

Reclaim Our Trade



The Bare Facts about Air Conditioning & the Relationship with Greenhouse Gas Emissions:

Excerpts from Federal Government's Green Paper

"Carbon pollution is causing climate change, resulting in higher temperatures, more droughts, rising sea levels and more extreme weather" (p.13, p 1.)

"The 12 hottest years in history have all been in the last 13 years and IPCC scenarios project temperature rises between 1 and 6.4 degrees over the next century relative to 1980-99." (p.13, p2)

"The Government's climate change policy is built on three pillars:

- *Reducing Australia's greenhouse gas emissions*
- *Adapting to climate change that we cannot avoid*
- *Helping to shape a global solution that protects the planet and advances Australia's long-term interest." (p.26, p3)*

Government have failed on all three pillars "SIGNIFICANTLY" since the introduction of the national Arctick licensing system and the onslaught of NON-TRADE QUALIFIED installers of air conditioning units, one of the single greatest emitters of greenhouse emissions.

- **Government have increased greenhouse gas emissions**
- **Failed to adequately adapt to climate change**
- **Failed to successfully help toward shaping a global solution**

Excerpt from Qld Premier Anna Bligh's Website;

"We've signed up to doing our part to achieve a 60% reduction in national greenhouse gas emissions by 2050." (www.thepremier.qld.gov.au)

Failed before it has even started with the onslaught of NON-TRADE QUALIFIED installers of air conditioning units, one of the single greatest emitters of greenhouse emissions.

Australian Bureau of Statistics

"There was a substantial increase in the number of households with coolers (air conditioners and evaporative coolers) from 32% of dwellings in 1994 to 67% in 2008. Reverse cycle/heat pump has been the most popular system of cooling since 1994."

Excerpt from Peter Garrett's Website;

"The household sector is forecast to grow by almost 4 million homes and over 1,000 million square kilometres in combined floor space by 2020, creating increased demand for heating, cooling, lighting and electrical appliances.

(http://www.petegarrett.com.au)

The Bare Facts about Air Conditioning & the Relationship with Greenhouse Gas Emissions:

“There has been on average 1.3 million split system air conditioners installed into Queensland homes per year for the past 7 years, that’s 9.1 million, all with at least 1.5 kg of refrigerant.” *(Industry source)*

“60% of installs completed by partially trained personnel....approx 5.46mil” *(Industry source)*

“15% of installs by DIY or "friends"no training.....approx 1.36mil units” *(Industry source)*

“This leads to - 75% installs (6.8million) must be considered dubious in regards to poor performance and that performance increases with ambient temperature increases as systems works harder outside of design parameters.” *(Industry source)*

Electricians and Plumbers’ “RPL” throughout Australia in Cert 2 (Requirement for National Arctick “SPLIT” licence) in as little as 2 days and equivalent to year 12 qualifications can install single head split systems, but by law cannot repair, service or maintain them, thus customers cannot get the installer to repair the install faults. This must be carried out by 4 year trained “RAC” tradesperson.

“The refrigerant in modern split-system air conditioners is a potent greenhouse gas. One kilogram of the most common gas, R410a, has the same global warming impact as two tonnes of carbon dioxide – like driving a four-cylinder car for six months”
(www.lookforthetick.com.au)

Approximately 70 percent of the world's electricity is generated by the burning of fossil fuels.

For every additional kWh used, there are more greenhouse gas emissions generated by electric utility power plants. This is the indirect effect of global warming refrigerants.

The environmental impact of even small changes in chiller energy use has an impact.

There is a need to use refrigerants that minimize both Ozone Depleting Potential and Global Warming Potential to address global environmental concerns. If the efficiency of every centrifugal chiller in the world were decreased by only 0.08 kW/ton, power plant-generated greenhouse gas emissions would be reduced by literally billions of pounds. This is an amount equal to removing nearly two million cars from the road each year, or to planting nearly a half billion trees every year.

Air Conditioning is the single biggest waster of electrical power. Every kilowatt of power wasted requires another to be generated – doubling the effect).

Domestic Air Conditioning is the single biggest consumer of power based on number of units within the domestic field.

25% of SEQ power is utilized for cooling/refrigeration systems and *“Queensland creates 30% of Australia's emissions despite having only 20% of the national population.”*
(www.thepremier.qld.gov.au)

Power usage would drop dramatically due to correctly installed systems operating to correct design parameters.

An air conditioner can use up to 50% more power than required if not installed correctly.

“.. Queensland households also have a big role to play in tackling climate change.

The Bare Facts about Air Conditioning & the Relationship with Greenhouse Gas Emissions:

The average Queensland household generates approximately 13.77 tonnes of greenhouse gas emissions (our household carbon footprint). The average Queenslanders carbon footprint is larger than the rest of the world.

South-East Queensland alone uses more electricity than the whole of South Australia. We're using power-hungry appliances, such as larger televisions, computers and air-conditioners.”
(www.thepremier.qld.gov.au)

All refrigeration and air conditioning systems should only be installed, serviced, maintained and repaired by trade qualified refrigeration specialists by law, as they have the skills and training to properly install/repair to correct design parameters.

Cert 2 “SPLIT” installers cannot do anything other than install and decommission single head split systems of less than 18kw and with as little as 2 days of training, it is questionable as to the skills learned/gained.

Understanding and learning the dynamics of air conditioning is a lengthy and involved process, one which cannot be learned through “Short Courses”, Governments recognize this hence the need for RAC Specialists to undertake 4 years of training.

Yet State and Federal Governments consistently failed to recognize or apply this knowledge when introducing the Cert 2 qualifications for non-trade qualified “SPLIT” licence holders, there is no sound understanding of the systems, we reiterate, **“Understanding and learning the dynamics of air conditioning is a lengthy and involved process, one which cannot be learned through “Short Courses”, Governments recognize this hence, the need for RAC Specialists to undertake 4 years of training”.**

Excerpt from Cool Change Magazine Issue 11, December 2008;

(Australian Government, Department of Environment, Water, Heritage and the Arts)

“As an illustration of how the recognition of prior learning process works, the Certificate 11 contains competencies; apply principles of occupational health and safety in the work environment, use hand tools, use power tools/hand held operations. These competencies are also part of the training for electricians. Electricians who are undertaking the Certificate 11 course for split- system installation do not have to redo training that they have already done and, so, are given recognition for their prior learning. This recognition process has the effect of shortening the course training for the Certificate 11.”

IT FURTHER STATES;

“The only way that someone can qualify for a refrigerant handling licence after a two or three day course is to get recognition of prior learning for a great many of the competencies involved. In effect, for a student to complete a Certificate 11 course in such a short time, they would have to be fully qualified in an allied trade (such as plumbing or electrical). There is no way that, even for a qualified tradesperson in an allied trade, that the full RAC qualification (Certificate 111) could be completed in such a short time.”

Refrigeration and Air Conditioning specialists study for four years to become competent and skilled, but in State and Federal Governments that amounts to nothing.

Doctors study for years to become qualified, so would you let a 2 day qualified “senior first aider” carry out surgery on your family members.....NEVER

Why let less than 4 year fully trade qualified RAC specialist carry out “DR Death” surgery on the planet.

Do Your Part for the Environment

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References:

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Cool Change Magazine Issue 11, December 2008; (Australian Government, Department of Environment, Water, Heritage and the Arts)
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