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Australian Energy Market Commission (AEMC)  
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### **Review into electricity compensation frameworks - Consultation paper**

Snowy Hydro Limited welcomes the opportunity to comment on matters raised in the Australian Energy Market Commission (the Commission) Review into electricity compensation frameworks – Consultation paper.

The Commission's self-initiated review into compensation frameworks in the NER is critical to identify changes that would provide confidence to market participants and support better outcomes for consumers. It is critical that regulatory reform measures firstly understand the underlying causes of the issues that led to the market suspension. Any focus of any reforms should be market-based, preserving commercial decision-making to the greatest extent possible. As explained below, market-based measures of compensation should recognise the close relationship between the spot and contracts markets and that determining an appropriate compensation amount will often require a consideration of both.

There is an opportunity for the Commission to learn from the experiences of the past 2 years. Following the recent energy crisis there has been uncertainty arising from the administration of the compensation regime. In particular, with inadequate limitations on the timeframes for the assessment of claims, payment of compensation has not been timely. For example:

- compensation claims for market suspension and directions were finalised by AEMO in February 2023, more than 6 months after the crisis, while
- to date, the Commission is still assessing the opportunity cost methodology.

The recent assessment of claims has highlighted that market participants should be confident that they are no worse off financially from supplying additional energy if required by AEMO, regardless of market circumstances and that compensation is paid in a timely manner.

Specifically as part of the compensation review, Snowy Hydro notes:

- The Commission's review should provide clarity, with the compensation regime being simple, and clearly set out in the Rules or a subordinate regulatory instrument.
  - The framework should be predictable and consistent across states with claimants clearly aware of the remuneration they are entitled to, and be able to make a reasonable estimate of those entitlements in real-time.
- The current NEM is not a capacity market but an energy only market. Introducing an obligation on generators to offer capacity into the market is not consistent with the fundamental premise of the NEM (ie. generators are compensated for their output, not their availability). Further to this, a capacity market would incentivise generators to procure capacity and not provide a mandated obligation to provide free capacity.
- The energy only structure of the NEM means that generators, particularly those with relatively low capacity factors, rely on periods of volatility to recover their fixed costs. A compensation arrangement focused on their short run marginal cost will not compensate generators for their fixed costs.
- When reconsidering the roles and responsibilities related to compensation frameworks the most efficient approach should be chosen which is both timely and effective.
  - The preferred option, with minimal changes, is that AEMO is responsible for all compensation frameworks in the NEM. We agree with the Commission that this would lead to lower administrative burden for completing claims given AEMO experience in administering direct cost claims and AEMO have access to relevant

data to determine direct cost claims. Although AEMO is not an economic regulator and its functions to date have not included determining opportunity cost claims, the Commission has not been timely in determining the cost under the current process.

- The opportunity costs methodology as part of the compensation framework is important not only to accurately assess compensation for the events in question, but to ensure the efficient operation of the market during future Administered Price Period (APP) events. The purpose of the APP Compensation framework is to “maintain the incentive” for scheduled generators to supply energy during price limit events.
  - The Commission should consider a compensation Rule Change which would allow non-directed Dispatchable Unit Identifier (DUID)’s to be able to claim for opportunity costs during Market Suspension periods, the same as is allowed during an Administered Price Period (APP).
- Under the improving security frameworks for the energy transition the proposed approach through a benchmark-based compensation framework will mean participants will be paid inefficiently for the service without any consideration of an efficient market which will ultimately not lead to the investment required in the market. At a time when investment is needed most the Commission should consider market approaches and attempt to make directions more transparent and improved.
- Measures of compensation should take into account both the spot and contracts market. The spot market is an incomplete measure of the value of energy. Ignoring the relationship between these two markets will result in generators not being compensated at fair value.

Market participants need to have confidence in how the compensation arrangements will be applied when required. If the rules are not clear the incentive for participants to provide services during price limited events is reduced and the market may be unnecessarily impaired during price limited events

### **Objectives and Methodologies of compensation frameworks**

In considering the objectives and methodologies of the schemes, the Commission is sensibly reviewing whether the frameworks provide adequate incentives for participants to provide services. This is supported by Snowy Hydro.

Appropriate regulatory reform measures should target the underlying causes of the issues that led to the market suspension. Instead the AER’s proposal seeks to impose mandatory obligations without identifying the key issues from the recent energy crisis . The options are identified by the AER include:

- removing commercial considerations from the list of reasonable causes for causing a direction in clause 4.8.9(c2)
- introducing a positive obligation on generators to continue to offer capacity into the market during actual Lack of Reserve (LOR) 2 or LOR3 conditions during an administered price period (APP), and
- introducing an obligation for generators to use the available price bands during APPs.

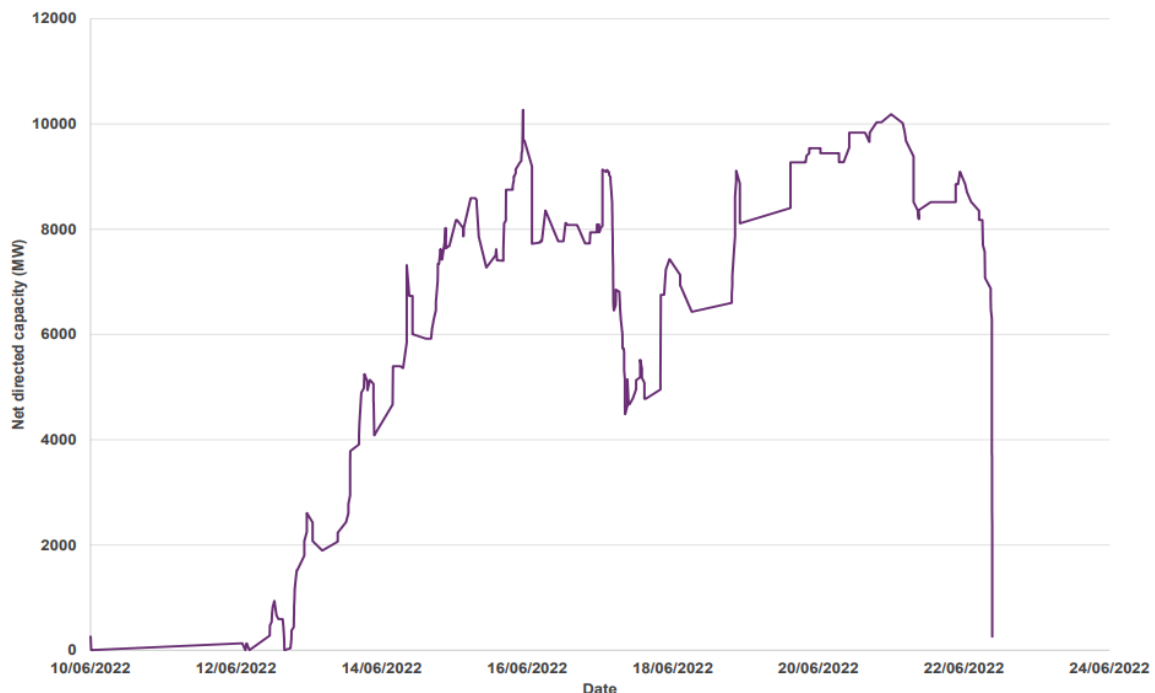
Rather than the objective being deficient, the shortcomings lie with the compensation regime itself and the underlying incentives it creates. Accordingly, the focus should be on these elements and be more market-based, preserving commercial decision-making to the greatest extent possible.

The current NEM is not a capacity market but an energy only market. Implementing an availability or capacity obligation, as proposed by some stakeholders, would undermine the effective operation of the NEM.

Generators already have a strong incentive to offer availability into the market. If market bodies are concerned about a lack of availability, a better approach is to understand why this is the case, rather than simply assuming profiteering on the part of generators. The solution to a lack of availability is not to impose an availability obligation.

In June 2022, a combination of factors led to significant operational challenges in the NEM and not solely the commercial considerations of generators. Early in the energy crisis there was speculation that the withdrawal of capacity may have been motivated by generators seeking to maximise compensation payments. As shown in Figure 1 however capacity continued to be withdrawn as this was necessitated by more acute reasons than compensation as the suspension didn't resolve the underlying problem, the inability of any price-capped dispatch process to ration energy.

Figure 1: Total net directed capacity in the NEM<sup>1</sup>



This 'availability problem' during this period reveals an important risk for generators which is not captured in the compensation framework. That is that in the NEM, generation is mostly pre-sold through forward contracts. When market intervention occurs, generators' ability to manage the dispatch of their assets and, therefore, their fuel supplies, is diminished. Generators face the risk that their output, which has already been pre-sold to counterparties, is dispatched into the market at a time not of their choosing. This creates severe risks for generators, who may find themselves subsequently unable to service their forward positions. In these circumstances, imposing an availability obligation on generators will make the situation worse, not better. It would serve as a disincentive for generators to forward contract their output, because it might require them to provide availability even when they have already pre-sold all available energy.

### Governance options for compensation frameworks

Snowy Hydro believes when reconsidering the roles and responsibilities related to compensation frameworks the most efficient approach should be chosen which is both timely and effective. What is key for market participants as part of this review is stability given the framework was used for the June 2022 events.

<sup>1</sup>[https://www.aemo.com.au/-/media/files/electricity/nem/market\\_notices\\_and\\_events/market\\_event\\_reports/2022/nem-market-suspension-and-operational-challenges-in-june-2022.pdf](https://www.aemo.com.au/-/media/files/electricity/nem/market_notices_and_events/market_event_reports/2022/nem-market-suspension-and-operational-challenges-in-june-2022.pdf)

The preferred option, with minimal changes, is that AEMO is responsible for all compensation frameworks in the NEM. We agree with the Commission that this would lead to lower administrative burden for completing claims given AEMO experience in administering direct cost claims and AEMO have access to relevant data to determine direct cost claims. Although AEMO is not an economic regulator and its functions to date have not included determining opportunity cost claims, the Commission has not been timely in determining the cost under the current process.

The other alternative options would likely take time to implement and could lead to unintended consequences. Changing responsibilities to the AER for example who do not have the functions to determine opportunity cost claims and no dedicated resource to process claims would take a significant amount of time to implement.

### **Importance of the Opportunity Cost Methodology**

The opportunity costs methodology is important not only to accurately assess compensation for the events in question, but to ensure the efficient operation of the market when intervention occurs, including during future Administered Price Period (APP) events. The purpose of the APP Compensation framework, is, relevantly, to "maintain the incentive" for scheduled generators to supply energy during price limit events. While this is an appropriate objective, Snowy Hydro considers that, in practice, the framework does not adequately compensate generators during APP events.

Snowy Hydro considers that there is a lack of understanding by some stakeholders of the importance of opportunity cost. Much of the current compensation framework in the NEM is predicated on the need to compensate generators for their short run marginal cost (SRMC). For hydro generators, whose fuel is 'free', SRMC is not a meaningful concept. The value of hydro resource (water) is fundamentally linked to market opportunities. It follows that the only fair way to compensate hydro generators is one based on opportunity cost. For generators with low capacity factors (such as hydro), opportunity cost is particularly important, given they have relatively few opportunities to recover their fixed costs. Snowy Hydro considers that opportunity cost compensation should be payable in respect of directions and APP events.

Opportunity cost is closely linked to marginal pricing. The NEM is a marginal market whereby all generators, regardless of their cost of generation, receive the marginal price. Therefore, when determining the opportunity cost for hydro generators, an assessment should be made of the marginal opportunity for using the resource. In practice, the bid price of hydro capacity tends to shadow open cycle gas-turbine (OCGT), as it is typically the price-setting capacity in the bid stack. Accordingly, a reasonable proxy for determining opportunity cost of hydro is to consider the cost of dispatching OCGT assets. Furthermore, opportunity cost compensation should recognise the relationship between spot and contracts markets. Most generators operate in, and their revenue is a function of, outcomes in both markets. While it may be appealing to rely solely on spot market outcomes to determine opportunity cost, given its greater transparency, such an approach would ignore the fact that the NEM is largely a balancing market - the contracts market provides a much better guide to the real value of energy.

A compensation methodology which does not appropriately compensate opportunity costs is dangerous for the NEM. While such an approach may, in the short term, reduce compensation payments to generators, it will ultimately be more expensive than fair value compensation. In the long-run, it will create an incentive for generators to withhold generation during future APP events - the very outcome the compensation framework seeks to avoid. As part of the compensation review, the Commission should ensure that generators are appropriately compensated based on their opportunity costs.

- **Opportunity Cost Compensation Methodology must recognise the individual circumstances of each Generator**

Determining opportunity cost can be a challenging exercise because it will usually be influenced by decisions taken by the generator which may not be transparent to third parties. For example, a fuel constrained hydro generator which has less water in reserve because of previous generation decisions will face a higher opportunity cost, other things being equal. Similarly, a generator's opportunity cost will be influenced by forward contracting decisions - if energy (water) which has been pre-sold to counterparties is dispatched at a lower value because of a price-limit event (such as administered pricing), the generator will need to replace that water resource at a higher cost. The compensation framework should, therefore, be sufficiently flexible to recognise the individual circumstances - the unique opportunities - of each generator. Without this flexibility the compensation framework is unlikely to maintain the incentive to supply energy during such events, because generators will not have confidence they will be compensated in full. If the framework does not engender this confidence, it will be rational for generators not to generate during a price-limit event and preserve resources for more valuable opportunities in the future.

There is, therefore, a limit on the extent to which a compensation methodology can and should be 'repeatable and generalisable'. Snowy Hydro cautions against adopting any compensation principles under the guise of ease of administration, where they lead to a compensation amount which does not fully compensate a generator for the marginal opportunity for a given resource. Such an outcome would be self-defeating, because it would incentivise generators to withhold supply, precipitating the need for more market intervention. For example, using the historical volume weighted average price (VWAP) to value opportunity cost, even the VWAP for a period close in time to the event in question, will be inadequate because it is unlikely to accurately capture the marginal opportunity of a specific generator. Looking at any sort of averaging across all NEM fuel sources by definition will in the majority of cases undercompensate for actual costs incurred at a time of supply constraint. It is unavoidable that the task of accurately determining opportunity cost requires an examination of the opportunities available to a particular generator.

### **Compensation Rule Change the Commission could consider**

As part of the Compensation review, Snowy Hydro believes the Commission should consider a compensation Rule Change which would allow non-directed Dispatchable Unit Identifier (DUID)'s to be able to claim for opportunity costs during Market Suspension periods, the same as is allowed during an Administered Price Period (APP).

When the market is operating in an APP, Dispatchable Unit Identifier (DUID)'s that are not directed (i.e. are bid into the market), are able to claim for the opportunity cost of their generation, if that opportunity cost is higher than the spot revenue they received during the APP.

By allowing non-directed DUIDs to claim opportunity cost, it creates an incentive for the DUID to remain bid into the market, as its opportunity cost may be higher than its direct costs. That is, DUIDs that are not bid into the market and are "directed" can only claim direct costs for compensation.

DUID's bidding into the market assists AEMO in dispatching the market (using NEMDE), which improves their operational ability to dispatch the market and so reduces the risk of the market being "suspended". It should be noted that AEMO's manual dispatch of the market creates operational risks due to the quantum of information that must be manually assessed, which increases the risk of "blackouts".

The same logic (during APPs), for incentivising DUIDs to remain bid into the market by allowing them to claim for opportunity cost, should also apply to the market suspension periods to reduce the duration of the market suspension. It is for this reason that non-directed DUID's should be able to claim for opportunity costs during Market Suspension periods, the same as is allowed during an Administered Price Period (APP).

## **Improving security frameworks for the energy transition**

Recently the Commission assessed objectives and methodologies relating to directions compensation that were identified by the Improving security frameworks for the energy transition rule change. Specifically the Commission proposed a benchmark-based compensation framework, similar to that used during market suspension periods. Under this framework, directed participants would be entitled to compensation based on predetermined values of the short-run marginal cost (SRMC) for the relevant technology type, as determined through ISP data inputs. This would be combined with a 15% premium to account for variability of heat rates and other divergences between the estimated and actual costs on the day.

Snowy Hydro welcomes that any changes to the directions compensation framework be considered as part of a larger review undertaken in this compensation review. The proposed approach through a benchmark-based compensation framework would have likely undercompensated storage and fuel-constrained generation. Given that generation from such assets is usually contracted ahead of time, this would increase the risk of loss for affected generators. At a time when investment is needed most the Commission should consider market approaches and attempt to make directions more transparent and improved.

The compensation currently available under directions is also inadequate, as it is based on short-run marginal cost, does not account for scarcity, does not account for the increased costs of bringing forward plant maintenance and is often erroneously determined without including the opportunity cost of fuel. These shortcomings would be worsened through benchmarking based compensation framework.

Snowy Hydro is particularly concerned with the proposal to adopt a SRMC approach for benchmarking directions compensation. As stated above, for fuel constrained generators such as hydro-power, short-run marginal cost is not a meaningful concept.

A much fairer approach is to compensate generators based on opportunity cost or, at least, as occurs at present, a value tied to the market-clearing marginal price. Deliberately undercompensating generators for directions may be superficially appealing but in the long-run will undermine revenue adequacy for generators needed to provide system strength to the NEM.

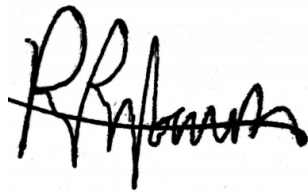
Snowy Hydro does not consider that a proper rationale for excluding opportunity costs from directions compensation has been established. This review is an excellent opportunity to revisit this issue as to whether there is any justification for not incorporating opportunity costs in the directions compensation framework.

## **About Snowy Hydro**

Snowy Hydro Limited is a producer, supplier, trader and retailer of energy in the National Electricity Market ('NEM') and a leading provider of risk management financial hedge contracts. We are an integrated energy company with more than 5,500 megawatts (MW) of generating capacity. We are one of Australia's largest renewable generators, the third largest generator by capacity and the fourth largest retailer in the NEM through our award-winning retail energy companies - Red Energy and Lumo Energy.

Snowy Hydro appreciates the opportunity to respond to the Commission Review into electricity compensation frameworks – Consultation paper. Any questions about this submission should be addressed to [panos.priftakis@snowyhydro.com.au](mailto:panos.priftakis@snowyhydro.com.au).

Yours sincerely,

A handwritten signature in black ink, appearing to read 'P. Priftakis', written over a faint, light-colored rectangular stamp or watermark.

Panos Priftakis  
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Snowy Hydro