Submission for Climate Change Contribution Consultation

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Electric Cars to Displace Petrol Cars

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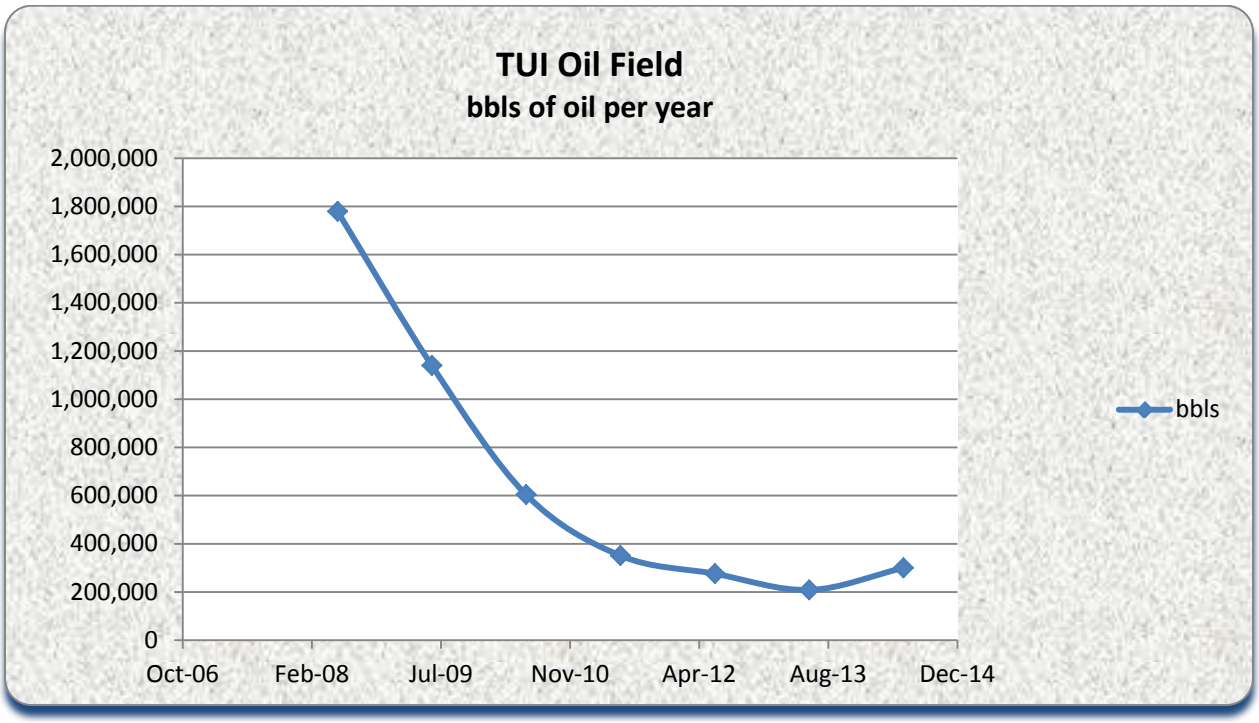
Electric Cars to offset Carbon emissions: ***Great for NZ Great for the world!!!!***

One of the biggest environmental challenges in our lifetime is renewable transport fuel: This challenge has been solved!!! We only need the people and the government to embrace and adopt this technology. Renewable transportation fuel is here today, electric cars coupled to an 80% renewable NZ electricity grid which is getting greener every year. For example Northpower's Wairua Falls 5 MW Run of the River Hydro power station, generates enough electricity to drive an electric car to the moon every day, yes 385,000 km every day for the last 100 years, and for the next 100 years. That is sustainable transportation fuel!!!! Wairua Falls is one of the smallest hydro stations in New Zealand and has been in operation since 1916. In contrast, the Tui Oil Field has been in decline since production started in 2008. This is typical of oil fields production.



Source, New Zealand Oil and Gas

New Zealand is a perfect fit for Electric Cars:

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1. NZ imports 6 to 8 billion dollars of petroleum each year.
2. NZ generates all its own electricity - keep your transportation dollars local
3. Huge positive effect on the balance of payments (Keeping more money in NZ)
4. World Class reliable electricity network
5. Approximately 80% renewable electricity generation
6. More renewable electricity to bring on line.
7. NZ only has one major highway (so very few charging stations) - not like Europe, N .America or Australia, where you need 50,000 + charging stations… we only need 100 to 200.
8. The cost of a fast charger = $23,000, compared to a gas station for millions
9. Any standard 10 amp plug can charge any Electric Car
10. Not many NZ households have petroleum plumbed to their house.
11. Typically short commute distances, compared to other countries.
12. Converting all NZ passenger cars to electricity would require 8% increase in electricity usage. Most of that is spare capacity at night.
13. There is a large electrical component in every litre of refined oil. One litre of Petrol requires 1 to 2 kW of electricity input to refine crude oil into a finished product. (Electrical pumps, electrical heaters etc.) [1]
14. Once refined you still need to burn it in your car. 1 litre = 13 km average
15. In contrast, 1 to 2 kW of electricity will power an electric car between 7 and 14 km.
16. Marsden Pt consumes 37 MW base load = all of Northlands electricity combined.
17. By utilizing the grid more, especially at night, electric cars have the ability to reduce electricity prices. More volume = lower prices.
18. There is a fixed cost to maintain the electricity network, by electrifying transport you can lower prices. Higher utilization.
19. In Whangarei over the past year, 33 electric cars have collectively traveled 491,000 km, saving $48,000 and 80,000 kg of CO_2.
20. Sustainable Transport Fuel is here today. We can make a positive change, good for the pocket book and the environment.
21. Capital Cost is in the low 20K for a Japanese import Nissan LEAF with low km, 15,000 km or less typically, in like new condition.
22. The 3rd World will benefit from electric cars, increasingly they can generate renewable electricity and offset oil that is controlled by a small number of mega-multi- national-tax dodging corporations and oil Cartels. All the money these Islands spend to buy oil goes offshore. (this is true for NZ as well)

1. **Jacob Ward,** Program Analyst/PMF Vehicle Technologies Program Office of Energy Efficiency and Renewable Energy U.S. Department of Energy