



Submission to the ASFI Taxonomy Consultation Paper

July 2024

About the EEC

EEC is the peak body for Australia's energy management sector.

We are a membership association for businesses, universities, governments and NGOs that have come together to ensure Australia harnesses the power of efficiency, electrification and demand management to deliver a prosperous, equitable, net zero Australia with:

- People living and working in healthy, comfortable buildings;
- Businesses thriving in a decarbonised global economy; and
- An energy system delivering affordable, reliable energy to everyone.

EEC works on behalf of its members to drive world-leading government policy, support businesses to rapidly decarbonise, and to ensure we have the skilled professionals to drive Australia's energy transformation.

Summary

The EEC welcomes the opportunity to provide feedback on the Australian Sustainable Finance Institute Taxonomy consultation paper. The EEC supports the implementation of a sustainable finance taxonomy to allow investors and financial institutions to identify opportunities and create sustainable assets, with the ultimate goal of guiding capital to support Australia's climate objectives. This submission includes responses to consultation questions in the following sectors:

- Construction and the built environment;
- Minerals, mining and metals; and
- Electricity generation and supply.

The EEC has provided responses to several of the questions in the consultation paper in this submission. In addition, we would like to emphasise that the taxonomy should incorporate criteria to assess actions that businesses are taking to improve energy performance, including energy efficiency, electrification and demand flexibility, across all sectors of the economy.

Headline Ambitions

Do the headline ambitions reflect Australia's highest national goals for climate and environmental sustainability?

The EEC agrees with the proposed headline ambitions in relation to climate sustainability.

Explicitly incorporating demand side actions into the taxonomy is critical to achieving the headline ambitions.

The EEC is concerned that demand-side actions are currently treated in a piecemeal way in the draft taxonomy, confined mainly to the built environment sector. Improving demand side energy performance across the whole economy, through energy efficiency, electrification and demand flexibility, is critical to achieving the headline ambitions outlined in the consultation document.

As the world's "first fuel", energy efficiency plays a central role in the IEA's Net Zero Emissions by 2050 (NZE) Scenario. As the [IEA notes](#), "energy-efficient technologies slow growth in energy demand and play a vital role in reducing fossil fuel consumption and emissions in all sectors of the economy."

In Australia, energy efficiency presents the lowest-cost method to reduce energy-related emissions, which represent around 76% of Australia's scope 1 emissions (excluding LULUCF).

At COP28 in 2023, over 100 countries, including Australia, agreed to double the global annual rate of energy efficiency improvements by 2030, with the number of countries rising to 133 at the time of writing.

In this context, investment in improved demand side energy performance should be encouraged as a priority through the taxonomy via criteria in every sector that value demand side actions. Including these activities aligns with the taxonomy's climate change mitigation ambition and supports meeting Australia's international climate pledges and other national policy objectives.

Construction and the Built Environment

Sunrise and sunset dates

Do you support a 'sunrise' trigger for refrigerants and embodied carbon? Is the two year nominated (1 Jan 2027 sunrise) appropriate? If not, what should it be and why? (pg. 63)

Progress has been made in reducing the global warming potential (GWP) of common refrigerants used in heat pump equipment. From 1 July 2024, the [Australian Government](#) has prohibited import and manufacture of small air conditioners with GWP exceeding 750kg CO₂e/m². The [Victorian Essential Services Commission](#) also removed hot water heat pumps with refrigerants with GWP greater than 700kg CO₂e/m² from the list of eligible products in the Victorian Energy Upgrades Program. The predicted number of these systems using lower-GWP refrigerants is expected to rise to [85% by 2030](#).

In general, the EEC supports the principle of the taxonomy containing criteria that helps attract capital to companies that are first movers in the transition to low-GWP refrigerants, to help drive uptake of products using low-GWP refrigerants beyond levels expected under current policy settings described above. However, the timing of introducing such provisions needs to be carefully managed to ensure that enough low-GWP products are on the market, and that such measures do not have

the perverse outcome of slowing down momentum towards electrifying buildings. The EEC would be happy to facilitate engagement with members with expertise in heat pumps to further explore this issue.

There are several existing and forthcoming tools for the measurement of embodied carbon, including NABERS' Embodied Carbon tool and CIBSE ANZ (used by GreenStar). These tools vary in their methodologies and assumptions and some EEC members have raised concerns that existing tools are inconsistent with each other with some potentially containing issues related to the greenhouse gas factors used, which may be leading to inaccurate results. The sunrise date should allow time to align these tools and improve their accuracy to try and build industry consensus – as far as practicable – on the measurement of embodied carbon. Ideally, in the time before the sunrise date, Australia could develop and introduce Environmental Product Declarations (EPDs) for use in the taxonomy, consistent with international approaches. However, given the time needed to develop EPDs, at minimum the taxonomy should prioritise principles of usability and clarity, ensuring new tools are not introduced that further complicate the market.

Do you support a sunset date for transition criteria? If not, what should it be and why? (pg. 63)

The EEC supports a clear and easy to understand taxonomy for it to be widely used by financial institutions and investors. We understand the inclusion of transition criteria is to allow time for transitioning away from gas use in *existing* buildings. However, the taxonomy's purpose is to catalyse investment in sustainable building assets. It is important that transition criteria do not result in buildings using fossil gas receiving green finance nor delay electrification in the built environment, given the technologies are available to retrofit existing buildings today. Transition criteria would also add additional complexity for the taxonomy's users. As highlighted in the headline ambition on climate change mitigation, the taxonomy should enable a scenario where temperatures are limited to a 1.5°C increase. This is already difficult to achieve and any delay in decarbonising the built environment further compromises the ability to meet this target. The EEC recommends that the transition criteria be removed, or at minimum, that it is made clear it remains only for specific cases where gas is very difficult to abate.

Energy efficiency for new construction

Is the proposed alignment with the NCC requirements and revisioning process for the energy efficiency of new building supported, or should those requirements be subject to an uplift, like the 10% required by the Green Star Buildings criteria? If you support an uplift, what should it be and for what reasons? If you currently support an uplift, should this continue indefinitely, or should it be revisited in the future as the NCC continues to be revised? (pg.65)

The National Construction Code (NCC) defines minimum standards for buildings' energy performance. While there is careful consideration put into revisions of the NCC, the Australian Building Codes Board balances achievability with ambition. The EEC believes the role of the taxonomy is to be ambitious and to reward those who achieve higher than minimum standards. Only requiring assets to meet minimum standards compromises the usefulness of the taxonomy and inhibits the ability of investors to direct finance towards the highest performing assets. An uplift of 10%, aligning with Green Star could be a useful starting point and it should be revisited in the future depending on progress of revisions to the NCC. That said, if the metric for a 10% uplift proves to be too hard to calculate, the EEC could support NCC alignment provided modifications are made where the NCC is not aligned with a 1.5°C scenario. For example, new buildings with gas connections should not be considered green assets, regardless of whether they are built to NCC standards.

Technical screening criteria (TSC)

Should rooftop solar be a prerequisite for green screening criteria? Should rooftop solar screening criteria be applied to all building use types or is it only appropriate for a limited selection of building use types, such as single-family dwellings? If you support limiting to select building use types, which types of buildings and why? Are there other measures instead of or in addition to on-site solar that should be recognised? Are there better ways to screen for the contribution of rooftop solar for any building than currently proposed? (pg. 68)

The EEC does not think rooftop solar should be a specified pre-requisite for green screening criteria, as there are other priorities that should be implemented before solar on buildings: namely, improved thermal performance through energy efficient technologies and fuel switching from gas to electricity. Of these, a principle of 'energy efficiency first' should be applied, to ensure that once buildings are electrified, their energy requirements do not pose challenges for the grid and allow for smaller, more cost-effective solar systems to be installed that still meet energy demands. Requiring rooftop solar as a pre-requisite also poses a risk that buildings will be able to install solar and be considered sustainable, even if they do not have high thermal performance. The taxonomy should aim to minimise this risk by ensuring the other criteria (including energy efficiency requirements, embodied carbon etc.) are equally significant to rooftop solar.

It is also important to consider the way the electricity grid has changed in recent years, before incentivising additional rooftop solar and other renewables. Many parts of the electricity grid are already curtailing excess solar generation in the middle of the day when generation is high. Additionally, as the grid decarbonises, the emissions reduction benefits of solar will become less significant. Requiring rooftop solar as a pre-requisite places too much importance on solar, and there will be other opportunities for energy management that have more substantial benefits in a renewables-dominated grid. Criteria for buildings should also include ways the energy is being stored for times of peak demand, and reward buildings that provide flexible demand resources. Presenting solar as a pre-requisite for green criteria could be confusing for investors, leading them to consider buildings with rooftop solar as sustainable investments, when this may not be the case. Use of renewables should be part of green criteria, but should not be presented as a pre-requisite that indicates higher priority than thermal performance and energy efficiency.

Minerals, Mining and Metals

Technical Screening Criteria (TSC)

Are there any material decarbonisation levers missing from the measures?

The EEC supports inclusion of criteria for energy efficiency improvements in this sector that would highlight leading organisations in the mining industry. There are opportunities to improve energy performance of various mining processes on site. [Comminution, blasting and sorting](#) generally use the most energy and therefore offer the best scope for savings. For example, selective smart blasting uses data to target high ore concentration areas with greater blast energy, to optimise the blast and reduce net total energy consumed by [up to 30 per cent](#). Companies in the mining industry that are implementing demand side strategies that enable them to reduce their energy and emissions intensity should be acknowledged in the taxonomy.

Electricity Generation and Supply

Use of methane gas for firming

Do you agree with the proposal to provide the market with system-level advice for energy utilities or portfolios of assets that contain gas firming facilities? If so, please provide feedback on what issues should be covered in the guidance. (pg. 25)

The EEC agrees with the proposal to provide the market with this advice noting the need to transition away from gas for firming as soon as practicable, and that Australia should be targeting a zero-carbon electricity system no later than 2050.

Life cycle assessment (LCA)

On a scale of 1-3, how much of a challenge is it to acquire LCA data for upstream scope 3 emissions? (1 = data not likely to ever be available, 2= challenging but can be resolved in time with better disclosures and evolving practices, 3= not challenging, data is readily available). Are the proposed ISO standards suitable for assessing lifecycle emissions requirements in Australia? If not, which standard(s) is more suitable? (pg. 27)

2= challenging but can be resolved in time with better disclosures and evolving practices

Technical screening criteria (TSC)

Are there any additional activities that should be included, which comply with the taxonomy methodology?

Inclusion of energy efficiency as an activity

Reducing electricity consumption via energy efficiency is vital to ensure that sufficient levels of renewable generation assets can be installed to meet demand and achieve a net zero emissions grid. For example, the central scenario in [AEMO's latest Integrated System Plan \(ISP\)](#) sees energy efficiency reduce demand by 35 TWh in the residential sector and 45 TWh in commercial and industrial facilities in 2050.

Losses in Australia's electricity grid are a major source of emissions while the grid remains reliant on fossil fuel-based power. Some of the EEC's members produce tools and services to monitor, manage and reduce these losses, improving the energy efficiency of the grid infrastructure itself and reducing emissions. These companies should be recognised for their contribution to decarbonising the electricity sector.

The manufacture and/or installation of products that deliver a reduction in electricity demand may be covered in other sectors of the taxonomy (such as the Manufacturing and Industry sector). If not, these activities, as well as the activity of providing advice on energy efficiency measures, should be included in the electricity generation and supply sector.

The technical screening criteria for energy efficiency activities will need to be considered in more detail. Although it is more challenging to determine the criteria for a "green" activity which relates to energy efficiency, the desired outcome should be used as a guide – a reduction in fossil fuel electricity demand and therefore a reduction in emissions and a more reliable grid.

Inclusion of demand flexibility as an activity

The EEC recommends that demand flexibility is included as an activity within the taxonomy as it provides a form of electricity (capacity) supply. The importance of demand flexibility (sometimes also called demand response) in reducing peak demand is recognised in the [AEMO 2024 ISP](#) (captured as "consumer energy resources" and "demand-side participation") and globally the [IEA's Net Zero by 2050 Scenario](#) has 500 GW of demand response brought onto the market by 2030.

Demand flexibility plays a crucial role in a successful transition to a net zero grid. The ability to shift or shed electricity demand to match an increasingly variable energy supply from renewables can enhance the reliability of the grid and reduce the need for building new supply and storage assets. AEMO's 2024 ISP notes that consumer energy resources are expected to grow to almost half of the NEM's capacity by 2050 and that well-coordinated consumer batteries could avoid \$4.1 billion of utility scale storage.

[A study](#) by NERA Economic Consulting commissioned by ARENA found flexible demand could achieve savings in generation and storage costs ranging from \$3 billion to \$18 billion to 2042. [Analysis by UTS](#) estimated a combination of more efficient heat pumps and more flexible electric resistance water

heating could provide about 50 GWh/day of flexible demand capacity by 2040, equivalent to around two-thirds of AEMO's projections for behind-the-meter, coordinated DER storage capacity. This would save \$6.7 billion in energy use and \$14.3 billion in grid storage.

It is noted that consideration of technical screening criteria is more challenging when considering demand flexibility. This is due to the different actors involved in 'activities' related to demand flexibility – from those that manufacture the relevant equipment and appliances, to those that control them, to those that use them. This includes:

- Participants in flexible demand markets such as the Wholesale Demand Response Mechanism, which aggregate available capacity and coordinate a response to signals from the wholesale and ancillary markets (thereby providing a 'green' service).
- Manufacturers of products capable of demand flexibility. While currently a nascent market in Australia, products likely to have a large potential to provide demand flexibility services include batteries, domestic and commercial space conditioning and refrigeration technologies, electric vehicles and domestic and industrial water heaters. Other companies produce software and hardware products that enable flexible demand (e.g. sensors and A.I. enabled building energy management systems).
- End-users who directly shed demand in response to signals from the market or shift the time of use of energy intensive equipment and appliances such as HVAC systems.
- Utilities and distribution network companies, such as Energex's use of PeakSmart technologies to remotely control air conditioning units in Queensland.

Not all these actors are a key focus of the taxonomy (for example, government owned entities) and technical screening criteria would need to be tailored according to the actor. The technical screening criteria should focus on the desired outcome – for example, a reduction in peak demand whether through load shifting or shedding. There will be some nuances to consider, such as whether the assets used by market participants when aggregating capacity could include diesel generators. Where these assets are reducing peak demand or delivering other services that support increased renewables to the grid such as frequency control, advice should be provided as to whether this would be a "green" or "transitional" activity.



Energy Efficiency Council

Level 18, 1 Nicholson Street,
East Melbourne 3002
Victoria, Australia