

## **Proposed Otago Regional Policy Statement (Freshwater parts) - Summary of Evidence in Chief of Julia Marianne Kennedy, dated 28 June 2023.**

### *Introduction*

My name is Julia Kennedy and I am the Environmental Consents and Compliance Team Leader at Transpower NZ Ltd. I understand that my Evidence in Chief (EiC), dated 28 June 2023, has been read prior, and I am here today to present a summary of that evidence and to answer questions from the panel on the activities that are carried out on the National Grid, and its access.

The National Grid is nationally significant infrastructure. It is infrastructure that is critical to the livelihoods of New Zealanders and should be provided for in the pORPS, whether that is the maintenance, upgrading and operation of existing assets, or the creation of new assets (including access). In expansion of this, I refer to the EiC of Mr Roy Noble, who the panel heard from in the hearing for the non-freshwater parts of the pORPS. Mr Noble gave evidence that Transpower needs to respond to any increase in demand and subsequent generation, and that flexibility is required in terms of connections to the National Grid, given the linear nature of the infrastructure.

Mr Noble's evidence provided a description of National Grid assets in the Otago Region, of which there are many, and include substations, transmission lines, communications sites and access tracks. There are substations located at generation sites that are next to or within water bodies (e.g. Roxburgh and Clyde Substations), and transmission lines that span water bodies, with structures located near or within water bodies. An example of this is provided in Figure 1 (para 4.7) of my EiC which is a transmission tower located within Lake Onslow.

Transpower's submission, as explained in Ms McLeod's EiC, seeks appropriate recognition and consenting pathways proportionate to the importance of the National Grid. That is, provision of access to and activities to maintain and upgrade National Grid assets, as well as build new assets if so required, so that security of supply is not compromised, and that there is ability to respond to renewable electricity demand.

I will now go through some key points of my EiC which I thought would be useful to provide context to the reasons for Transpower's submissions and relief sought.

### *Activities*

I refer also to Mr Noble's EiC where there is a good explanation of the types of routine maintenance activities that need to be carried out on the National Grid and I consequently refer to my EiC, Para 4.10 which sets out the typical activities that Transpower undertakes in proximity to freshwater bodies to enable those grid activities. These activities are obviously not restricted to the Otago region, they are activities that need to be carried out anywhere on the National Grid where there are interactions with freshwater. I won't explain these activities in detail, but these typically are:

- Earthworks along transmission lines
- Earthworks at substations
- Disturbance of lakes and riverbeds
- Works within or near wetlands
- Diversions of waterbodies
- Discharges
- Emergency work

- Resilience work
- Vegetation control

The photos provided in my EiC (in the same Para 4.10) show some examples of transmission structures within waterbodies and demonstrates why some of the activities I have listed need to occur.

My EiC also refers to resilience work, of which investigations have more recently been forthcoming due to the effects of climate change becoming more apparent. Structures located in freshwater bodies, particularly those in braided rivers, are at risk of being compromised by higher river flows and more frequent flooding events. This has led to the failure of some structures, for example the collapsed tower shown in Figure 4 of my EiC, which was a tower in Canterbury's Rangitata River during a significant flood event in 2019.

Resilience investigations will look at alternative locations of structures, outside of beds of freshwater bodies and flood zones where practical, but this may create other issues, such as wider and taller structures (to cover greater spans) or cause more disruption removing existing structures and creating new access routes. Relocation of structures may also be constrained by special areas or features, such as Outstanding Natural Landscapes whereby new and taller structures would be tricky to consent (e.g. CML-FKN structure 122 as shown in Figure 5 in the Shotover River floodplain). In addition, structures that may be removed from a river bed may soon be relocated inside a floodplain due to the migratory nature of rivers. On this basis, Transpower needs to plan for scenarios that will see at risk structures remain within waterbodies, with potentially deeper foundations and structures, such as groynes, that divert the flow of water away from them to prevent scouring and failure.

#### *Access*

I will now discuss the necessity to have useable land access, where at all possible, to the National Grid. Having the ability to safely access all parts of transmission infrastructure is crucial. I have covered access in Para's 4.13 to 4.18 in my EiC but in summary, it is often activities involving access work that are located in or near freshwater. So, while structures themselves may not be located in waterbodies, the access to them might cross them, or be located next to them.

Earthworks to create or maintain access or the maintenance, replacement or construction of new waterway crossings such as bridges, culverts and fords are regular activities on the National Grid. With over 1,700 km of access tracks in the Otago region, this equates to approximately 25 bridges and over 200 culverts or fords that are currently recorded as being located along Transpower's accessways in the region. Most of these traverse private farmland. Transpower needs to have the ability to carry out work on these waterway crossing structures, and without any significant delay. This is especially important where alternative access, for example by helicopter, is not possible or would incur significant costs.

The Case Study presented in my EiC (at section 6) provides a good example of access work, along an existing access track, that is required within a freshwater system, being a stream and connected wetlands - some of which have been created due to unmaintained culverts along the accessway.

#### *Substation discharges*

My EiC briefly touched on the discharges from National Grid assets at Para 4.10 (f) and in particular I draw attention to Ms McLeod's EiC at Para 8.42 in relation to discharges from substation sites. Where possible, Transpower will consider connecting site discharges to reticulated systems. As Ms

McLeod describes in her experience on Transpower projects, there needs to be a reticulated system available to take these discharges, but in many locations a reticulated system is actually not present, such as at rurally sited substations.

However, Transpower supports continuous improvements and environmental performance and we will consider options to improve the manner in which discharges leave the site. For example, initiatives to discontinue discharges of stormwater and treated water from oil interceptor systems directly to surface water and to change this to a discharge via land soakage instead.

#### *Barriers and consequences*

I refer to section 5 of my EiC where I set out the barriers that are experienced where necessary work on the National Grid can be complicated by consenting requirements. While the NES-ETA provides for a large majority of work on existing transmission line assets, structures for waterway crossings, such as bridges and culverts (mostly on access ways), are not provided for and hence Transpower needs to rely on a permitted or consenting pathway through regional rules, or other relevant instruments, such as the NES-F.

Transpower's experience to date with the NES-F provisions has been variable. Regularly, the availability of wetland ecologists, culvert engineers and ecologists specialising in appropriate fish passage is not as immediate as may be required. Natural inland wetlands are not always mapped, nor will some even need to be. This makes it incredibly difficult when the timeframes to even get an ecologist to site to determine if a wetland is a wetland can be months. While I acknowledge that the pORPS won't change the activity status of the NES-F, a policy framework supportive of the requirements of the National Grid would be useful. Ms McLeod also explains this in her EiC (Para 4.3).

Finally, I wanted to elaborate on my EiC, that the consequences of Transpower not being able to carry out necessary work, whether that's on existing assets or creating new ones, would be problematic for ensuring the security of electricity supply and/or for being able to support and provide for renewable energy demand.