



SUBMISSION BY THE

Swimming Pool and Spa Alliance



to the

Department of Climate Change and Energy Efficiency

on

Mandating 'Smart Appliance' Interfaces for Air Conditioners, Water Heaters and other Appliances *(inc. Pool Pumps and Controllers)*

May 2013

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INTRODUCTION

The Swimming Pool and Spa Alliance (SPASA) is a Not-For-Profit organisation representing hundreds of Australian businesses in the swimming pool and spa leisure industry.

Members of SPASA include pool builders, manufacturers, suppliers, retailers, technical servicemen, subcontractors, installers, consultants and other allied trades.

SPASA is also a Registered Training Organisation (RTO) that provides training and assessment to the swimming pool and spa industry nationally. Our courses are designed in consultation with key industry stakeholders and our qualifications and accreditations are highly valued by government, employers and the wider community.

SPASA is a current sitting committee member on the Australian Standards EL-054 Committee and many of our members have participated in the EL-054 Working Group to revise AS 5102 - Performance of Household Electrical Appliances - Swimming Pool Pump-Units (Parts 1 and 2).

BACKGROUND

Since April 2010, Australian and New Zealand energy efficiency regulatory agencies have been offering a Voluntary Energy Rating Labelling Program in relation to swimming pool pump-units under the Equipment Energy Efficiency Program (E3).

The Voluntary Energy Rating Labelling Program allowed energy efficiency labelling in accordance with the Australian Standard AS5102-2009, Performance of household electrical appliances - Swimming pool pump-units:

Part 1: Energy consumption and performance

Part 2: Energy labelling and minimum energy performance standard requirements

At this stage it has not been mandatory to comply or to label swimming pool pump-units, however, a number of suppliers and manufacturers have chosen to proactively label their pump-units in accordance with the Energy Rating Labelling Program. These companies can then display the energy rating label with the appropriate star rating as prescribed under the minimum energy performance levels.

Whilst the commencement of the Voluntary Energy Rating Labelling Program was an initiative the industry strongly supported, pool pump energy performance levels were already significantly improving through market forces and industry innovations that were introduced well before the creation of AS5102.

There were at least thirty five pool pumps participating in the voluntary program at the time of writing this submission.

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SWIMMING POOL AND SPA INDUSTRY OVERVIEW

Owning a swimming pool or spa is part of Australia's social fabric.

Not only are swimming pools and spas an excellent way to learn to swim, lose weight, maintain health, but they continue to be a preferred setting for family and friend gatherings.

The swimming pool and spa industry contributes in excess of \$1 billion to Australia's Gross Domestic Product (GDP), with another \$500 million coming from associated sectors such as spas, pool shops and other service providers as well as employing approximately 40,000 people.

There are approximately 1 million residential pools in Australia and most pool controllers sold in this country are locally made with approximately between 70,000 and 100,000 pool pump-units sold each year.

The swimming pool and spa industry is made up of many trades and professions, not limited to the following sectors;

Manufacturers	Pool Builders
Suppliers	Pool Service Technicians
Retailers	Subcontractors
Consultants	and other Allied Trades
Professionals	

RESPONSE TO REGULATORY IMPACT STATEMENT (RIS)

In response to your invitation, the Swimming Pool and Spa Alliance (SPASA) has consulted with members from the industry and requests that Department of Climate Change and Energy Efficiency (DCCEE) give consideration to the following submission.

CLARIFICATION NOTE:

The Scope in AS/NZS4755 - Demand Response Capabilities and Supporting Technologies For Electrical Products – Part 3.2 refers to Pump-unit controllers, however, the Regulatory Impact Statement (RIS) makes reference to both pool pumps and controllers throughout the document.

Our understanding of the AS/NZS4755 is that pump equipment with speed controls are not subject to the standard.

PROPOSAL TO MANDATE COMPLIANCE WITH AS/NZS 4755

SPASA supports mandating the Energy Consumption and Labelling Program in accordance with the Australian Standard AS 5102-2009 - Performance of Household Electrical Appliances - Swimming pool pump-units BUT submits that multispeed and variable speed pumps "with" and "without" an integrated controller (the system) should be excluded from AS/NZS 4755.

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Factors which may SUPPORT the proposal to mandate compliance with AS/NZS 4755 for swimming pool pumps include:

- *Potential improvement of pricing and incentives* – Prices that reflect the cost of electricity and provide clear signals that encourage consumers to manage their demand
- *Informed Choice* – It may be easier for consumers to assess the costs and benefits of their electricity consumption
- *Innovative Services* – Opportunity for consumers to be offered a wide range of innovative new services by the electricity service providers such as monitors to track and manage their energy use
- *Investment* – Allows electricity wholesalers ability to better manage the grid in a more sophisticated and cost effective way
- *Control* – Provides electricity providers with control over nominated smart appliances to deal with peak periods
- *Data* – Provides electricity providers with unprecedented access to consumer data and behaviour use patterns

Factors which DO NOT SUPPORT the proposal to mandate compliance with AS/NZS 4755 for swimming pool pumps include:

Manufacturing Costs - Adding smart appliance interfaces to products will impose additional manufacturing costs, which will be passed on to every buyer of that class of product.

Integration Costs - The integration of a demand response circuit in pool pumps/controllers would be a costly exercise for manufacturers. The estimated \$10 dollars provided in the RIS is inconsistent with the research and development that will be required by every manufacture on their numerous product lines.

Early indications from a number of companies suggest the following:-

- Research and Development costs for DMR1, DRM2 and DRM4 integrations would attract a different development cost due to their specific functionality
- Some manufacturers have up to 10 pool pump and controller product lines which may require separate investment into research, development and tooling costs
- Estimated manufacturing costs of up to \$100,000 dollars per product line are not unrealistic considering the small volumes of pool pump and controllers manufactured in this country
- Increased retail pricing of the product by as much as \$100

POOL PUMP EFFICIENCY

About 10% of Australian households have a swimming pool or spa.

It is estimated that energy use in domestic swimming pools and spa pools accounts for about 3.3% of residential sector electricity use.

The overall energy and water consumption of a swimming pool or spa depends not just on the efficiency of individual items of equipment but also on the overall design, the selection and integration of the equipment, the controller capabilities and how the pool or spa is managed.

The latest pool pumps being manufactured are becoming much more efficient with the use of multispeed and variable speed pumps being able to use as little as 175 - 250W per hour during the filtration cycle. A Demand Response to shut down of this type of pump would be insignificant.

SPASA supports mandating the Energy Consumption and Labelling Program in accordance with the Australian Standard AS 5102-2009, Performance of household electrical appliances - Swimming pool pump-units BUT submits that multispeed and variable speed pumps “with” and “without” an integrated controller (the system) should be excluded from AS/NZS 4755.

COMPLYING COSTS - PUMP AND CONTROLLER

Adding smart appliance interfaces to pool pumps/controllers will impose additional design and manufacturing costs, which will need to be passed on to every consumer who buys that product.

The Regulatory Impact Statement (RIS) estimates that an AS/NZS 4755 interface, plus supporting hardware and software, would add about \$5 to manufacturing costs per appliance, or \$10 to the retail price. This is contrary to industry’s estimated manufacturing cost of up to \$100 per appliance which will ultimately be passed directly onto consumers at the point of sale.

Most swimming pool manufacturers offer a number of different model ‘ranges’ or ‘series’, distinguished by features such as advanced setting modes, efficiency, durability, quietness and of course price.

As previously noted, some manufacturers have up to 10 pool pump and controller product lines which may require separate investment into research, development and tooling costs.

Unlike the larger multinational companies whose nominated products may be captured under AS/NZS4755, the swimming pool and spa industry is a niche industry with many products and components still being manufactured in Australia.

Basic mathematics dictates that costs will always be based on quantity. Companies with larger product lines will be able to spread the cost of research and development over larger quantities whereas smaller companies may find that their quantities cannot justify additional costs and simply look to discontinue manufacturing of that product or reduce the range.

FILTRATION POOL PUMP / CONTROLLER COMPLIANCE

Some pools have multiple pumps, each serving a different load. The RIS's intention is to limit mandating AS/NZS4755 to the filtration pump only.

A great number of swimming pools and spas constructed rely on the filtration pump to operate additional functions such as; pumping water through rooftop solar heating panels, gas heating, heat pumps and vacuuming the pool just to name a few. These additional functions will automatically cease during a demand response Interruption.

SPASA considers a demand response on a filtration pump that pumps water through rooftop Solar Heating as a significant threat to the swimming pool solar heating sector as solar heating installations rely on the sun and becomes ineffective if it is not able to operate in optimal summer conditions.

The RIS also raises the possibility of exempting pumps that cannot be used for filtration from the requirement to have an integral AS/NZS 4755 interface installed. Rather than being cost effective as suggested in the RIS, this may in fact increase costs, not limited to; manufacturing similar products with different requirements on the same assembly lines, packaging, registration, literature and marketing.

Further consultation with industry is required in this area.

PREFERENTIAL SIGNALLING

Over 1 million air conditioners and approximately 370,000 various types of hot water heaters are sold each year in Australia compared with approximately 70,000 pool pumps.

Industry was advised during the public meeting consultations that preferential signalling should be expected. Participants were advised that signalling to pool pumps/controllers would occur prior to the signalling of more energy intensive air conditioners and hot water systems.

In this regard, the swimming pool and spa industry is simply seen as a convenient and easy target even though pool pump load demand is significantly less during the peak periods when compared with more energy intensive appliances above.

Preferential signalling, as a blanket approach to pumps/controllers raises other concerns. It is foreseeable that homeowners who purchase multi and variable speed technology or introduce other innovations (*and do not activate the interface on their pump/controller*) and achieve significant energy reductions will be penalised when compared to homeowners who have activated the interface on a single speed pump where the energy reductions are much less.

As previously stated, SPASA recommends that multispeed and variable speed pumps “with” and “without” an integrated controller (the system) should be excluded from AS/NZS 4755.

ELECTRICITY NETWORK OPERATORS

There is no doubt that mandating AS/NZS4755 will support the development of a large scale direct load control strategy as a viable and cost-effective alternative to the conventional means of meeting peak load.

If mandated, AS/NZS4755 will provide network operators with unprecedented control over smart appliances and homeowner data.

Control will largely fall in three areas:

1. *Infrastructure Planning* – Operators will be able to plan infrastructure investment using DRM data. It is possible that this may provide motivation by network operators to only invest in bare minimum infrastructure using the DRM controls rather than investment in infrastructure that is in line with population growth and homeowner and market expectations.
2. *Incentives* - There is no present data or guarantee that operators will offer incentives for participation in Demand Response programs, whether in form of rebates for appliances, regular cash payments or access to more attractive tariffs.
3. *Other DRM capabilities* - The minimum capability required to comply with AS/NZS 4755 is DRM1. There is no guarantee that operators will support higher capabilities (e.g. DRM2, DRM3 and DRM4).

ELECTRICITY RETAILERS

Electricity retailers do not directly bear the costs of network investment, but they do have to pay the Distribution Network Providers (DNSPs) for use of the network. The other major part of their cost is wholesale energy.

It is of significant concern as stated in the RIS that it may suit Retailers to call DRM1/2/3/4 events at times when there is no network stress but when wholesale energy prices are high. It may also suit retailers to call DRM4 events (to bring forward pool pump operation) at times when the cost of energy under their agreement with the DNSP is low, zero or even negative.

These events are at odds with the intention and concept of AS/NZS4755, and there is an strong argument that if this practice was allowed to occur that affected companies and homeowners would be underwriting additional electricity “retail profits” at industries cost.

VALUE OF PROPOSAL – COST REFLECTIVE PRICING (Time of Use Tariffs)

Modelling within the RIS suggests an estimated \$60 - \$120 saving per household per year from 2014 – 2028 for connecting to a demand response tariff IF the benefits were passed on.

These savings are diminutive to the householder when compared with the savings that a homeowner would receive switching to a variable speed pool pump (approx. \$400-\$700 per year).

Time of Use (TOU) tariffs would penalise homeowners who have not activated the interface on their pump or controller BUT achieve significant energy reductions through multi and variable speed technology or through other innovations. As previously tabled, this would be in stark contrast to homeowners who have activated their interface on a single speed pump where the energy reductions achieved are much less.

As previously stated, SPASA recommends that multispeed and variable speed pumps “with” and “without” an integrated controller (the system) should be excluded from AS/NZS 4755.

AN INDUSTRY ALREADY UNDER STRESS

Residential Swimming Pools Spas are considered a luxury discretionary spend by some consumers whilst SPASA would argue that such a purchase supports a healthy, therapeutic and family focused lifestyle.

Consumer spending patterns indicate that our industry competes directly with the camping, motorhome/caravan and holiday sectors. Such competition is primarily driven by an ageing population, property affordability and concerns relating to costs associated with swimming pool and spa ownership.

Over recent years the swimming pool and spa industry in Australia has been exposed to a number of cost burdens resulting in considerable market stress. Costs have not been limited to regulatory requirements, compliance, carbon tax, bureaucracy, Codes and Australian Standards.

Despite such challenges, much of the design and manufacture of pool pump-unit controllers has continued to be done in Australia. However, unlike larger multinational companies, Australian manufacturers are competing in an environment of diminishing margins.

Unsurprisingly, many Australian companies will need to rethink their business strategy.

Some Australian suppliers and manufacturers may choose to withdraw from the market resulting in a decline in the number of pump models available. Such impacts may have consequential effect on revenue, employee retention and competition in the market place.

There is a very real risk that smaller companies may decide to relocate their business, and jobs, to overseas markets offering higher profit margins with less regulatory control.

Any additional costs mandated and borne by Australian swimming pool and spa manufacturers may lead to some companies considering a slow exit from the market whilst providing an invitation to larger international companies with larger budgets to enter the Australian market.

PROPOSED IMPLEMENTATION

The RIS suggests a timeframe of mid-2013 to mid-2014 if the measures in AS/NZS 4755 are implemented.

SPASA considers these proposed dates as extremely ambitious and not reflective of the swimming pool and spa industries need to consider the following:

Planning and Design	General Labelling
Interface Communication Platform	Point of Sale Labelling
R & D for the full range of products on offer	Markings
Registration	Manufacturers Literature
Packaging	Testing

If mandated, SPASA submits that mid 2015 is a more realistic and achievable target implementation timeframe.

Again, SPASA recommends that multispeed and variable speed pumps “with” and “without” an integrated controller (the system) should be excluded from AS/NZS 4755.

TRANSITIONAL ARRANGEMENTS

The introduction of AS/NZS 4755 will have significant implications for the Australian swimming pool and spa industry as well the importation of products by Australian suppliers.

It should also be noted that manufacturers and suppliers with longer product development lead times or longer overseas supply chains could have more difficulty in ensuring that all their models comply by the proposed target implementation date of *June 2014*.

A transition period of not less than 12 months should be permitted post the mandatory implementation AS/NZS4755 to allow the swimming pool and spa industry sufficient time to adjust.

A 12 month transition period would provide for the selling down of stock in the supply chain as well as the creation of labelling, markings, manufacturer literature and product training.

IMPACT ON ENERGY PRICES & NETWORK COSTS

Australia has already experienced electricity regulatory and market failures. These failures have been thoroughly detailed in the RIS and the creation of AS/NZS4755 is in some way a consequential response to address just some of these problems.

AS/NZS 4755 is unique in that it is the first standard of this kind published. There are no comparable smart appliance interface standards available anywhere else in the world at present.

Whilst there are significant long term costs and implications placed on industry if the recommendations within the RIS are adopted there appears to be no guarantees provided by operators and retailers of electricity and how they will react.

Examples include:

- Australian utilities experience new Infrastructure network and management failures
- Australian utilities may not develop the commercial & technical aspects of demand response strategies
- Australian utilities do not properly manage infrastructure investment and roll out

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- Utilities outside NSW, Victoria and Queensland (which already have near-complete coverage by communications platforms) do not develop the necessary communications platforms
- Competing international standards that may emerge to fragment the smart appliance market
- New technology (innovations) replaces RJ45 technology
- Insufficient Incentives and rewards provided for consumers to participate
- There is no guarantee that operators and retailers will participate with DRM programs other than DRM1

DEMAND RESPONSE MODES FOR THE SWIMMING POOL INDUSTRY

Demand Response Modes will enable shifting of the operation for swimming pool pumps outside peak times for no more than about 40 hours per year.

There is nothing in the RIS to suggest that the 40 hour target will not increase over time due to: 1) additional market failures, 2) related and unrelated electricity network issues, or 3) additional air conditioning, water heater and electric vehicle charging loads.

There is also nothing in the RIS to suggest what the maximum period for a signal will be at any one time. If mandated, SPASA submits that a Demand Response Event should not exceed 2 hours on any given day.

Consumers who choose to participate in demand response programs are likely to experience one or more events each year where their pool pump operations has been modified as per the DRM signal. The RIS stipulates that pool owners are unlikely to notice operating changes at all during demand response events. Whilst this statement may have some merit the observation does not take into account the complexities surrounding human behaviour, expectations, needs and the actual set up of specific swimming pools.

A vast number of swimming pools and spas rely on the filtration pump to operate additional functions such as; pumping water through rooftop solar heating panels, gas heating, heat pumps and vacuuming the pool just to name a few. These additional functions will automatically cease during a demand response Interruption.

Again, SPASA considers a demand response on a filtration pump that pumps water through rooftop Solar Heating as a significant threat to the swimming pool heating sector as this installation relies directly on the sun and is completely ineffective if it is not able to operate in optimal conditions.

Shifting the operation of swimming pool filtration pumps that operate solar heating outside peak times for even the smallest time may have a sizeable impact on that products ability to be sold and operate as intended.

MANUAL OVERRIDE

Manual over-ride capabilities for all products (except air conditioners) are recommended but not mandatory for products complying with AS/NZS 4755.

Pool owners will have the option (subject to pool pumps capability to override) to manually override an interruption to obtain up to one hour of operation to allow for increased bather loads or simply to boost chlorination during a demand response event.

With the exception of pool pumps/related controllers, almost all of the nominated smart appliances covered by the RIS and AS/NZS4755 do not require any onsite follow up other than if there is a problem with the appliance.

The swimming pool industry is unlike most other industries.

Many thousands of pools are serviced on a daily basis right across Australia by Pool and Spa Service Technicians.

Pool and Spa Service Technician tasks are not limited to the following functions onsite:

Chemically balancing the pool or spa	Pool Plumbing / Hydraulics pressure testing
Vacuuming or scrubbing the pool or spa	Identifying leaks
Replacing a pump/s	Repairs to equipment
Replacing a controller/s	Testing of equipment

A Demand Response during any of these activities (even when considering the manual override) may force individuals to simply unplug the RJ45 connector from the Demand Response Enabling Device (DRED) so that Pool and Spa Service Technicians may continue to deliver their services.

As previously stated, SPASA recommends that multispeed and variable speed pumps “with” and “without” an integrated controller (the system) should be excluded from AS/NZS 4755.

SCOPE OF THE PROPOSAL

Air conditioners

Over 1 million air conditioners are sold each year in Australia.

There are approximately 100 suppliers in Australia supplying approximately 80 per cent of all air conditioning units sold with the vast majority being manufactured overseas before being imported.

Data provided within the RIS estimates that the proportion of Australian households with at least one air conditioner was 56 per cent in 2012 and is projected to exceed 70 per cent by 2020.

SPASA agrees that the scope of the proposal should include air conditioners as they are the largest contributor to peak demand.

Water heaters

Over 370,000 water heaters were sold in 2011.

Most electric storage water heaters are made in Australia with other types being assembled from a mixture of imported and assembled components.

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Water heating is the second largest energy user in the average Australian home, behind only space heating and cooling. It accounts for approximately a quarter of household energy use and greenhouse gas emissions.

SPASA agrees that the scope of the proposal should include water heaters as they are the second largest contributor to peak demand.

Electric Vehicle Chargers

Whilst there is a growing trend towards electric vehicles, there is insufficient data available due to there being an undeveloped market. Despite the lack of information, it is anticipated that related electric vehicle chargers would have a significant negative impact to peak load demand in the foreseeable future.

Electric vehicle chargers, if broadly introduced and accepted in the market would make them the highest energy consuming device in most homes.

SPASA agrees that the scope of the proposal should include electric vehicle chargers due to their load potential to impair the electricity network.

Swimming Pool Pumps

Approximately 70,000 to 100,000 pool pumps are sold in every year in Australia.

It is estimated that energy use in domestic swimming pools and spa pools accounts for about 3.3% of residential sector electricity use.

The latest pool pumps being manufactured are becoming much more efficient with the use of multispeed and variable speed pumps being able to use as little as 175 - 250W per hour during the filtration cycle. A Demand Response to shut down of this type of pump would be insignificant.

SPASA supports mandating the Energy Consumption and Labelling Program in accordance with the Australian Standard AS 5102-2009, Performance of household electrical appliances - Swimming pool pump-units BUT recommends that multispeed and variable speed pumps "with" and "without" an integrated controller (the system) should be excluded from AS/NZS 4755.

MARKET COMPETITION – COST IMPLICATION

Compliance costs are already high for pool pumps. Currently pool pumps have to comply with Electromagnetic Compatibility (EMC) and Electrical Safety Standards. It is also expected that pool pumps will also be required to comply with Minimum Energy Performance Standards (MEPS) /Energy Star Labelling (currently voluntary).

The associated research and development costs would reduce competition by restricting new companies and products being developed.

Affected product retail prices would have to increase by as much as \$100 as a consequence of manufacturing costs. As previously advised, estimated manufacturing costs of up to \$100,000 dollars per product line are not unrealistic considering the small volumes of pool pump and controllers manufactured in this country.

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TECHNICAL AND FUNCTIONAL ISSUES

It would be difficult to include any mandated functionality proposed into the pool pump itself as motors are mass produced in Asia for a variety of uses, not limited to pool pumps. A specialised pool pump product catering only for the Australian market would make them potentially unviable.

Unlike other nominated appliances, the RIS makes reference to swimming pool pumps and controllers (two related products).

It is of critical importance to note that some pool equipment set-ups have either a filtration pump with no controller (liquid or granular chlorine) or a filtration pump connected to a controller (eg. chlorinator). Both these pool set-ups are common place in Australia.

Unlike other nominated appliances proposed within the RIS, the cost to the swimming pool industry would double if both the pool pump and the controller were to be mandated under AS/NZS4755. *See clarification note on page 4*

As previously stated, SPASA recommends that multispeed and variable speed pumps “with” and “without” an integrated controller (the system) should be excluded from AS/NZS 4755.

SPASA also strongly submits that additional consultation with industry is required.

COMMERCIAL POOLS

Although AS/NZS 4755.3.2 is intended to apply to products generally used in the residential pool market, some may end up in commercial applications, where strict requirements on filtration and sanitisation make interruption of operation unworkable and unacceptable.

If so, the installer need not activate the interface BUT the commercial operator would still need to pay the additional cost, because every unit (if mandated) would be sold with an interface.”

Further consultation in this area is required but again SPASA recommends that multispeed and variable speed pumps “with” and “without” an integrated controller (the system) should be excluded from AS/NZS 4755.

HOUSEHOLDS

The RIS estimates that incorporating AS/NZS 4755 interfaces would add about \$10 to appliance prices – consultation with industry suggest that costs would be closer to \$100 representing somewhere between 10 to 20% for swimming pool pumps and controllers.

The RIS also states that activation costs for the homeowner would be in the order of \$50 to \$180 and goes onto say that these are likely to be met by the Distribution Network Service Provider (DNSP) in return for an agreement to participate in a DLC program. Despite this statement, there are no guarantees provided that such costs will be met by the DNSP.

Consumer participation will be voluntary; however, householders who decide to participate will need to make decisions about the DRMs they wish to make available for control. This is highly dependent on the provision that the electricity providers and retailers will in fact offer the un-mandated DRM2, 3 and 4.

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GOVERNMENT SUBSIDIES FOR THE SWIMMING POOL INDUSTRY

AS/NZS 4755 is unique in that it is the first standard of this kind published. There are no comparable smart appliance interface standards available anywhere else in the world at present and industries nominated can be excused for feeling that they are participating in a mandatory trial with their own funds.

Both State and Federal Governments provide a wide range of generous financial subsidies for renewable energy and energy efficiency schemes such as wind farms and Photovoltaic cells, just to name a few. The lack of base load capability resulting from these renewable energy initiatives has been widely criticised when compared to the significant government subsidised investment.

Mandating AS/NZS4755 will have a significant financial impact on all affected industries, but in particular to the swimming pool and spa industry. This is mainly due to our size as well as the small volume of products manufactured when compared to the other appliances nominated in AS/NZS4755.

Accordingly, if AS/NZS4755 is mandated for pool pumps/controllers, SPASA would argue strongly that the Federal Government should create a “*Transitional Implementation Subsidy Fund*” to financially support the swimming pool industry with implementing this “*world first standard*” as is the case with similar renewable energy and energy efficiency schemes.

RIS RECOMMENDATIONS

- a. All air conditioners (up to 30 kW cooling capacity), electric, solar-electric and heat pump water heaters, pool pump-unit controllers and electric vehicle chargers manufactured in or imported to Australia after June 2014 should be equipped with AS/NZS 4755 smart appliance interfaces.

Whilst SPASA sees significant merit in energy intensive appliance (air conditioners, electric vehicle chargers and water heaters) being equipped with a smart appliance interface we believe a more motivating and sustainable approach would be to introduce tax effective and/or market based incentives to encourage manufacturers to adopt newer technology. In this regard, SPASA maintains that multispeed and variable speed pumps “with” and “without” an integrated controller (the system) should be excluded from AS/NZS 4755.

Also see comments for “Transitional Arrangements”.

- b. For air conditioners, the measure should be implemented by mandating compliance with the AS/NZS 4775.3.1:2012 Interaction of demand response enabling devices and electrical products—Operational instructions and connections for air conditioners.

See response “a”

- c. From the implementation date, all air conditioners within the scope of AS/NZS 4755.3.1 should be 'demand response capable' within the meaning of AS/NZS 3823.2:2009 Performance of electrical appliances—Air conditioners and heat pumps; i.e. fully compliant with AS/NZS 4755.3.1 without the need to purchase further parts or components.

See response "a"

- d. For pool pump-unit controllers, the measure should be implemented by mandating compliance with AS/NZS 4755.3.2:2012: Interaction of demand response enabling devices and electrical products—Operational instructions and connections for swimming pool pump-unit controllers.

See response "a"

- e. For electric and electric-boosted water heaters, the measure should be implemented by mandating compliance with AS/NZS 4755.3.3 Interaction of demand response enabling devices and electrical products—Operational instructions and connections for electric and electric-boosted water heaters (forthcoming).

See response "a"

- f. For electric vehicle chargers, the measure should be implemented by mandating compliance with AS/NZS 4755.3.4 Interaction of demand response enabling devices and electrical products—Operational instructions and connections for charge/discharge controllers for electric vehicles (forthcoming).

See response "a"

- g. To maximise the probability that AS/NZS 4755-compliant appliances will be activated effectively and rapidly, governments should ensure that AS/NZS 4755 standards for demand response enabling devices are finalised as soon as possible.

SPASA supports mandating the Energy Consumption and Labelling Program in accordance with the Australian Standard AS 5102-2009, Performance of household electrical appliances - Swimming pool pump-units BUT recommends that multispeed and variable speed pumps "with" and "without" an integrated controller (the system) should be excluded from AS/NZS 4755.

- h. Governments should work with the electricity supply industry to promote to appliance buyers the value of higher levels of demand response in appliances (above DRM1, the minimum mandatory level).

SPASA strongly supports governments working with electricity providers to promote the value of higher levels of demand response in appliances to buyers; however, it is predictable that the financial and energy saving benefits of multi and variable speed pumps may overshadow incentives offered under DRM1.

- i. To support the above, governments should implement the mandatory disclosure of demand response capability levels in point of sale information (on energy labels or by other means).

Mandatory disclosure of demand response capabilities at the point of sale is purposeless as similar information is likely to be provided on appliance packaging, instruction manuals, brochures or associated labelling.

- j. Governments should commence a review of progress on large scale residential sector demand response and direct load control programs, not more than 3 years after implementation of the proposed measure.

Electricity Providers and Electricity Retailers have participated in various ways in the creation of AS/NZS4755. Whilst the RIS includes modelling on historical energy saving incentives provided by electricity providers, there are no actual projections on actual demand response tariffs.

SPASA does not believe it is unreasonable to expect that actual demand response tariffs should be made available prior to any mandatory requirement for the inclusion of demand response functionality into products.

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