

# Session Keynote: Transforming the Heat Pump Market with Energy Efficiency Standards

## 應用能源效益標準 熱泵市場成功轉型

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### Abstract

Internationally we are encountering significant growth in residential energy use. Affluence in developing countries is driving demand for appliances such as refrigerators and air conditioning, on top of the widespread demand for consumer products spurred particularly by the fast moving field of consumer electronics.

As electronic devices become an integral part of our lives, ensuring they are energy efficient becomes more and more critical.

This paper outlines how Minimum Energy Performance Standards (MEPS) underpinned the successful market transformation of the New Zealand heat pump market, alongside a number of other complementary measures. Although standards are an important intervention tool to overcome market barriers, this presentation also shows how a coordinated suite of measures - both mandatory and voluntary - are necessary to bring about significant energy savings. These measures comprise MEPS, mandatory labeling, the voluntary endorsement ENERGY STAR, financial incentives, procurement guidelines and advertising/information provision that together have raised the energy efficiency performance of heat pumps sold in New Zealand.

The combination of these measures has resulted in a 20% increase in the average efficiency of heat pumps, and a shift in consumer preference to high efficiency models where today 65% of models sold are in the top quartile of efficiency. This was achieved during a period where in 2000 only 4% of New Zealand homes had a heat pump to today where over 25% have a heat pump fitted. Together these measures have saved New Zealand consumers over \$147 million in energy costs.

### 摘要

在世界各地，我們面對家居能源消耗量的顯著增長，日益富裕的發展中國家不但對電子消費產品有著廣泛需求，對其他家用器具如雪櫃、冷氣機的需求也很大。

當電子產品成為我們生活中不能或缺的部份，它們的能效表現將變得更為重要。

這篇論文概要地說明最低能源表現標準(MEPS)在紐西蘭熱泵市場的成功市場轉化中，結合其地補充措施，如何擔當了重要角色。雖然標準的制訂是克服市場障礙的重要手段之

一，在這裡也描述一系列其他的協調措施，包括強制性和自願性的措施，以助減少能源消耗。這些措施包括最低能源表現標準(MEPS)、強制性標籤、自願性標籤如美國的『能源之星』、財政誘因、採購指引和廣告/資訊的提供等，亦有助提高在市場中熱泵的能效表現。

透過上述的綜合措施，市場中熱泵的能效改善了約百份之二十，亦改變了消費者在選購產品時的偏好，現時約有百份之六十五的紐西蘭消費者在購買產品時會選擇能效表現屬於最高四份之一的產品。紐西蘭的家居從二〇〇〇年起從擁有熱泵只有百份之四的份額，增至今天超過百份之二十五，隨著同一期間熱泵能效的提高，這些措施為紐西蘭能源開支節省超過一億四千七百萬元。

### Biography

Terry is member of EECA's senior leadership team and is accountable for EECA's Products Programme which has four major work streams:

- Minimum Energy Performance Standards and Mandatory Energy Performance labelling for appliances and equipment
- Energy Star®: a voluntary endorsement scheme that promotes the most energy efficient products in a product class
- Vehicle Fuel Economy Labelling: a mandatory scheme that requires fuel economy information to be provided for new and used vehicles at point of sale (including private internet sales)
- HomeStar: in partnership with industry provision of a single rating tool, including an energy rating system, for homes in New Zealand

Terry has a background in policy, quality management systems, regulatory compliance and standards development. He is responsible for relationship management with Australian Commonwealth, State and Territory agencies who participate in the trans-Tasman, Equipment Energy Efficiency Programme. Terry is also the Chairman of the the APEC Working Group on Energy Efficiency and Conservation.