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Electricity Authority
By email: OperationsConsult@ea.govt.nz

Common quality and wholesale market arrangements for BESS and BESS-hybrid stations

Dear Operations team,

Haast Energy Trading Limited welcomes the opportunity to comment on the Electricity Authority's issues and options paper on common quality and wholesale market arrangements for BESS and BESS-hybrid stations.

Haast supports work to make the Code and market systems fit for batteries and hybrid stations. These assets can improve system flexibility, absorb intermittent generation, provide fast response and support efficient investment. The framework should unlock those benefits without creating hidden obligations, avoidable compliance cost or opaque dispatch outcomes.

Haast's interest is as an active wholesale-market, hedge-market, FTR and risk-management participant. The common-quality and hybrid-station settings should therefore be assessed not only by whether they work technically for asset owners and the System Operator, but also by whether they improve price formation, transparency, competition and the ability of participants to manage risk.

Executive summary

1. Haast supports clarifying common-quality obligations for idle BESS and BESS-hybrid stations, but obligations should be proportionate, technology-neutral and tied to clear system need.
2. Where a service has opportunity cost, wear cost, operational complexity, investment cost, or requires inverter capacity, operating headroom or BESS availability that could otherwise support energy or reserve market participation, the Authority should prefer transparent procurement, dispatch or compensation rather than relying on implicit uncompensated provision.
3. Asset owner performance obligations should be station-aware and physically grounded, with station-level assessment generally preferred where the relevant system effect is experienced at the point of connection.
4. Moving relevant voltage-support compliance toward the point of connection may improve operational truth, but only if the rules clearly address existing assets, dispensation pathways, transformer and connection-line effects, and technology-neutral treatment.
5. Wholesale trading arrangements for BESS-hybrid stations should preserve optionality where physical feasibility can be maintained, and should not accidentally favour one technical configuration or ownership structure.
6. The Authority should clarify how trading conduct monitoring will apply to BESS-hybrid operating states, station or component offering choices, reserve availability, common-quality constraints and mode changes.
7. The final design should publish enough information for participants to understand the drivers of net injection, offtake, reserve availability, connection constraints and price effects from hybrid stations.

Idle BESS and BESS-hybrid obligations

Haast supports clarifying the Part 8 common-quality obligations that apply when BESS or BESS-hybrid stations are idle.

The Authority should be cautious about imposing obligations simply because capability exists. If idle BESS can provide frequency or voltage support at low cost, the market and system should be able to access that value.

But obligations should be proportionate, transparent and aligned with efficient procurement or compensation where the service imposes opportunity cost, cycling or degradation cost, operational complexity, additional investment cost, or requires inverter capacity, operating headroom or BESS availability that could otherwise support energy or reserve market participation.

Haast's preferred principle is:

- where the obligation is necessary for secure connection and ordinary system operation, it should be clearly specified and technology-neutral;
- where the service is valuable ancillary or network support beyond ordinary connection obligations, the design should prefer transparent procurement, dispatch or compensation over implicit uncompensated provision; and
- where asset capability differs materially by configuration, the obligation should follow physical capability and system need rather than a generic label such as BESS or hybrid.

Applying AOPOs to BESS-hybrid stations

Haast supports clarifying how asset owner performance obligations apply to BESS-hybrid stations in injection, consumption and idle states.

The rules should be station-aware and physically grounded. Haast considers station-level assessment should generally be the default for BESS-hybrid AOPOs where the relevant system effect is experienced at the point of connection. In many cases, station-level obligations will better reflect how hybrid stations are controlled and how they interact with the grid. At the same time, the final design should avoid a one-size-fits-all approach that ignores material differences between AC-coupled and DC-coupled configurations, shared inverters, shared transformers, connection limits and control-system arrangements.

The objective should be to give the System Operator confidence in frequency and voltage performance while preserving investment flexibility. The Code should avoid unnecessary re-testing or compliance cost where a hybrid configuration is operationally equivalent to assets that are already understood.

Voltage support and point of compliance

Haast supports further work on moving relevant voltage-support compliance obligations toward the point of connection where that gives the System Operator better visibility of the service actually delivered to the grid.

That change should not simply move risk and cost onto asset owners without a clear system benefit. Any move in the point of compliance should be accompanied by:

- clear transitional treatment for existing assets;
- workable dispensation and exemption pathways;
- transparent modelling of transformer and connection-line effects;
- consistent treatment across standalone generation, standalone BESS and BESS-hybrid stations;
- clarity on when compliance is measured at component level and when it is measured at station or connection-point level; and
- publication of enough assumptions for participants to understand operational constraints that may affect dispatch and prices.

The point of compliance should improve operational truth. It should not become an indirect way of requiring unpriced network support services that would otherwise be procured transparently.

Wholesale trading arrangements for BESS-hybrid stations

Haast supports clarifying wholesale trading arrangements for BESS-hybrid stations. The rules should preserve optionality where physical feasibility can be maintained.

Different hybrid configurations may be better represented through separate component-level offers, station-level dispatch, or another model. The Code should not accidentally favour one technical configuration, ownership structure or connection design if another can deliver equivalent market and system outcomes.

Haast's main concern is market transparency. If hybrid stations are dispatched at station level, market data should still allow participants to understand the drivers of net injection or offtake, relevant constraints and reserve availability. If hybrid components are offered separately, the rules should clearly handle shared connection limits, DC-coupled constraints and infeasible dispatch risk.

The guiding principle should be: physical feasibility for the System Operator, clear risk allocation for asset owners, and transparent market information for everyone else.

Trading conduct and portfolio transparency

The interaction with the trading conduct regime is important. BESS-hybrid stations may move between operating states and may be represented through technology-component offers, station-level dispatch, or an elected station model. Those choices can affect energy offers, reserve availability, net injection or offtake, and price outcomes.

The trading conduct regime can only discipline offers effectively if the competitive counterfactual is observable enough. If price-affecting conduct can be attributed to internal hybrid controls, state of charge, shared connection limits, voltage-support obligations, common-quality constraints or station/component elections that other participants cannot see, market monitoring and participant risk management become harder.

Haast recommends that the Authority clarify how trading conduct monitoring will apply to BESS-hybrid energy offers, reserve offers, operating states, station/component offering choices, common-quality constraints and behind-the-meter charging. The design should avoid opaque switching between participation models, and should publish enough data to monitor portfolio-level market-power effects where a hybrid station forms part of a broader generation, load, reserve or hedge portfolio.

Implementation and information publication

The Authority's later Code amendment consultation should include enough implementation detail for participants to assess how hybrid-station constraints, reserve capability, voltage-support obligations and common-quality obligations will appear in SPD, vSPD, dispatch data and other published market information.

Haast recommends that the Authority publish, or require the relevant market operation service providers to publish, the data needed to understand:

- hybrid-station connection limits and constraints used in dispatch;
- whether net injection or offtake is driven by generation, BESS charging, BESS discharging or station-level controls;
- reserve availability by operating mode where this affects dispatch or prices;
- voltage or common-quality constraints that materially affect dispatch or availability; and
- any changes to vSPD inputs or outputs needed to model hybrid-station behaviour.

Without that information, non-asset-owning participants may see only the price effect, not the cause. That would weaken confidence in dispatch outcomes and increase risk premia in hedge and FTR markets.

Recommendations

1 Clarify common-quality obligations for idle BESS and BESS-hybrid stations, but make those obligations proportionate, technology-neutral and tied to a clear system-security need.

2 Prefer transparent procurement, dispatch or compensation where a service has opportunity cost, wear cost, operational complexity, investment cost, or requires inverter capacity, operating headroom or BESS availability that could otherwise support energy or reserve market participation.

3 Apply asset owner performance obligations in a station-aware and physically grounded way, with station-level assessment generally preferred where the relevant system effect is experienced at the point of connection.

4 Progress point-of-connection voltage-support work only with clear transitional rules, dispensation pathways and transparent modelling of connection effects.

5 Develop hybrid-station trading arrangements that preserve physical feasibility without forcing all configurations into a single rigid market model.

6 Clarify how BESS-hybrid offers, reserve offers, operating states, station/component offering choices and behind-the-meter charging will be monitored under the trading conduct framework.

7 Ensure SPD, vSPD and market-data publication allow participants to understand hybrid-station constraints, reserve availability, operating modes and price effects.

Closing

Haast supports the Authority's work to remove barriers to efficient BESS and BESS-hybrid participation. These assets can provide meaningful system value, but the framework should be transparent, participant-neutral and technically workable.

The next stage should focus on implementation detail: what obligations apply in which operating states, how hybrid stations are represented in dispatch, what services are procured or compensated, and what market information is published. Those details will determine whether the reforms support clean investment signals and risk-manageable market outcomes.

We would be happy to discuss any of these points with the Authority.

Yours sincerely,

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