

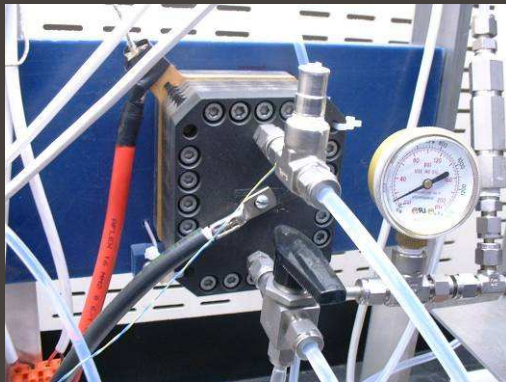
Where to Place Hydrogen Research Effort?

2000

2005

2030

2050



New Zealand's EnergyScape



Why Look at Hydrogen?

2000 2005 2030 2050

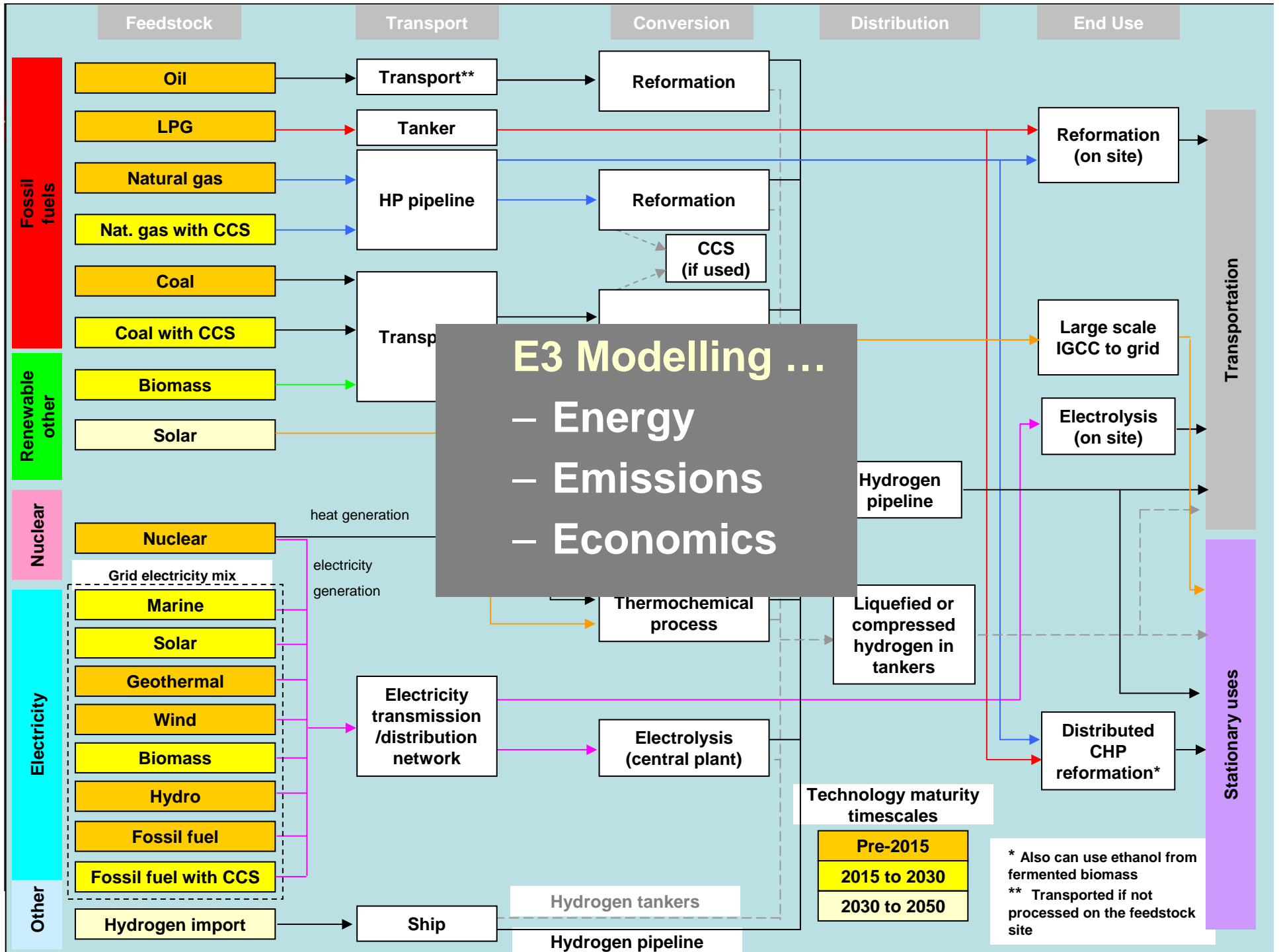
Some comments from past meetings ...

- **Is hydrogen just too far out there?**
 - Hydrogen has potential of a great energy carrier
 - Potential for a paradigm shift in how it could be used.
- **Why now?**
 - Require plans so that it can be a future option
 - They may simply require maintaining a watching brief.
- à **The hydrogen Energyscape Project**
 - Assume that it has happened,
now how did we get here?

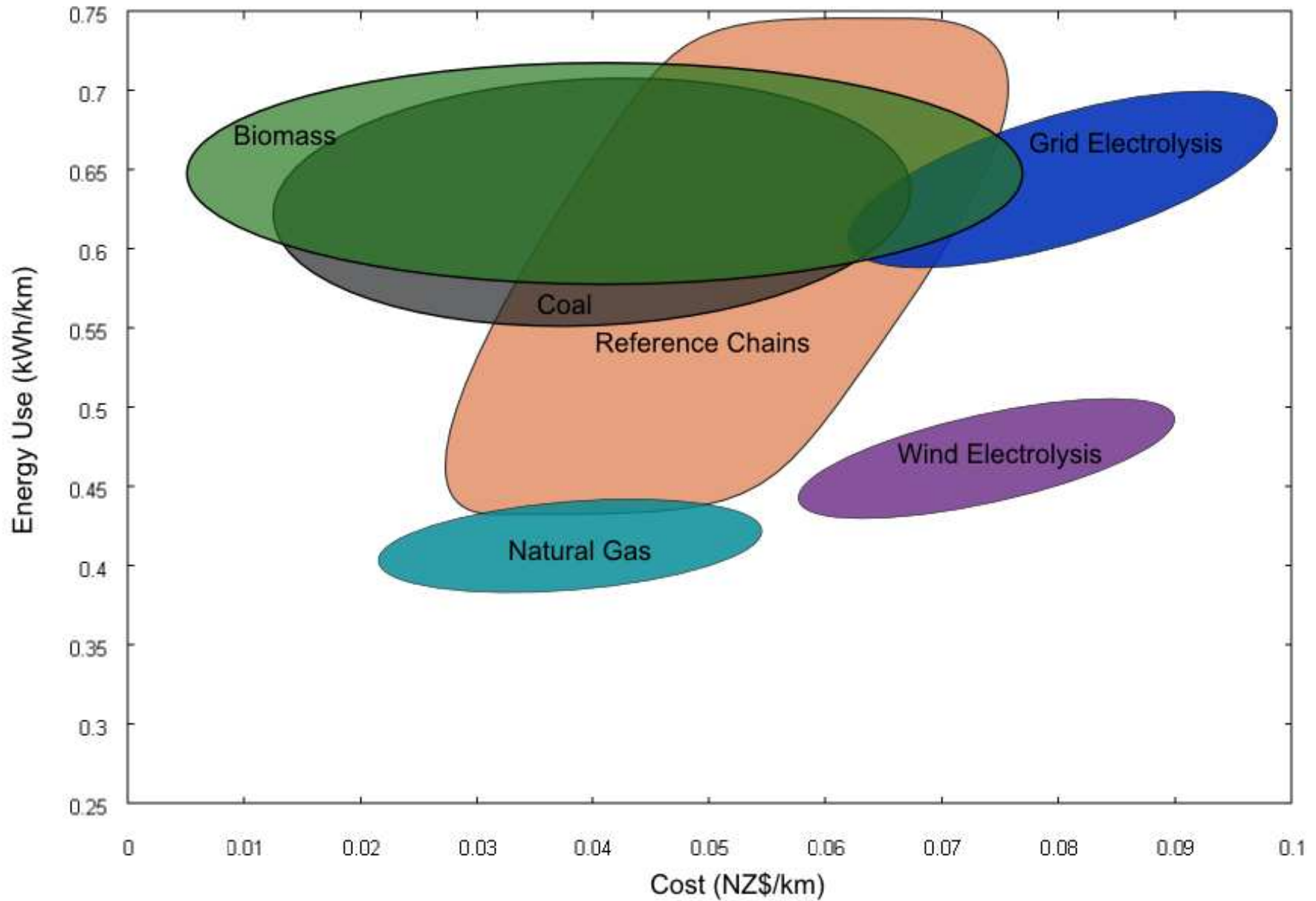
Stage One – Situation Analysis

2000 2005 2030 2050

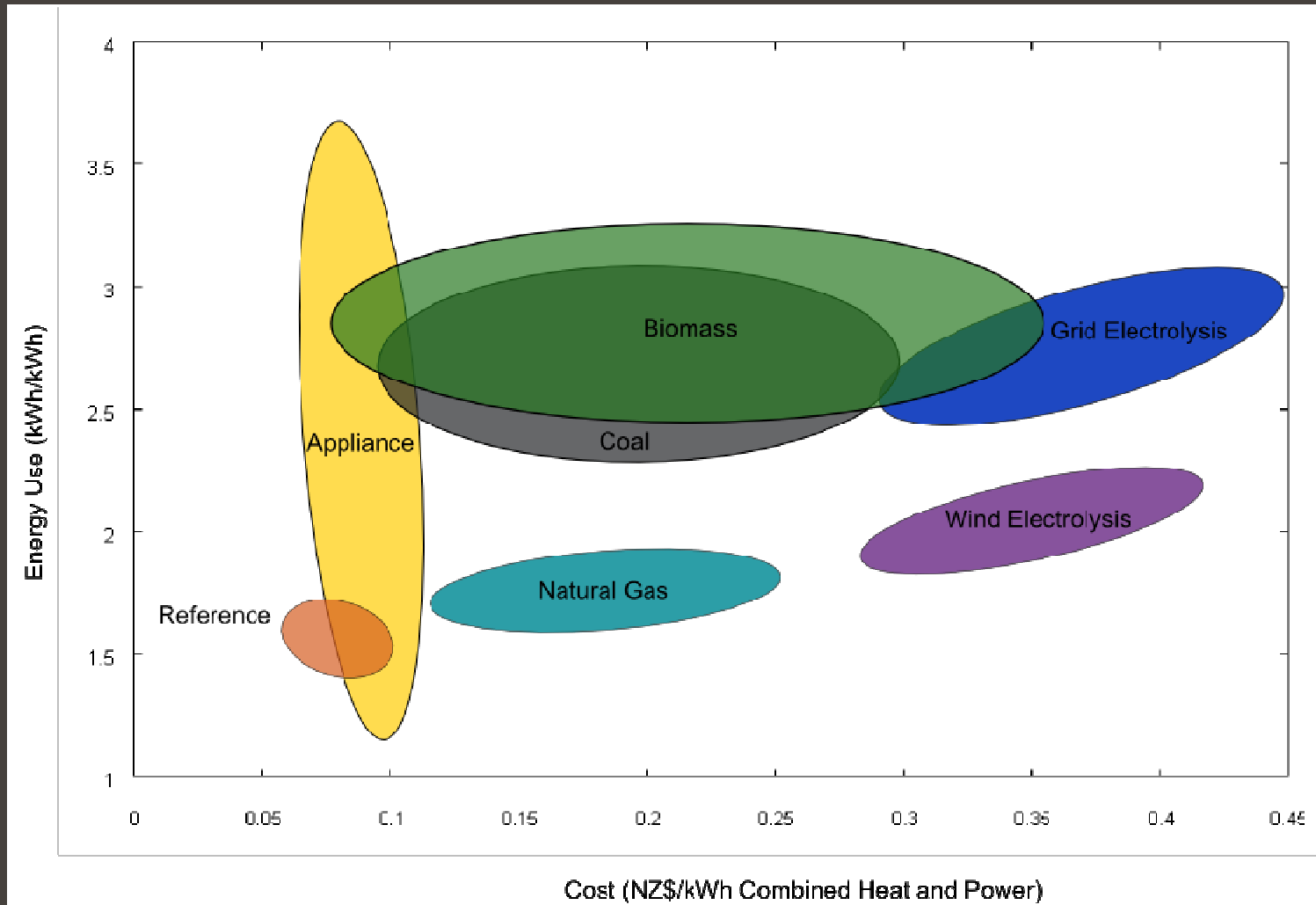
- **Globally:**
 - 138 refuelling stations in 25 countries.
 - 63 planned for 2007
 - 600 FC vehicles
- **New Zealand:**
 - 55,000 tpa
 - Consumed on site
 - 10 x for future transport
- **Future Options ...**



Results from E3 Analysis - Transport



Stationary applications



New Zealand's EnergyScape



Next Steps

2000 2005 2030 2050

- **Integrated modelling to provide to various demand scenarios (STELLA):**
 - What are the possible transition strategies
 - What if we wait?
- **Integrated EnergyScape scenario:**
 - Without hydrogen
 - With hydrogen