NEW ZEALAND INFRASTRUCTURE COMMISSION
*Te Waihanga*

Episode seven

TRANSCRIPT

# Infrastructure for a better future

## The Climate Cost of Consenting

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Please note: the transcript has been edited to make reading as easy as possible.

**Introduction:** Welcome to the Te Waihanga 'Infrastructure for a Better Future' podcast. A series where we talk to experts both from here and overseas about the infrastructure challenges we are facing.

**Ross Copland:** Kia ora folks, it's Ross Copland here, Chief Executive of Te Waihanga, the New Zealand Infrastructure Commission. And joining me today is Corina Comendant from Sapere Research Group, who has put together a piece of research together with her team commissioned by the Infrastructure Commission. And it really looks at this big issue of how do we meet our climate targets for energy and transport sectors when we have efficiency troubles with our existing consenting system.

Some of the findings, just really high level: the consenting system needs to deliver a 40% increase in consenting by 2050. And as you'll know from the 30-year infrastructure strategy, that relates to delivering all of the different things that form the infrastructure deficit. We know that consent times are increasing considerably. And the report finds that by 2028, we need to have implemented the reform and that we need a 50% efficiency gain by then to achieve these net-zero targets. The report also finds, interestingly, that if we don't get there, there's a $16 billion cost that New Zealand could face to buy these international emissions offsets.

So welcome, Corina. We'd love to talk to you a little bit today to unpack this report and its findings.

I'd love if you could kick us off by just taking listeners through what are the key findings of this research.

**Corina Comendant:** This work looks at the trends and the consenting processes and what that might imply for the net-zero target. While we look at the historical trends in the system, we estimate that the volume of consents that will need to go through the system would go up, that can have significant impacts on the time that it might take for each individual project to get a consenting permit.

With some of the findings we've got, are looking at, you know, different assumptions on the resources that might be allocated to the system and the complexity that might grow. We find that the emissions reduction gap that would need to take place between today and 2050 can be somewhere between 11% and 34%, depending on how many resources or complexity reductions can take place in the system. That is quite significant and on the upper level, it can cost us about $16 billion to cover that emissions gap if it is not achieved through the projects that we think need to take place to decarbonise electricity and transport.

**Ross Copland:** Excellent. Well, perhaps to go back to go forward. The Infrastructure Commission published a 30-year strategy for New Zealand's infrastructure last year. And as part of that work, we looked at this infrastructure deficit, this idea that New Zealand has underinvested for quite a number of decades consecutively now and accrued this backlog of transport, energy, housing, water, a whole lot of upgrades that need to take place to get us up to sort of benchmark standards. And so obviously, when we think about the planning system, and the role that it plays in enabling that, as a Commission we were really interested in understanding a bit more about what needed to happen and the reform of the Resource Management Act.

But also, when we thought about some of these government targets that were agreed for resource management reform, particularly this efficiency target was something that captivated us, trying to understand and quantify you know, just how much more efficient, how much faster does the system need to be to achieve success. And Sapere partnered with the Commission actually on a first piece of work, this Cost of Consent study last year, which has actually been really widely read and cited, including by the Minister in a number of his speeches, Minister Parker. But as I recall, it so said, we spend $1.3 billion consenting, about $15 billion of annual infrastructure spend, and that that cost and time was growing really quickly. This is not a story of a static system that is sort of trundling along. The idea here is actually since 2014/15, the time it takes to consent projects has increased by 150%.

Maybe it's useful for listeners that you know that was the reason or the genesis behind commissioning. The second piece of work was to say, so how much more efficient does our new consenting system need to be? How much faster? How much less costly? And what might that lead to in terms of meeting some of our other objectives? So, perhaps, to hand back to you Corina to just talk us through the findings of this piece of work. So perhaps a little bit of background about exactly what it was we studied and what your key findings were.

**Corina Comendant:** This report projects the demand on the consenting system in New Zealand, based on the observed trends in the past, and with a particular focus on estimating the ability of the system to respond and deliver on the net-zero target. We took that challenge, because it's something tangible, we've got that as a legislative target. And we know already that the resourcing system is a pivotal part of enabling all those projects – the decarbonising projects – to take place. We wanted to see how ready the system is. We've done the exercise of understanding how big the size of the problem is, but are we actually up for the challenge?

We focused on infrastructure: housing, energy, transport, water. When we looked at the emissions target specifically, when we estimated it was energy and transport that were part of the model. And that's because we looked at the source of emissions, not the use. In fact, by looking at just those two sectors it actually covers everything in infrastructure. And we use quite a bit of, you mentioned, the first report Sapere undertook. We used that as evidence of the past trends. What happens if we let them continue? We had an understanding of the consenting cost. I think it was 5% of a capital expense that went to direct consenting costs, and we particularly looked at the evidence of impact on duration. How long does it take to consent a project? And they vary quite a bit, depending, of course, on the complexity of the project and also the sector. But that was a key variable into our model because we wanted to see if trends continue, what would be the impact on the duration of getting a consent issued? And making assumptions about if there is a breaking point where investors will simply just not tolerate the delay in getting a permit. Where would that happen in terms of the projects that need to be delivered to decarbonise energy and transport.

**Ross Copland:** The Infrastructure Commission published a piece of work last year, which looked at New Zealand's abundance of renewable energy resources, and Transpower – the New Zealand system operator for the electricity market – had published a piece of work called Whakamana I Te Mauri Hiko, which set out this broad high-level goal, or not a goal so much as a necessity, to have around 500 megawatts of new

generation annually to 2050. And we thought, well, that's a lot. That's basically a new Clyde Dam-sized, renewable energy asset added to the grid every year, for the next 30 years. So that frame or that lens of the amount of consenting that needed to happen to get us to net zero, that must have played quite significantly in this research as a baseline assumption.

**Corina Comendant:** We used the Climate Change Commission's demonstration path scenario, as our go to projections on the future. Transpower's estimates are a bit more ambitious in terms of the scale of electrification, but we just wanted to be conservative. But electrification, in any model these days, it's significant.

Between now and 2050, capacity would have to increase by 2.5, or multiple 2.5 at the least. But not only that, all the renewals that need to take place in the system. So, 40% of renewable generation will need to be re-consented in the next 10 years. And we know, we've got evidence that in some cases of renewals on the site, it may require the same effort as applying for a new permit altogether. It's a massive challenge. I think our estimates, they are already quite grounding. I think what we're seeing is that for high complexity projects, for example, if trends continue and we assume no resources come into the system, just keeping up with population growth so the relative size of this sector does not increase, a project that is taking on average two years today will take 12 years in 2050, to get a consent issued.

**Ross Copland:** Wow, sorry, a two-year consent now, because of the rate of growth and the time would take 12 years to consent in 2050?

**Corina Comendant:** In 2050, if there was no change in the complexity of the consenting system or, of course, if there are no additional resources added. So, it's quite sobering, it's a sobering finding. We do need to think about, the criticality of improving and making the system a bit more efficient. What we found is that needs to take place in the next five years. If we have a reform, it will take years for that to be implemented.

Some of burden that is in the state system will continue, say, for the next five years. If we let that happen in 2028, we would need to cut the time that it takes to issue a permit by 50% compared to today, so we'd need to revert to current duration that it takes to issue a permit. And that's basically the maximum that we can allow, essentially, is what we found.

**Ross Copland:** And it sounds like, that's a moderately optimistic scenario, given the discussion that reform is likely to take more in the order of 10 years to be fully operational.

**Corina Comendant:** Yeah. We found that pretty much the next five years is you know, is that is that the time that we've got to fix this is too long to get to net zero.

**Ross Copland:** Yeah, cool. So really big picture numbers for listeners. We need to achieve a 50% reduction in the time to consent by 2028, compared to today, and if we don't, because, you know, reform takes say 10 years, then that number is actually much larger, it might be, well in excess of 50% more efficient, if we defer the start until, say 2030.

**Corina Comendant:** If we did not improve the efficiency in the system at the moment, the projects that need to be implemented in 2050 to reach net zero, some of them will fall out. What that means is that we will not achieve the emissions reduction that we are expecting to do domestically for domestic actions.

We still have international commitments. If we are to meet those commitments, then that implies a liability for the government. It's going to cost more to achieve those emissions reductions. Just to give some numbers, in the worst-case scenario, without any additional resources or reduced complexity in the system, the admissions gap can be around 30%, so we will not deliver 30% of the emissions reductions that we need. At the same time, on the other side, if we do pull our efforts together and fix this in the next five years, and when we say fix this, allow for the duration and consent to be no more than it is at the moment, then there's a minimum impact on our emissions reductions.

**Ross Copland:** Sure. You're talking now to the scenarios that you looked at. And I see here in your report 'under this observed trend continues unabated to 2050 scenario', scenario one, you're speaking there to saying essentially, if the system remains as complex as it is, and therefore, the time taken continues to grow at that base growth rate, we're likely to miss something like 30% of our emissions reduction targets.

**Corina Comendant:** Yeah, those scenarios are A and B. Those are the worst scenarios, where we assume that the volume increases by 40%, the volume of consents in the system increases by 40% from today to 2050. And the number of resources that we add to the system, they

don't keep up with that, but rather grow with the population growth. So, the relative size of the system does not change. That's the worst-case scenario. I don't think that's realistic, but that gives us you know, the worst case. The one in between scenarios one and two, the impact in that case is an emissions gap reduction gap of between 11% and 15%.

**Ross Copland:** A lot of our work is thinking about, and I've seen Climate Change targets, the Transpower targets and others, has really looked at decarbonising the existing domestic economy, it hasn't leaned into this idea that perhaps New Zealand could have a strategic point of difference because we have a highly renewable economy, in developing green jobs, green manufacturing, energy intensive sectors that have traditionally been very polluting, but could be very efficient and renewably powered. I guess the question for me, I'd be really interested in your view, if New Zealand did go down a track where industry policy evolved and said, well, actually, we want to position New Zealand to leverage these renewable energy resources, and we ended up with a significantly higher requirement for new generation, what can we learn from this research? What does it say about the planning system and the type of efficiency gains we might need?

**Corina Comendant:** I think New Zealand has the potential to have quite a good competitive advantage in low-carbon industrial products. I think there's a lot of innovation happening in New Zealand. I've lived in a few countries abroad, and I think innovation is something that New Zealand should be proud of. And we should capitalise on that. There's a lot of interest happening, there's interest in offshore wind, there's a lot of interest in decarbonising methanol production in the Taranaki region. There's the market interest, but there needs to be an enabling environment and they need to go hand in hand.

This research suggests it won't be difficult getting the resource consent when you need it. And in an environment where, you know, these technologies are costly, and investors need certainty on their returns, I don't think that the metrics that we have estimated do any justice or are favorable for an investor who looks to put his money in industries that are forefront of innovation. We need to think strategically about this, about where New Zealand wants to be, I think that's something for the policymakers to decide. And how we want to position in the global market, and if that's the case, then everything else needs to be supportive. It needs to be joined up thinking between the policymakers and the resourcing system that supports all of these investments. There's no time to wait to address the issues we've got with the consenting system. I think that's the key conclusion.

**Ross Copland:** Just to come back to the report where you look at the cost of not getting there, basically. There's some research where you've studied what the likely cost of emissions reduction, international offsets might be to the New Zealand economy. Can you explain to us, because to me I think this is this is quite an important counterfactual that when we're doing these trade-offs about efficiency and certainty, we need to know, versus looking at more effects and more studies and more certainty that we've met all of the various potential environmental risks and so on, we need to know what the counterfactual is if we don't get there, and I think this is something that listeners would be quite interested in. How does this shape up? What was the methodology? Are the numbers pretty solid? Or are there some kind of limits of accuracy that they need to be aware of?

**Corina Comendant:** The emissions liability that we estimate is based on the carbon values estimated by the Climate Change Commission. So those are not the prices for international carbon offsets. We don't have a market that yet sets the prices for those kind of units, let alone forward prices. In economic terms, those values represent the marginal cost of abatement. If you're not, if you don't decarbonise using, you know, renewable generation or to electrify transport, or to further decarbonise the electricity system, you will need to find those abatement efforts somewhere else in the economy. And that price gives you a good idea of what's next, what's the cost of that abatement.

**Ross Copland:** And what was the number? What was what? If we don't get there? What are we looking at?

**Corina Comendant:** In the worst case, where there's no regulatory change and no resources being added – so no efficiency gains – it's between $13 and $16 billion between now and 2050. Somewhere in between, it's $5 and $8 billion, so about half of that.

The way the system is acting at the moment provides signals to the investor community. I think there is a cost in the fact that the signals of inefficiency, of delays, or frustration, that's something that puts the investment community off. So just waiting and thinking that paying the emissions liabilities for the time is actually going to get us to a net zero just because our modelling says so is actually not the case. If we're putting all the investors away, because your regulatory and policy environment is not enabling, then your gap is going to be much larger.

**Ross Copland:** Great, that's been a super helpful summary. I think listeners should have a read of the report, digest the findings. They're pretty useful numbers. Certainly, when we think about the reform efforts that are going on, and policymakers are having to make these difficult trade-offs. It's really helpful. I think it's super insightful to know that this is the magnitude of change, it needs to be at least, you know, 50% faster in terms of the efficiency objective by 2028. And just knowing that there's actually 40% more stuff that needs to be consented. There's reconsenting, there's existing energy that will expire and have to be replaced. Really useful findings. Thank you so much for the work Corina and thank you for your time today.

**Corina Comendant:** Thank you. Thank you for talking to me.

**Narrator:** Thanks for listening to infrastructure for a better future.