



**MINISTRY OF BUSINESS,
INNOVATION & EMPLOYMENT**
HIKINA WHAKATUTUKI

Renewable energy in New Zealand ニュージーランドの再生可能エネルギー事情

Presentation for International Symposium on Renewable Energy 2015

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Outline 本日の発表内容

- Basic approach to renewable energy
再生可能エネルギーに対する政府の基本方針
- NZ's current renewable energy profile
国内の再エネ事情
- Future options
今後のオプション
- NZ Energy Strategy
国のエネルギー戦略



Government approach to renewable energy

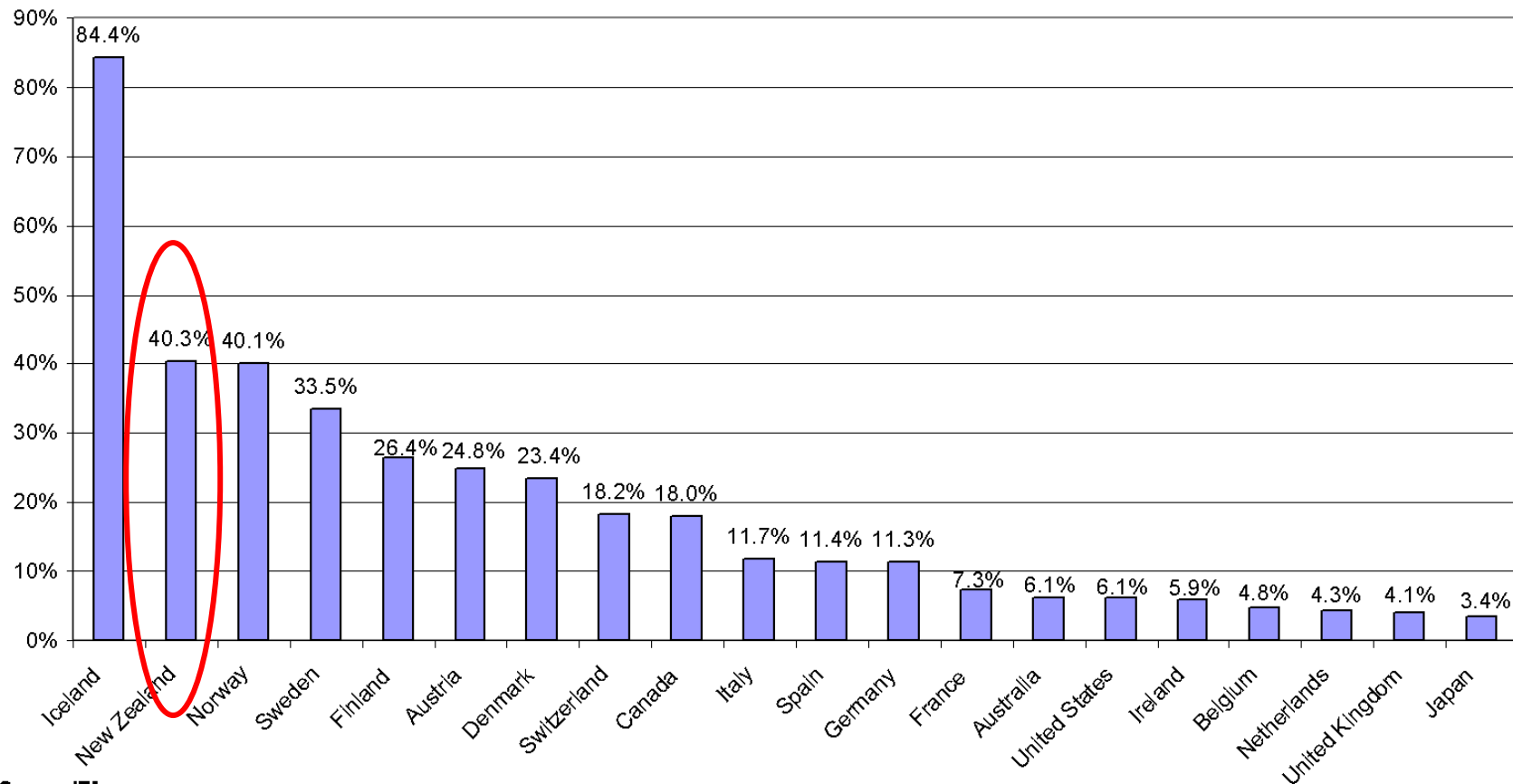
再生可能エネルギーに対する政府の方針

- Market/industry-led 市場・業界主導
- Ensuring there are no unnecessary regulatory barriers, while managing environmental and sustainability issues (e.g. through Resource Management Act)
不必要な規制障壁を取り払い、資源管理法等を通じて環境保護とサステナビリティを確保
- Investing in scientific research and facilitates market development (e.g. wood energy) 科学研究に投資、市場開拓を促進
- Direct financial incentives such as feed-in tariffs not considered necessary (since renewables currently cost-competitive)
国内の再エネにはコスト競争力あり、固定価格買取制度等は導入せず
- Emissions Trading Scheme to introduce global price of carbon in key sectors
排出量取引制度を主要セクターに導入



New Zealand's TPES is 40% renewable now

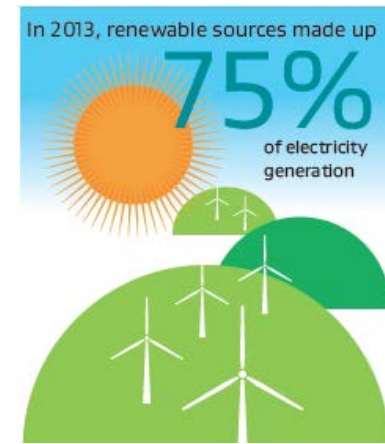
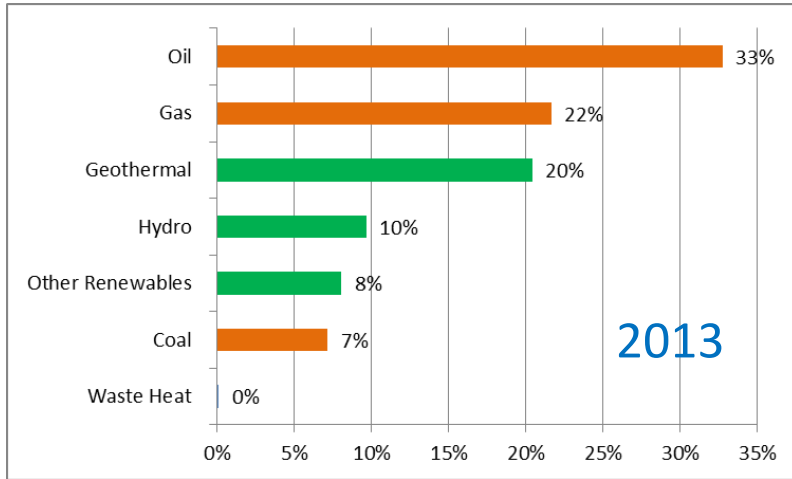
再エネは、第一次エネルギー源の40%を占める



Source: IEA

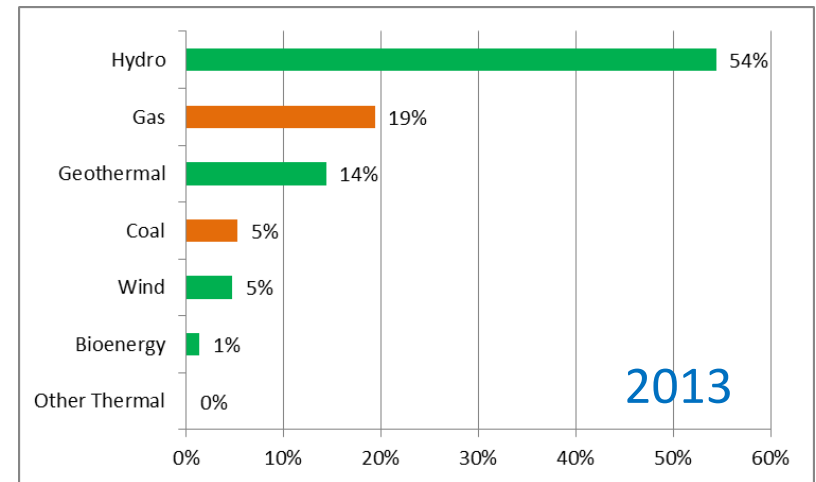
Renewables comprise almost 40% of total primary energy supply...

第一次エネルギー源の40%



...and around three-quarters of electricity generation

電力供給の約75%

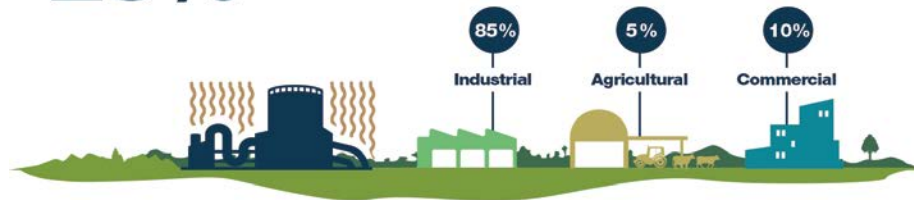


Current energy use by sector セクター別 エネルギー消費割合

26% Electricity



28% Process Heat



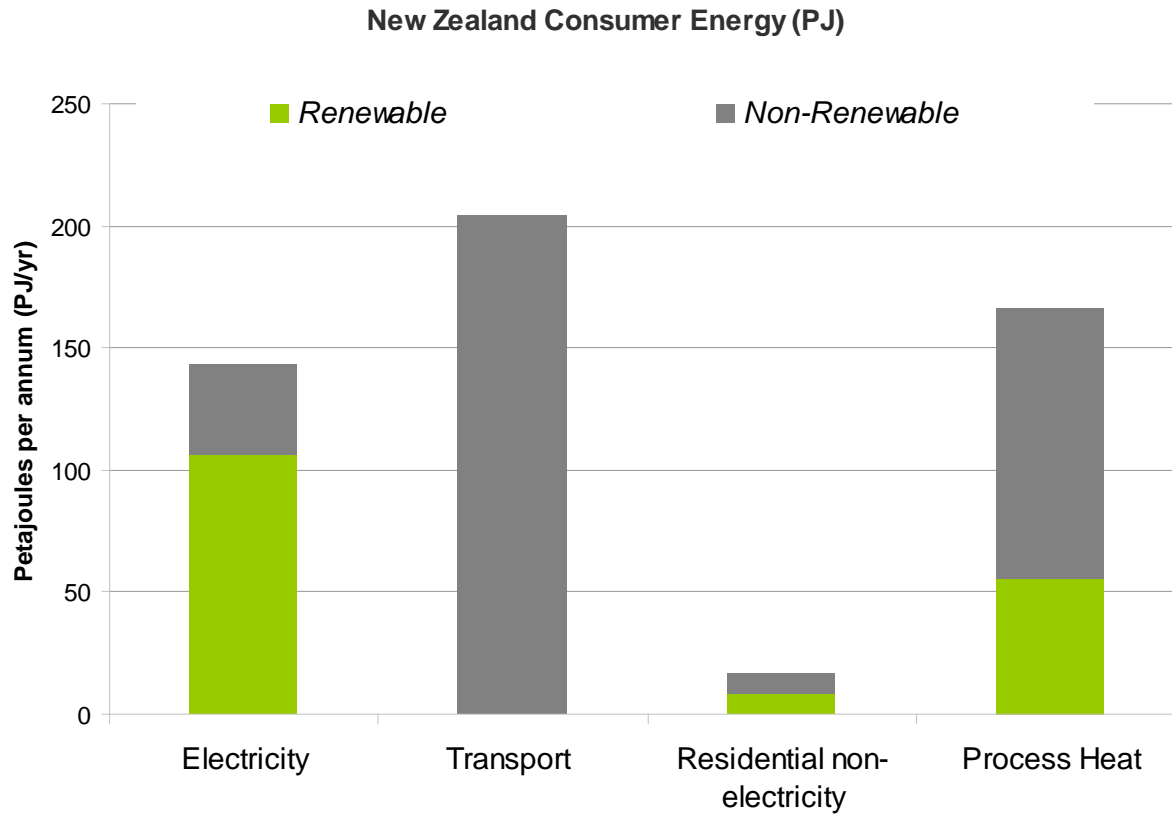
38% Transport Fuels



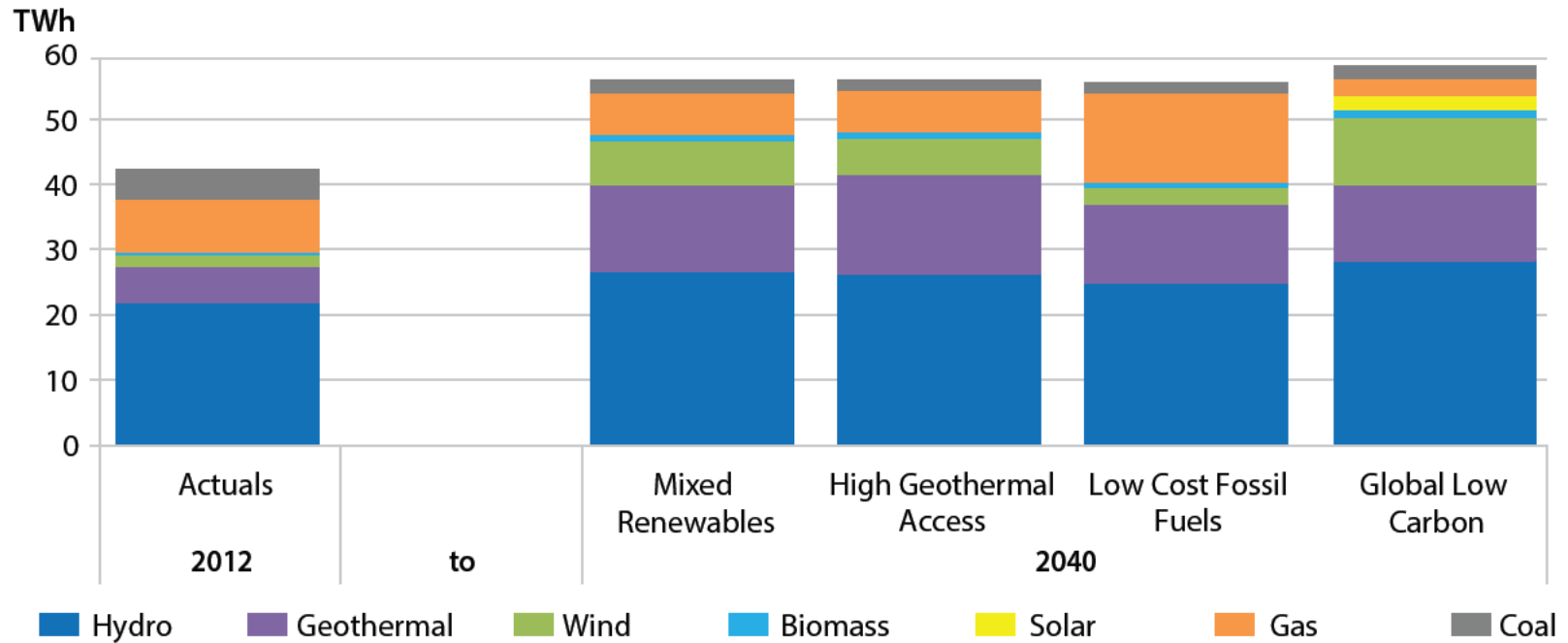
8% Other

Includes some business transport and non-electric residential.

Current renewable energy by sector セクター別 再生可能エネルギー利用量



NZs Future electricity supply? これからのエネルギー供給



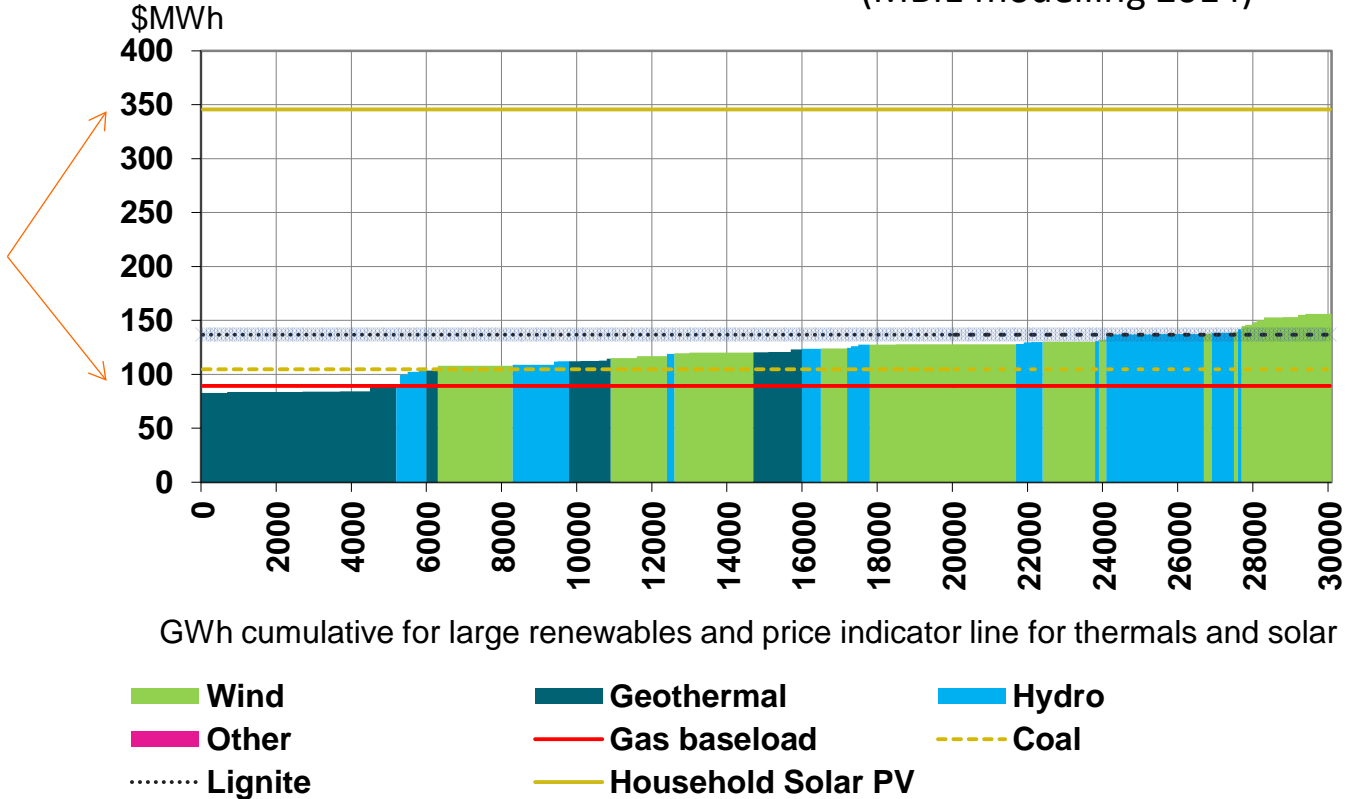
- More geothermal resources?
- New, large, gas find in NZ?
- Significant increase in wind energy if costs fall?
- What about distributed generation such as solar photovoltaic (PV) panels?

New technology e.g. Solar PV is still a relatively expensive option compared to generation alternatives ...

NZの太陽光発電は新技術のなかでも依然として割高...

Long run marginal cost of new electricity generation options in NZ
(MBIE modelling 2014)

LRMC of solar PV is currently 3-4 times that of the cheapest alternative (geothermal)



Source: MBIE

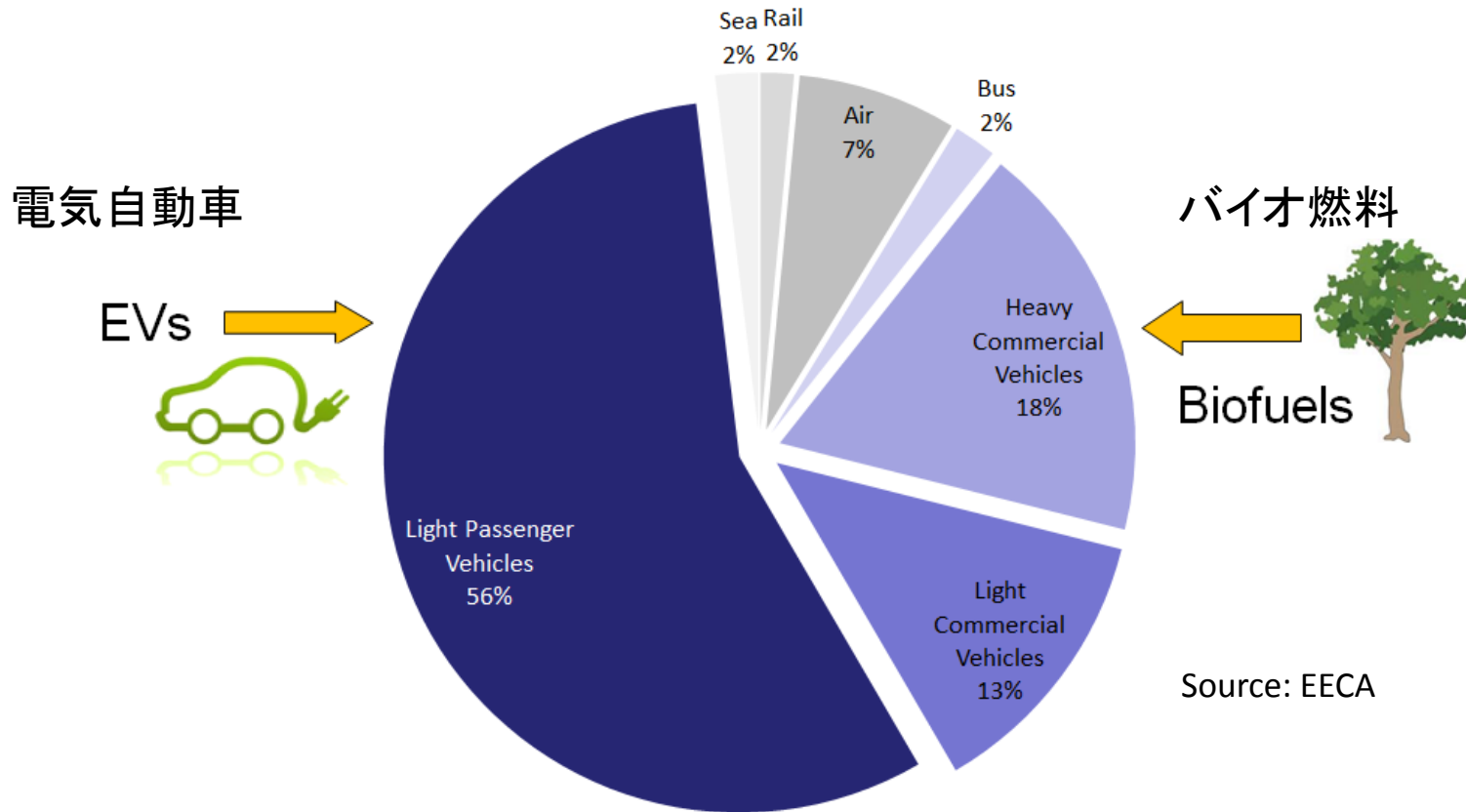
Renewable generation – progress

再エネ導入の進捗

- Renewable electricity generation in the June 2014 quarter was 78.5% up from 68.1% in June 2013, largely due to a new geothermal plant operating at full capacity
- Thermal generation was down 33% and greenhouse gas emissions from electricity generation are down 32% over the same time
- Total electricity demand is currently falling, and this is the main limitation to building additional new renewable generation at the moment
- There are sufficient consented renewable generation projects to meet all demand growth to 2035
- Renewable electricity generation is not subsidised in New Zealand but fossil generation is subject to the Emissions Trading Scheme (a price on carbon)
- Geothermal energy currently appears to be the cheapest new baseload generation technology in New Zealand, at around 9 c/kWh, followed by wind and then natural gas (MBIE 2013)
- There is a target for 90% renewable electricity generation by 2025 (New Zealand Energy Strategy)

Renewable transport fuels 再生輸送燃料

Transport is biggest area of potential increase in renewables for New Zealand



What role could hydrogen play by 2030, by 2050 ?

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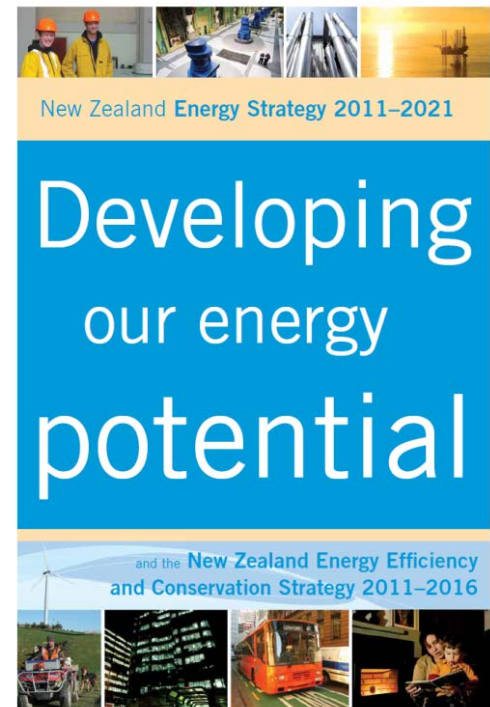
2030~50年には、水素はどんな役割を果たしているのでしょうか？

And for those wanting more detail....

詳細情報はこちら

New Zealand Energy Strategy 2011-2021 ニュージーランド エネルギー戦略

- Sets the strategic direction for the energy sector and the role energy will play in the New Zealand economy over the period 2011-2021
- **Goal:** for New Zealand to make the most of its abundant energy potential for the benefit of all New Zealanders
- Companion to New Zealand Energy Efficiency and Conservation Strategy 2011-2016



www.med.govt.nz/sectors-industries/energy/strategies

Thank you!
ご清聴ありがとうございました

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