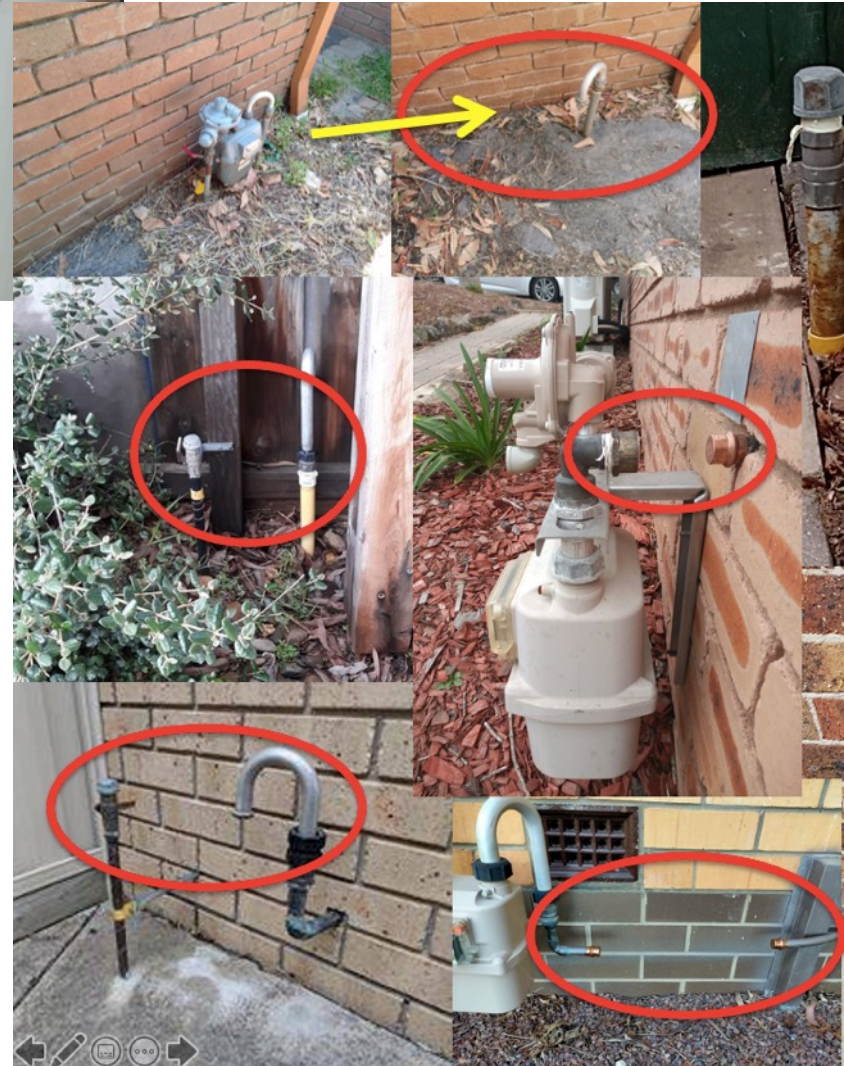


**Presentation by Tim Forcey**

***DRAMATICALLY  
REDUCING  
RESIDENTIAL  
GAS DEMAND***



## KEY POINTS

1. People are already getting their homes off gas and saving big buck\$ with heat pumps
2. Gas demand is already falling
3. Expanding gas-supply infrastructure increases gas price; accelerates gas death spiral
4. Hydrogen is and will always be wildly uneconomic for homes vs heat pumps

# My former roles:

Facilities and operations manager

Commercial manager

Planning principal

Researcher

The BHP logo, consisting of the letters "BHP" in a bold, orange, sans-serif font.The ExxonMobil logo, featuring the word "ExxonMobil" in a red, sans-serif font, with the "X" stylized.

# University of Melbourne research – Heat with your air con, and save money.

NATIONAL VICTORIA

THE  AGE

This was published 5 years ago

## 'Heat pump' tech could save Victorian homes up to \$658 a year on gas: report

ABC NEWS

Just In Coronavirus Politics World Business Analysis Sport Science Health Arts Fact Check Other

## Reverse cycle air conditioners cheaper to run than gas heating, report finds

By consumer affairs reporter [Josie Taylor](#)

Posted Tue 25 Aug 2015 at 4:38pm, updated Tue 25 Aug 2015 at 6:43pm



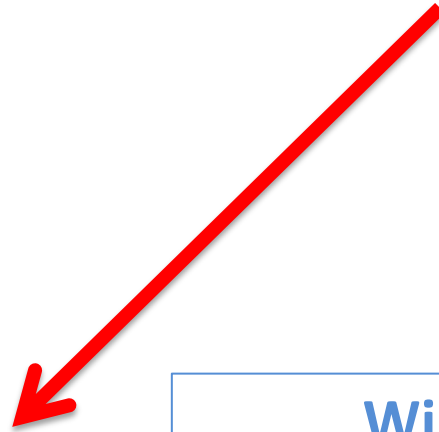
THE UNIVERSITY OF  
MELBOURNE



# HEATING WITH AIR CONS (HEAT PUMPS)

Saves money / uses renewable heat /  
smashes residential gas demand

Inside unit



Outside unit

Winter “reverse-cycle” operation.  
Collects **free renewable heat**  
from the air outside your home.

A good thing about free heat  
is that no one will send you a bill for it!

Heat with air cons  
(heat pumps)  
for 1/3<sup>rd</sup> the cost  
of gas heating.



# renew.

Technology for a sustainable future magazine

SUSTAINABLE TECH ▾

BUYERS GUIDES

DIY ▾

NEWS & EVENTS

HOME / RENEW MAGAZINE / SUSTAINABLE TECH / EFFICIENT HOMES

OCTOBER 2015  
Issue 133



BUY  
IN STORE

## Comfortably ahead: A tale of two heaters

Date published:  
15 Apr 2016

Author:  
Tim Forcey

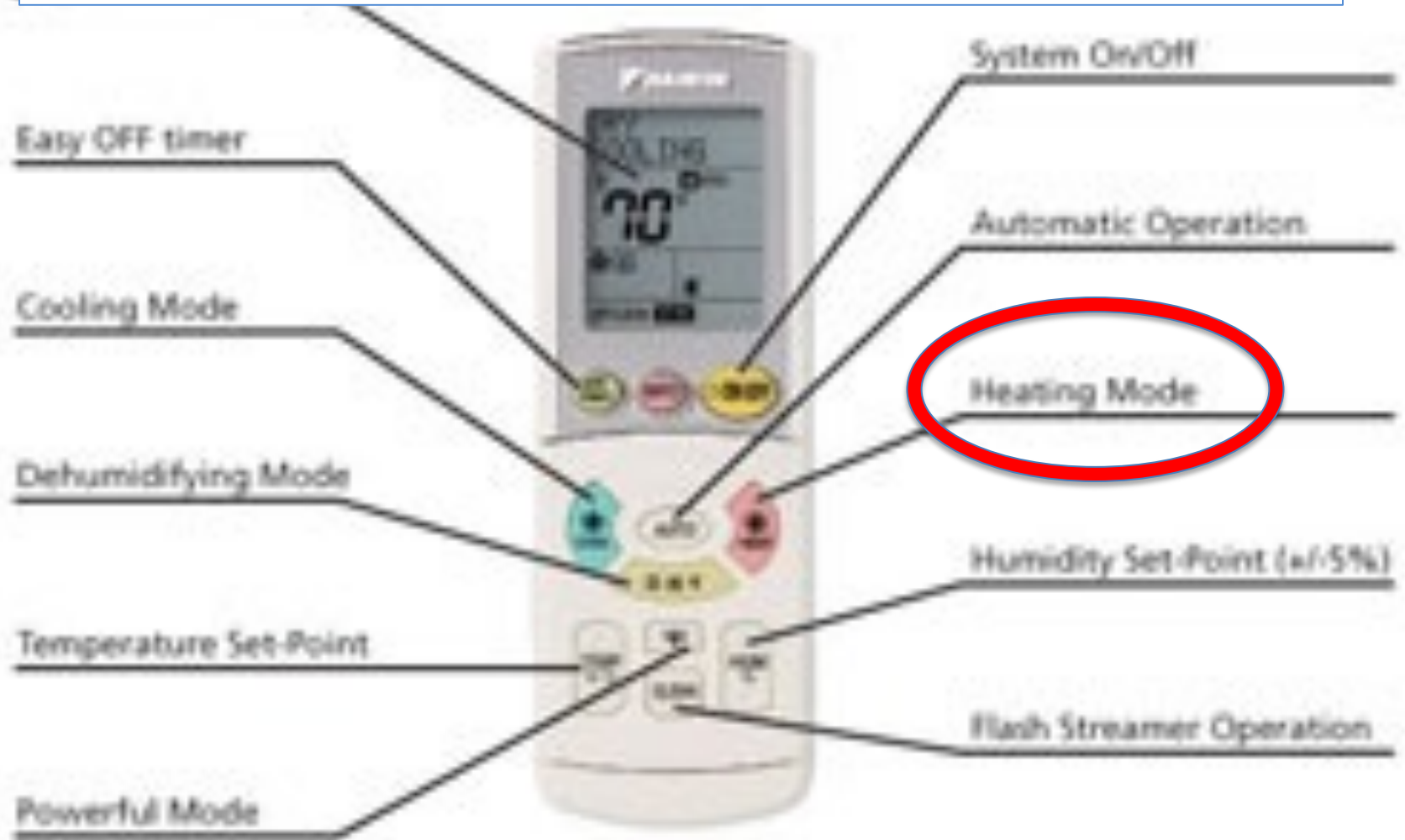


Turn on your air conditioner—and knock hundreds of dollars off your heating bill. Tim Forcey describes the learnings (and savings) gained from his experiment with reverse-cycle electric heating.

This article was first published in [Issue 133](#) (October–December 2015) of Renew magazine.

Over the last 20 years my wife and I have raised a family in our 100-year-old Melbourne bayside weatherboard home. Last spring, following our third partial renovation, we installed two air conditioners in preparation for the hot summers to come—particularly so my wife

And for many homes all it takes is to find the heat button!



Note: To switch from °C to °F display (& vice versa) hold Temp Up/Down for 5 seconds



## Hot-water heat pump

1 part of electrical energy produces  
4 parts of hot water energy.

How? 3 parts of renewable heat  
collected out of “thin” air.



In Australia, hot-water  
heat pumps receive  
renewable energy certificates,  
just like solar PV.





**Gets  
even better  
for homes  
w/ solar PV**

**...warms the air...**



# ALL GAS BURNED IN AUS BUILDINGS IS NOW AN ECONOMIC WASTE!

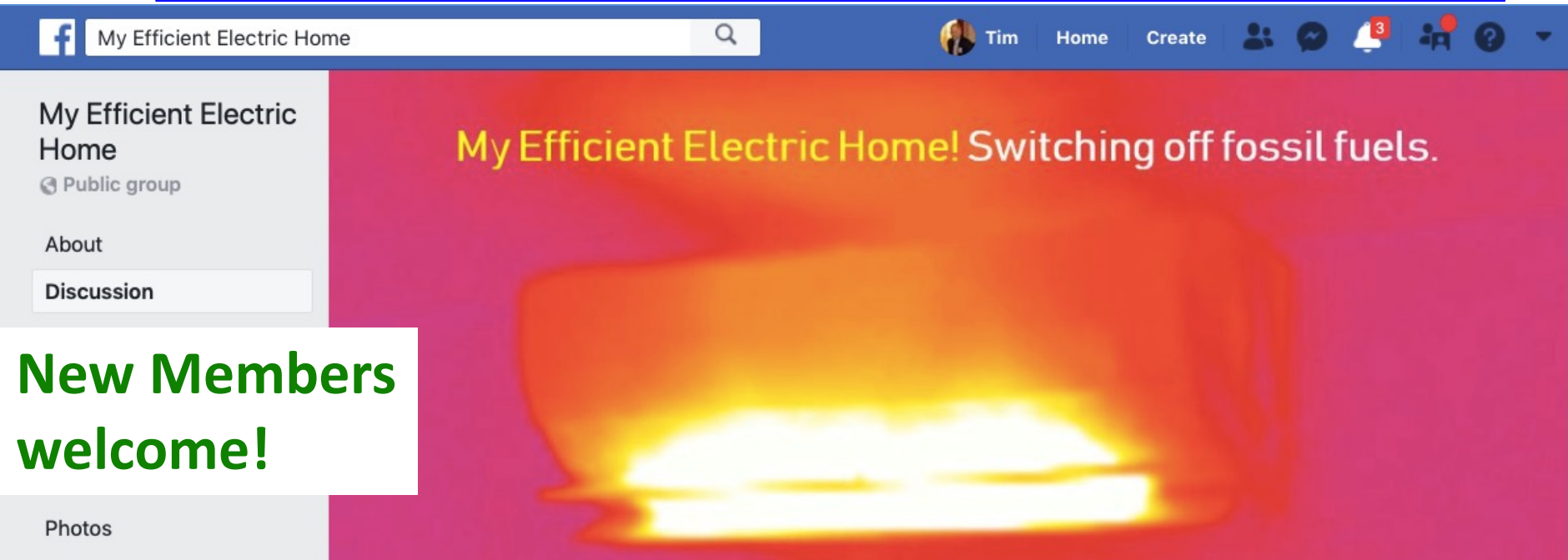
- Victorians wasting \$2 to 3 billion / year burning gas in buildings.
- We don't have to do that anymore.
- There are better economic options.
- Will we tell people, or fool them with, I don't know, hydrogen?



# Facebook group: “My Efficient Electric Home”.

> 35,000 members

A free, searchable database of home-improvement information.



"This is the first winter I haven't turned on the gas heater. Working from home and we had aircon installed in lounge last spring so I decided to use it." - Fiona

"We haven't used the gas since installing RCAC two weeks ago." - Jane

"We used our RCAC this winter in Canberra, worked great. On track to save \$1,100." - Jacqui





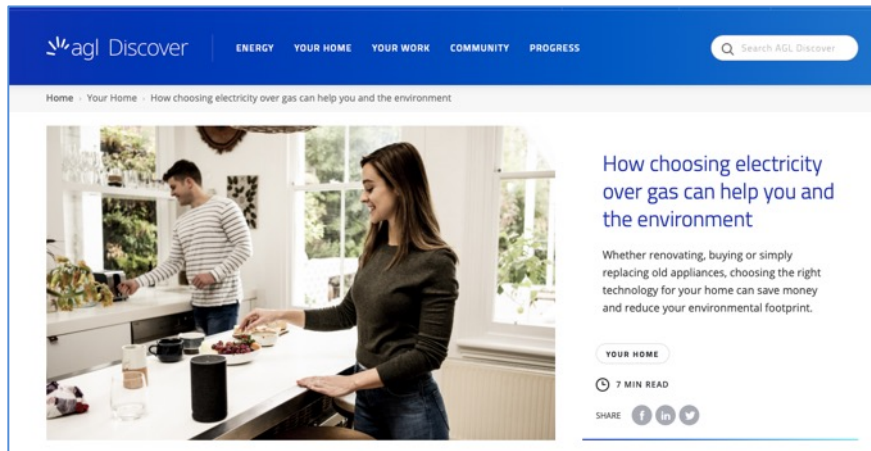
**Abolishing the gas meter  
- is a thing!**



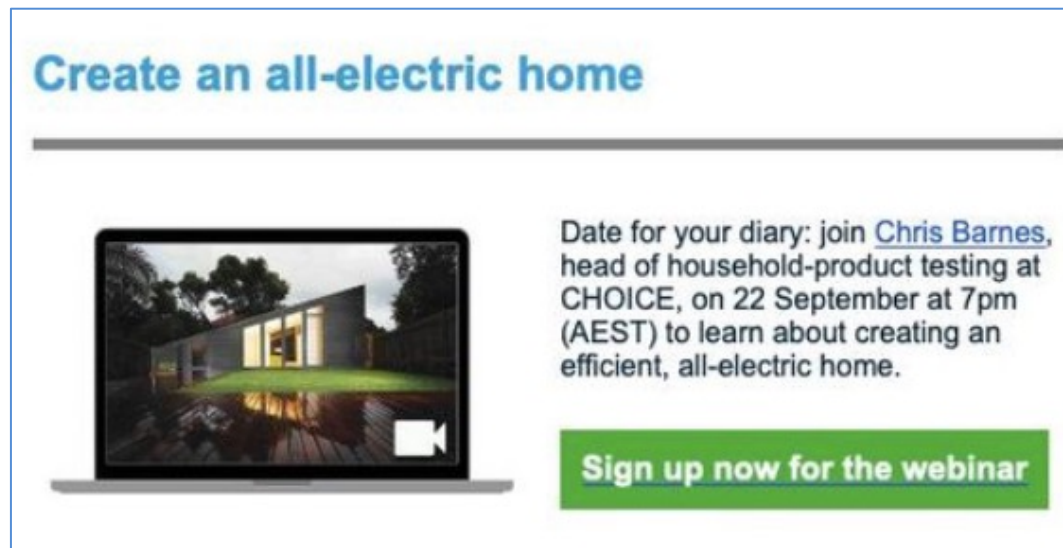


# Who's talking about \$aving by getting homes off gas?

AGL



Vic Gov



Choice Magazine

# Reducing gas demand – ACT and VIC


**Make the Switch**

About this projectSearch

Why switch?How to switchCalculate the switch

**Make the switch from gas to electricity.**

By switching your appliances from gas to electricity, you can save money on your household bills, improve your family's convenience and comfort, and take action to stop climate change.



 MENU

 **act smart**<sup>®</sup>

[Home](#) > [What can I do to take action?](#) > [Sustainable Home Advice Program](#) > Switch off gas

## Switch off gas

Make the switch from gas to electric. It can save you money in connection fees and help the environment. Making the switch from gas to electric will take time. Good times to consider making the switch are:

- When your appliances are approaching end of life
- When renovating your home or replacing existing appliances

Here are steps you can take to help you make the switch:

## Make the change to cleaner, cheaper energy



### PLAN YOUR SWITCH FROM GAS TO ELECTRICITY...

#### HEAT PUMPS



An electric heat pump hot water system will deliver hot water cleanly and efficiently.

#### REVERSE-CYCLE AIR CON



Reverse-cycle air conditioners provide efficient heating & cooling.

#### INDUCTION COOKTOPS



Induction cooking is fast, responsive, efficient and healthy.

#### GO ALL ELECTRIC



Closing your gas account will save hundreds of dollars per year in service charges.

Distributed by *[INSERT NAME OF YOUR GROUP OR ORGANISATION]* March 2021  
Web address of leaflet landing page *[OF THE GROUP/ORGANISATION]*



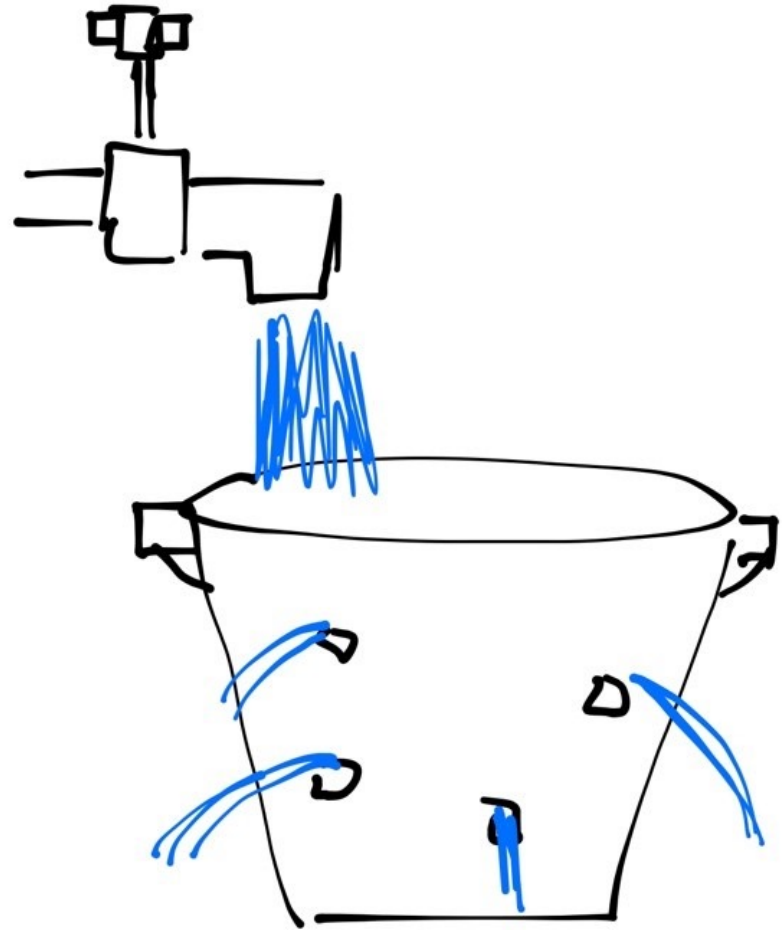
# Tim Forcey – Home Comfort & Energy Advisor



# In winter, our homes are leaky buckets!

How do we stop the heat from leaking out as fast as we put it in?

1. draught-sealing
2. insulation
3. window treatments
4. windows

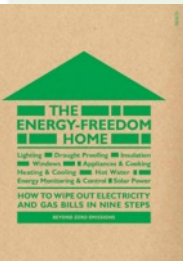
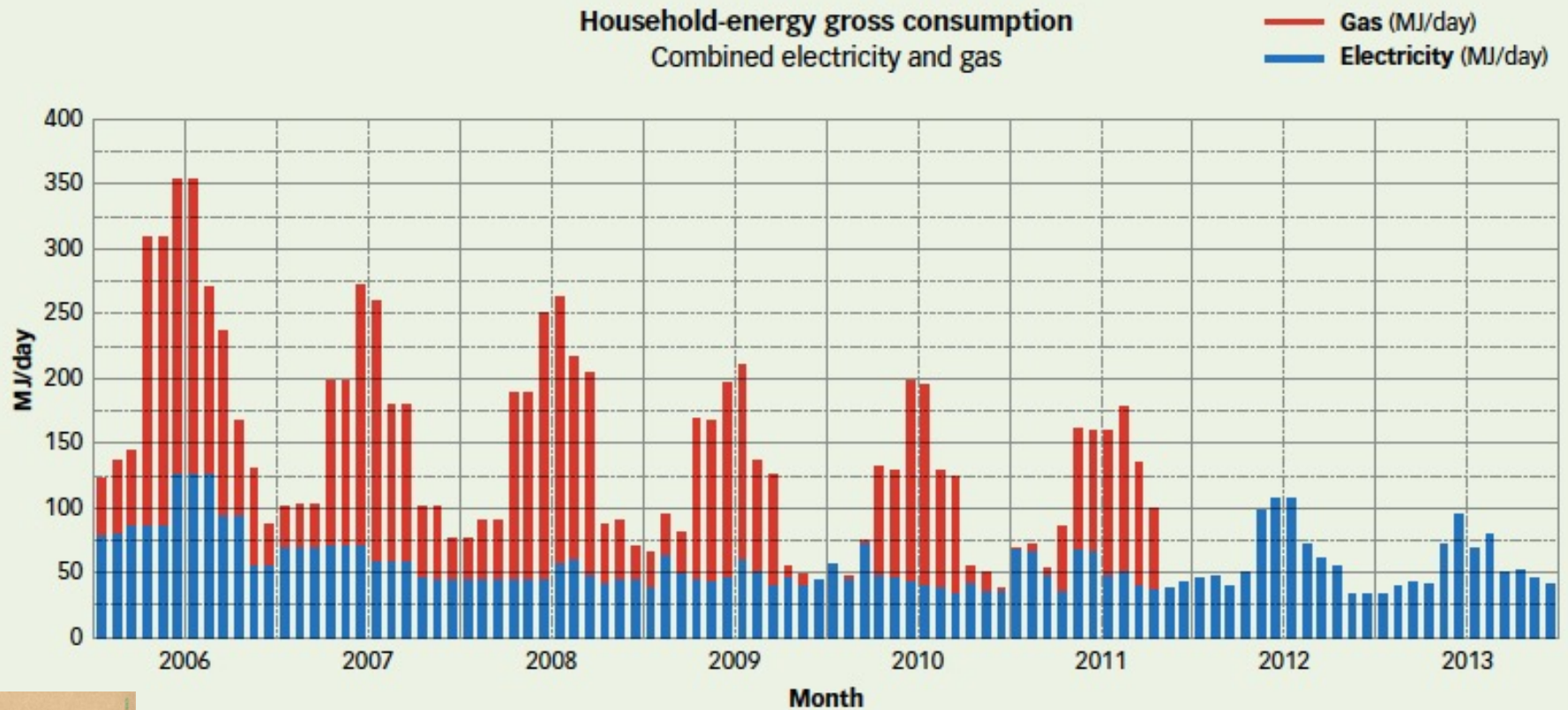




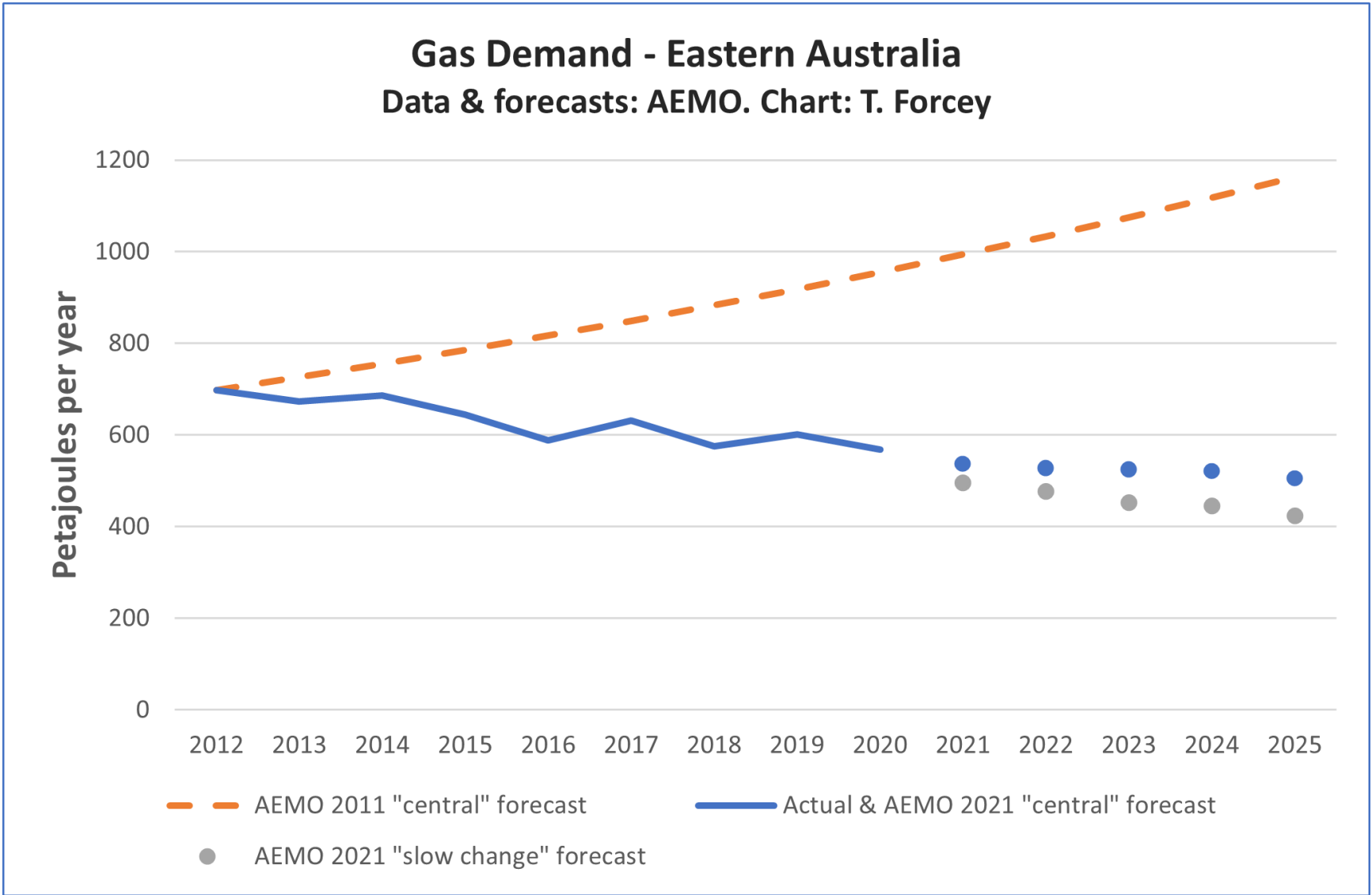
Melbourne home as documented in “The Energy Freedom Home”.

As the use of gas (red) disappears, electrical energy used (blue) hardly increases.

Excludes the impact of solar photo-voltaic panels (PV), electric vehicle (EV).

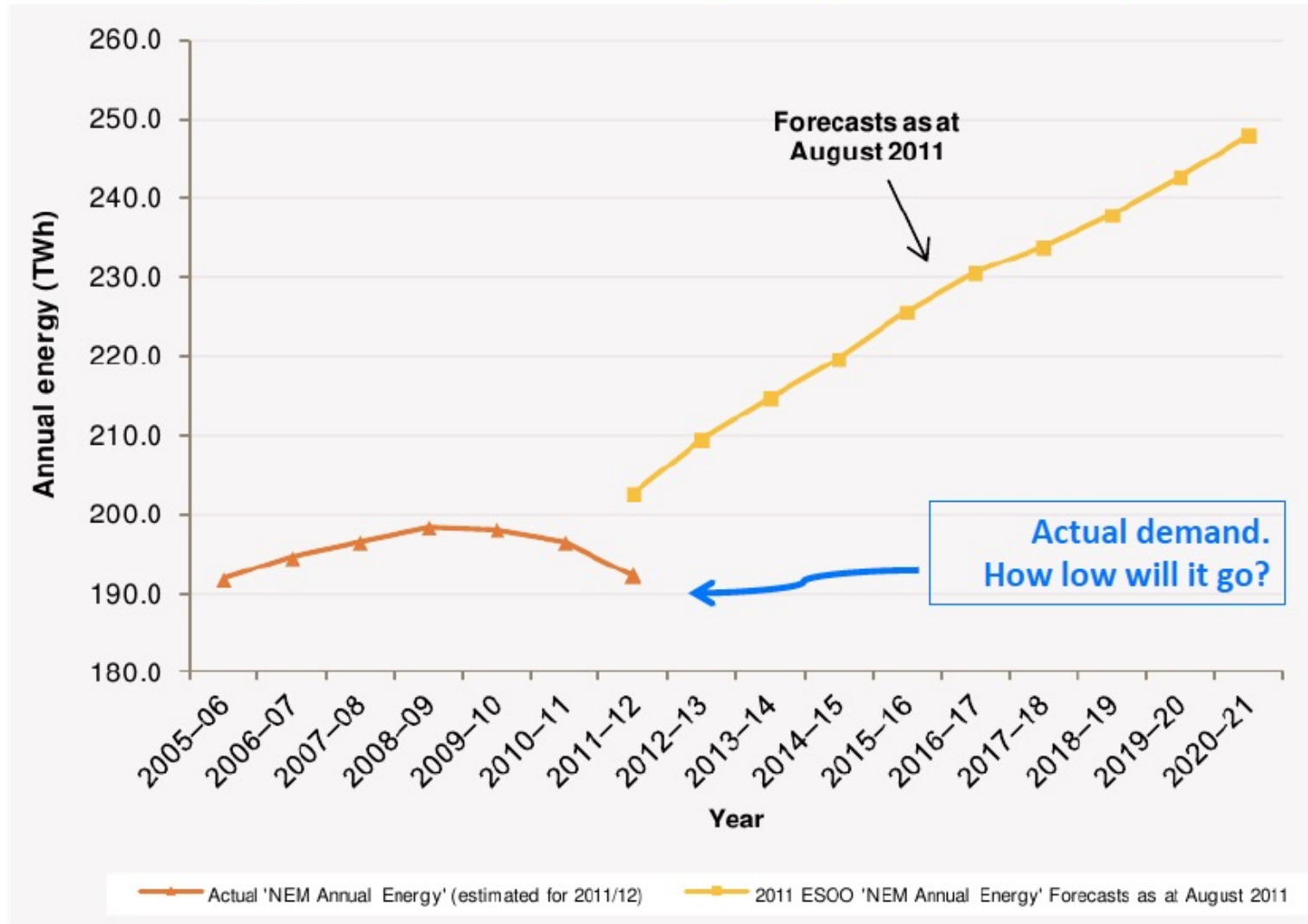


# Gas demand in E. Aus. Peaked in 2012. Falling far below AEMO 2011 projections.



# 2011- ELECTRICITY INDUSTRY CAUGHT OFF GUARD!

## Electricity demanded from the grid (AEMO forecast)



## Beware fossil-gas suppliers bearing hydrogen gifts

Tim Forcey 26 October 2018 0 Comments

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# HYDROGEN: DON'T TRY THIS AT HOME! TOO EXPENSIVE ...



**THEFIFTHSTATE** **V** OUR PLANET  
OUR BUSINESS

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SPINIFEX

## Hydrogen in the gas grid is a great idea – if you own the gas grid

*Some of us learned in chemistry class that hydrogen molecules can spin. But our teachers never told us how much spin we'd see, and how much energy it would take not to fall for it.*

TIM FORCEY, MY EFFICIENT ELECTRIC HOME 23 SEPTEMBER 2020 UPDATED 28 SEPTEMBER 2020




The companies that own the pipes and meters bringing fossil gas down our streets are aware their product is a damaging fuel. At the same time, they see building managers and home-owners

Ad

### TRENDING

 Melbourne overhauls urban design guide to stop "spreadsheets in the sky"

 The Aussie eco startup crowdsourcing \$4.3 million to tackle single use plastics

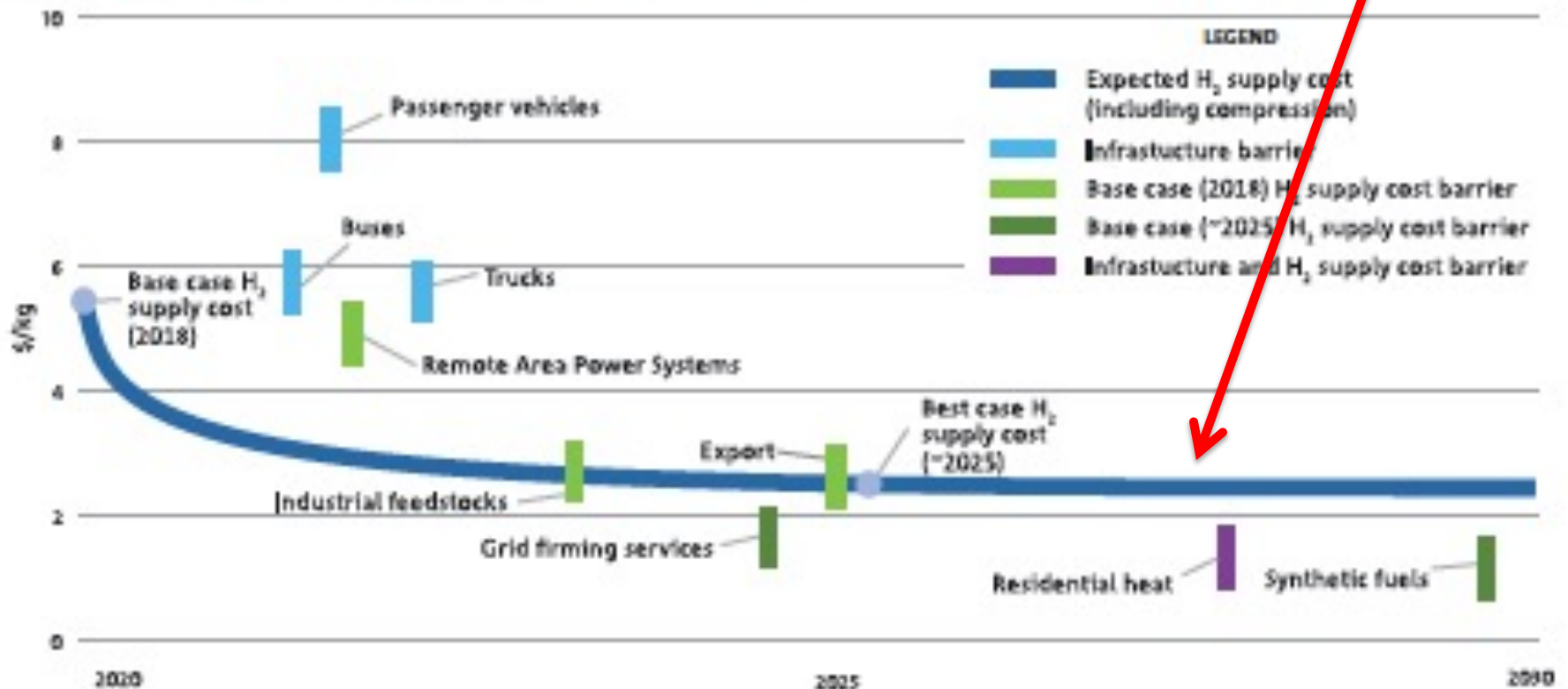
 Nikola Tesla dreamed of free



# CSIRO Hydrogen Road Map

## Hydrogen too expensive to compete with heat pumps for home and water heating.

Hydrogen competitiveness in targeted applications



## Q3 E. Aus. Gas Demand - Industrial and Buildings AEMO QED

