

29<sup>th</sup> September 2023

Mr Terry Niemeier  
Director  
Program and Market Development - Safeguard  
NSW Office of Energy and Climate Change

Dear Mr Niemeier,

Thank you for the opportunity to provide a submission to the NSW Energy Savings Scheme Water Heaters Consultation.

Dux is incredibly supportive of the NSW Government's ambition to reduce household electricity bills and greenhouse gas emissions. Dux commends the NSW Government for its open consultation on the ESS. Dux thought the online session set a new technology benchmark for such forums and David Pryor from NSW Office of Energy and Climate Change (OECC) was clearly across the detail. Well done!

Dux agrees that urgent rule changes are required to safeguard the integrity of the ESS. Whilst this is a step in the right direction, further urgent measures are required to safeguard both consumers and the scheme.

### **About Dux**

By way of introduction, established in 1915, Dux Hot Water is the oldest water heater manufacturer in Australia. Since that date, millions of Dux water heaters have been installed in NSW.

Overwhelmingly, Dux revenue comes from Australian made products, manufactured locally in our state-of-the-art Moss Vale factory in the NSW Southern Highlands.

Dux is one of the largest private employers in the area and since the closure of Electrolux Refrigeration plant in Orange in 2016, we're the only manufacturer of large appliances remaining in regional Australia. Dux has never sought nor received any type of Government support or assistance.

Dux manufactures or markets a full range of electric water heaters including Electric Storage, Gas Storage, Gas Continuous Flow, Solar, Heat Pump and Commercial water heaters. Our business purpose is that our customers have such a good experience with our products, that they will insist on another Dux manufactured water heater. Dux also strives to challenge the status quo to provide our customers with innovative products that save money and the environment.

### **Question 1 - What are your views on amending the baselines for calculating energy savings from residential and small business hot water upgrades? Where possible, please provide evidence to support your position**

Whilst it is difficult to comment without all of the calculations, Dux supports baseline changes where they align with the estimates of other jurisdictions and reflect realistic usage.

**Question 2 - What are your views on the additional co-payments for the hot water system installations and upgrades? Where possible, please provide evidence to support your position**

Even at \$200 the co-payment is far too low.

ESCs are not NSW Government rebates. As David Pryor said in the online consultation, ESS is a “white certificate mechanism”. ESCs are funded by electricity retailers and large electricity users like Dux, who pass these costs on to customers in the form of higher prices. With cost-of-living pressures top of mind for many NSW households, it is vitally important the cost burden from such a scheme is safeguarded for the best use of those funds. I understand that this is top of mind for the NSW Government too.

In terms of supporting the position of a higher co-payment, Dux investigated other clean energy subsidy schemes from around the world. The clear standout was the US Inflation Reduction Act (IRA).

In January 2023, The Economist magazine quoted The Boston Consulting Group, that “the IRA will be the most significant policy driver for global emissions reduction this century—or perhaps ever.” Further, in June 2023, Science magazine modelling on the IRA showed “economy-wide emissions drop 43 to 48% below 2005 levels by 2035 with accelerated clean energy deployment.” This has resulted in huge capital inflows to the USA.

Australians don’t even need to look far for the design of this scheme. Australian scientist and MIT engineer, Saul Griffith advised the Biden Administration on the clean energy strategies for the IRA. In his book, *Electrify - An Optimist's Playbook for our Clean Energy Future*, Griffith says "The Government doesn't have to pay the full cost of every item to make them cost effective, just enough to tip the market in favour of decarbonised solutions with the right subsidies that are a fraction of the cost of the whole item."

US homeowners can now claim a tax credit of 30% (net of all subsidies) on an approved heat pump or many other approved green residential appliances. Unlike the ESS scheme, rebates are not allowed to overlap. The claimable amount is capped at 30% of its total upfront cost. Thus, the homeowner pays 70% of the upfront investment cost. Griffith calls this a multiplier, whereby the homeowner contributes a minimum of \$2.33 for every dollar of subsidy.

I completely appreciate the point of view expressed by David Pryor in the online consultation, when he said, “How do we balance the grants and the rebates with the market-based mechanisms? That’s a bigger question for another time... It’s really hard to start these methodologies.”

The current out of pocket required under the NSW ESS scheme is ridiculously small relative to the value available. As at daily spot price from September 2023, the NSW homeowner purchasing one of the scheme’s top selling heat pumps is eligible for \$2,111 in subsidies (STCs \$918, ESCs \$1,193] for a homeowner contribution of \$33 (\$30 ex GST). In this instance, the overlapping STC and ESS subsidies are providing nearly \$64 for every dollar of homeowner contribution. That’s clearly unsustainable.

However, if the proposed change in the baseline calculation reduces the ESCs generated by 25% and the minimum co-payment is increased to \$200, it still won’t be enough. The multiplier will still be uneconomic with any subsidy still outweighing the homeowner contribution. Whilst this might be

acceptable in means tested low-income scenarios, whilst it is available otherwise, it will continue to attract unscrupulous operators with their unscrupulous practices.

For the long-term integrity and sustainability of the scheme, Dux recommends that ESS caps the claimable amount inclusive of all available subsidies or rebates to 30% of its upfront capital cost. Accredited Certificate Providers (ACPs) could easily oversee this process.

If the NSW Government insists on a stand-alone co-payment model of overlapping rebates, \$600 (ex GST) would be about half what a customer would pay for a traditional electric storage water heater installed.

### **Question 3 - What are your views on the two transition options? Where possible, please provide evidence to support your position**

The rule changes should be introduced with immediate effect. IPART is already well aware of the bad behaviour of some unscrupulous operators. Unfortunately, this consultation paper is likely being used now by those same unscrupulous operators to close sales for fear of missing out before the rules change.

In addition to the rule changes proposed, more are urgently required to protect customers from these unscrupulous operators.

#### **A. Poor customer outcomes**

Unsolicited approaches are being made to customers from door knockers and telemarketers with high pressure sales tactics. I've personally been called twice recently with the callers saying that they're from either the NSW Government or the Department of Energy! When I ask for their details, they hang up.

Uninformed customers are being switched from electric storage water heaters on relatively cheap controlled off peak tariffs to heat pumps on more expensive continuous tariffs. Whilst they might be using less electricity, they could have the poor outcome of **higher electricity bills**.

OECC needs to be aware of this problem. Over 20,000 heat pumps have been installed in the last 3 months in NSW alone. Many customers wouldn't have received their quarterly electric bill yet, so will be still unaware. Where tariffs are changed, this needs to be fully explained to the homeowner before work commences.

Many customers are moving from large water heaters to small water heaters. They will have **less hot water** available. Some customers may find this a poor outcome.

Heat pumps generate **noise** and may operate in periods where latent heat energy is available including at night. Some customers may find this a poor outcome, particularly when located near a window whilst trying to sleep. The same applies to any locations near neighbour's windows.

Dux is aware of instances where customers have complained about their experience only to be told that they are only eligible for a \$33 refund and then need to find a new water heater. They need protection.

**Recommendation** – ACPs must seek and upload in IPART's TESSA portal a signed declaration of informed consent for all unsolicited approaches like door knocking or telemarketing. The purchaser must declare that the seller has properly informed them about relevant items like a change of electricity tariff and possibility of higher costs, having less hot water if moving to a smaller water heater and the noise potential, even at night.

## **B. Future warranty concerns**

In the online consultation forum, David Pryor noted, “ACPs are responsible under the Australian Consumer Law (ACL) for warranties. There can’t be a vacuum left in this space.”

Under the current market model for the supply of heat pumps to consumers, Australian licenced Plumbers install recognised brands of heat pump products for consumers after purchasing the product from recognised Australian Plumbing Merchants. This model ensures that both the Plumbing Merchants (seller of the product) and Manufacturers (including both actual manufacturer and importer if the actual manufacturer is overseas) of the product are liable to the consumer for the consumer's rights in relation to the product under the Australian Consumer Law.

However, if the Plumber or suitably licensed Electrician and in some instances a Refrigeration Mechanic (installer of the product) installs a heat pump purchased by the consumer from an Accredited Certificate Provider (ACP) who is no longer trading and the product installed is not of a recognised brand and where the actual overseas manufacturer is unknown or unidentifiable, then according to our consumer law advisor Michael Corrigan, senior partner at Clayton Utz and one of Australia's leading consumer lawyers, the consumer will have real difficulty and likely no success in seeking redress for any problems with the product or otherwise enforcing their rights under the Australian Consumer Law.

This is because in these types of situations, there is no recognised and identifiable seller or actual manufacturer within Australia.

Unlike LED light bulbs, heat pumps and water heaters are high value items and customers need proper protection. The warranty protection provided to participants of the ESS and the Victorian Upgrade program looks far less certain than those protections applicable to the traditional water heater industry.

The most recent statutory filings with ASIC, show that Australian manufacturers Dux, Rheem and Rinnai combined have more than \$36m in audited warranty provisions. According to Australian accounting standards, provisions are audited twice a year to make sure that they are sufficient against product risk in the market place. Consumers are further protected under the ACL, should any of these manufacturers fail. In that instance the last seller assumes the warranty liability. We’re talking about major companies like ASX listed Reece, who would be there to ultimately protect the consumer.

It's likely that reputable ACPs have proper warranty provisions and would satisfy such an audit. Our concern should be for those that don't. If we look to a similar industry, like solar electricity (PV) there is a long list of sellers that have closed up shop and left consumers without any warranty protection. We want to avoid a repeat of this situation for heat pump purchasers under the ESS.

**Recommendation** – ACP warranty provisions must be audited to Australian accounting standards and deemed sufficient to protect the consumer for the balance of the warranty for all products in the field by that ACP. Where there is insufficient warranty provision, an insurance arrangement, similar to the NSW Home Warranty Insurance Scheme, should be purchased by the ACP to protect the consumer.

Alternately, the ACP must provide the OECC with sufficient security to protect customers. The balance of any security would be released when all protections under Australian Consumer Law no longer apply to those products, almost like liquidated damages are retained and then released after a period.

### **C. Repairs, speed of repairs and spare part availability concerns**

The availability of spare parts and repairs is one of the nine consumer guarantees under the Australian Consumer Law. Manufacturers and importers must guarantee they will take reasonable steps to provide spare parts and repairs for a reasonable time after purchase. In defining 'reasonable', NSW Fair Trading refers to a refrigerator and that "it would be reasonable to expect that spare parts for a refrigerator will be available for many years after its purchase." The same logic would apply to a heat pump.

The term 'reasonable' is also used by NSW Fair Trading regarding the time taken to undertake repairs. In fact, the specific example cited is a water heater. "For example, you would be required to respond quickly for a repair to an essential item, such as a water heater."

Where water heaters are sold through Plumbing Merchants, they are very well supported. Plumbing Merchants like Reece have hundreds of branches and abundant stock of spare parts. Thousands of Plumbers are familiar with the water heaters sold through these networks, so Plumbers possess the skills and knowledge to get customers back into hot water quickly.

The same can't be said about imported heat pumps that have been direct imported by only a few companies. There is neither the established spare parts network nor the thousands of Plumbers that are familiar with the product or its fault finding. It would be unreasonable for a consumer to wait for 2 weeks for the airfreight of a component from China, if indeed it is still available and someone is responding.

Heat pumps have many complex components, so this could easily become a very significant issue. For example, the Dux heat pump has roughly 75 additional parts to a standard electric storage water heater. Items like a compressor, controller, evaporator, TX valve etc. Of these 75 additional parts, a failure of roughly 25 or 1/3<sup>rd</sup> of them could disable the heat pump with the customer having no hot water. All heat pumps will have the same criticality of spare parts. However in the Dux example, if a part fails, consumers are able to rely on the plumbing merchant network for a prompt supply of a spare part.

**Recommendation** – ACPs must hold a range of spare parts in sufficient quantity to support a reasonable proportion of units in the field for their warranty period. Alternately, they should carry an insurance policy or bond to protect the customer with a replacement heat pump in a similar manner to the NSW Home Warranty Insurance Scheme.

### **D. No applicable MEPS for Heat Pumps**

Without Minimum Energy Performance Standards (MEPs) for heat pumps, performance is being "gamed" to maximise rebates at the expense of user experience.

Many parts of heat pump testing are unclear, so open to interpretation. Without clear testing guidelines, it can be exploited for commercial benefit. Manufacturers wanting to provide outstanding customer experiences are being disadvantaged by those seeking maximum rebates and/or exploit loopholes with little regard to the long term customer experience.

Some heat pumps have permanent boost modes, although this is explicitly not allowed under the Renewable Energy Determination. This is not declared to the Clean Energy Regulator and is not the default mode of the water heater. This mode may only be available through an app. With one unnamed heat pump, we discovered that when the app is turned to permanent boost mode, it will stay in that mode forever until subsequently changed in the app.

In our testing lab, Dux discovered 5 other grey areas, that without clear guidelines, increases rebates at the expense of customer experience (and energy savings). Dux refused to exploit these loopholes when modelling rebates for our heat pumps. Dux doesn't intend to share these in open correspondence, in case it becomes a guide for unscrupulous operators. Dux would be prepared to share these findings with the NSW Government at a subsequent meeting.

**Recommendation** – Provide a clear testing guideline for heat pumps and regularly monitor compliance including only purchasing product for testing from the field.

### **E. Compliance and Governance**

Just over 40,000 heat pumps have been installed in NSW from January to end August 2023. If we compare August 2023 with August 2021, monthly heat pump installations have grown 26-fold in just two years from 355 to 9,281. NSW has already installed more heat pumps this year than Great Britain in 2021.

Water heaters are inherently dangerous appliances. They are not inert Pink Batts. If not fit for purpose or installed properly by qualified tradespeople, they can produce catastrophic outcomes like catch fire, explode, create electric shock or legionella etc. Heat pumps can also do all of that and more with some units containing explosive R290 refrigerant gases.

NSW needs to do much more on governance. In the consultation, David Pryor said "We're also looking at collection of installer data and product details in TESSA, IPART's system for collecting information on the scheme. Right now, we can't trace the actual tradesmen, who does the work, and that's an important part of the compliance chain for the scheme. We also don't record product details in TESSA."

This is very concerning from a governance perspective and needs to be rectified urgently. Victorian plumbing compliance is already far better and more regulated than NSW on two fronts:

1. Solar Victoria imposes a 5% audit regime 6 months after installation, albeit they acknowledge that the target will be difficult to achieve due to the fast ramp up of the heat pump program.
2. All plumbing work over \$750 including labour and materials in Victoria requires a Plumbing Compliance Certificate be lodged with the Victorian Building Authority (VBA). The VBA inspects jobs and there is a long established, effective compliance scheme in place.

For more than 10 years, Dux has managed the water heater installation service for Bunnings. During that period, tens of thousands of water heaters have been installed. A network of licensed plumbers, further trained by Dux use a work flow based compliance system. Every installation is subject to a desktop inspection from Dux's compliance team. Additionally, Dux targets a physical inspection of at least 5% but up to 10% of all installations.

OECC must ensure that ACPs have a similar compliance framework in place to retain their compliance and ensure the safety of consumers.

**Recommendation** – ACPs must use a qualified Plumber and with some products an additional Refrigeration Mechanic to complete a comprehensive desktop review of every installation, including all previous installations and declare that each installation is safe and fully compliant with all regulations. Further, ACPs should physically inspect 5% of installations per month to retain their compliance.

TESSA must be urgently capture both the installer details and product details so that IPART has a record to easily identify repeat poor products and/or installers under their governance responsibilities.

Dux thanks you for the opportunity to provide this feedback on the proposed changes and recommend additional changes.

Should you have any queries or questions, please don't hesitate to contact me at your earliest convenience.

Yours sincerely

A handwritten signature in blue ink, appearing to be 'ST', with a long horizontal stroke extending to the right.

Simon Terry  
Chief Executive Officer