



To: Coordinator of Energy
Attn: Wholesale Electricity Markets
Energy Policy WA

via email: energymarkets@deed.wa.gov.au

7 October 2026

Subject: Submission on 2026 Benchmark Technology Review - Draft Determination

I am writing to comment on the 2026 Benchmark Technology Review Draft Determination, in particular the proposal to adopt an E-class simple-cycle gas turbine (SCGT), certified on distillate with gas as the preferred operating fuel, as the Benchmark Technology for both Peak and Flexible Capacity.

This submission sets out:

1. Why the proposed change in Benchmark Technology is not driven by genuine market developments.
2. Specific issues with newly introduced assumptions and the resulting resulting E-class dual-fuel SCGT benchmark.
3. How these issues were raised, and effectively dismissed, during meetings of the WEM Investment Certainty Review Working Group.
4. The implications for investment incentives, Reserve Capacity outcomes and long-term consumer costs.
5. The inconsistency of the Draft Determination with the State Electricity Objective (SEO).
6. Recommendations.

1. Change in Benchmark Technology is not driven by genuine market developments

The Draft Determination replaces the previous BESS benchmark (200 MW / 1,200 MWh, 6-hour duration) with an E-class SCGT certified on distillate, assumed to run predominantly on gas. This is presented as a response to the increase in the ESR Duration Requirement (ESRDR) from 6 to 7 hours and a requirement to select the “lowest fixed cost” technology.

However:

- The formal trigger for the 2026 review is the ESRDR change from 6 to 7 hours. This affects all candidate technologies and does not, in itself, justify abandoning a storage-based benchmark in favour of a dual-fuel thermal benchmark.
- The E-class dual-fuel SCGT configuration is a new construct in benchmark terms. It was not previously adopted as the Benchmark Technology and was ineligible in the 2025 review under the indicative 0.55 tCO_{2eq}/MWh emissions constraint.
- The apparent cost advantage of the E-class SCGT arises mainly from two modelling choices:
 - Removing the earlier emissions-intensity constraint, without any replacement mechanism for reflecting emissions and policy risk; and
 - Allowing a configuration that is certified on distillate but assumed to operate mainly on relatively cheap, unfirmed gas, while e
 - excluding firm gas-supply costs from its fixed cost stack.

The Draft Determination does not identify any independent change in technology costs or system needs between 2023 and 2026 that would necessitate this particular shift. The new benchmark emerges entirely from changed assumptions, not from any demonstrated evolution in market dynamics of technology performances.

2. Issues with the proposed assumptions and the resulting benchmark technology

2.1 Technology availability and suitability

The industrial SCGTs used in the analysis include frames (such as the GT13E2) that are no longer offered – and have no longer been offered for a long time – as new-build units and exist only as legacy fleets with parts and service support.

Despite presenting detailed Thermoflow modelling the Draft Determination does not demonstrate that the benchmark technology:

- is currently available as a new-build plant from OEMs on realistic delivery schedules; and
- reflects what an efficient new entrant in the WEM Reserve Capacity Market could actually purchase and finance.

Simply put, a benchmark based on effectively discontinued turbine platforms does not satisfy the requirement that it represent an “available technology” for new entry.

2.2 Understated capital and O&M costs

The cost base for the E-class SCGT dual-fuel benchmark is derived from:

- generic public sources (Thermoflow, GenCost, IASR);
- a uniform WACC (10.85%) across all technologies; and
- simple CPI escalation (2.5% p.a.).

It does not adjust for any of:

- Turbine supply-chain constraints: tight OEM manufacturing capacity, longer lead times, and scarcity premiums driven by global demand (including data centres).
- Construction-cost inflation beyond CPI in a constrained EPC market.
- Financing differentiation: lower WACC typically available for lower-emissions, lower-risk technologies. All configurations are modelled at the same WACC, regardless of emissions or risk.

This approach structurally understates the relative cost of high-emissions, fuel-exposed technologies and overstates their competitiveness against storage and lower-emissions options.

2.3 Inadequate distillate price and volatility assumptions

The diesel price trajectory used in the modelling is based on pre-2026 planning forecasts that show nominal diesel prices flat or gently declining over 2026–2035. This:

- Does not incorporate observed diesel price increases and volatility since mid-2025 due to geopolitical and shipping disruptions.
- Does not apply any explicit risk premium for future supply shocks, sanctions, or trade disruptions.
- Treats distillate as a benign, slowly declining cost input, rather than a volatile imported commodity with heightened geopolitical risk.

In addition, the distillate price series used in the Draft Determination and supporting calculations appears to be net of excise and GST, resulting in an average benchmark price materially below \$1.00/L. There is no explanation of this treatment or any legal or tax basis for it anywhere in the Draft Determination papers, even though power-generation assets in Australia are not exempt from fuel excise and GST on diesel purchases.

If excise and GST have been removed from the fuel price inputs, this is inconsistent with the real, delivered cost of fuel faced by capacity providers and further understates the true variable and quasi-fixed cost of distillate-backed generation.

Given that the benchmark's certification fuel is distillate, underestimating this cost component biases the comparison in favour of the dual-fuel SCGT.

2.4 Terminal-gate vs delivered and reserved fuel costs

For the E-class SCGT benchmark:

- Fuel costs are effectively based on terminal-level prices.
- On-site tankage (36 hours' worth of fuel) and demineralised-water plant are assumed to be costed, although without any explicit description of the underlying assumptions
- No explicit allowance is made for:
 - transport from terminals to site (road haulage, loading, unloading, regional differentials), other than 0.20\$/l;
 - reservation or priority-delivery charges needed to guarantee supply under system-stress conditions; or
 - additional logistics costs associated with maintaining high inventory levels for rare but severe events.

By contrast, gas-only options incorporate detailed DBNGP tariffs, fat laterals, compressor power and MDQ. The omission of comparable distillate-logistics and reservation costs for the dual-fuel SCGT is a material asymmetry.

2.5 Asymmetric treatment of gas access for dual-fuel units

The modelling treats fuel-supply infrastructure differently for gas-only versus dual-fuel configurations:

- Gas-only SCGTs:
 - must carry the cost of a fat lateral and DBNGP MDQ, sized to provide 14 hours of gas per day; and
 - incur corresponding fixed costs
- Dual-fuel SCGTs certified on distillate:
 - include only a cheaper, skinny lateral;
 - incur no DBNGP MDQ or firm gas-transport charges; and
 - are nonetheless assumed to run predominantly on gas for economic operation and FCESS provision.

In practice, a stand-alone dual-fuel new entrant will require firm gas capacity or equivalent arrangements if it is to rely on gas for most of its running hours. Excluding these fixed costs only for the dual-fuel benchmark artificially lowers its apparent cost vis-à-vis the gas-only alternative.

2.6 Over-statement of dependable duration

The assumption that 36 hours of distillate storage translates to 36 hours of dependable full-load operation ignores:

- start-up, warm-up and synchronisation fuel use;
- elevated fuel consumption during non-steady-state operation; and
- fuel used for conditioning, circulation and auxiliary systems.

The net hours of firm capacity service deliverable from 36 hours of nominal fuel inventory are therefore materially less than 36. The benchmark overstates effective duration for the distillate-backed SCGT relative to technologies without fuel storage overheads.

2.7 Operational risk for intermittent distillate operation

There is no adjustment to the SCGT's reliability parameters to reflect:

- the higher likelihood of start failures, deratings and auxiliary faults in low-run-hour distillate operation; or
- empirical experience from events such as the South Australian system black in 2016, where distillate-fired turbines did not perform as contracted, to supply network support and black start capacity as amply documented by AEMO and other sources.

The benchmark assumes generic forced-outage rates that are not adjusted for the specific risks of intermittent distillate firing.

2.8 Unmodelled water and environmental-compliance costs

While the Draft Determination recognises that water injection or equivalent measures are required for NO_x control when firing distillate, the cost stack:

- includes only on-site demineralised-water plant and tankage; and
- explicitly assigns zero cost to external water infrastructure and to obtaining licensed water allocations at potential sites.

This understates the CAPEX and OPEX needed for compliance and ignores water-resource constraints in relevant regions.

2.9 Non-equivalence of reserve-capacity capabilities

The analysis in the Draft Determination treats:

- a distillate-backed SCGT with 36 hours of nominal fuel inventory;
- a gas-only SCGT with a fat lateral and firm MDQ; and
- a seven-hour BESS capable of multiple daily cycles

as if they were functionally equivalent for Peak and Flexible Capacity, so long as each meets basic duration and ramping tests.

In reality:

- only the gas-backed SCGT and BESS can reliably support multiple and consecutive events without significant refuelling or logistics risk; and
- the fuel-limited SCGT is inherently more constrained.

Ignoring these differences over-credits the contribution of the distillate-backed SCGT to long-duration and repeated stress-event coverage.

2.10 Artificially low BRCP and procurement risk

By omitting or downplaying the above costs and risks, the analysis produces an artificially low annualised fixed cost for the E-class SCGT dual-fuel benchmark. A BRCP anchored on this figure:

- will not support new gas projects that internalise realistic firm fuel and compliance costs;
- will not support new storage projects whose costs are less amenable to optimistic assumptions; and
- will ultimately fail to attract sufficient credible new entry at the administered BRCP level.

It is also relevant that, even with historically high BRCPs over the last two years - no new-entrant SCGT units have successfully registered and certified in the Reserve Capacity Mechanism - This is strong empirical evidence that current and recent BRCP levels are already at, or below, the true cost of credible new-entry gas-turbine capacity once realistic fuel, connection, compliance and financing costs are considered.

Further suppressing the BRCP by anchoring it to an even more optimistic dual-fuel benchmark will not unlock new capacity; it will widen the gap between administered prices and actual project economics. The likely result is continued absence of new SCGT entry, greater reliance on ageing plant and short-term measures, and ultimately a sharper and more expensive correction in future Reserve Capacity Cycles.

3. Stakeholder evidence and treatment in the Working Group process

These concerns were not identified for the first time after the Draft Determination. They were raised, in substance, during the WEM Investment Certainty Review Working Group meetings held on July 16, July 23 and August 6.

Examples include:

- Synergy's representative stating that, after Collie and Muja retirements, spare gas capacity is likely to be redirected to existing combined-cycle units, making the assumed gas-backed operating mode for a new dual-fuel peaker unrealistic without firm gas contracts.
- Stakeholders questioning how a distillate-certified SCGT could provide FCESS frequently without firm gas transport, given that no fixed gas-transport costs are included for the dual-fuel benchmark.
- Experienced operators pointing out that terminal-gate prices do not capture the full cost of delivering and reserving distillate for dependable capacity provision, and asking whether any such reservation or logistics costs were included. It was confirmed that only on-site storage was modelled; no terminal reservation was assumed.
- Multiple members emphasising that emissions and the environmental limb of the SEO remain relevant, even if the 0.55 tCO₂/MWh threshold has not been codified, and questioning the implications of dropping this constraint.
- Concerns that the benchmark change and omission of key costs and risks would undermine investor confidence and reduce the bankability of both gas and storage projects.

The minutes show that these inputs were recorded but not acted on. The standard responses were that:

- DEED had "no reason to assume large gas constraints in 2029," and relied on DomGas policy and current practice;
- distillate-certified facilities could acquire gas through portfolios or spot markets, making gas-related costs a variable-cost issue, not a benchmark-cost issue; and
- cost to consumers and the absence of a formal emissions threshold precluded selecting a higher-cost benchmark.

The consultation process has therefore not corrected the underlying benchmark design, despite receiving clear, technically grounded warnings from operators of the very assets under consideration.

4. Consequences for investment incentives and capacity-market outcomes

4.1 Distorted investment signals

A BRCP based on the E-class SCGT dual-fuel benchmark:

- will not be sufficient to underwrite new stand-alone SCGT projects that must bear realistic firm fuel, logistics and compliance costs;
- will under-incentivise new BESS and storage projects whose costs more accurately reflect current OEM pricing and connection costs; and
- will favour incremental life-extension of existing plant and portfolio optimisation, rather than the timely entry of new capacity consistent with the 7-hour ESRDR and increasing flexibility requirements.

4.2 Increased risk of under-procurement and price spikes

With an artificially low BRCP:

- rational developers will delay or cancel new capacity investments rather than commit at unremunerative prices;
- the RCM will lean more heavily on grandfathered capacity and ad hoc arrangements; and
- at some point, the system will be forced to procure capacity at much higher prices to restore adequacy, either within the RCM or via emergency measures.

Under plausible conditions, realised capacity prices in future cycles could rise to 130–150% of the currently modelled BRCP, once the mechanism is forced to converge on the real cost of credible new entry rather than on a suppressed benchmark.

4.3 Higher long-term cost to consumers

While the Draft Determination is framed as protecting consumers from overpaying today, its likely effect is to:

- increase long-term costs by deferring necessary investment and then procuring capacity in more expensive, time-pressured circumstances;
- introduce volatility into capacity prices; and
- undermine the credibility of the Reserve Capacity Mechanism as a stable, bankable revenue source for new investments.

5. Inconsistent treatment of the State Electricity Objective (SEO)

The SEO requires that environmental, security and cost objectives be pursued in balance. The Draft Determination does not do this.

5.1 Greenhouse-gas emissions

By removing the indicative 0.55 t_{CO2-e}/MWh threshold without substituting any other mechanism to reflect emissions impacts:

- high-emissions, distillate-certified SCGTs are admitted to the benchmark set;
- no emissions differentiation is made in WACC or in policy-risk treatment; and
- the emissions implications of the benchmark choice are not quantified or compared.

Given the State's net-zero 2050 target and the environmental limb of the SEO, this is a significant omission.

5.2 Energy security and imported diesel dependence

Western Australia has no operating domestic oil refinery; distillate must be imported and shipped from interstate or overseas. Basing the benchmark on a notional new facility whose certification fuel is imported diesel:

- increases dependence on global oil markets, maritime chokepoints and refining capacity abroad;
- exposes the State to greater risk of fuel supply disruption in crises; and
- competes directly with essential users of distillate (mining, agriculture, logistics and freight) during major events.

These risks are not analysed or reflected in the benchmark assumptions.

5.3 Unrealistic reliance on road-tanker logistics

The benchmark assumes that 36 hours of full-load SCGT operation on distillate can be supported, and replenished as needed, through standard tankage and existing logistics. Based on the Draft Determination's own parameters, replenishing 36 hours of operation for a 300-350 MW SCGT (at the assumed heat rate of 10,057 GJ_{LHV}/MWh would:

- require very large volumes of distillate, in excess of 350,000 l; and
- in practice, translate into on the order of 80-100 heavy road-tanker deliveries to rebuild inventories after an extended event, depending on tanker sizes (35-45,000 l) and delivery rates.

Attempting to mobilise this level of road-tanker traffic to a single site in, or immediately after, severe system-stress conditions is:

- operationally challenging; and
- likely to divert fuel and logistics capacity away from other critical users at the same time.

The Draft Determination does not address the feasibility or risk implications of this assumption, nor does it cost the additional logistics and resilience measures that might be needed.

5.4 Cost limb vs environment and security

In practice, the Draft Determination gives primacy to a narrow, short-run interpretation of the “cost” limb of the SEO, while largely externalising environmental and energy-security risks. This is not a balanced application of the SEO. A benchmark that increases dependence on imported diesel, relies on fragile logistics, uses tax-exclusive fuel prices, and ignores emissions implications cannot be regarded as advancing the SEO in the long-term interests of consumers.

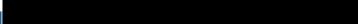
6. Recommendations

To realign the Benchmark Technology Review with the ESM Rules and the SEO, I recommend that the Coordinator:

1. Re-open the benchmark selection process with full, symmetric treatment of:
 - a. current technology availability as new-build plant;
 - b. realistic capital and supply-chain conditions;
 - c. delivered and reserved fuel costs for both gas and distillate, including excise and GST;
 - d. operational reliability in low-run-hour distillate service;
 - e. water and environmental-compliance costs; and
 - f. differentiated financing conditions reflecting emissions and technology risk.
2. Treat portfolio-dependent advantages (e.g. access to existing gas portfolios or terminal arrangements) as specific to incumbents, not as intrinsic to the benchmark.
3. Reassess seven-hour BESS and gas-certified SCGT options under corrected assumptions, including the possibility that a storage-based or gas-only benchmark remains the most appropriate reference technology.
4. Explicitly document how stakeholder evidence from the Working Group, particularly from Synergy and other operators of gas-turbine and storage assets, has been incorporated into the final benchmark design and cost assumptions.
5. Demonstrate, quantitatively where possible, how the final benchmark choice reflects a balanced application of all three limbs of the SEO: environment, security and cost.

Only a benchmark that is both technically credible and reflective of the true cost and risk of dependable new entry will provide stable, efficient investment signals and support the long-term interests of electricity consumers in Western Australia.

Yours sincerely,

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Talent with Energy Pty Ltd

