10 September 2021

NSW Department of Planning, Industry and Environment
Lodged via email: Electricity.Roadmap@dpie.nsw.gov.au

Dear Sir/Madam,

Long-Term Energy Service Agreement Consultation Paper

The Clean Energy Council (CEC) welcomes the opportunity to comment on the NSW Department of Planning, Industry and Environment's Consultation Paper on the Long-Term Energy Service Agreements (LTESAs) as part of the Electricity Infrastructure Roadmap.

As you are aware, the CEC is the peak body for the clean energy industry in Australia. We represent and work with over 900 leading businesses operating across the renewable energy, energy storage and renewable hydrogen sectors. We are committed to accelerating Australia's clean energy transformation.

The Clean Energy Council strongly supports the ambitious agenda that the NSW Government has set out to prepare the state for the expected retirement of much of its thermal generation fleet in the coming decade, and to manage the transition to lower-cost, renewable energy generation and storage.

The inadequacy of existing transmission networks is without doubt the biggest barrier to investment across the NEM, and we expect the transmission augmentation projects across the Renewable Energy Zones to go a long way to supporting new investment.

We commend the NSW Government's policy intent in designing the LTESAs to improve the cost of capital and bankability of generation and long-duration storage projects, and the careful thought given to incentivising the market to use these option agreements as an 'insurance' policy only.

With the New South Wales Government potentially entering into option contracts with a large number of new connecting generation in the state, the design of the contracting framework with the private sector is of critical importance to ensure that as far as possible, it protects the integrity of the National Electricity Market, in order to continue to provide the right signals to operators and investors. Maintaining exposure to market prices and supporting the efficient function of the existing wholesale contract market is essential.

The proposed design of the LTESA scheme will require virtually all new generating capacity in the state to enter into options contracts with the Scheme Financial Vehicle (SFV), administered by the New South Wales Consumer Trustee (CT) which may be exercised by proponents if and when electricity prices are low. We note that this may not be as infrequently as hoped if Federal and State Government continue to intervene in the market by acting to extend the lives of ageing thermal generators.

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The CEC welcomes the attention given to the need for flexibility in the design of contracts by allowing for alternative bids to be made, while noting that there will nonetheless be a requirement for all projects to lodge a 'conforming (default) bid' to facilitate comparability.

The 20-year development pathway operationalised over a 10-year tender plan reflects the ambition of the scheme and the commitment by the NSW Government to meeting its objectives of the NSW Roadmap. However, there is concern around the ability for proponents and the Consumer Trustee to forecast changing market conditions and exogenous variables over this period. As the scheme is intended to provide a long-term price signal for investors, the practical benefits and limitations of this should be further considered. There is risk that bids are made based on forecasting currently available to proponents, and market conditions subsequently change such that contracts are consistently in- or out-of-the-money. While cash flow stability over the long term ultimately lowers the cost of capital, this has implications for both the LTES Operator, and NSW consumers. Contracts will need to allow for some response to market conditions.

On the whole, we remain concerned that the task of administering this scheme will be very complex, ranging from the challenges with comparing value from fundamentally different projects through to the need for electricity market price forecasting in order to manage risk to electricity consumers.

To reduce the administrative complexity, the Government could consider a simpler approach of proponents bidding into the tender scheme for simple top-up payments, which could potentially limit the cost of the scheme to consumers. It would leave the responsibilities for projects to model and manage their earnings and risks in the electricity market, while delivering a simpler process for the CT to compare and contrast different projects on the basis of the top-up required.

The natural vehicle for this top-up payment would be the purchase of Large-scale Generation Certificates (LGCs), with a bid reflecting a fixed price of LGCs available to LTES operators when the contract is exercised. The Large-scale Renewable Energy Target (LRET) framework is familiar and well-understood by investors, and using this system would deliver the benefits of market participants maintaining their full exposure to the electricity market, the government limiting the potential exposure to consumers and its own balance sheet, while still providing a long-term revenue safety net for projects. Importantly, it would also support the links between state and Commonwealth schemes, and smooth the transition from the LRET to voluntary carbon abatement markets in the long term and the future Guarantee of Origin for renewable hydrogen.

While we consider this as a first-best approach, and one which we believe the legislation can accommodate, the remainder of this submission outlines feedback on the existing LTESA model proposed by the Department, covering:

1. Interaction with REZ connection and access
2. Shape risk and value
3. Interaction with the existing wholesale contracts market
4. Long-duration storage LTESAs
5. The need for a scheme review mechanism.

1. Interaction with REZ connection and access

The Department has indicated clearly that LTESAs have been designed as an insurance policy for projects, and that in an ideal scenario, the options are never exercised. However, the CEC understands that a project within a REZ will be required to secure an LTESA, whether or not this is required or desired by the proponent, forcing market participants to contract with the SFV.

We note that if the Energy Security Board's proposal for a Congestion Management Model eventuates – which will heavily disincentivise construction outside a REZ by adding both risks and costs – there will be significant pressure for projects to be located within these zones.

The requirement to be located within strong areas of the transmission network, should not however obligate a project to enter into electricity contracts with the CT, and we strongly urge the Department to consider how it can better separate the requirements for REZ access and market contracting mechanisms. It should be feasible for the Government to develop separate agreements for access to these very distinct categories of benefits while providing the ability for proponents to coordinate between these processes.

2. Shape risk and value

The balancing of risk allocation between the LTES Operators and the SFV (and by extension, NSW Consumers) is critical to the success of this scheme. The CEC supports a principles-based approach which allocates risk to the parties best placed to manage it whilst maintaining the above.

A key element of risk to proponents is managing the 'shape risk' of generation, which the Department has proposed to enable the SFV to flexibly manage its portfolio of contracted projects. As understood by the Department through its recent consultations, shape risk will be managed by proponents by either over-building the project with respect to the contract volume, hedging the financial exposure of generation shortfalls, or by relying on either on-site, off-site or contracted firming capacity.

The CEC's principal concern with this approach is that if all 12 GW of new capacity is required to provide a firm generation shape, then it will result in materially higher costs of generation across the portfolio as a whole, making projects in New South Wales higher cost and less competitive than projects in other jurisdictions. This would be detrimental to the success of the scheme as a whole and would increase the costs to consumers.

In addition, the CEC is concerned that the requirement for projects to provide a firm shape:

- could skew the market into over-building a specific generation technology that has a firmer shape or is easiest to firm (e.g. solar) and move away from a diversified supply mix.
- could result in a bias towards larger players, or those vertically or horizontally integrated, who are better able to hedge the shape risk within their existing portfolios. This would disadvantage smaller or more specialised project proponents and dampen competition.

Rather than placing obligations on each and every project for a firm generation shape, the CEC suggests that it would be more efficient overall for the Consumer Trustee to manage the shape risk across the portfolio as a whole, potentially working to manage its own 'macro' shape that it seeks to fill, simply choosing from the various offers available to meet that overall shape. Projects would still be required to outline their expected shape within their bids, such that the CT could form the portfolio. LTES operators would retain the risk of generation shortfalls, meaning consumers would not be adversely impacted in these situations. This approach is no more centralised than the proposed approach in the Consultation Paper and still allows LTES operators to make their own decisions to hedge customer positions. Alternatively, to provide greater certainty to the market about the project profiles it was seeking, the CT could issue tenders for different categories of generation, being either fixed shape or generation following.

Such a portfolio approach could also assist to address the question of how 'value' of projects will be assessed. If under the proposed approach, each and every project competes fundamentally on the cost of providing fixed shape generation, then solar – which is a lower cost technology than wind and inherently simpler to firm on the grounds of shape predictability – will presumably dominate the generation mix, and NSW may not achieve the diversified energy mix it seeks. In the

short-term, this may also lead to increased costs of firming due to the increase in correlated demand. However, if it is managed across a portfolio basis, the CT will be working to fulfil a regional generation profile which meets the reliability needs of the state.

2.1 Use of standardised products for renewable energy derivatives

The CEC expects that requirements for proponents to provide a firm shape will result in increased demand for firming derivatives which allow project proponents to manage their risk and optimally, lower their cost of capital in doing so. However, these products have not experienced widespread standardisation or adoption and have only recently gained wider use. Where the Consumer Trustee requires fixed shape, it should leverage existing market mechanisms such the Australian Renewable Energy Agency (ARENA) Renewable Energy Hub Marketplace. This will provide significant support for the existing secondary contracts market.

3. Interactions with the existing wholesale contracts market

The model proposed by the Department includes the potential for the SFV to hold a large volume of wholesale contracts which will need to be managed. The Department foresees the SFV selling contracts if and only if it would provide benefit to consumers. This will only be possible if the contracts are like those existing in the market; bespoke generation shape contracts may not exist in the market and therefore may have little market demand. We note however that with the SFV in control of such a large potential volume of contracts, a failure to on-sell these contracts could be detrimental to market liquidity and expose consumers to increased price risk if retailers are forced to encourage consumers to take the pool price.

The CEC therefore considers that the CT should outline the principles or necessary preconditions to decisions which would see contracts being offloaded or sold. These preconditions could either concern the SFV (in the event that contracts are offloaded where the risk must be managed to benefit NSW consumers), or the broader contracts market (in the event that the SFV would offload contracts to provide liquidity or volume to the market).

On a separate matter relating to the interaction of the scheme with the wholesale market, we note that while operators will have the opportunity to exercise their option once every two years, we note that there is no corresponding demand from retailers or corporates to acquire a two-year power plant-following generation swap, meaning that the exercise periods may not smoothly align with market contracting preferences.

4. Long duration storage LTESAs

The CEC acknowledges the different treatment that has been afforded to long-duration storage LTESAs in the Consultation Paper, by way of 40-year agreement terms and stable and predictable annuity payments. This appropriately recognises the higher capital cost, higher operational costs and longer payback periods of pumped hydro projects.

The Consultation Paper proposes a repayment mechanism for 50 per cent of the net operational revenue where it exceeds a net revenue threshold. Noting that there is a considerable degree of uncertainty as to the introduction and timing of new revenue streams for energy storage (e.g., system strength and inertia, or system integrity and restart services), and that this makes it difficult for proponents to model future revenue, we propose that the net operational revenue calculation should be restricted to those established market revenues at the time of the tender, which can be more readily modelled by proponents. These established market revenue streams can and should be updated over time to reflect any new market services which are recognised and valued.

Additionally, the CEC encourages the Department to ensure the technology neutrality of the LDS contract such that the scheme does not result in a bias towards any single solution. This will enable the reliability needs of NSW to be met with a diverse storage portfolio while cost effectively meeting the Government's storage target.

5. Scheme review mechanism

Finally, an important further area of consideration for the Department should be how the CT will review the efficient and effective functioning of the scheme, so that the design may be refined over time as appropriate, informed by the implementation experience. To allow for this fine-tuning, it will be important that the CT maintains a significant degree of flexibility in the final design of the contracting framework, so that any necessary adjustments can be made to reflect learnings and market innovation over time.

Thank you for the opportunity to comment on the LTESA Consultation Paper, and we look forward to continuing to work with the Department to refine the design of the NSW Electricity Infrastructure Roadmap through consultation on Tranche 3 and its other core elements. If you would like to discuss any of the issues raised in this submission, please contact Jordan Ferrari, Policy Officer, jferrari@cleanenergycouncil.org.au or myself, as outlined below.

Yours sincerely,

Anna Freeman
Policy Director – Energy Generation & Hydrogen