

Project 1:

Project Brief

As a party to the Paris Agreement Australia will target a reduction in Greenhouse Gas (GHG) emissions of 26 to 28% on 2005 levels by 2030.¹ Transportation represents a significant contribution to GHG emissions at 96 MtCO₂e or 17% of Australia's total emissions with light vehicles accounting for approximately 50% of that.^{2,3} Unlike most developed nations Australia does not currently have GHG emission standards for vehicles despite this being an important contributor to meeting our Paris Agreement targets. With the transportation sector growth of more than 60% since 1990 this represents a significant risk in our capacity to meet our Paris Agreement obligations.¹

It has been proposed that Australia should adopt more stringent emission targets on all new vehicles to bring us in-line with European and US targets of 105 g CO₂e per km by 2025.³ Over recent years the average emissions achieved by Australian cars has plateaued at approximately 180 g CO₂e per Km, even though selection of "best in class" vehicles would dramatically reduce this figure as well as their fuel related running costs.⁴

Whilst there are many theoretically feasible solutions to reducing tailpipe derived GHG emissions (propulsion type, drive train, light weighting, fuels, duty cycle, tyre technologies, etc) these are complicated by user preference, cost and other market forces including infrastructure for plug-in-electric, grid stability and production mix.⁵ New innovations in ownership, ride sharing along with cycling infrastructure will play a part in lowering our transportation related emissions. Future developments and investments in the public transport sector are planned and needed, but the COVID-19 pandemic has seen dramatically reduced computer numbers and confidence in selecting this option which could catalyse a renewed reliance on light vehicles for transport.

Clearly new technology and innovations that reduce light vehicle emissions are required and will play an important contribution to Australia achieving its Paris Agreement obligations and tackling the threat of climate change as a result of global warming.

Attached References 1 - 6

¹ 2017 Review of Climate Change Policies, Commonwealth of Australia, 2017

² Climate Council Fact Sheet, Transport Emissions: Driving Down Car Pollution in Cities, 2017

³ Light Vehicle Emission Standards for Australia, Research Report, Climate Change Authority, Commonwealth of Australia, 2014

⁴ Carbon Dioxide Emissions Intensity for New Australian Light Vehicles 2019, National Transport Commission, June 2020.

⁵ Clean, green machines: the truth about electric vehicle emissions, The Conversation, September 5, 2019