# Should Councils measure road network CO2?

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| Think Piece Paper  2. Leading Change |

Abley recently undertook work for a Queenstown Lakes District Council who wanted to find out the amount of carbon emissions generated by vehicles travelling on their entire road network in the past year. They also asked for these emissions to be projected annually up to 2048.

Using data on Vehicle Kilometres Travelled (VKT) extracted from their traffic model alongside Ministry of Transport (MoT) fleet data and Ministry for the Environment (MfE) emission factors, we were able to model the impact of increasing VKT as well as changes in the fleet composition, with the increasing share of electric and hybrid vehicles forecasting a reduction in overall emissions over time.

We estimated that road transport emissions in the district would peak in 2029/2030 under a base scenario, an important data point for Council’s climate mitigation policies. In the short term, reducing the number of VKT, i.e. less driving, would be the most effective action to reduce emissions, whereas in the longer term a large share of cleaner vehicles can also drive the reduction.

We provided the data in a format that Queenstown Lakes District Council’s emissions team could combine in their emissions reduction model alongside other emission sources. The outputs can also directly be used for monetisation of carbon equivalent emissions in the context of business cases or carbon offsetting initiatives. For example, knowing that a tonne of carbon generally costs between NZD20 and NZD40, a monetary value can be assigned to a reduction of emissions on the road network.

So should all Road Controlling Authorities (RCA) calculate emissions on their road network? Are traffic models the best data to base emissions forecasts on? Can we really expect evidence-based decisions on climate policies without this crucial information? Finally, where does an RCA’s responsibility for emissions stop and where does individual responsibility (the driver’s) kick in?