



Friday, 14 February 2025

VicGrid
GPO Box 527,
Melbourne VIC 3001

VicGrid – Grid Impact Assessment Consultation Paper

Dear Mr Mitch Watson,

The Clean Energy Council (CEC) is the peak body for the clean energy industry in Australia, representing nearly 1,000 of the leading businesses operating in renewable energy, energy storage, and renewable hydrogen. The CEC is committed to accelerating the decarbonisation of Australia's energy system as rapidly as possible while maintaining a secure and reliable supply of electricity for customers.

The CEC welcomes this opportunity to comment on the changes proposed to the Victorian Access Regime. These changes represent a significant shift away from the NEM open access regime and have the potential to negatively impact all renewable energy proponents looking to invest in Victoria. The consultation paper published by VicGrid represents the first policy setting document to change the access regime in the NEM and is of interest to CEC members.

In general, the CEC maintains that open access is a valuable feature of the NEM rather than a detriment. The ability to connect to the power system is critical to maintaining confidence in the Australian renewable energy investment environment. Any changes to the current open access regime should therefore be considered carefully, with a view to maintaining an investment environment conducive to bringing on the volumes of new generation capacity needed to maintain reliability and keep energy prices down for consumers.

For this reason, CEC members are generally not supportive of VicGrid's proposed approach to amend the open access framework in Victoria. However, the CEC is eager to work collaboratively with VicGrid to develop a regime that better meets the policy drivers VicGrid is seeking to address.

An effective access regime is critical for all developers seeking to invest and build new projects in the Victorian network. The development of the access regime should not be rushed and should be based on the best available information.

The CEC therefore recommends VicGrid provide a further consultation paper on the GIA that considers and addresses stakeholder feedback prior to it determining and/or publishing draft GIA guidelines.

The policy as set out in the consultation paper is a significant shift away from the current open access regime to one that is essentially fully government controlled. As is, the GIA design could reduce investor certainty and severely weaken the case for renewable energy developers to construct projects in Victoria, particularly those projects outside of renewable energy zones (REZs).

The CEC also recommends VicGrid provide further information to clarify the intended policy objectives of the GIA and specific examples of the types of issues it is seeking to mitigate. The CEC also encourages VicGrid to include consideration of the National Electricity Objective in the development of the GIA that focuses on the transition to a zero-carbon generation fleet in a way that is at the least cost to energy consumers.

The CEC is also concerned about the proposed process to guide applicants on how to demonstrate their GIA submission meets the two assessment criteria. This is in part due to inconsistencies within the consultation paper on the approach to assessing projects connecting outside of a REZ. For example, for a battery energy storage systems (BESS) connecting outside of a REZ, some sections of the consultation paper state a requirement for a GIA for these facilities (section 4.1), while other sections note less onerous requirements (section 4.3).

Furthermore, there is a lack of clarity around a clear definition of excessive curtailment in Criterion 1 of the GIA. Some curtailment of generation is efficient, regardless of whether the generation is inside or outside of a declared REZ. It is not clear from the consultation paper whether the avoidance of congestion is considered a policy objective, irrespective of its efficiency impacts, or rather that limiting congestion is a mechanism to progress efficient operation of the market. For example, not constraining generators to utilise excess network capacity during periods of low irradiance or low wind speeds has the potential to minimise the need for construction of new transmission network infrastructure (to connect REZs or otherwise) with added benefits to First Nation values, landholders, and the natural environment and communities.

The CEC encourages VicGrid to continue to engage with industry, particularly around the underlying need for interventionist mechanisms that limit open access. The need for these mechanisms should be considered in the context of the physical access regimes being applied in the REZs themselves and the degree of curtailment protection desired by REZ generators. While historically there has been a push for absolute limitations on curtailment risk, an increasing number of more sophisticated developers are adopting solutions to manage these risks themselves, often leveraging the capability of new technologies like battery storage. While management of curtailment risk remains valuable for REZ connecting generators, we encourage VicGrid to look holistically at the overall value proposition of limiting curtailment, weighing this against the cost of the relevant access charges for REZ generators and the impact the resultant limitations on open access outside the REZ would have on investment across Victoria / outside of the REZs.

The following outlines CEC member feedback on the questions raised by VicGrid in its consultation paper on the proposed Grid Impact Assessment (GIA) process to apply to generators and storage connecting outside of REZs in Victoria.

Location of proposed facility in relation to a REZ

VicGrid indicate that a GIA will be required if more than half of the proposed facility (including connection infrastructure) by area is outside a REZ. The consultation paper provides three broad examples to illustrate this point. Where there is any doubt about whether more than half the facility is outside a REZ, the decision will be at VicGrid's discretion. The impact on a REZ of connections to the distribution network are not included currently but are being reviewed by VicGrid.

Matters for consultation

- How clear is the proposed distinction between connections inside and outside a REZ for all future generation and BESS connection scenarios?

The CEC considers the 50 per cent value set out in the GIA as the basis for whether an impact assessment is required or not to be very arbitrary. Further, the CEC notes that to date VicGrid has not identified or declared any REZ areas in Victoria and therefore recommends that VicGrid clearly define the proposed distinction of what is inside and outside of a REZ if it is to use the geographic boundary of the REZ as the reference. This is because the geographical boundaries

of REZs can be subject to change. The latest planning reports from AEMO has redefined the geographical boundaries of several REZs for inclusion in the 2026 ISP¹ For instance, as described in Example 2 of the application of the GIA in the consultation paper, a connection applicant outside the current REZ boundary but connecting to a busbar within the REZ would be required to undertake a GIA. However, this would not be case of the REZ boundary changes in the future. This level of uncertainty deters or delays project development. REZs are critical for integrating renewable energy into the grid effectively and in time. VicGrid should consider ways to remove barriers for project proponents and ensure industry has clarity around locational requirements.

To this point, some CEC members sought clarification on whether VicGrid would consider a project to be within a REZ if it is wholly within the REZ geographic boundaries or would VicGrid consider a project connecting to REZ infrastructure as being within the REZ. As mentioned, this distinction is critical for developers as they balance technical and planning project requirements.

Project selection must meet technical and social site prerequisites, requiring developers to consider a multitude of factors and usually follow a priority list. The best sites, those that also align with VicGrid mapping and especially those that have a strong community support, might be in a geographical area that sits outside a declared REZ. For these reasons, the CEC encourage VicGrid to have a holistic understanding of project development. Community acceptance is a critical factor in siting, and we consider that these elements should factor in VicGrid decision to reduce the instances of potential missed opportunity for projects or delays to existing projects.

The CEC supports a simple REZ definition, consistent with VicGrid's recent mapping assessment. CEC members also requested clarity on the weighting of the two GIA criteria to better reflect the trade-offs between the technical and social elements for projects outside of a REZ, as this would ensure developers understand the relative importance of the criteria and how to plan effectively.

Grid impact assessment criteria

VicGrid propose that applicants will pass a GIA if they can demonstrate their proposed generation project addresses the following criteria:

- Criterion 1: the proposed connection is unlikely to result in excessive curtailment of existing and planned REZ generators; and
- Criterion 2: the access applicant meets government expectations for community and Traditional Owners engagement and provides meaningful benefit.

Unlikely to result in excessive curtailment of existing and planned REZ generators

VicGrid has requested stakeholder feedback on the first criterion where an applicant needs to demonstrate that their proposed connection is unlikely to result in excessive curtailment of existing and planned REZ generators. Some of the relevant factors noted in the consultation paper include the constraints that may arise on a shared transmission flow path between a REZ and a major load centre, and whether the connection application has the potential to exacerbate known power system security issues in the area.

Matters for consultation

¹ Draft 2025 Input, Assumptions and Scenario Report, AEMO, Section 3.9.3 REZ transmission limits, page 133.

- What assumptions, scenarios and other information would access applicants require from VicGrid if undertaking their own modelling to determine their potential impact on REZ generators?

We consider there can be several issues with the intended operation of criterion 1 in the GIA. CEC members noted that without a quantitative understanding of, or definition of, what is meant or implied by “excessive curtailment” it will be very difficult to factor this into any meaningful analysis.

This issue stems from a lack of understanding of the proposed curtailment framework applied to generators located within a REZ. While not endorsing the approach taken in the South West REZ, the CEC notes it is an example where more information has been provided to connection applicants. The *South West REZ Access Scheme Target Transmission Curtailment Level and Headroom Assessment Method* contains significant information on the initial allocation, and any subsequent allocation or grant, of access rights for proponents located in the NSW South West REZ. This also includes the curtailment processes within the REZ to the level of transmission transfer capability and/or individual network elements.² Without understanding the full details of how the GIA will be impacted by the regulatory framework intended to operate within a REZ, in addition to, what is intended by excessive curtailment, it will be difficult to provide any meaningful analysis. The CEC encourages VicGrid to provide more information in relation to this point.

More clarity is needed in relation to what is intended by curtailment. Does the GIA consider only curtailment due to thermal limits, or will this criterion extend to consideration of voltage stability and system strength? It is worth noting that while developers may have more experience in modelling thermal limits, system strength and voltage/stability limits can be much harder to assess and forecast in a meaningful way and may require very time-consuming detailed modelling (for example, PSCAD) which is not likely to be available and accurate until very late in the connection process.

Some CEC members raised concerns around the definition of curtailment and whether or not it would also encompass economic curtailment due to low or negative pricing within the spot market and its impact on REZ connected generators. In general, wholesale electricity prices are reaching very low (even negative) levels more frequently, with this trend expected to continue as the amount of rooftop solar generation in the system increases. The CEC is of the opinion that it makes no sense to prevent an investment outside of a REZ from proceeding based on physical curtailment within a REZ alone, particularly if the physical curtailment is likely to occur during times of very low wholesale prices. Curtailment should be quantified in terms of dollars lost (compared with the counterfactual scenario) rather than in terms of the volume of electrical energy curtailed. Some level of curtailment is economically efficient. If the GIA assumes all curtailment of electricity generation in a REZ should be avoided (even when the electricity is worthless on the wholesale market) then the resulting modelling will be excessively conservative and is unlikely to be in the long-term interests of all consumers.

We consider the queuing system proposed could lead to the risk that a connection applicant could be granted an access offer that changed the modelling results of the next GIA application to be considered by VicGrid and were unclear whether the next project in the queue would be required to update their GIA application. Further, the queuing system could also create delay risk due to any rework (after an access offer is granted). The proposed queuing system on a sequential first in – first assessed basis does not outline how VicGrid will deal with any project delays and/or cancelations, zombie projects holding up others, or how project changes will be managed through the queuing process – it is unclear whether a connection applicant will return to their position in

² EnergyCo | South West Renewable Energy Zone Access Scheme Target Transmission Curtailment Level and Headroom Assessment Method - May 2024.

the queue or not. The queuing system as proposed also does not provide clarity to connection applicants on how the GIA application process and access offer milestones align more generally with the connection application process.

Furthermore, CEC members sought clarification from VicGrid on the meaning of the words “planned REZ generators”. Does the word “planned” encompass future generation/load forecast build out as inferred by the VTP and additionally the complementary network augmentations?

VicGrid has proposed a methodology for modelling the future generation and transmission requirements based on the data from the Integrated System Plan. We acknowledge that this information will inform the VTP. However, it is unclear how projects outside the REZ will be incorporated in this upcoming modelling. This uncertainty could affect project progress while the VTP and other frameworks are fully implemented. We advocate that VicGrid focus on ensuring investment and development certainty and avoiding delays in the buildout of renewable projects.

The consultation paper also outlines some of the actions access applicants may demonstrate to mitigate the impact of their connection on curtailment faced by REZ generators. The paper also provides details on how VicGrid will assess the technology type (solar, wind, or BESS) of the connection application when appraising a GIA. The consultation paper seeks stakeholder feedback on the following matters:

Matters for consultation

- How should the treatment of BESS account for differences between long-duration storage and fast-firming technologies?
- What additional information could access applicants provide to demonstrate that a proposed connection is unlikely to result in excessive curtailment of existing and planned REZ generators?

The consultation paper outlines that not all elements of the GIA will apply to BESS projects located outside of a REZ. To be granted access authorisation, BESS applicants will need to meet Criterion 2 and demonstrate that they will not operate in a way that will undermine the output of REZ generators.

The CEC notes that in many instances BESS operate to reduce congestion on the network and are unlikely to operate in a manner that curtails REZ output. As such, the CEC recommends that new BESS investment outside of a REZ should not be required to undertake modelling of curtailment. The CEC also encourages VicGrid to consider the connection of hybrid facilities (consisting of VRE and BESS) and whether these facilities should also be exempt from the requirement to model generation curtailment from a REZ. For example, where the ratio of storage to generation at a hybrid facility exceeds a minimum threshold (sufficient to store the entire generation of an average day, or 120% of the generation, or some other threshold), it would not need to undertake modelling.

Notwithstanding VicGrid’s consideration of the above, CEC members would encourage VicGrid to provide further clarity on the scope of Criterion 1’s application to BESS projects to allow applicants to adequately demonstrate that operating behaviour will not undermine REZ generation.

Community and Traditional Owners engagement and benefits

VicGrid has proposed that access applicants be required to submit a *Community and Traditional Owners Engagement and Community Benefits Plan* as part of their GIA. The intent being for the applicant to demonstrate that they have undertaken meaningful engagement with the community and Traditional Owners to consider their views and support their self-determined priorities. VicGrid noted they are developing a REZ Community Benefits Plan (to be released in 2025) that

will inform any updates to the benefits approach currently contained in the Victorian Government's *Community Engagement and Benefit Sharing Guide for Renewable Energy Developers*.

Matters for consultation

- There are no specific questions for stakeholder feedback in relation to this criterion.

Some CEC members have raised the question whether criterion 2 is relevant to be considered at the same time as the grid studies. Given the timing of these processes, the community and Traditional Owners engagement and benefits does not seem directly relevant to the technical requirements of a grid impact assessment. Projects may be delayed if the timing of the information required by the GIA is not aligned with project development stages.

The CEC also notes that GIA Criterion 2 is proposed to apply to generators and BESS connecting outside a REZ; and that the benefits sharing approach would need to meet the same benefits sharing contributions as those hosted within a REZ, in the soon to be published REZ Community Benefits Plan. Without visibility of the final plan, there is a risk of uncoordinated overlapping obligations. For example, the CEC understands the Draft REZ Community Benefits Plan (published May 2024) states that “[T]he benefits outlined in this draft plan are not a substitute for, and are in addition to, existing compensation arrangements, discretionary benefits provided by private project developers and individual community benefits arrangements [emphasis added]”.

CEC members have highlighted that it is already commonplace for all renewable energy projects in Victoria to be making material discretionary benefits (both financial and non-financial) as part of the course of best practice development of projects. These financial contributions and benefits sharing schemes are sometimes established at the origination stage of projects; during early-stage engagement with communities and Traditional Owner engagements; committed as part of government tenders (i.e. CIS); well before any GIA process would commence.

As such, the CEC recommends that if the GIA is to propose benefits sharing commitments and contribution levels for projects hosted outside of a REZ, that:

- they explicitly recognise existing compensation arrangements and discretionary benefits already provided or committed by generators (that is, they can satisfy, or contribute to satisfying, expected contribution levels);
- they are not calculated on a MWh basis, as this could act as a disincentive to longer duration storage projects that provide system value; and
- they be holistically evaluated, considered both financial and non-financial benefits sharing initiatives that are aligned with community values and input.

Consideration of other criteria that should apply

The consultation paper noted the proposed GIA criteria have been identified as critical to protecting the integrity of REZs and ensuring a consistent approach to community and Transitional Owners engagement and benefits across Victoria.

VicGrid are seeking feedback from stakeholders on any additional criterion that could be applied to the GIA to provide another avenue for access applicants to demonstrate their case for a project. Any additional criterion would need to align with the Victorian transmission planning objectives (VTPO) outlined in the consultation paper.

Matters for consultation

- What additional criteria should be included in the GIA that would be critical to implementing the VTPO?
- Under what circumstances could a project outside a REZ support achieving the VTPO?

The CEC did not see any benefit in any additional criterion being included in VicGrid’s GIA assessment.

Appraisal process

The proposed appraisal process is set out in the following table.

<p>Lodging and accepting an application</p>	<p>Information of the type outlined in the accessible guidance and checklists on website, including a site plan.</p> <ul style="list-style-type: none"> • Assessment of whether more than half of proposed facility outside a REZ. • Validation that all necessary and relevant information and data has been submitted. • Allowance of 20 business days if further information required. • GIA applications will be assessed in the order validated submissions are received.
<p>Notification time for application outcomes</p>	<ul style="list-style-type: none"> • 60 business days for an application that does not require a congestion impact assessment under criterion 1; or • 120 business days for all other applications. • Notification within 20 business days, if further information is needed, as outlined above. <p>Where VicGrid rejects a GIA, it will provide reasons for its decision. An access applicant may submit a new GIA that meets any issues identified but is required to pay another fee to cover costs of reassessment.</p>
<p>Interaction with the connection process</p>	<ul style="list-style-type: none"> • GIA may be submitted at any time, but ideally when the technical characteristics of the proposed connection are confirmed. • Early engagement with VicGrid is encouraged. • If the technical characteristics of the proposed connection change materially during the connection application process, the access applicant will need to resubmit a GIA.
<p>What to submit</p>	<p>Criterion 1: congestion impact report</p> <ul style="list-style-type: none"> • Access applicant should provide a report on its congestion impacts for <u>all REZs</u> in Victoria – accounting for proposed generation’s type and pattern of operation. • Modelling required to provide evidence of the lack of any constraint impact on REZs

	<ul style="list-style-type: none"> • Modelling needs to use the same inputs as VTP modelling – will be confirmed by VicGrid. • Where mitigating actions are proposed – sufficient evidence the identified constraints have been resolved is required. <p>Criterion 2: engagement and community benefits plan</p> <ul style="list-style-type: none"> • Social impact assessment clearly identifying local community and Traditional Owners. • Community engagement strategy. • Community benefits program including both financial and non-financial contributions. • Monitoring, evaluation and reporting plan. • Evidence of community and Traditional Owner support. • Provision for decommissioning responsibilities including funding.
Fees and charges	<ul style="list-style-type: none"> • Application fee at point of submission. • Additional fee if further congestion modelling is required. <p>Indicative fees to be published in draft GIA guidelines and apply even when the applicant’s proposal does not pass the GIA.</p>
Revocation of access authorisation	<p>VicGrid is considering the circumstances in which an access authorisation can be revoked. For example:</p> <ul style="list-style-type: none"> • Development milestones not met. • Material change in project specification leading to excessive curtailment. • Mitigating actions approved under GIA are not carried out. • Community and Traditional Owners benefits fail to meet expectations.
Enforcement	<p>The draft GIA guidelines will include further information on amendments to legislation to enable enforcement of access conditions under the Victorian Access Regime (including the GIA) as well as roles and responsibilities.</p>

Matters for consultation

- At what point in time or development milestone do stakeholders think it would be most appropriate for a GIA application to be submitted to VicGrid for appraisal?
- How clear is the proposed process on how to demonstrate their GIA submission meets the two assessment criteria?

CEC is concerned about the degree of modelling that appears necessary to accompany a GIA. The resourcing requirements at VicGrid to enable it to process a lot of complex modelling has the potential to be another impediment to the timely and necessary investment in renewable energy projects in Victoria.

The modelling appears to need to be based on that foreshadowed in the VTP inputs and confirmed by VicGrid and seek to demonstrate the congestion implications of the proposed development on all REZs within Victoria. In addition, where near an interconnector to an adjacent jurisdiction, this impact may need to include analysis with the REZs in the interconnected region. CEC members were concerned that the provision of this modelling would require specialist expertise either within or outside the business. Where sourced outside of the business, the availability of engineering firms to provide this analysis could be limited and/or result in a significant cost impost for connection applicants, particularly if the analysis must be undertaken more than once to address any concerns raised by VicGrid.

The CEC encourages VicGrid to consider alternative methods to the modelling approach currently advocated in the GIA. For example, VicGrid could in conjunction with the VTP publish a model of the Victorian network that includes each REZ, its overall hosting capacity and remaining available capacity that is dynamic to changes in the siting of generation. This would ensure that the most up to date model was available to connection applicants, and that connection applicants would all be basing their assessment off the same information rather than each developer being required to undertake a separate modelling exercise on an ad hoc basis. The utilisation of a common source of truth is also likely to make VicGrid's assessment process easier too. Notwithstanding, CEC members sought assurance that any model be independently verified so that the information contained was accurate, up-to-date and not based on overly conservative assumptions.

In term of the notification times, we would suggest VicGrid be open to allowing for a shorter notification timeframe. For example, 120 business days is a significant time to allow for VicGrid to consider a single application, and when factoring in the sequential nature of the queuing system could result in applications taking some multiples of this time reach completion.

As mentioned above, there may also be benefits for the two criteria to have separate timelines if one is expected to take longer than the other.

Review of the GIA guidelines

VicGrid are proposing to review the GIA guidelines every two years to ensure they remain fit for purpose. VicGrid proposes to include any required updates to the technical methodology to be included as part of this review.

Matters for consultation

- How effective is a review every two years in capturing evolving circumstances within the GIA guidelines?

The CEC is concerned with the proposed review of the GIA guidelines on a biennial basis. This is driven by a risk of assets becoming stranded because of the site selection criteria for generation being reviewed every two years before an applicant can move to construction. For example, the full development cycle can take up to three years for BESS and more than ten years for wind farms and any material changes to the GIA guidelines and/or requirements within this time could undermine investment certainty for connection applicants.

The CEC encourages VicGrid to consult further with stakeholders on suggested approaches to building in a mechanism to review the GIA periodically in a manner that does not create uncertainty for connection applicants.

Transitional arrangements for GIA

Transitional arrangements

Where an access applicant has an offer to connect from AEMO on or before the date the Victorian Access Regime comes into effect, a GIA will not be required.

Where an access applicant does not have an offer to connect but are “committed” in accordance with AEMO’s generator and integrated resource systems commitment criteria, a GIA will be required to be submitted. In this circumstance, VicGrid will automatically pass their GIA, and they will receive an access authorisation with conditions, including that they meet development milestones.

Capacity investment scheme

Successful tenderers from the May 2024 CIS tender will automatically be given an access authorisation.

Access applicants supported by a CIS tender, from November 2024 onwards, must submit a GIA if their project is located outside a REZ.

Matters for consultation

- How do the transitional arrangements impact the level of certainty for access applicants?
- How reasonable is it to base transitional arrangements on the status of ‘committed’ as a milestone?

The CEC considers that a committed project was too far along the development pathway and that VicGrid should also contemplate projects that fell within AEMO’s category of “advanced projects”. This was primarily because projects at this development milestone are included in the Integrated System Plan and most of these projects follow through to financial close.

The CEC welcomes further engagement with VicGrid on the subsequent development of the Victorian Access Regime and the GIA guidelines as they are progressed. Further queries can be directed to jeastcott@cleanenergycouncil.org.au.

Kind regards

Christiaan Zuur

General Manager, Market, Operations and Grid