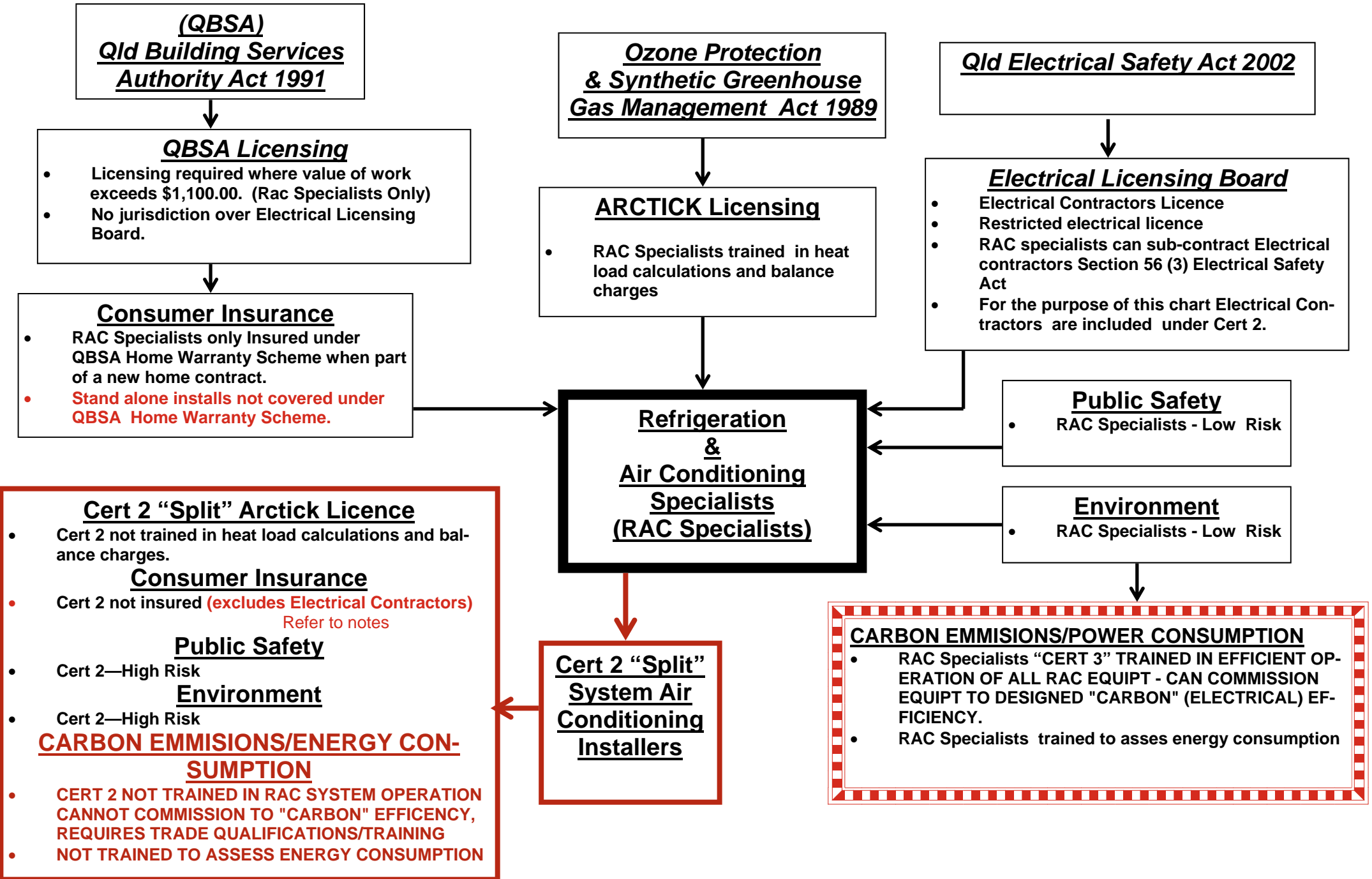


(RAC) Refrigeration & Air Conditioning Flowchart QLD
 Installation of Split System Air Conditioning Units



Notes:

CERT 2

Cert 2 is a requirement for the Installation and Decommission of Domestic Split System Air Conditioner Licence issued by the Department of the Environment, Heritage, Water & the Arts (DEHWAH). Arctick “Authorisation” to purchase any and all refrigerants is also available to Cert 2 trained and competent “Split” installers even though they have no training in or need for, under their licence, for those refrigerants.

Failure of Cert 2:

- Cert 2 holders are not trained to calculate heat loading—This means a Cert 2 person does not have the necessary training to establish the correct size of unit needed to perform the job. Undersized units will ensure excessive drawing of power to compensate. This problem also exists with retailers selling units and no training.
- Cert 2 holders are not trained in balance charge and therefore are unable to accurately establish the correct refrigerant levels required at installation. The unit will draw excess power to compensate.
- Contrary to Ministers’ claims, training is significantly flawed in many circumstances but more importantly the outcome of Cert 2 is TOTALLY misunderstood-
 - a. It is not a trade outcome;
 - b. The course, hence training was meant for someone who’s work would be supervised;
 - c. The competency was limited to simple back to back domestic air conditioning type installations—nothing more

“Assessment” techniques applied by varying RTO’s failed to properly address issues of RPL hence qualified “Similarities” rather than proof of personal competencies, eg:

- i. A plumber silver solders copper pipe but they do it for substance entirely different than refrigerants and in differing engineering circumstances but are GRANTED AN RPL for the refrigerant outcome?
- ii. An electrician is granted RPL as it is assumed, particularly by the RTO the Electrical Contractors Association of Queensland (ECAQ) that there is a power supply and it is falsely called “AN APPLIANCE” then electricians are trained yet no where is it part of their competencies—a 747 has a power cord yet electricians do not work on the engines!

By offering online studies (Anyone can complete this dishonestly) and secondly, by reducing modules for electrical contractors and allowing the RTO organisation within the Electrical Contractors Association QLD to provide the course. A fallacy exists that electricians have some special recognised prior learning skills, which is in itself a fallacy as electricians supply power from the mains, they have no training of the operations and design. A 3 hour course will not meet the AQTF contrary to Minister Welford’s claims. It is also clear in a letter from Hon. Rod Welford that his office has no understanding of what organisations are offering the Cert 2 courses or the auditing system.

The Hon. P. Garret fails to recognise the lack of real industry consultation that has previously occurred as this, the RAC Industry, is small and largely unrepresented by paid full-time personnel as are other trade organisations eg, Plumbers, Electricians, etc. Thus it is easy to have limited meetings in main areas to satisfy the “Consultation Process” but be “HOODWINKED” by the agendas of those parties with vested interests. It takes an astute, industry and technically knowledgeable person to truly gain a full and proper outcome as distinct to the one that was searched for;

Indeed it must be asked of the Minister “Where is the proposed Industry Technical Board that was trumpeted by his Department but now become a silent issue?” This is especially true when the current ARC Board and staff are considered, as it is our belief that;

- a. The board has only one person from who can be described “Hands On” RAC Contractor/Worker;
- b. The ARC’s new CEO does not come from the ARC Industry and hence has no industry knowledge or experience as a RAC Contractor/Worker;
- c. That ARC second in command also has never been a practicing RAC Contractor/Worker; and
- d. The only person to our understanding that was an apprentice, worker and contractor within the industry has now left due to frustration and lack of competency found within the ARC.

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Consumer Protection

There is no consumer protection within the existing framework of Cert 2 holders, with the exclusion of electrical contractors who meet the requirements within the Electrical Safety Act 2002.

(QBSA) Queensland Building Services Authority which enforce RAC Specialists to be QBSA licensed do not offer consumer protection unless the installation is part of a larger building project such as a new home. QBSA licensing is required for works over the value of \$1,100 yet fails to provide any service to the licence holder or the consumer, therefore enforcing a licensing regime for no purpose and charging RAC specialists for the privilege, and

The consumer suffers a continuous financial loss due to any inefficient piece of RAC equipment as they have no means to validate that financial loss as it appears on their electricity bill. As the inefficiency of the equipment increases so to does the financial costs creep up. As long as the consumer feels cool or the food does not spoil they are blissfully unaware to the “Rip Off”. Indeed it pays electrical production industry to encourage this continuous wastage as it is “Money in their pockets” for nothing.

The consumer also suffers from the issue of food poisoning which becomes rampant during summer months due to poorly designed, maintained and operating refrigeration plant which is a major factor in food poisoning, ie;

- a. Garibaldi Instance—SA production of Salami; and
- b. Qantas flight Cairns to Osaka—Chocolate pudding

The Consumer also has no longer term protection in regards to installation work of RAC equipment within residences and buildings. This equipment should be considered as a “Fixture” of that structure not as an appliance and therefore totally come under the control of the QBSA and not split as at the present through coverage both by the Electrical contractors board and the QBSA. In this manner the consumer can have long term confidence that any issues of damage to the structure can be treated in an holistic manner.

Ozone Protection & Synthetic Greenhouse Gas Management Act 1989

The failure of the uncontrolled introduction of the Cert 2 licence by DEHWA has ensured the continuation of environmental issues rather than reducing those emissions for the following reasons;

- a. The Cert 2 Licence worker thinks he has an open ticket to undertake any form of RAC work (particularly true of the Electrical Trade within Queensland) the Department did not and has not enforced the limiting nature of the licence. It further has not identified to the Consumer the “Limited nature of that licence”.
RESULT—limited trained personnel undertaking work types not covered within the training package hence the risks of emissions and carbon footprints increases!
- b. The Cert 2 course package does not include the training in understanding the performance criteria, methods of testing for that criteria nor teaching of achieving equipment efficiency. RESULT—high potential for the past installations to affect adversely the environment and carbon footprint BUT also the future units to be installed.

Public Safety

The introduction of highly flammable refrigerants to replace non-flammable refrigerants requires trained persons to carry out the works. Continued ignorance by government in this area places the general public at high risk.

Contrary to Good Design (Codes and Standards) the issue of public health for both the workers and the general public is at risk daily due to the “Cheapness” of installation of Split air conditioners into commercial structures without any regard to fresh air requirements, this has increased by the lack of proper training of Cert 2 for commercial installs—As it was not intended for them to undertake this work hence no need to train for—A properly designed commercial air conditioning installation cannot compete financially against the simplistic throw in mentality generated by the Cert 2 course package.

The commercially designed and installed air conditioning plant can be properly disinfected and cleaned, which should be done minimum of twice yearly, whilst the split air conditioning package offers no simple complete cleaning design. RESULT— poorly disinfected gather of dirt and dust, dirt germs, parasites, etc for redistribution back into the air conditioned space (Major issue during Flu season).

Carbon Emissions

RAC Specialists are in a unique position to reduce carbon emissions by 5+% - Significantly greater results than the current electrical efficiency campaign.

To achieve significant results it is crucial to establish credible Government support and establish supporting enforceable legislation. Ministers have the responsibility to interpret and fully understand the current implications and the necessary/crucial requirements to reduce carbon emissions.

1. ALL RAC equipment by Australian law must be energy efficient guaranteed by the manufacturers this works only if:
 - a. Equipment is wholly manufactured at the engineering premises;
 - b. There are performance indices to gauge the finished performance against the designed performance;
 - c. The installation is completed by thoroughly trained technicians that understand the system and the methodology to achieve the designed (and accepted by Australian Law) performance.
3. FAILURE of the above "1" results in inefficient operation, electrical energy wastage and excessive run time for the equipment hence CARBON FOOTPRINT is excessively high - TOTAL WASTAGE!
4. WASTAGE for the customer, public and Australia as a whole is compounded at the power production for wasted electrical power means more has to be produced - EXPANDING THE CARBON FOOTPRINT!
5. Simple "feeling" (cold air blowing) does not mean the system is working efficiently and an inefficient system can be multiplying its inefficiency just by continuing to operate!!!!
6. Cert 3 have a full 4 years training on all refrigeration system types (the heart of the Air Conditioning Equipment) therefore have the understanding, knowledge and skill base to achieve the demanded manufacturers efficiency standards in the field!
7. Cert 2 training competencies do not include the system understanding nor does it cover efficiency criteria needed to achieve ACCEPTABLE CARBON EMISSION LEVELS as design for.
8. Cert 2 training was only for an interim licence for the purposes of installation under supervision of a fully competent person.

Power Consumption

Seeing 25% of power consumption in Queensland (and 40% projected in 2020) is used to cool or heat buildings and split system air conditioners being a very high contributor to that %

And with incorrectly sized (undersized/oversized) and/or inefficient systems contribute to this – correctly sized and installed systems and correct advice to the customer about opportunities to keep the house/business cool or warm due to other means (insulation, glazing, shades etc.) would decrease the energy consumption.

Skills Shortages

Minister's inability to recognise the impact of skills shortages with the introduction of Cert 2 packages has now ensured long term skills shortages will apply to RAC Specialists, eg;

1. One major retailer has a list of 300 installers, the introduction of Cert 2 saw "**299**" RAC Specialists replaced with Cert 2 installers
2. A second major retailer reduced their number of RAC Specialists — significantly replaced with a minimum of 75% of installers now Cert 2 installers
3. One RAC Specialist was forced to retrench all 4 employees and now operates part time.

Ministers must now address the question of how do these RAC Specialists and the many other RAC Specialists in the same position now offer positions for apprentices?

Some Events To Consider That Are Occurring Within The Industry:

- One small business owner now at risk of losing the family home as he has been undercut when quoting by electricians on several jobs.
- Electricians consistently advertise in their local newspapers for the repairs, services and warranties of split system units, This is illegal works they consistently offer.
- Refrigerant mysteriously disappears from A/C Unit between visits of the contracted RAC Specialist.
- Electrician empties refrigerant from unit directly into the environment.
- Builders fail to hire RAC Specialists, instead hire electricians to pre-pipe a nursing home and the end result was to have pre-piping in the rooms for 7kw units instead of the required 2.6kw units.
- A commercial premise has holes in their firewall to accommodate the split systems (Illegal).

Attachments:

Hon Rob. Swarten MP "Letter dated 20/11/2008

Hon Peter. Garret MP "Letter dated 10/12/2008

Hon Rod Welford MP "Letter dated 09/12/2008

ARCTICK Advertising

Please Note

Reclaim Our Trade are not a policing organisation and had the RAC Specialists themselves been included during the consultation processes, many of these issues could have been avoided.

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