



the architectural centre inc.
PO Box 24178 Wellington

13 February 2017

Sustainable Transport Committee
Greater Wellington Regional Council
P.O. Box 11646
Wellington 6142

Dear Members of the Sustainable Transport Committee

Re: Retention of Electric Trolley Buses

We understand that there will be a presentation opposing the replacement of electric trolley buses with diesel buses at tomorrow's Committee meeting (14 February). While we are not a party to this presentation we would like to express our continued opposition to the proposed replacement of trolley buses with what we see as a retrograde step in our collective aim to improve the sustainability of our public transport network. We have previously expressed these views in our submissions on the: Draft Wellington Regional Public Transport Plan (9 May 2014); Draft Wellington Urban Growth Plan (9 October 2014); and the Draft Regional Land Transport Plan 2015 (20 February 2015).

We make the following comments:

1. Under the Resource Management Act, regional councils are required to implement objectives, policies and methods to achieve integrated management of the natural and physical resources of the region. The *Regional Policy Statement* (RPS) is a key document in this regard. Objective 9 and Policy 9 are highly relevant in terms of the council's objectives in relation to achieving sustainable transport. They are as follows:

*Objective 9: The region's energy needs are met in ways that: ... (e) **reduce greenhouse gas emissions from transportation** (RPS p. 36)*

*Policy 9: **Reducing the use and consumption of non-renewable transport fuels and carbon dioxide emissions from transportation***

The Wellington Regional Land Transport Strategy shall include objectives and policies that promote a reduction in:

- (a) the consumption of non-renewable transport fuels; and*
- (b) the emission of carbon dioxide from transportation. (RPS p. 96)*

2. The proposal to replace electric trolley buses with hybrid (diesel-electric) buses contravenes the *Regional Policy Statement*.
3. The proposal increases CO₂ emissions in the following ways:
 - (a) changing from trolley buses to diesel buses will produce an increase in carbon dioxide emissions, as will changing to a hybrid (diesel-electric) fleet. Relevant figures are:
 - i. diesel urban bus: 0.2kg CO₂/passenger-km (US data)

- ii. electricity powered trolley bus: 0.03kg CO₂/passenger-km
 - iii. renewable electricity-powered trolley bus: 0kg CO₂/passenger-km¹
- (b) the proposal will waste embodied energy by pre-maturely discarding buses which we understand have a remaining service life of about 20 years.
- (c) battery-run vehicles are less efficient users of electricity than trolley buses, which use power directly from the mains:
- i. because charging and discharging batteries results in a loss of efficiency, and
 - ii. because of the need to recycle and dispose of batteries
4. We are equally concerned regarding the demolition of the existing overhead distribution network that will occur if the proposal is implemented. Removing such sustainable energy infrastructure is short-sighted, and will reduce the city's future resilience.
5. Domestic transport produces 46.7% of all energy sector emissions (2015).² This is a vitally important sector to reform if we are to make the urgent changes needed to mitigate the impacts of climate change. We cannot be complacent, and we certainly must not revert to greater reliance on fossil-fuels.
6. As members of the Sustainable Transport Committee, your job is to lead the charge to a zero-carbon Wellington. We strongly support you fulfilling this mandate.

Thank you for this opportunity to reiterate our strong opposition to the proposal to replace the electric trolley buses. If you have any questions please do not hesitate to contact me.

Yours faithfully



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¹ Calculations are derived from MJ/passenger kilometres multiplied by carbon intensity figures for the relevant energy sources.

² MBIE "Energy sector greenhouse gas emissions" (2015) [Annual emissions data table]
<http://www.mbie.govt.nz/info-services/sectors-industries/energy/energy-data-modelling/statistics/greenhouse-gas-emissions/?searchterm=greenhouse%20gas%20emission%2A>