MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HIKINA WHAKATUTUKI

New Zealand report to CEM H2 advisory group July 2020

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Apologies for not being on line in person

- But 14:00 to 16:30 CEST is midnight to 0:230 am NZDT

Context: High level New Zealand Policies

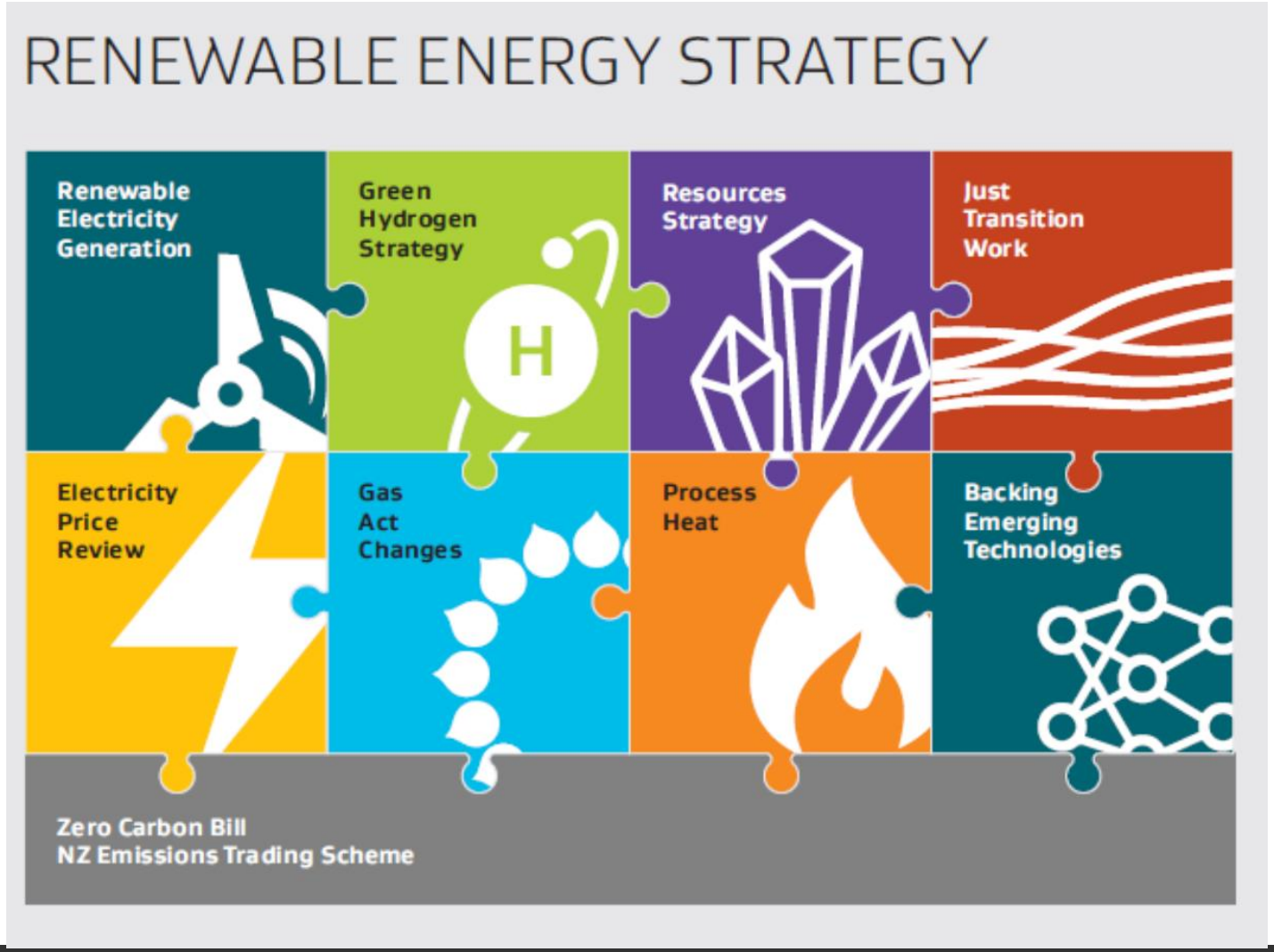
New Zealand's government has committed to :

1. **Renewable Electricity**
   - 100 per cent renewable electricity by 2035 (in a normal hydrological year).

2. **Emissions**
   - Net zero emissions by 2050.

COVID-19 Response has added an additional concern to our energy policy. However, these policies remain important in the assessment oof any post-COVID recovery investment.

Hydrogen is a key part of the NZ Govt's energy strategy



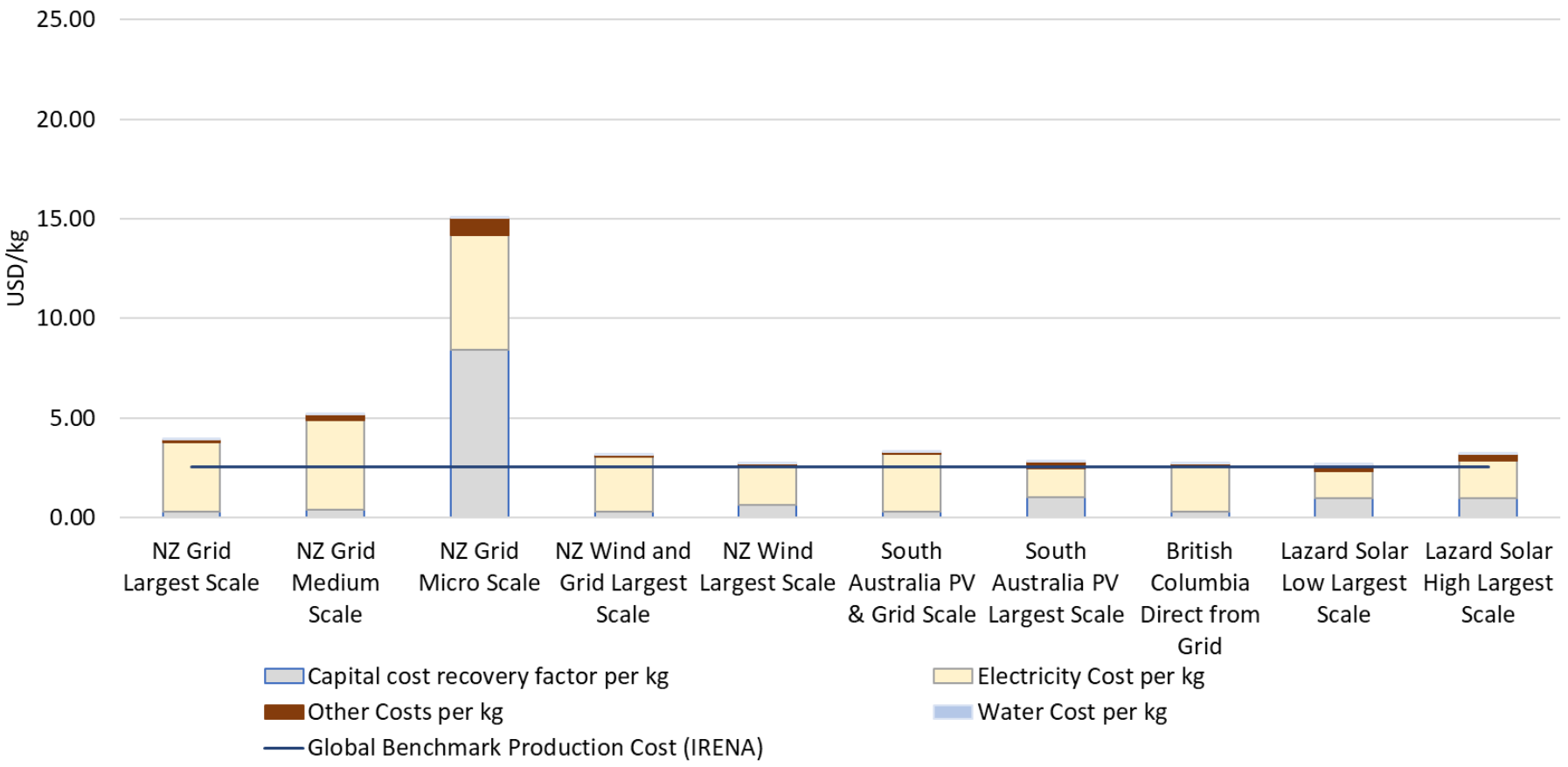
Our vision

To harness the hydrogen opportunity for a sustainable and resilient energy future for New Zealand

New Zealand Hydrogen Strategy has two parts:

1. **Hydrogen Vison**
   - Released in September 2019
   - Submissions analysed by end Q4 2019
   - Analysis of submissions published Q1 2020
2. **Hydrogen Roadmap**
   - Modelling on hydrogen supply and demand in New Zealand has been completed and is expected to be made available in an interactive model on our website by the end of July 2020.
   - A sample of the model output is on the following slide. Note this is from pne set of assumptions on generation costs.
   - Not surprisingly this work concludes that New Zealand's ability to export hydrogen depends mostly on our expected electricity price relative to export competitors.
   - The target for date for New Zealand’s hydrogen roadmap to complete the strategy is before the end of 2021.

Levelized cost of green hydrogen for 10 archetypal plants for 2035 (modified assumptions)



Work underway on hydrogen in New Zealand

- The New Zealand government to date has committed a total of $21.6 million NZD on hydrogen specific projects.
- This includes :
  - $1.25 million to support two hydrogen transport initiatives
  - $20 million for a hydrogen industrial project
  - $250,000 on a study into hydrogen gas transmission
- We have an active programme to ensure our regulations and standards governing hydrogen are fit for purpose.
- The Government has announced $155 million NZD support for transformative energy projects. Some of these are hydrogen related but details have not been released publically yet.

International hydrogen engagements

- The New Zealand government is working with several Asia Pacific countries (Japan, South Korea and Singapore) on future cooperation on hydrogen export from New Zealand.
- As the host of APEC 2021, New Zealand has been investigating a low carbon hydrogen standard. We are evaluating how this project will work now that APEC21 will be a virtual meeting.
- In terms of active international projects in New Zealand:
  - the Obayashi Corporation of Japan is working with a local Maori Trust – The Tuaropaki Trust, to develop a 1.5 MW electrolyser using electricity from a geothermal power plant owned by the Trust.
  - Mitsui Corporation of Japan has formed a joint venture with Hiringa Energy to support its work on hydrogen transport and hydrogen industrial use.

What New Zealand is interested in

- Working with other members to ensure a workable standard or definition of low carbon or green hydrogen is agreed to facilitate future hydrogen trade.
- Sharing experiences of working applications and issues with hydrogen deployment, with the understanding that New Zealand is just beginning on this path.