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# Submission by Water New Zealand

Company name: Water New Zealand

Contact person: John Pfahlert

Address: PO Box 1316

Region Wellington

Country New Zealand

Phone +64 0211509763

Email ceo@waternz.org.nz

Submitter type, pick one:

√ NGO

### 2050 target

1. If the Government sets a 2050 target now, which is the best target for New Zealand?

Pick one:

* **net zero carbon dioxide:** Reducing net carbon dioxide emissions to zero by 2050

√ **net zero long-lived gases and stabilised short-lived gases:** Long-lived gases to net zero by 2050, while also stabilising short-lived gases

* **net zero emissions:** Net zero emissions across all greenhouse gases by 2050.

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| **Optional comment**  The process of wastewater treatment generates fugitive emissions, principally composed of the long lived gases methane and nitrous oxide. While in some instances it will be possible to reduce fugitive emissions, reducing emissions altogether would prove impractical for New Zealand’s smaller wastewater treatment plants (in particular where oxidation ponds are used). |

1. Do you agree with the [considerations](#_What_the_Commission) we propose that the Government and the Climate Change Commission take into account when advising on and setting budgets?

Pick one:

√ yes

* no.

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| **Optional comment**  We do not object to the considerations proposed, however recommend the Climate Change Commission also consider any likely impacts on the environment that result from emissions reductions (over and above the climate change impacts). In the case of wastewater treatment plants emissions reductions may involve trade-offs between emissions and waterways protection.  Wastewater treatment systems need to treat all domestic and trade wastes to levels that allow them to be safely discharged to receiving environments without causing a nuisance or a risk to public health. This should always be at the top of the priority list for operating wastewater treatment plants.  Treatment plant design and operation involves trade-offs in terms of fugitive emissions, energy and final effluent quality. Energy intensive process routes such as high rate, or forced aeration systems use more electricity but produce a higher quality effluent and avoid methanogenic process routes. Low energy process methods such as passive pond systems use significantly less power but may produce lower quality effluent and use methanogenic process routes.  We note that such trade offs will become increasingly easier to manage as the electricity grid decarbonises. |

### Government response

1. What are the most important issues for the Government to consider in setting plans to meet budgets? For example, who do we need to work with, what else needs to be considered?

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| **Comment**  The water sector is an important stakeholder in both climate change mitigation and adaptation efforts.  Water New Zealand represents technical professionals and organisations with broad ranging operational and technical expertise in drinking water, wastewater and storm water infrastructure. Input from industry professionals is needed to assist the government assess the technical feasibility and operational realities that will be faced in implementing emissions reduction opportunities related to the water sector. |

1. The Government has proposed that Climate Change Commissioners need to have a range of [essential and desirable expertise](#_What_expertise_cshould). Do you agree with the proposed expertise?

Pick one:

√ yes

* no.

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| **Optional comment**  We strongly support the inclusion of the following two items of essential expertise on the committee;   * engineering and infrastructure * experience with addressing adaptation challenges like planning, insurance and local government |

### Adapting to the impacts of climate change

1. The Government has proposed a number of new [functions](#_Creating_the_right) to help us adapt to climate change. Do you agree with the proposed functions?

Pick one:

√ yes

* no.

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| **Optional comment**  A national risk assessment and adaptation plan would assist in creating the joined up thinking the water sector needs to confront is adaption challenges. The water sector faces a number of climate change adaptation challenges.  Under the current status quo, an absence of central leadership means the majority of water suppliers are currently addressing climate change adaption challenges in isolation from each other and related sectors. |

1. Should we explore setting up a targeted adaptation reporting power that could see some organisations share information on their exposure to climate change risks?

Pick one:

* yes

√ no.

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| **Optional comment**  While this may have benefits in the future, the water sector does not currently have the guidance or expertise to understand and report on adaptation risks in a nationally consistent fashion. These gaps need to be addressed before consideration is given to mandating climate change adaptation reporting. |