

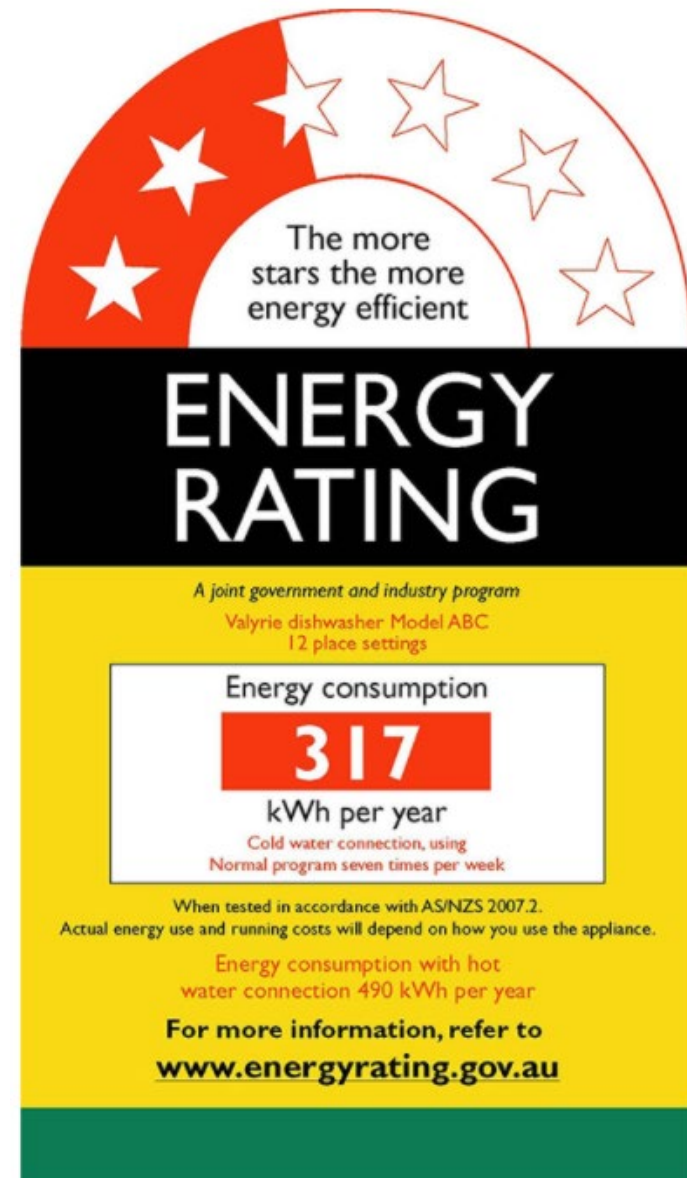
NZ Energy Efficiency Regulation using International Standards

May 2024

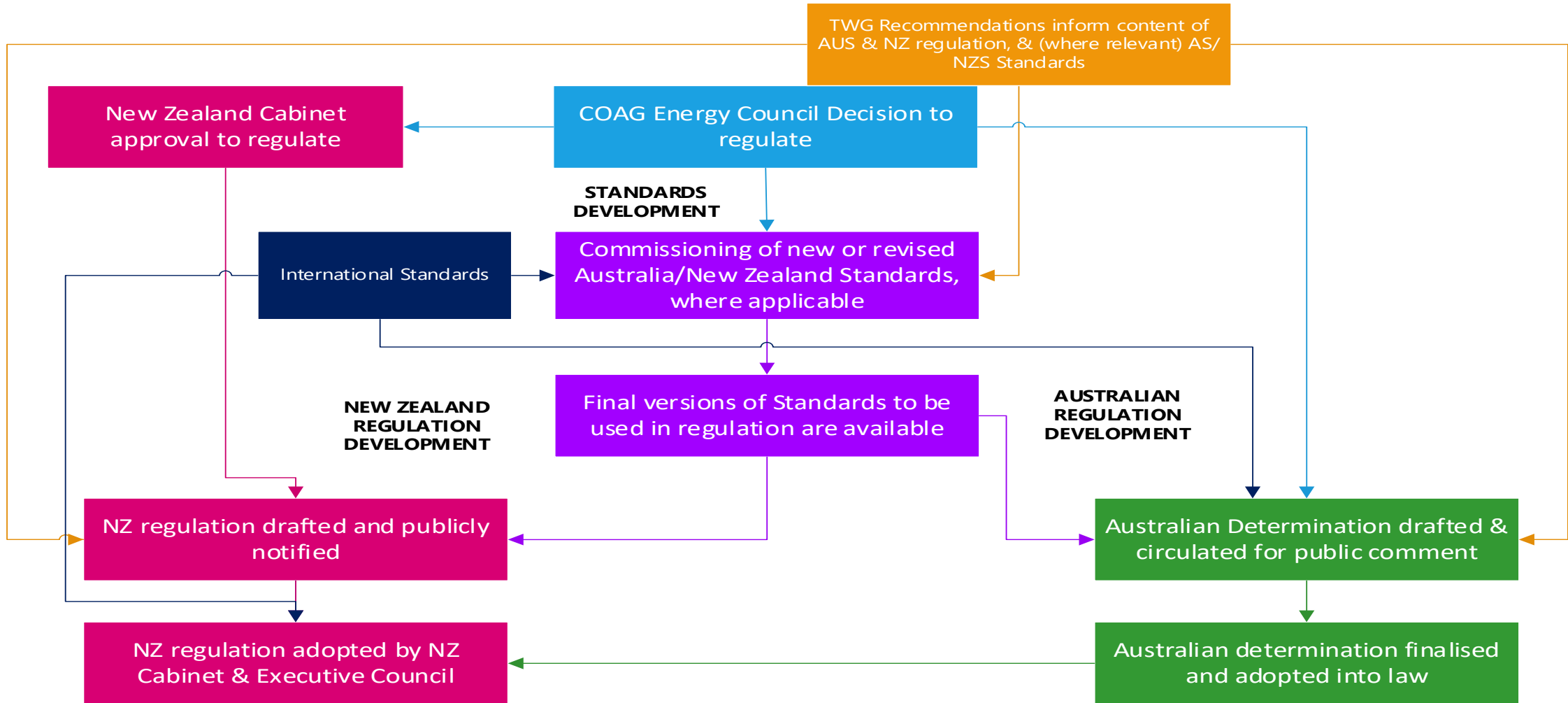


NZs Current Regulatory Approach

- EECA is responsible for NZ's energy efficiency (energy using products) regulations, in force since 2002.
- Product regulations specify the minimum energy performance (MEPS) of appliances, and any labelling requirements.
- Product regulations are grounded in standards – in most cases this is a MEPS and labelling standard, and a test standard
- Energy Efficiency Standards are commonly developed trans -Tasman but both the NZ and Australian Governments have started the transition to international test standards and embedding MEPS and labelling requirements directly into regulation.



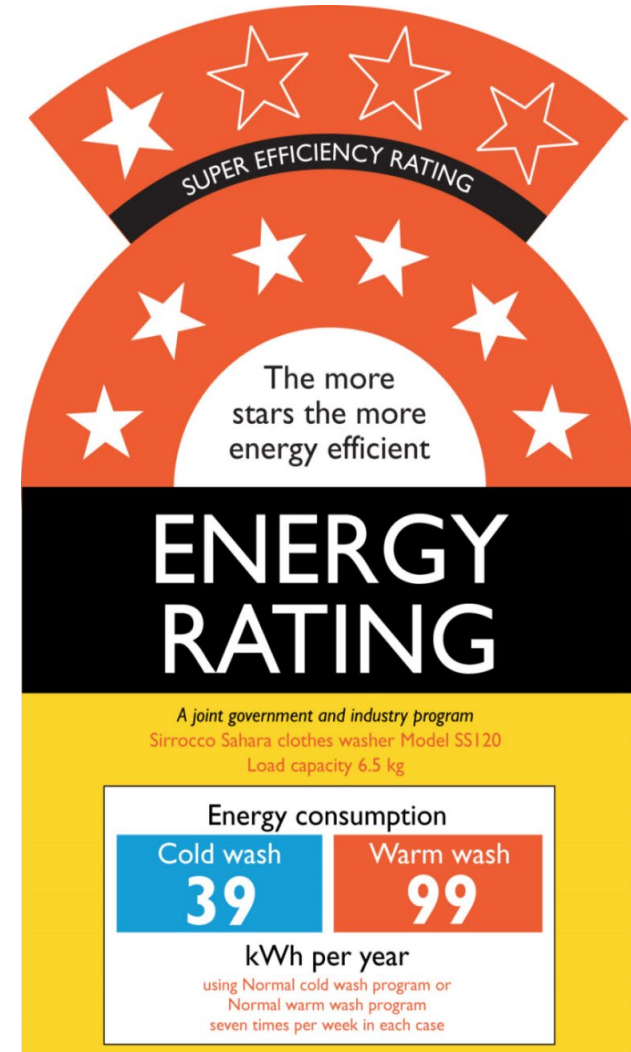
NZs current regulatory approach



Notice period applies before regulation comes into force

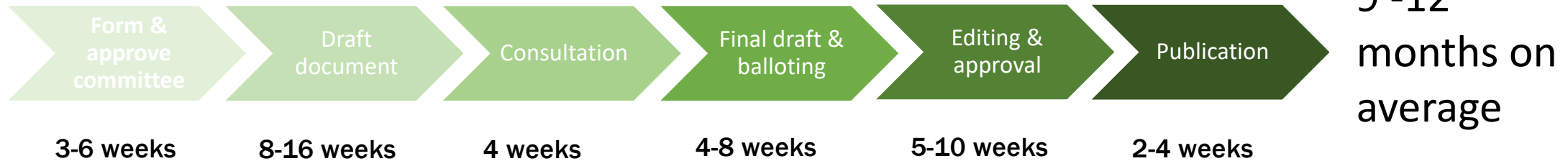
Light Touch EE Regulation - Publicly Available Specifications (PAS)

- The challenge: Keeping regulation (and the standards that underpin them) current with the pace of technology change.
- The pace of technology change
 - effects the top of the market
 - widens the gap between the most energy efficient and least energy efficient technologies making it difficult to provide ‘get it at a glance’ information to consumers – particularly at point of sale labelling.

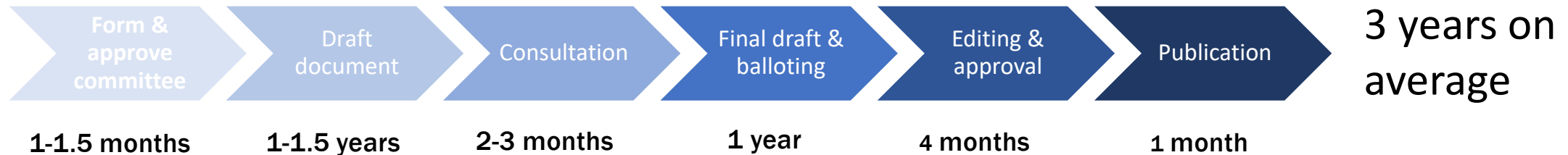


Development timelines

PAS process



Standard process



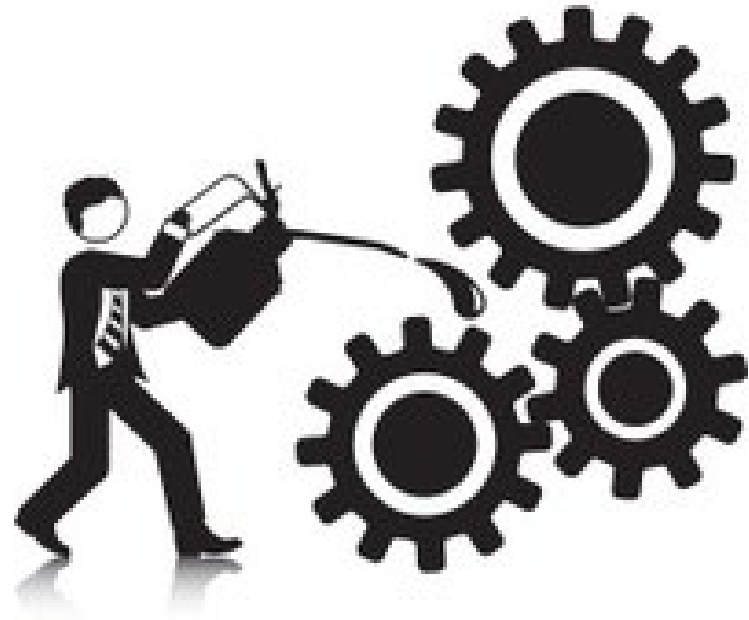
A Regulatory Pull Strategy : Publicly Available Specifications (PAS)

- A PAS is basically a standard 'light'
- Created to a recognised ISO framework
- Based on existing international standards
- Developed by a representative group of industry, regulators, academia and subject matter experts
- Completed between 9 - 12 months (depending on complexity)



What a PAS achieves

- A quicker process
- A document developed, approved and published by an independent national standards body
- Information based on expert knowledge developed through a multi-stakeholder process
- Consensus-based approach
- An easy to understand best practice guidance document for government, industry and consumers

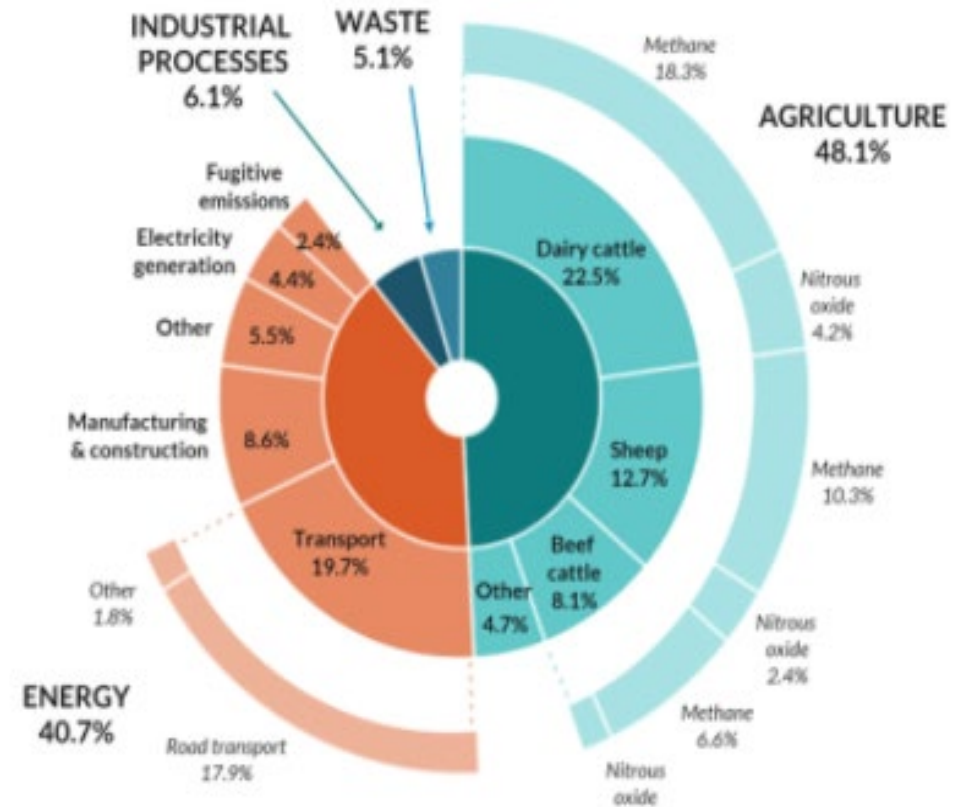


So why bother?

- NZ GHG emission reduction target to reduce net GHG emissions to zero by 2050.
- NZs Climate Change Commission 5 yearly GHG emission reduction budgets to reach the 2050 target.
- Government departments, manufacturers, suppliers and consumers will need to collaborate and co-ordinate efforts to deliver on these budgets; that become increasingly stringent as each 5 year cycle passes.

NEW ZEALAND'S Greenhouse Gas Emissions

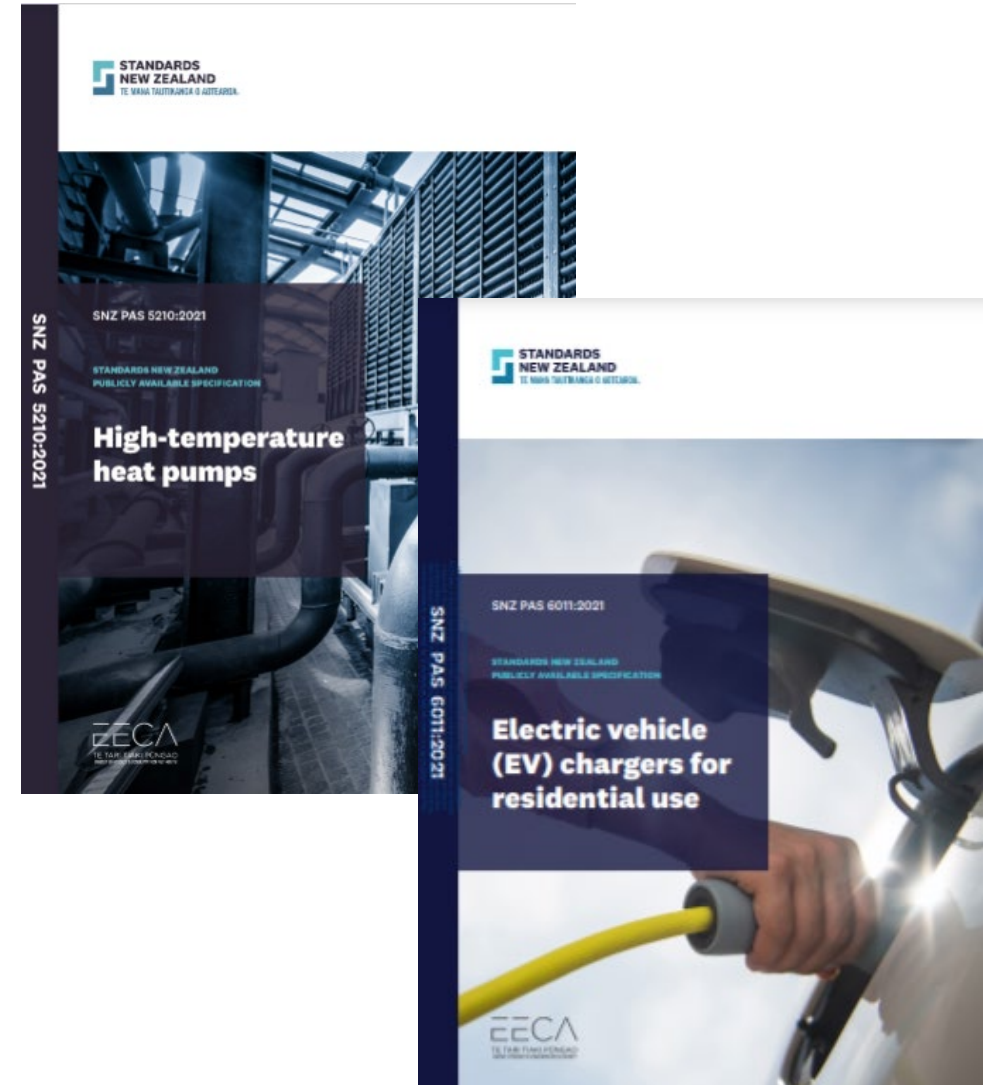
Source: New Zealand's
Greenhouse Gas Inventory
1990-2017, published
April 2019



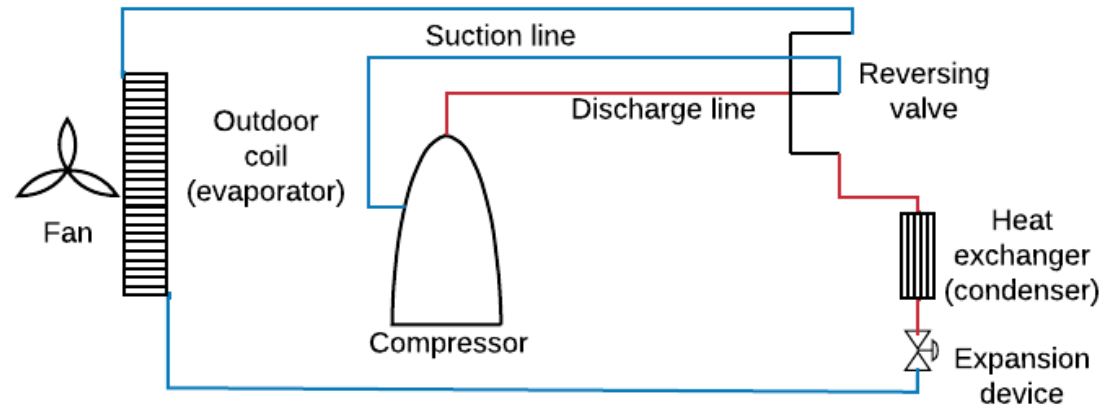
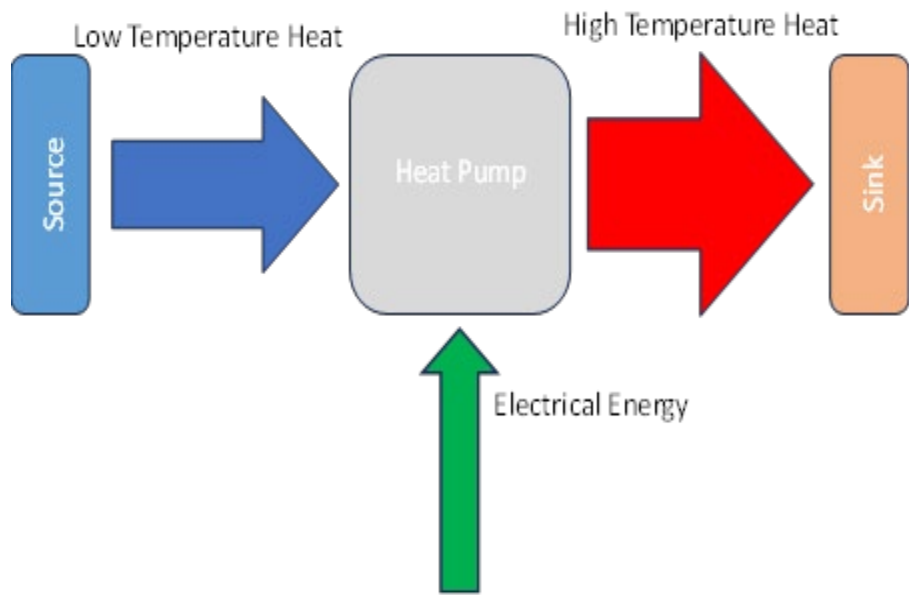
A Regulatory Pull Strategy : Publicly Available Specifications (PAS)

To target high GHG abatement technologies, EECA and SNZ have produced (voluntary) PAS for the following technologies:

- High temperature heat pumps
- Biomass boilers
- Gas/Liquid Fuel Boilers
- Residential EV chargers
- Commercial EV chargers
- Smart Homes

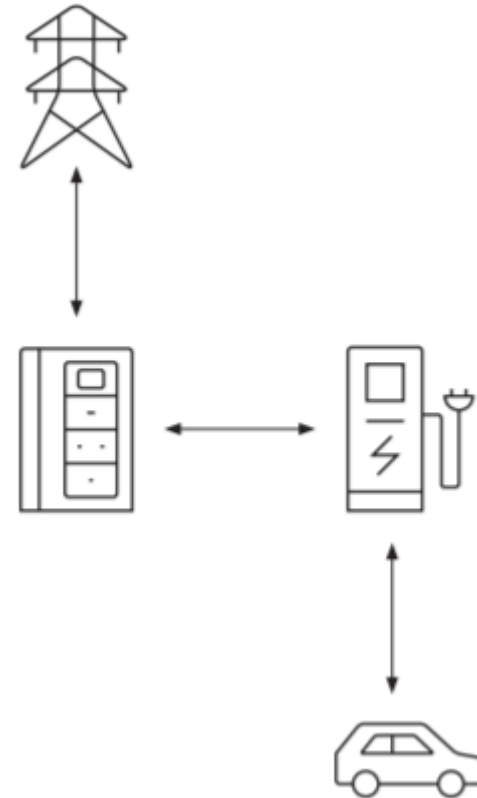


HTHP PAS example



Publicly Available Specifications (PAS) Summary

- Based on international standards and designed to be accessible to a non-technical audience
- Designed to support a market shift to lower GHG emission technologies and enable regulation for those technology types to be more easily achieved in future (a soft touch/pull strategy)
- Developed by a group of government, academic, supplier and installer SMEs
- A single touch point document: PAS have been well accepted in government, industry and by consumer sectors. EECA funded free access to PAS to drive uptake,



Exercise – Smart Home PAS 6012:2022

Context:

- A developer has preliminary approval to build 50 x new residential homes adjacent to an existing subdivision of 200 homes. All new homes have been sold off the plans
- However, the additional electrical load on the local grid may mean that the local substation, lines and transformers will need to be upgraded and the additional electrical load places even more pressure on the island's diesel generators.

Task:

- You are the developer
- Your electrical contractor has advised that to provide sufficient electricity to the new homes will potentially add a minimum of 30% to the project's capital costs to upgrade the local electricity supply system
- Using the PAS as a guide – what could you do to reduce the amount of electricity the existing and new homes will need, what advice can you give existing and potential new homeowners, and what international standards can help you decide what technology to install?



Questions

- Q1 - How can you engage with the electricity supply company and existing residents on the amount of electricity they currently use?
- Q2 – What low cost/simple technologies could be deployed to reduce electricity use in the existing homes? Where is a good place to start?
- Q3 – What technologies could be incorporated into the new build homes to help minimise the amount of electricity they will use?
- Q4 – How can technologies be communicated with? What international standards can be used to link the supply system to the customer technologies? What international standard can be used to evidence supplier conformity?