

**BEFORE THE COMMISSIONERS APPOINTED ON BEHALF OF THE  
OTAGO REGIONAL COUNCIL**

**UNDER** The Resource Management Act 1991  
(the **Act** or **RMA**)

**IN THE** of an original submission on the  
**MATTER** Proposed Regional Policy Statement  
for Otago 2021 (**PRPS**)

**BETWEEN** **OTAGO WATER RESOURCE USER  
GROUP**

**Submitter OS00235 and FS00235**

**FEDERATED FARMERS NZ INC**

**Submitter OS00239 and FS00239**

**DAIRY NZ**

**Submitter FS00601**

**AND** **OTAGO REGIONAL COUNCIL**

**Local Authority**

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**SUMMARY OF EVIDENCE OF MARIO ANDRES FERNANDEZ CADENA**  
**DATED 4 MAY 2023**

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## **Summary of evidence**

1. My name is Mario Fernandez. I am a Principal Economist at Dairy NZ. I refer to my experience as outlined in my evidence<sup>1</sup>.
2. My evidence focuses on the economic impact of the proposed RPS on dairy farmers in Otago.
3. I confirm that I have read the updated 'Code of conduct for expert witnesses' contained in the Environment Court Practice Note 2023 and agree to comply with this Code of Conduct.

## **The importance of the dairy sector to the Otago economy**

4. Dairy farming in Otago is an essential contributor to the national and regional economy, with 5.5% of the dairy cows in New Zealand.
5. The dairy industry in Otago provides employment opportunities four times higher than the national average, and in 2021, dairy related roles represented 13.5% and 8% of the total roles in the Clutha and Waitaki districts.
6. In the Clutha district, dairy farming held the top position for job creation from 2020 to 2021, being responsible for around 10% of the new roles<sup>2</sup>.

## **The method used for evaluation**

7. I use nitrogen loss reduction levels and various mitigations as an example of assessing the impact of the RPS and different transition timeframes on dairy farmers in Otago. I do this since the PRSP does not outline specifics to evaluate and to exemplify the value of setting long and flexible timeframes for dairy farmers and how that allows farmers to adapt their operations and minimise the costs.
8. Requirements from the pRSP to reduce nitrogen leaching from farms will impose mounting costs on top of the Essential Freshwater (EFW) package and the potential pricing of agricultural emissions in 2025.

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<sup>1</sup> At [5]-[7].

<sup>2</sup> At [14]-[16]

9. Appropriate timeframes to meet the reductions are required to allow farmers to accommodate their production plans and adopt new technologies and research-backed practices. Furthermore, it allows further investigations into the most cost-effective designs and features to achieve future reduction targets.
10. I tested two different timeframes combined with several mitigation actions and reduction targets in my assessment. The timeframes were set at 2040 (a stringent timeframe for compliance) and 2060 (a more flexible timeframe).

### **What does my modelling show?**

11. The uncertainty introduced by the PRPS adds layers of complexity that further complicate the production decisions of farmers.
12. The economic costs of the potential reduction levels are high, regardless of the timeframe or the practices adopted. Figure 2 in my evidence shows that some farms may accommodate the nitrogen leaching reductions into their production plans, but the vast majority of farms will report losses. Figure 2 also shows that the economic value of setting longer and more flexible timeframes relies on the intermediate lower reduction levels that allow farmers to prorate decision plans over a longer time horizon and minimise costs.
13. Nonetheless, at least a quarter of farms may shut down in the Otago region by 2040 due to the lack of cost-effective mitigation practices or technologies that generate cost savings while meeting any reduction level. Losses to the regional economy will be significant given the importance of dairy production in Otago.
14. Moreover, the permanent nature of the reduction levels, coupled with the lack of cost-effective mitigation practices and mechanisms to attenuate the PRPS shock, will only imply worsening economic impacts as time passes. Longer timeframes may not suffice to prevent a share of dairy farms from becoming non-viable.

15. Therefore, the staged and careful transition to achieving reduction targets in the long run is critical to preserving the viability of farms as well as the economic structure of the Otago region.