Energy Efficiency Research Hub | Project Factsheet

Improving Fuel Efficiency in New South Wales Road Transport Sector

Road transport contributes to 85% of New South Wales's transport sector greenhouse gas emissions

Greenhouse gas emissions have declined across most sectors in NSW, except transport, which contributes to 18.9% of greenhouse gas emissions and is growing at a concerning average annual rate of 1.4% since 1990.

Transport emissions from cars, light commercial vehicles, buses, rigid and articulated trucks, and motorcycles account for 84% of the total transport emissions.

By 2030, transport emissions in Australia are projected to increase to 29% above 2005 levels. Moreover, until 2050 energy consumption by transport sector is projected to grow at a rate of 1.3% per annum.

Improvements in vehicle fuel efficiency has the potential to act as a significant mitigation strategy. A 30% improvement in car fuel efficiency and an 18% reduction in freight vehicle fuel efficiency would result in more than 1/3rd of the 2050 reductions target of 80%.

Considering the NSW's Future Transport 2056 strategy, along with improvements in fuel efficiency of on-road vehicles, the following strategies seem to complement the NSW government's objective of achieving net-zero emissions by 2050:

- Alternative fuel sources including biofuels, ethanol, hydrogen, CNG and LNG
- Mode shift to public and active transport options
- Adoption of alternative low emission or hybrid/electric vehicles
- Eco-driving practices and techniques to save fuel

The impact of action

Improvement in fuel efficiency on-road vehicles will offer economic benefits to consumer and producer, and, health and environmental benefits as a result of reduced emissions. Through this, NSW will also benefit in meeting its objective of net-zero emissions.

NSW GOVERNMENT

LOW CARBON LIVING CRC

Coordinated by the CRC for Low Carbon Living, the NSW Energy Efficiency Decision Making Node is part of the Energy Efficiency Research Hub. The Node is a research collaboration between CSIRO and the Universities of Wollongong and UNSW. With a track record of high-quality, rigorous and end-user driven research, it is delivering research outcomes to help reduce greenhouse gases and improve energy efficiency. Key research areas are:

- Energy efficiency investment decisions
- Efficient products, technologies and services
- Practical and achievable energy-saving actions

FURTHER INFORMATION

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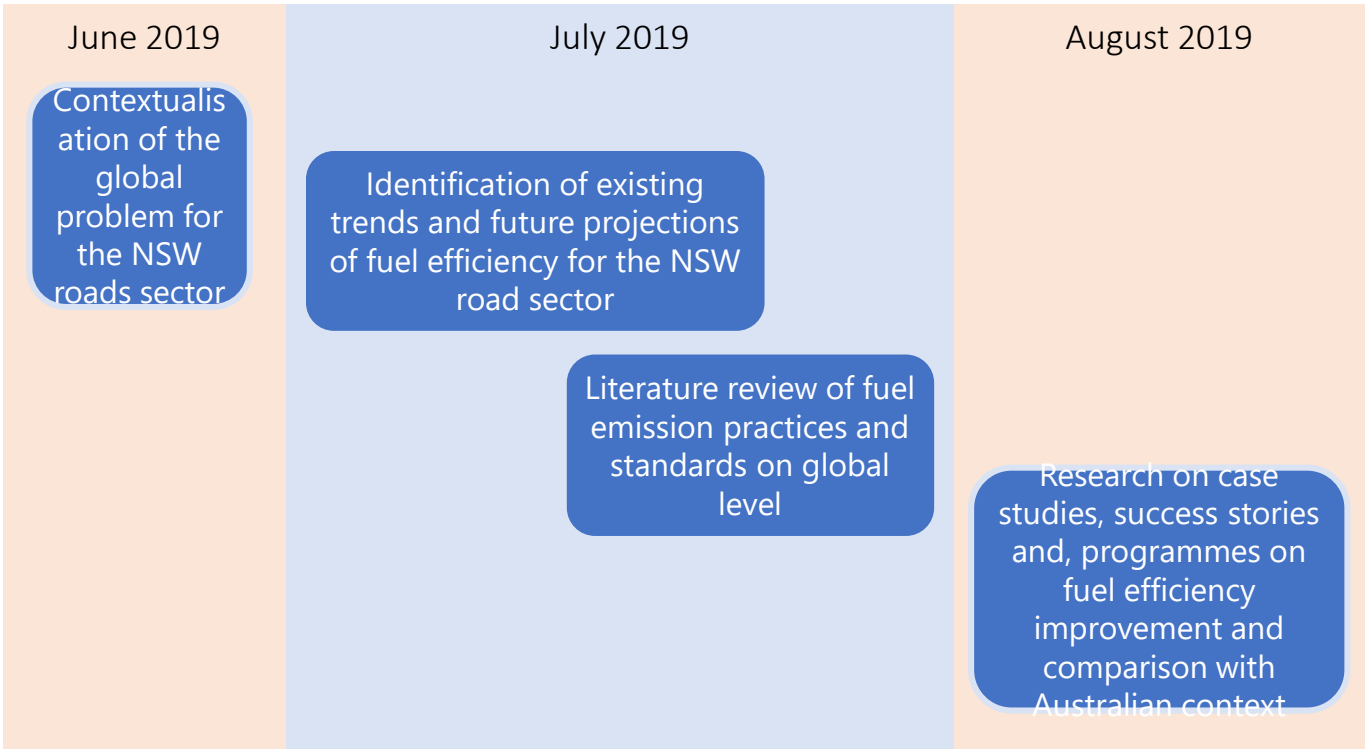
Research outcomes

Our research will deliver an understanding of:

- The existing trends and future projections of fuel efficiency and fuel emissions pertaining to NSW road network.
- The past and present global standard practices and guidelines on fuel efficiency and road transport.
- Case studies and campaigns focused on improvement of fuel efficiency and greenhouse gas emissions mitigation strategies.
- Viable policies and direction for NSW regarding fuel efficiency standards.

Steps



What excites us

Fuel efficiency is expected to improve as a result of increased uptake of electric vehicles and the advancement in production of alternative fuels from renewable resources. Eco-driving practices and modal shift towards public and active transport in the recent years will also play a key role in reducing emissions. NSW can implement policies based on these mitigation strategies to meet their Paris Agreement targets and net-zero emissions by 2050.