Orderly Exit Management Framework
Consultation Paper
December 2023
Acknowledgment of Country

We acknowledge that Aboriginal and Torres Strait Islander peoples are the First Peoples and Traditional Custodians of Australia, and the oldest continuing culture in human history.

We pay respect to Elders past and present and commit to respecting the lands we walk on, and the communities we walk with.

We celebrate the deep and enduring connection of Aboriginal and Torres Strait Islander peoples to Country and acknowledge their continuing custodianship of the land, seas and sky.

We acknowledge the ongoing stewardship of Aboriginal and Torres Strait Islander peoples, and the important contribution they make to our communities and economies.

We reflect on the continuing impact of government policies and practices, and recognise our responsibility to work together with and for Aboriginal and Torres Strait Islander peoples, families and communities, towards improved economic, social and cultural outcomes.

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1 Executive summary

As Australia responds to climate change, the National Electricity Market (NEM) is transforming from a centralised energy system that relies on thermal generation, to a modern energy system containing widely dispersed renewable generation that will provide consumers with the lowest-cost electricity supply.

The pace and scale of this transformation brings new opportunities to Australia for cheaper and cleaner forms of energy; however, this transformation brings key challenges to the NEM.

Notwithstanding the development of new renewable energy capacity that is required to replace retiring thermal generation, the critical challenge surrounds new transmission lines needed to link power from generation sites to load centres. Price signals from the electricity market and government programs are encouraging renewable energy and storage investment. However, network investments are determined separately; they are centrally planned and regulated. Because much of the new generation and storage investment across the NEM relies on new network investment to supply major load centres, the effectiveness of all of the settings which aim to encourage investment in generation and storage is limited unless supported by transmission.

Australian governments have responded to this challenge by unlocking new investment in renewable generation, firming capacity and transmission. Initiatives such as the Capacity Investment Scheme supported by the Australian Government, the NSW Government’s Electricity Infrastructure Roadmap, the Victorian Government’s Renewable Energy Target Auction 2 and the Queensland Government’s Energy and Jobs Plan aim to provide a policy and regulatory environment that can encourage investment in renewable energy. Meanwhile, network infrastructure investments include the Australian Government’s Rewiring the Nation program and the NSW Transmission Acceleration Facility (TAF).

While these projects are underway, building transmission infrastructure remains a key challenge due to the scale, complexity and risks of delay. The development of new network infrastructure can have a long time horizon (for example, 7 to 8 years). Furthermore, there are practical limits as to how much capacity and infrastructure can be put in place in a given timeframe. In addition, factors such as global competition for skills and resources, increased cost estimates from prolonged COVID impacts and a challenging economic environment result in additional risks.

While Australian governments are united in their commitment to decarbonising our electricity grid, new energy infrastructure is taking longer to build, while the available runway to do so is compressed from existing thermal generators bringing forward their retirement dates.

As a result, the need exists for a mechanism to ensure the orderly exit of thermal generation in a way that does not adversely impact on reliability and system security needs.

1.1 The OEM Framework

The Orderly Exit Management (OEM) Framework is to be established against this background. The OEM Framework will be an opt-in transition backup for NEM jurisdictions and will give governments the choice of a new tool to manage the closing date of retiring thermal generators, so the generation can be available if needed as we connect new renewables to the grid. The OEM
Framework is itself a temporary measure and will only be needed while the transition to renewable energy is completed.

This transition backup will be included in the National Electricity Law and available to participating jurisdictions on an opt-in basis. It will enable the Minister of a state jurisdiction (Jurisdiction Minister) to ensure that a generator can continue to provide vital reliability or system security services to the NEM until replacement infrastructure becomes operational.

The OEM Framework only applies to thermal generators that have brought forward their scheduled closure date since 1 January 2021, and this date is within seven (7) years from the date of notification to the Australian Energy Market Operator (AEMO). The OEM Framework will minimise costs to consumers, whilst ensuring that generators can receive reasonable financial returns for the system services that they provide.

The OEM Framework is structured with four key stages.

- The first stage, called the gateway process, aims to identify whether a generator bringing forward the closure date of a generating unit, will create a shortfall in reliability or systems security (system needs shortfall). If a generator notifies the bring forward of the closure date of one or more of its generating units, the Jurisdiction Minister can direct AEMO to undertake a System Needs Assessment to identify whether this may lead to a system needs shortfall in the NEM jurisdiction it is located in. If the Jurisdiction Minister believes that the early closure will contribute to a system needs shortfall the Jurisdiction Minister can trigger stage two of the Framework. Transitional arrangements apply where the generator notified the bring forward of the closure of its generating units in the period from 1 January 2021 to the commencement of the OEM Framework.

- Stage two is the consideration of alternative solutions to address the system needs shortfall or, if no viable solutions are available, the negotiation of a voluntary agreement between the generator and the jurisdiction. During stage two, the Jurisdiction Minister can commission a third party or the department to undertake a Consumer Benefit Assessment, which will guide the Jurisdiction Minister on the value to electricity consumers of addressing a system needs shortfall. The Minister can also commission an independent expert to undertake a technical and/or financial due diligence report on the generator, as well as seek an indicative cost estimate from the Australian Energy Regulator (AER) of placing the generator under a Notice for Mandatory Operation.

- The third stage (if required) is the Notice for Mandatory Operation. This is intended as a measure of last resort to be used where it is unlikely that a negotiated voluntary agreement can be reached or it is within 30 months of the proposed closure date. By issuing a Notice for Mandatory Operation, the Jurisdiction Minister can direct a generator to provide system services for the period required to avoid a system needs shortfall.
  - In the case of a generator that brought forward its closure date in the period from 1 January 2021 to the date of commencement of the OEM Framework, this can be no more than three years from the expected date of closure (i.e., the closure date as at the date of OEM Framework commencement).
  - In the case of a generator that brings forward its closure date in the period after the OEM Framework has commenced, this is no longer than its current expected closure date.
The fourth, operational, stage is cost recovery. Costs associated with providing system services are passed onto energy consumers who benefit from the improved reliability and system security services achieved under the OEM Framework. The OEM Framework proposes a new model to recover costs through transmission network service providers (TNSPs) to ensure that large energy consumers that are directly connected to the transmission system also pay their reasonable share. In doing so, the costs associated with the OEM Framework will be placed on a wider pool of energy consumers and not unduly burden customers who are connected to distributed network service providers (DNSPs). There may be situations where the jurisdiction decides to exempt a portion of certain customer load from the cost recovery for the OEM Framework. Costs would only be recouped from electricity consumers in the Jurisdiction in which the generator is located.

A Notice for Mandatory Operation will also specify a restricted or unrestricted operating mode for the generator. Under a restricted operating mode, the generator will only be allowed to operate certain capacity during specific periods of the year or events, in accordance with the generating units’ technical capability and safe operation. Under an unrestricted operating mode, the generator can operate as it would on a commercial basis, subject to meeting any performance obligations which may be specified under the Notice for Mandatory Operation.

Under a Notice for Mandatory Operation, the Generator will be compensated for the system services that they provide. This compensation may be provided to a generator under arrangements that include a financial contract (swap or cap arrangement, depending upon the type of service the generator will provide), with the strike price to be determined by the AER.

1.2 Implementing the OEM Framework

The OEM Framework also includes additional requirements on Generators who bring forward their retirement dates to within seven years of when the notice is provided. Under the OEM Framework, scheduled, thermal generators are required to provide Prescribed Information to the AER, and through the AER, to the Jurisdiction Minister and AEMO. This will provide all the required information to facilitate understanding of the financial and technical position of the generator and its generating units as well as enable transparency and an informed basis for effective negotiations.

The OEM Framework will operate in parallel with the existing notice of closure requirements under National Electricity Rules (NER) 2.10.1 (c2) and does not impact on these processes. That is, any generator seeking an exemption to the 42-month notice of closure requirements will still need to apply to the AER.

The OEM Framework is to be reviewed by the Australian Energy Market Commission (AEMC) after five years, unless Energy Ministers approve a deferral, to ensure that the OEM Framework is achieving its objectives and operating efficiently.

Designed as a transitional backup, the OEM Framework will ensure that once a system needs shortfall has been remediated (i.e., completion of major transmission infrastructure projects and other projects to replace generation capacity), plans for the permanent closure of an OEM Generator will continue as intended.

Managing the orderly exit of thermal generators is a necessary step to transition the NEM to a modern energy system powered by renewable energy. Other policies and initiatives will continue to
play a critical role in delivering the energy transition for Australia, and while there are existing arrangements in other jurisdictions that will remain, the OEM Framework will be part of the NEM regulatory framework to provide consistency, greater transparency and clarity to the market and generators as thermal plants reach the end of their life.
2 Consultation process

2.1 Consultation and next steps

In July 2023, Energy Ministers endorsed NSW progressing the development of a proposal to establish an Orderly Exit Management (OEM) Framework into the National Electricity Law (NEL) and its Rules that will manage the exit of thermal generators to safeguard reliability and system security of the NEM jurisdiction they are located in. In more recent years, energy reliability and security risks have been exacerbated by factors such as delay in transmission development projects and global supply chain issues.

The NSW Office of Energy and Climate Change (OECC) is progressing the development of the OEM Framework on behalf of NEM jurisdictions. The design of the OEM Framework has been prepared in consultation with representatives from state and Commonwealth government departments. NSW has also been supported in the design with advice and input from the energy market bodies as well as specialist advice on elements of the OEM Framework. In November 2023, Energy Ministers agreed to release this consultation paper to obtain feedback on the detailed elements of the OEM Framework.

This consultation process will help inform the final design of the OEM Framework and its inclusion in the NEL and NER. Following this consultation process, an exposure bill and draft rules package will be finalised and be publicly released for further consultation.

Once this work is complete, the final bill and rules package will be introduced into the NEL through South Australian Parliament.

2.2 Structure of this Consultation Paper

This Consultation Paper has been structured as set out in the sections outlined below:

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Where relevant, the consultation paper will also include questions on specific issues. Energy Ministers are interested in obtaining feedback on these issues to assist in the final design of the OEM Framework.

### 2.3 Have your say

Energy Ministers are seeking feedback on the proposed OEM Framework and its elements. Your feedback will help inform the final design of the OEM Framework, including detailed legislative and commercial instruments that are necessary to implement the Framework.

Feedback can be provided by email to energy.consult@dpie.nsw.gov.au.

If you are choosing to provide any documentation, please provide your documentation in Word or PDF format for accessibility reasons. When providing feedback, please use the following naming convention in the subject line of your email: ‘Your Name – OEMF Consultation Submission’. Please answer the specific questions in the consultation paper and identify the question number you are addressing. For feedback on other parts of the OEM Framework, please identify the sub-section you are responding to.

This consultation period will be open until Friday 2 February 2024. Responses to this consultation may be made public. If you wish to remain confidential or anonymous, please indicate this in your response.

Please note that during the consultation period, the NSW OECC will become part of the NSW Department of Climate Change, Energy, the Environment and Water (NSW DCCEEW) effective 1 January 2024. For the purposes of this consultation, references to the OECC also refer to NSW DCCEEW after this date.

### 2.4 Confidentiality of your submission

Energy Ministers are committed to an open and transparent consultation process. As such, all submissions will be made publicly available, except where it is requested that the response or
submission remain confidential. Please clearly indicate in your submission that you wish for your submission, or any part therein, to remain confidential and why.

While confidential information will not be made publicly available, it will be shared with state, territory and commonwealth representatives via the Jurisdictional Working Group that is supporting the development of the OEM Framework. Please note that all jurisdictions are bound by applicable privacy and freedom of information legislation, which may affect the confidentiality of your submission.

Unless otherwise indicated, it will be assumed that all information provided is not considered intellectual property of the respondent.
3 Abbreviations and definitions

**AEMC**: Australian Energy Market Commission

**AEMO**: Australian Energy Market Operator

**AER**: Australian Energy Regulator

**Current Expected Closure Date**: The closure date (referring to closure date and/or closure year) for a generating unit that had been notified to AEMO by a generator under National Electricity Rules clause 2.2 and clause 2.10 prior to the generator seeking to change the closure date.

**Days**: This refers to business days.

**ESOO**: The Electricity Statement of Opportunities (ESOO) is an annual publication by AEMO that forecasts electricity supply reliability in the NEM over a 10-year period to inform decisions by market participants, investors, and policymakers.

**ISP**: The Integrated System Plan (ISP) is a whole-of-system plan that provides an integrated roadmap for the efficient development of the National Electricity Market over the next 20 years and beyond, published by AEMO on a biennial basis.

**Jurisdiction Minister**: The Minister for Energy in the jurisdiction in which the relevant OEM Generating Unit is located.

**Mode of Operation**: The parameters set in the Notice for Mandatory Operation for the maximum capacity that the generator may operate and for the periods of the year and times that the generator may operate.

**NEL**: National Electricity Law

**NEM**: National Electricity Market

**NER**: National Electricity Rules

**Notice for Mandatory Operation**: A notice issued by the Jurisdiction Minister that mandates the continued operation of an OEM Generator subject to specified conditions.

**OEM Contribution**: The payment from the TNSP to the OEM Fund.

**OEM Fund**: The fund or entity to which OEM Contributions are paid.

**OEM Generator**: The generator that controls the OEM Generating Unit.

**OEM Generating Unit**: A generating unit in a jurisdiction that has opted into the OEM Framework, that is a scheduled thermal generating unit and meets any additional criteria for an OEM Generating Unit included in the regulations made under the jurisdiction’s application Act.

**OEM Payments**: Payments made to the OEM Generator from the OEM Fund under the OEM Framework.

**OEM Framework**: The rules and structures that operate once an OEM generator has notified AEMO of its intention to bring forward the closure date of an OEM Generating Unit that act to assess system needs and may be used to delay the exit of an OEM Generator through a voluntary negotiated agreement or a Notice for Mandatory Operation. Jurisdictions will need to opt-in to this framework.
**Ongoing Information:** The information the OEM Generator is required to provide in its Annual Performance Report to the AER within 45 days of the end of the financial year.

**Proposed Closure Date:** The new date which the OEM Generator notifies AEMO under National Electricity Rules clause 2.2 and clause 2.10 that it intends to close a generating unit; or

The new closing date being applied for by the OEM Generator to the AER when it applies for an exemption from the 42-month notice of closure requirement (NER2.10.1 (c2)) under NER2.10.1(c4) for an OEM Generating Unit.

**Prescribed Information:** The information the OEM Generator is required to provide when notifying AEMO of a change in the closure date of an OEM Generating Unit or when it is applying to the AER for an exemption from the 42-month notice of closure requirement.

**Prospective Projects:** Projects that have funding approved under Government programs, such as the NSW Electricity Infrastructure Roadmap and where, in AEMO's opinion, the capacity is likely to be available to the jurisdiction's electricity consumers in a given financial year.

**System Significant Generator:** The generator that controls the System Significant Generating Unit.

**System Significant Generating Unit:** Any OEM Generating Unit whose retirement before replacement infrastructure is in place contributes to a system needs shortfall for that NEM jurisdiction.

**TNSP Cost Recovery Mechanism:** The cost recovery mechanism described in section 11.1.
4  The need for an OEM Framework

4.1  An energy market in transition towards net zero

The National Electricity Market (NEM) is undergoing a transition as Australia ramps up its efforts to reach net zero greenhouse gas emissions. As the NEM’s fleet of thermal generators are approaching the end of their technical and economic lives, investors, governments and energy market bodies are supporting the adoption of the cheapest source of new generation; renewable electricity. As cheaper renewable energy enters the NEM, the economics of thermal generation are weakening. As the NEM transitions to net zero, Australia will need to develop new renewable energy capacity, and this is in train, such as that being created in the roll out of Renewable Energy Zones (REZs). More crucially however, new transmission lines will also be needed to enable power to be shared from generation sites to load centres. Even with retiring coal-fired generation and capacity being replaced, transmission remains the key challenge due to the scale, complexity and risks of delay. Significant storage capacity will also be required to support reliability.

These investments need to occur against the backdrop of retiring thermal generator capacity, some of which are retiring on a faster than expected timeline. In light of the changing dynamics in the operating environment for thermal generation, several generators have announced new and accelerated closure dates. They include:

- EnergyAustralia’s announcement in March 2021 of the potential closure of Yallourn Power Station (1,450MW) in 2028, instead of 2032 as previously planned,
- Origin Energy’s announcement in February 2022 of the potential closure of Eraring Power Station by August 2025, instead of 2032 as previously planned,
- AGL’s announcement in September 2022 that it plans to close Loy Yang A in Victoria, a brown coal power plant, in 2035, instead of 2048 as previously planned, and
- AGL’s announcement in November 2022 that it plans to close Torrens Island B in South Australia, a natural gas power plant, in 2026, instead of 2035 as previously planned.

The Victorian Government has successfully negotiated and entered into structured transition agreements (STAs) with Yallourn Power Station and Loy Yang A generators to ensure they remain available to the market so that replacement capacity enter before reliability and system security risks can emerge.

State, territory and Commonwealth governments and energy market bodies are acting to address any reliability and system security risks and improve the NEM’s capacity to respond to the energy transition. Initiatives such as the Capacity Investment Scheme supported by the Australian Government, the NSW Government’s Electricity Infrastructure Roadmap, the Victorian Government’s Renewable Energy Target Auction 2 and the Queensland Government’s Energy and Jobs Plan aim to provide a policy and regulatory environment that encourages investment into renewable energy. Meanwhile, network infrastructure programs include the Australian Government’s Rewiring the Nation program and the NSW Transmission Acceleration Facility (TAF).
Notwithstanding these initiatives, significant risks remain to the timely delivery of the generation, storage, transmission, and system services infrastructure required for the energy transition. The development of new network infrastructure can have a long time horizon (for example, 7 to 8 years). Furthermore, there are practical limits as to how much capacity and infrastructure can be put in place in a given timeframe. In addition, factors such as global competition for skills and resources, increased cost estimates from prolonged COVID impacts, and a challenging economic environment have resulted in additional risks. In this context, the accelerated retirement of thermal generators can further compress the time available to build the necessary replacement infrastructure, adding to system risks unless replacement capacity comes online before thermal generation retires.

4.1.1 Existing mechanisms to manage the transition

Price signals from the energy market encourage investment in generation and storage. Market prices will rise when supply is scarce and fall when supply is more than adequate.

Network investments are determined separately, being subject to regulatory processes. Much of the new generation and storage investment across the NEM is reliant on new network investment to supply major load centres. This limits the effectiveness of market price signals in encouraging investment in generation and storage that can address system needs.

The market settings (such as the Market Price Cap) are set to support the achievement of the reliability standard. Further, the Retailer Reliability Obligation serves to incentivise retailers to make contracting decisions that support dispatchable capacity. AEMO also retains the ability to procure out of market resources through the Reliability and Emergency Reserve Trader framework (RERT) to address an impending shortfall.

The AEMO also provides important information disclosure and monitoring mechanisms for NEM market participants and stakeholders. AEMO publishes information to inform market participants, including the Electricity Statement of Opportunities (ESOO) and the Integrated System Plan (ISP). The ESOO forecasts electricity supply reliability in the NEM over a 10-year period to inform decisions by market participants, investors, and policymakers. The ISP provides a comprehensive roadmap for the NEM that optimises consumer benefits through a transition period of great complexity and uncertainty. The ISP and its ideal pathway support Australia's highly complex and rapid energy transformation towards net zero emissions, enabling low-cost renewable energy and essential transmission to provide electricity consumers with reliable, secure, and affordable power. It serves the regulatory purpose of identifying actionable and future ISP transmission projects, as well as the broader purposes of informing market participants, investors, policy decision makers and electricity consumers.

In addition, under national rules every generator is required to provide to AEMO the expected closure date for a generating unit, and to update this as required. This published information assists participants in planning investments in supply. However, this information about closure is not firm. If a generator decides to alter this closure date, various existing processes would be triggered. The generator will need to notify AEMO of its new closure date and update its capacity outlook in AEMO’s Medium Term Projected Assessment of System Adequacy (MT PASA) if within the MT PASA period.

If the retirement of scheduled or semi-scheduled generation is brought forward to a date within the 42-month notice of closure period required under NER clause 2.10.1, it will also need to apply to the AER for an exemption from the notice of closure obligations. The AER, under the ‘Generator notice of
closure exemption guideline', will engage with AEMO when considering exemption applications to understand the reliability implications of a generating unit’s earlier closure. If the planned closure of a generating unit materially changes the reliability outlook, AEMO is required to publish an updated reliability forecast.

4.1.2 New measures are required to reduce the risks to the NEM

Notwithstanding government policy supporting investment in new infrastructure and the operation of NEM market signals, risks to an orderly transition remain.

Thermal generators may seek to retire earlier than currently expected, and potentially before adequate replacement capacity is in place. The decision of a thermal generator to seek an earlier retirement may reflect a number of factors. An ageing generator may face large capital and maintenance expenditures for its continued operation. The generator will need to weigh these possible expenditures against expected revenues from electricity markets, which can be variable.

Coal-fired generators also face significant challenges in operating in an energy market that is undergoing transition, for example managing generation operations during periods of low prices when there is significant renewable supply. As well, the generator may face fuel supply issues, or increasing fuel costs. Moreover, the decision to bring forward the closure of a generator may reflect non-economic considerations, such as emissions reduction objectives.

In this context, there is a risk that the early retirement of a System Significant Generating Unit could result in a temporal mismatch with the development of related network and other infrastructure that gives rise to a potential reliability shortfall or other systems needs shortfall. At a high level, the OEM Framework will be an opt-in transition backup for NEM jurisdictions and is intended to manage the orderly exit of a System Significant Generating Unit so that it occurs when replacement capacity is in place, at an efficient cost to electricity consumers.
5 The OEM Framework

The objective of the OEM Framework is to ensure that the energy market transition progresses in an orderly manner, minimising risks to reliability or the security of the electricity system.

In this context, the OEM Framework is intended to be a last resort, a transition backup.

5.1 Jurisdiction opt-in

The OEM Framework will only apply where a Jurisdiction has opted in.

To adopt the OEM Framework a jurisdiction will be required to amend the regulations made under the jurisdiction’s application Act to provide that the OEM Framework applies in that jurisdiction.

The OEM Framework would apply to scheduled thermal generators.

The opt-in regulation may also include additional criteria to define the generating units to which the OEM Framework will apply. For example, it could specify that the OEM Framework only applies to generating units greater than the size defined in the adopting regulation or that it applies to non-government owned generators. This will enable the jurisdiction to tailor the application of the OEM Framework to the jurisdiction’s circumstances.

A jurisdiction that has opted in can subsequently opt-out through amending the regulation made under the jurisdiction’s application Act.

5.2 The OEM Framework process

The Framework is designed to support the energy transition by facilitating the exit of thermal generation in an orderly manner. Figure 1 sets out the OEM Framework process.

The OEM Framework only applies in jurisdictions that have opted into the OEM Framework.

The Framework involves four stages, the elements of which are discussed in more detail in later sections.

5.2.1 Stage one: The OEM Framework gateway process

The first stage is the gateway process. The gateway process is initiated when an OEM Generator notifies the bring forward of the closure date of one or more of its OEM Generating Units to within 7 years, either by notifying AEMO of a change in the closure date (or where it has already notified AEMO since 1 January 2021) or by applying to the AER for an exemption from the current 42-month notice of closure requirements.

The OEM Generator will be required to provide Prescribed Information at this point, in order to facilitate later processes including the possible negotiation of a voluntary agreement and estimating the possible cost of a Notice for Mandatory Operation.

After an OEM Generator signals an intention to bring forward the closure date for an OEM Generating Unit, the Jurisdiction Minister may direct AEMO to undertake a System Needs
Assessment. The purpose of the System Needs Assessment is to determine the impact of the early closure of the OEM Generating Unit(s) on the reliability and security of the electricity system.

The Jurisdiction Minister, having considered the System Needs Assessment, can trigger the next stage of the OEM Framework, if the Minister believes the closure of the OEM Generating Unit will contribute to a system needs shortfall.

5.2.2 Stage two: Alternative solutions and voluntary agreements

The second stage of the OEM Framework includes processes intended to inform the decision making of the Jurisdiction Minister in response to a system needs shortfall, and possible voluntary negotiations between the Jurisdiction and the System Significant Generator (OEM Generator controlling OEM Units whose closure will, in the opinion of the Jurisdiction Minister, result in a system needs shortfall).

The search for alternative solutions will involve AEMO identifying, through a desktop exercise, the range of potential replacement options within the relevant NEM jurisdiction to address the system needs shortfall in the System Needs Assessment. The Jurisdiction Minister may also consider policy options or, building on AEMO’s work, undertake market soundings for alternative solutions.

The Jurisdiction Minister may also direct the preparation of an estimate of the benefit to consumers from addressing system needs and direct the AER to estimate the likely cost of a Notice for Mandatory Operation.

The OEM Generator will be required, if directed by the Jurisdiction Minister, to commission an independent due diligence report of the technical position and/or the financial position of the OEM Generator.

The cost of these will be met initially by the jurisdiction with the potential for cost recovery under stage four of the OEM Framework. This will inform voluntary negotiations.

Combined, this information will support decision making by the Jurisdiction Minister.

The jurisdiction and the System Significant Generator may be able to negotiate a voluntary agreement for the System Significant Generator to extend its operations for the period required to address system needs. The OEM Framework is not prescriptive of the form or terms of any voluntary agreement. A voluntary agreement would be administered by the jurisdiction.

5.2.3 Stage three: Notice for Mandatory Operation

The Notice for Mandatory Operation is intended to be a last resort.

The Jurisdiction Minister may issue a Notice for Mandatory Operation to the System Significant Generator if, in the Minister’s opinion it is needed to avoid a system needs shortfall and:

- It is unlikely that a negotiated voluntary agreement will be reached, or
- The System Significant Generator’s Proposed Closure Date is within 30 months.

By issuing a Notice for Mandatory Operation, the Jurisdiction Minister can direct a System Significant Generator to provide system services in order to avoid a system needs shortfall.

The Notice for Mandatory Operation will be in place for the period required to address the system need.
• In the case of a generator that brought forward its closure date in the period from 1 January 2021 to the date of commencement of the OEM Framework, this will be for no more than three years from its current expected date of closure.

• In the case of a generator that brings forward its closure date in the period after the OEM Framework has commenced, this is for no longer than its current expected closure date.

The AER will administer the Notice for Mandatory Operation including the determination of the costs to be recouped by the System Significant Generator.

**5.2.4 Stage four: Cost recovery process**

The cost of solutions adopted under either stage two or stage three of the OEM Framework will be recovered from consumers in the Jurisdiction in which the OEM Generator is located.

A new TNSP Cost Recovery Mechanism is proposed that will be used for the OEM Framework. Consideration had also been given to recovering the cost from consumers through DNSPs or directly from retailers. Cost recovery from DNSPs could have used a similar process to that already used for jurisdictional schemes. However, cost recovery via the TNSP is an efficient means of collecting the OEM Contribution and also provides for collection from transmission connected consumers.

The TNSP Cost Recovery Mechanism would be able to be used to support alternative solutions and programs and schemes other than the OEM Framework.
Figure 1: Overview of the OEM Framework process

1. **Stage 1: Gateway (Assessing Reliability)**
   - Retiring coal and gas-fired generator notifies the AEMO of its planned closing date as part of the renewable energy transition.

2. **Stage 2: Alternatives & Voluntary Agreement Process (Finding a Backstop)**
   - AEMO assesses whether the closure date puts the security or reliability of the grid at risk, the size and extent of any temporary energy shortfall, and the impact on consumers.
   - If the Minister believes there is a need for a backstop, AEMO searches for alternative options to ensure reliable and secure energy supply when the generator closes.
   - If no viable alternative option is identified, the Minister negotiates a voluntary agreement with the generator to temporarily adjust its closing date to ensure reliable and secure energy supply.
   - If the Minister believes an agreement can't be reached, as a last resort, the Minister issues a Notice for Mandatory Operation to the generator to temporarily extend the generator's permanent closing date to keep the lights on.

3. **Stage 3: Notice for Mandatory Operation (If Required)**
   - Notice for Mandatory Operation provides the generator a clear process for how it will operate.
   - Once the temporary shortfall is filled, the power station permanently closes.

4. **Stage 4: Cost Recovery**
   - Costs passed through to consumers in the NEM jurisdiction.
   - Cost recovery (Cost of all solutions passed on to energy consumers in the NEM jurisdiction).
5.3 Design principles

The design of the OEM Framework reflects a number of principles:

- Opt-in: The OEM Framework will be implemented on the basis that jurisdictions will opt-in. A jurisdiction may decide to not opt-in to the OEM Framework, for example where the jurisdiction believes that, because of the structure of the electricity sector or alternative policy actions, there would not be a benefit in implementing the OEM Framework in that jurisdiction.

- Support meeting system needs: The OEM Framework seeks to address system shortfalls that might arise with the early closure of a System Significant Generating Unit. The potential to mandate the continued operation of the System Significant Generating Unit, whilst hopefully not required, provides a necessary power to support reliability and other system needs.

- Cost recovery from those who benefit from it: The net costs of the OEM Framework will be met by the electricity consumers in the NEM jurisdiction where the System Significant Generator is located, as these electricity consumers will benefit most from improved system outcomes.

- Minimise costs to electricity consumers: The OEM Framework is designed to support reliability in a way that does not impose excessive costs to electricity consumers. The search for alternative solutions, prescribed disclosure of information by OEM Generators to facilitate informed negotiations and, if commissioned, the consumer benefit assessment would underpin this. Information disclosures where the Jurisdiction Minister has entered into a voluntary agreement or mandated the continued operation of the System Significant Generator would provide further protection to consumers.

- Reasonable return to System Significant Generators: The OEM Framework is designed so that the System Significant Generator can earn a reasonable return for its operations to address system needs shortfalls, if it is subject to a Notice for Mandatory Operation.

- Minimise market distortions: The OEM Framework, by potentially delaying the exit of thermal generation capacity, will represent an impact on the market. However, the OEM Framework structure seeks to minimise market distortions, where possible and appropriate.

- Minimise regulatory complexity: Minimising regulatory complexity is necessary to reduce regulatory burden on OEM Generators and the costs of administering the OEM Framework.

- Transparency: Transparency of key terms of a voluntary agreement or Notice for Mandatory Operation, including the actual cost to consumers, is important for the efficient operation of the market and to protect the interests of consumers. This must be balanced against ensuring that commercially sensitive information is not released that may damage competition in the market.

- Maximise potential for negotiated outcomes: The Minister may only mandate the operation of a System Significant Generator where, in the Jurisdiction Minister’s opinion, it is unlikely that a negotiated voluntary agreement will be reached, or the System Significant Generating Unit’s Proposed Closure Date is within 30 months.
• Managing perverse incentives for OEM Generators: For example, the OEM Framework is designed in a way that aims to minimise the risk of OEM Generators bringing forward the notified closure date of OEM Generating Units to obtain Government support that may not otherwise be available and to minimise the risk that the OEM Generator will incur expenses inefficiently.

• Providing certainty of generator exit date: Once the term of the Notice for Mandatory Operation expires, the System Significant Generator will retire permanently.
6 The gateway process

6.1 Establishing clear preconditions for triggering the OEM Framework

The OEM Framework is intended to support an orderly transition, by managing the exit of a generator where required to address a system needs shortfall.

As part of the first stage under the OEM Framework, the gateway process outlines the preconditions necessary for the OEM Framework to be actioned.

6.2 The OEM Framework gateway process

The gateway to the OEM Framework process has a number of key phases: notification, provision of Prescribed Information, Ministerial direction of a System Needs Assessment, and the Jurisdiction Minister determination on whether to proceed to stage two.

Currently, under NER clause 2.2.1, a generator must immediately notify AEMO of any change to the expected closure year of a scheduled generating unit.

6.2.1 Notification

The precondition for OEM Framework is when an OEM Generator:

- Notifies AEMO on or after 1 January 2021 of a change to the Current Expected Closure Date of an OEM Generating Unit, with the new expected closure date (Proposed Closure Date) being:
  - Earlier than the previously notified date, and
  - Within seven (7) years of the date of notification.

Or

- Applies to the AER for an exemption (NER clause 2.10.1 (c4)) from the 42-month notice of closure requirement (NER clause 2.10.1 (c2)) for an OEM Generating Unit.

The OEM Framework will only apply where the Proposed Closure Date is within seven (7) years. This figure has been chosen on the basis that this should provide sufficient time to develop alternative infrastructure to address any system needs or reliability gaps.

The OEM Framework has not been restricted to generators that have applied for an exemption under NER clause 2.10.1 (c4). This is because it may not be possible for feasible replacement infrastructure, particularly related network infrastructure, to be put in place within that 42-month period.
Key question

One of the issues raised is how to activate the OEM Framework if an OEM Generator were to mothball a unit(s). Consideration is being made to include a mechanism to capture generating units that are mothballed. The proposed text for inclusion in the criteria above to trigger the OEM Framework is “when an OEM Generator notifies AEMO that an OEM Generating Unit is not available under the NER clause 3.7.2 for a period covering 75% of the period from 12-36 months, with a recall time greater than 3 days or no recall time reported”.

1. Is this mothballing precondition appropriate?
2. Do you have a view on the timings in the mothballing precondition?

6.2.2 The OEM Generator is required to provide Prescribed Information

Significant information asymmetries exist between the OEM Generator and Jurisdiction regarding the operation and economics of the OEM Generator. Other information that is not available to the Jurisdiction include:

- Additional insight on issues the OEM Generator may be facing and why the OEM Generating Unit is closing.
- Information on whether the OEM Generating Unit could continue to operate in a way needed to address system needs shortfalls.
- Clarification on the timeframes in which decisions need to be made within the OEM Framework to minimise costs.
- Additional information on corporate structure that may be necessary to efficiently implement the Notice for Mandatory Operation.

In order to address these information asymmetries, the OEM Generator is required to provide Prescribed Information to the AER. The AER will provide a copy of the Prescribed Information to the Jurisdiction Minister and AEMO.

The OEM Generator does not have to meet the Prescribed Information requirements where there are less than three months to the Current Expected Closure Date. This will allow minor changes to be made in the immediate time leading up to the expected closure date.

The Prescribed Information would be treated as being confidential to the extent permitted by law. Penalties would apply to the provision of false or misleading information.

6.2.2.1 When are OEM Generators required to provide the Prescribed Information to the AER?

To address information asymmetries, the OEM Framework proposes that the OEM Generator is required to provide the Prescribed Information to the AER when:

- Notifying AEMO of a change in its scheduled closure date, that will bring forward the closure date to within 7 years of the date of notification, or
- It applies to the AER for an exemption from the 42-month notice of closure requirement (NER clause 2.10.1 (c2)) under NER clause 2.10.1 (c4) for an OEM Generating Unit.
In the event that the OEM Generator brought forward its expected closure date between 1 January 2021 and the commencement of the OEM Framework, the Jurisdictional Minister may direct the OEM Generator to provide Prescribed Information to the AER.

The Jurisdiction Minister may require an update of Prescribed Information be provided to the AER at any time.

6.2.2.2 What information are OEM Generators required to provide?

The Prescribed Information to be provided would include:

- OEM Generating Unit Proposed Closure Date in the absence of a voluntary negotiated agreement or Notice for Mandatory Operation.

- The following information for the OEM Generator, including on an annual basis for the past three financial years.
  
  o Revenues, including detail of whether revenue was sourced from spot markets, contracts, or other sources.
  
  o Fuel costs.
  
  o Maintenance costs for the OEM Generator and specific OEM Generating Units.
  
  o Employee related costs.
  
  o Financing costs.
  
  o Insurance costs.
  
  o Other ongoing costs, including details of the cost, for the OEM Generator and specific OEM Generating Units.
  
  o Electricity price risk management contracts, including payments made and received under these contracts.

- The following information for the OEM Generator for the period to the Current Expected Closure Date or for the next seven years, whichever is earliest (or for a Generator that notified its closure date in the period between 1 January 2021 and the commencement of the OEM Framework, for up to three years after the current expected closure date), and how the information would be different if the OEM Generator or OEM Generating Unit closed on the Proposed Closure Date.
  
  o Projected annual revenues, and assumptions on which they are based.
  
  o Estimated annual maintenance schedule and budget for the OEM Generator and specific OEM Generating Units, including demonstration of where these costs are committed.
  
  o Expected annual fuel supply and cost, including demonstration of where costs are already committed (for example, contract being signed) and contracts for the management of fuel supply.
  
  o Expected other annual capital expenditure and operating costs for the OEM Generator and specific OEM Generating Units, including demonstration of where costs are committed.
o Any other substantial costs expected to be borne by the generating facility.

o Details of existing contractual obligations, including contracts or agreements with related entities, related to the continued operation of the OEM Generator.

o Risks management contracts and arrangements that pertain to the OEM Generator and relate to:
  ▪ Electricity price risk (a contract or arrangement between an OEM Generator and another party that references the wholesale spot price for electricity, including with respect to the purchase or sale of electricity, and effects the OEM Generator’s exposure to the volatility of the spot price).
  ▪ For vertically integrated “gentailers” details of expected hedging levels for retail customers and the associated payment or transfer pricing arrangements.
  ▪ Fuel supply and price (contracts or arrangements between an OEM Generator and another party that affects the OEM Generator’s exposure to movements in fuel prices).

o Risks and risk management strategies relating to:
  ▪ Reliability of plant and the likelihood of forced outages.
  ▪ Safety.

• Information of any opportunity cost or other cost not otherwise identified that would be associated with the continued operation of the OEM Generating Unit that may be incurred if the OEM Generating Unit was required to operate until the Current Expected Closure Date.

• Information on, and demonstration of the basis for, incremental costs for the continued operation of the OEM Generating Unit, examples listed as follows. This information is required for the period to the Proposed Closure Date.
  o Additional maintenance costs, including incremental maintenance and other costs, that will be incurred for the OEM Generating Unit in order for it to operate for the period after the Proposed Closure Date to the Current Expected Closure Date.

• Additional remediation or redundancy costs, or changes to the termination value of the asset.

• Information on any regulatory approvals that would be required for the continued operation of the OEM Generating Unit, for example environmental licences, and by when these would need to be renewed, if operations were to be extended.

• Information on any supply contracts with related entities or third parties that are currently in place and necessary for the continued operation of the OEM Generator and OEM Generating Unit. The detail should include:
  o Current term and expiry date of the contracts.
  o Contract conditions relating to termination of the contract.
  o Contract conditions relating to the extension of the contract.
  o Terms relating to volume supplied and price.
  o Other terms likely to be relevant to the continued operation of the OEM Generating Unit.
- Information on any other agreements with related entities, including in other jurisdictions.

- Information on the technical condition of the plant, including information on the current condition of the OEM Generating Unit and supporting on-site infrastructure required for the continued operation of the OEM Generating Unit and information relevant to the operation of the OEM Generating Unit until the Current Expected Closure Date.

- Information on the corporate structure of the entity owning the OEM Generator, including where services are provided to the OEM Generator by related entities.

Where specific revenue and cost information is not available at the level of the OEM Generator, for example where there are only pooled costs available for the owning entity’s broad portfolio, estimates (certified by a duly authorised officer) should be provided to the extent that they pertain to the OEM Generator, along with information on the basis for the estimates.

Key question
3. Are there concerns with requiring the Prescribed Information to be provided when the OEM Generator notifies of a change to its closure date (or applies to the AER for an exemption from the notice of closure requirements)? If yes, please provide details.

### 6.2.3 System Needs Assessment

Where an OEM Generator has brought forward the closure date for an OEM Generating Unit, the Jurisdiction Minister may decide to direct AEMO to undertake a System Needs Assessment for the closure of the OEM Generating Unit(s).

The purpose of the System Needs Assessment is to consider potential system needs of reliability and system security.

The Jurisdiction Minister will have defined periods in which to decide whether to direct AEMO to undertake a System Needs Assessment. The Minister may issue the direction either:

- within 60 days of the OEM Generator notifying AEMO of the change in the closure date of its OEM Generating Units, or

- within 60 days of the annual ESOO, or updated ESOO.

AEMO should complete and provide the System Needs Assessment to the Jurisdiction Minister as soon as practicable. AEMO must, within 60 days of providing the System Needs Assessment to the Jurisdiction Minister, publish the System Needs Assessment on its website.

The ability for the Jurisdiction Minister to trigger the System Needs Assessment process would exist even where the Proposed Closure Date remains outside of the 42-month notice of closure requirements under NER clause 2.10.1.

The System Needs Assessment will include a reliability assessment as well as an assessment of system security needs. The assessment of the system needs shortfall will also inform the search for alternative solutions, by identifying the type, size, and duration of the need to be addressed.

The Jurisdiction Minister may also consider other information to inform their view on system needs. For example, the Minister may consider information concerning jurisdiction specific reliability targets, such as the NSW Energy Security Target.
Where the Minister has directed AEMO to undertake a System Needs Assessment and AEMO will also produce an ESOO Update, the System Needs Assessment could be aligned with, and integrated into, the ESOO Update.

### 6.2.3.1 The System Needs Assessment will consider reliability and system security

The Systems Needs Assessment will include forecasts for reliability consistent with the methodology used for the ESOO, as well as forecasts for reliability that also take account of prospective projects, and information concerning forecast unserved energy relevant for assessing risks.

In practice, this would include, but not be limited to, an assessment against the relevant reliability standard for the forecast period using the central scenario, consistent with that undertaken for the most recent ESOO.

The System Needs Assessment may also include any additional sensitivity that AEMO considers relevant or requested by a jurisdiction.

The System Needs Assessment may also provide descriptive information on ‘tail risks’ to reliability (low probability events that would have a high impact). This would include a description of the risks of unserved energy, including estimates for the probability, magnitude, and duration of periods of unserved energy (including for periods of low probability).

The System Needs Assessment will also consider the impacts on system security. This would involve a high-level assessment of the impact on system security unless, in AEMO’s opinion, there is a compelling need to update the annual power system security reports. Projects include generation, transmission and other projects that could support system needs.

The System Needs Assessment would include identification of the type, size, and duration of the need to be addressed. It would also identify the event(s) that are expected to cause any reliability shortfall or other system needs shortfall to close over time, for example the completion of additional generation capacity or transmission infrastructure.

### 6.2.3.2 The System Needs Assessment will consider future projects in the NEM

The System Needs Assessment will include a sensitivity that takes into consideration prospective projects (see Box 1), in addition to existing, committed and anticipated projects, in order not to overstate a system needs shortfall in the outer years of the forecast period. This represents a balancing of competing considerations as, for example, there is additional uncertainty associated with prospective projects defined in this way, for example with respect to connection requirements.

**Box 1: What makes a project a ‘prospective project’?**

Prospective projects are projects that will be constructed under a jurisdiction or Australian Government funding program (for example, a project that has received a Long-Term Energy Service Agreement in NSW) and where, in AEMO’s opinion, the capacity is likely to be available to the jurisdiction’s electricity consumers.

The System Needs Assessment will also include the identification of the projects expected to address the system needs shortfall, as this is necessary to detail the adjustment events which may cause a voluntary negotiated agreement (if the voluntary agreement provides for an adjustment event) or Notice for Mandatory Operation to be extended.
For example, the completion of a transmission project may be identified as an event that would contribute to addressing a reliability shortfall. If the completion of the transmission project is identified as an adjustment event and it is delayed, then the duration of the voluntary agreement or Notice for Mandatory Operation may be prolonged (in the case of the Notice for Mandatory Operation, for up to three years after the Current Expected Closure Date if the closure date was brought forward in the period from 1 January 2021 to the date of OEM Framework commencement, or for no longer than its Current Expected Closure Date if the closure date was brought forward after the date of OEM Framework commencement). Such adjustment events would need to be identified in the voluntary agreement or Notice for Mandatory Operation along with the terms for extension.

6.2.4 Notice of closure requirements

The OEM Framework does not alter the existing notice for closure requirements under NER clause 2.10.1. The AER will determine any applications for exemption received under NER clause 2.10.1 (c4).

It is possible that the outcome of the AER’s assessment of an application for exemption from the notice of closure will be different from a Minister’s decision under the OEM Framework. For example, a System Significant Generator may still be subject to the OEM Framework, potentially including a Notice for Mandatory Operation, even where the AER has approved the application for exemption from the notice for closure requirements. The AER assessment of the application for exemption may consider different criteria to that being considered by the Jurisdictional Minister through the OEM Framework process.

6.2.5 Transition to stage two

The Jurisdiction Minister, having considered the System Needs Assessment and any other relevant information (including additional information sought by the Minister, for example an assessment against a jurisdiction specific reliability standard), can trigger the next stage of the OEM Framework process. The Jurisdiction Minister can only trigger stage two of the OEM Framework if the Minister believes the closure of the OEM Generating Unit will contribute to a system needs shortfall and within 60 days of receiving a System Needs Assessment.

The Jurisdiction Minister is to advise the AER, AEMO and the OEM Generator of the direction to initiate stage two of the OEM Framework. The Jurisdiction Minister is to publish on a Government website that stage two of the OEM Framework is being initiated as soon as practicable.

6.2.5.1 OEM Framework application in the NSW/ACT NEM region

The NSW NEM region consists of the NSW and ACT jurisdictions. The operation of the OEM Framework in NSW will have implications for energy consumers in the ACT. It is appropriate that the ACT Energy Minister be consulted on any decision made to initiate stage two of the OEM Framework. If the ACT were to opt-in to the OEM Framework, further consultation may be considered before initiating further stages.

The NEL will require the NSW Jurisdiction Minister to consult with the ACT Energy Minister before initiating stage two of the OEM Framework, and before each additional stage if the ACT were to opt-in.
7  Search for alternative solutions

7.1  Finding alternative solutions

Once a Jurisdiction Minister considers a system needs shortfall exists and has triggered stage two of the OEM Framework, the OEM Framework includes a step to identify practical options that could be put in place to cover the system needs shortfall.

The search for solutions seeks to ensure that all options to address a reliability or systems needs shortfall are given the opportunity to be considered as an alternative to extending the operation of the System Significant Generating Unit.

At a minimum, the search will involve AEMO identifying through a desktop exercise the range of potential replacement options to address the system needs shortfall in the Systems Needs Assessment. AEMO’s search for alternative solutions should be completed in 60 days. AEMO can extend the time for the search for alternative solutions if required.

The alternative solution process is not required in the case of OEM Generators that notified an early closure date between 1 January 2021 and the commencement of the OEM Framework.

7.1.1  Steps to identify alternative solutions

The Systems Needs Assessment undertaken by AEMO as part of the gateway process will identify the type, size, and duration of the need to be addressed.

The search for alternative solutions will involve AEMO providing advice on alternative solutions to the Jurisdiction Minister. Replacement options could be identified through a desktop exercise conducted by AEMO and involve a high-level assessment of project pipeline information against the replacement options. Potential replacement options could include prolonging the operation of other generators in the jurisdiction that were expected to exit.

The Jurisdiction Minister may also obtain additional information on alternative solutions, consider possible policy responses or undertake a market sounding process to identify market solutions, if time permits.

The potential use by a Jurisdiction Minister of an approach to market to identify whether alternative solutions are available to mitigate the systems needs shortfall is beneficial as:

- It ensures that the solution is drawn from the widest information set possible.
- It is the most likely to draw out cost-effective proposals.
- It will provide additional information regarding the cost of alternative solutions.
- Conducting such a search alongside obtaining Prescribed Information from the System Significant Generator provides for competitive tension between options to meet the system needs shortfall.

If a Notice for Mandatory Operation is issued, AEMO’s advice on alternative solutions will be published as part of the Minister’s declaration and on AEMO’s website.
8  Information processes

8.1  Addressing information asymmetry

Information asymmetries mentioned in section 6.2.2 are particularly impactful if the Jurisdiction Minister and OEM Generator enter into voluntary negotiations. Addressing this information asymmetry will support the informed negotiation of a voluntary negotiated agreement on reasonable commercial terms.

8.2  Consumer benefit assessment

The Jurisdiction Minister may commission an analysis by a government department or third party of the benefit to electricity consumers of addressing a system needs shortfall identified in the System Needs Assessment.

The consumer benefit assessment should include, but is not necessarily limited to, the direct impact of changes in involuntary load shedding that may be identified in the System Needs Assessment. The consumer benefit assessment may include consideration of other matters that are identified by the Jurisdiction Minister.

The information on the estimated benefit to electricity consumers of addressing a system needs shortfall would provide guidance on the value of closing a system needs shortfall. The estimated cost of any proposed voluntary negotiated agreement, Notice for Mandatory Operation or alternative solution could be compared to the estimated cost of the forecast system needs shortfall, to indicate whether there is a net benefit to electricity consumers.

A summary of the consumer benefit assessment, if commissioned, will be published as part of the Minister’s declaration if a Notice for Mandatory Operation is issued.

8.3  Technical and financial due diligence reports

The technical due diligence report will confirm the technical position of the OEM Generator and OEM Generating Unit, while the financial due diligence report will confirm the financial position of the OEM Generator.

The OEM Generator technical and financial due diligence report results will be kept confidential to the extent permitted by law as they are likely to include commercially sensitive information. The due diligence reports will be provided to the Jurisdiction Minister, the OEM Generator, AEMO and the AER.

8.3.1  Technical due diligence reports

The OEM Generator will be required, if directed by the Jurisdiction Minister, to commission an independent due diligence report of the technical position of the OEM Generating Unit and the necessary associated facilities. The service provider undertaking the technical due diligence would
be determined by the Jurisdiction Minister, following consultation with the OEM Generator, AEMO and the AER.

The scope of the technical due diligence report would be determined by the Jurisdiction Minister, following consultation with the OEM Generator, AEMO and the AER. It is to be undertaken by a suitably qualified engineering firm, and is expected to:

- Confirm the technical condition of the plant.
- Identify engineering requirements, issues and risks from an engineering perspective associated with the continued operation of the OEM Generating Unit for the period required to address the system need shortfall.
- Identify any specific work, health and safety or environmental issues associated with the continued operation of the OEM Generating Unit for the period required to address the system need shortfall.

### 8.3.2 Financial due diligence reports

The OEM Generator will be required, if directed by the Jurisdiction Minister, to commission an independent due diligence report of the financial position of the OEM Generator.

The financial due diligence report would confirm that the financial information, including on projected revenues and costs, provided by the OEM Generator, which were required when the OEM Generator brought forward the OEM Generating Unit’s closure date as part of the Prescribed Information disclosure, are accurate and reasonable in the context of prolonging the operation of the OEM Generating Unit.

The scope of the financial due diligence report would be determined by the Jurisdiction Minister, following consultation with the OEM Generator, AEMO and AER. The service provider undertaking the financial due diligence would be determined by the Jurisdiction Minister, following consultation with the OEM Generator, AEMO and AER.

### 8.4 Notice for Mandatory Operation indicative cost estimate

The Jurisdiction Minister may request the AER to provide an indicative estimate of the cost of the Notice for Mandatory Operation when, or after, triggering stage two of the OEM Framework.

The AER’s indicative estimate of the cost of the Notice for Mandatory Operation will inform voluntary negotiations with the System Significant Generator. This information will protect electricity consumers against excessive cost.

The Jurisdiction Minister’s request to the AER would need to include the proposed duration (calendar time from the start of the Notice for Mandatory Operation to its expected end date), the operating mode (see section 10.6) and performance obligations anticipated for the Notice for Mandatory Operation.

The Prescribed Information provided by the System Significant Generator would inform the development of the indicative cost estimate.
The AER may also engage industry experts to assist in the development of the indicative cost estimate.

The AER may require the System Significant Generator to supply any additional information and/or verification the AER deems necessary to inform the development of the indicative cost estimate. In particular, additional information will likely be required to take account of any operating mode restrictions and performance obligations.

The indicative cost estimate of the Notice for Mandatory Operation is to be completed within 60 days. The AER may extend the timeframe for completion of the indicative cost estimate if required.

The AER is not expected to undertake external consultation in developing the indicative cost estimate and it is provided for guidance purposes only. The indicative cost estimate is not a determination by the AER.

The indicative cost estimate will be provided to the Jurisdiction Minister but otherwise kept confidential to the extent permissible by law.

8.5 Exemptions

The System Significant Generator may seek an exemption from the voluntary agreement process or the Notice for Mandatory Operation where the System Significant Generator believes:

- The technical condition of the System Significant Generating Unit makes further operation impossible or unsafe and this issue cannot be mitigated.
- There are other impediments to the continued operation of the System Significant Generating Unit that cannot be feasibly addressed.

The System Significant Generator would apply for the exemption to the Jurisdiction Minister, including all relevant information including any potential legal barriers associated with the continued operation of the System Significant Generator or System Significant Generating Unit.

Noting that the System Significant Generator may have sought an exemption from the notice of closure requirements from the AER on similar grounds, the Jurisdiction Minister may consider the assessment of the AER in determining whether to provide an exemption to a Notice for Mandatory Operation.

If necessary, the Minister may commission further technical assessment to verify that the basis for the exemption is genuine (noting a due diligence report may have already been conducted as part of the information processes).
9 Voluntary negotiated agreement

9.1 Promoting consensus-building to address a system needs shortfall

The OEM Framework also allows the Jurisdiction Minister and the System Significant Generator to develop a voluntary, negotiated agreement to address the system needs shortfall. The voluntary negotiations may take place subsequent to the search for alternative solutions, or in parallel (particularly if there are time constraints).

Box 2: What is a ‘System Significant Generator’?
A System Significant Generator is any entity that controls a System Significant Generating Unit. These units are OEM Generating Units whose retirement before replacement infrastructure is in place contributes to a systems reliability or security shortfall for that NEM region.

The OEM Framework is designed to give maximum flexibility for parties to develop terms in order to address the system needs shortfall.

It is anticipated that jurisdictions will ensure that, at the jurisdiction level, appropriate governance arrangements are in place for any voluntary negotiations to maintain accountability, transparency and to ensure fairness and equity in carrying out the negotiations process.

The voluntary agreement will be administered by the jurisdiction.

9.1.1 Transparency safeguards

To provide confidence to the market and energy consumers, selected terms of the voluntary negotiated agreement should be released to the market once an agreement has been reached. This information should include:

- The System Significant Generator that is party to the agreement.
- The duration of the voluntary negotiated agreement.
- Specified adjustment events that may cause a change in the term of the voluntary negotiated agreement.

Information on the actual cost to consumers of a voluntary negotiated agreement, and process for cost recovery, should also be published annually.

Commercially or competitively sensitive information should not be publicly disclosed.
10 Notice for Mandatory Operation

10.1 A measure of last resort

The Jurisdiction Minister can issue a Notice for Mandatory Operation if, in the Jurisdiction Minister’s opinion, it is needed to avoid a system needs shortfall, it is unlikely that a negotiated voluntary agreement will be reached, or the System Significant Generating Unit’s Proposed Closure Date is within 30 months.

These provisions, including the ability to issue the Notice for Mandatory Operation within 30 months of the Proposed Closure Date, are intended to prevent the continuation of non-productive negotiations that will reduce the time to the System Significant Generating Unit’s Proposed Closure Date and to enable the Minister to issue a Notice for Mandatory Operation to address a forthcoming system needs issue when required at short notice.

A delay in the decision to prolong the operation of a System Significant Generating Unit may add to the cost of prolonging the operation of a System Significant Generating Unit because of differences in the maintenance profile. In addition, the arrangements for the System Significant Generator continuing to operate under a Notice for Mandatory Operation will be different from the negotiations for a voluntary agreement, and time will be needed to put this in place.

In deciding to issue the Notice for Mandatory Operation, the Minister may have regard to information from the OEM Framework processes and other information.

It is appropriate that the decision to issue the Notice for Mandatory Operation is made by the relevant Jurisdiction Minister for the affected NEM jurisdiction. Electricity consumers in the relevant jurisdiction would bear the effects of a decision not to issue a Notice for Mandatory Operation or the cost associated with the issue of a Notice for Mandatory Operation.

The AER will administer the Notice for Mandatory Operation including the determination of the costs to be recouped by the System Significant Generator.

10.2 Content of the Notice for Mandatory Operation

The content of the Notice for Mandatory Operation includes bespoke terms relevant to the application of the notice to the System Significant Generator, bespoke terms determining the expected basis of operation of the System Significant Generator, and the performance obligations of the System Significant Generator.

The Notice for Mandatory Operation is addressed to the System Significant Generator and may include, to the extent permissible, other related entities that provide essential services to the System Significant Generator.

The Notice for Mandatory Operation should specify the following:

- The System Significant Generator to which the Notice applies (published to the market).
- The term of the Notice for Mandatory Operation, including the start date for the commercial component (also published to the market).
• Specified adjustment events that may cause a change in the term of mandatory operation (also published to the market).

• The specific performance obligations applying to the System Significant Generator to be available during periods of system needs risks (also published to the market).

• The generation capacity (MW) to be made available by the generator (also published to the market).

• The permitted operating mode of the generator, including if there are any restrictions on the operation of the generator (also published to the market).

• Any other System Significant Generator or System Significant Generating Unit specific requirements necessary for the continued operation of the generator. This may include:
  o Requiring the System Significant Generator use all reasonable and best endeavours to maintain arrangements with related and third-party entities that provide services necessary for the continued operation of the System Significant Generator.
  o Maintenance and operation of ancillary plant such as coal unloaders and conveyors.
  o Doing all things necessary to maintain relevant licences.

### Key question

4. Noting that generators may operate under complex corporate structures, what are the best means for addressing related entities that provide services that are required for the operation of the System Significant Generator?

### 10.3 Duration of Notice for Mandatory Operation

The Notice for Mandatory Operation should run for no longer than the Minister expects to be required to address a system needs shortfall.

To provide as much certainty to the market as possible, the Notice for Mandatory Operation will be for a term to a fixed date subject to variation in the date for any specified adjustment event.

There is always a risk that the development of replacement infrastructure is delayed, causing the period of reliability shortfall to be extended. As such, the Notice for Mandatory Operation will also specify adjustment events, on which the term of mandatory operation can be varied. Specifying the relevant adjustment events will provide markets with additional information and confidence.

There will still be a hard limit that the System Significant Generating Unit cannot be kept open beyond:

• In the case of a generator that brought forward the closure date of the generating unit in the period from 1 January 2021 to the date of commencement of the OEM Framework, this is no more than three years from its current expected date of closure (that is, the date it has advised AEMO as at the date of commencement of the OEM Framework).

• In the case of a generator that brings forward the closure date of an OEM Generating Unit in the period after the OEM Framework has commenced, this is no longer than its current expected closure date.
The System Significant Generating Unit will be required to close at the end of the term of Notice for Mandatory Operation.

10.4 Minister declaration

The Jurisdiction Minister, when issuing a Notice for Mandatory Operation, will issue:

- Information listing the committed projects and actionable projects (including renewable generation projects) that could address system needs over time, considered as part of the System Needs Assessment.
- A copy of AEMO’s report on alternative solutions.
- If commissioned, a summary of the consumer benefit assessment.

Information shared by the Jurisdiction Minister on projects such as renewable generation, storage or transmission projects that are existing or committed to address system needs will serve to reinforce the Minister’s commitment to energy transition.

The provision of summary information on the search for alternative solutions as well as the consumer benefit assessment should contribute to market transparency in the decision-making process.

10.5 Market transparency

Given the impact that a Notice for Mandatory Operation will have on the market, specific details from the Notice for Mandatory Operation, as indicated in section 10.2, will be published to support an informed market.

The publication of these details will:

- Ensure the market is informed of the mode of operation of the System Significant Generator, informing the operational decisions of other generators.
- Provide confidence to the market as to the duration for which the closure of the System Significant Generating Unit will be delayed, thereby informing and potentially incentivising new investment decisions.
- Provide information to electricity consumers that are paying for the continued operation of the System Significant Generating Unit, showing there will be a reliability benefit from the System Significant Generating Unit’s continued operation.

In addition, the actual cost to consumers of the Notice for Mandatory Operation will be published annually as part of the AER’s cost recovery determination.

Competitive or commercially sensitive information should not be published.

10.6 Operating mode

The Notice for Mandatory Operation will need to specify the operating mode for the System Significant Generator. The operating mode, which will be determined by the Jurisdiction Minister, is
intended to include whether the System Significant Generator operates on a restricted or unrestricted basis.

- **Restricted**: If the generator is operating on a restricted basis, it will only be allowed to operate certain capacity during specific periods of the year or events, in accordance with the technical capability and safe operation of the generating unit(s).

- **Unrestricted**: If the generator is operating on an unrestricted basis, it can operate as it would on a commercial basis subject to meeting any performance obligations.

The unrestricted mode of operation, accompanied by performance obligations is expected to normally provide the best system needs outcomes and allows the System Significant Generator to respond to market price signals regarding supply tightness. It also alleviates practical issues that would otherwise arise, such as staffing a System Significant Generator that will only be operating for limited periods.

However, there is a risk that allowing the System Significant Generator to operate on a commercial basis, when also receiving support from the Notice for Mandatory operation, may distort market outcomes and discourage new investment.

As such, there may be circumstances in which the mode of operation of the generator is limited. For example:

- The operations of a generator may be restricted to mitigate market distortions.

- The operations of a generator may be limited for environmental reasons, for example to reduce carbon emissions.

### 10.7 Performance obligations

It will be necessary to impose performance obligations on the System Significant Generator to ensure that the system benefit is realised. Consumers are paying for the continued operation of the generator, and it is essential that it is available during periods required to address systems needs and to provide market certainty. The Jurisdiction Minister may update the performance obligations annually to take account of changes in system needs. Any change in performance obligations will typically take effect from the start of the next financial year.

The performance obligations may detail the periods or events for which the System Significant Generator should make certain capacity available. The performance obligations will be informed by the System Needs Assessment and subsequent Electricity Statement of Opportunities (ESOO), and could be broadly set but precisely defined. For example, requirements for availability during January between 2pm and 8pm (hypothetical example only), to ensure that the System Significant Generator is available when required for reliability purposes.

The performance obligations may also include specific obligations, such as around fuel stocks, to ensure that the System Significant Generator can meet the performance obligations.

The System Significant Generator will be exempt from the performance obligations if it is unable to meet the performance obligations because of a serious technical fault or for safety reasons for the period needed to address the technical fault or safety issue. The System Significant Generator will
supply relevant information to the AER confirming the reason for the non-performance, certified by a duly authorised officer, including information concerning plans to address the issue. Note that the commercial component would provide an incentive to generate during periods of high prices.

The AER will assess the System Significant Generator’s compliance with its performance obligations at the end of each financial year. The AER may request information from the System Significant Generator and, if required, source information from AEMO in order to assess compliance.

### 10.8 Penalty for non-compliance

Given that the Notice for Mandatory Operation is intended to address the cost to electricity consumers of a systems needs shortfall, the AER will have access to its full suite of enforcement tools to ensure compliance. Failure to comply will be classified as a Tier 1 civil penalty under the NEL.

### 10.9 Insurance

A System Significant Generator subject to a Notice for Mandatory Operation will be required to maintain a prudent level of insurance at all times that is consistent with good industry practice. Insurance serves two purposes:

1. Provides the Jurisdiction Minister with confidence that the unit will be returned to service in the event of a failure; and
2. Provides the Minister with additional confidence that the unit is being properly maintained. The insurance provider is likely to require a prudent level of maintenance, and to apply a level of due diligence, in order to manage their risk.

This will increase confidence that the generator will be in a position to provide the required services.

Unless exempted by the Jurisdictional Minister, the System Significant Generator would need to apply insurance proceeds to returning the unit to service or the relevant issue. The System Significant Generator should confirm this was the case in reporting to the AER.

If the Jurisdictional Minister issues an exemption and the unit is not repaired, then insurance proceeds would be returned to consumers.

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<th>Key questions</th>
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<td>5. Are there other specific insurances that should be maintained?</td>
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10.10 Commercial component

The commercial component under the Notice for Mandatory Operation is intended to allow the System Significant Generator to be made whole, by providing the generator with the opportunity to recover its efficient cost of operation. The generator should be able to earn a return that is at least commensurate with the risks involved with its continued operation.

The preferred option for the Commercial Component is a financial contract-based model, which would be a financial swap based model for a coal-fired generator and a cap based model for a gas peaking generator.

For a financial swap based model it would comprise two elements:

- An ex-ante payment for expected capital expenditure and fixed operating and maintenance costs that would be paid quarterly. The payment would be determined by the AER.
- A financial swap for a notional amount of electricity determined by the Jurisdiction Minister. The strike price for the swap would be determined by the AER and set at a level that would cover the AER's ex-ante determination of the generator's short-run marginal cost plus a margin.

Other models were also considered, and we have released an analysis by Frontier Economics as part of this consultation. Further investigation has been undertaken on the Shielded Loss and Gain approach identified in the Frontier report and a description on how that approach could work is outlined in Appendix 1. The key questions below include a question seeking feedback on the appropriateness of the proposed commercial component outlined in this section. It also asks whether an alternative approach – such as the Shielded Loss and Gain - would be preferred and, if so, why.

### 10.10.1 A financial contract

The following outlines the information for a financial swap which will include the following elements:

- The parties to the contract.
- The effective date and term, and adjustment events.
- Notional amount of electricity (volume) that the swap is based upon expressed in megawatts.
- The strike price for the swap, which is to be determined by the AER and reset annually.
- Termination conditions.
- Any other relevant clauses.

The financial swap arrangement for coal-fired generators has several benefits including:

- The strike price is set to provide generators with revenue to meet expected short-run marginal costs (SRMCs) plus a return that is commensurate with the risks incurred.
- Consumers would benefit through the market price being hedged against high electricity prices.
• A financial swap preserves full incentives for efficient operation, as generators are exposed to market difference payments even when not operating.

• A financial swap leaves all outage risk with generators (exposed to market prices during outages) who are best placed to manage maintenance and reliability. The cost of managing this risk can be included in the strike price.

• A financial swap prevents a vertically integrated OEM Generator from capturing additional value from the extended operations through an internal hedge for its retail business against spot wholesale electricity prices.

The financial swap model does involve regulatory costs, including in the determination of the swap price and the potential need to reopen a determination if there are changes in costs due to events that could not be foreseen.

The System Significant Generator and OEM Fund (see section 11.2) are to settle swap difference payments periodically, possibly on a weekly basis.

Of itself, the financial swap does not require the actual operation of the System Significant Generating Units. The Notice for Mandatory Operation’s performance obligations (see section 10.7) will impose availability requirements on the System Significant Generator.

The cap model for gas peaking generation is appropriate in providing revenue required to meet the generator’s costs. It also preserves market price signals to the generator and provides consumers with a hedge against high electricity prices.

10.10.1.1 Parties to the financial contract

The parties to the swap will be the System Significant Generator and a counter party nominated by the Jurisdiction Minister, which would be the Jurisdiction or an entity nominated by the Jurisdiction Minister.

10.10.1.2 Effective date and term and adjustment events

The commencement date of the swap will match the Proposed Closure Date (or, in the case of a generator that had brought forward its closure date in the period from 1 January 2021 to the commencement of the OEM Framework, the Current Expected Closure Date).

The term will be the term identified in the Notice for Mandatory Operation, subject to the option for the term to be extended at the discretion of the Jurisdiction Minister in the event of a specified adjustment event.

10.10.1.3 Notional amount of electricity (volume) that the swap is based upon expressed in megawatts

The notional amount of electricity that the swap is based upon expressed in megawatts will be identified by the Jurisdiction Minister in the Notice for Mandatory Operation.

10.10.1.4 Strike price for the swap

This is detailed in section 10.10.2.
10.10.1.5 **Termination conditions**

Termination conditions will align with those in the Notice for Mandatory Operation.

10.10.2 **Swap strike price**

In order to allow for the generator to be able to be made whole, it is necessary to identify the costs incurred by the generator.

The costs are broken into several groups:

- Short-run marginal costs (SRMC), which include avoidable costs that are not incurred when not running. This will include fuel costs.
- FOM, excluding capital expenditure (investment).
- Capital expenditure (investment).
- Margin, which may include an allowance for the cost of managing outage risk.

The strike price for the swap would be on a $/MWh basis and will be set at the sum of the SRMC plus margin determined on an ex-ante basis by the AER.

The System Significant Generator and OEM Fund will settle swap difference payments periodically, possibly on a weekly basis.

10.10.3 **Process for setting the fixed payments and the strike price**

The System Significant Generator will make a submission to the AER on the proposed costs for meeting the requirements of the Notice for Mandatory Operation. The Jurisdiction Minister may also make a submission if deemed necessary.

The AER will also have access to the Prescribed Information, due diligence reviews (if commissioned) and Ongoing Information and any other information that the AER may engage in determining the elements of the commercial component.

The AER will provide a draft determination to the System Significant Generator and Jurisdiction Minister who will have the opportunity to make comment on the draft determination. The AER will then make a final determination.

The final determination will then be provided to the System Significant Generator, Jurisdiction Minister and OEM Fund (so that the OEM Fund can estimate the required OEM Contribution). This sets the commercial terms.

The strike price will be updated annually by the AER to take account of changes in circumstances. The approach to the calculation of individual cost elements is detailed below.

10.10.3.1 **Capital expenditure and FOM**

The System Significant Generator will receive an upfront payment at the start of each quarter for the ex-ante estimate of capital expenditure and FOM.

Where the System Significant Generator proposes fixed (for example, periodic) maintenance or non-recurrent capital expenditure, it must submit a cost proposal to the AER that justifies that cost being incurred. The proposal should include information on the need, proposed timing and the efficiency of the forecast cost. This will include information on whether the proposed cost is
consistent with the System Significant Generator’s historical practice and/or uses competitive market sourcing (the Generator is permitted to provide quotes from contractors provided that they are arranged at arms length from the OEM Generator).

Other fixed operating expenditure must be determined based initially on the operating expenditure incurred in a representative year (i.e., the base year). The observed cost can be adjusted to take account of information and to remove any material ‘one-off’ costs that were incurred in that year that cannot be classed as recurrent costs and the expected trend in costs over the period.

The AER will assess the submissions provided by the System Significant Generator and Jurisdiction Minister, the Prescribed Information, the Ongoing Information and the due diligence reviews (if commissioned) to make a determination on the payment. The AER may also consider other information it considers relevant, including advice from independent experts and benchmark price/cost measures (if available).

Where large maintenance costs arise as a result of unforeseen events, the System Significant Generator can apply to the AER to redetermine the payment for capital expenditure and FOM.

The System Significant Generator may also apply to the AER to recover certain capital expenditure and FOM expenses for the period from the date of issue of the Notice for Mandatory Operation to the Proposed Closure Date where, in order to support the efficient operation of the System Significant Generator and System Significant Generating Units over the term of the Notice for Mandatory Operation, these expenses are higher than would have been incurred had the System Significant Generator closed on the Proposed Closure Date.

10.10.3.2 Short run variable costs (excluding fuel)

The ex-ante estimate of variable maintenance costs will be determined by the AER using a similar approach to that for fixed maintenance costs.

The ex-ante estimate of the System Significant Generator’s other short run variable costs (excluding fuel) will be determined by the AER based initially on the operating expenditure incurred in a representative year. The observed cost can be adjusted to take account of inflation (using appropriate indicators, such as sector specific labour cost indices), and to remove any material ‘one-off’ costs that were incurred in that year that cannot be classified as recurrent costs.

The resultant estimate of short run variable costs (excluding fuel) can be adjusted to take account of the submissions provided by the System Significant Generator and Jurisdiction Minister, the Prescribed Information, and the due diligence reviews (if engaged). The AER may also consider any other information it considers relevant, including advice from independent experts and benchmark price/cost measures.

10.10.3.3 Fuel costs

The System Significant Generator will make a proposal to the AER for the forecast cost of fuel based on fuel sourcing strategies.

The AER will determine the forecast fuel price to be used, taking account of:

- Whether the proposed contracting strategy reflects an efficient strategy for a generator in the position of the System Significant Generator, including taking account of previous fuel sourcing strategies and fuel costs and, where appropriate, the use of competitive market-based sourcing strategies.
• Whether the System Significant Generator has demonstrated that it has undertaken the appropriate steps to reveal an efficient market price for fuel.
• The current spot price and the forward price of fuel.
• Previous contracting strategies by the OEM Generator.
• Research produced by analysts on fuel costs, stockpile levels, current fuel contracting arrangements and pricing, and future fuel supply options.
• Independent advice from expert consultants, if engaged.
• Benchmark price indices and forward prices.
• Other information the AER considers relevant.

10.10.3.4 Margin and cost of capital
The System Significant Generator should be able to earn a return that is at least commensurate with the risks involved with the continued operation of the System Significant Generator, including an allowance for outage risk.

10.10.3.5 Outage risk
The System Significant Generator may propose one of two methods for estimating the cost of outage risk.

• A valuation based on the cost of purchasing a hedge or insurance product against the risk of unfunded difference payments, or
• A valuation based on an estimation of the probability of the incidence and value of unfunded difference payments.

Where the System Significant Generator proposes an outage risk valuation based on the cost of purchasing a hedge or insurance product, it must demonstrate that it has undertaken reasonable efforts to competitively source quotes that are likely to reveal the efficient cost of insuring against the risk.

Where the System Significant Generator proposes an outage risk valuation method based on the probability of the incidence and value of unfunded difference payments, it is required to demonstrate to the satisfaction of the AER that its method for estimation is robust and represents the efficient cost of managing the risk.

In assessing the proposal regarding the cost of outage risk, the AER is able to have regard to:

• The proposal from the System Significant Generator.
• The options available to the System Significant Generator to manage the risk, including how it might operate the System Significant Generating Unit or rely on its portfolio of generators, where applicable.
• Independent advice from expert consultants.

10.10.3.6 Uncertainty mechanisms
The determination of costs will be subject to an uncertainty mechanism.

A final determination can be reopened where:
• An event has occurred that could not have been reasonably foreseen by the System Significant Generator.

• In response to the event, the System Significant Generator must incur material additional costs without which its ability to provide its relevant business service would be compromised.

• The event triggers costs that the System Significant Generator cannot otherwise reasonably fund within the period.

• There is no existing allowance for that additional cost.

The System Significant Generator is required to make an application for a reopening of the final determination.

10.10.4 Cap contract model for gas peaking generation

The following outlines the information for a cap contract model.

A cap contract model will be more appropriate for a System Significant gas peaking generating plant. This is because a flexible gas peaking plant can avoid operating losses by reducing operation when price is below SRMC, so there is no need for difference payments when price is below SRMC. Instead, a cap contract would involve:

• difference payments from the generator to consumers only when prices are above the strike price (whether the generator is running or not). This strike price could be set at $300/MWh as used for standard cap contracts (alternative approaches could also be considered to setting the strike price); and

• quarterly payments that cover fixed costs, including the cost of maintaining staff availability

The gas peaking generator would have an incentive to operate when the electricity price exceeds the cap strike price in order to earn revenue to cover difference payments.

Key questions

6. What information should be published to the market regarding AER decisions?

7. What are your views on the appropriateness of the proposed commercial component outlined in section 10.10?

8. Is an alternative commercial component approach preferred and, if so, why?

9. Are there other key issues that need to be considered as part of the commercial component?

10. Should the financial model include an additional incentive component, even if small, so that the generator has some incentive to contain costs?

11. How should services provided by related entities be treated?

12. Should the AER have the ability to “look through” the billing arrangements of services provided by related entities to see the actual costs without mark ups?

13. How should the return to the generator be calculated in the case of a swap?
14. Should there be a ‘true-up’ settlement in the event that actual capital expenditure and FOM expenses (fixed costs in the case of gas fired generators) differ materially from the ex-ante determination on which payments to the OEM Generator were based?

15. How should the strike price for a cap for a gas-fired generator be determined (e.g., set at a fixed price, linked to the price of gas, or an alternative method)?

10.11 Ongoing Information – System Significant Generator information and reporting requirements

The System Significant Generator is required to provide selected Ongoing Information to the AER in an Annual Performance Report in order to ensure compliance with the Notice for Mandatory Operation and to ensure that AER payments are made on a proper basis.

In this context, the System Significant Generator will be required to provide to the AER, within 45 days of the end of the financial year:

- Information on the technical condition of the generator.
- Information on actual revenues attributable to the generator for the previous year including:
  - Attributable settlements in energy, ancillary and other security markets.
  - The outcomes of approved energy and risk management contracts.
  - Any additional information required to be provided by the AER.
- Information on costs attributable to the generator and, where relevant, the specific System Significant Generating Unit as certified by a duly authorised officer of the System Significant Generator or certified by an external due diligence report or otherwise approved to the satisfaction of the AER for the relevant period including:
  - Actual capital expenditure and maintenance expenditure for the year.
  - Fuel cost for the year.
  - Realised labour and other operating costs associated with the continued operation and availability of the System Significant Generating Unit (including costs associated with not closing).
  - Realised labour and other operating costs associated with the continued operation and availability of the System Significant Generator (including costs associated with not closing).
  - Any other significant costs related to the System Significant Generator not closing the System Significant Generating Unit (including a pre-agreed allowance for incremental rehabilitation costs).
  - Taxation expenses.
- Information, certified by a duly authorised officer of the System Significant Generator, to confirm compliance with the operating mode and performance obligations of the Notice for Mandatory Operation.
• System Significant Generator estimates for the generator and, where relevant, System Significant Generating Unit, for the next financial year and thereafter annually for the remaining period of the Notice for Mandatory Operation:
  o Revenues.
  o Capital expenditures.
  o Maintenance schedules and costs.
  o Fuel costs.
  o Other costs.
  o Incremental costs associated with the continued operation of the System Significant Generating Unit, for example, incremental site rehabilitation costs.

• Information on the process for sourcing capital investment in the past year, including whether it was in line with historical practice and whether competitive sourcing was used.

• Information on the proposed process for sourcing capital investment in the coming year, including whether it will be in line with historical practice or whether competitive sourcing will be used.

• Information on the process for sourcing fuel in the past year, including whether it was in line with historical practice and whether competitive sourcing was used.

• Information on the proposed process for sourcing fuel in the coming year, including whether it will be in line with historical practice and whether competitive sourcing will be used.

• Information on the process for sourcing other services in the past year, including whether it was in line with historical practice and whether competitive sourcing was used.

• Information on the proposed process for sourcing other services in the coming year, including whether it will be in line with historical practice or whether competitive sourcing will be used.

• Other information as requested by the AER.

The AER may also direct a technical and/or financial due diligence report of the System Significant Generator.

The information may be provided to the OEM Fund, AEMO and the Jurisdiction Minister. Otherwise, the information provided by the System Significant Generator will be treated as confidential to the extent permitted by law.

Separately, the AER may receive information from AEMO with respect to the System Significant Generator’s availability with respect to its performance obligations.


10.12  Work, health and safety obligations

As the System Significant Generator will retain operational control over their generating assets, the System Significant Generator will retain responsibility for meeting work, health and safety obligations.

10.13  Termination

The Notice for Mandatory Operation framework will include a provision for the termination of the Notice for Mandatory Operation.

The Notice for Mandatory Operation may be terminated by:

- The agreement of the Jurisdiction Minister and the System Significant Generator.
- A force majeure event. The System Significant Generator will notify the AER of a force majeure event. The AER will determine if the force majeure event causes termination of the Notice for Mandatory Operation, for example, if it becomes impossible for the System Significant Generator to continue to operate or reasonable to terminate the notice because of a change in circumstances.
- The Jurisdiction Minister, if they are satisfied the system needs reasons for the Notice for Mandatory Operation are no longer apparent.
- The Jurisdiction Minister, if the Jurisdiction Minister assesses that the cost of the Notice for Mandatory Operation is materially above expectations, for example due to higher than anticipated capital expenditures and alternative cost effective options become available.

10.13.1  Payment arrangements for termination

The System Significant Generator may apply to the AER to determine cost payment for termination. In determining if, and what, amount is payable, the System Significant Generator is required to establish what loss it has incurred and provide sufficient data and information to substantiate each component of the claim.

The AER will determine the payments to the System Significant Generator in the case of termination, unless both parties agree on an alternative approach. Where the Jurisdiction Minister is to terminate the Notice for Mandatory Operation due to changes in the outlook for reliability or unexpected changes in cost, the Jurisdiction Minister should give the market and System Significant Generator as much notice as practicable of the decision.

The System Significant Generator is not entitled to payment for loss of future earnings from the operation of the System Significant Generating Unit as the System Significant Generating Unit would have closed but for the Notice for Mandatory Operation. A System Significant Generator is also not entitled to compensation for any matters for which it will already receive compensation under the commercial component or is entitled to compensation through insurance payments or other recoverable.
11 Cost recovery structure

The cost of activities under stages two and three of the OEM Framework and related administrative costs should be recovered from electricity consumers in the jurisdiction that benefits from the application of the OEM Framework.

A new TNSP Cost Recovery Mechanism is proposed that will be used for the OEM Framework. Consideration had also been given to recovering the cost from consumers through DNSPs or directly from retailers. However, cost recovery via the TNSP is an efficient means of collecting the OEM Contribution and also provides for collection from transmission connected consumers.

The TNSP Cost Recovery Mechanism could also be used to recover costs for other programs, including funding of alternative solutions to the continued operation of the OEM Generator. The below describes its application with respect to a System Significant Generator under the OEM Framework. If applied to alternative solutions, for example, the nature of the OEM Contribution and specific functions of the OEM Fund would need to be amended to reflect the circumstances of the alternative solution.

The role of the OEM Fund is to allow for the efficient administration of funds.

In the case of a Notice for Mandatory Operation, the role of the OEM Fund administrator could be performed by an independent entity or government entity, depending in part on the counter party to the swap contract.

The process would work as follows:

- The OEM Contribution should be sufficient to meet:
  - Payments to the System Significant Generator, including swap difference payments, payments for capital expenditure and FOM.
  - Payments required to fund alternative solutions.
  - The OEM Contribution should also include provisioning for other payments such as payments associated with the final closure of the System Significant Generator (for example, the incremental cost for site remediation).
  - The permitted administrative costs of the OEM Framework.
  - The requirements for the OEM Fund to maintain a prudent cash balance in order to meet unexpected payment obligations and manage uneven cashflows and payment timing.

- The OEM Contribution will be determined.
  - In the case of a Notice for Mandatory Operation using a swap-based payment arrangement, the OEM Fund administrator will estimate the OEM Contribution required, using information provided by the AER with respect to fixed payments for capital expenditure and FOM, and the swap strike price. The required OEM Contribution should also reflect any expected surplus or shortfall left from the previous year (including as a result of any redetermination of the fixed payment or strike price due to unforeseen circumstances).
The OEM Fund will then make an OEM Contribution application to the AER. The AER will consider and make a determination regarding the OEM Contribution, including adjustments required to account for the ‘unders and overs’ account held by the TNSP. In the case of a voluntary agreement or alternative solution, this would be determined by the jurisdiction and reflect the terms of any agreement.

- The TNSP will pay the OEM Contribution into an OEM Fund, which may be one of:
  - An entity, fund or government agency identified in the regulations made under the jurisdiction’s application Act, if the System Significant Generator is subject to a Notice for Mandatory Operation.
  - To a jurisdiction government or another entity, in the case of an alternative solution or voluntary agreement (and for the latter, be consistent with the terms and structure of any agreement).

- TNSP will apply the approved pricing methodology to set annual transmission prices. The OEM Contribution could be passed through separately as a top-up to the calculated postage stamped common service price. The TNSP’s Maximum Allowable Revenue would be adjusted to reflect the OEM Contribution.

- As such, the TNSP will pass through the cost of the OEM Contribution to DNSPs and other transmission connected customers within the jurisdiction. DNSPs will recover the cost from consumers via retailers.

Where the OEM Fund accumulates funds that are surplus to its requirements, for example as a result of favourable swap difference payments, the OEM Fund will hold these funds as a credit against future OEM Contributions. If there are surplus funds in the OEM Fund upon expiry of the Notice for Mandatory Operation, these can be credited to the TNSP and used as a one-off offset against electricity consumers’ transmission charges.

**Key question**

16. What do you think of using the proposed new transmission cost recovery mechanism compared to the existing distribution network cost recovery mechanism contained in the national electricity rules (“Jurisdictional Scheme”)?

### 11.1 TNSP Cost Recovery Mechanism

Design of the scheme will ensure the cost recovery will be from the energy consumers of the jurisdiction that the OEM Generator is in. Key elements of the mechanism include:

- As TNSPs must publish their annual transmission prices by 15 March each year, the OEM Contribution for the forthcoming year will need to be set by mid-February to allow for factoring into TNSP pricing.
• A TNSP will apply the approved pricing methodology to set annual transmission prices. The OEM Contribution is passed through separately to the customers in the jurisdiction that the OEM Generator is in.

• Transmission prices are charged to distributors and to large industrial customers (that are connected directly to the transmission network). The TNSP-based recovery mechanism will effectively recover OEM costs from all customers (large and small) within the transmission network in that jurisdiction, subject to any exemptions identified in the regulation under the jurisdiction’s application Act.

• A TNSP will make the OEM contributions to the entity (in the case of the OEM Framework, expected to be the OEM Fund) identified in regulation under the jurisdiction’s application Act.

11.2 OEM Fund

The Jurisdiction Minister will identify an OEM Fund (which may comprise a fund and separate administrator) for the purposes of administering elements of stages two and three of the OEM Framework, particularly intermediating funds to the System Significant Generator.

It is necessary for the OEM Fund to have appropriate credit support. The OEM Fund will need to retain a level of ‘working capital’ that is sufficient to meet most expenses. However, additional credit support arrangements will likely be required.

The OEM Fund may receive:

• OEM Contributions from the TNSP.
• Money received from voluntary contributions to the OEM Fund made by a person or body.
• Money paid into the OEM Fund by a jurisdiction Government.
• Money paid from the System Significant Generator under the commercial component.
• Other money that may be required to be paid into the OEM Fund under a law or regulation.

The OEM Fund may make the following payments:

• Money required to meet the liabilities of the OEM Fund, including payments to a System Significant Generator that are required under the commercial component.
• Money directed to be paid from the OEM Fund under a law or regulation.
• The payment of surplus funds in the OEM Fund to the TNSP (the TNSP from which the OEM Contribution had been received) at the end of the Notice for Mandatory Operation to enable surplus funds to be returned to electricity customers.

The money held in the OEM Fund is to be paid into an account with an authorised deposit-taking institution.

The OEM Fund will require appropriate credit support arrangements in order to ensure that it can manage uneven payment requirements.

The OEM Fund is also responsible for estimating the OEM Contribution that will be required to meet expected payments to the System Significant Generator. The OEM Fund’s estimation of the required
OEM Contribution will be based on the AER’s determinations of the payments for capital expenditure and FOM and the strike price for the financial contract.

The OEM Fund will provide its estimate of the required OEM Contribution to the AER, which will make a determination to approve the OEM Contribution which will then be recoverable by the OEM Fund from the TNSP.

The OEM Fund will be required to have appropriate quality assurance processes in place for this role.

Other unfunded costs may also need to be covered by the OEM Contribution.

**Key question**

17. Noting the aim of a cost recovery estimate is to even out impact to energy consumers, should the estimation be averaged out over the entire period or allocated as expected by year with a re-estimation every year to correct for any variations?

### 11.3 Exemptions

There may be situations where the jurisdiction decides to provide an exemption from the cost recovery process. Transmission prices are charged to customers directly connected to the transmission network (i.e., DNSPs and transmission-connected loads). Jurisdictions may decide to exempt a portion of certain customer load from the cost recovery for the OEM Framework.

The exemption should be included in the regulations made under the jurisdiction’s application Act.

Where an exemption is to be provided, the TNSP will redistribute the allocation of the OEM Contribution from exempted customers. This amount would then be recovered from non-exempted customers through an adjusted charge. This adjustment would occur prior to the setting of annual prices for prescribed transmission services each year (ex-ante).
12 Administration and compliance

A summary of the roles and responsibilities of the AER, AEMO and the AEMC is outlined below.

The AER has responsibility for:

- Receiving Prescribed Information and providing it to the Jurisdiction Minister and AEMO.
- Providing an indicative estimate to the Jurisdiction Minister of the cost of a Notice for Mandatory Operation under stage two of the OEM Framework process.
- Providing advice to the Jurisdiction Minister with respect to the supplier and scope for a technical and/or financial due diligence review.
- Determining payments and financial contract strike price under the commercial component.
- Assessment of force majeure event causes of termination of a Notice for Mandatory Operation
- Determining payments to the System Significant Generator associated with a termination of the Notice for Mandatory Operation.
- Determining the OEM Contribution, following receipt of an application from the OEM Fund.
- Approving a pricing methodology for the TNSP which allows for the recovery of the OEM Contribution.
- Assessing compliance with the performance obligations under the Notice for Mandatory Operation.
- Taking enforcement action if there is a breach of the Notice for Mandatory Operation conditions.

AEMO has responsibility for:

- Undertaking the System Needs Assessment.
- Undertaking the search for alternative solutions.
- If required, providing information to the AER to assist with its assessment of compliance with performance obligations.

The AEMC has responsibility for:

- A review of the OEM Framework every five years (unless Energy Ministers approve a deferral).

12.1 OEM Framework review

Ensuring that there is a robust review mechanism in place ensures that the OEM Framework can continue delivering the best outcomes for addressing a system needs shortfall and reliability risks from the exit of thermal generators.

The AEMC will perform this function and undertake a review of the OEM Framework every five years following the establishment of the OEM Framework.

The review may assess, but is not limited to:
• The contribution of the OEM Framework to the orderly exit of retiring generators.
• The contribution of the OEM Framework in mitigating potential system needs issues that may otherwise have arisen as a result of the early exit of a System Significant Generating Unit.
• The administrative cost of the OEM Framework.
• Options for improving the administrative efficiency of the OEM Framework.
• The continued need for the OEM Framework.

The AEMC may seek approval from the Ministerial Council of Energy to defer a 5-year review if, in the AEMC’s opinion, a review of the OEM Framework at that time is likely to be of limited value.
13 Transitional arrangements

13.1 Generators that have brought forward their expected closure date

Where a scheduled thermal generator has brought forward the closure date of a generating unit between 1 January 2021 and the OEM Framework coming into force, the Jurisdiction Minister may deem the generator to be in stage two of the OEM Framework, if the jurisdiction in which they are based opts-in to the OEM Framework. An AEMO assessment of alternative solutions is not required for these generators as consideration may have already been given to possible actions to respond to any closure.
Appendix 1. Alternative commercial component approach – shielded loss and gain option

As noted in the main body of the paper, the preferred commercial component approach to apply under the Notice for Mandatory Operation is a financial contracts approach. Other models were also considered, and we have released an analysis by Frontier Economics as part of this consultation. Further investigation has been undertaken on the Shielded Loss and Gain approach. This is presented below.

The shielded loss and gain approach has a number of benefits:

- The model ensures that the System Significant Generator is made whole.
- The System Significant Generator has an incentive to operate when prices are high, assuming it is not certain of making a loss. However, the incentive is muted by the revenue sharing requirement.
- The revenue sharing arrangements provide consumers with a partial hedge against high prices.

However, market signals to the System Significant Generator are muted, especially if the System Significant Generator believes a loss is certain. For this reason, arrangements would need to be put in place that limit the System Significant Generator’s operations when the electricity price falls below its short-run marginal cost, except when required to meet its performance obligations. Otherwise, the System Significant Generator may continue operating, at a cost to consumers.

There is also a risk that a Generator with a portfolio of power stations could manipulate operations across the power stations in a way that added to costs to consumers.

The structure of the shielded loss and gain approach is as follows:

- The System Significant Generator would be required to meet the performance obligations set out in the Notice for Mandatory Operation. The Generator could operate commercially outside of those periods.
- The System Significant Generator will receive ex-ante payments from the OEM Fund to meet the sustaining capital investment requirements of the plant.
- The System Significant Generator’s profit/loss position (excluding the capital expenditure) reflects revenues less costs (excluding the capital expenditure).
- Revenues over the period are determined by the payments settled in the energy and ancillary wholesale markets.
- The System Significant Generator is shielded from all losses with it being compensated for its actual operating losses ex-post by the OEM Fund.
- A payment would be made ex-post to cover any interest charges for carrying a loss across the delivery period.
• The System Significant Generator would retain (for example) 25 per cent of any positive cash earnings, with the remaining 75 per cent transferred to the OEM Fund.

• If the generator is not available when needed to meet system needs the 25 per cent would be proportionally reduced to the extent it was not available.

• The System Significant Generator would be required to provide an ex-ante estimate of its short-run marginal cost to the AER at the start of each quarter.

• The System Significant Generator would be required to limit its generation when the electricity price falls below its short-run marginal cost, except when required to meet its performance obligations or otherwise required for operational reasons.

The shielded loss and gain approach will commence from the Proposed Closure Date and continue until the end of the Notice for Mandatory Operation.

The System Significant Generator may also apply to the AER to recover certain incremental capital expenditure and FOM expenses for the period from the date of issue of the Notice for Mandatory Operation to the Proposed Closure Date where, in order to support the efficient operation of the System Significant Generator and System Significant Generating Units over the term of the Notice for Mandatory Operation, these expenses are higher than would have been incurred had the System Significant Generator closed on the Proposed Closure Date.

A1.1 Shielded loss and gain model process

The process to be undertaken under the shielded loss and gain approach is detailed below. The AER will make a determination for the period of the Notice for Mandatory Operation, which will be subject to annual updates.

The AER will have access to the Prescribed Information, due diligence reviews (if commissioned) and any other information that the AER may engage in determining the elements of the commercial component. Additionally, the AER will have access to the Ongoing Information for the purpose of the annual updates. The prime focus of the AER is ensuring that expenses are efficiently incurred.

A1.1.1 Initial submission

The System Significant Generator will make a submission to the AER outlining its expected costs for providing the relevant service, and the basis for those costs. The Jurisdiction Minister may also make a submission in response to the submission from the System Significant Generator.

Based on the submissions and other information provided, the AER will make:

• A draft determination on the quarterly ex-ante payments to the System Significant Generator for capital expenditure.

• An estimate of the FOM and of other operating and maintenance expenses.

• Approve the sourcing strategies for services and fuel.

The AER will provide its draft determinations and estimates to the System Significant Generator and Jurisdiction Minister. The System Significant Generator and Jurisdiction Minister will have the opportunity to make comment on the draft determination. The AER will then make a final determination.
The AER will provide the determination and estimates to the OEM Fund, along with the System Significant Generator’s estimates of revenue (included in Ongoing Information) in order that it can develop an estimate of the OEM Contribution.

The AER will provide the determination and estimates to the Jurisdiction Minister and System Significant Generator.

The estimates of short-run marginal cost will inform a mechanism that will limit generation by the System Significant Generator when the electricity price falls below its short-run marginal cost, except when required to meet its performance obligations.

**A1.1.2 Determination of capital expenditure**

Where the System Significant Generator proposes capital expenditure, it must submit a cost proposal to the AER that justifies that cost being incurred. The proposal should include information on the need, proposed timing and the efficiency of the forecast cost. This will include information on whether the proposed cost is consistent with the System Significant Generator’s historical practice and/or uses competitive market sourcing.

The AER will assess the submissions provided by the System Significant Generator and Jurisdiction Minister, the Prescribed Information, the Ongoing Information, and the due diligence reviews (if commissioned) to make a determination on the approved ex-ante payment. The AER may also consider other information, including advice from independent experts and benchmark price/cost measures (if available).

Where large, unexpected changes to forecast capital expenditure arise, the System Significant Generator can apply to the AER to redetermine the payment for capital expenditure.

The OEM Fund will make ex-ante payment to the System Significant Generator for capital expenditure at the start of each quarter. Adjustments to the capital expenditure payments to take account of differences between actual and expected capital expenditure can be made following the end of the financial year as part of the ‘true-up’ process.

**A1.1.3 Estimate of the FOM and of other operating and maintenance expenses for the next financial year**

The purpose of the estimate of FOM and of other operating expenses is to:

- Inform the OEM Fund of expected System Significant Generator costs.
- Inform an initial estimate of short-run marginal costs for the first quarter of the next financial year.

Additionally, the AER will approve the proposed sourcing strategies for services and fuel, taking account of the submissions received, market prices for fuel (spot and forward), historic fuel sourcing strategies, the use of market based competitive sourcing strategies and other information the AER deems relevant.

**A1.1.4 Profit/loss sharing**

At the end of each quarter, the System Significant Generator will provide information to the OEM Fund and AER on its cash profit/loss position. The System Significant Generator will also provide an
estimate of any change to its short run marginal cost, for the purposes of limiting the generator’s operation during loss-making periods.

The OEM Fund will make a payment to the System Significant Generator equal to the value of the cash loss, including an allowance for the interest cost of carrying the loss.

The OEM Fund will receive a revenue share payment from the System Significant Generator in the event of a cash profit.

**A1.1.5 True-up**

Following the end of the financial year, the AER will determine payments to be made as a ‘true-up’ to the payments made during the year.

The ‘true-up’ payment will be an adjustment to the payments already made to reflect actual, audited outcomes.

The AER will determine what true-up payments are to be made based on the Ongoing Information provided by the System Significant Generator.

The System Significant Generator will also be required to provide a statement confirming that it had followed the AER approved sourcing practices.

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