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07 October 2025

Shagofta Ali
Director Strategy and Policy, Climate and Environment
Protection
NSW Environment Protection Authority

Sent via email: [REDACTED]
CC: climatechange.review@epa.nsw.gov.au

Dear Shagofta,

Essential Energy submission on the NSW EPA's Proposed Climate Change Licensee Requirements and Climate Change Mitigation and Adaption Plans: Proposed Mitigation Requirements

Essential Energy appreciates the opportunity to provide comment on the NSW Environmental Protection Authority (EPA) Proposed Climate Change Licensee Requirements and Climate Change Mitigation and Adaption Plans: Proposed Mitigation Requirements.

Our business is wholly owned by the NSW Government and is major distribution network service provider (DNSP) managing over 183,000 km of powerlines, covering 95% of New South Wales (NSW) and parts of southern Queensland, serving more than 900,000 customers. The successful decarbonisation of NSW's businesses will involve substantial electrification of existing business processes that burn fossil fuel, and we are focused on playing our part in facilitating this transition.

Essential Energy believes that successfully delivering Australia's energy transition will require a rapid, scaled and coordinated decarbonisation of the commercial and industrial sectors. This presents a substantial challenge both for individual businesses and society as a whole. However, putting in place cohesive policy that seeks the lowest cost pathway for the transition will also present businesses with opportunities to grow, and will compliment broader initiatives to ensure communities and businesses across NSW and Australia continue to prosper long into the future.

We note the important role that the NSW EPA has facilitating emissions reduction across its licensee businesses. We are supportive of the intent behind the NSW EPA's approach to Climate Change Licensee Requirements and Adaption Plans. However, we believe that additional financial support and incentives, beyond the scope of the EPA's current plans, will be necessary to ensure NSW businesses are able to remain competitive while they decarbonise.

We encourage the NSW EPA and the NSW Government more broadly to provide improved financial incentives for commercial and industrial businesses that will compliment the new Licensee Requirement and accelerate the implementation of decarbonisation and electrification projects across businesses in NSW. Specifically, we believe that there is a need to better incentivise the decarbonisation of industrial heat processes, which could be achieved through targeted grants and the amendment of existing incentives around the NSW Energy Savings Scheme and Peak Demand Reduction Scheme. To emphasise our point above, we believe having appropriate financial support in place to assist businesses with

completing their transition is imperative if we are to ensure that the business environment remains conducive to growth and prosperity through the transition.

1. Better financial incentives for commercial and industrial energy users are required to accelerate decarbonisation

Essential Energy have established a dedicated team supporting the electrification and decarbonisation of our commercial and industrial customers, helping them navigate the energy transition at pace and at least cost. We are also working on behalf of our customers to advocate for best practice policy design to achieve rapid and least cost business decarbonisation.

As a part of this work Essential Energy's electrification program has engaged directly with over 120 of the largest commercial and industrial energy users in our network to understand their current fossil fuel usage, their plans to decarbonise, and the barriers they are facing to further decarbonisation. A survey covering 86 sites associated with this work showed that only 7 per cent of surveyed sites are actively implementing decarbonisation plans, while almost 75 per cent of sites have taken no significant action to decarbonise. A total of 70 per cent of sites identified capital or return on investment as a barrier to action, making it by far the most commonly identified barrier. These findings mirror those of the 2023 EPA survey discussed in the consultation paper, which identified that 75% of licensees had no emissions reduction plan.¹

These collective findings clearly identify a need for carefully designed but rapidly implemented government policy and associated policy and financial incentives for our commercial and industrial energy users to support their timely decarbonisation.

Essential Energy notes the EPA's comment that, "Licence holders required to develop a Climate Change Mitigation and Adaptation Plan by October 2027 will also be able to seek financial support to develop their plans. This funding will be time limited and be available towards the end of 2025."² While funding for the development of plans is an excellent initiative that will tangibly progress business decarbonisation, we believe that the urgency of the decarbonisation task and the current danger of materially underperforming our NSW emissions reduction targets necessitates the provision of new funding for the accelerated implementation of projects - not just for the planning stages of a project but also to support the capital and implementation cost of key equipment.

New funding is particularly required because most existing NSW commercial and industrial businesses are ineligible for the only existing NSW funding supporting the implementation of business decarbonisation projects – the NSW High Emitting Industry Fund.³ This funding is only available for manufacturing or mining facilities that emit more than 90,000 tCO₂-e per year, limiting it to a small number of very large businesses. Ineligible businesses include the vast majority of businesses in the Essential Energy Network area.

Essential Energy notes the EPA's comments that businesses may lose their ability to access grant funds to support the implementation of decarbonisation projects once formal, specific EPA emission reduction

¹ NSW EPA (2025), [Proposed Climate Change Licensee Requirements](#), p.10.

² *Ibid.*

³ [High Emitting Industries grant | NSW Climate and Energy Action](#)

requirements are in place.⁴ We believe that this creates an additional imperative to immediately create better financial incentives to support the implementation of decarbonisation initiatives. There is a public good to incentivising and supporting proactive businesses who wish to act immediately on the decarbonisation of their operations, as the funding will bring forward critical emissions reduction. Beyond this, it will assist more broadly through building case studies and goodwill across relevant industries, and will support improved market maturity for emission reduction technologies and processes relevant to each sector.

2. The introduction of targeted funding for decarbonisation of industrial heat could deliver accelerated emissions reduction across industrial businesses and the grid.

Essential Energy estimates that manufacturing in NSW accounts for approximately 75% of the state's stationary emissions, which equates to 13MT of CO₂ annually. These are emissions generated through industrial heat processes – burning fossil fuels to heat water or create steam in industrial businesses. The elimination of these emissions through electrification could require up to 6TWhs of additional electricity in Essential Energy's footprint alone. This could support 4.4GW of co-located solar PV on commercial and industrial sites across the Essential Energy network footprint. The deployment of this solar to support newly electrified industrial processes would result in rapidly accelerated grid decarbonisation at the same time as supporting business decarbonisation.

There are commercially available solutions to decarbonise the industrial heat processes described above, but they are yet to be adopted at scale in NSW or Australia. In part this is because current government funding programs at a state and federal level are inaccessible or unsuitable for many industrial businesses, or do not support the full range of technologies available to rapidly decarbonise commercial and industrial heat processes.

Critically, this includes a lack of financial support for electrothermal energy storage (ETES) solutions. This technology offers the possibility of businesses eliminating the use of fossil fuels for industrial process heat by replacing fossil fuel burners with highly flexible electric heat generation and storage devices. ETES units on the market in Australia offer the possibility of simultaneously charging and discharging, meaning they can act to provide the steam and heat needs of an industrial business while also soaking up cheap, abundant, low carbon solar PV in the middle of the day. These devices can also complement the widespread installation of solar PV and chemical storage batteries at commercial and industrial facilities.

We believe that the potential of ETES technology to simultaneously accelerate industrial and grid decarbonisation merits particular focus by the NSW EPA and the NSW Government more broadly. Through the 2024 NSW pre-budget process, Essential Energy proposed a \$150m grant program that could be used by industrial businesses to fund up to 50 per cent of costs associated with the decarbonisation of industrial heat processes (inclusive of feasibility, implementation and capital costs).

The proposed fund would have broad eligibility criteria to ensure it was open to most industrial facilities. It would primarily support electrification technologies such as ETES, while also remaining open to non-electric processes. It would be targeted at commercially available and technologically proven solutions to decarbonise industrial heat that were yet to be deployed at scale in Australia, accelerating their market maturity and helping NSW industrial businesses find the most affordable path to rapidly decarbonise.

⁴ NSW EPA (2025), [Proposed Climate Change Licensee Requirements](#), p.11

Essential Energy continues to believe that an incentive such as this could be an effective means to accelerate the decarbonisation of industrial emissions in NSW, and would be highly complementary to the proposed trajectory of the EPA's regulatory approach for its licensees.

3. Incentives should support businesses shifting from peak demand to low carbon, low demand periods to accelerate decarbonisation and support grid resilience.

The careful sequencing and management of newly electrified business loads could increase distribution network utilisation and resilience, placing downwards pressure on network costs for customers. However, without this careful management there is the prospect that decarbonisation and electrification of business processes could increase peak demand and adversely impact reliability while increasing network costs for customers.

As such we believe that wherever possible from a technical and business process perspective any electrification technology installed with the support of state or Australian government funding should be capable of digital communication and enrolled in some form of peak demand management scheme. This requirement could also extend to technology installed under the mandated requirements of a government licencing scheme, such as that proposed by the NSW EPA.

Conversely, to achieve faster decarbonisation any government schemes targeting commercial and industrial customers should also consider how they might incentivise load shifting not just from peak times of use, but also to periods where there is a lower carbon intensity associated with the electricity that has been generated – typically when there is abundant solar available during the day. Increasing load during these times of lower carbon intensity and minimum demand will also open the opportunity for additional incremental growth in renewables connected to the grid, further accelerating grid decarbonisation. Amending current regulations associated with the NSW Energy Savings Scheme and the NSW Peak Demand Reduction Scheme could be one way to achieve this without having to create a new funding program with its associated policies and frameworks.

Incentivising this movement from times of peak demand to times of abundant, low carbon energy will ensure that electrification of business processes contributes simultaneously to rapid business and grid decarbonisation, improved grid resilience, and downwards pressure on network costs.

4. Detailed requirements and targets will help to encourage proactive business decarbonisation

Essential Energy notes that beyond phasing in the requirement to develop and publish mitigation and adaption plans that the NSW EPA intends to “develop targeted mitigation requirements for industry specific technologies, processes or emission actions by specific dates”.⁵ Essential Energy believes that the development of these detailed, industry specific requirements will be critical to fostering action and providing a catalyst for businesses to execute plans to decarbonise. Associated with this, we believe that it may also be helpful for the NSW Government to adopt and pursue a target associated with the reduction of stationary emissions, industrial heat or another appropriate sub-target that would sit below the broader statewide NSW emissions reduction targets. This would help to bring accountability for any lack of progress, but conversely would also allow the business sector the opportunity to highlight and celebrate successes, contributing to public support and goodwill associated with the energy transition.

⁵ NSW EPA (2025), [Proposed Climate Change Licensee Requirements](#), p.11

Again, Essential Energy believe it is imperative that the development of any industry specific and targeted mitigation requirements be accompanied by funding available to proactive businesses to support the prompt implementation of their decarbonisation projects.

5. Requiring premise level data will help with overcoming gaps in fossil fuel mapping

One persistent barrier to the successful transition of businesses away from fossil fuels, identified through the work of the Essential Energy's electrification program, is public access to accurate premise level data on fossil fuel use. The absence of this data makes it difficult to assess the scale of the fossil fuel problem within businesses in a given region, and constrains the ability of policy makers and businesses such as Essential Energy to undertake proactive and coordinated initiatives to facilitate the energy transition at least cost to businesses and households across NSW.

The absence of this information in the broader market also means that it is harder for firms seeking to specialise in the decarbonisation of other businesses to appropriately assess the size and location of the economic opportunities associated with decarbonisation. This constrains the economic opportunities and maturity of these businesses and also slows the market adoption and maturity of the various decarbonisation technologies required to reduce business emissions.

With this as context, Essential Energy commends the NSW EPA for its proposal to require sites associated with large corporations and complex sites to still report premise level in their Climate Change Mitigation and Action Plan (CCMAP).⁶ While in many respects it is an unremarkable requirement, it will be an important part of providing the baseline knowledge needed to deliver rapid and comprehensive decarbonisation of NSW businesses. Essential Energy encourages the NSW EPA to pursue any other related initiatives that can improve detailed fossil fuel mapping across NSW.

Yours sincerely,

A handwritten signature in black ink, appearing to read "JH", followed by a small dot.

Justin Hillier
Chief Commercial Officer

⁶ NSW EPA (2025) [Climate Change Mitigation and Adaptation Plans: Proposed Mitigation Requirements](#), p.8