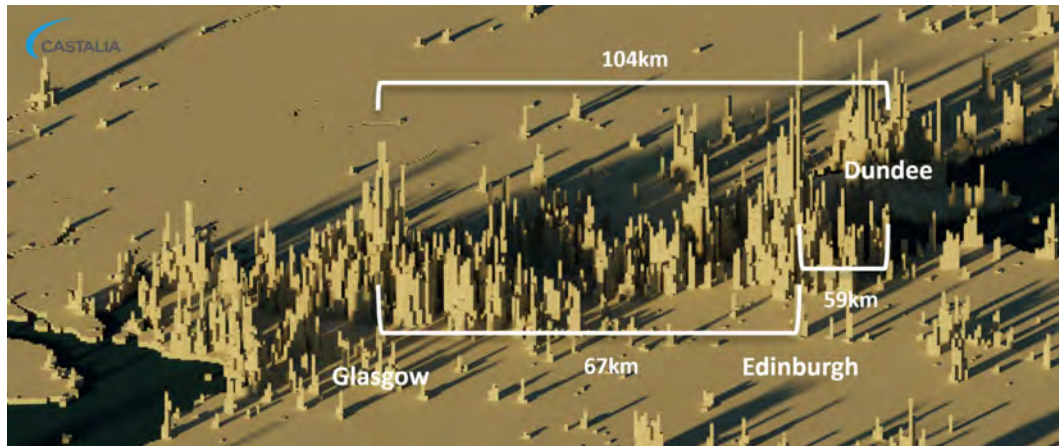
As Castalia has consistently pointed out, Scotland is not a relevant comparator for New Zealand water services. There are fundamental differences between the two countries' geography.

In water services, geography is important for the cost and quality of service. Denser urban areas tend to have lower average costs of service. Water services with more dispersed customers have to distribute drinking water and pump wastewater over longer distances with more pipes, dispersed treatment infrastructure and higher costs. Aside from some high-level

discussion of available water sources and similar populations, there is no investigation into why Scotland's geography is a good predictor of New Zealand's water investment needs.

Figure 2.2 illustrates the population density in Scotland. Most of the population lives in the narrow band that is between and around Glasgow and Edinburgh. There is potential for agglomeration efficiencies and for networks to achieve some scale benefits based on proximity alone.

Figure 2.2: Population density (persons per square kilometre) in Scotland



As Figure 2.3 and Figure 2.4 show, the majority of New Zealand's population reside in urban areas with significant distances between each urban area.

Figure 2.3: Major cities within the proposed Entity A and the distances between them

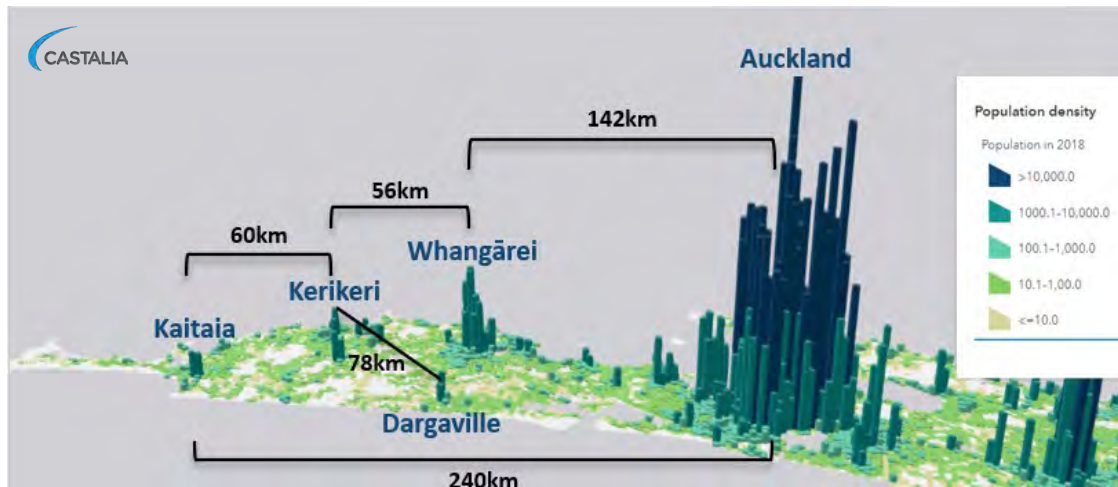
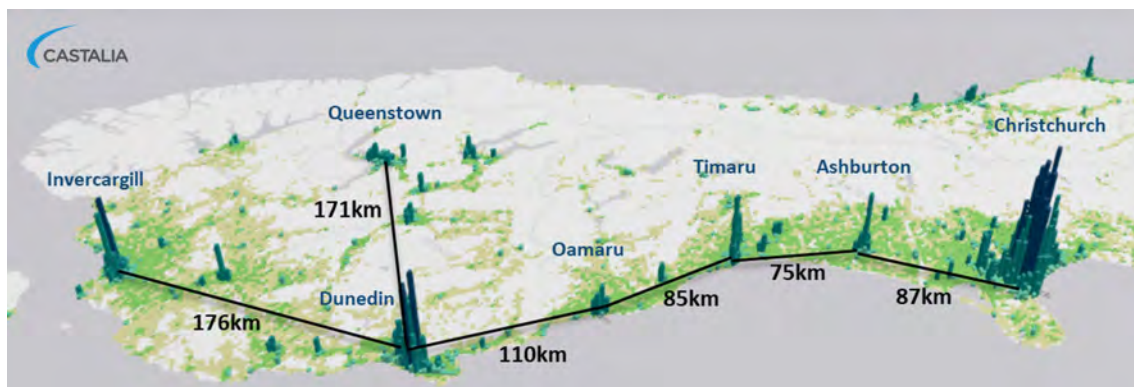


Figure 2.4: Major cities within the proposed Entity D and the distances between them



It is incorrectly assumed that lower population density in New Zealand implies lower levels of urbanisation. Table 2.2 illustrates how New Zealand's population is more urbanised than Scotland's, but despite this, New Zealand still has a lower population density. A larger majority of New Zealand's population live in urban areas, and the urban population is more likely to grow in New Zealand as compared to Scotland.

Table 2.1: Urban population statistics of New Zealand and Scotland

	Population Density (people per sq. km of land area)	Urban population (% of population)	Population in the largest city (% of urban population)	Urban population growth (annual %)
New Zealand	18.6	86.7	36.4 (Auckland)	2.2
Scotland	65	83.04 ³	11.6 (Glasgow)	-0.06 ⁴

Source: World Bank Indicator Database, 2020

There are other methodological flaws in the government's prediction

No adjustment is made for the overlapping nature of growth and replacement investment. This overstates the total investment estimate. In practice, when enhancement and growth investment take place, the new upgraded assets often replace at least some ageing assets. This reduces the need for replacement expenditure.

The government-commissioned technical analysis from Beca New Zealand that found UK water quality standards were a relevant benchmark for future New Zealand regulatory standards. But this does not mean that the same investment gap exists between New Zealand's current state and the UK's. Beca New Zealand's report cannot (and does not) provide a view on whether WICS' top-down analysis and crude modelling techniques give accurate insights into the level of investment required.

WICS uses cumulative economic depreciation to forecast replacement capex

WICS uses an unorthodox and inaccurate method to forecast replacement capex. It uses cumulative economic depreciation on new assets, which assumes that future replacement capital expenditure will be exactly equal to estimated future depreciation. This is an incredibly crude assumption. The depreciation-derived estimates are far inferior to the bottom-up capex forecasts developed by local authorities for the purposes of their long-term plans. Standard regulatory approaches do not equate economic depreciation with capital expenditure. To our best knowledge, neither Water Services regulation Authority (OFWAT), Office of Gas and Electricity Market (OFGEM), Australian Energy Regulator (AER), Australian State regulators, nor the New Zealand Commerce Commission (to name a few) have set capital expenditure allowances based on economic depreciation. Local Government New Zealand has issued guidance to local authorities that depreciation should not be confused with replacement capital expenditure.⁵

2.2 Bottom-up estimates by experts show much lower needed investment

The government's modelled investment requirement for standalone councils is determined by population, land area, and density alone. The formulas used to estimate the required investment for each standalone council are not made available. It appears only basic

³ <https://www.gov.scot/publications/rural-scotland-key-facts-2018/pages/2/>

⁴ Urban population as a percent of total population has decreased by 0.06 percent between 2018 and 2019. <https://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/population/population-estimates/2011-based-special-area-population-estimates/population-estimates-by-urban-rural-classification>

⁵ LGNZ, Depreciation in the local government context, available at: <https://www.lgnz.co.nz/assets/Induction-Extras/78d9041b79/Depreciation-paper-final.pdf>

information from the RFI responses is applied in modelling the mega entity and standalone councils. This includes connected population, asset values, water-related debt, and current water-related revenues.

The government's estimates are significantly higher than councils' own estimates. In some cases, the government's estimate is over ten times that of the councils' own estimates.⁶ Box 2.1 and Box 2.2 below, as well as Box 6.1 in section 6, present case studies of individual councils. In each case, the government's claimed investment requirement is several times more than the council's own estimates.

Box 2.1 examines Waimakariri District Council. The government's claimed investment requirement for Waimakariri District Council is nearly four times more than the council's own estimate. This is not plausible. Waimakariri District Council has made significant capital investments in water infrastructure assets in recent years, and its water infrastructure assets are relatively new.

Box 2.2 examines Auckland Watercare. The overstated investment requirement for New Zealand's most sophisticated water utility suggests that the government's approach is unreliable across all councils.

Box 6.1 in section 6 below also examines Hastings District Council. It is not plausible Hastings District Council's investment requirement is more than double the amount budgeted for in Hastings District Council's long-term plan (LTP). Hastings District Council has implemented several operational and management changes and has made significant water infrastructure investments since Havelock North Inquiry. It's most recent LTP budgets for a comprehensive asset upgrade in the coming years.

Local councils are well placed to understand investment needs

All local councils in New Zealand agreed to provide the government with comprehensive information about water services during the RFI phase in mid-2020. The RFI responses included a full picture of all local councils' planned water sector investments.

As asset owners with accountability to local communities, local councils have a sound understanding of the investment needs required for three waters' services. This detailed and rich data source could have been used to estimate the required investment levels. Adjustments could have been made to the RFI data to account for any conservatism or for differences in management's sophistication in estimating investment needs. However, the government preferred top-down modelling using overseas comparators.

Box 2.1: Waimakariri District Council case study

Waimakariri District Council has a relatively new asset base and has plans to accommodate a growing community. This is reflected in its LTP. It is not plausible that Waimakariri's investment requirement, as modelled by WICS, is so high.

⁶ Waimate District Council – Morrison Low Review of WICS data, August 2021. Page 11

Waimakariri District Council has relatively new water infrastructure assets

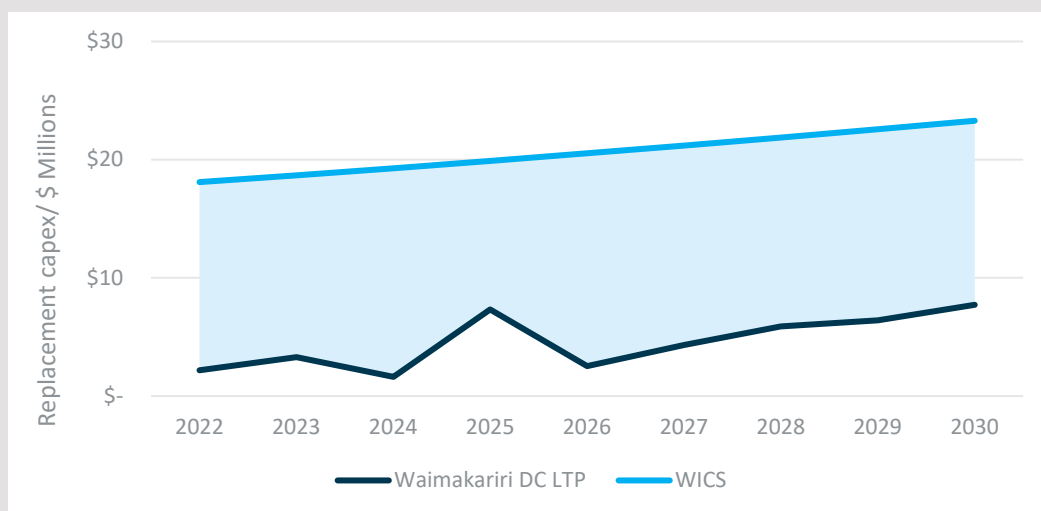
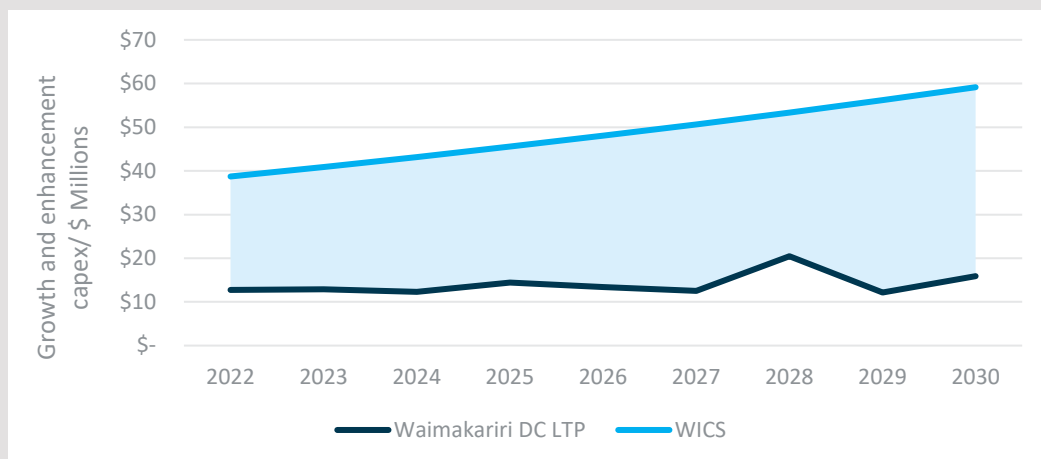
Waimakariri is a growing community. The population has doubled since 1996 and is expected to grow by just under 50 percent by 2050 to reach a total population of 95,000.⁷ Water infrastructure assets in Waimakariri are relatively new. For example, 61 percent of its reticulation assets has more than 80 percent asset life remaining.⁸

In recent years, Waimakariri has invested heavily in water infrastructure for growth. The council has focussed on enabling growth by providing trunk infrastructure. It ranks sixth out of 89 statistical areas for the highest housing consent rate per 1,000 residents in New Zealand since 2004.⁹ Since 2016 Waimakariri District Council has spent \$87.6 million of capex on water infrastructure assets. An average of \$17.5 million per year.¹⁰

The government's estimate of Waimakariri District Council's investment requirement is nearly four times greater

Waimakariri District Council has a clear picture of its investment needs, since so much of the water infrastructure is new. It plans to spend \$168 million of capex on water infrastructure assets between 2022-2030.¹¹ The government estimate is nearly four times greater at \$621 million. The figures below show the difference between Waimakariri estimates as an asset owner and the government's top-down analysis using Scottish models. Capex is broken down into Growth and Enhancement, and Replacement capex.

The government's estimates are seriously flawed. First, it is implausible that Waimakariri needs four times as much growth and enhancement investment when it has some of the most modern infrastructure in New Zealand and is already planning for growth. Second, Waimakariri's estimates of replacement capex are robust, since it understands the conditions of its own assets unlike WICS.



Waimakariri is already achieving local economies of scale

Waimakariri is consolidating its small wastewater treatment plants into two main plants. Further opportunities to achieve economies of scale in production (merging infrastructure) is unlikely over the period in question.

Box 2.2: Auckland Watercare case study

The overstated investment requirement for New Zealand's most sophisticated water utility suggests that the government's approach is unreliable across all councils

The government's estimate of Watercare's investment requirement is 1.6 times greater than the utility's own estimate between 2022 and 2030. It is not plausible that Watercare's own estimate of investment requirement is so much smaller than the government's claim. Watercare has the most sophisticated asset management approach in New Zealand.¹² Its own investment plans are a more appropriate estimate of actual investment requirement. Watercare has organisational structures that fully integrate asset management decision-making from the operational level to the executive team level, with specialist individuals with defined asset management roles specified in their job descriptions and regular training.

Watercare plans to spend \$8.6 billion of capex on water infrastructure assets between 2022 and 2030.¹³ The WICS top-down approach estimates that \$13.9 billion is needed over the same period.¹⁴ The figures below show the difference between Watercare's bottom-up analysis and the government's top-down analysis.

⁷ Waimakariri District Council annual report 2021/22

⁸ Waimakariri District Council - Activity Management Plan 2021 Water Supply District Overview. July 2021

⁹ Statistics New Zealand. Waimakariri only ranks behind high-growth areas Queenstown-Lakes, Selwyn, Mackenzie, Waitemata and Upper Harbour.

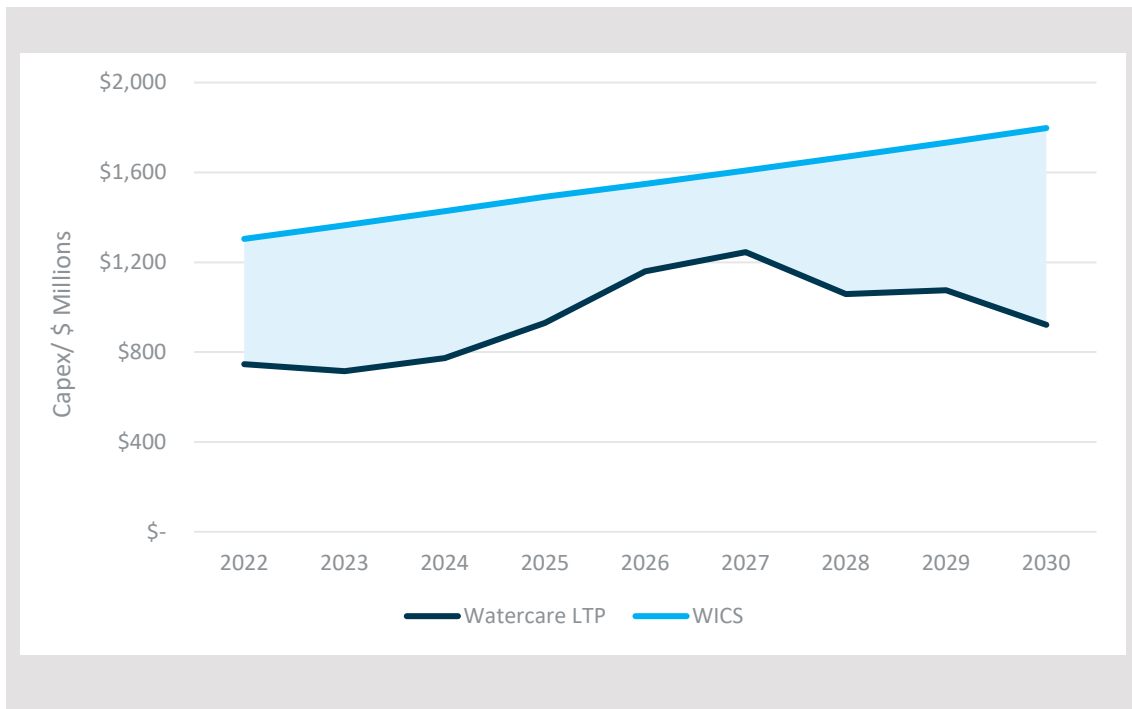
¹⁰ Waimakariri District Council annual reports 2016-2021

¹¹ Waimakariri District Council long-term plan 2021-2031

¹² Castalia (2017) Three Waters Asset Management Maturity in New Zealand - Report to Department of Internal Affairs

¹³ Watercare Asset Management Plan 2021-2041

¹⁴ Three Waters Reform Individual council models and slide packs - dia.govt.nz



2.3 Experts' reviews of the government's analysis highlight flaws

The government cite the expert reports it commissioned to review the modelling in support of its claims that the UK and Scottish models are appropriate for New Zealand. FarrierSwier's report made several reservations about the investment requirement estimate.¹⁵ The report cautioned that "Investment assumed to achieve UK levels of water quality and may not reflect New Zealand needs" and that the "Investment requirement is uncertain over 30 year-horizon". The report also highlighted that cultural standard, as well as climate change and seismic resilience, were not directly captured in WICS analysis.

3 The government's average household water charges claims are implausible

The government is claiming that the Bill will deliver lower household water bills compared to a situation where councils make no improvements whatsoever. The government's claims are based on implausible assumptions and faulty modelling that exaggerates the benefits of mega entity reform. The key issues are:

- Implausibly high capex and opex efficiencies assumed for the mega entity reform
- Most councils assumed to achieve no efficiencies without amalgamation

¹⁵ FarrierSwier (2021), Three Waters Reform: Review of the methodology and assumptions underpinning economic analysis of aggregation, page 28.

- The government's modelling makes additional assumptions that exaggerate the benefits of reform.

3.1 Mega entity efficiencies are highly implausible

The capex and opex efficiency assumptions used in the government's modelling are implausible and drive significant cost savings for the mega entities in the reform scenario. Capex and opex efficiency assumptions are based on inappropriate comparisons with the performance of water utilities in the UK.

The government's modelling assumes that:

- The mega entities will deliver the same level of service for half the capital expenditure
- Operating expenditure (opex) efficiency will more than halve¹⁶ without any staff losing their jobs percent by 2040.

Figure 3.1 shows the results of estimating the average household bill in 2051 using the government's model with more reasonable efficiency assumptions. This results in an average household bill in 2051 of around double the government's claim.

The results in Figure 3.1 assume a 10 percent capex efficiency achieved over 20 years. This would be a generous assumption for an administrative amalgamation of geographically dispersed water utilities. Some capex efficiencies may be achievable in the mega entity reform due to regulation, clarity of policy priority and excellence in management.

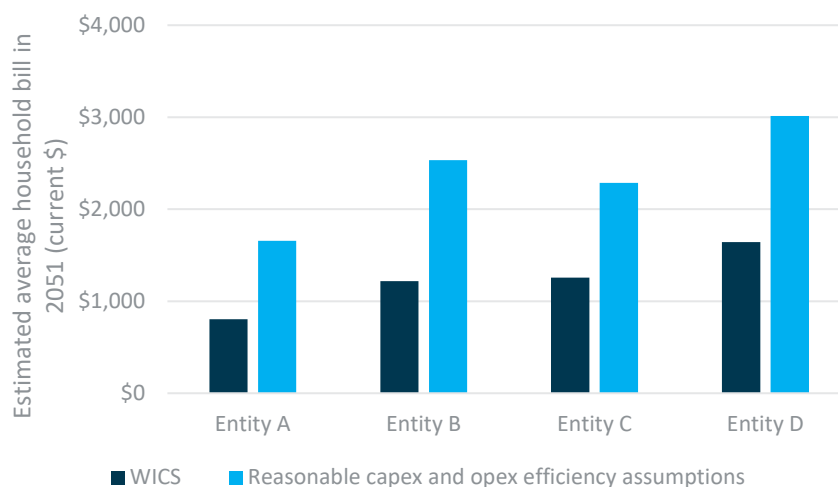
The results assume a cost saving of only \$5.7 million to \$22.5 million per year.¹⁷ This minor opex efficiency may be realised due to the likely reduction in the number of high-paid senior staff members.

¹⁶Opex efficiencies are determined by characteristics of the mega entity and so vary between mega entities

¹⁷ Calculated based on the following assumptions:

- Metropolitan councils lose three staff members earning \$200,000 with an overhead equal to twice the salary
- Provincial councils lose two staff members earning \$180,000 with an overhead equal to twice the salary
- Rural councils lose one staff member earning \$150,000 with an overhead equal to twice the salary

Figure 3.1: Estimated average household bill in 2051 under reasonable capex and opex efficiency assumptions



3.1.1 Capex efficiency estimates are implausible

Significant capex efficiencies from “economies of scale” are not available in the New Zealand water sector. The government’s consultants claim that the same level of service will be available for half the money. The government and its advisors have not engaged in the relevant literature and applied it appropriately in the New Zealand context. The government’s analysis is based on an inappropriate comparison to the observed efficiencies of Scottish Water. Administrative amalgamations of water services that are not physically proximate generally do not generate efficiency benefits.

The literature does not provide a justification for the government’s conclusion

The government claims the “route one” cause of a poor performing water sector is that it does not exploit efficiencies of scale.¹⁸ The government relies on international literature applied to New Zealand to conclude that a connected population of 600,000 to 800,000 seems likely to achieve an efficient scale. It provides a sample of the literature in its Regulatory Impact Assessment. However, it manages to completely misinterpret that evidence. In fact, the literature finds

- There are “diverse findings on economies of scale”¹⁹
- There is “little evidence of consistent economies of scale from consolidation”²⁰,
- There is “no generally applicable rule, but there is a need to carry out case studies prior to taking a decision”²¹,

¹⁸ DIA - Regulatory Impact Assessment: Decision on the reform of three waters service delivery arrangements, May 2021. Page 38.

¹⁹ Abbot and Cohen (2009) Productivity and efficiency measurement in the water industry

²⁰ Ferro (2017) Global study on the aggregation of Water Supply and Sanitation Utilities.

²¹ González-Gómez and García-Rubio (2008). Efficiency in the management of urban water services. What we have learned after four decades of research.

- Customer density is the greatest driver of efficiency.²²

Where the literature does find scale advantages for larger water companies, it only applies to already operational companies and networks and not physically distant or merged entities. Administrative amalgamations of water services that are not physically proximate generally do not generate efficiency benefits.²³

The government's claim that the reform will achieve a 50 percent capex efficiency is based on an inappropriate Scottish comparator

The government claims that the reform will achieve a 50 percent capex efficiency using modelling produced by WICS. This modelling uses a very crude efficiency factor driven by the population served by the merged entity. The only quantitative analysis WICS says it has undertaken to support this belief is an observation that Scotland improved capital expenditure efficiency from 2002-2021. WICS' modelling fails to account for the fact that the NZ reforms are administrative mergers of geographically dispersed water utilities.

The government has failed to recognise criticisms of its modelling and assumptions on economies of scale

FarrierSwier peer-reviewed the modelling, and it appears they did not interrogate the underlying models. It found that "WICS analysis cannot be used to definitively conclude that amalgamation in and of itself will lead to material efficiency gains in New Zealand" and that "significant care should be taken when relying on the capital efficiency gaps estimated by WICS."²⁴

The government's consultants admit capex efficiencies are not driven by economies of scale

The CEO of WICS, Alan Sutherland, stated in a TVNZ interview that cost savings will not be realised from capital cost savings by "hooking different rural communities together".²⁵ Instead, he states that it is about regulation (which we agree will improve performance), professionalism, and excellence in management. He claims that scale is necessary to achieve **operational cost savings**, such as improved professionalism and asset management in an interview with Business Desk.²⁶

WICS modelling does not decompose regulation, professionalism, and improved management-driven efficiencies. WICS also mistakenly assumes that regulation will not apply to the status quo (council-owned water services).

Minor efficiencies may be realised

There may be some capex efficiency from the reform due to regulation, clarity of policy priority and excellence in management. For example, Deloitte found poor procurement costs around AU\$239 million per annum on annual infrastructure spend of AU\$4.4 billion (a one-off 5.5 percent improvement might be possible). A 10 percent capex efficiency over 30 years is therefore a generous assumption for an administrative amalgamation of geographically dispersed water utilities.

²² ACIL Tasman (2007) Size and Scope Economies in Water and Wastewater Service

²³ Castalia (2020) Analysing Economies of Scale in New Zealand Water Services. Report to Local Government New Zealand.

²⁴ FarrierSwier (2021), Three Waters Reform: Review of the methodology and assumptions underpinning economic analysis of aggregation, page 29

²⁵ Alan Sutherland interviewed by Jack Tame on TVNZ's political show Q+A, 19/06/2021.

²⁶ Business Desk article "Six year wait for three waters reforms far too long, says Scottish expert", 27 June 2022.

WICS efficiency assumptions for mega Entity A (Auckland and Northland) highlight implausible claims

It is not plausible that mega entity A will realise household bills more than half of what is estimated for Watercare by 2051. The government's modelling of Watercare and Entity A reveals two things:

- Efficiency gains are not driven predominantly by scale, excellence in management, procurement, and specialist staff
- The government's counterfactual is wrong and assumes regulation and clarity of policy would not be available without amalgamation.

The government's modelling of mega entity A is significantly different to its modelling of Watercare. Even though Watercare accounts for 95 percent of the total population served and Watercare's investment requirement is 85 percent of the total investment requirement of all four councils in Entity A.

The government's modelling assumes Watercare will achieve capex and opex efficiencies of 10 percent by 2041 (the largest of any standalone council). The government's modelling claims this is based on observed efficiencies from the UK of entities of such scale. Alternatively mega entity A achieves efficiencies of more than 50 percent.

In addition to these efficiencies, the government's modelling makes further efficiency assumptions for mega entity A, which are not assumed for Watercare. The government's modelling assumes mega entity A will:

- Absorb additional capital inflationary pressures
- Achieve total factor productivity (TfP) of half NZ wide productivity
- Absorb all new opex costs.

The government's claim that Watercare will only achieve minor efficiency gains compared to mega entity A is wrong. Watercare is aiming to reduce the cost of developments by 20% by working together with contractors in an enterprise framework.²⁷ The same efficiency gains from regulation and clarity of policy will be available to Watercare without amalgamation. mega entity A will not achieve improved asset management, procurement, and specialist staff compared to Watercare. Watercare has the most sophisticated asset management approach in New Zealand.²⁸ Increasing the size of its asset base by less than 10 percent is highly unlikely to attract more professional staff.

3.1.2 Opex efficiency estimates are implausible

WICS assumes implausible opex savings. Globally the major operating costs for water services are labour, third party (that is outsourced) services and materials and energy. New Zealand is no different. WICS claims the mega entities achieve opex efficiencies of between 53.3 and 61.9 percent by 2040, derived from econometric studies of UK water entities. Opex efficiencies achieved in the UK water sector are not a reasonable guide to the efficiency gap in New Zealand. Opex efficiencies above 50 percent in under 20 years is not plausible in the New Zealand water sector.

²⁷ Watercare Asset Management Plan 2021-2041

²⁸ Castalia (2017) Three Waters Asset Management Maturity in New Zealand -Report to Department of Internal Affairs

This is because:

- The government has promised that all staff in council organisations will be retained in their jobs and further that more jobs will be created from the reform
- The outsource service provider market is already competitive.

Castalia estimates that only minor opex efficiencies of around \$5.7 million to 22.5 million per year²⁹ may materialise. We estimate this because some high paid senior staff members will no longer be required following amalgamation.

UK econometric models to claim that large opex efficiencies are possible

WICS has used an Ofwat 2004 econometric model to estimate that, after reform, larger New Zealand water entities can achieve up to a 61.9 percent efficiency improvement opex.

To estimate the opex efficiencies, WICS combined 2003-2004 data from the UK with recent data from New Zealand councils to estimate a performance baseline to measure New Zealand water entities against. To ensure compatibility of the estimates with New Zealand's operating environment, the gaps in efficiency between New Zealand entities and the benchmark were adjusted with 'special factors' related to regulatory, geographic and environmental factors that were considered unique to New Zealand.

Based on observed efficiency gains from UK water reforms, WICS assumes that New Zealand water reforms may achieve the same operating efficiency results – roughly a 50 percent improvement.

It is important to note that these estimates are an assumed benchmark that provides a guide to what might be possible based on experiences in the UK water sector but, as peer reviewer FarrierSwier notes, care needs to be taken as it is not possible to conclude that those efficiencies can be realised.³⁰

Many local councils already outsource operational capability to scale providers

Many New Zealand water companies already outsource operational capability to specialist providers. Several large-scale providers deliver services across all of New Zealand, such as Downer, CityCare Water and Veolia (a global specialist water services company). Other large-scale providers operate on a regional basis, such as Watercare (which provides services around Auckland).

Outsource providers already achieve economies of scope and scale across regions and New Zealand. This is because outsourced service providers can offer specialist expertise on a contracted basis, where full-time employment of staff may not be warranted. Outsource providers also compete with one another for council contracts. This ensures prices tend towards costs and it incentivises efficiency improvements. Cost reductions of up to 50 percent in the already competitive outsource service provider market are implausible.

²⁹ Calculated based on the following assumptions:

- Metropolitan councils are losing three staff members earning \$200,000 with an overhead equal to twice the salary
- Provincial councils are losing two staff members earning \$180,000 with an overhead equal twice the salary
- Rural councils are losing one staff member earning \$150,000 with an overhead equal to twice the salary

³⁰ FarrierSwier (2021), Three Waters Reform: Review of the methodology and assumptions underpinning economic analysis of aggregation, page 60

The government claims no jobs will be lost and new jobs created—despite claimed opex cost savings

The government claims firstly that no jobs will be lost,³¹ and furthermore that the reform will create additional jobs.³² It estimates 6,000 to 9,000 additional jobs will be created.³³ In an interview with TVNZ, the government's lead consultant from WICS', CEO Alan Sutherland stated that efficiencies are achievable despite jobs increasing in the sector.³⁴

3.2 Additional assumptions are invalid

The government's modelling makes additional assumptions that exaggerate the benefits of reform. These seemingly innocent assumptions multiply the variation in the estimated average household bills across the two scenarios.

- Total factor productivity efficiency is assumed only for mega entities
- Additional capital price inflation is absorbed only by mega entities
- Additional opex is absorbed only by mega entities
- Capex is expended according to an increasing time profile only for mega entities

Table 3.1 presents assumptions adopted in each scenario and the impact on projected costs in the mega entity models.

Table 3.1: Impact of additional assumptions on the mega entity modelling

Assumption	Mega entity	Standalone Council	Impact
Total factor productivity (TfP) efficiency	0.4 percent per year	0 efficiency	Mega entity capex and opex 11.5 percent lower by 2051
Additional capital price inflation absorbed	0 additional capital price inflation	1 percent capital price inflation	Mega entity capex 25 percent lower by 2051
Additional opex absorbed	0 additional opex	3 percent of growth and enhancement capex	Mega entity opex between 38 percent and 50 percent lower by 2051 ³⁵
Investment and efficiency time profile	Investment time profile increasing over time combined with efficiency time profile decreasing over time	Investment constant over time No efficiencies in most cases	Mega entity total capex between 2022 and 2051 is between 11 and 15 ³⁶ percent lower than if capex time profile was linear

³¹ Rachel Reese, Mayor of Nelson and Three Waters Steering Committee member – Thursday 15 July 2021, LGNZ Conference Speech [00:23:12:00], available at <https://www.lgnz.co.nz/about/lgnz-conference/2021-lgnz-conference/videos-conference-2021/>

³² Grant Robertson, Minister of Infrastructure – Thursday 15 July 2021, LGNZ Conference Speech [00:33:40:00], available at <https://www.lgnz.co.nz/about/lgnz-conference/2021-lgnz-conference/videos-conference-2021/>

³³ <https://www.dia.govt.nz/three-waters-reform-programme-frequently-asked-questions>

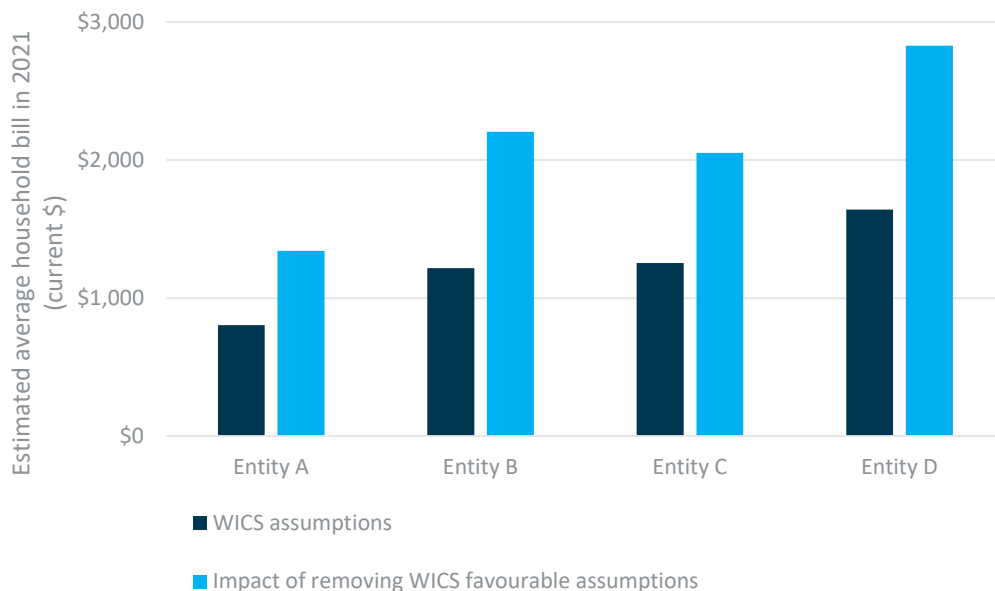
³⁴ Alan Sutherland interview on Saturday Morning with Jack Tame Newstalk ZB, 19/06/2021.

³⁵ Each mega entity is modelled to have different growth and enhancement capex requirements so additional opex varies.

³⁶ Cost difference varies between mega entities because of different capex requirements

Figure 3.2 illustrates the materiality of these additional assumptions. The figure presents the results of estimating the average household bill in 2051 under assumptions consistent with the standalone council model and assuming a linear investment time profile. The results are generated using WICS's own model.

Figure 3.2: Impact of removing WICS favourable assumptions on the estimated average household bill in 2051

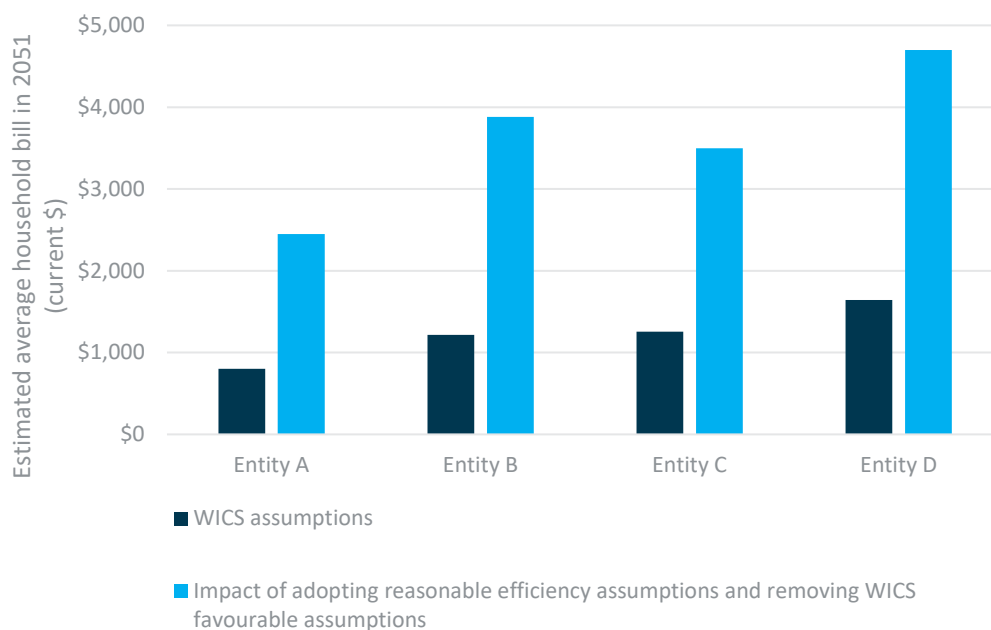


The assumption that only mega entities will achieve Tfp efficiency and absorb capital price inflation and additional opex are additional efficiency assumptions. These additional efficiencies drive significant cost savings as shown in Figure 3.2. WICS provides no substantive justification or disclose empirical analysis to support these gains. As discussed in the previous sub section, capex and opex efficiencies are not available at the scale assumed by WICS. WICS has not provided any basis for why council-owned water services will not achieve any Tfp efficiencies and not absorb any opex or capital price inflation.

WICS chosen time-profile for capex investments in the mega entity model deflates the capex expended. In the Reform Scenario, WICS has only included the large investment requirements after 2031. Yet, in the standalone council Scenario, WICS included the large investment requirements from 2022. In the Reform Scenario, the benefits of the new investment are delayed by up to a decade, while the costs arrive just in time to be reduced by the maximum efficiency gains assumed in the model. We note that 2031 is the first year when the WICS model allows maximum efficiency gains.

Combining these assumptions with more reasonable capex and opex assumptions produces unsustainable household bills. Figure 3.3 presents the results of combining the assumptions.

Figure 3.3: Impact of adopting reasonable efficiency assumptions, and removing WICS favourable assumptions on the estimated average household bill in 2051



3.3 Peer review highlights flaws

FarrierSwier's review of WICS modelling highlights several flaws in WICS modelling approach.

³⁷

- UK experience of expenditure efficiencies may not be a reliable measure of outcomes to be observed in New Zealand
- Other factors, as well as amalgamation, could be attributed to WICS estimated efficiency gains
- Costs associated with amalgamation are not captured and could be substantial
- Estimating household prices are calculated by back solving a revenue path is an unconventional approach
- WICS analysis does not account for potential diseconomies of scale or scope.

Morrison Low's review of WICS modelling concluded the scale of the difference between the entity and council scenarios is smaller than the amount that the WICS analysis indicates.

Morrison Low's report points out several concerns with WICS modelling.³⁸

- WICS modelling does not account for differences in rural drinking water, including level of service funding, or water use

³⁷ FarrierSwier (2021), Three Waters Reform: Review of the methodology and assumptions underpinning economic analysis of aggregation, page 28.

³⁸ Waimate District Council – Morrison Low Review of WICS data, August 2021. Pages 1-2.

- Council's debt capacity is not considered at an activity level. Because borrowing requirements of other council activities are usually low, a 250 percent debt/ revenue limit is significantly understated
- Key underlying assumptions (percentage of revenue from households and number of connected properties) do not match the councils RFIs, leading to overstated costs in the standalone council scenario
- There has been no adjustment to planned renewals investment to reflect that some investment in the level of service enhancement or growth is likely to also have a renewals component
- Long term contractual obligations will reduce or at least defer efficiencies.

4 Mega entities will have poor accountability to the public

Accountability to the public is important because water services are natural monopolies and essential for community wellbeing. The typical ways that customers hold a service provider accountable are not available (by choosing an alternative, reducing consumption, or demanding better service). The complex governance structure chosen for the mega entities undermines accountability to the public and key communities of interest.

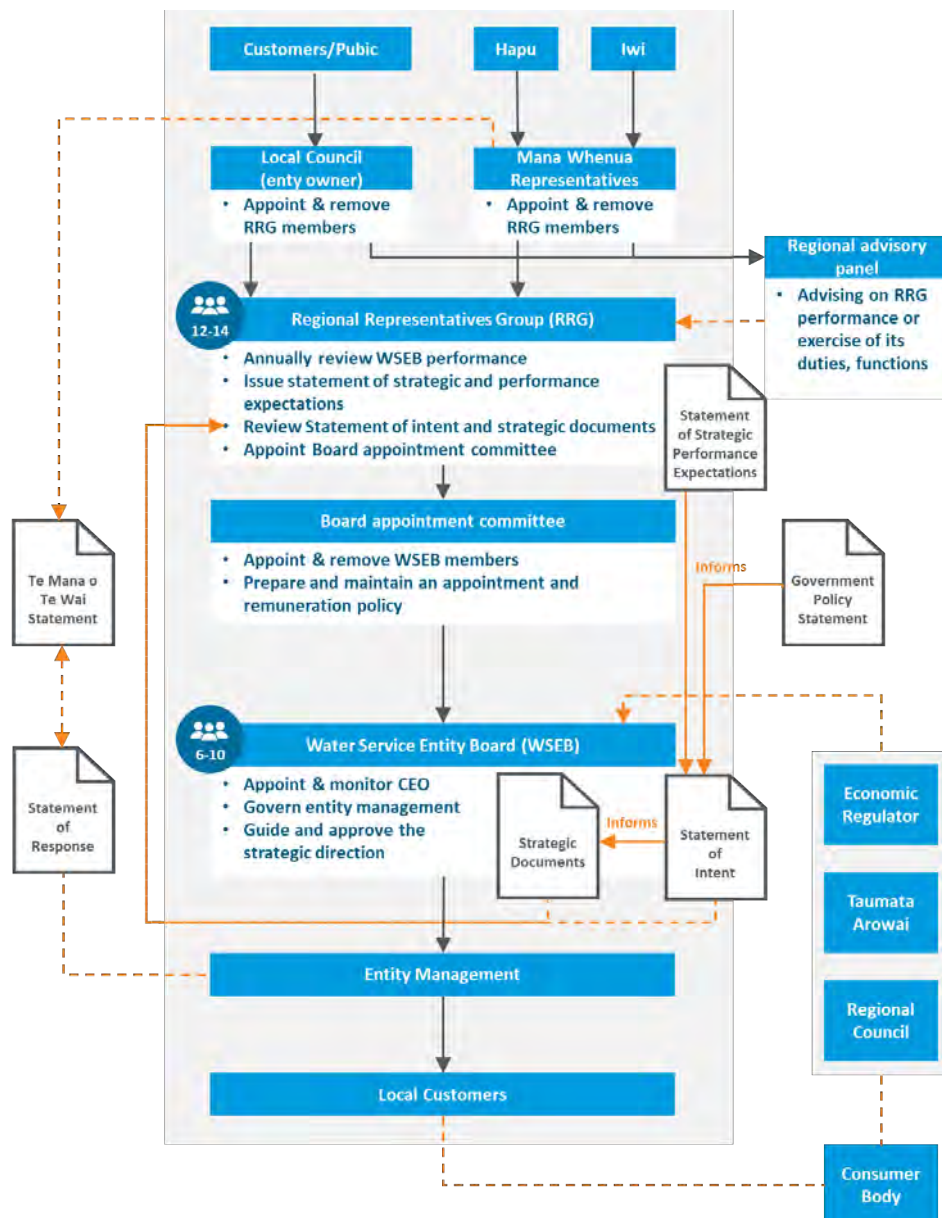
4.1 Complex governance structure removes accountability to public and communities of interest

The proposed WSE will have unique and complex governance mechanisms. Those charged with governance of the WSEs will have diverse interests to serve. The management of the entity is removed from local voters and Iwi members by several steps. There are also a variety of accountability documents issued by various parties. In addition, three regulators (water quality, environmental and economic regulators) will have to monitor compliance with their standards and rulings and attempt to enforce breaches.

The governance model requires balancing various socio-cultural objectives. These include Iwi-Māori objectives and equity, affordability objectives and any others such as support housing and urban development that the government may specify in a National Policy Statement. It is highly unusual for water utilities to have to maintain safe water, provide for efficient services while investing prudently for the future, maintain environmental outcomes and provide for a range of potentially competing socio-cultural objectives to numerous authorities.

Typical Companies Act duties of directors do not apply. Instead, bespoke duties are set out in the Bill. These are untested and novel, as far as we are aware. Therefore, the balancing of competing objectives, and how to trade these off will be determined in the future. Figure 4.1 below illustrates the complex governance and accountability arrangements.

Figure 4.1: Complex mega entity governance structure



4.2 Local variability, resilience and responsiveness will be lost

Local responsibility for water networks is critical to resilience to climate change and other challenges. Local responsibility ensures networks are responsive to changes. This will be lost under the reforms. Additional command and control mechanisms will not improve governance.

Important local variability in service and quality levels will be lost

There is variability in service expectations. For example, wastewater services often need to consider local needs. There are different options of treating and discharging treated wastewater. Some communities, including local hapu, may have different expectations and

needs in respect of wastewater. Within the complex governance structure proposed in the mega entity model it is unlikely local variations in demands will be reflected.

It will be challenging for management and operational staff in the central head offices to understand and respond to the variability in demands in communities. The proposed mega entities will oversee geographically dispersed areas, from a centralised head office. Management and administration will be centralised to four main centres in each mega entity area. This means that sophisticated management and reporting mechanisms will be needed to ensure that the multiple discrete networks report cost and quality information back to head office.

The role of local expertise and management is critical in water services. This is a key difference to other infrastructure like national electricity networks. Water networks are highly localised. The environmental conditions are very different between networks. For example, some regions draw drinking water from multiple bores from a large aquifer (like Christchurch), whereas other regions take surface water from purpose-built dams (like Auckland) or from rivers. The drinking water reticulation network and wastewater networks are highly localised because water has a low value to weight ratio. This is unlike electricity, where the network covers the whole country.

Additional command and control measures more likely to complicate governance than improve it

The government has proposed additional measures to try and hold the WSE board and RRG accountable to certain additional requirements. These requirements are imposed by central government as command-and-control mechanisms in which certain requirements are set out which the WSE board and RRG must report on.

The government has acknowledged that the command-and-control accountability mechanisms it has designed are not capable of completing the governance arrangements. Cabinet stated: “the level of independent governance proposed requires the addition of appropriate consumer protection and accountability mechanisms.”

4.3 Mega entity interaction with regulation is poor

Economic regulation of water services is intended to support the reform objectives. Evidence suggests that the performance of economic regulation for public-owned water utilities is poor, with few exceptions.

The economic regulator will struggle to interact with the complex governance structure of the mega entity. The cost of economic regulation will outweigh the benefits.

- The regulator will struggle to improve the availability of relevant information
- The regulator will struggle to incentivise management and governance to optimise cost and quality of service
- The regulator will struggle to value the socio-cultural matters that will be traded off.

The economic regulator will struggle to improve the availability of relevant information

Overcoming information asymmetry will be especially hard because of idiosyncratic water networks. The regulator will need to independently judge whether the WSEs costs are fairly attributable to the different typographies, geographies, water sources and so on that will apply differently in across its jurisdiction. This is different to other utility regulation, like electricity, which has fewer idiosyncrasies.

This will be especially difficult in New Zealand, where there is a lack of relevant and accurate information on the current value and state of water assets and networks. There is also limited information on the volumes of water consumed (or lost as non-revenue water). Many water networks in New Zealand remain unmetered.

The regulator will have issues incentivising management and governance to optimise costs and quality of service

The government acknowledges that conventional civil penalties are likely to be ineffective in addressing mega entity misconduct due to a lack of profit motive and the cost of any sanctions will ultimately be borne by the consumer. It is likely that repeated breaches would be needed to prompt any action.

The mega entities do not have a profit motive. There will be no commercial incentive to reduce costs (or increase revenues). Managers will receive no rewards for innovating, finding ways to save resources, or the myriad of other efficiencies that profit-maximising managers might identify. In fact, managers might even be incentivised to increase some costs. Typically, price-quality regulation incentivises management to improve efficiency by setting the prices that water utilities can charge at a level that reflects reasonable costs.

The regulator faces an unusual challenge of incentivising mega entities to increase tariffs to cover costs. This is because, in some cases, local councils failed to charge tariffs that cover the cost of service. This is one of the government's justifications for sector reform. Typically, in profit-maximising water utilities, regulators are faced with the challenge of ensuring water utilities do not increase tariffs too much in pursuit of excess profits. The government has not acknowledged the challenges of this unusual regulatory challenge.

The regulator will be unable to analyse price differences between localised networks because tariff harmonisation is a feature of the mega entities. The large-scale tariff harmonisation of the sort proposed will create opportunities for inefficiencies and improper conduct to be concealed because both the governance bodies and regulator will be unable to monitor it.

Those tasked with governance of the mega entities, at any of the many layers between voters and mega entity management, could have incentives to keep tariffs low. This is a particular risk given the significant cross-subsidies that will exist. Unless the regulator itself initiates tariff increases, even in the absence of mega entities proposing such increases, typical price or revenue cap regulation may prove ineffective.

Socio-cultural objectives compete with efficiency and water service outcomes

The economic regulator will be required to monitor the socio-cultural outcomes sought from these reforms. It is an inevitable consequence that the regulator will have to judge the trade-offs between different values. An economic regulator is ill-suited to the role of determining whether investments and tariffs are appropriate in light of socio-cultural objectives.

The regulator is tasked with defining the level of productive efficiency—best service for least cost. The regulator faces the challenge of understanding how to value the socio-cultural matters that will be traded off. Improving the performance of water utilities is generally cost benefit justified, but not Pareto efficient. In other words, there are winners as well as losers.

This will be complex. The mega entities will be required to make investment decisions that reflect the different needs of over 60 Iwi (for Entity B), and many more hapu groups. As the government itself acknowledges, to realise the objective of improved kaitiakitanga, the mega entities will have to connect governance with delivery on the ground at a hapū/whānau level.

5 The reform increases fiscal risk

The proposed reform will create four of the largest firms by asset value in New Zealand. The Crown will provide a fiscal backstop under the proposed reform model, according to Standard & Poors' latest report to the government. Significant risk will be transferred to the Crown without the typical control and accountability mechanisms. The Crown is not best placed to manage such risk.

5.1 Mega entities are effectively guaranteed by the Crown

The reform proposes that the four mega entity balance sheets will be separate from local authorities. Local authorities will retain a “shareholding” under a unique structure in the Bill.

Each entity will be a body corporate and will be co-owned by the territorial authorities in its service area in shares to provide a tangible expression of ownership that is recognisable by communities and territorial authorities.³⁹

The Bill states that the mega entities will be “separate from the entity’s board members, the entity’s employees, the Crown, the entity’s regional representative group, and the entity’s territorial authority owners”. While the Bill states that the mega entities will be “co-owned” by territorial authorities in the service area, the shares cannot be sold or otherwise transferred for any reason.

In light of this structure, Standard & Poors find that the Crown is the ultimate fiscal backstop. Since the government re-designed the mega entities to have council “shareholders”, Standard & Poors stated in May 2022 “there is an ‘extremely high’ likelihood that the New Zealand sovereign will provide timely support to WSEs if they were in financial distress.” Therefore, Standard & Poors assign the likely credit rating of A-/Stable. This is effectively a guarantee or at least a contingent liability on the Crown’s balance sheet—as Standard & Poors confirms.⁴⁰

5.2 Local authority debt is quarantined from Crown

In contrast, to the mega entities which will effectively be Crown guaranteed, local authority debt has a very strong standalone credit quality. Local authority debt is quarantined from the Crown. This means it is much less likely to present a fiscal risk to the Crown in the event of borrower failure.

Local authority debt is particularly creditworthy because it is secured against ratepayers’ rates obligations and, if necessary, the forced sale of ratepayers’ real property pursuant to section 115 of the Local Government Act 2002 (LGA). If a local authority defaults on its obligations to repay a debenture lender, the following will apply:

- The lender can immediately appoint a receiver and impose a rate on all ratepayers
- Failure by a ratepayer to pay that rate can ultimately lead to the sale of the ratepayer’s property (the receiver has first right to the proceeds from the sale and in fact ranks ahead of the mortgagee)

³⁹ Water Services Entities Bill, Explanatory note, p. 2

⁴⁰ Page 7

- The receiver can seek payment from the mortgagee of a defaulting ratepayer's property.

This general principle is further strengthened where local authorities are members of the Local Government Financing Authority (LGFA). Currently, 65 local authorities (local and regional councils) are members. The LGFA is a club through which local authorities collectively issue debt. The LGFA underwrites the obligations of its individual member councils because 65 members guarantee the obligations of the others through joint and several liability.⁴¹ The strong credit quality is underpinned by the fact that no local authority has ever failed in the history of New Zealand.⁴²

5.3 Mega entities will increase Crown fiscal risk

The mega entities increase Crown fiscal risk. Because the Crown is effectively providing a credit backstop, and creditors' powers are reduced relative to current local authority borrowing, the Crown is exposed to increased risk of mega entity failure.

This risk is increased due to a combination of key factors, which we elaborate on below:

- Complex governance and competing objectives dilute accountability of mega entity management to the directors and, ultimately, customers
- Incentives on the large bureaucratic management structure to over-spend
- Unallocated equity risk.

A possible outcome of these reforms, once the increased Crown fiscal risk is made apparent (for example, during a period of high interest rates and significant debt repayment obligations), is that the Crown directly intervenes in the governance and management of the entities, since core Crown creditworthiness could be at stake. This is exactly what occurred when England and Wales reformed from hundreds of municipal water entities to ten regional water boards in 1972. By 1983, with rising debt costs and the poorly performing regional boards, the UK central government stepped in and removed all local authority influence. By 1989, the ten water boards needed new capital and were privatised by the Thatcher government.

Complex governance and competing objectives dilute accountability

The mega entities will have globally unique governance, accountability, and incentive structures. The mega entity management will be three or four steps removed from elected councillors—those are the individuals who, via democratic process, have direct accountability to the consumers served.

Several accountability documents and statements overlay the disconnected accountability to consumers. Figure 4.1 above shows the complexity and disconnect between customers, communities, mana whenua, and the mega entity management (which is tasked with improving the service).

⁴¹ https://www.lgfa.co.nz/sites/default/files/2022-03/New%20Zealand%20Local%20Government%20Funding%20Agency%20Ltd._0.PDF

⁴² LGFA Investor Update, December 2021, available at: https://www.lgfa.co.nz/sites/default/files/2021-12/LGFA%20Investor%20Update-%20December%202021_0.pdf

Incentives on management misaligned with fiscal prudence

Managers of the mega entities are not incentivised to maximise fiscal prudence. This increases the Crown's fiscal risk—a risk over which it has no control. The Bill will create large bureaucratic organisations with a wide geographic spread and a large number of employees. These will be difficult to oversee to ensure investment decision making is efficient and necessary

As we outline above, the investment requirement is overstated and unrealistic. Managers, based in centralised offices away from the local networks, will have a combination of a massive balance sheet (and ability to borrow) and many demands to spend on capital projects. This means large debt and increased opportunity for mismanagement or even malfeasance in spending programmes.

Furthermore, cross subsidisation of tariffs is a feature of the new system. This means that cost of service cannot be accurately calculated at an appropriate level of service delivery. It creates further room for mismanagement, over-estimation of costs and a general inability to detect poor performance and bloat.

Finally, the multi-faceted obligations on the mega entities create opportunities for management to avoid accountability. There are multiple competing obligations to multiple parties (customers, central government, regional representatives, Iwi and regulators). There is no clarity on how these will be traded off when in conflict.

Equity risk is not allocated to councils or iwi

Mega entity “shareholders” have no right to an equity return, directly or indirectly. This means the equity risk and obligation to provide equity capital is unclear. The mega entities will also be financed by the private sector (quite unlike Scottish Water, the model this has been based on). Mega entities will face market interest rates and creditors that assess the creditworthiness in terms of core financial metrics, not socio-cultural or wellbeing objectives.

The model is untested and globally unique. It is unclear what will happen if the mega entities face rising financing costs and are unable to raise revenues to match costs. This leaves a range of unanswered questions:

- Will the councils listed as “shareholders” be obligated to provide additional equity capital? There is a prohibition under the Bill on providing “financial support”
- Will iwi within the mega entity boundary be able or obliged to provide additional capital?
- Why would either councils or iwi provide any capital since there is no effective control over governance (and hence management) and no financial return?

6 The government failed to consider alternative options and evidence

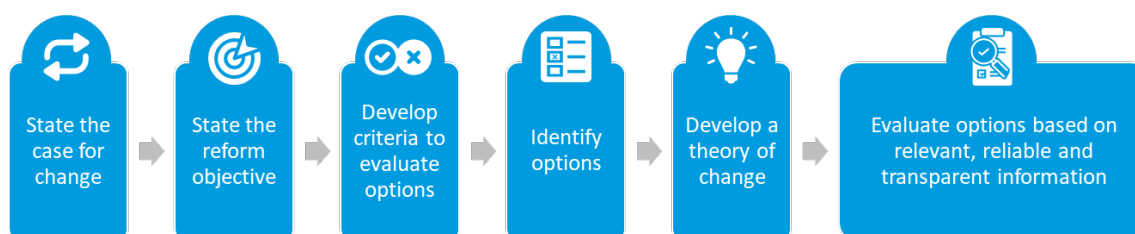
The government did not follow the correct policy process to establish a reform proposal. The government fixated on economies of scale and prematurely developed a reform model built around mega amalgamation. Throughout the reform process, the government relied on flawed analysis to discard alternative reform options. The government conflated the benefits of privatisation and regulation in England and Wales with amalgamation and relied on cherry

picked examples to claim benefits of amalgamation. . The impact of an improved regulatory regime was not properly considered, and historical lessons of amalgamation were ignored.

6.1 Government and its consultants did not appropriately review options

The government's policy development process was poor and failed to follow standard processes. The government prematurely fixated on one reform option, regional amalgamation. It did not properly evaluate alternative options and failed to appropriately consult. Failing to follow standard policy processes creates a risk that the model selected could fail, and lead to reforms that do not meet the agreed public policy objectives, or that produce unintended consequences.

Figure 6.1: Standard policy development process



Unfortunately, standard policy process has not been followed. A preferred entity design was chosen before options properly identified and evaluated.

The government correctly identified a range of problems that exist in the water sector, on the basis of some research and analysis. However, the objectives chosen included one of the evaluation criteria (benefits of scale) and accordingly ensured a biased outcome. It focussed on one factor among a range of important factors—economies of scale. This contributed to premature selection of a preferred model following a relatively cursory review of the international experience.

From around 2017

The government's consultant team assumed that scale benefits were available before testing that critical assumption. Before considering alternative options, it commissioned work from Frontier Economics⁴³ and Martin Jenkins⁴⁴ to review regional administrative amalgamation of water utilities in a limited number of jurisdictions, and overlooked extensive evidence from the global literature. Castalia contributed analysis to the Joint Steering Committee in mid-2020 on:

- Relevant evaluation criteria for water reform
- Institutional options and experience from global reform episodes

⁴³ Frontier Economics (2019), Review of Experience with Aggregation in the Water Sector Report for the Department of Internal Affairs

⁴⁴ Summary of Comparative Model, 25 October 2020. Provided to Joint Steering Committee secretariat by consultants Martin Jenkins on 3 September 2020

- Economies of scale in New Zealand water services.

Unfortunately, the government's consultants did not incorporate that evidence, and has managed to incorrectly interpret the evidence in its Regulatory Impact Statement.⁴⁵

The government fixated on a preferred mega entity design supported by flawed analysis. The government based its reform proposal solely on WICS analysis before alternative options were properly identified and evaluated. The government did not engage with consultation that critiqued WICS analysis.

Only later did the government consider the objectives of reform. It then designed bolt on policies to ensure the full sweep of reforms achieved the objectives.

Throughout the reform process, the government relied on WICS flawed analysis to discard alternative reform options. The government compared WICS analysis of a full package of reforms to all proposed alternatives of entity design considered in isolation.

6.2 Impact of improved regulatory regime not properly considered

The government focused on the issue of “scale” and ignored the evidence—since the Havelock North inquiry—of how even a modest improvement in the regulatory regime would improve outcomes. Until 2020, responsibility for water quality regulation sat with the Ministry of Health under the Health Act 1956. The Ministry made no prosecutions in over 60 years of regulatory responsibility. Only after the tragic event of Havelock North that resulted in four deaths and thousands of illnesses did the Ministry take action. The Havelock North inquiry established that this weak regulatory regime in turn provided weak incentives on drinking water providers to meet minimum safety standards.

Water services have objectively improved in many cases from a combination of heightened public scrutiny, expectations of stricter regulatory standards and creation of a new regulator. The case study set out in the Box below illustrates this.

Box 6.1: Hastings District Council case study

Regulation with appropriate incentives serves its purpose

Improved regulation and accountability incentivise councils to invest appropriately in water infrastructure and improve management and operational performance. Without public attention and regulation—as was evident in the 60 years that the Ministry of Health regulated water quality with zero enforcement actions—councils have failed in some cases to invest appropriately and manage water services. The Hastings District

⁴⁵ DIA (2022), Regulatory Impact Statement at paras 110-117, Breakout Box 1 and Breakout Box 2 is a plainly incorrect interpretation of the existence of economies of scale in water services. In fact the available economies of scale from administrative amalgamations of the type proposed for New Zealand are limited to procurement cost savings, operating cost savings and

Council serves as a useful example of how changing the balance of accountability improves outcomes.

The gastroenteritis outbreak in Havelock North tragically resulted in three deaths and around 5,500 people becoming seriously ill with campylobacteriosis. The inquiry identified [poor management], [poor regulation and enforcement] and [under-investment] as major contributing factors to the outbreak.

In the two years following the Havelock North Inquiry Hastings District Council implemented a number of operational and management changes.⁴⁶

- Formed a Joint Working Group to work on drinking water quality with the regional council and health authorities to provide oversight for planning and decision making on regional drinking water matters.⁴⁷
- Reviewed, updated, and implemented water testing, water safety measures and emergency response plans
- Increased staffing and organisational capacity
- Contracted an international water quality expert to advise on and peer review water safety operations and decision making
- Developed a “one network” Water Supply Strategy in 2017
- Developed a further Water Strategy in 2018
- Worked with surrounding Local Councils to develop a regional water service model for Hawkes Bay funded by the government and rewarded with \$20 million in 2020.

Following the inquiry, Hastings District Council has invested over \$80 million in drinking water infrastructure over four years.⁴⁸ A number of significant milestones in the Water Strategy have been achieved in four years and most projects are on track to be completed by the end of 2022:

- In 2019, the Hastings-Havelock North water main was completed, and the Havelock North booster pump began construction
- In 2020, three small community supplies upgraded
- In 2021, the Frimley water storage and treatment plant, which will hold eight million litres of water as well as enabling effective water treatment, began construction
- In 2022, the Eastbourne water storage and treatment plant began construction, and four small community supplies were fully upgraded, two entered the commissioning phase and one entered the consenting phase.

⁴⁶ Hastings District Council annual report summary 2016/17

⁴⁷ Hastings District Council annual report summary 2017/18

⁴⁸ <https://www.hastingsdc.govt.nz/services/water/three-waters-reform/>

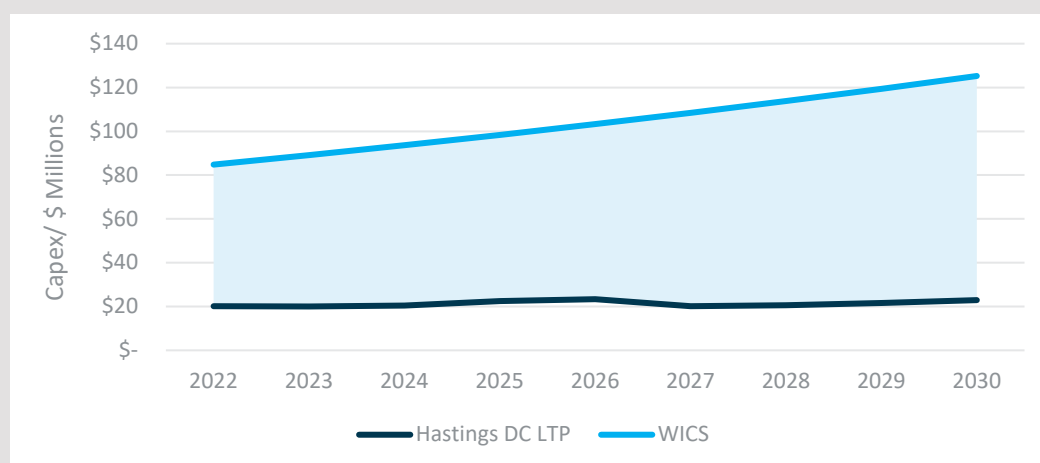
In addition, Hastings District Council is undergoing a significant renewal programme in the wastewater area relating to rising mains and trunk main infrastructure. This programme is over 20 per cent complete and is ongoing in future years.⁴⁹

The government's investment requirement is overstated

The government estimates that Hastings District Council has an investment requirement more than 4.5 times as much as provisioned for in its LTP. This is implausible, especially since Hastings District Council has significantly upgraded its network assets since the tragic Havelock North campylobacter outbreak.

Hastings District Council water infrastructure assets are relatively new. For example, Hastings District Council has 10 brand new treatment and storage drinking water facilities, and an award-winning \$35 million wastewater plant was built just over a decade ago.⁵⁰ Hastings District Council plans to spend \$192 million of capex on water infrastructure assets between 2022-2030.⁵¹ The government estimates a \$936 million investment requirement over the same period.⁵²

The figures below show the difference between Hastings District Council's bottom-up analysis and the WICS top-down analysis.



6.3 Historical reform lessons ignored

The government did not appropriately consider historical lessons of reform. The government commissioned Frontier Economics to undertake a review of amalgamation experiences in

⁴⁹ Hastings District Council annual report 2020/21

⁵⁰ Talking point: Mayor Sandra Hazlehurst – Hastings District Council website: <https://www.hastingsdc.govt.nz/services/water/three-waters-reform/>

⁵¹ Hastings District Council long term plan 2021-2031

⁵² Three Waters Reform Individual council models and slide packs - dia.govt.nz

relevant countries.⁵³ The report drew incorrect conclusions from the case studies. Amalgamation in of itself did not lead to enhanced performance across the case studies reviewed. The study cherry picked scenarios and conflated outcomes of other structural reforms with amalgamation. The report did not provide sufficient attention to examples of amalgamation that caused diseconomies of scale.

The report cherry picked time periods to deliver examples of amalgamated entities with enhanced performance

Prior reform periods where amalgamation failed to drive performance improvements were overlooked.

In England and Wales water companies amalgamated 17 years prior to the period reviewed.

In Scotland there was a long history of amalgamation before the case study period. The period considered in the case study followed four years of poor performance of amalgamated regional entities.

In Tasmania the study focuses on the recent performance of Tasmania's single water company, overlooking prior poor performance following amalgamation.

The report conflated outcomes of privatisation and regulation with amalgamation.

The study cites the improved performance of water utilities in England and Wales after privatisation and regulation as evidence that amalgamation of water providers results in benefits. In fact, the benefits identified in the report relate only to the outcomes of privatisation and regulation of the water sector.

The report overlooks improvements in governance and regulatory oversight during the creation of Scottish water. The report focuses on the performance of Scottish Water to establish the benefits attributable to amalgamation.

The report overlooks examples of diseconomies of scale due to amalgamation

The study only briefly reviews Melbourne Water, the single water service provider to the city of Melbourne. Melbourne Water was amalgamated in 1992, however this amalgamation resulted in diseconomies of scale due to its size. In 1995 Melbourne Water was separated into four entities: three retail water businesses, and a wholesale bulk water, sewer and waterways manager (which would retain the name Melbourne Water).

⁵³ Frontier Economies (2019), Review of Experience with Aggregation in the Water Sector Report for the Department of Internal Affairs



Castalia is a global strategic advisory firm. We design innovative solutions to the world's most complex infrastructure, resource, and policy problems. We are experts in the finance, economics, and policy of infrastructure, natural resources, and social service provision.

We apply our economic, financial, and regulatory expertise to the energy, water, transportation, telecommunications, natural resources, and social services sectors. We help governments and companies to transform sectors and enterprises, design markets and regulation, set utility tariffs and service standards, and appraise and finance projects. We deliver concrete measurable results applying our thinking to make a better world.

**Thinking
for a better
world.**

WASHINGTON, DC

1747 Pennsylvania Avenue NW, Suite 1200
Washington, DC 20006
United States of America
+1 (202) 466-6790

SYDNEY

Suite 19.01, Level 19, 227 Elizabeth Street
Sydney NSW 2000
Australia
+61 (2) 9231 6862

AUCKLAND

74D France Street, Newton South
Auckland 1010
New Zealand
+64 (4) 913 2800

WELLINGTON

Level 2, 88 The Terrace
Wellington 6011
New Zealand
+64 (4) 913 2800

PARIS

64-66 Rue des Archives
Paris 75003
France
+33 (0)1 84 60 02 00

enquiries@castalia-advisors.com
castalia-advisors.com

Appendix 6

Castalia “Better Water Reform Options”



Better Water Reform Options

**Design of a superior reform model for Communities 4
Local Democracy**

JULY 2022

Copyright Castalia Limited. All rights reserved. Castalia is not liable for any loss caused by reliance on this document.
Castalia is a part of the worldwide Castalia Advisory Group.

Table of contents

Executive summary	5
1 Introduction	9
2 Objectives and success criteria for water reform	9
2.1 Objectives for water reform	9
2.2 Success criteria	10
3 Core elements of C4LD reform model	11
3.1 Improving the regulatory framework for water services	12
3.1.1 Water quality regulation with enforced standards	13
3.1.2 Environmental regulation	14
3.1.3 Effective economic regulation	15
3.2 Separating water service business units and accounts from other Council activities	16
3.3 Council ownership or control and accountability to the public	16
3.4 Financing the needed investment is possible under C4LD model	18
3.4.1 C4LD model can finance all capital expenditure for 20 years without changing settings	19
3.4.2 Future access to finance can be improved	20
3.4.3 Designing alternative financing facility to incentivise reform	20
4 Implementing the C4LD reform model	22
4.1 Setting and enforcing efficiency and service level standards	22
4.2 Time-limited compliance requirement	24
4.3 Resolving disputes and imposing change for non-compliance	25
4.4 Financing facility only available to complying entities	26
5 Target end-state for C4LD reform model	26
5.1 Structural reform to match local and regional needs	26
5.1.1 Council-owned model	27
5.1.2 Council-owned regional enterprise model	27
5.1.3 Contractual outsourcing of services model	28
5.2 Outcomes of C4LD's reform model	29
5.2.1 Council-owned model	30
5.2.2 Council-owned regional entity	31
5.2.3 Contractual outsourcing of services	33

Appendices

NO TABLE OF CONTENTS ENTRIES FOUND.

Tables

Table 3.1: Approaches to regulation of water services in selected jurisdictions	12
Table 3.2: Environmental regulation in water services globally	14
Table 3.3: Ratio of iwi to RRG seats in proposed mega entities	18

Figures

Figure 0.1: Implementing WICS capex plan under C4LD model	6
Figure 0.2: Timeframe for implementing C4LD model	7
Figure 0.3: Comparing the end-state of C4LD's model against mega entity reform	8
Figure 3.1: Ensuring accountability in water services	12
Figure 3.2: Implementing WICS capex plan under C4LD model	19
Figure 3.3: Proposed water financing facility	21
Figure 4.1: Timeframe for implementing C4LD reform model	22
Figure 5.1: Comparing C4LD's model against Mega Entity Reform	26
Figure 5.2: Council-owned water services model	27
Figure 5.3: Council-owned regional entity model	28
Figure 5.4: Contractual outsourcing of services to specialist provider	29

Boxes

No table of figures entries found.

Definitions

Bill	Water Services Entities Bill
Capex	Capital expenditure
CME	Compliance, monitoring, and enforcement
COO	Council-owned and operated model
CORE	Council-owned regional enterprise model
C4LD	Communities 4 Local Democracy
DIA	Department of Internal Affairs
IFRS	International Financial Reporting Standards
LGFA	Local Government Funding Authority
WFF	Water financing facility
WICS	Water Industry Commission for Scotland
WSE	Water service entity

Executive summary

The government's Water Services Entities Bill (Bill) is being considered by Parliament and has been referred to the Finance and Expenditure Committee. Castalia has been appointed by Communities 4 Local Democracy (C4LD) to provide independent analysis and advice on the Bill. Castalia prepared a report entitled *Flaws in Water Service Entities Bill* that accompanies this report, and which highlights five key flaws in the Bill.

In this report we now set out Castalia's design of a superior reform option for C4LD. The need for some reform in the New Zealand water sector is beyond debate. Regulation must improve, management capability needs to be lifted in many localities, and investment levels need to match consumer demands and minimum service standards.

The C4LD superior reform model is based on setting a clear objective and evaluation criteria. It includes core features of sound regulation, improving accountability to the community and improving financing. In order to implement the model, we provide a five-year timeframe with a combination of "sticks" and "carrots" to drive higher performance by local government and ensure locally and regionally appropriate models are developed in response to incentives. When the end-state institutional structure is evaluated against the evaluation criteria, we find that C4LD's superior model performs much better than the government's mega entity model.

Reform models should be assessed against objectives and success criteria

An overarching objective for water sector reform and key criteria to judge success are necessary. In all policy reforms, it is essential to identify the objectives of the reform and to identify the success criteria with which to judge whether possible options meet the objectives.

As our report *Flaws in Water Service Entities Bill* identifies, the government has failed to set a clear objective and use relevant evaluation criteria. We therefore use an overarching objective and neutral criteria to evaluate the institutional structures that will result from the C4LD reform model.

Provision of safe, resilient, reliable, and customer-responsive water services, at least cost.

Core elements of the C4LD reform model

The C4LD reform has four core elements. These include central government actions and local government actions

Improving the regulatory framework

The regulatory framework is essential to the proper functioning of the water sector. Effective water quality regulation has been absent for six decades but has already significantly improved with Taumata Arowai. Effective economic oversight through regulation is also necessary. Finally, environmental outcome regulation is important (but the settings need improvement in New Zealand)

Separate water service accounts

This is a relatively minor and easy fix, however, councils will need to retain separate financial and operational records for council water services to ensure the regulation can be effective

Ensuring accountability to communities

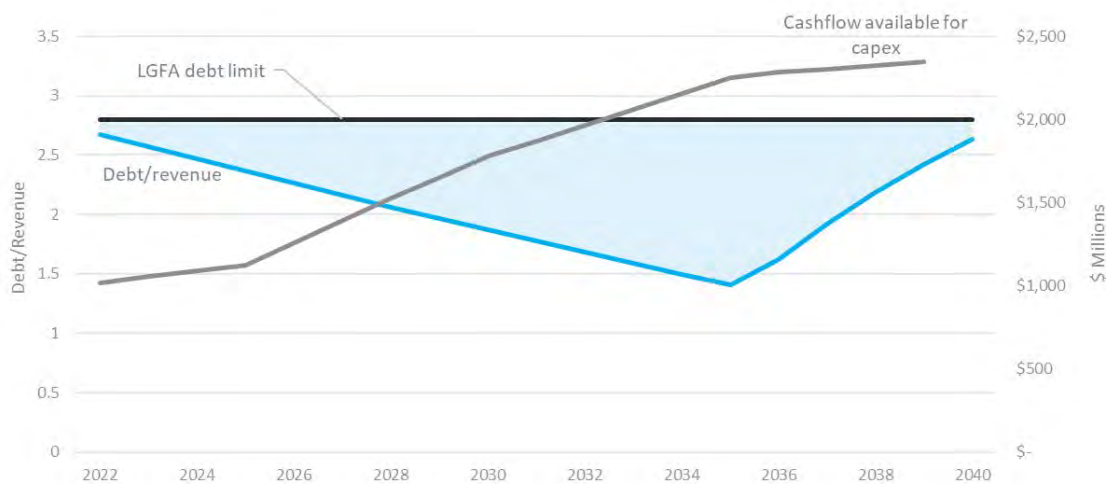
The success of the public ownership model in meeting the public interest depends on how the entity is governed, and the incentives inherent in the governance design. Direct ownership and operation of water services by councils/municipalities provides strong customer and community accountability

Improving the financing conditions where necessary

The government has made affordability and social inclusion in some localities for needed capital expenditure a priority. To improve financing for water capital expenditure, some change is needed.

However, Castalia finds that the government's modelled \$97 billion capital expenditure under the mega entity reform is financeable for 20 years under the C4LD reform model without increasing water bills or changing council debt caps. Castalia's modelling matches exactly the WICS mega entity capex programme in terms of timing and amount spent. Of course, a range of financing options are available that would make financing even more accessible. These include revenue bonds, increasing debt caps for the water service provider (for example by achieving balance sheet separation from councils under accounting rules through C4LD's council-owned regional enterprise model), or under the Infrastructure Funding and Financing Act 2020. For genuine affordability issues, a Water Financing Facility using the untapped \$2.5 billion committed to local councils under these reforms, could be used. There are 20 years to ensure financing models are arrangements are made, without sacrificing any of the capex the government's modelling predicts is needed. Furthermore, modest increases in water rates under C4LD's model would make the capex financeable without changing the debt limit.

Figure 0.1: Implementing WICS capex plan under C4LD model



Implementing the C4LD reform model

The steps to implement the C4LD reform model are illustrated in Figure 0.2. A genuine partnership between central and local government is needed where each takes the actions necessary for the model to be successful.

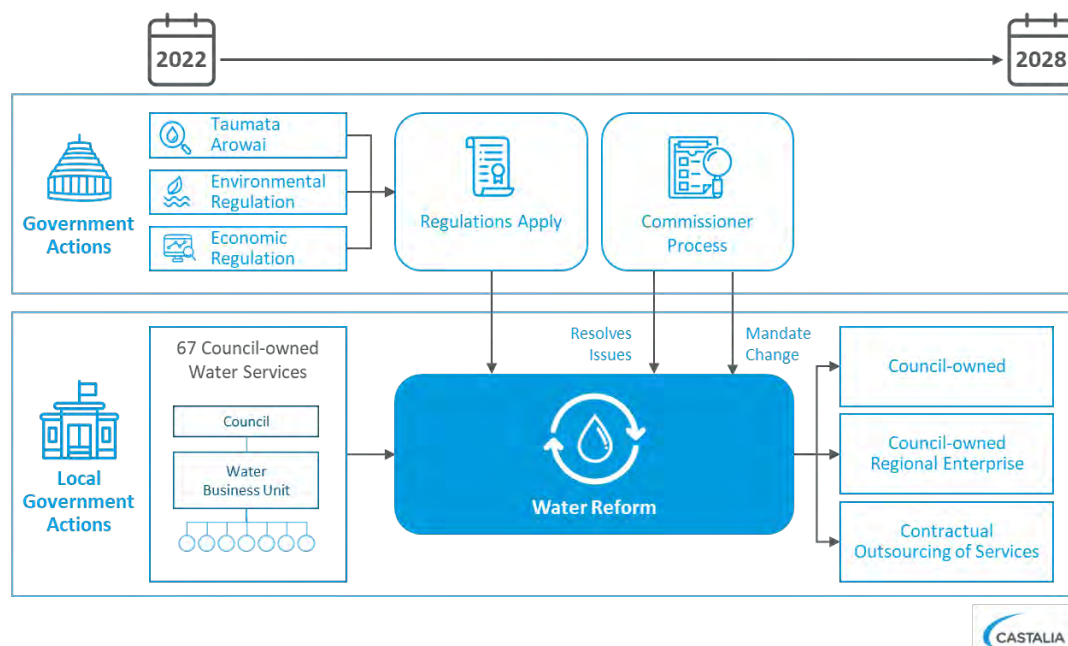
On the central government side, the model requires getting the regulatory settings right (water quality, environmental and economic). Those settings then need to be effectively applied and enforced. Once those are in place, a Commissioner-type role would facilitate reform and mandate changes where councils do not meet regulatory standards by deadlines.

On the local government side, councils will have to comply with the regulations. Water quality standards must be met through changing management techniques, operations and service delivery and making investments in improvements. Environmental outcomes must be assured through operational changes or new investments. Sufficient planned capital expenditure, adequate financing and sustainable rates/charges must be adopted to meet benchmarks set by the economic regulator.

Councils will have a range of options to meet the regulatory standards. In cases where councils meet the standards and model criteria as a standalone, then they can continue. Where regulatory standards will not be met, regional merger or collaboration is possible, as is outsourcing to a specialist water service operator. The Commissioner will also be able to mandate changes in cases of non-compliance.

The C4LD model is also dynamic. It is able to adapt to changes over time, for instance as population pressures grow or ease in different areas. Adjustments in regional groupings could occur or councils could elect to outsource service provision. The model is “horses for courses” and dynamic to local and regional conditions.

Figure 0.2: Timeframe for implementing C4LD model



Target end-state is better performing council-owned water services

At the conclusion of the five year period, and then into the future, a target end-state will emerge. Councils that are able to comply with the minimum regulatory standards across water quality, environmental outcomes and economic/financial performance. The result is a “horses for courses” reform where local and regional differences are reflected in the institutional structure for water services. Community accountability is retained, management and governance incentives are enhanced, access to finance is improves, scale and scope efficiencies are exploited and the model is flexible for future developments such as climate or demographic change.

Figure 0.3 below illustrates how the C4LD end-state institutional structure compares against the mega entity reform. The mega entity reform is a high-risk model that is likely to deliver inferior outcomes compared to the C4LD alternative.

Figure 0.3: Comparing the end-state of C4LD’s model against mega entity reform

	Council-owned model	Council-owned regional entity	Contractual outsourcing	Mega-entity proposal
 Accountability to customers				
 Incentives of management and governance				
 Management and operational performance				
 Access to financing				
 Scale and scope efficiencies				
 Flexibility for the future				

1 Introduction

The government's Water Services Entities Bill (Bill) is being considered by Parliament and has been referred to the Finance and Expenditure Committee. Castalia has been appointed by Communities 4 Local Democracy (C4LD) to provide independent analysis and advice on the Bill. Castalia prepared a report that accompanies this report highlighting five key flaws in the Bill.

In this report we now set out Castalia's design of a superior reform option for C4LD. The need for some reform in the New Zealand water sector is beyond debate. Regulation must improve, management capability needs to be lifted in many localities, and investment levels need to match consumer demands and minimum service standards.

In section 2, we outline how the C4LD superior reform model is based on setting a clear objective and evaluation criteria. Section 3 describes the core features of sound regulation, improving accountability to the community and improving financing. Implementation of the model is described in section 4. We provide a five-year timeframe with a combination of "sticks" and "carrots" to drive higher performance by local government, and ensure locally and regionally appropriate models are developed in response to incentives. When the end-state institutional structures are evaluated against the evaluation criteria in section 5, we find that C4LD's superior model performs much better than the government's mega entity model.

2 Objectives and success criteria for water reform

In policy reform, following standard policy development processes is important. This ensures that reforms are properly considered, relevant factors weighted and robust evidence used.

The local government sector agrees there is a clear case for change for New Zealand water services. Unfortunately, the government has not properly evaluated the available options. It uses faulty logic and fundamentally flawed evidence to justify its mega entity model.

It is critical that the policy process follows standard processes: It should:

- Define the problems the reform should fix: what is the case for change?
- State the objectives: what outcomes do we want to achieve?
- Identify criteria with which to evaluate reform
- Evaluate reform options with credible and contestable evidence.

Proper evaluation is possible when we properly separate the objectives and success criteria.

2.1 Objectives for water reform

The government has set out its reform objectives. These are to:

- Improve the safety, quality, and environmental performance of three waters services
- Ensure all New Zealanders have access to affordable three waters services
- Move the supply of three waters services to a more financially sustainable footing, and address the affordability and capability challenges that currently exist in the sector

- Improve transparency in, and accountability for, the delivery and costs of three waters services
- Improve the coordination of resources and unlock opportunities to consider New Zealand's water infrastructure needs at a larger scale and alongside wider infrastructure and development needs
- Increase the resilience of three waters services provision to both short- and long-term risks and events, particularly climate change and natural hazards
- Provide mechanisms for enabling iwi/Māori rights and interests.¹

Single overarching objective can improve clarity when assessing options

The Cabinet objectives are useful for setting out the specific things that have motivated the desire for reform (for example, drinking water safety and improving access to lowest-cost finance) or which must not be lost in the reform process (for example, community responsiveness, financial wellbeing of local authorities). However, numerous discrete objectives can lead to confusion. We, therefore, propose a single overarching objective that is consistent with and encompasses the numerous objectives of Cabinet and the local government sector. This overarching objective is:

Provision of safe, resilient, reliable, and customer-responsive water services, at least cost.

2.2 Success criteria

We propose six success criteria to evaluate water service reform options. The government has not separated the criteria from its objective statement. The following success criteria were presented to the Joint Steering Committee in 2020, and no objections to these were received at any stage. Each criterion applies to important aspects of water service delivery. The criteria are:

- Is the water delivery service accountable to customers?
- Does the model improve the competence of management and operations?
- Are incentives aligned with objectives?
- Are providers able to reliably raise the finance needed for investment?
- Does the model achieve economies of scale and scope?
- Will the model be flexible and adapt to change and new information?

Accountability of water delivery services to customers and communities

Accountability to customers and communities is important to ensure the water services are provided at the desired quality and cost level. Institutional structuring options provide varying degrees of accountability. These include municipal democratic control, regulation, corporatisation and direct ownership.

¹ DIA (2022), Transforming the system for delivering three waters services: Summary of proposals

Improvements in competence of management and operations

Competent and sophisticated management and operations are essential to safe and efficient water services. There are various ways of achieving this, including scale, competition, regulation, outsourcing and competition.

Alignment of incentives with objectives

Incentive alignment is important for the short- and long-term. More care is required to align the incentives of management and those charged with governance with the public policy objectives over the long-term. Regulatory and institutional design support incentive alignment to varying degrees.

Reliable access to finance for investment

Water providers need access to adequate finance for investment needs. Various barriers currently exist preventing water services in New Zealand from efficiently financing investment. Overseas institutional models avoid these barriers through revenue financing and stand-alone corporate structures.

Economies of scale and scope

Economies of scale can exist in natural monopolies because unit costs tend to fall as the firm's production increases. However, economies of scale in water services need to be carefully examined. Water networks are often already at efficient scale, because water networks tend to match local geography. Caution is especially warranted when examining evidence of economies of scale in water services to find cost savings as a reason for administrative amalgamation.

Economies of scope are also less clear cut with water services. Economies can exist where water services are provided alongside other services (such as with many council-owned water services currently).

Flexibility and adaptability to change and new information

Water services involve expensive, long-lived assets that require long-term investment and stewardship. Nevertheless, water services need to be flexible and adapt to change and emerging new information, such as changes in customer preferences, society's expectations and growth. Institutional design can help preserve this flexibility.

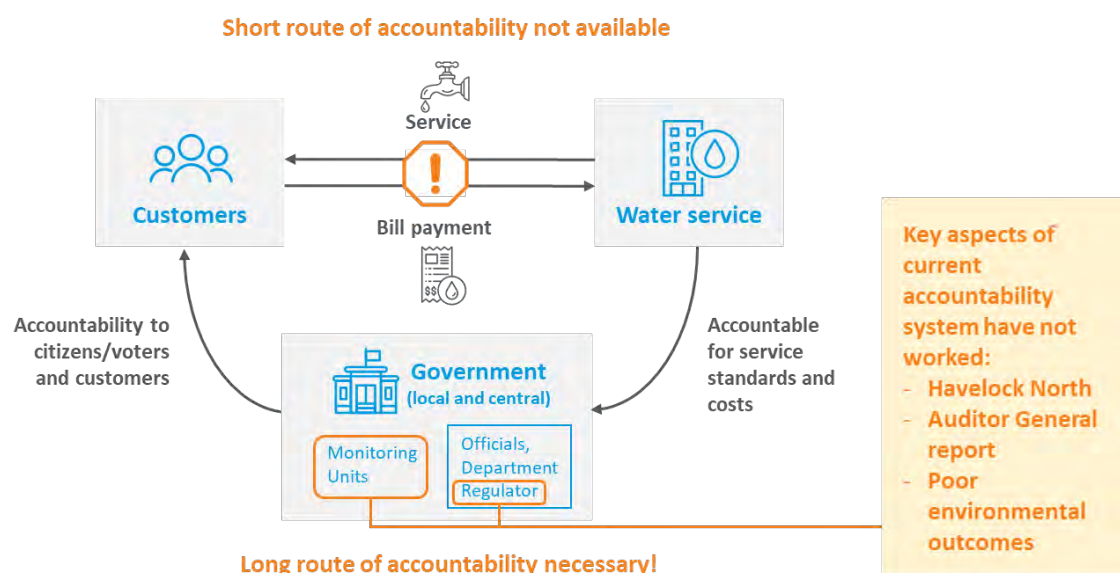
3 Core elements of C4LD reform model

The C4LD reform model has core elements that will drive outcomes. First, like the government, C4LD proposes that the regulatory framework is improved across water quality, environmental and economic regulation. This will bring New Zealand into line with global best practice. Second, C4LD proposes that water services are separated for accounting purposes from all local councils immediately where this has not already been done, to enable proper analysis and evaluation of water service performance separate from other council activities. Third, C4LD proposes that the council retain ownership of all or a proportionate share of water service providers to ensure accountability to local customers and communities of interest. Fourth, financing options are needed to finance the \$97 billion capex that Water Industry Commission for Scotland (WICS) modelling suggests is needed for New Zealand.

3.1 Improving the regulatory framework for water services

A well-performing regulatory system for New Zealand water services is essential. Since water services are natural monopolies, the typical accountability mechanism in competitive markets (accountability to customers through a competitive process) is unavailable. Therefore, the “long-route” of accountability set out in Figure 3.1 is needed.

Figure 3.1: Ensuring accountability in water services



New Zealand has undertaken significant steps to improve the regulatory framework for the water sector. However, more needs to be done to get the basic settings right. New Zealand’s water quality regulatory regime now has a resourced and centralised regulator, which brings New Zealand into line with global peers. However, the economic and environmental regulation are not yet aligned with global norms. Table 3.1 shows the global comparators and New Zealand’s outlier status in terms of economic and environmental regulation.

Table 3.1: Approaches to regulation of water services in selected jurisdictions

Jurisdiction	Level of provision	Drinking water regulation	Environmental regulation	Economic regulation
England and Wales	Regional	Drinking Water Inspectorate	Environment Agency	Water Services Regulation Authority (Ofwat)
Scotland	National	Drinking Water Quality Regulator	Scottish Environment Protection Agency	Water Industry Commission for Scotland
Ireland	National	Environmental Protection Agency	Environment Protection Agency	Commission for Regulation of Utilities

Tasmania	State-level	Tasmanian Department of Health and Human Services	Tasmanian Environment Protection Authority	Office of the Tasmanian Economic Regulator
Victoria	Regional	Victorian Department of Health and Human Services	Victorian Environment Protection Authority	Essential Services Commission
New South Wales	Regional & local	NSW Department of Planning and Environment	NSW Environment Protection Authority	Independent Pricing and Regulatory Tribunal
Florida	Municipal/local	Florida Department of Environmental Protection	Florida Department of Environmental Protection	Florida Public Services Commission
Colombia	Municipal/local	Ministry of Economic Development	Ministry of the Environment and Sustainable Development	Potable Water and Basic Sanitation Regulatory Commission
Philippines	Municipal/local	Department of Health	Department of Environment and Natural Resources	Local government units
New Zealand	Local	Taumata Arowai	16 Unitary and Regional Councils²	Limited regulation (currently DIA/ Auditor General)

3.1.1 Water quality regulation with enforced standards

Water quality regulation is essential to ensuring that water service providers are incentivised to provide safe water. Those charged with legal and/or democratic responsibility for water services are incentivised to complete when the water quality regulator enforces minimum quality standards of safety.

The Taumata Arowai-the Water Services Regulator Act 2020 established a new framework for minimum quality standards and created the water quality regulator Taumata Arowai. This is a welcome addition. Taumata Arowai has begun to establish itself as a credible and respected regulator. It will continue to do this through developing proportional standards, enforcing these, and requiring compliance with remedies it imposes. Taumata Arowai is already regulating a large number of public and private water providers. According to its CEO, the vast majority of local authorities are adapting well to the new regulatory regime.³

Taumata Arowai has a range of regulatory tools and approaches and will take a balanced approach to regulation. The compliance, monitoring, and enforcement (CME) strategy will be

² Chatham Islands is also a unitary authority but not counted for these purposes.

³ CEO Bill Bayfield at Water NZ conference May 2022.

published on its website in July. Any regulatory interventions will be proportionate and directed to address the risk and nature of non-compliance.⁴

Enforcement activities will be proportionate to the risk to consumers and the extent to which the supplier has failed to meet its duties. The Water Services Act empowers Taumata Arowai to impose criminal penalties on individuals as well as financial penalties on individuals and body corporates. For serious offences, a convicted individual is liable for up to \$300,000, and a company can be fined up to \$1.5 million. A company can be fined up to \$3 million for failure to take action, and an individual could be imprisoned for up to five years.⁵

Taumata Arowai will have additional powers that allow it to undertake its responsibilities. It can exercise powers of entry and inspection, take and test samples, require the supplier to take action, and issue compliance orders.⁶

3.1.2 Environmental regulation

Unfortunately, New Zealand's environmental regulation in the water sector is currently different to global norms. The regional and unitary councils will remain in charge of interpreting, monitoring and enforcing environmental standards. From 2023, according to the Water Services Act 2021, Taumata Arowai will be responsible for:

- Environmental performance standard setting functions, specific to waste- and stormwater networks (section 138)
- Wastewater risk management planning function (section 139)
- Monitoring and reporting on environmental performance (sections 141, 142, 144)
- Performance measures and targets for networks (section 145)
- Enforcement powers (section 143).

This structure is somewhat unusual. Normally, water quality and environmental regulation skillsets are different and carried out by different institutions. Table 3.2 shows the global approach to environmental regulation in water services. It is a positive step for New Zealand to have a centralised, uniform standard setter of minimum environmental standards relevant for water services. Regulatory functions benefit from standardisation and sufficient scale.

Table 3.2: Environmental regulation in water services globally

Jurisdiction	Level of water provision	Environmental standard-setting	Environmental enforcement
England and Wales	Regional	Environment Agency	Environment Agency
Scotland	National	Scottish Environment Protection Agency	Scottish Environment Protection Agency

⁴ <https://www.taumataarowai.govt.nz/about/what-we-do/>

⁵ Franks Ogilvie – Analysis of Water Services Act 2021. 14 February 2022

⁶ Franks Ogilvie – Analysis of Water Services Act 2021. 14 February 2022

Ireland	National	Environment Protection Agency	Environment Protection Agency
Tasmania	State-level	Tasmanian Environment Protection Authority	Tasmanian Environment Protection Authority
Victoria	Regional	Victorian Environment Protection Authority	Victorian Environment Protection Authority
New South Wales	Regional & local	NSW Environment Protection Authority	NSW Environment Protection Authority
Florida	Municipal/local	Florida Department of Environmental Protection	Florida Department of Environmental Protection
Colombia	Municipal/local	Ministry of the Environment and Sustainable Development	Ministry of the Environment and Sustainable Development
Philippines	Municipal/local	Department of Environment and Natural Resources	Department of Environment and Natural Resources
New Zealand (to 2023)	Local	Minister for the Environment	Environment Protection Authority
		Regional and unitary councils (frontline regulators)	
New Zealand (post 2023)	Local and regional (if C4LD model is implemented)	Taumata Arowai	Taumata Arowai and Regional Councils

3.1.3 Effective economic regulation

Economic regulation in the form of regulatory oversight is necessary for New Zealand water services. Drinking, waste and stormwater networks are natural monopolies and essential for community wellbeing. The typical way customers hold a service provider accountable (by choosing an alternative, reducing consumption, or demanding better service) is not available.

Economic regulation aims to make providers offer services that customers want at reasonable prices. In New Zealand, it is essential that water service providers ensure that asset serviceability remains above specified levels. Economic regulation should mimic the competitive pressures that competition provides in other markets. The core functions of economic regulation include setting, monitoring, enforcing, and charging the maximum water

charges that water providers are allowed to charge and service standards that they are required to provide. Other functions can include controlling water charging structures, setting coverage targets, or ensuring that asset serviceability remains above specified levels.

The economic regulation challenge in New Zealand is uncommon because Water Service Entities (WSE) are not-for-profit. The regulator will be challenged to ensure WSE's set tariffs that are high enough to cover the service cost. This is one of the government's justifications for reform. Without a profit motive, WSE's have no basic incentive to increase tariffs, and the regulator has no viable way to enforce breaches.

Furthermore, without objective asset serviceability targets, councils have faced fewer incentives to maintain capital investment levels. Economic regulation can determine whether water service providers are maintaining assets and investing at adequate levels to continue to maintain service levels into the future.

Economic regulation paired with sound governance is required to deliver desirable outcomes in the public ownership model. Public ownership and sound governance can address the market failure to improve consumer welfare. Regulation should support the public ownership model. It achieves this through information disclosure, benchmarking, and a commitment in statute to promote the long-term benefit of consumers.

3.2 Separating water service business units and accounts from other Council activities

Water service business units need to be ring-fenced from council activities. This will enable the regulatory regime to properly function. Many local authorities already keep accounts for the water services, but this needs to be standardised and uniformly applied to enable comparisons between entities. By separating the water services from remaining council activities, the water-specific expenses, asset values and liabilities can be ascertained.

A key function of the regulatory regime across water quality, economic and environmental matters is to ensure that resources are being used to address identified problems. Without a separate set of accounts and separate business units, the regulatory system cannot be effective.

In practice, a standardised regulatory accounting framework should be developed using regulatory best practice. In particular, this will need to provide guidance on allocating shared costs between the water and non-water activities of a Council. The framework will also need to provide guidance on how to set and roll forward the regulatory asset base against which the reasonableness of tariffs will be assessed.

3.3 Council ownership or control and accountability to the public

The government is committed to public ownership of water service providers. This is valid but not sufficient. The success of the public ownership model in meeting the public interest depends on how the entity is governed, and the incentives inherent in the governance design.

Ownership should remain close to the community of interest and there should be direct accountability to ensure incentives are aligned. This is an effective way of ensuring optimal outcomes and overcoming the monopoly problem in water services.

Ownership or control of WSE's should remain with councils because water services are inherently local

Councils are closer to local conditions and so have a better understanding of the demands on the network. Local councils tend to have a sound understanding of local investment needs and idiosyncrasies of local service delivery. Water networks are designed around natural features—access to water sources for drinking water, and access to suitable locations to treat wastewater and dispose of it. There are dozens of discrete networks in New Zealand with highly idiosyncratic physical, engineering, topographical, environmental, and climatic conditions.

Water service quality can be highly variable, even above safe minima. Water service can even take on luxury good characteristics. Customers in high-income areas may wish to use more water for gardens (and be willing to pay to avoid sprinkler bans). In contrast, customers in low-income areas may be happy with simply safe, available drinking water. Some consumers may value friendly customer service and prompt attention to faults.

Local governments tend to be closer to local conditions so can adapt as conditions change. Adaptability to change and new information is desirable to ensure that service delivery remains optimal over time. Customer quality and price preferences and society's tolerance of environmental outcomes can change. Technology changes leads to improvements in services or major changes in how and at what scale services should be delivered.

Direct ownership and operation of water services by councils/municipalities provides strong customer and community accountability

In the local government model, customers in the community can have a more direct link to the provider and can vote for local government representatives that will ensure price and service levels are met. This ensures those charged with governance of the service are incentivised to ensure the water utility serves the community well, and those that fail to do this may be voted out. In contrast, where there is central government control through national regulation (and governance in the case of a public corporation), direct accountability to consumers is weak, since it is unlikely that national elections will turn on water service matters.

Accountability to iwi, hapu and whanau

Iwi, hapū and whanau place significant cultural value in water and waterways. Overall, a paradigm shift of *Te Mana o te Wai* has been introduced across freshwater and three waters policy at all levels of government. We understand that different iwi, hapū and whanau have common values in water and waterways, but also unique perspectives and relationships with particular water sources, waterways, marine environment and other parts of the land and environment that interact with three waters infrastructure. Accountability of the people responsible for governance, management, and operations in three waters to iwi, hapū and whānau is more likely to be achieved where the water service entity boundaries match the boundaries of local communities of interest. The smaller entity design ensures greater efficiency and accountability of the governance and management to local communities of interest. Therefore, iwi, hapū and whanau within the smaller entity boundaries are more likely to have their diverse needs and interests matched. Indeed, this is acknowledged by the Department of Internal Affairs (DIA) in its March 2021 slide decks presented to local government and mana whenua when DIA was considering number and boundaries of the

mega entities.⁷ On pages 29 and 33-35 DIA makes clear that if a smaller number of mega entities is chosen, this is worse for recognising rohe/takiwa and communities of interest.

The government has made iwi and hapū representation a priority in three waters services. It may ensure better outcomes if this is implemented at the local or regional level (as opposed to mega-regional level). We agree with DIA that the water service institution can better respond to the needs and interests of diverse iwi, hapu and whanau (rohe/takiwa and communities of interest) the closer it is to those communities. In contrast, the four mega entity Regional Representative Groups have to represent 34 (Entity A), 68 (Entity B), 35 (Entity C) and one (Entity D) iwi respectively. At the level of territorial authorities, the number of iwi in each local government area can be as low as one or two, and up to 15 (Rotorua District and Western Bay of Plenty District) or 18 (Auckland Council).⁸

Table 3.3: Ratio of iwi to RRG seats in proposed mega entities

WSE	Northern Water Services Entity (Entity A)	Western-Central Water Services Entity (Entity B)	Eastern-Central Water Services Entity (Entity C)	Southern Water Services Entity (Entity D)
Iwi in entity	27	68	35	1
Ratio of iwi to RRG seats (assuming 12 total RRG seats)	4.5	11.3	5.8	0.2
Ratio of Iwi to RRG seats (assuming 14 total RRG seats)	3.9	9.7	5.0	0.1

Source: Statistics New Zealand classification of iwi and territorial authority boundaries

3.4 Financing the needed investment is possible under C4LD model

The New Zealand water sector needs additional investment that is affordable and financeable. The total amount of capital expenditure needed over the next 30 years is \$97 billion (in 2021 dollars), according to the government's WICS consultants.⁹ The Te Waihangā/Infrastructure Commission estimates the investment need is \$90 billion.¹⁰ The government also claims the investment needed may present challenges for some communities.

In contrast, the government's financing proposal for the mega entity reform increases fiscal risk and is ultimately backed by the Crown. We discuss this risk in our report dated July 2022

⁷ DIA (March 2021), Slide deck "March 2021 Local Government and Iwi/hapū engagement"

⁸ Analysis is based on Statistics New Zealand statistics of Iwi and local authority boundaries.

⁹ This is the total capital expenditure (in 2021 dollars) that will be made across all four entities, stated in the government's WICS consultant spreadsheets available at <https://www.dia.govt.nz/Three-Waters-Reform-Individual-council-models-and-slidepacks#proposed-entities>.

¹⁰ Te Waihangā, 2 May 2022, New Zealand Infrastructure Strategy presentation by CE Ross Copland, slide deck, page 3

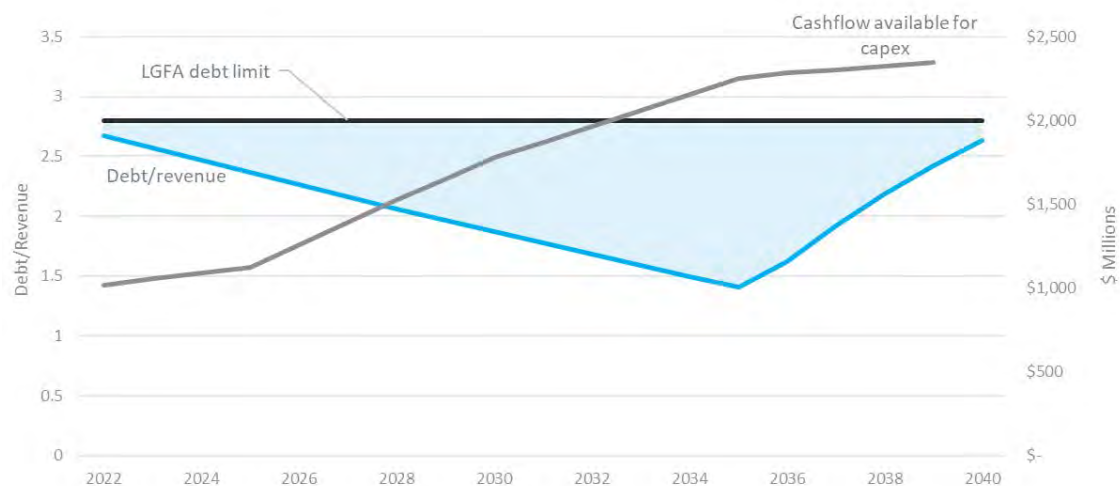
Flaws in the Government's Reform Proposal. Alternative financing solutions are available that were not considered during the reform policy process. We present one example that could apply in the C4LD model – a **results-based water financing facility (WFF)**. Results-based financing is used around the world successfully, in developed and developing countries. Under Castalia's example of a WFF, financing will remain principally with local authorities and risk to the Crown will be quarantined.

3.4.1 C4LD model can finance all capital expenditure for 20 years without changing settings

We find that the C4LD model could finance the capital expenditure the government claims are necessary for 20 years without changing any settings. The government's consultant WICS has modelled that the four mega entities will undertake \$97 billion of capital expenditure over the 30 year period.

Castalia's simple financing model uses the same capex profile for councils, using the same assumptions as WICS for investment timing, population growth, local government debt cap, interest rates and opex. We assume that a debt cap of 2.8 times council revenue applies for the 30-year period (as it currently does under Local Government Funding Authority covenants). We also assume that the government's commitment of \$2.5 billion toward councils (so-called "better off funding") is made available to councils to invest in water investments. This is a better use of scarce public funding for the water sector than the government's current proposal to permit councils to spend the \$2.5 billion on any matter.

Figure 3.2: Implementing WICS capex plan under C4LD model



The Castalia modelling assumes no changes to water rates/charges. If water rates/charges were increased at a modest 0.6 percent per year, the WICS claimed \$97 billion capex would be financeable under the C4LD model without changing council debt caps for the whole 30 year period.

3.4.2 Future access to finance can be improved

Of course, in reality there are many options available to improve access to finance. The C4LD reform model is flexible and will encourage additional financing mechanisms. Therefore, the C4LD model could be financeable over the full 30 year period without increasing water bills by a combination of the following common measures:

- Relaxing debt caps for the water-related activities of councils. The sector will have vastly improved water quality and economic regulation. This will make lenders more comfortable with higher levels of debt for water services. It may mean more can be borrowed without affecting council credit ratings
- Revenue bonds (as opposed to standard general obligations bonds) that are subordinated and tied to water charge revenues. These are extremely common other developed country jurisdictions and would probably be attractive to investors, especially since the sector would be better regulated and financial sustainability monitored by a credible economic regulator
- Water Financing Facility (discussed below) to solve genuine affordability challenges using the \$2.5 billion of funding already committed by the Crown to the reforms (although this funding currently is not tied to improving water infrastructure)
- Infrastructure Funding and Financing Act 2020 enables the use of an infrastructure levy.

3.4.3 Designing alternative financing facility to incentivise reform

In some cases, some councils or regions cannot afford needed investment because and the Crown may need to support social inclusion in those areas via direct support (similar to how it funds roads based on relative levels of deprivation).

The C4LD reform model could include a new financing facility that will make the needed investment more affordable and financeable. We propose a **results-based water financing facility** (WFF) to improve the affordability of needed investment, and address financing constraints. This will not add significant risk to the Crown. The WFF will not create any additional cross subsidy compared to the mega entity reform. This proposed financing facility is likely to improve incentives for water utilities and the managers to deliver capital projects on time and on budget. It builds on models that Castalia has designed in other countries, and is based on best-practice results-based infrastructure financing.

Results-based financing facility design features

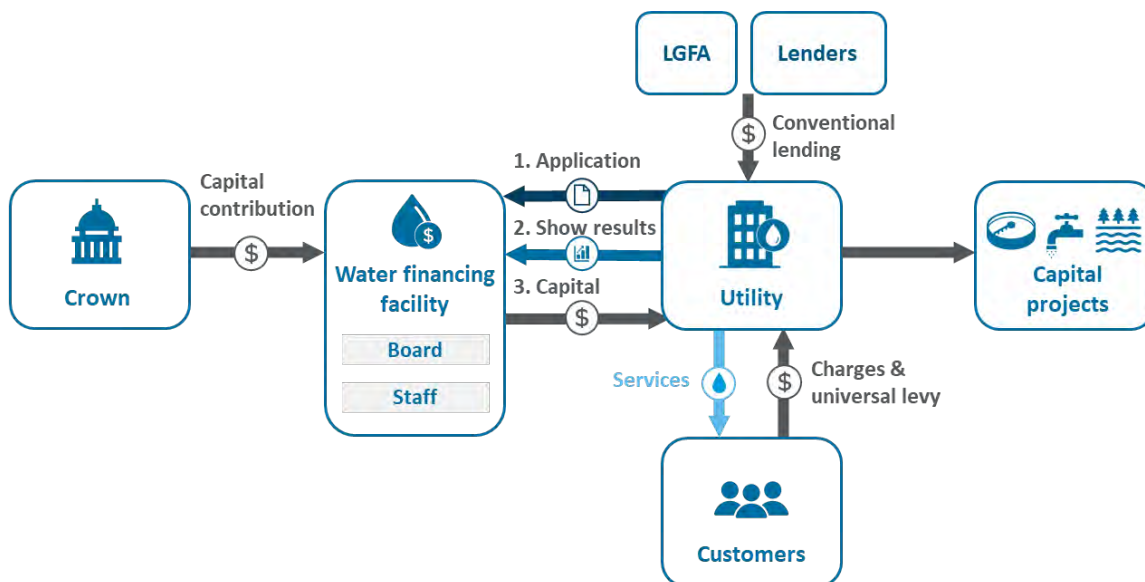
The WFF will be Crown-owned and headed by a professional board and a small number of staff. It could initially be housed within Te Waihanganga/Infrastructure Commission. The facility will receive applications from water utilities (council-owned, council-owned regional enterprises or other permitted structures). It will initially be funded by the Crown and will stand ready to finance capital projects planned by water utilities, provided those projects achieve the results intended.

Water utilities will submit applications for financing support for capital projects. These could include an upgraded water supply, modern wastewater treatment plant, nature-based solutions for ecological and culturally appropriate disposal of wastewater. The application must set out the business case for the capital project, budget and expected outcomes. The

utility can then borrow for the project from conventional lenders (for example, LGFA), backed by a promise from the WFF to provide capital if results are achieved.

When the capital project is completed, the results are verified by the WFF, and the WFF pays the promised capital amount. This can then be used to retire the project-related debt, or immediately recycled into another capital project.

Figure 3.3: Proposed water financing facility



Crown funding of the facility is marginally higher than existing commitments

The Crown would provide the initial funding for the WFF. The Crown has already committed \$2.5 billion of taxpayer funding to local authorities to “support transition through the reforms”.¹¹ This funding is not tied to water infrastructure, so local authorities can spend it on any capital or operating expense. Therefore, the WFF will immediately provide a better targeted use of Crown funds to improve water sector outcomes.

The use of Crown funding for the WFF model is entirely consistent with the government’s attempt to make water charges more equitable under the mega entity model. The government’s policy advice and slide decks have presented a benefit of a smaller number of mega entities as being harmonised prices.¹² Under the mega entity model, water charges will be normalised across the mega regions (for example, a uniform water charge will apply to rural Tairāwhiti and urban Wellington city; rural Waimate and urban Christchurch).

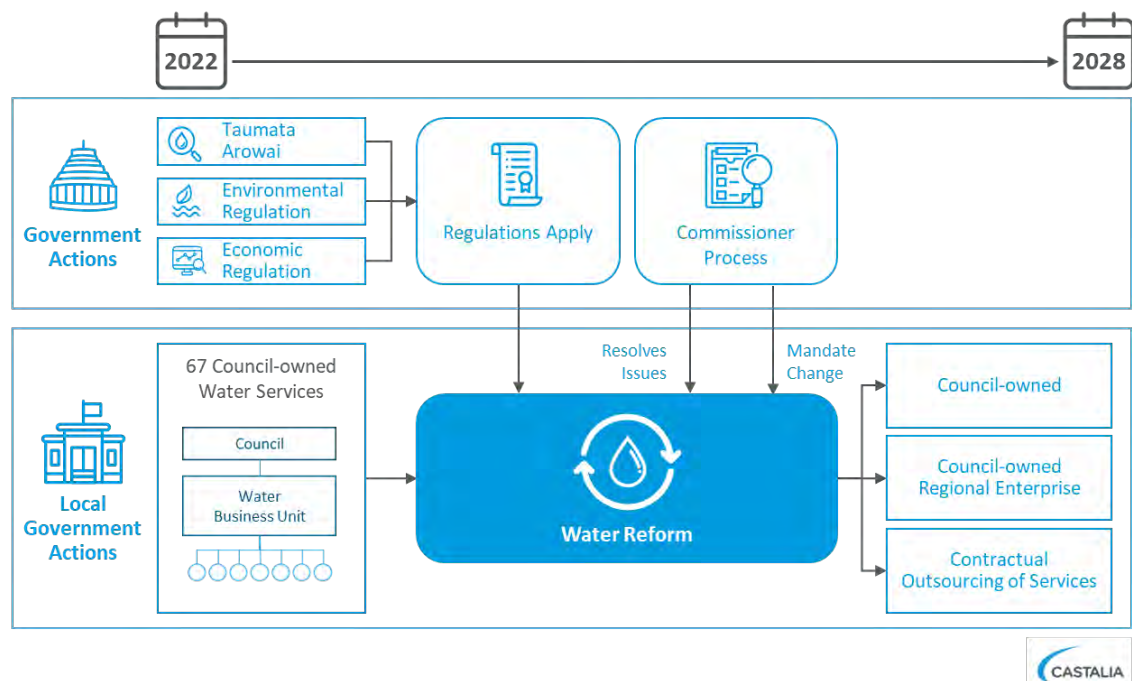
¹¹ Government announcement 15 July 2021, quoting Prime Minister Jacinda Ardern, <https://www.beehive.govt.nz/release/government-provide-support-water-reforms-jobs-and-growth>

¹² For example, DIA (March 2021), Slide deck “March 2021 Local Government and Iwi/hapū engagement” at page 30.

4 Implementing the C4LD reform model

The C4LD model can be implemented with a combination of incentive-based policies. The C4LD model will enable \$97 billion of capital investment to be made over 20-30 years by remaining broadly within current institutional and policy settings. To achieve this, we propose a combination of incentives. These combine penalties for failing to comply (“stick”) with financial benefits for meeting minimum standards (“carrot”). The diagram illustrates the government actions (top) and the local government actions (bottom). It shows how high-quality regulation by the central government can incentivise councils to reform into stand-alone, council-owned regional enterprises or enter into contractual arrangements to improve water services at the same level of efficiency as the government’s reform model.

Figure 4.1: Timeframe for implementing C4LD reform model



4.1 Setting and enforcing efficiency and service level standards

The first critical element is to enforce regulatory standards across the three regulatory domains (water quality, environmental and economic). Enforcement of regulation is just as important as the existence of regulation. Without a credible threat that breaches of regulation will be sanctioned, water service providers will face no incentive to meet standards. To achieve the C4LD reform model, regulatory standards should be enforced across:

- Water quality—Taumata Arowai’s water quality standards must be met by all providers
- Environmental outcomes—Regional Council regional plan rules and consent conditions must be met by all providers

- Economic performance—the economic regulator’s role is the newest out of all three forms and needs to ensure standards are understood and set.

In each case, failure to meet efficiency and service level standards set by the regulators will mean that the reform objectives are not being met.

Setting and enforcing water quality regulation

To implement the reform, water service providers need to be incentivised to comply with water quality regulations. It is essential that the regulator drive improved performance through enforcement. Enforcement of water quality standards is expected to increase under Taumata Arowai. Indeed, the lack of any credible enforcement threat was a key reason for the compliance failures under the prior Ministry of Health regime, as the Inquiry into the Havelock North tragedy identified. The ministry managed zero prosecutions in over 60 years under the Public Health Act 1956.¹³ It took the tragic event in Havelock North, resulting in four deaths and thousands of illnesses, to provoke prosecution. This failing has been identified by the Havelock North Inquiry, the Productivity Commission, and several commentators.

Complying with environmental regulation

Similarly, environmental regulation needs to be enforced. From 2023 Taumata Arowai will have monitoring powers. It will keep records of environmental performance specifically related to water service provision. Breaches should be enforced, and fines and infringement penalties imposed to incentivise performance.

Taumata Arowai’s key role will be to report on and benchmark environmental performance. Where a water service provider fails to meet standards, the regulator will have unambiguous records of this. As records are updated, performance can be monitored over time. Water service providers can be ranked. The regulator will determine whether standards are being met and whether credible plans exist to remedy failings.

Complying with economic performance indicators and investment levels

The economic regulator should collect and publish information on the financial and operational performance of all water utilities. Once it has collected information, it can engage in benchmarking and, if appropriate, given the balance of local and regional ownership, consider price-quality regulation.

At a minimum, the regulator should collect the following:

- Templated financial performance disclosures:
 - Asset registers and relevant depreciation schedules and age profiles
 - Operating expenditure (split by amounts spent directly on water assets compared to other assets like vehicles, IT, office furniture and so on)
 - Capital expenditure
 - Revenues by customer and tariff type
 - Depreciation
 - Tax

¹³ Report of the Havelock North Drinking Water Inquiry: Stage 2 Report, pages 86, 92

- Revaluations
- Debt (including key characteristics of each debt instrument used to fund water expenditure)
- Profit
- Return on Investment
- Regulatory asset base and its roll forward for the year
- Related party transactions
- Operational information
 - Kilometres of pipes
 - Water/wastewater throughput
 - Customer numbers by type
 - Supply interruption/breakdowns statistics.

Regulators typically prepare templates (similar to the “Request for Information” templates provided by DIA and WICS to councils in 2021). Templates provide prompts for the key information the regulator needs to collect. In electricity lines business regulation, the Commerce Commission uses templated forms to collect data from the 27 firms it regulates. Professional advisory firms (such as major accounting firms) typically assist in the preparation.¹⁴

4.2 Time-limited compliance requirement

Regulatory enforcement should be supported by time limits on compliance. C4LD is proposing a five-year time limit from the implementation of the regulatory regime for water service providers to demonstrate compliance.¹⁵ If prior to the end of the five year limit, compliance cannot be demonstrated, then the water provider must have a plan that is satisfactory to the government, to meet regulatory standards.

Whether water service providers meet the compliance requirements will be a matter of fact: whether the three regulators agree that the service provider complies with all material requirements.

Councils incentivised to respond to compliance requirements by reorganising or reforming

Within this time limit, councils can organise their water services into structures that will ensure compliance. A range of responses are expected, depending on the problems that are present in different areas:

- Financing sophistication: If corporate treasury skills are lacking and council is too small to manage the finance for a large capex programme

¹⁴ For example, Deloitte assisted to prepare this template response for Main power, the North Canterbury lines company: <https://mainpower.co.nz/assets/documents/electricity-information-disclosure-schedules.pdf>

¹⁵ Five years is enough time for the government to build on the modest progress made on developing the economic regulation framework and council work on improving information. It also provides sufficient time for councils to identify areas for performance improvement and implement the changes to address any deficiencies.

- Coordination of capex programme: To the extent economies of scale in procurement are available, a regional merger may make sense to better coordinate and reduce the cost of water capex programme
- Management and operational staff capacity: If this is lacking (for example, individual councils in a region cannot justify hiring a water scientist), then councils will find shared service arrangements or regional mergers to improve this
- Management and operational merger: To the extent economies of scope and scale are available in management and operations, a regional merger may make sense to reduce costs.

4.3 Resolving disputes and imposing change for non-compliance

There will inevitably be disputes or disagreements between councils, regulators and the central government regarding the implementation of C4LD's proposals. In the case of a merger, disputes may arise over the value of shares in the merged entity. In the case of shared services, different councils may have invested at different rates and will have differing views on the value of assets. Some councils will have newer assets and higher corresponding debt levels, which may lead to disagreement over how to allocate that debt within a council-owned regional enterprise.

Guidance from a centralised Commissioner—backed by regulatory information

The government can appoint a Commissioner, for example sitting in Te Waihanga/Infrastructure Commission supported by technical experts. That Commissioner will guide any council seeking help to inform on the available options. The Commissioner will have full access to all regulatory disclosures and all regulators' assessments.

Facilitated resolution of issues by Commissioner

In the event that water service providers face difficulty meeting the regulatory requirements, or cannot agree on merger, shared services or other mechanisms to improve compliance, facilitated resolution will be needed. In these cases, the Commissioner will have the authority to resolve disputes on the application of any party. Under C4LD's model, a Commissioner will be available to resolve disputes on the application of any council, or at the request of the economic regulator. The Commissioner will use inputs from the economic regulator and other regulators to determine the optimal resolution of issues. Options available will be:

- Require merger of water services among neighbouring councils
- Setting the terms and conditions of water service merger (asset valuations, debt allocation, structure of water charges)
- Require specific performance of particular requirements with penalties for noncompliance.

Mandated reform for non-compliance

Finally, if at the end of the five-year period, councils are not complying with regulatory standards, or likely to comply within a certain timeframe, then the Commissioner can mandate certain outcomes. This will include mandating water service merger or appointment of specialist water service operators.




4.4 Financing facility only available to complying entities

The financing facility—initially funded with the \$2.5 billion Crown capital contribution promised under the proposed government reforms—will only be available for complying water entities. This will provide a financial incentive, that any Crown funding will only be available where water service providers meet all regulatory minimum requirements.

5 Target end-state for C4LD reform model

When the C4LD reform is implemented, the end-state for the sector is likely to be a combination of council-owned water entities for large metropolitan areas or high-performing provincial cities, and council-owned regional entities. Each of the possible end-states outperform the government’s mega entity proposal. Figure 5.1 below shows how on a rating scale of 1 (dark red) to 5 (dark green), the three C4LD reform end-state options perform better on the six performance criteria than the government’s mega entity proposal.

Figure 5.1: Comparing C4LD’s model against Mega Entity Reform

	Council-owned model	Council-owned regional entity	Contractual outsourcing	Mega-entity proposal
 Accountability to customers				
 Incentives of management and governance				
 Management and operational performance				
 Access to financing				
 Scale and scope efficiencies				
 Flexibility for the future				

5.1 Structural reform to match local and regional needs

The three available models are:

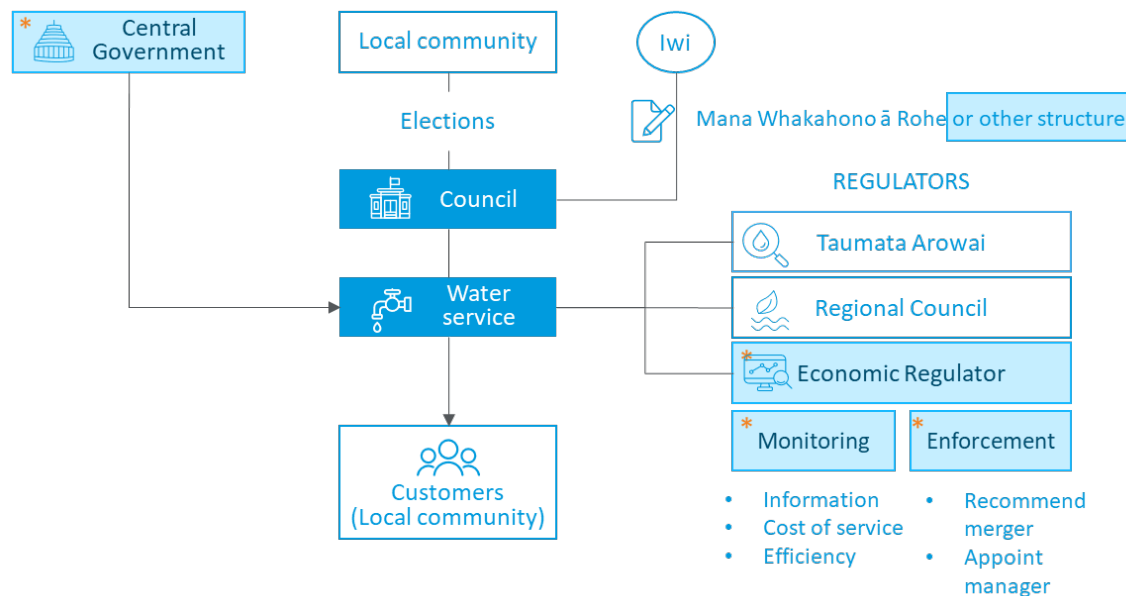
- Council-owned, with enforced, high-quality regulation
- Council-owned regional enterprise, with enforced, high-quality regulation
- Contracting of services to specialist third-party providers, with enforced, high-quality regulation.

In the following, we describe the three structures that are the likely end-state for the C4LD reform model:

5.1.1 Council-owned model

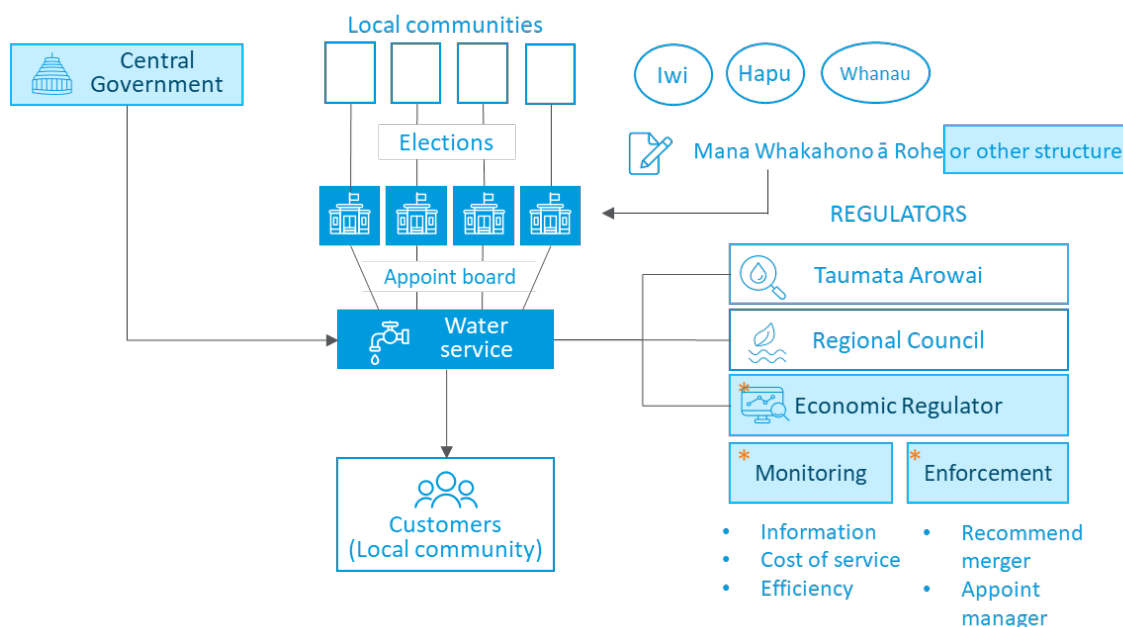
This model would see that water services remained in the ownership and control of an individual council directly. However, the water service provider would have to comply with the regulatory requirements and consistently demonstrate compliance against the threat of the Commissioner intervening and determining a more appropriate ownership and management model.

Figure 5.2: Council-owned water services model



5.1.2 Council-owned regional enterprise model

The regional council-owned enterprise (CORE) model would see a regional enterprise co-owned by relevant councils in proportion to assets or number of connections. It would require that no single council would own or control 50 percent or more of the voting rights, or otherwise control the organisation for accounting purposes.

Figure 5.3: Council-owned regional entity model

This model has been proposed in Hawkes Bay (as a result of the efforts of Hastings District Council, Napier City Council, Wairoa District Council and Central Hawkes Bay District Council). Those councils have identified management efficiencies, and social inclusion gains.

Other regional water service merger or service sharing models have been explored for:

- Northland (Whangārei District Council, Kaipara District Council and Far North District Council)
- Central and South Canterbury (Ashburton District Council, Timaru District Council, Mackenzie District Council, Waimate District Council, Waitaki District Council)
- Southland
- West Coast
- Wellington Region (Wellington Mayoral Forum)
- Canterbury Region (Canterbury Mayoral Forum).

The analysis was carried out at various levels of sophistication and using differing quality information. Some regional groupings relied on WICS modelling or none at all. However, under the C4LD reform model, high quality and consistent information will be available from the three branches of regulators to show the extent to which regional groupings can improve services by exploiting any available economies of scale and scope, improving utilisation of management and operational staff, improving staff recruitment and so on. Therefore, regional water service merger investigations will have a better evidence base to proceed.

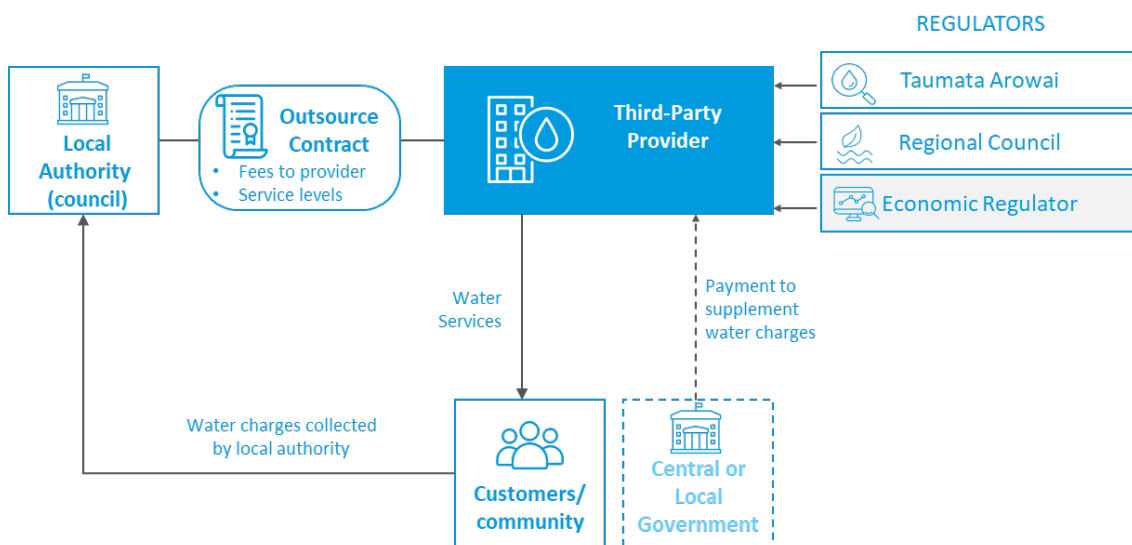
5.1.3 Contractual outsourcing of services model

Delegation of service provision to a third-party provider is a common model for water services around the world and is relevant for New Zealand. Local governments in New Zealand already engage in contractual arrangements to provide public services such as roading, parks and

recreation. A version of the model has been successfully used in Papakura for almost 30 years. Contractual outsourcing of water services has been used for over 200 years in many civil law countries (for instance France) and in some common law countries.

The World Bank finds that the concession contract model in the water sector is associated with performance gains and increased labour productivity when compared to state owned water utilities. The comprehensive study covered all water and sanitation companies that experienced private sector participation. Including 93 cases of water services being provided by concession contracts, between the beginning of the 1990s and 2002.¹⁶

Figure 5.4: Contractual outsourcing of services to specialist provider



5.2 Outcomes of C4LD's reform model

The outcomes of the C4LD reform model will be positive. The likely end-state models all score highly across the parameters identified (above in section 2.2) as important for water services.

Those parameters are:

- Is the water delivery service accountable to customers?
- Does the model improve competence of management and operations?
- Are incentives aligned with objectives?
- Are providers able to reliably raise the finance needed for investment?
- Does the model achieve economies of scale and scope?
- Will the model be flexible and adapt to change and new information?

In the following, we evaluate the three structural options against these criteria.

¹⁶ World Bank PPIAF - Does Private Sector Participation Improve Performance in Electricity and Water Distribution, 2009.

5.2.1 Council-owned model

The council-owned model, where implemented and provided that the regulatory standards are met, scores highly across all six metrics.

Improved accountability to customers and the public interest

Accountability to customers is generally high with council ownership and responsibility for water services. Elected councillors are responsible for the water service, and therefore can be held to account for poor performance by voters. Local councils also tend to have a sound understanding of local investment needs and idiosyncrasies of local service delivery.

Regulation will enhance the council-owned model. Information disclosure and benchmarking allows voters to evaluate and compare performance across councils. Economic regulation will also be committed to ensuring consumers' long-term interest. Water quality regulation will ensure water service providers have incentives to provide safe water.

Improved management and operational performance

Councils with high-performing asset management systems are likely to opt for this model. Where management and operational performance are constrained by size, councils have the option to amalgamate regionally to attract and retain talent or contractually outsource to access world-class expertise.

Good governance and regulation will enhance asset management performance. With information disclosure regulation and benchmarking, managers will compete on performance. Good governance ensures asset managers are held to account for their performance.

Clarity of policy priority and enforcement of breaches by the water quality regulator will lift management and operational performance.

Alignment of incentives with objectives

Regulation and governance are important to ensure incentive alignment in the council-owned model. Fit-for-purpose regulation can incentivise local government-owned water services' management (and staff) to act in the public interest. Governance bodies that are experienced in monitoring and holding managerial performance to account and carrying out good financial governance play an essential role in ensuring incentives are aligned.

Improved access to financing

Councils at or close to debt limits will continue to be constrained by self-imposed debt limits and a desire to remain within LGFA targets. However, the sector will have vastly improved water quality and economic regulation. This will make lenders more comfortable with higher levels of debt for water services. It may mean more can be borrowed without affecting council credit ratings.

In any case, we find that the \$97 billion capex modelled by the government is financeable under the C4LD model for 20 years without increasing water bills or changing any other existing settings.

Of course, in reality there are many options available to improve access to finance. Therefore, the C4LD model could be financeable over the full 30 year period without increasing water bills by a combination of the following common measures:

- Water Financing Facility to solve genuine affordability challenges using money already committed to the reform

- Relaxing debt caps for the water-related activities of councils. The sector will have vastly improved water quality and economic regulation. This will make lenders more comfortable with higher levels of debt for water services. It may mean more can be borrowed without affecting council credit ratings
- Revenue bonds (as opposed to standard general obligations bonds) that are subordinated and tied to water charge revenues
- Infrastructure Funding and Financing Act 2020 enables the use of an infrastructure levy.

Available scale and scope efficiencies are maximised

Councils that are meeting the regulatory standards and have exhausted available regional scale and scope efficiencies will opt for this model. A competitive outsource service provider market can also provide any productivity improvements or future benefits of scale to council-owned entities. Where scale and scope efficiencies are available, councils will amalgamate regionally but the option to remain council-owned prevents diseconomies.

Flexibility to change

Councils have a range of options to respond to change and new information. They can merge, outsource services, delegate management, and change delivery technology in response to local demands (expressed directly) and with knowledge of local conditions. Councils do not need to get consensus at a national level to try something new.

Information disclosure and benchmarking will enhance flexibility to change. Councils can learn what works in different situations by comparing one local council's water service to another. Greater transparency will also safeguard councils from flexibility to change being prevented by parochial interests.

5.2.2 Council-owned regional entity

Where benefits from water service merger are available, councils will amalgamate to the Council-owned regional entity (CORE) model. Provided regulatory standards are met, the regional entity scores highly across all six metrics.

Improved accountability to customers and the public interest

Accountability to the customer remains high. Elected councillors, accountable to the public, elect the board of the council-owned regional entity.

Fit-for-purpose regulation will enhance performance. Information disclosure and benchmarking allow voters to evaluate and compare performance. The regulator will be more effectively able to benchmark when there are multiple entities. Economic regulation will also be committed to ensuring the long-term interest of consumers.

Alignment of incentives with objectives

The council-owned regional entity provides similar outcomes to the council-owned model. For regional entities, it is even more important that there is sound governance and fit-for-purpose regulation to ensure incentives are aligned.

Governance bodies that are experienced in monitoring and holding managerial performance to account and carrying out good financial governance play an important role in ensuring incentives are aligned. Fit-for-purpose regulation can drive incentives of management (and staff) of local government-owned water services to act in the public interest.

Improved management and operational performance

Asset management maturity varies across councils. Councils that struggle to attract and retain staff will amalgamate. A larger asset base will improve recruitment and retention of staff.

Good governance will improve management and operational efficiency. Regional public companies tend to improve competence in management and operations where those charged with governance can hold management accountable.

Fit-for-purpose regulation will enhance management and operational performance. Asset management performance will increase as breaches of water quality, environmental and financial performance standards are enforced. Information disclosure and benchmarking will raise the level of asset management maturity. Asset managers will compete in performance and be held to account for poor performance.

Improved access to financing

Higher rates of borrowing and easier access to finance for investment is likely to be possible under the CORE model. If no council owns or controls 50 percent, there is no balance sheet consolidation under International Financial Reporting Standards (IFRS) accounting rules.¹⁷ The CORE entity could be financed as an independent company.

The sector will also have vastly improved water quality and economic regulation. This will make lenders more comfortable with higher levels of debt for water services. It may mean more can be borrowed without affecting council credit ratings. Fit for purpose regulation is likely to attract lenders.

As outlined above, the government's modelled \$97 billion capex is financeable under the C4LD model for 20 years without increasing water bills and maintaining the current settings (debt caps). Of course, many other options exist to improve access to finance, which we outline above in section 5.2.1.

Available scale and scope efficiencies are maximised

Councils will amalgamate where the benefit from scale and scope efficiencies are greatest. There are minor scale efficiencies available in procurement, and operating functions and scope efficiencies are possible from integrating regional urban and transport planning.

Flexibility to change

Regional entities have a good understanding of local conditions to adapt. The effectiveness is reduced somewhat by need to reach a regional consensus.

Information disclosure and benchmarking will enhance flexibility. With multiple regional entities, entities can learn what works in different situations by comparing one entity's water service to another. Greater transparency will also safeguard flexibility to change being prevented by parochial interests.

¹⁷ NZ IFRS 10 sets out the prerequisites for an entity to "control" another and therefore requiring consolidated financial statements:
<https://www.xrb.govt.nz/dmsdocument/3407#:~:text=NZ%20IFRS%2010%20is%20based,type%20state%20the%20main%20principles>.

5.2.3 Contractual outsourcing of services

Where the council-owned model does not perform optimally, and regional water service merger is not rational, contractual outsourcing of services can provide for councils to score highly across all six metrics.

Improved accountability to customers and the public interest

Municipal decision-makers still directly accountable to customers. Regulation enhances accountability and promotes the public interest. Responsiveness may be constrained by term and duration of contracts.

Customer accountability is usually provided for in the contract with the operator. Key price and quality metrics (or mechanisms to set these over the life of the contract) are set out in the contract. Customers can lobby the local government in case of complaints or performance issues. Contracts also provide the local government with remedies in case of major breaches.

Contracts can be for as long as 30 years (as is the case with Papakura's provider contract). Disagreements over contract interpretation can be a barrier to realising accountability to customers. Regulation will enhance improved accountability to customers and the public interest.

Improved management and operational performance

Contractual outsourcing accesses world-class management systems, and IP achieves required scale across multiple operations. Outsource providers can attract and retain high quality staff with no limits on pay or incentives and the ability to provide global career prospects.

Operators are normally appointed following competitive tenders. Tenders are won on the basis of the demonstrated competence in management and operations of the operator. Operators tend to be global water service companies with wide ranging experience and expertise. Specialist New Zealand water service providers also operate nationally, including CityCare Water (owned by Christchurch City Council). These firms will usually bring their international or national expertise to bear and improve competence of management and operations.

During the life of the contract (can be up to 30 years), the contractual conditions will set performance standards that incentivise competence in management and operations. This, however, depends on the terms of the contract.

Alignment of incentives with objectives

Under most contracts, the operators are incentivised to provide a high-quality service at least cost. Operators are also 'repeat players' in contract tenders around the world. A track record of poor performance will reduce the chances of appointment in contract tenders. Once the tender is won, there are also various ways of designing contracts to incentivise performance improvements and penalise poor performance.

Improved access to financing

Outsource providers have ready access to commercial debt and equity. Some third-party specialist water providers enter into long-term joint venture agreements with publicly owned investors (for example, government pension or insurance funds like NZSF or ACC). This also provides ready access to long-term equity and debt finance for investment.

Contracts can include provision for the operator to charge tariffs for water directly to customers, or (less common) remuneration from the local government entity. Operators can

usually raise finance from the wider corporate group or directly from investors, secured against the revenues of the contract.

Available scale and scope efficiencies are maximised

Economies of scale in management and specialist services can be exploited where third-party providers can operate over multiple contracts. Procurement of equipment and network assets may also be improved from scale (volume discounts and standardisation of plant and equipment). There is potential for economies of scope where the provider can offer other utility services.

Flexibility to change

The model can be flexible and adaptable with a good contract design. Profit motives can incentivise third-party providers to adapt to change in some cases where cost savings are possible.

If well designed, operators can be incentivised to implement new and innovative ways to deliver services that lower cost. If the contract gets the balance between local government and concessionaire wrong and does not follow global PPP contract standards, then there can even be disincentives to adapt and change.

Operators can also be incentivised to add new customers, since this increases profits. For high-growth places, such as many of New Zealand's cities, these incentives to adapt to change could be positive.



Castalia is a global strategic advisory firm. We design innovative solutions to the world's most complex infrastructure, resource, and policy problems. We are experts in the finance, economics, and policy of infrastructure, natural resources, and social service provision.

We apply our economic, financial, and regulatory expertise to the energy, water, transportation, telecommunications, natural resources, and social services sectors. We help governments and companies to transform sectors and enterprises, design markets and regulation, set utility tariffs and service standards, and appraise and finance projects. We deliver concrete measurable results applying our thinking to make a better world.

**Thinking
for a better
world.**

WASHINGTON, DC

1747 Pennsylvania Avenue NW, Suite 1200
Washington, DC 20006
United States of America
+1 (202) 466-6790

SYDNEY

Suite 19.01, Level 19, 227 Elizabeth Street
Sydney NSW 2000
Australia
+61 (2) 9231 6862

AUCKLAND

74D France Street, Newton South
Auckland 1010
New Zealand
+64 (4) 913 2800

WELLINGTON

Level 2, 88 The Terrace
Wellington 6011
New Zealand
+64 (4) 913 2800

PARIS

64-66 Rue des Archives
Paris 75003
France
+33 (0)1 84 60 02 00

enquiries@castalia-advisors.com
castalia-advisors.com

Appendix 7

C4LD Position Statement on Iwi/Māori Partnership

Position on Iwi Māori Partnership

Key Points

- The Government's 'one size fits all' model does not reflect local realities and communities of interest and, importantly, iwi and hapū rohe and areas of interest.
- We believe any arrangements will be more effective if they reflect common local interests, decision-making and build on existing relationships.
- We actively seek to initiate authentic discussions with mana whenua at a local level that consider co-design and partnership arrangements that acknowledge and enable Te Tiriti based pathways at a local and regional level.
- We seek a pause so we can have more time to work on a way forward that works for everyone.

Detail

The Government's decision to mandate the Three Waters Reform was disappointing to most Councils in Aotearoa New Zealand. Ninety percent of Councils submitted their opposition to the Government's four entity model.

The Government did not respond to this opposition, nor the significant negative public reaction, and continued with their plans to mandate the implementation of this model.

In response, some concerned Councils got together and developed a Memorandum of Understanding in order to better work together on an alternative way to effect change.

We formed Communities 4 Local Democracy He hapori mō te Manapori (C4LD) which now has 31 partner Councils representing over 1.4 million New Zealanders and is growing.

We are providing a constructive voice for the majority of Aotearoa New Zealand with real concerns about this reform and the rush with which it is being imposed on our communities.

There are 10 specific things we agree on and that we stand for, three of which are:

- Better drinking water and environmental outcomes are essential
- Proper and effective regulation and an independent regulator
- Partnering with mana whenua and co-designing a governance framework locally and regionally

Overall, we stand for fresh ideas for better water for everyone.

All our members value the importance of developing strong and meaningful partnerships with Iwi Māori for the future of 3 Waters.

We do not, nor believe we should, have a fixed view on how we would best achieve this.

We do know that a 'one size fits all' solution simply will not work for anyone.

The Government's proposal will not reflect local realities and communities of interest and, importantly, iwi and hapū rohe and areas of interest.

Any arrangements will be more effective if they reflect common local interests, decision-making and build on existing relationships.

We actively seek to initiate authentic discussions with mana whenua at a local level that consider co-design and partnership arrangements that acknowledge and enable Te Tiriti based pathways at a local and regional level.

The concept of Te Mana o te Wai reflects the paramount importance of the wai. In particular it is about restoring and preserving the balance between te wai, te taiao, and nga tāngata.

The guidance provided by Te Mana o te Wai delivered with local knowledge will help us better respond to current challenges and realise future opportunities to achieve objectives that are shared by all communities.

Together as a community we can tackle the pressing issues of water quality, water security, sustainable economic growth and development, resilience and climate change mitigation and/or adaptation, and to do this in a way that also respects shared values.

Our primary undertaking, therefore, must be to care for water.

The next step is to consider how we make decisions in partnership, in the best interests of our water in a holistic sense. Seeing Three Waters Reform through this lens is an attractive kaupapa.

It is unfortunate that the Government and Department of Internal Affairs did not consider and discuss the proposed Three Waters Reform on this basis.

This is complex work, and our members have continually underlined the importance of Government providing sufficient time to work through this. It is worth noting that in most cases, partner Councils already had workstreams under way that were leading us in the direction of change.

We have an opportunity to turn this around.

To do this we are seeking a pause so we can have more time to work on a way forward that works for everyone. A vital part of this is developing a true partnership with mana whenua with hui and kōrero about how we best achieve this.

Rushed and forced reform is in no-one's interest. For such significant reform it is imperative that this is done in partnership and with the consent of both the sector and Iwi Māori.

We support a bipartisan political approach so that changes brought about by these reforms endure. There is a commitment from all partner Councils to achieve this. Without bipartisan support there is a high risk that the changes proposed by the Government will not survive future changes of government.

We have particularly focused our attention on two models which we believe will achieve a more durable approach, and also ensure greater involvement for mana whenua than is presently being offered by the Government - essentially a panel that appoints the board, and a guiding document "Mana Whakahono ā Rohe". We acknowledge the working group has recommended some changes but in our view those recommendations fall short of what is required to achieve broad support.

We would value the opportunity to discuss this further with mana whenua and seek to create opportunities to do so. We all are also supportive of a greater involvement for mana whenua with the new Water Regulator, Taumata Arowai.

We are aware there are those who would benefit by discrediting our group or by misrepresenting our values and aims.

Our group are committed to genuine partnership with mana whenua and a reform proposal that is durable, widely-supported and fit for purpose.

We represent a significant percentage of the local government sector and over 1.4m people.

We are genuine in our desire to work in partnership with Iwi Māori and would welcome discussion on these matters and opportunities for clarification.

We want to make it clear:

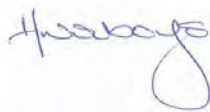
- Iwi partnership and relationships are critical and important to us, and any suggestion otherwise is simply not correct
- All partner Councils have relationships with their mana whenua at a local level and these are highly valued
- We strongly support giving effect to Te Mana o te Wai

C4LD formed just 12 weeks ago, and we accept there is a lot more work for us to do, including furthering authentic conversations and discussions with mana whenua. While there have been attempts to do this, we are very clear that more work is needed – work that we are committed to doing.

We believe a less rushed process would have allowed the creation of an appropriate governance in a co-design process with mana whenua. This outcome can still be achieved.

We want to know what success looks like for mana whenua and how we can work collectively, collaboratively and in partnership to achieve better outcomes for all our communities.

Ngā mihi



Mayor Helen Worboys
Chair



Mayor Dan Gordon
Deputy Chair



Mayor Lyn Riesterer
Co-chair
Iwi Māori Working Group

Appendix 8

REG 1

2020/21 Auckland Transport RCA Report



Activity Management

Planning, Procurement and Data Quality

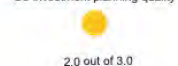
Composite Indicator

Activity Management Planning

Planning quality



Co-investment planning quality



Procurement

Smart buyer self-assessment



Data Quality

Asset management at expected standard (%) and Score



Source: REG 2018 AMP Assessment, Waka Kotahi 2018 AMP Assessment

Source: RCA Smart Buyer 2017 Self-Assessment

Source: REG Annual Data Quality Assessment

Service Performance

LGA Non-Financial Performance Measures

2018-21 LTP Targets Achieved

Annual Targets Achieved



Source: TA Annual Reports

Target achieved Partially achieved Target not achieved Not reported

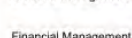
Co-Investor Assurance

Investment Performance

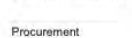
Investment Technical

Investment Audit (Four Grades)

Contract Management



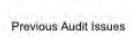
Financial Management



Procurement



Professional Services



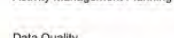
Previous Audit Issues



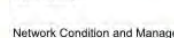
Source: Waka Kotahi, Audit and Assurance, Investment Audit Report Jun-21

Technical Audit (Four Grades)

Activity Management Planning



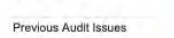
Data Quality



Network Condition and Management



Road Safety



Previous Audit Issues



Source: Waka Kotahi, Audit and Assurance, Technical Audit Report Apr-21

Three grades:
Effective
Improvement needed
Unacceptable
Not available

Four grades:
Effective
Some improvement needed
Significant improvement needed
Unacceptable
Not available

Delivery

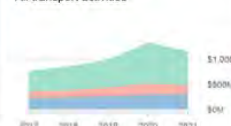
Expenditure, Funding, Cost Efficiency and Valuation

\$3.7B (93.8%)

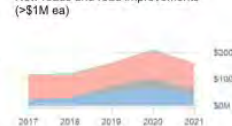
Total 2018-21 NLTP Budget (\$M)
Total Budget Spent (%)

Co-Invested Expenditure

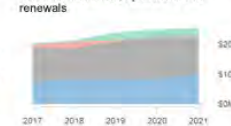
All transport activities



New roads and road improvements (>\$1M ea)

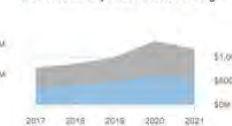


Road maintenance, operations and renewals



Funding

Co-invested expenditure and funding

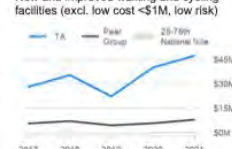


Activity Class Expenditure

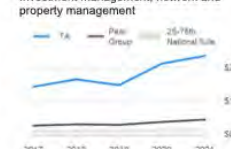
Road safety promotion



New and improved walking and cycling facilities (excl. low cost <\$1M, low risk)

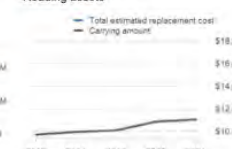


Investment management, network and property management



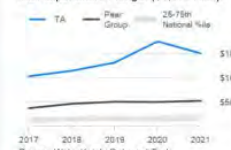
Valuation

Roadway assets

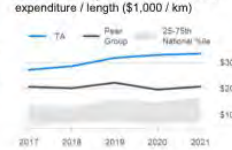


Cost Efficiency

Total expenditure / length (\$1,000 / km)



Maintenance, operations and renewals expenditure / length (\$1,000 / km)



Achievements

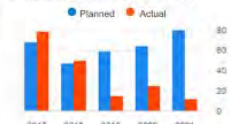
Works Completed, Amenity and Road Condition

-0.2%

Ride Quality (STE)

Works Completed

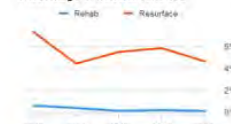
Pavement rehabilitation (lane kms)



Pavement resurfacing (lane kms)

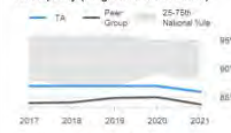


Percentage of network renewed



Amenity (Sealed Roads)

Ride quality (roughness of the roads)

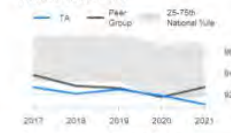


Peak and average road roughness (NAASRA) (peer group lighter)



Road Condition (Sealed Roads)

Pavement condition



Surface condition



Source: Waka Kotahi Data and Tools

Source: REG ONRC Performance Measures Reporting

Source: Waka Kotahi Data and Tools

Appendix 9

REG 2



Activity Management

Planning, Procurement and Data Quality

Composite Indicator

Activity Management Planning

Planning quality

1.7 out of 3.0

Co-investment planning quality

2.0 out of 3.0

Procurement

Smart buyer self-assessment

60 out of 70

Data Quality

Asset management at expected standard (%) and Score



Service Performance

LGA Non-Financial Performance Measures

2016-21 LTP
Targets Achieved

Annual Targets Achieved



Source: TA Annual Reports

● Target achieved ● Partially achieved ● Target not achieved ● Not reported

Co-Investor Assurance

Investment Performance

Investment Technical

Investment Audit (Four Grades)

Contract Management

Technical Audit (Four Grades)

Activity Management Planning

Financial Management

Data Quality

Procurement

Network Condition and Management

Professional Services

Road Safety

Previous Audit Issues

Previous Audit Issues

Three grades:
● Effective
● Improvement needed
● Unacceptable
● Not available

Four grades:
● Effective
● Some improvement needed
● Significant improvement needed
● Unacceptable
● Not available

Source: Waka Kotahi, Audit and Assurance, Investment Audit Report Jun-18

Source: Waka Kotahi, Audit and Assurance, Technical Audit Report Mar-21

Delivery

Expenditure, Funding, Cost Efficiency and Valuation

\$50.1M (99.9%)

Total 2016-21 MLTP Budget (\$M)
Total Budget Spent (%)

Co-Invested Expenditure

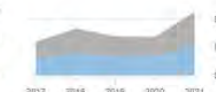
All transport activities

New roads and road improvements
(>\$1M ea)

Road maintenance, operations and
renewals

Funding

Co-invested expenditure and funding



Activity Class Expenditure

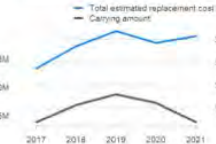
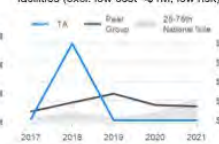
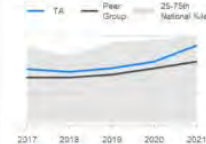
Road safety promotion

New and improved walking and cycling
facilities (excl. low cost <\$1M, low risk)

Investment management, network and
property management

Valuation

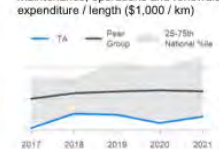
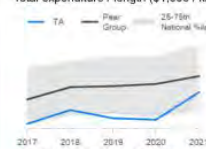
Road assets



Cost Efficiency

Total expenditure / length (\$1,000 / km)

Maintenance, operations and renewals
expenditure / length (\$1,000 / km)



Achievements

Works Completed, Amenity and Road Condition

0.3%

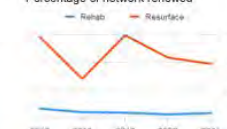
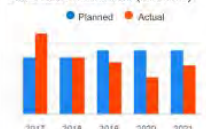
Ride Quality
(STE)

Works Completed

Pavement rehabilitation (lane kms)

Pavement resurfacing (lane kms)

Percentage of network renewed



Amenity (Sealed Roads)

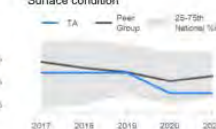
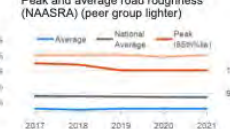
Ride quality (roughness of the roads)

Peak and average road roughness
(NAASRA) (peer group lighter)

Road Condition (Sealed Roads)

Pavement condition

Surface condition



Source: Waka Kotahi Data and Tools

Source: REG CNRC Performance Measure Reporting

Source: Waka Kotahi Data and Tools

Source: Waka Kotahi Data and Tools