

Submission – 2026 Benchmark Technology Review Draft Determination

1. Executive summary

Trina Solar Australia strongly opposes Proposal A — an E-Class Simple Cycle Gas Turbine (SCGT) certified on distillate as the Benchmark Peak and Flexible Technology — and in particular the decision to stop applying the 0.55 tCO₂/MWh emissions intensity threshold.

The outcome of Proposal A rests almost entirely on that one change. DEED's own paper states that removing the threshold is what makes E-Class SCGTs eligible for the shortlist (section 2.3). On DEED's Figure 1, every gas-only thermal option costs more than the 7-hour BESS. Keep the threshold, and the 7-hour BESS remains the lowest-cost eligible technology.

Our key concerns are:

1. **The threshold has been dropped on an expectation, not a decision.** No Government decision has withdrawn the threshold. "No progress" towards implementation is not a policy reversal, and a technical review is not the place to make one.
2. **It is inconsistent with the State Electricity Objective (SEO).** A plant certified on distillate would emit roughly 0.69–0.75 tCO₂/MWh when providing the capacity it is paid for — 25–35% above the threshold. DEED rejects distillate-only plant for environmental reasons, yet accepts distillate certification.
3. **The dual-fuel SCGT is costed as a gas plant for emissions, but as a distillate plant for costs.** It carries no firm gas transport, so in the stress periods the Reserve Capacity Mechanism (RCM) pays for, it will run on distillate.
4. **The capital cost of E-Class turbines is likely understated,** given the global gas turbine supply shortage DEED itself acknowledges.
5. **Reversing the 2025 outcome after one year undermines investment certainty.** An indicative ~26% cut to the BRCP would send a price signal that no deliverable new entrant can meet, at the very time the SWIS needs new firmed capacity to replace coal.

We ask the Coordinator to retain the 0.55 tCO₂/MWh threshold, determine the 7-hour BESS as the Benchmark Peak and Flexible Technology, and publish a quantified SEO assessment. We support Proposal B (retaining gross CONE).

2. Removing the emissions threshold should be rejected

The 0.55 tCO₂/MWh threshold should stay as a screening constraint until the Government formally decides otherwise.

2.1 An expectation is not a basis for reversing policy

The 2025 Review applied the threshold as a constraint because DEED expected it to be implemented. The 2026 paper removes it because "there has not been any progress" and it is DEED's "best

expectation" that it will not be imposed in time (section 2.3). The Chair of the Working Group confirmed on 6 August 2026 that whether Government implements the threshold "in future is uncertain".

Nothing has changed except the passage of time. The threshold has not been withdrawn, rejected or replaced. We submit that:

- A policy position developed through the WEM Investment Certainty Review should only be abandoned through an equally transparent policy process, with Ministerial endorsement. It should not be dropped inside a technical cost review.
- If implementation is uncertain, the Coordinator should prefer the assumption that is consistent with the SEO and with the State's decarbonisation direction — not the one that removes the environmental constraint.
- DEED concedes the threshold "may be included in future Benchmark Technology determinations". Switching the benchmark from BESS to gas and potentially back again within a few cycles is the opposite of the investment certainty the RCM is meant to provide.

2.2 The environmental limb of the SEO is asserted, not applied

The SEO requires decision-makers to promote the long-term interests of consumers in relation to price, reliability and security, **and** the environment, including reducing greenhouse gas emissions. DEED states the environmental limb "is still considered" (section 2.3), but the paper contains no quantified emissions assessment, no comparison of emissions between candidate technologies, and no explanation of how that limb was weighed against cost.

Once the threshold is removed, selection is made on lowest fixed cost alone. In practice the environmental limb has been given zero weight.

2.3 The proposed technology clearly exceeds the threshold when doing its RCM job

The table below applies Australian National Greenhouse Accounts scope 1 emission factors to the heat rates in Table 3 of the paper. The range reflects whether a higher-heating-value correction is applied to DEED's lower-heating-value (LHV) heat rates.

Configuration (41°C, clean-as-new)	Net heat rate (GJ/MWh, LHV)	Indicative intensity on gas (tCO ₂ e/MWh)	Indicative intensity on distillate (tCO ₂ e/MWh)
2 x GT13E2 SCGT	9.771	0.50 – 0.56	0.69 – 0.73
2 x SGT5-2000E SCGT	10.057	0.52 – 0.58	0.71 – 0.75
Indicative threshold	—	0.55	0.55

Indicative only. Emission factors: natural gas 51.53 kgCO₂e/GJ; diesel 70.2 kgCO₂e/GJ (HHV basis). Heat-rate degradation, part-load operation and water injection for NO_x control would all increase these figures.

Three points follow:

- **On distillate — the fuel it is certified on — the benchmark exceeds the threshold by roughly 25–35%.** That is the fuel the RCM is paying it to have available.

- **Even on gas it is marginal at best when new.** DEED itself acknowledges that the 2025 analysis found an SCGT on gas "may meet the emission intensity threshold initially but not over the considered timeframe, due to degradation". That finding supports keeping the E-Class SCGT off the shortlist, not removing the threshold.
- **DEED's own reasoning is inconsistent.** It rules out a distillate-only plant because it "would not be consistent with the environmental limb of the SEO". A plant certified on distillate, with no firm gas, has the same emissions profile in the intervals that matter. The environmental limb cannot exclude one and admit the other.

3. The dual-fuel SCGT is assessed on inconsistent assumptions

The proposed benchmark takes the costs of a distillate plant and the emissions of a gas plant. It cannot have both.

3.1 No firm gas means distillate in the periods that matter

The dual-fuel configuration includes a "skinny" gas lateral but no DBNGP capacity reservation. By contrast, the gas-only E-Class configurations carry about \$34–36 million a year in MDQ costs (Appendix B.8). Removing that cost is a major reason the dual-fuel option is cheapest.

DEED justifies the omission by saying gas would be bought opportunistically or from a portfolio and recovered through the Real-Time Market. But capacity is procured for peak and stress periods, which are exactly when spare pipeline capacity is least available. Synergy told the Working Group on 6 August 2026 that, with the retirement of Collie and Muja, spare gas capacity is unlikely.

So, when the plant is actually needed for reliability, the reasonable expectation is that it runs on distillate. DEED's statement that "overall its emissions would be relatively low" relies on gas availability that has not been costed or secured.

3.2 DEED's own modelling does not support the "mainly on gas" claim

The net CONE modelling in section 3 assumed the SCGT runs entirely on natural gas, and described this as the "best possible case". It was not a finding that the plant would in fact secure gas. In the distillate scenario the plant "received no significant dispatch". The paper does not show which fuel it would use in the capacity-critical intervals, or what its emissions would be.

3.3 What a consistent approach requires

If the Coordinator persists with a dual-fuel SCGT despite our objections, it should choose one consistent basis:

- **Assess emissions on the certified fuel (distillate).** The technology then fails the threshold and, on DEED's own reasoning for distillate-only plant, fails the environmental limb of the SEO; or
- **Assume gas operation and cost firm gas supply** (DBNGP reservation or an equivalent firm arrangement) in the fixed costs. On Figure 1, gas-certified E-Class options are about \$485,000–\$490,000/MW/year — above the 7-hour BESS.

Either way, the E-Class SCGT is not the lowest-cost technology that is consistent with the SEO.

4. The E-Class SCGT cost is likely understated

The 26% cost advantage claimed for the E-Class SCGT over the 7-hour BESS is fragile, and the uncertainty runs one way.

- **Global turbine shortage.** DEED acknowledges that manufacturers "shuttered facilities", that capacity "has not yet responded to increased demand", and that it is "presently difficult to obtain an aeroderivative unit for delivery before 2030" (Appendix B.2). Heavy-duty frame units face the same data-centre-driven demand. Yet the E-Class estimate relies on a generic Thermoflow database that DEED says "is not tailored to latest Australian conditions and may itself be lagging current market prices".
- **Asymmetric data sources.** BESS costs come from AEMO's 2026 IASR, which is consulted on and current. The thermal costs come from a software database adjusted by DEED. Comparing a market-tested cost with a lagging estimate biases selection towards the thermal option.
- **No risk contingency.** The estimates are expected values with no risk contingency (Appendix B.1). For a technology facing tight supply and volatile pricing, that understates what an investor would need to recover.
- **Delivery by 1 October 2029 is doubtful.** The benchmark is notional, but the BRCP still sets the price signal for real capacity in the 2029 Capacity Year. A price benchmarked to a plant that cannot be procured or delivered in time will not attract that plant — and will under-reward the technologies that can be delivered.

We ask DEED to obtain current market quotations or independent OEM pricing for E-Class units with delivery in the relevant window, and to publish a sensitivity showing the capital cost at which the 7-hour BESS becomes the lower-cost option.

5. Investment certainty and outcomes for consumers

A lower BRCP is not the same as lower cost to consumers if it fails to bring forward the capacity the SWIS needs.

- **Regulatory whiplash.** The 2025 Review set a BESS benchmark. One year later, the paper proposes a gas benchmark and an indicative ~26% lower BRCP, driven mainly by an assumption change rather than new cost evidence. Investors and lenders price this kind of instability into their cost of capital, which consumers ultimately pay.
- **Projects already committed on the current framework.** Storage and hybrid projects in the SWIS — including those supported under the Capacity Investment Scheme — have reached investment decisions or are progressing financing based on the current benchmark and the stated direction of the Investment Certainty Review. A sudden fall in the BRCP erodes the revenue those projects were financed on.
- **Timing with coal exit.** The SWIS must replace significant coal capacity by 2030. Weakening the price signal now, for a benchmark plant that is hard to procure, raises the risk of a capacity shortfall and of more costly out-of-market interventions such as Supplementary Reserve Capacity or Non-Co-optimised Essential System Services.
- **Emissions lock-in.** A distillate-certified benchmark rewards new thermal capacity with a 25–35 year technical life. That is inconsistent with the State's net zero by 2050 commitment and exposes consumers to future carbon costs and stranded-asset risk.

The proposed change therefore does not clearly serve the price and reliability limbs of the SEO either, let alone the environmental limb.

6. Responses to consultation questions and recommendations

Consultation question	Response
1. Do stakeholders agree with the proposed Benchmark Peak Technology?	No. The E-Class SCGT is only eligible because the emissions threshold was removed. With the threshold retained, the 7-hour BESS is the lowest-cost eligible technology.
2. Do stakeholders agree with the proposed Benchmark Flexible Technology?	No , for the same reasons. The 7-hour BESS meets the Flexible Capacity requirements (Table 6).
3. Do stakeholders agree with retaining a gross CONE approach?	Yes. Gross CONE provides predictable BRCPs and investment certainty.

Recommendations

1. **Retain the 0.55 tCO₂/MWh emissions intensity threshold** as a screening constraint, as in the 2025 Review, unless and until the Government formally withdraws it through a transparent policy process.
2. **Determine the 7-hour BESS as the Benchmark Peak and Flexible Technology** for this Review.
3. **Publish a quantified SEO assessment** comparing the emissions, cost and reliability outcomes of each shortlisted technology, and explain how the environmental limb was weighed.
4. **If a dual-fuel SCGT is still considered, cost it consistently:** either include firm gas transport in fixed costs, or assess its emissions on distillate.
5. **Update thermal capital costs** with current market evidence for E-Class turbines deliverable by 1 October 2029, and publish cost sensitivities.
6. **Provide transitional certainty:** any future change to the Benchmark Technology driven by policy settings should be signalled at least one full Reserve Capacity Cycle in advance.

We would welcome the opportunity to discuss this submission with DEED.

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