Wednesday, 7 October 2026

Department of Energy and Economic Diversification
Level 11
1 William Street
Perth WA 6000

Attention: Ms Dora Guzeleva

2026 Benchmark Technology Review

Summary

The Clean Energy Council (CEC) welcomes the opportunity to comment on the proposed draft determination of the Benchmark Peak Technology and Benchmark Flexible Technology for the purposes of setting the Benchmark Reserve Capacity Prices (BRCP) in the South West Interconnected System (SWIS).

The BRCP are important inputs to the Reserve Capacity Price curves and are intended to reflect the marginal fixed cost of providing additional Reserve Capacity. As such, Benchmark Technologies have the potential to influence the investment signals provided through the Reserve Capacity Mechanism (RCM).

The draft determination proposes to remove the emissions-intensity threshold used in the previous two reviews and select the Benchmark Technologies based on the lowest annual fixed cost, comprising annualised capital costs and fixed operating and maintenance costs. It also states that the Benchmark Technologies are notional new facilities and that factors such as development lead times and equipment procurability and/or availability are not considered.[1]

The CEC is alarmed with the Department of Energy and Economic Diversification's (DEED's) decision to remove the emissions-intensity threshold from this consultation process. We contend

[1] DEED | 2026 Benchmark Technology Review - Consultation Paper, September 2026, p.1.

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that this is the first time that Industry is being made aware of a significant change in policy direction by the WA Government without any formal announcement from the Minister for Energy. This represents an abrupt change in the decarbonisation ambitions of the State.

Selecting a Benchmark Technology without an emissions-intensity threshold risks narrowing any assessment of efficiency to only annualised capital and fixed operating costs. It may also produce an investment signal that does not adequately account for transition risks or the long-term environmental interests of consumers.

The CEC, therefore, does not support the exclusion of an emissions-intensity threshold from the Benchmark Technology assessment framework. The BRCP is a significant investment signal within the SWIS and should reflect the full intent of the State Electricity Objective (SEO), including environmental outcomes and the reduction of greenhouse gas emissions. We consider excluding emissions intensity from this assessment is problematic for four reasons:

- it does not adequately reflect the environmental limb of the SEO, which expressly includes reducing greenhouse gas emissions;
- it risks treating the lowest directly measured fixed-cost technology as the most efficient new entrant without considering material transition, emissions and policy risks;
- it may weaken investment signals for lower-emission firming technologies; and
- it creates legal and administrative-law risk if the final determination does not demonstrate genuine consideration of the SEO.

The CEC notes that Section 3A of the Electricity Industry Act 2004 provides that the SEO is intended to promote efficient investment in, and efficient operation and use of, electricity services for the long-term interests of consumers in relation to reliability and security, price, and the environment, including reducing greenhouse gas emissions. It also requires the Coordinator of Energy (Coordinator) to have regard to the SEO when carrying out any functions under the Act.[2]

The legislation allows the Coordinator to give different weight to different aspects of the SEO as they consider appropriate under the circumstances.[3] However, while the CEC notes the intent in the consultation paper to consider the environmental limb of the SEO, in balance with the other limbs, there is no discussion as to how this is being achieved.[4] That is, there is a perception that the discretion to determine weight is being treated as permission to omit the emissions limb from substantive consideration without providing justification.

The CEC is concerned that the current approach creates legal risk. In particular, the absence of a substantive and transparent emissions assessment could support arguments that the Coordinator failed to have regard to a mandatory statutory consideration, misunderstood the scope of the weighting discretion, or reached an outcome insufficiently connected to the SEO.

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[2] Electricity Industry Act 2004 | Section 3A - State electricity Objective.
[3] ibid.
[4] DEED | 2026 Benchmark Technology Review - Consultation Paper, September 2026, p.13.

We therefore recommend that the final determination either re-applies the 0.55T CO_2/MWh emissions-intensity threshold or, at a minimum, explain transparently:

- how emissions and environmental outcomes were evaluated;
- what weight was given to them;
- why that weight was appropriate;
- how selecting the proposed technology promotes efficient investment in the long-term interests of consumers; and
- why an alternative low-emission benchmark would not better balance reliability, price, and environmental sustainability.

The remainder of this submission will provide further context on these points.

Benchmark technology is an important investment signal

The Benchmark Technology determined through this process is not merely a technical input into an administrative calculation. Rather, the BRCPs establish anchor points for the Reserve Capacity Price curves and are intended to represent the marginal fixed cost of the additional future Reserve Capacity to facilitate efficient investment in the SWIS.

The draft determination states the Benchmark Technologies must be selected in accordance with the relevant Electricity System and Market Rules (ESM Rules) definitions. That being said, new facilities are expected to provide the relevant capacity service at the lowest annual fixed cost, including annualised capital costs and annual fixed operating and maintenance (FOM) costs.[5]

The draft determination proposes an E-class single cycle gas turbine to run on petroleum distillate (diesel) with a preference to run on gas.

It is not reasonable to assume that an E-class single cycle gas turbine could be expected to provide Peak Capacity by 1 October 2029 because DEED has been signalling through its previous determinations since December 2023 that this technology would not be eligible for Capacity Credits. No participant could deliver this technology for 1 October 2029 unless they had perfect foresight that DEED would reverse this decision and therefore continued to develop this technology despite DEED maintaining this eligibility criteria (emissions-intensity threshold).

The draft decision to run with diesel fuel also seems counterintuitive given the current geopolitical instability in global oil markets because of the conflict in the Middle East. While it remains unclear whether the conflict represents a structural change or will be transient in nature, diesel prices approaching AU$3.00/L are difficult to justify as least-cost from an operational perspective.

[5] DEED | 2026 Benchmark Technology Review - Consultation Paper, September 2026, p.1.

Furthermore, global demand for gas turbines has increased dramatically in recent years, particularly in conjunction with their collocation to data centres, energy security concerns and the retirement of coal-fired generation and decarbonisation of the electricity sector. As a result, global gas turbine procurement lead times are often more than two years, and in many cases are closer to 4-7 years for new large-frame open cycle gas turbines (OCGT) of the type likely to constitute the Benchmark Technology.[6,7]

As such, we consider it to be a legitimate question as to whether a benchmark technology that cannot realistically be delivered within the relevant investment horizon still provides an efficient "new entrant" reference.

While the CEC understands the ESM Rule limitations on setting the Benchmark Technology, we do not think this should detract from the practical signalling effects of the benchmark. A benchmark based on a particular technology necessarily communicates information about the level of capacity revenue considered sufficient to support new investment. It can therefore affect:

- the adequacy of the price signal for alternative technologies that may actually be deliverable within the relevant investment horizon;
- investor expectations about the preferred cost structure of new capacity;
- the allocation of risks between capacity, energy and Essential System Services revenues; and
- the relative financing position of low-emission firming technologies.

The ESM Rules and benchmark methodology focus on the cost of a compliant benchmark facility. They do not appear to explicitly test whether the benchmark technology can be procured and commissioned within the reserve capacity investment horizon. Given current global gas turbine supply constraints, consideration should be given to whether deliverability should form part of future benchmark technology assessments.

As such, the draft determination sets the Benchmark Technology for a notional facility that cannot be delivered for the capacity year it relates to, and at a price that negates any signal to invest in the main source of capacity being delivered in the SWIS to date – energy storage. That is, the price of an OCGT in conjunction with the increase in the electricity storage duration requirement to 7 hours is expected to render any future storage projects uneconomical.

Accordingly, selecting the candidate facility with the lowest immediately observable fixed cost as the Benchmark Technology risks excluding efficient, deliverable capacity investments that support the SWIS over the long term.

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[6] Secondwatt | GE Vernova Backlog Hits $176.3B: What 116 GW of Turbine Orders Means for Buyers
[7] Utility Dive | GE Vernova Investor update 2025

The State Electricity Objective expressly includes emissions reduction

The draft determination indicates that the 2025 Benchmark Technology Review was based on the indicative proposal for an emissions threshold developed as part of the WEM Investment Certainty Review in 2023. As such, the 0.55t/MWh emissions threshold constraint was imposed on the candidate technologies' shortlisting process in 2025, which resulted in the long list of candidate technologies consisting of gas-only configurations.[8]

DEED subsequently state that as "there has not been any progress towards introducing the 0.55t/MWh limit … best expectation that such a limit will not be imposed within a timeframe relevant to this determination, therefore it has not been applied as a constraint on the candidate configurations in this Review".[9]

The CEC is alarmed that this is the first time that Industry is being made aware of a significant change in policy direction by the WA Government without any formal announcement from DEED, or the Minister for Energy in respect of this abrupt change in the decarbonisation ambitions of the State. Many of our members have made, or are intending to make, investments in the SWIS that are predicated on the current policy ambitions and thresholds outlined by the WA Government. This abrupt change in direction without any formal consultation introduces further policy uncertainty and investment risk for CEC members considering investing in Western Australia.

If the draft determination does represent a formal change in policy direction by the WA Government with respect to decarbonisation, the CEC implores that DEED announce this openly and publicly rather than as a single paragraph in this document.

Notwithstanding, the CEC has concerns with the conclusions raised by DEED following the excision of the emissions threshold and the applicability under the SEO of a gas turbine, certified on diesel as the most efficient new entrant generation for the SWIS.

The SEO sets out to promote efficient investment in, and efficient operation and use of, electricity services for the long-term interests of consumers in relation to:[10]

- quality, safety, security and reliability of supply;
- the price of electricity; and
- the environment, including reducing greenhouse gas emissions.

The statutory formulation of the SEO does not position environmental sustainability as a secondary or optional consideration but one of the three elements to be considered. The CEC also notes the draft determination states that the environmental limb of the SEO will still be "considered by the Coordinator, in balance with the other limbs, as part of the review".[11] Given the Coordinator has not

8 DEED | 2026 Benchmark Technology Review - Consultation Paper, September 2026, p.13.
9 ibid.
10 Electricity Industry Act 2004 | Section 3A - State electricity Objective.
11 DEED | 2026 Benchmark Technology Review - Consultation Paper, September 2026, p.13.

indicated they intend to give greater weight to any specific limb of the SEO, the CEC contends that "in balance with the other limbs" implies the three limbs as having "equal precedence" as part of the review.

On this basis, compared with the current Benchmark Technology that consists of an electric storage resource, the change to a gas turbine, certified on diesel would increase rather than reduce greenhouse gas emissions. That is, the proposed change set out in the draft determination would not promote efficient investment in electricity services for the long-term interests of consumers in relation to reducing greenhouse gas emissions.

We therefore recommend that the final determination either re-applies the 0.55T CO_2/MWh emissions-intensity threshold or, at a minimum, explain transparently:

- how emissions and environmental outcomes were evaluated;
- what weight was given to them;
- why that weight was appropriate;
- how selecting the proposed technology promotes efficient investment in the long-term interests of consumers; and
- why an alternative low-emission benchmark would not better balance reliability, price and environmental sustainability.

Excluding emissions intensity risks narrowing "efficiency" to fixed cost

The CEC considers that the draft determination appears to equate the most efficient benchmark substantially with the technology having the lowest annualised capital and fixed operating and maintenance costs.

This approach may omit costs and risks relevant to the long-term interests of consumers, including:

- exposure to future emissions constraints;
- the risk that a benchmark technology becomes inconsistent with future electricity-sector policy;
- potential asset-stranding or early-replacement costs;
- reliance on separate future interventions to correct investment signals; and
- the effect of the benchmark on investment in lower-emission firming technologies.

For example, the Commonwealth Government is currently undertaking a review of the operation of the Safeguard Mechanism that may include consideration regarding how the Mechanism applies

to the electricity sector in the future.[12] These changes may have implications for future greenhouse gas emissions from the electricity sector that would impact the choice of Benchmark Technology.

Conclusion

The CEC is not convinced that DEED have adequately and robustly explained the significant change in policy direction with respect to the decarbonisation ambitions of Western Australia inferred in the draft determination. Nor do we consider the draft decision to set the Benchmark Technology as an E-class single cycle gas turbine to run on diesel is likely to meet the requirements of the SEO with respect its ability to protect the environment and reduce greenhouse gas emissions in the long-term interests of consumers of electricity. Merely noting that no progress towards introducing the 0.55t/MWh limit within a time relevant to this determination would, in our opinion, be insufficient. The statutory obligation to have regard to the environmental limb of the SEO does not depend on a separate emissions policy having already been implemented.

In addition, we do not consider it reasonable to assume that an E-class single cycle gas turbine could be expected to provide Peak Capacity by 1 October 2029 because DEED has been signalling through its previous determinations since December 2023 that this technology would not be eligible for Capacity Credits. Given the current geopolitical turmoil in the Middle East in conjunction with long lead times to procure gas turbines, the CEC does not believe any market participant could deliver this technology for 1 October 2029 unless they had perfect foresight that DEED would reverse this decision and therefore continued to develop this technology despite DEED maintaining the emissions-intensity threshold eligibility criteria until now.

The CEC welcomes further engagement with the Department of Energy and Economic Development and the WA Government as it finalises this consultation process on the Benchmark Technology to apply in the 2029 capacity year in the SWIS. Further queries can be directed to jeastcott@cleanenergycouncil.org.au.

Kind regards,

Martin Kennedy
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[12] DCCEEW (Cth) | 2026-27 review of the Safeguard Mechanism