



## NEW ZEALAND

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## INTRODUCTION AND BACKGROUND

The Ministry of Business, Innovation and Employment (MBIE) administers New Zealand's contract with the IEA HIA. New Zealand joined the HIA in 2005 when the New Zealand Council for Sustainable Business Development was the contracting Party. This role was subsequently fulfilled firstly by Solid Energy Limited, and then in 2014 by Unitec Institute of Technology.

Government funding for advanced energy technology-related projects is predominantly available through MBIE and Callaghan Innovation (CI). CI is a government agency that aims to connect businesses with research organizations. CI operates its own research and technology laboratories within a Research and Technical Services group to assist in commercializing emerging technologies and accelerate innovation within New Zealand businesses.

Hydrogen-related research has been undertaken in New Zealand since 2002 with funding averaging about US\$750k per year thru 2012. The focus of research during that period has included oxygen blown fluidized bed co-gasification of lignite coal and biomass for co-production of syngas and hydrogen; more efficient low-cost separation membranes for hydrogen purification; reliable low-cost alkaline based electrolyzer using potassium hydroxide electrolyte; and UniSyD techno-economic energy systems modelling software.

## UPDATE ON MEMBER'S ENERGY FRAMEWORK

### UPDATE ON RELEVANT POLICIES

The New Zealand Energy Strategy 2011–2021 sets key targets of 90 percent of electricity generated from renewable resources by 2025 and a 50 percent reduction in greenhouse gas (GHG) emissions from 1990 levels by 2050. The 2020 target for GHG emissions reductions agreed under the UN Framework Convention for Climate Change is 5% below 1990 levels [1].

New Zealand has a partial-coverage free allocation emissions trading scheme. The scheme covers forestry (a net sink), energy (43.4% of total 2010 emissions), industry (6.7% of total 2010 emissions) and waste (2.8% of total 2010 emissions) but not pastoral agriculture (47% of 2010 total emissions) [2]. Participants in the scheme must surrender one emission unit (either an international 'Kyoto' unit or a New Zealand-issued unit) for every two tonnes of carbon dioxide equivalent emissions reported or they may choose to buy NZ units from the government at a fixed price of US\$19 assuming 1NZ\$ = US\$0.75 [3].

## VITAL STATISTICS

### Population

4.471 million (2013) Statistics New Zealand

[www.stats.govt.nz/census/2013-census](http://www.stats.govt.nz/census/2013-census)

### Territory

268,021 km<sup>2</sup>

### Capital

Wellington

### GDP/capita

41,555.83 USD (2013)

### Average Annual GDP Growth

3.2% (1<sup>st</sup> Quarter 2015)

1.4% (2011)

2.5% (2012)

2.2% (2013)

2.8% (2014)

### Primary Energy Structure

See data charts at the end of this report









