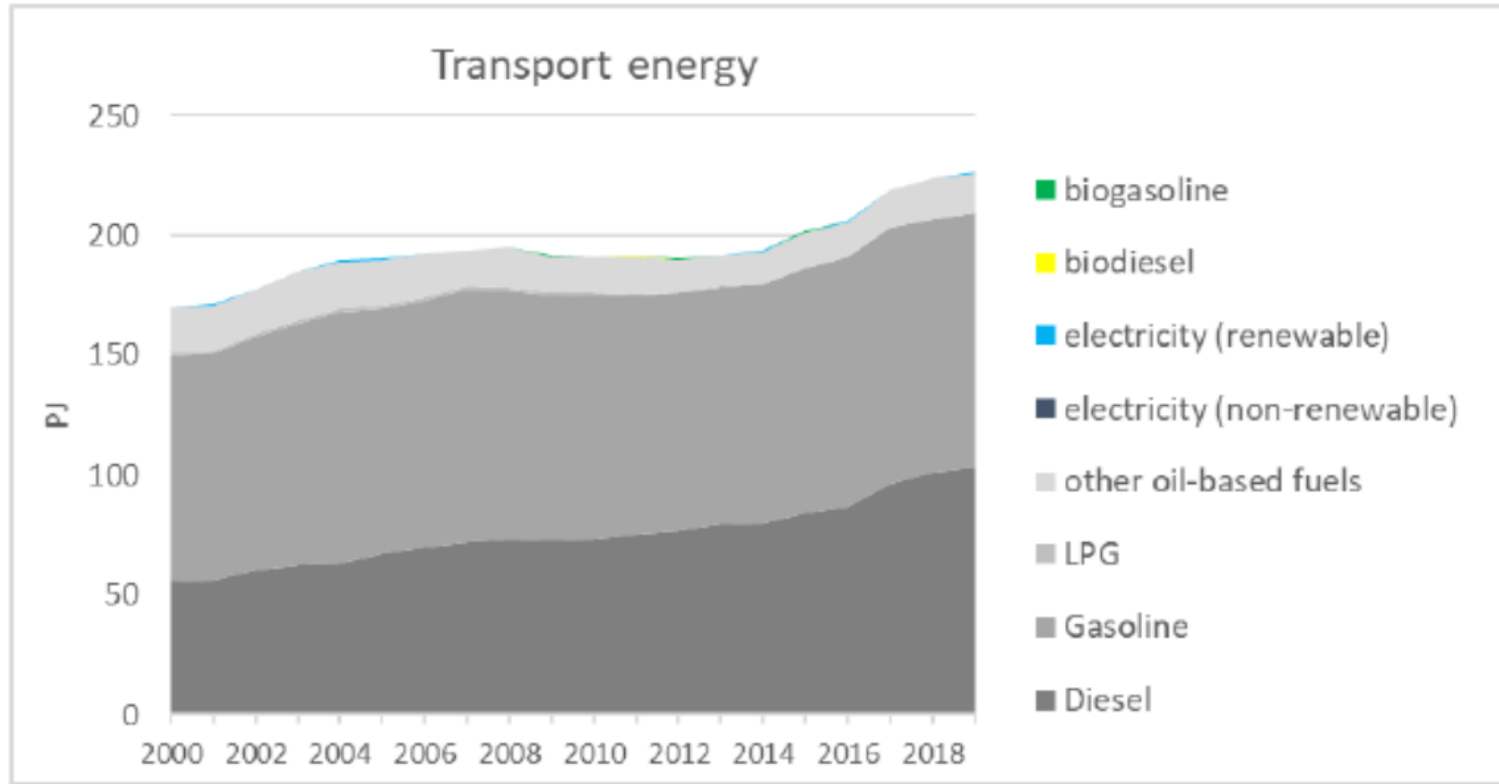


New Zealand

Paul Bennett
September 2022



Liquid Biofuel Status and History



8.5 Billion litres fuel used

Ethanol

- blending by one company into 98 RON fuel
- 3 Million litres from whey and some imports (Australia)

Biodiesel

- 0.5 million litres from UCO (closed)
- 20 million litres from tallow (closed)

Biofuels Research/Developments

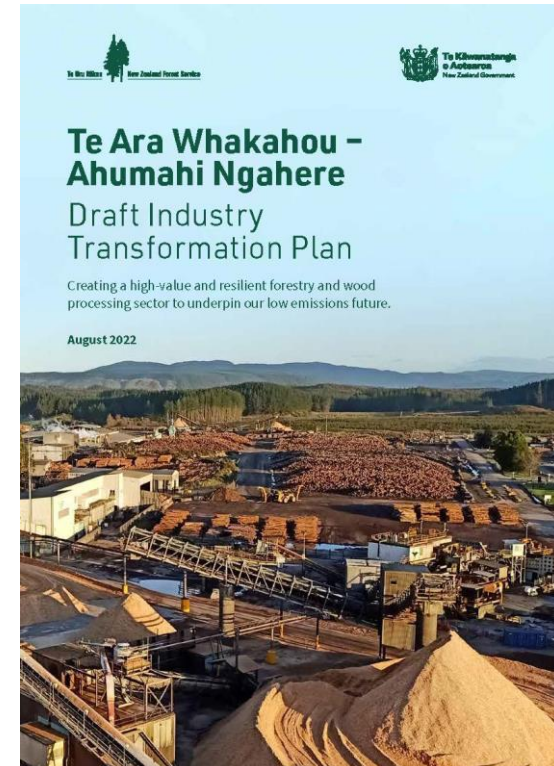
2018

- Biofuels in New Zealand would be derived from woody biomass
 - Residues/Wastes
 - 2nd generation biofuels
 - Dedicated plantations (SRF)
 - Focus on hard to decarbonise sectors



2022

- 4 value creation routes proposed – 3 were bioenergy related
- Gov't Budget
 - \$91 million for SRF research and demonstration
 - \$73 million for advanced wood processing



Sustainable Biofuel Obligation (Domestic Ground-based)

Sustainable Biofuels Obligation

- Implementation planned 1st April 2023
- Still not enacted
- Focused on CO2 emissions benefit targets
- Sustainability criteria (RSB and ISCC)
- But also, Sustainable forest management in New Zealand (FSC and PEFC)
- Will start with imports (renewable diesel), but Gov't trying to encourage domestic production
- 2023-2025 Targets, 2026+ provisional targets
- Penalty \$800/teCO2 reduction not achieved

Year	%CO2 reduction target
2023	1.2
2024	2.4
2025	3.5
2026	3.8
2027	4.1
2028	4.4
2029	4.7
2030	5.0
2031	5.8
2032	6.6
2033	7.4
2034	8.2
2035	9.0

International Biofuels

Aviation

- Separate Mandate/Obligation being developed for SAF
- Closed RFP led by Air NZ/MBIE.
 - 4 projects to FEL1
 - Downselect to one project
- Sustainable Aviation Aotearoa Council
 - Ministry of Transport to lead

>80% aviation CO2 emissions come from medium and long haul flights in NZ

Marine

- Greening New Zealand coastal shipping
- New Interisland ferries will be battery/gasoil hybrids from 2023/24
- Ports of Auckland investing H2 for dockside transport – but interest in biofuels
- Concern from shipping operators, ports and produce exporters
- No legislation yet

Product import /export account for 54% of national GDP

Also, \$2 million biorefinery project at Paper Mill supported by Gov't

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Prosperity from trees *Mai i te ngahere oranga*

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