

Interim export limit guidance note – for consultation

November 2023

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Contents

Overview	ii
Background	ii
The AER's role	ii
Purpose and scope of this document.....	iii
Process for developing the interim guidance note.....	iv
How to make a submission	iv
Shortened forms	v
Part A: Explanatory material	0
1. Objectives and use	1
1.1 Objectives of the interim guidance note	1
1.2 Intended use	1
2. Approach and related streams of work	2
2.1 Evolving our approach to network regulation to meet future challenges.....	2
2.2 Related streams of work	2
3. Guidance note topics	4
3.1 Capacity allocation.....	5
3.2 DNSPs' revenue determination process	6
3.3 Key considerations in implementing and using flexible export limits.....	7
3.4 Reporting	8
Part B: Draft guidance	10
4. Draft guidance	11
4.1 Capacity allocation.....	11
4.2 DNSP revenue determination process	17
4.3 Key considerations in implementing and using flexible export limits.....	23
4.4 Reporting	34
5. Consultation questions	37
5.1 Capacity allocation.....	37
5.2 DNSP revenue determination process	37
5.3 Key considerations in implementing and using flexible export limits.....	38
A.1 AER expenditure guidance	40
A.2 Interrelated matters	41
B.1 Energy Advisory Panel (formerly ESB).....	43
B.2. AEMC.....	43
B.3 Other	44

Overview

Background

Throughout 2022 to mid-2023, the Australian Energy Regulator (AER) led a review of the regulatory framework for flexible export limits as part of the Energy Security Board's Consumer Energy Resources Implementation Plan. This plan sought to effectively integrate consumer energy resources, such as rooftop solar and batteries, into the National Electricity Market. The primary purpose of the AER's review was to identify and analyse potential regulatory gaps associated with the implementation of flexible export limits by distribution network service providers (DNSPs) and identify actions that could address the risks to energy consumers associated with these gaps.

Consultation undertaken as part of the AER's review highlighted the need for immediate action regarding several gaps. Key findings from our review were:

- the need for transparency in how DNSPs calculate and apportion available network hosting capacity and how this is reflected in their regulatory proposals
- the need to prioritise enhancing consumer and industry stakeholder awareness and understanding of flexible export limits
- low levels of compliance with technical standards hamper effective implementation of flexible export limits
- the need to establish clear complaint handling and dispute resolution pathways.

The Flexible Export Limits Final Response (Final Response), published on 31 July 2023, proposed a set of priority actions to address gaps in the regulatory framework. These include:

1. Develop and publish interim guidance on export limits while formal arrangements are being established.
2. Improve the provision of information to electricity consumers on flexible export limits.
3. Initiate a rule change proposal to provide the AER with the appropriate head of power to develop and publish an Export Limit Guideline.

This interim guidance note is intended to provide guidance to DNSPs on key issues identified through our review of regulatory arrangements for flexible export limits, while a rule change proposal is being developed by the AER and then considered by the Australian Energy Market Commission (AEMC).

The AER's role

As the economic regulator of energy networks in all states and territories except Western Australia, we play an important role in the energy transition. We regulate gas and electricity network businesses and have a primary role in setting the maximum revenue and prices that network businesses can recover from end users of their networks. We aim to ensure consumers pay no more than necessary for safe and reliable energy and seek to promote the efficient supply and use of energy through our determinations and monitoring and enforcement role.

Our framework for regulating electricity networks is set out in the National Electricity Rules and National Electricity Law.

In relation to flexible export limits, the AER has an oversight role in:

- assessing the prudence and efficiency of DNSPs' proposed expenditure
- assessing which DNSPs undertake sufficient engagement with consumers and relevant stakeholders in developing capacity allocation methodologies, design and intended operation of flexible export limits
- assessing whether DNSPs clearly communicate how export limits interact with price signals in their expenditure proposals
- reviewing and approving connection policies and terms and conditions contained in Model Standing Offers.

The AER does not have a direct role in:

- regulating the sale, installation or operation of consumer energy resources
- compliance and enforcement of technical standards
- regulating consumer rights and guarantees in relation to consumer energy resources.

The AEMC's recently completed review contains a detailed description of the current governance arrangements for consumer energy resources technical standards.¹

Purpose and scope of this document

This guidance note is intended to:

- provide clarity on policy objectives and design principles for DNSPs when implementing and using flexible export limits as a tool for managing network congestion and increasing available hosting capacity
- provide clarity to DNSPs on AER expectations to support the development of expenditure to implement and use flexible export limits
- establish 'guard rails' for the development and use of flexible export limits to protect consumers and enable owners of consumer energy resources to maximise the value from their investments in a manner that delivers benefits to all consumers.

This document covers the AER's expectations relating to export limits – both flexible and static – but does not cover import limits (also known as 'flexible load').

Stakeholder responses to the Flexible Export Limits Issues Paper (published in October 2022) underscored a range of challenges and barriers to the integration of consumer energy resources that are beyond the scope of this work on flexible export limits. These challenges encompass device technical compliance, governance concerns related to roles and responsibilities of various parties accessing consumer energy resources (such as installers, traders and third parties), deficiencies in the current contractual arrangements under the connection agreement framework and issues surrounding access to smart meter data.

¹ AEMC, [Review into consumer energy resources technical standards, final report](#), Australian Energy Market Commission, 21 September 2023.

Process for developing the interim guidance note

Table 1 Timeframes for developing and publishing the interim guidance note

Key steps	Purpose	Indicative timeframe
Release draft guidance note	Publish the draft interim guidance note to seek stakeholder submissions	17 November 2023
Webinars/targeted workshops for interested stakeholders	Provide an overview to stakeholders on the content of the draft interim guidance note and how to make a submission, and provide opportunities for verbal feedback	Late November 2023
Submissions on draft guidance note due	Opportunity for stakeholders to provide written feedback on the draft interim guidance note	19 January 2024
Publish final guidance note	Publish final interim guidance note to provide guidance to stakeholders	Q1 2024

How to make a submission

The Australian Energy Regulator (AER) invites interested parties to make submissions on this draft export limit interim guidance note by **19 January 2024**.

We prefer that all submissions are in Microsoft Word or another text readable document format. Submissions on our draft interim guidance note – for consultation should be emailed to [AERinquiry@aer.gov.au](mailto:AERinquiry@ aer.gov.au) with the subject heading ‘Submission on the AER’s draft interim export limit guidance note’.

Alternatively, submissions can be sent to:

Mr Mark Feather
 General Manager, Strategic Energy Policy and Energy System Innovation
 Australian Energy Regulator
 GPO Box 520
 Melbourne, VIC, 3001

We prefer that all submissions be publicly available to facilitate an informed and transparent consultative process. Submissions will be treated as public documents unless otherwise requested. Parties wishing to submit confidential information should:

- clearly identify the information that is the subject of the confidentiality claim; and
- provide a non-confidential version of the submission in a form suitable for publication.

We will place all non-confidential submissions on our website. For further information on our use and disclosure of information provided to us, see the [ACCC/AER Information Policy](#) (June 2014).

Shortened forms

Shortened form	Extended form
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
CECV	Customer export curtailment value
CER	Consumer energy resources
DEIP	Distribution Energy Integration Program
DNSP	Distribution network service provider
NEM	National Electricity Market
NEO	National Electricity Objective
NER	National Electricity Rules
NERR	National Energy Retail Rules
OEMs	Original equipment manufacturers
VPPs	Virtual power plants

Part A: Explanatory material

1. Objectives and use

1.1 Objectives of the interim guidance note

Flexible export limits offer an alternative to static export limits, which are used by most DNSPs to manage network constraints caused by exports from consumer energy resources, such as solar and batteries. This draft interim guidance note on export limits is a non-binding document intended to provide temporary guidance to DNSPs while a rule change proposal is developed by the AER and then considered by the AEMC.

The primary objective of this work is to identify and provide clarity on the regulatory framework necessary to facilitate the effective implementation of flexible export limits. Flexible export limits are one of many tools that can be used by DNSPs to manage network hosting capacity. DNSPs can potentially communicate signals to inverters to dynamically adjust output limits in response to the prevailing network conditions. The goal of such flexibility is to better use network hosting capacity, thus benefiting all participants within the network and enhancing the overall efficiency of deployment of consumer energy resources within the system.

1.2 Intended use

In this document, the AER establishes interim guidance on several key areas relating to the use of export limits to provide clarity to DNSPs and stakeholders, while more formal arrangements are progressed. Consultation on the interim guidance note enables the AER to test the effectiveness of its positions in addressing identified gaps in the regulatory framework in a holistic and consolidated manner.

Stakeholder feedback will be used to inform the AER's final positions on matters discussed in this document and will be used to inform the approach towards implementing these positions. Positions outlined in final interim guidance note are anticipated to be formalised through a combination of amendments to existing AER guidance material and a rule change request to the AEMC.

The interim guidance note will remain in place until the outcome of the AER's rule change request to the AEMC is determined and any rule changes come into force. DNSPs should refer to this guidance note when seeking to implement and use export limits (flexible and static), which sets out:

- The AER's expectations relating to the allocation of network hosting capacity, provision of information to consumers and industry stakeholders, and the expected terms and conditions of connection agreements. This information is intended to address the consistency and transparency gaps that were identified during our review of the regulatory framework for flexible export limits.
- AER expectations around hosting capacity assessments and their input into DNSPs' business cases for expenditure to implement flexible export limits.

2. Approach and related streams of work

2.1 Evolving our approach to network regulation to meet future challenges

Our approach to regulating energy networks is evolving. The increased uptake of consumer energy resources (such as rooftop solar and batteries) and growing recognition of the impacts of climate change, are driving changes in how electricity networks need to function to support Australia's transition to clean, reliable and more affordable renewable energy.

DNSPs are changing how they operate their networks to better integrate consumer energy resources and support changes in consumer preferences about how they use and consume electricity. Recent DNSP revenue proposals have proposed network expenditure aimed to increase low voltage visibility and invest in system upgrades to allow DNSPs to manage their networks more dynamically. DNSPs and other supply chain partners are increasingly seeking to explore innovative ways for responding to emerging network issues and to support the development of new service and product offerings.

To ensure that requirements remain relevant and fit-for-purpose, we will need to update our guidance as the market and DNSP practices continue to evolve, and related policy reforms are finalised. This will provide an opportunity for the AER to consider whether existing guidance needs to be strengthened or adapted to address identified gaps or unintended consequences from current regulatory settings.

Our view is that an iterative outcomes-based approach will promote innovation and market development, while establishing 'guard rails' to protect consumer interests and promote confidence in market and network operations.

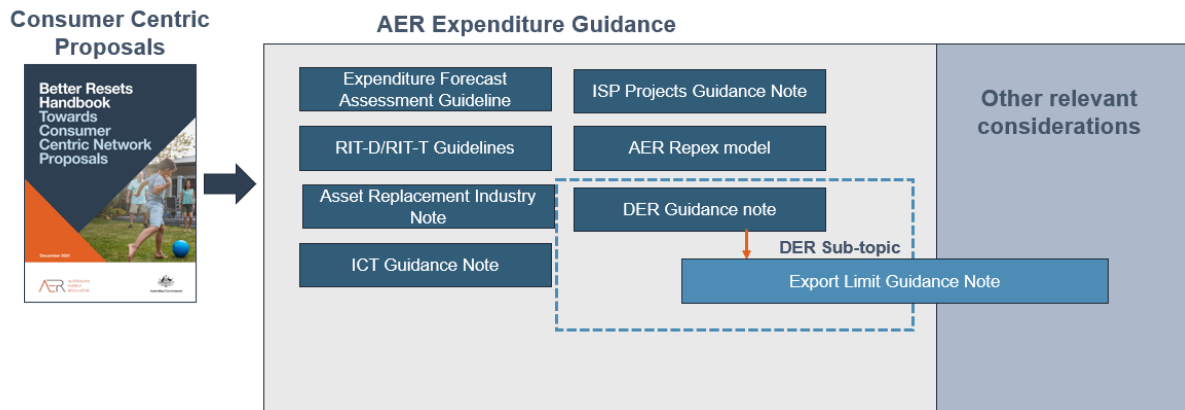
2.2 Related streams of work

We aim to enable consumers who own energy resources to use those resources to consume, store and trade energy in a way that benefits the long-term interests of *all* consumers.

We have considered how related streams of AER work interface with the interim guidance note and the impact of other reforms and policy work being progressed by other market bodies. Figure 1 illustrates where the interim guidance note fits within the existing architecture of AER documents on expenditure guidance.

The Better Resets Handbook signals the AER's expectations of how DNSPs should develop consumer-centric network proposals that are consistent with AER expenditure guidance. Figure 1 also shows how the guidance note is intended to supplement existing guidance provided under the DER integration expenditure guidance, while also addressing broader considerations (such as consumer equity issues with connection arrangements) where DNSPs elect to implement flexible export limits.

Figure 1 – Role of interim export limit guidance note within the existing architecture of AER documents



Several inter-related and over-lapping market reforms are being led by different market bodies and organisations. We understand that navigating these reforms can be challenging for new market participants and stakeholders. Our Consumer Energy Resources Strategy² outlines how these workstreams fit together holistically, under a framework of consumer-centric design. A more detailed explanation of related streams of work (both internal and external) is provided in Appendix A and B to help stakeholders understand how other reforms relate to our draft interim guidance note on export limits.

² AER, [Consumer energy resources strategy](#), Australian Energy Regulator, 3 April 2023.

3. Guidance note topics

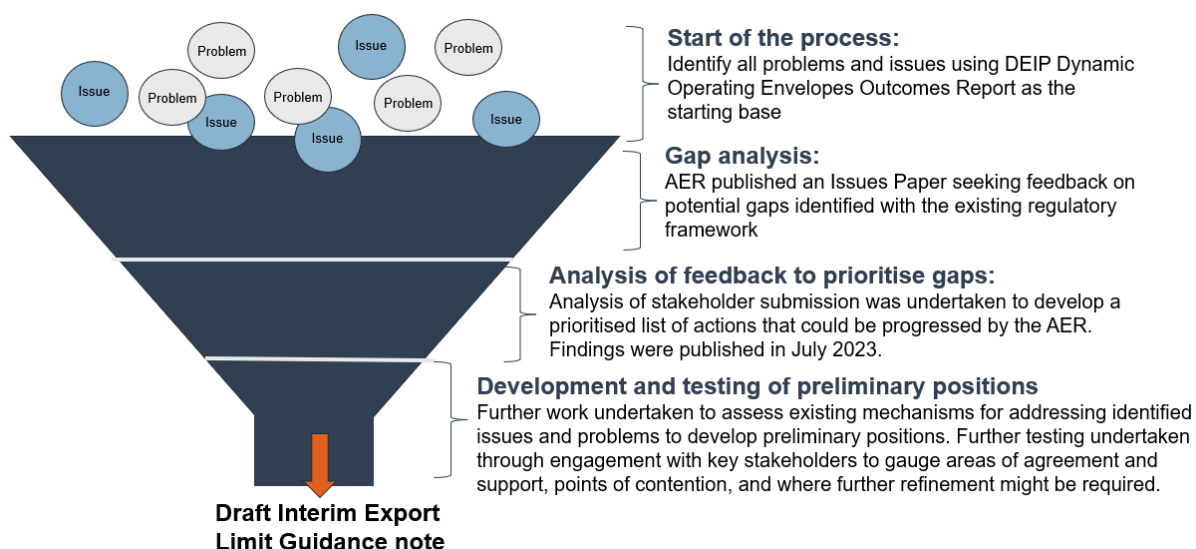
In 2022 to mid-2023, the AER undertook a review of regulatory arrangements for flexible export limits, as part of the Energy Security Board's Consumer Energy Resource Implementation Plan.

We initiated our review by publishing an issues paper on flexible export limits,³ which identified issues with the implementation and uptake of flexible export limits and tested the nature and importance of identified gaps in the regulatory framework.

Further analysis determined which stakeholder issues were appropriate for addressing through this workstream, compared to those that should be progressed through other related reforms being progressed by the Energy Advisory Panel or other market and regulatory bodies.

In July 2023, we published our final findings which included a prioritised list of actions that the AER could progress.⁴ This guidance note builds on key findings from our review of the regulatory framework. Figure 2 summarises the AER's approach towards developing the guidance note and highlights that the scope of issues have been further refined throughout the process as a result of stakeholder feedback and further AER analysis.

Figure 2 – AER approach towards developing the guidance note



This section sets out guidance on the following key topic areas:

- Capacity allocation: establishes a consistent set of capacity allocation principles that apply to static and flexible export limits, using the Distribution Energy Integration Program (DEIP) capacity allocation principles as a starting foundation. It also provides practical guidance on how DNSPs can seek to demonstrate compliance with the capacity allocation principles in developing their capacity allocation methodologies.

³ AER, [Flexible Export Limits: Issues Paper](#), Australian Energy Regulator, October 2022.

⁴ AER, [Flexible Export Limits: Final response and proposed actions](#), Australian Energy Regulator, July 2023.

- Revenue determinations: sets out additional guidance on matters that DNSPs should seek to address in developing their CER integration strategy, have regard to in undertaking options analysis and hosting capacity assessments, and in developing their connection policy.
- Key considerations in implementing and using flexible export limits: sets out guidance on matters DNSPs should have regard to when offering flexible export limits to consumers, outlines areas where DNSPs need to uplift consumer and industry awareness and understanding to support the uptake and implementation of flexible export limits, and states expectations around the establishment of complaint and dispute handling processes.
- Reporting: sets out guidance on areas where DNSPs can seek to enhance data and information gathering relating to export services and self-reporting to promote greater confidence in the operation of flexible export limits.

Further information on the above guidance note topics is provided below. This information is intended to provide context on the positions outlined in Part B.

3.1 Capacity allocation

Capacity allocation refers to the apportioning of available network hosting capacity between individual consumers based on anticipated network conditions and expected power flow. DNSPs' allocation of available network hosting capacity can potentially affect the value consumers can derive from their energy resources because this allocation determines how much energy each consumer can export from their energy resources.

Our review concluded that DNSPs should allocate network hosting capacity transparently. In our findings we noted that DNSPs are at varying stages of maturity in implementing flexible export limits and have differing levels of low voltage visibility and system capability. Consequently, we considered that capacity allocation principles should initially focus on:

1. Supporting the implementation of flexible export limits.
2. Providing greater clarity and transparency on how exports limits (static and flexible) are determined and the interrelationship with export limits and two-way pricing.

Our expectations in relation to capacity allocation are outlined in Part B. We have focused our guidance on outlining our proposed approach for establishing a set of consistent capacity allocation principles and outlining matters that DNSPs should consider in developing their capacity allocation methodologies.

Network hosting capacity

Hosting capacity refers to the ability of a power system to accept energy generated by consumer energy resources without adversely impacting power quality such that the network continues to operate within defined operational limits (without experiencing voltage or thermal violations). Hosting capacity varies by location and time due to changes in consumption and the level of consumer energy resource penetration.

Distribution networks have an intrinsic level of hosting capacity (or base level ability) to host a certain level of consumer energy resource exports within operational limits. This is because

network assets constructed for consumption services have the capacity to support some reverse power flow without additional investment.

Why network hosting capacity is important

Network hosting capacity can have important implications for both the effective operation of distribution networks and the way owners of consumer energy resources can derive value from their investments. As networks begin to reach the limit of their intrinsic export hosting capacity, they may need to ‘curtail’ solar exports to prevent adverse impacts to the operation of the electricity network (safety and reliability) and prevent power quality issues. However, the level and prevalence of solar curtailment can have a detrimental impact on the ability of owners of consumers energy resources to earn additional revenue from relevant schemes (such as solar rebates), which can affect the payback period for their investment.

The AEMC’s rule change⁵ introduced amendments to the National Electricity Rules to recognise two-way electricity flows by confirming that export services are part of the core services to be provided by distribution businesses. Prior to this rule change, DNSPs had limited options for managing hosting capacity issues. This often involved curtailment or imposing zero export limits or low static export limits on new solar PV connections in congested areas.

In response to the growing uptake of solar PV, DNSPs have undertaken expenditure to support the provision of export services, including flexible export limits or investing to increase network hosting capacity. DNSPs can also seek to implement two-way pricing to signal when it is better to self-consume from consumers’ own rooftop solar (that is, when too much energy is being exported to the grid) and when it is better to export (that is, when energy is needed on the grid during peak load times). This enables DNSPs to recover the costs of asset upgrades from consumers who will benefit most from the network investment.

How network hosting capacity is calculated and allocated

A DNSP’s capacity allocation methodology refers to how DNSPs calculate and allocate network hosting capacity to consumers’ energy resources that are capable of exporting (that is, solar PV and batteries). The capacity allocation approach refers to how DNSPs communicate their methodology to consumers and stakeholders, which is technical in nature. The communication of DNSP’s capacity allocation methodology should form part of engagement undertaken by DNSPs in developing their regulatory proposal.

Network capacity can be calculated and allocated in a variety of ways. In our final response we noted our view that a ‘one-size’ fits all approach towards capacity allocation methodology is unlikely to be appropriate given the significant differences that exist in DNSPs’ operating circumstances, their access to smart meter data and differences in level of network visibility.⁶

3.2 DNSPs’ revenue determination process

In our review of regulatory arrangements for flexible export limits, stakeholders raised the need for us to:

⁵ AEMC, [Access, pricing and incentive arrangements for distributed energy resources](#), Rule determination, Australian Energy Market Commission, 12 August 2021.

⁶ AER, [Flexible Export Limits Final Response](#), Australian Energy Regulator, p. 29.

- have an oversight role in reviewing DNSPs' capacity allocation methodologies and approaches
- provide further guidance on how DNSPs should seek to demonstrate the investment need for implementing flexible export limits
- provide greater clarity on the relationship between export limits and price signals.

We have considered existing mechanisms that could be leveraged to provide further guidance on the evidence required to substantiate businesses cases for expenditure to implement flexible export limits. This is best addressed by supplementing existing guidance in our DER integration expenditure guidance note relating to the development of DNSPs' CER integration strategies and business case justification.

In addition, line of sight between DNSPs' calculation of available network hosting, the apportioning of this to establish exports limits and eligibility requirements for flexible export limits is desirable. This will help to establish 'guard rails' for consumers by ensuring DNSPs are applying their capacity allocation methodologies consistently and transparently to customer connections. Our view is this is best achieved by outlining additional areas that DNSPs should address in developing their connection policies.

Guidance provided in Part B focuses on clarifying the AER's expectations regarding documentation of the base case, use of options analysis and hosting capacity assessments in supporting expenditure proposals for flexible export limits. We have also set out additional areas that should be addressed in DNSPs' connection policies.

3.3 Key considerations in implementing and using flexible export limits

Our review of regulatory arrangements for flexible export limits found that an opt-in approach for implementing flexible export limits would likely be most appropriate given low levels of consumer understanding and awareness. It also identified the need for a significant uplift in consumer awareness and understanding on the operation of connection arrangements, the need to include terms and conditions in DNSPs' Model Standing Offers governing the application of flexible export limits, and the provision of explanatory material to help consumers make an informed choice between static and flexible export arrangements.

Connection agreements

Under Chapter 5A of the NER, a DNSP must submit for the AER's approval a proposed Model Standing Offer (MSO). Once the AER approves the MSO, a DNSP must make any connection offers in accordance with the MSO. Once the offer is accepted, a connection agreement (contract) is formed.

The criteria that the AER must apply when approving MSOs includes that:

- the connection charges are consistent with the DNSP's distribution determination including the connection policy
- the terms and conditions need to be fair and reasonable

- the terms and conditions comply with applicable requirements of the energy laws.

Our review also found the need for DNSPs to engage more with industry in designing and implementing flexible exports to help support the efficient use and uptake of export limits. Key areas where we have identified additional engagement is required include:

- key design elements relating to flexible export limits
- compliance with technical standards
- establishment of complaint handling and dispute resolution processes.

We anticipate that uplifting engagement with industry on these key areas and improving information sharing will help improve consumer outcomes. Better engagement will promote more consistent messaging throughout the consumers' CER journey to help inform consumer decision-making, support the development of new product and service offerings and efficient market outcomes.

Our guidance outlined in Part B clarifies information that should form parts of the terms and conditions of connection agreements, versus what should be provided to consumers as supplementary material to help inform their decision-making when implementing flexible export limits. Guidance is also provided on specific matters that DNSPs should engage with industry stakeholders to promote improved consumer outcomes, with a key focus on improving CER compliance with technical standards and establishing appropriate complaint and dispute resolution processes.

3.4 Reporting

Under the National Electricity Rules DNSPs are subject to various reporting obligations relating to performance and compliance monitoring. This includes performance reporting via responses to AER regulatory information instruments, annual benchmarking, and self-reporting through distribution annual planning reports.

During consultation on our recent reviews of flexible export limits and consultation on incentivising and measuring export service performance,⁷ the AER sought to explore stakeholder views on reporting metrics for promoting transparency and confidence in the operation of flexible export limits. Our review noted that the AER will commence annual export service performance reporting in December this year, which will capture metrics aimed at monitoring flexible export limit performance.

We acknowledge that further work is required to reporting metrics. We anticipate reporting metrics will continue to evolve over time as DNSP data capture and access to smart meter data improves. Recent work undertaken by RACE for 2030 on measuring and communicating network export service quality (RACE 2030 report) provides useful guidance on the use of different export service quality metrics based on the specific 'use cases' summarised in Figure 3 and Table 2.

⁷ Refer to the AER's [Incentivising and measuring export service performance report](#).

Figure 3 Summary of export service quality metrics by use case⁸

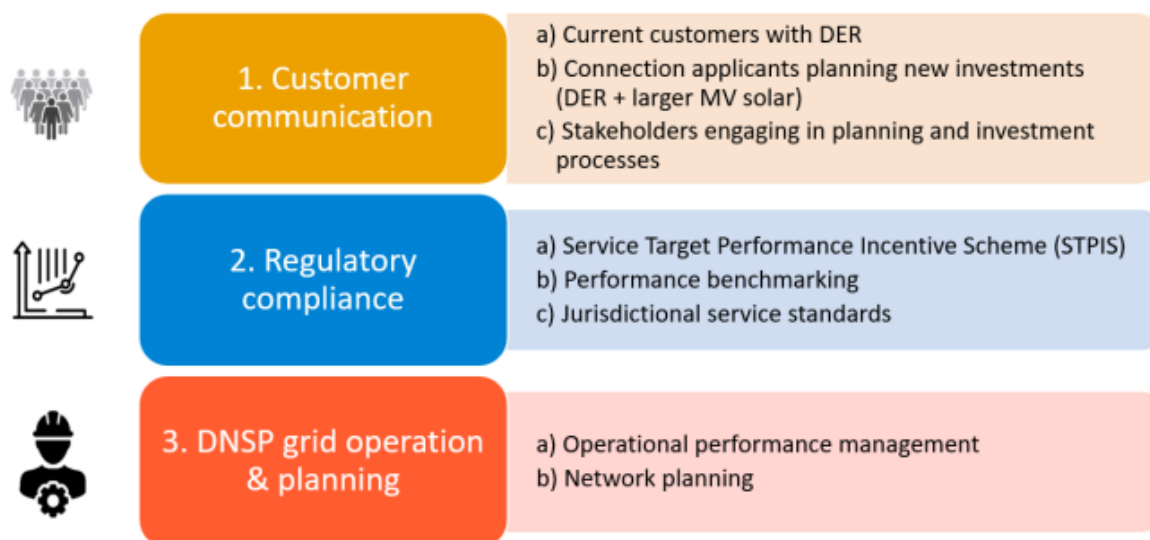


Table 2 Mapping of metrics to use case⁹

ID	Shortlisted metrics	Use cases								
		1) Customer communication			2) Regulatory compliance			3) Grid operation and planning		
		a) Current DER customers	b) Connection applicants	c) Engaging with stakeholders	a) STPIS	b) Performance benchmarking	c) Jurisdictional service	a) Operation	b) Planning	
27	Volume of Energy Curtailed	✓	✓	✓		✓		✓	✓	
5	Total Utilised DER Generation		✓	✓	✓	✓	✓	✓	✓	
10	Duration of Full Export Access	✓	✓	✓		✓	✓	✓	✓	
28	Export Service Levels Achieved				✓	✓		✓	✓	
22	Volume of System Services Provided by DER		✓	✓		✓			✓	
17	CO ₂ Emissions Reduction			✓						
12	Customer Complaints			✓		✓	✓	✓	✓	

Our guidance in Part B signals the importance of more self-reporting by DNSPs in promoting consumer confidence in the operation of flexible export limits. It highlights how DNSPs can leverage reporting through their distribution annual planning reports to report on the effectiveness of flexible export limits and opportunities for non-network solutions. It also provides DNSPs with further clarity on the AER’s work on improving its performance monitoring and reporting.

⁸ See Langham, E.L., Guerrero, J., Nagrath, K. and Roche, D. 2022, [Measuring and communicating network export service quality](#), prepared for RACE for 2030. p 4.

⁹ Ibid, see p.7.

Part B: Draft guidance

4. Draft guidance

For each of the topics addressed by our interim guidance note on export limits, we have sought to clearly define the issue that we are seeking to address and the objectives we are seeking to achieve by providing guidance.

The following sections set out our views on the nature of guidance required to address issues identified as part of our review of the regulatory framework for flexible export limits. It also provides practical guidance on how DNSPs can demonstrate compliance with requirements that will be established once the interim guidance note is finalised and highlights where further work might be required to implement the AER's guidance approach.

Section 5 sets out a consolidated list of consultation questions aimed at testing the appropriateness and effectiveness of our proposed guidance and implementation approach.

4.1 Capacity allocation

4.1.1 Capacity allocation principles

Problem statement

Unless DNSPs calculate and allocate available network hosting capacity transparently and consistently, consumers may not be able to understand the value and pay-back periods of their investments in consumer energy resources.

Policy outcome

Greater transparency and consistency in the allocation of available network hosting capacity is promoted, while affording DNSPs flexibility to develop approaches that are reflective of their operating circumstances and customer preferences.

Draft position for the guidance note

In its Dynamic Operating Envelopes Outcomes Report, the Distributed Energy Integration Program¹⁰ (DEIP) developed principles for allocating network hosting capacity for flexible export limits. We seek feedback on how to refine and expand the DEIP capacity allocation principles to provide appropriate guidance to DNSPs in developing their capacity allocation methodologies for setting static and flexible export limits. The capacity allocation principles will be provided in the final version of this guidance note.

¹⁰ DEIP is a collaboration of government agencies, market authorities, industry and consumer associations aimed at maximising the value of consumers energy resources for all energy users. Led by a steering group, the forum is driven by the premise that exchanging information and collaborating on consumer energy resources issues will more efficiently identify knowledge gaps and priorities, as well as accelerate reforms in the interest of customers.

DEIP capacity allocation principles

1. DNSPs are responsible for setting flexible export limits, with the calculation methodology used to determine the limits being transparent and subject to stakeholder consultation.
2. Allocation should seek to maximise the use of network export hosting capacity while balancing customer expectations of transparency, cost and fairness.
3. Capacity allocation can initially be based on net exports and measured at the customer's point of connection to the network.
4. Capacity should be allocated to small customers irrespective of the size or type of customer technology (for example, solar or batteries) at the customer premises.
5. In the near term, flexible export limits should be offered on an opt-in basis with capacity reserved only to make good on legacy static limit connection agreements, with efficient incentives provided for customers to transition to flexible export limits over time.

Proposed amendments to the DEIP capacity allocation principles

We consider our policy objectives can be achieved with relatively minor amendments to the DEIP capacity allocation principles as follows:

- Change the wording of principle 1 to reflect that DNSPs are responsible for setting export limits (static and flexible). The wording should also be expanded to reflect that the calculation of the capacity allocation methodology should be informed by network hosting capacity analysis and static export limits should not be set arbitrarily low.
- Expand principle 2 to include consideration of complementary measures such as two-way pricing.

The capacity allocation principles should be high-level so that they can be applied flexibly to accommodate differences in DNSPs' network operating circumstances, network visibility, and differences in system capability and maturity. Further guidance on how DNSPs can demonstrate compliance with the capacity allocation principles is set out in sections 4.1.2, 4.2 and 4.3 below.

Subsequent implementation

The AER is seeking to establish non-binding capacity allocation principles through this interim guidance note and provide direction on how DNSPs can demonstrate consistency with the capacity allocation principles.

Adherence to the capacity allocation principles will be a relevant factor that the AER will consider in assessing expenditure proposals. This issue is further discussed in section 4.2.

The National Electricity Rules (NER or rules) should be amended to enable the establishment of binding capacity allocation principles by the AER, which would then need to be implemented by DNSPs. From a regulatory design perspective, establishing a requirement for the AER to develop capacity allocation principles (rather than codifying the principles in the rules) provides flexibility for the principles to adapt over time.

4.1.2 Capacity allocation methodology

Problem statement

Unless the methodology to calculating and allocating available network hosting capacity is transparent, it is difficult to ascertain whether the calculations are being done accurately and in sufficient detail. This gives rise to the risk of inaccurate export curtailment forecasts and higher levels of network expenditure than necessary.

Policy outcome

There is greater transparency in how DNSPs have applied the capacity allocation principles in allocating available network hosting capacity to promote confidence in the implementation and operation of export limits.

Draft position for the guidance note

DNSPs should develop their capacity allocation methodology in a manner that is consistent with the capacity allocation principles. Our view is that DNSPs should:

- describe their capacity allocation methodology as part of their CER integration strategy and demonstrate how their methodology is consistent with the capacity allocation principles
- describe how their capacity allocation methodology has been reflected in their connection policies and connection agreements
- demonstrate how their capacity allocation methodology has been informed by consumer and stakeholder feedback
- publish their capacity allocation methodology on their website.

This strikes an appropriate balance between promoting greater transparency and consumer understanding, while providing flexibility for DNSPs to develop methodologies based on their individual network characteristics, technical capabilities, and consumer preferences.

In assessing the prudence and efficiency of DNSPs' expenditure proposals for implementing and using flexible export limits, the AER will consider the extent to which DNSPs have demonstrated consistency with the capacity allocation principles and have consulted on their capacity allocation methodology. We will also check to ensure that DNSPs' approach for calculating and allocating available network hosting capacity, as outlined in their capacity allocation methodologies, is reflected in their pricing approach and connection policy. These issues are discussed in further detail in section 4.2.1 and 4.2.3.

Our expectations

The following section is intended to provide DNSPs with guidance on how they can demonstrate that their capacity allocation methodology is reflective of the DEIP capacity allocation principles 1 to 4. Further guidance on our expectations for demonstrating compliance with principle 5 is set out in section 4.3.1.

In developing their capacity allocation methodology for setting export limits, the AER expects that DNSPs will consult with consumers and affected industry stakeholders on:

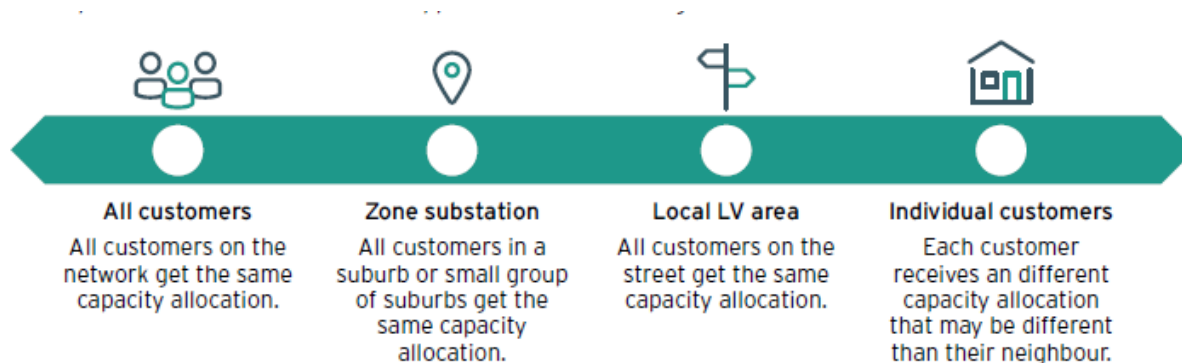
- the level at which capacity allocation is to be set

- the allocation model that the DNSP proposes to use
- the trade-offs between different options in terms of efficiency, equity, complexity, and fairness outcomes.

Allocation level

We expect DNSPs to consult with consumers and industry on the allocation level at which export limits will be set. The DEIP Dynamic Operating Envelope Outcomes Report found that there were 4 different types of allocation levels at which network capacity could be set, as shown by Figure 4.¹¹

Figure 4 Allocation level options¹²



The appropriateness of allocating capacity at different network levels will be heavily influenced by the unique circumstances in terms of network need and level of network visibility of each DNSP. Findings from DEIP's allocation principles workshop indicated that no single allocation level was ideal and that pros and cons existed with each approach.

DNSPs should consult with consumers and industry stakeholders on the pros and cons of different allocation level approaches to identify a preferred approach. This may result in DNSPs adopting hybrid approaches to strike the optimal balance between network need, equity, and cost outcomes. DNSPs may want to apply different allocation approaches for residential customers, or commercial and industrial customers.

We expect DNSPs to implement a baseline model and incrementally increase the sophistication of allocation levels based on:

- the desirability expressed by consumers and stakeholders
- the DNSP's ability to demonstrate benefits from moving towards a more sophisticated approach considering the associated costs.

Over time and as recommendations from the AEMC's review of the regulatory framework for metering services are implemented, there is likely to be greater convergence in allocation approaches as access to smart meter data and network visibility improves.

¹¹ DEIP, [Dynamic Operating Envelopes Workstream: Allocation Principles Workshop Summary](#), July 2021, p. 4.

¹² Ibid.

Capacity allocation models

The AER expects that DNSPs will consult with consumers and industry stakeholders on the model they intend on using for allocating network capacity. The DEIP Dynamic Operating Envelopes Outcomes Report identified 4 main types of capacity allocation models that could be used by DNSPs to allocate network capacity:

1. Equal allocation – all customers receive the same capacity.
2. Proportional allocation – customers are constrained by a proportion of their system size (i.e. larger systems receive greater allocation).
3. Value-based allocation – customers receive capacity based off the value of their exports (for example, virtual power plants participants receive priority access).
4. Pay-for-more allocation – customers can purchase rights for additional shares of the hosting capacity.

As highlighted by Figure 5, consumer outcomes can vary significantly depending on the capacity allocation model used.

The AER anticipates that DNSPs' use of capacity allocation models will also likely evolve and become more sophisticated as DNSPs' and industry knowledge and experience in this area matures.

Figure 5 DEIP capacity allocation models¹³



¹³ Extract taken from DEIP, [Dynamic Operating Envelopes Workstream: Allocation Principles Workshop Summary](#), July 2021, p. 6.

Objective functions and metrics for comparing different option outcomes

Objective functions refer to the outcomes that modelling aims to achieve. Project EDGE's work¹⁴ on defining different objective functions for dynamic operating envelopes provides a useful framework that can be adopted by DNSPs in calculating and determining export limits. The work undertaken by Project EDGE, in collaboration with the University of Melbourne, provides useful guidance on:

- different approaches for how fairness might be considered in DNSPs' capacity allocation methodologies and the different outcomes that can arise depending on the perspective of 'fairness' that is adopted
- assessment metrics that can be used to assess different options against considerations of technical efficacy, economic performance, and fairness.

The 6 objective functions considered by Project Edge and summary of different outcomes are outlined in Table 3.¹⁵

Table 3 Project EDGE objective functions

Objective Function	Fairness approach	Outcomes
Maximise export	Fairness is considered from a whole-of-consumer and system' perspective not the individual CER owner's perspective	Some sites receive greater export capacity than others to maximise the total export and overall benefit to all consumers, including those without CER.
Policy outcome	Fairness to all consumers is considered from a policy perspective.	Each CER weighting is considered by integrating policy factors such as emission reduction.
Fixed percentage	Fairness is achieved by applying same percentage allocation from an individual CER asset perspective.	Consumers are allocated the same percentage of their CER asset size, with those with larger CER systems allocated more kW capacity.
Equal kW reduction	Fairness is achieved by the equal reduction of CER exports by the same number of kW.	Could result in less total exports across the National Electricity Market. Imposes absolute capacity limits instead of equal percentages to equalise financial impacts to owners of CER. Those with larger CER systems receive more capacity.
Level network sharing	Fairness is attempted by sharing equal network capacity across CER consumers with some reallocation of capacity that cannot be used.	Could result in less total exports across the National Electricity Market with a diminished benefit to non-CER consumers.
Flat access	Fairness is considered by allocating the same network capacity among CER consumers even if they cannot use it.	Could result in the lowest total export across the National Electricity Market relative to other options, with a diminished benefit to non-CER consumers due to some allocation that cannot be used.

¹⁴ Project EDGE (Energy Demand and Generation Exchange) was a multi-year project collaboration project between AEMO, AusNet and Mondo to demonstrate an off-market, proof-of-concept of a CER marketplace.

¹⁵ For further details see, Project Edge, '[Fairness in Dynamic Operating Envelope Objective Functions](#)' – a report by the University of Melbourne, Version 1, April 2023.

The Project EDGE 'Fairness in Dynamic Operating Envelope Objective Functions Report' considers several metrics for assessing objective function approaches and provides guidance on how impacts can be quantified. These metrics include:¹⁶

- Technical metrics – network utilisation, CER capacity utilisation and renewable utilisation have been proposed as metrics for capturing different aspects of the technical operation of the network.
- Economic metrics – Relative social welfare is the metric proposed for measuring the economic value that can be obtained by participating customers (or their aggregator) from participating in the wholesale market.
- Fairness metrics – quality of service, quality of experience and minimum-maximum fairness have been proposed as useful metrics for measuring something that is generally viewed as being subjective.

Subsequent implementation

The AER considers that a rule change would be appropriate in relation to implementing our draft positions on capacity allocation methodologies. Our preliminary view is that this can be incorporated within the framework of DNSPs' existing obligations under Chapter 5 and 6 of the NER, rather than requiring broader changes or additions to the existing framework.

4.2 DNSP revenue determination process

4.2.1 CER integration strategy

Problem statement

Clarity surrounding how two-way pricing arrangements interact with export limits, particularly flexible export limits, can drive greater consistency and understanding for DNSPs, industry stakeholders and consumers, leading to more informed decision-making.

Stakeholders also noted the need for greater transparency over how DNSPs calculate and allocate network hosting capacity and that it would be appropriate for DNSPs to provide these details as part of their CER integration strategies.

Policy outcome

DNSPs uplift awareness and understanding of their capacity allocation methodologies and the interrelationship between export limits and two-way pricing, where they seek to implement both tools. Specifically, DNSPs should clearly communicate what service levels consumers can expect when receiving flexible export limits or two-way pricing.

¹⁶ For further details see, Project Edge, '[Fairness in Dynamic Operating Envelope Objective Functions](#)' – a report by the University of Melbourne, Version 1, April 2023, pp. 14-18.

Our expectations

DNSPs should include commentary, as part of their CER integration strategies, on how their capacity allocation methodology reflects the capacity allocation principles and how it has been shaped by consumer and stakeholder feedback.

In addition, the AER considers that DNSPs should include commentary in their CER integration strategies that includes:

- a holistic overview of the different initiatives that the DNSP is seeking to take to support the efficient integration of CER, and a summary of the identified CER integration problem that different initiatives are aimed at addressing, explaining how the impact of complementary measures (such as two-way pricing, voltage management, network visibility and use of export limits) have been taken into account in determining the DNSP's proposed expenditure
- how benefits have been apportioned to each program or project, where an investment is likely to deliver multiple benefits to different programs or projects
- the DNSP's approach and rationale for setting export limits (basic, static, and flexible) and how this relates to, and is consistent with, the DNSP's capacity allocation methodology
- how the DNSP has considered the use of other complementary tools, such as two-way pricing, in setting export limits.

Subsequent implementation

We will make minor amendments to our DER integration expenditure guidance note.¹⁷ We intend to make these amendments following the establishment of relevant arrangements in the National Electricity Rules. This would enable the AER to establish binding capacity allocation principles, which would then need to be implemented by DNSPs. Once these amendments are made, the guidance that our interim guidance note provides about capacity allocation will be superseded. Relevant guidance about capacity allocation that is not captured by rule change amendments will be uplifted into the DER integration expenditure guidance note.

4.2.2 Developing flexible export limits business case

Problem statement

DNSPs should demonstrate the prudence in investing and implementing flexible export limits relative to other investment options for managing network capacity and integrating consumer energy resources. There are potential difficulties for DNSPs operating outside of Victoria to substantiate business cases to implement flexible export limits given current limitations with low voltage visibility and ability to access smart meter data.

¹⁷ AER, [DER integration expenditure guidance note](#), Australian Energy Regulator, June 2022.

Policy outcome

DNSPs obtain further clarity on AER expectations for when we review expenditure related to the implementation of flexible export limits. This information is aimed at assisting DNSPs to prepare business cases for flexible export limits that are based on credible assumptions and are consistent with DNSPs' capacity allocation methodologies.

Draft position for the guidance note

Our DER integration expenditure guidance note outlines our expectations for how DNSPs should develop business cases and quantify benefits associated with network investments that increase network hosting capacity. DNSPs should detail plans for the implementation of flexible export limits, which may include the timing of trials, methods for capacity allocation and consumer engagement.

Flexible export limits allow DNSPs to maximise existing hosting capacity. However, it is one of many tools that can be used to support the efficient integration of consumer energy resources. Potential options for managing network capacity (from least cost to most costly, generally speaking) are summarised in Figure 6.

Figure 6 Summary of potential options for managing network capacity

	Tool	Description
	Cost reflective prices	Export tariffs signal to customers the additional network costs associated with relieving export constraints. If customers respond by self-consuming or investing in energy storage, future augmentation costs can be avoided or deferred.
	Compliance and awareness	Many solar PV inverters are non-compliant with technical standards, which may require DNSPs to set conservative static export limits. Compliance activities, such as introducing commissioning sheets, are relatively low cost and will help to ensure that new or replacement solar PV inverters are compliant with technical standards. Better inverter compliance with technical standards will reduce the need for conservative static export limits and is a key enabler for the successful implementation of flexible export limits.
	Voltage management	Adjusting transformer tap settings, phase balancing and dynamic voltage management are examples of activities to manage voltage and reduce voltage-related export curtailment.
	Network visibility	Network visibility provides better knowledge about hosting capacity. Over the coming years, DNSPs are likely to get improved access to smart meter data following recent recommendations from the AEMC's smart metering review. This allows DNSPs to rely less on estimation and better target network investments, allowing them to offer higher static export limits which reflect the true state of the network.
	Flexible export limits	-Allows DNSPs to maximise existing hosting capacity. They may be simple (feeder level) or sophisticated (household level) and are generally preferable to augmenting the network to increase hosting capacity (dependent on network visibility and the level of investment in ICT that is necessary).
	Network augmentation	Investments to increase network hosting capacity may be justified if they provide net economic benefits and other credible investment options have been considered.

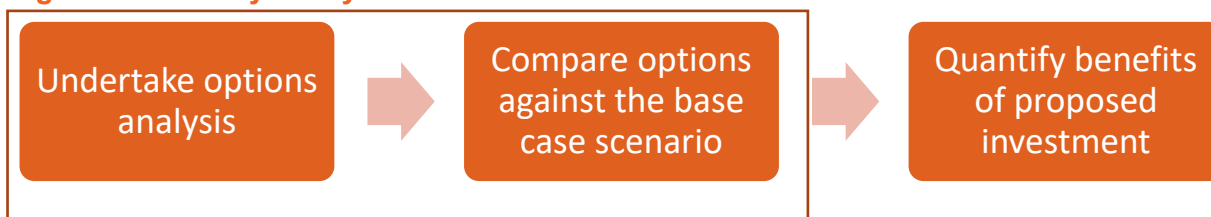
Some of the options outlined in Figure 6 are also key enablers for the successful implementation of flexible export limits. For example, implementing flexible export limits requires network visibility and certainty that consumer energy resources are compliant with technical standards. Therefore, these activities may be complementary to flexible export limits rather than substitute options for managing network capacity.

DNSPs in Australia generally have poor visibility of customer voltage, except in Victoria where there is a very high penetration of smart meters and access to smart meter data. Consequently, most DNSPs have historically relied on simple measures such as customer

complaints (in response to quality of supply issues) to understand whether customers are experiencing voltage-related curtailment. More recently, and in response to these complaints, DNSPs have invested in low voltage monitoring programs to estimate network hosting capacity and the impacts of voltage-related curtailment.

Our observation from the 2024-29 revenue proposals is that low voltage network visibility and understanding of hosting capacity vary across distribution networks. Our guidance supplements existing guidance relating to key elements of DNSPs' business cases as highlighted by Figure 7, focusing on providing additional guidance to assist DNSPs in undertaking their options analysis and comparison against the base case.

Figure 7 Summary of key elements of a business case



Our expectations

Options analysis

We expect that the option put forward for flexible export limits is the credible investment option that maximises net economic benefits across the NEM.

DNSPs should demonstrate how they have considered other least cost measures. DNSPs should provide commentary on how other tools for improving network hosting capacity have been considered and reflected in the quantum of expenditure being proposed. The AER also expects to see evidence in DNSPs' business cases of:

- how the program and level of expenditure is reflective of and proportionate to the identified network need and the DNSP's operating circumstances
- has been informed by and reflects stakeholder and consumer feedback
- mitigating measures to address low level of consumer awareness and understanding which can negatively impact uptake and reduce the quantum of benefits from using flexible export limits
- the level of network visibility necessary to implement flexible export limits, including the potential need for real time or near-real time data
- DNSPs should include a breakdown of expenditure being proposed and documentation of key assumptions underlying the DNSP's cost benefit modelling.

A phased approach towards implementation of flexible export limits is likely to be most appropriate given current low levels of compliance with technical standards and consumer understanding and awareness. As network visibility improves, and consumer confidence and compliance increase, DNSPs will be better placed to substantiate a broader scale and more accelerated roll-out.

Base case scenario

The regulatory investment test for distribution (RIT-D) guidelines define the business-as-usual (BAU) base case as a standard base case where the RIT-D proponent does not implement a credible option to meet the identified need, but rather continues its BAU activities. BAU activities are ongoing, economically prudent activities that occur in absence of a credible option being implemented.

The base case scenario should comprise of BAU expenditure associated with voltage management, which may include managing distribution transformer tap settings and rebalancing across phases. It could also include BAU expenditure associated with operating a dynamic voltage management system, where DNSPs have deployed these.

The benefits provided by the proposed investment will be driven by the forecast increase in CER exports that flexible export limits will provide (relative to the level of CER exports under the base case scenario, where static export limits are likely to be imposed). In our existing guidance we refer to this as the 'alleviation profile'¹⁸ – the amount and timing of additional electricity that can be exported to the grid because of the proposed investment. It should reflect some time differentiation, whether it be by season, time of day, or broader supply/demand conditions, and changes over time as penetration of CER increases. Although DNSPs may assume a static export limit (above zero) in their base case scenario, they should demonstrate that this limit is not arbitrary and has been informed by its hosting capacity analysis.

DNSPs should clearly articulate the results of their hosting capacity analysis and how they it was used to derive their forecast alleviation profile. For example, the hosting capacity analysis should inform the assumed level of export limits in the base case scenario.

DNSPs should also articulate how forecasts of CER uptake in their networks will impact the alleviation profile over time. For example, increasing levels of rooftop PV may lead to more conservative static export limits in the base case scenario, whereas increasing levels of battery storage may reduce the need for such conservative limits.

Benefits of flexible export limits

DNSPs should quantify the benefits associated with flexible export limits in line with our existing guidance in the DER integration expenditure guidance note. This includes using our published customer export curtailment values (CECVs) methodology to measure wholesale market benefits. We expect DNSPs to adopt the value of emissions reduction as published by the Australian Government.

¹⁸ An alleviation profile captures the quantity and time distribution of export of consumer energy resources that, in the absence of the proposed investment, would have been curtailed.

4.2.3 Connection policy

Problem statement

DNSPs should transparently calculate available network hosting capacity and apportion this to consumer connections. DNSPs should provide evidence of a direct relationship between how they calculate available network hosting capacity and how export limits are applied to consumer connections. Regulatory oversight may be required to mitigate against the risk of DNSPs setting static export limits arbitrarily low.

Policy outcome

Greater clarity and transparency regarding how DNSPs calculate and apply available network hosting capacity to connections will promote confidence in how export limits operate.

Our expectations

DNSPs should clearly set out in their connection policies:

- the circumstances in which static export limits will be imposed and their approach for setting static export limits
- their approach for apportioning available network hosting capacity between static and flexible export limits
- the circumstances in which flexible export limits will be used and eligibility requirements
- the circumstances in which consumers will have their flexible export limit reverted to static export limits or will not be able to export, the expected duration of this occurrence and the notification that will be provided to consumers when this occurs
- the DNSPs approach for notifying consumers currently on static exports of their ability to apply to have their limit changed to a flexible export limit.

Subsequent implementation

These matters are likely best addressed by amending guidance in the AER's Connection Charge Guideline. This would require a rule change to amend provisions in Chapter 5A of the NER governing the scope of matters that must be addressed by the Connection Charge Guideline.

In the interim, the AER considers that DNSPs should demonstrate how their connection policy addresses the issues outlined above as part of their regulatory determination process.

4.3 Key considerations in implementing and using flexible export limits

4.3.1 Connection agreements and consumer participation

Problem statement

In general, consumers have low levels of understanding and awareness of how connection agreements operate. This makes them vulnerable to entering into agreements that can have adverse financial impacts and impact their ability to maximise the value from their investment in consumer energy resources.

Policy outcome

Providing greater clarity and certainty about how connection arrangements operate will establish appropriate consumer protections and support consumer confidence and uptake of flexible export limits.

Draft position for the guidance note

An opt-in approach to implementing flexible export limits for residential customers is likely to be the most appropriate given current low levels of consumer awareness, understanding and trust.

DNSPs should offer eligible customers a choice between opting into a flexible export limit or choosing a static export limit based on their individual circumstances and preferences. This is consistent with the existing DEIP capacity allocation principles (see principle 5, section 4.1.1).

DNSPs seeking to implement and use flexible export limits should seek AER approval for amendments to their Model Standing Offers to provide greater clarity and certainty of contractual obligations under static and dynamic connection arrangements. In addition, DNSPs should provide consumers with targeted information that helps them understand the impacts and requirements of different connection arrangements.

While we envisage these changes will help in establishing 'guard rails' to protect consumers and enable CER owners to maximise the value from their investment, they are unlikely (on their own) to deliver the uplift required in consumer awareness and understanding to support the efficient uptake of flexible export arrangements and other complementary measures such as two-way pricing.

DNSPs should work with industry to uplift consumer awareness and understanding on key topics to help support informed consumer decision-making throughout the consumer CER journey and in relation to connection arrangements and tariff offerings. While we recognise that DNSPs are not always the key interface with consumers, their decisions and approach can significantly impact consumer outcomes.

DNSPs need to take an active role in engagement with energy supply partners (for example energy and solar retailers), to promote better consumer outcomes and uplift consumer knowledge and understanding. Our position on this issue is discussed further in section 4.3.3.

Our expectations

Model Standing Offers

When offering an opt-in flexible export limit for consumers covered by a Model Standing Offer, each DNSP should cover both flexible and static limit options for the consumer, clearly laying out the differences between them. An example of how this has been done is SAPN's Model Standing Offer.

Static and flexible options should be presented to consumers on equal footing. The terms and conditions that should be included in DNSPs' Model Standing Offers are outlined in Table 4.

Table 4 Terms and conditions relating to flexible export limits

Issue	Expectation
Service offering	DNSPs should clearly set out the anticipated amount of export that customers can expect to receive by signing up to flexible export limits.
Reversion to static export limits	DNSPs should include the circumstances that would give rise to consumers being reverted to static export limits and specify the static export limit that will apply.
Non-compliance with the flexible export limit	DNSPs should clearly set out the requirements that must be met for consumers to be eligible to receive the flexible export limit, what happens if these conditions are not met, and the circumstances governing move-in arrangements. DNSPs should also set out their approach for notifying consumers of non-compliance and the rectification process that consumers should seek to follow in the event of being notified of non-compliance.
Customer enquiries, complaints, and disputes	DNSPs should set out: <ul style="list-style-type: none"> the process that should be followed when a consumer has a query about their flexible export limit or a concern around how much they have been able to export the process consumers can follow to make a complaint and the escalation process for resolving disputes, including advising of services offered by state / territory governments and access to relevant energy ombudsman schemes (see section 4.4 for further details)

Information to help support informed consumer decision-making about opting-in to flexible export limit arrangements

DNSPs should provide material to consumers to assist them in making an informed decision as to which connection arrangement best suits their circumstances. Connection agreements are difficult for consumers to understand, with many not even aware of the existence of such agreements. In turn, consumers may not receive adequate information about the implications and impacts of any flexible export arrangements into which they enter.

DNSPs should clearly set out, in material that is separate from connection agreements, information that will assist consumers in making an informed decision about whether to opt-in to flexible export limits and understand key implications surrounding their ongoing operation. This information should be presented in an easily digestible and accessible format.

Key areas where we consider DNSPs should seek to uplift consumer awareness and understanding to support more informed decision-making on the connection arrangements that best suits their circumstances are outlined in Table 5.

Table 5 Key areas requiring an uplift in consumer awareness

Area	Expectation
Differences between static and flexible export limits	<p>DNSPs should include an explanation on the 2 types of connection arrangements (static or flexible), what they are, and how they operate. In explaining the differences between the 2 types of connection arrangements, DNSPs should:</p> <ul style="list-style-type: none"> • set out the pros and cons of the different arrangements • provide worked examples of the benefits that customers could expect to receive under different static and flexible export arrangements based on common CER connection requests • indicate which arrangements would likely suit different types of customers based on consumer energy usage patterns.
Connection charges and tariff offerings	<p>DNSPs should provide consumers with relevant and easily digestible material that sets out the nature and types of connection charges under different connection arrangements, highlighting any interrelationships or implications with network tariff offerings.</p>
Factors that can affect performance	<p>DNSPs should provide consumers with material that helps them understand the different factors that might affect export levels and the consumer's ability to receive the level of export that they have signed up to at the agreed service level. For example, explaining any factors that might impact on a consumer to receive 10kW of export limit 95% of the time.</p>
Rights and responsibilities	<p>DNSPs should provide a fact sheet to consumers setting out their rights and responsibilities in relation to flexible export limits. This should include information on:</p> <ul style="list-style-type: none"> • how consumers can check what service they are entitled to receive under their agreement • what requirements consumers must comply with to ensure they are able to export at the agreed export level and within the service levels outlined in their agreement and steps that consumers can take to check that they are complying • how consumers can check and monitor what export level they are receiving • guidance on what factors can affect the level of export service consumers receive • how consumers can make enquiries or complaints about the level of service they are receiving.
Non-compliance	<p>DNSPs should provide general guidance on common causes for customer non-compliance with flexible export limit requirements and outline steps that the consumer can take to seek to resolve the non-compliance, including identifying who the relevant party the consumer should seek to contact based on the underlying cause for the non-compliance.</p>

The above information should be published on DNSPs websites in a manner that can be regularly updated by DNSPs, to reflect the dynamic nature of this information.

DNSPs may choose to convey this messaging using a combination of different mediums such as fact sheets, infographics or short animation videos to promote greater consumer awareness and understanding. DNSPs may need to work with industry stakeholders in

developing some of the messaging. This is likely to have a trickle-down effect in uplifting awareness throughout the industry supply chain.

Subsequent implementation

The approach that we have adopted seeks to deliver incremental and targeted changes to the *existing* framework governing connections arrangements to provide greater transparency and clarification of requirements and establish appropriate consumer protections.

The regulatory framework for connections enshrined in the National Electricity Rules does not currently recognise tripartite arrangements between the consumer, the DNSP, and the consumer's chosen trader or aggregator. Given this limitation, consumers need to be better equipped with knowledge and information to make more informed decisions. Key areas identified as requiring further uplift in consumer awareness and understanding include:

- how different connection agreements operate
- the pros and cons of different arrangements and how this relates to network charging arrangements
- consumer rights and responsibilities in relation to exporting energy to the grid
- navigating the terms and conditions of their connection agreement.

The AER considers that a rule change may be appropriate to require DNSPs to provide information about these topics to consumers. We are interested in stakeholder views as to whether the AER should seek such a rule change in the interests of promoting greater awareness of connection arrangements.

4.3.2 Consumer and industry engagement

High quality consumer and industry stakeholder engagement is essential for ensuring that DNSPs provide services that meet the needs of their consumers, at a price that is affordable and efficient.¹⁹ This section supplements existing AER guidance relating to DNSP engagement, to provide clarity on considerations for consumer and industry stakeholder engagement in designing and implementing flexible export limits.

4.3.2.1 Consumer understanding and interest

Problem statement

The effectiveness and uptake of flexible export limits depends on DNSPs and other relevant industry stakeholders uplifting consumer awareness throughout the consumer energy resources journey, to help consumers make more informed decisions.

Policy outcome

Accessible and consistent information helps consumers make informed decisions and supports consumer confidence and uptake.

¹⁹ AER, [Better Resets Handbook](#), Australian Energy Regulator, p. 12.

Draft position for the guidance note

DEIP identified that flexible export limits represent a significant change to the way customers understand solar exports and connect to the electricity grid. Therefore, consumer awareness, understanding, and interest are vital for successfully implementing and operating flexible export limits. Our approach, coupled with the involvement of DNSPs and other key stakeholders, aims to cultivate an environment where consumers are well-informed, empowered, and actively engaged in shaping the future of energy markets.

We would like to see DNSPs engage with consumers, where appropriate, to uplift their awareness of the roles of DNSPs and other participants in the electricity supply chain. This would include information about consumer rights and responsibilities when exporting to the grid. DNSPs should inform consumers that DNSP service offerings are evolving, due to the evolution of distribution networks from one-way to two-way electricity flows. DNSPs may need to do further work to uplift consumer awareness of why residential consumer energy resources systems may be limited in size and that they cannot always export. Creating such awareness should lead to greater understanding of the need for export limits more generally.

We expect DNSPs to use the following strategies to uplift consumer awareness and understanding surrounding flexible export limits:

- **Clear messaging** – Consumers should receive consistent and clear messaging about the potential impacts of making decisions to use flexible export limits. This clarity helps consumers understand the trade-offs and benefits associated with their choices. A good example of this is the [BankWest one-pager](#) on visual terms and conditions which provided clear information to consumers.
- **Accessible information** – Information should be accessible and easily comprehensible by consumers. This ensures that consumers of varying backgrounds and levels of expertise can easily engage with the information effectively.
- **Collaboration with stakeholders** – Effective communication also depends on understanding the consumer energy resources journey²⁰ when dealing with flexible export limits. This requires consideration of the following questions:
 - At what point are consumers likely to encounter details about flexible export limits, and with whom does this interaction take place?
 - What specific messages are essential to facilitate an informed decision?
 - In what manner are these messages effectively delivered?

DNSPs are not the first contact point for consumers when they consider purchasing consumer energy resources systems. We expect DNSPs to work more closely with retailers and installers who are well-positioned to inform consumers about the operation of flexible export limits, including payback periods. Partnerships between DNSPs and such industry stakeholders enable consumers to better understand flexible exports.

²⁰ Refer to p 14 of SA Power Networks' "[SAPN response to AER consultant on flexible export limits](#)" for an overview of the flexible export limits customer journey.

Our expectations

Clear and easily understandable information about anticipated and actual service outcomes is needed to gain public acceptance and encourage consumers to consider flexible export limits. The findings from the flexible exports trial conducted by SA Power Networks (SAPN) demonstrate the significance of informing customers about expected service standards before enrolling in the trial. In response, SAPN has developed a customer-oriented platform called SmartView, which offers insights into both current and historical performance levels of export services.²¹

DNSPs need to understand the consumer journey and decision points, including the parties that consumers engage with. This will enable DNSPs to engage with the relevant industry stakeholders that have direct contact with consumers and provide them with the relevant information to use when engaging with consumers. Some networks are already demonstrating this – for example, SAPN takes an approach through which it has identified that the key touchpoints with consumers are energy retailers that offer solar and solar installers. As a result, SAPN has provided fact sheets and briefing sessions to these parties to ensure they are providing the right information to consumers about flexible export limits in South Australia.

DNSPs should deliver clear and concise information to consumers, where it is in the DNSPs' remit to do so. DNSPs should provide pertinent details to assist consumers to make informed choices about the suitability of flexible export limits. Complex concepts should be conveyed in an easy-to-understand manner that fosters meaningful interactions and informed decisions. We expect DNSPs to provide information to consumers on flexible export limits using a variety of materials including infographics, animations, frequently asked questions, and other website material, as well as written documentation when required by consumers.

The AER is also currently progressing the review of consumer protections for future energy services.²² Suggested reforms to the National Energy Customer Framework recommended from this review could provide an opportunity to further bolster consumer protections in relation to flexible export limits.

4.3.2.2 Industry engagement

Problem statement

DNSPs should engage and share information with industry stakeholders to promote consistent messaging throughout consumers' energy resources journeys. DNSPs should engage industry stakeholders throughout the implementation and operation of flexible export limits, to help inform and target industry service offerings to promote greater consumer choice.

²¹ Refer to SA Power Networks' "Lessons learnt from the Flexible Exports trial" for further information.

²² Refer to the AER's website for further information on "[Review of consumer protections for future energy services](#)"

Policy outcome

DNSPs engage effectively and meaningfully with industry to support efficient market operation and deliver improved consumer outcomes.

Draft position for the guidance note

DNSPs should regularly engage with other industry stakeholders relevant to the design, implementation, and operation of flexible export limits, including retailers, original equipment manufacturers (OEMs), installers, and traders / aggregators. Our expectations for industry engagement in relation to compliance with technical standards are set out in section 4.3.3 below.

The DEIP Dynamic Operating Envelopes Outcomes Report noted *'industry capability and experience must be further developed to support the widespread deployment of [flexible export limits]*'.²³ DNSP engagement with relevant industry stakeholders, such as retailers, aggregators, solar retailers and installers is critical as these stakeholders interface with consumers during important stages of their decision-making.

These stakeholders interact with consumers to provide information about consumers' connection options, product options, expected benefits, payback periods, installation and operational requirements, ways of managing energy usage, and government rules and regulations in relation to consumer energy resources. DNSPs should establish and build productive working relationships with relevant industry stakeholders to effectively communicate with them to:

- uplift consumer awareness and decision-making about flexible export limits
- provide relevant information for industry stakeholders' product and service offerings to consumers
- work collaboratively to identify and resolve issues affecting the operation of flexible export limits.

Our expectations

DNSPs should equip and inform industry stakeholders appropriately about the design, implementation and operation of flexible export limits. This enables industry to provide accurate representations to consumers, including about the benefits. Such communication is important to incentivise the uptake of flexible export limits as well as empowering consumers to make choices that suit them. Industry stakeholders need clear communication and messaging, such that they can relay appropriate content to uplift consumer awareness ahead of any decision to opt-in to flexible export limits.

DNSP engagement with relevant industry stakeholders will result in more productive relationships between parties, leading to more appropriately tailored product and services for consumers, including flexible export limit offerings.

²³ ARENA 2022, [DEIP DOE report](#), p.7.

Example: SA Power Networks

Through its engagement with industry, SAPN has developed website pages specifically for installers; outlining installation requirements step-by-step in easily understandable language with external links embedded where needed. SAPN has also held several workshops for installers, both online and in-person, to outline the new South Australian Government regulatory requirements as well as providing training.

As learned by SAPN and AusNet through their flexible export trials, support and guidance material for installers should be updated on an ongoing basis to incorporate learnings from real-world experiences and ensure support is available.

DNSPs should engage with relevant industry stakeholders on the topics outlined in Table 6, to support the uptake and efficient operation of flexible export limits and the development of new consumer product and service offerings.

Table 6 Overview of industry engagement topics

Topic	Expectation
Where and how they can locate relevant network information	We expect DNSPs will assist retailers and installers to obtain knowledge of local network constraints, hosting capacity, or planned investments in the areas they are servicing.
Network hosting capacity allocation methodology	DNSPs should liaise with industry, particularly solar retailers and aggregators and traders, on their capacity allocation methodology.
Design elements of flexible export limits	
Application point for flexible export limit	DNSPs should specify that the flexible export limit is to be applied at the connection point. The AER is of the view that any approach beyond the connection point requires further testing.
Communication protocol, and forecasting and notification periods	DNSPs should clearly advise industry stakeholders about expectations as to which communications protocol is to be used to communicate the dynamic limit. DNSPs should consult with industry as to how it will forecast constraints on the network. These also help inform relevant industry stakeholders such as VPP operators (traders and aggregators) on how to develop their offerings to consumers.
Data exchange model	DNSPs may wish to refer to Project EDGE for references to appropriate models for data exchange between participants in the operation of a flexible export limit.
Hierarchy	DNSPs need to engage with industry around the prioritisation for who gets to export first or more. This also feeds into the 'fairness' and efficiency concepts outlined in section 4.1.2.
Performance	DNSPs should explain how the flexible export limit is likely to perform and outline factors that may affect performance. DNSPs and industry stakeholders should provide materials to consumers that highlight factors that can affect the performance of a flexible export limit at consumers' premises, such as internet connectivity and software updates.

DNSPs should not just advise or inform industry stakeholders without meaningful engagement. Where possible, DNSPs should engage in co-design processes with relevant industry stakeholders and take on feedback to further refine their approach.

Highly effective industry stakeholder engagement has been demonstrated in South Australia, as evidenced by the following practical example:

Example: Effective working relationships between industry players

There was a non-compliance event whereby an inverter original equipment manufacturer inadvertently ‘wiped’ the export limit register on inverters through a regular firmware update.

After the original equipment manufacturer self-reported the issue, the DNSP collaborated with them to identify affected sites and provide the appropriate export limit to be reinstated as per the connection agreement.

The AER considers such transparent and quick communication, where the original equipment manufacturer communicated with the DNSP and worked quickly to fix the issue without formal direction, as evidence of good practice.

DNSPs should also engage with the Australian Energy Market Operator (AEMO) to share information with AEMO on flexible export limit forecasting during the initial planning and implementation stages. The AER understands several DNSPs are already engaging with AEMO to integrate the impacts of static and flexible export limits and third-party interventions into distributed solar, due to the potential implications on dispatch forecasts.

4.3.3 Compliance with technical standards

Problem statement

Improving compliance with technical standards is critical to enable the efficient and effective implementation of flexible export limits. This is because the function of consumer energy resources on the network impacts the level at which static export limits can be set, and technical functionality is a key component in the overall effectiveness of flexible export limits.

Policy outcome

Improve levels of compliance with technical standards that impact how consumer energy resources will function and in turn contribute to the hosting capacity of the network and effectiveness of flexible export limits.

Draft position for the guidance note

The AEMC has now concluded its review into consumer energy resources technical standards and has made 10 ‘immediate’ recommendations that focus on improving compliance with AS 4777.2:2020. These recommendations include one action for DNSPs, which is to introduce a commissioning process to better standardise the process across the NEM for verifying correct device installation before connecting new CER devices to the grid (recommendation 8). We supported this action in our submission to the AEMC’s draft report because we expect the benefits to consumers will outweigh costs.

DNSPs should take practical steps to improve compliance (including implementing the AEMC's recommendations) with relevant technical standards to improve network hosting capacity and allow flexible export limits to be implemented most effectively.

We also support the AEMC's first recommendation for jurisdictions to develop an enduring NEM-wide regulatory framework for consumer energy resource technical standards.

Our expectations

DNSPs should take practical steps aimed at improving rates of compliance of consumer energy resources with relevant technical standards. This includes being innovative in looking for solutions that benefit consumers more in the long term.

Installers need clear information about installation and commissioning procedures to ensure accurate and appropriate installation practices take place. This minimises risks to consumers of ineffective installations leading to non-compliance, as installers establish the communication channel between the consumer device and DNSP server. DNSPs should engage with installers, OEMs and traders / aggregators on required installation procedures for solar and battery systems to facilitate correctly commissioned inverters, which will maximise the benefits of flexible export limits.

Some jurisdictions are already undertaking actions aimed at improving rates of compliance of consumer energy resources with technical standards. For example, Solar Victoria has developed installation safety technical guidance sheets to help installers maintain technical standards. In South Australia (see box below), SA Power Networks has introduced a portal for solar retailers and installers to keep track of standards that are applied at the point of installation.

DNSPs should communicate changes to any inverter standards to industry stakeholders, particularly installers and technology providers, ahead of time. We expect DNSPs will provide clear information about what will be prescribed in their remit so that stakeholders are informed and educated. For example, this could mean DNSPs hold mandatory information sessions or training for installers.

In their expenditure proposals, DNSPs should demonstrate any steps they have taken to improve compliance for new CER connections. As per section 4.3.2 (engagement and awareness) of this guidance note, we expect to see DNSPs set aside regulated revenue for engagement and awareness because this feeds into compliance.

Taking practical steps to improve compliance now, and as future challenges occur, should improve network hosting capacity and therefore the level at which export limits are set. Such steps may also help to avoid the need for DNSPs to propose additional capital expenditure allowances to manage non-compliance on their networks.

Example: SA Power Networks

In South Australia, following the recent implementation of the 'Smarter Homes' regulations, SAPN has developed a compliance strategy and roadmap, and transformed an existing team into one that oversees operational compliance, provides industry support and administers the connections process for consumer energy resources systems less than 30kVA.

SAPN have also established an industry outreach program to raise awareness and build industry understanding of compliance obligations and roles and responsibilities across channels. These channels include training programs, online materials, in-person industry events and road shows, webinars, and a new online portal for the consumer energy resources approvals process. This portal supports self-service life cycle management of applications, allows instant approvals with all regulations and requirements built into the portal, includes new close-out and commissioning steps, and has established automated detection capabilities in its online portal that allows retailers and installers to self-manage their compliance levels in real time.

4.3.4 Complaint handling and dispute resolution processes

Problem statement

Disputes between customers and DNSPs about the application of flexible export limits are potentially significant. A lack of clarity for consumers around resolving concerns or disputes can erode consumer trust and lead to minimal uptake of flexible export limits.

Policy outcome

Clear processes are established for DNSPs and consumers to follow to address complaints and disputes about the implementation and operation of flexible export limits.

Draft position for the guidance note

DNSPs should have clear processes for handling consumer complaints and resolving disputes relating to the implementation and operation of flexible export limits.

We recognise the need to build and maintain consumer trust in the uptake of flexible export limits and the role of flexible export limit specific consumer protections.

The AER is currently progressing the review of consumer protections for future energy services.²⁴ This review is considering how new energy products and services, like flexible export limits, interact with the National Energy Customer Framework (NECF) and the essentiality of energy supplies to consumers. It considers whether the current consumer protection framework is fit for purpose for the future energy market and can support customer uptake of new energy products and services. We consider there to be linkages between the flexible export limits workstream and review of consumer protections for future energy services, and that reforms to the NECF recommended through the review could provide the protections needed for flexible export limits.

²⁴ Refer to the AER's website for further information on "[Review of consumer protections for future energy services](#)"

Our expectations

DNSPs should develop and implement a standard approach to handling any complaints or resolving any disputes with customers about the implementation of flexible export limits.

Once a dispute resolution mechanism is established, we expect that DNSPs, as part of the connection process, will provide information on how issues and disputes about flexible export limits can be raised and resolved.

DNSPs should establish arrangements to collect suitable information to be able to answer questions from export limit customers and enable them to work through a complaint or dispute resolution issue with customers. We also expect that DNSPs will be able to demonstrate the impact of their network decisions on consumers' export abilities. For example, DNSPs should be able to demonstrate when a consumer was constrained, what was happening in the network at that time, and the amount of energy that was exported.

DNSPs should have clear information prepared about the pathways available to consumers in the event a dispute cannot be resolved by the DNSP. This will be specific to each jurisdiction, for example, ombudsmen may be able to address disputes about flexible export limits in some jurisdictions.

4.4 Reporting

4.4.1 DNSP reporting

Problem statement

Industry stakeholders need relevant information about network constraints and issues to help inform where they should seek to target product offerings and services that might offset the need for network investment. DNSPs should report flexible export limit metrics as part of their distribution annual planning report to enable stakeholders to participate more fully in flexible export limits.

Policy outcome

Provide greater clarity on the role of DNSP self-reporting and areas where this can be further improved to promote confidence and uptake in flexible export limits.

Draft position for the guidance note

DNSPs have a significant role in creating an inclusive environment for stakeholders to have access to export service data. This guidance aims to promote reliable and robust information sharing that can enable greater participation from consumers, facilitate uptake of flexible export limits and offset future network investments.

The AER considers that where DNSPs are offering flexible export limits, they should also include relevant details and more granular reporting metrics as part of their distribution annual planning report.

We agree with the findings of the RACE 2030 Report and consider that more work is required by DNSPs to develop a data management strategy that improves data quality, data consistency and access. We also consider that further work is required by DNSPs to ensure that they have appropriate processes for:

- identifying and capturing issues identified with their export service and monitoring the effectiveness of rectification strategies
- capturing relevant information relating to export service-related complaints.

Our expectations

Metrics canvassed in the RACE 2030 Report provide useful guidance on the nature of metrics that DNSPs might seek to include with appropriate commentary as part of their distribution annual planning report on performance of flexible export limits.

We anticipate over time and as smart meter penetration increases and DNSPs gain access to basic power quality data, that this will allow for improved reporting metrics to be developed.

4.4.2 AER Reporting

Problem statement

Transparency in DNSPs' export service performance is critical to promote consumer confidence and to assess the effectiveness of flexible export limits as a tool for addressing network capacity constraints.

Policy outcome

Explain the AER's intended reporting approach for monitoring DNSP export service performance.

Draft position for the guidance note

We encourage DNSPs to improve data gathering procedures on export services, which are currently lacking due to limited visibility. We are currently consulting with DNSPs to develop the inaugural performance report for export services which will be published in December 2023. The consultation forms part of the reforms we have initiated to strengthen customer protections and regulatory oversight of export services provided by distribution networks.

Implementation of flexible export limits is part of the process for DNSPs to provide export services. Various export service metrics such as CER consumer capacity, data on static and dynamic export limits and export volumes have been considered for the inaugural performance report. The objective of these measures is to provide insights on the impacts on network performance and inform stakeholders on delivery of projected service levels.

In addition to monitoring export service performance, the AER is also conducting a review of network information requirements to ensure that the information we collect on regulated networks is robust, accessible, and fit for purpose into the future. In defining additional information requirements, we will consider the cost to networks of providing this information as well as the benefits to consumers and the market.

Our expectations

For flexible export limits to be efficiently adopted, customers need to have greater understanding of export service performance, network constraints and flexible export contracts. The AEMC's smart meter review projects accelerated uptake of smart meters in jurisdictions other than Victoria.²⁵ Smart meter data will improve networks' visibility of the behind the meter profile which includes consumption, exports and self-consumption.

There are discrete and segregated sources of data on customer numbers, export capacity, CER expenditure, and static and export limits. However, the variation in definitions and variable interpretation of data is currently limiting the usefulness of this information. Lack of time series trends on these export service metrics makes it difficult to benchmark and develop use cases.

Our first export services report will be released in December 2023. We encourage stakeholders to read that report to inform data gathering processes for export services.

²⁵ AEMC, [Review of the regulatory framework for metering services](#), August 2023.

5. Consultation questions

5.1 Capacity allocation

Capacity allocation principles

- What are your views on the AER's proposed approach for amending the DEIP capacity allocation principles? Do you have any specific views on the nature of amendments required to achieve the AER's policy objectives?
- Should the capacity allocation principles be binding, and if so, should these be codified in the National Electricity Rules or set out in a binding AER Guideline?

Capacity allocation methodology

- What are your views on our proposed approach for improving transparency in DNSPs' capacity allocation methodologies? Is the guidance provided sufficiently targeted and proportionate for achieving the AER's policy objectives? Are there any other areas where further guidance is required?
- What areas of the National Electricity Rules and National Energy Retail Rules do you consider will likely require amendment to give effect to the AER's proposed approach for improving capacity allocation methodologies and transparency?
- What time periods should DNSPs consider in allocating network hosting capacity? For the allocation model, over what timeframe should capacity allocation be considered?

5.2 DNSP revenue determination process

Consumer Energy Resources Integration Strategy

- What are your views on the nature of changes required to address the issues identified in the problem statement and promote the AER's intended policy outcome?

Developing flexible export limits business case

- What should be considered the minimum level of information in relation to hosting capacity assessment that networks should provide during their regulatory determination?
- What are best practice measures networks can adopt when it is difficult to perform hosting capacity assessments?
- What are your views on whether the AER should expand the guidance within our DER integration expenditure guidance note?

Connection policy

- Has the AER identified relevant issues and matters relating to export limits (static and flexible) that should be addressed in DNSPs' connection policies? Are there any matters that need to be added or removed and if so, why?

- What are your views on the AER's proposed implementation approach of seeking amendments to provisions in the National Electricity Rules governing matters addressed by the AER's Connection Charging Guideline to implement our draft position?

5.3 Key considerations in implementing and using flexible export limits

Connection agreements and consumer participation

Model Standing Offers

- What are your views on the key areas identified by the AER as needing to be addressed in the terms and conditions of connection agreements that include flexible export limits? Are there any areas that should be included, removed, or further clarified, if so, what are these?
- Should DNSPs have a positive obligation to notify consumers of non-compliance with flexible export limits once becoming reasonably aware?
- Should the connection agreement include provisions for amending or seeking a review of the flexible export limit? What do stakeholders consider an appropriate minimum timeframe and circumstances for flexible export limits to be amended, while still providing investment certainty to consumers who invest in CER?
- With reference to the criteria for AER approval of Model Standing Offers under Chapter 5A of the NER, what are the key issues the AER should consider in relation to flexible export limits?
- What are your views as to whether the AER should seek such a rule change regarding Model Standing Offer and connection policy requirements?

Information to help consumer decision-making

- Is there any additional information DNSPs should provide consumers to enable them to make an informed decision about whether to opt-in to flexible export limit arrangements?
- Is the AER's expectations of information DNSPs should make available to consumers to promote informed decision-making and consumer confidence in the operation of flexible export limits reasonable and fit-for purpose? Are further changes required to better achieve the AER's intended policy outcomes?

Subsequent implementation

- What are your views on the need to amend relevant provisions in Chapter 5A of the National Electricity Rules to provide greater clarity on the need for Model Standing Offers to include specific terms and conditions that address issues relevant to flexible export limits?

Consumer and industry engagement

- What additional engagement or information do you consider DNSPs should undertake or provide to ensure consumers are well-informed in the decision-making process and continue to be engaged throughout the later stages of the customer journey?
- What are your views on what effective engagement looks like between DNSPs and relevant industry stakeholders?
- What, if any, additional information (other than what is outlined above) should DNSPs seek to provide to industry stakeholders?
- Which stakeholders should be responsible for conveying information to consumers at each step of the consumer energy resources journey?

Compliance with technical standards

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- Should DNSPs be required to demonstrate the compliance actions that they have taken when putting forward expenditure proposals?
- What are appropriate processes for DNSPs to go through if a consumer asset is identified to be non-compliant with a relevant technical standard? For example, should a customer be reverted to a static export limit (note: this would only occur after a period where the DNSP and retailer have communicated with the customer to rectify the problem)?
- Are there examples where government agencies or network businesses are already implementing practical solutions to increase compliance with technical standards?

Complaint handling and dispute resolution

- What information should DNSPs collect to facilitate complaints to be resolved?
- What is the role of DNSPs to co-ordinate complaint resolution, including identifying the responsible party, which may be the OEM, installer, or trader/aggregator?

Appendix A – Summary of AER related streams of work

A.1 AER expenditure guidance

Document	Description	Relevancy to export limits
Better Resets Handbook	The Better Resets Handbook aims to encourage networks to develop high quality proposals through genuine engagement with consumers and that meet our expectations. This will lead to a number of benefits, including regulatory outcomes that better reflect the long-term interests of consumers.	As highlighted in Figure 1, the interim export limit guidance note forms a subset of guidance under the Better Resets Handbook.
Expenditure Forecast Assessment Guidelines	Describes the process, techniques, and associated data requirements the AER will use in reviewing DNSPs revenue proposals to set efficient expenditure allowances for network businesses.	DNSP's should consider the AER's Expenditure Forecast Assessment Guidelines in developing expenditure proposals for flexible export limits. Failure to prepare expenditure proposals in a manner that is consistent with the Expenditure Forecast Assessment Guidelines may result in more detailed scrutiny and potential reductions in expenditure.
Regulatory Investment Test (RIT) - Distribution and Transmission	The RIT-D and RIT-T application guidelines provide guidance to DNSPs when undertaking cost benefit analysis for large investments. The guidelines provide guidance on quantifying benefits, identifying and assessing credible options, and approach for selecting options that maximises the net economic benefit across the NEM.	DNSPs should seek to apply the principles outlined in the RIT-D/RIT-T application guidelines in developing investment proposals for flexible export limits.
Asset Replacement industry note	This note is intended to supplement the RIT-D/RIT-T application guidelines. It is aimed at supporting network businesses in adopting good asset replacement planning practices. The guidance is more technical in nature and is aimed at supporting asset managers and network planners in making economic decisions regarding asset replacement and de-ratings.	The approaches and principles outlined in the Asset Replacement Industry Note help inform the development of DNSPs' capex proposals.
Non-network ICT capex guidance note	Provides guidance to DNSPs on the AER's assessment approach for assessing non-network ICT expenditure proposals.	DNSPs should consider the guidance provided in the AER's non-network ICT capex assessment approach in preparing expenditure proposals for flexible export limits.

Document	Description	Relevancy to export limits
AER Repex model	Explains how the AER will use its repex model in assessing DNSP capex proposals.	Assumptions around capacity and unit costs of assets being replaced are likely to be relevant in developing expenditure forecasts.
DER integration expenditure guidance note	Provides guidance to assist DNSPs in developing business cases for network investment to integrate higher levels of CER. It provides guidance on the AER's expectations on problem identification, consideration of options, cost benefit analysis and approach for quantifying CER benefits.	Guidance contained in the interim export limit guidance note is intended to supplement existing guidance provided by the DER guidance note. Relevant guidance will be uplifted into the DER guidance note, when it is re-opened for consultation to reflect the updated national electricity objectives relating to emissions.
Customer Export Curtailment Value Methodology	Outlines the AER's methodology for calculating customer export curtailment values, which form an input into DNSPs' business cases for network investments to alleviate the curtailment of customer exports.	The CECV will form an input into the development of business cases for flexible export limits.

A.2 Interrelated matters

Document	Description	Relevancy to export limits
Consumer Energy Resource Strategy	Outlines the AER's strategy for establishing a consumer centric regulatory framework to support the uptake of CER and ongoing Energy Advisory Panel (formerly ESB) programs and activities.	Sets the overarching strategic direction and outcomes of key pieces of AER work. The interim export limit forms a subset of key pieces of work noted in the CER strategy.
Review of consumer protections for future energy services	The AER is undertaking a review of energy consumer protections to assess whether they will remain fit for purpose in a transitioning energy market. This includes analysis of how new energy products and services could create gaps in the protection framework set out under the National Energy Customer Framework (NECF). The review forms part of the ESB's Consumer Energy Resources Implementation Plan.	This review examines broader framework issues relating to the governance of CER energy products and services. Findings and recommendations from this review will assist in support the efficient uptake and implementation of flexible export limits and strengthen consumer protection arrangements outlined in the interim guidance note.

Document	Description	Relevancy to export limits
Connection Charge Guideline	Sets out the requirements and principles DNSPs must consider in setting connection charges and imposing static zero export limits.	The interim export limit guidance note is intended to supplement guidance under the connection charging guideline. It outlines the AER's expectations for DNSPs to address matters relating to capacity allocation and setting export limits (static and flexible) in developing their connection policies.
Export Tariff Guidelines	Provides information and guidance on the process for development and approval of export tariffs. It sets out the approach for justifying and structuring export prices and expectations regarding consumer and stakeholder engagement, and how they should define the basic export level.	The interim export limit guidance note is intended to supplement guidance under the export tariff guidelines. It clarifies the need for DNSPs to consider and explain the use of export limits with export pricing in its CER integration strategy and in its business case.
Export Service Reporting	The AER will be publishing its inaugural export service report in December. This report provides information to consumers and stakeholders on the use of export services and provides metrics for providing insights into DNSP export performance.	Provides further guidance on the AER's expectations regarding DNSP reporting of export service performance.
Ring-fencing Guideline	Sets out requirements for preventing DNSPs from using their position as a monopoly service provider to engage in discriminatory behaviour to gain an unfair advantage over other market participants in competitive markets.	Ring-fencing restrictions around data access and information sharing will apply to DNSPs in implementing flexible export limits.

Appendix B – Summary of related external streams of work

B.1 Energy Advisory Panel (formerly ESB)

Document	Description	Relevancy to export limits
Interoperability workstream	Interoperability supports the customer journey for consumer energy resources, by making it easier to choose different energy services (including switching), expanding opportunities to be rewarded for participating in different markets, and reducing the complexity and time associated with managing and maintaining equipment.	Outcomes of this stream of work will determine the communication protocols for communicating with customer devices to implement and use flexible export limits.

B.2. AEMC

Document	Description	Relevancy to export limits
Review into Consumer Energy Resources Technical Standards	The AEMC has published final recommendations that are aimed at improving compliance with the technical standards for consumer energy resources (CER) devices such as rooftop PV, battery energy storage systems, and electric vehicles.	Compliance with technical standards is a critical enabler for the efficient and effective implementation of flexible export limits and can also impact on the level in which static export limits are set. The interim export limit guidance note builds on the findings from the AEMC's review of CER technical standards and highlights the importance of uplifting compliance to ensure that the benefits from imposing export limits are captured.
Review of regulatory arrangements for smart meters	Findings from the AEMC's review outline a new reform agenda for enabling an accelerated deployment of smart meters to consumers in a timely and cost-effective way, to maximise benefits for all consumers. As part of this reform agenda, the AEMC has outlined recommendations aimed at improving DNSP access to smart meter data and has proposed making access to basic power quality data freely available to DNSPs under a standardised format.	Recommendations from the AEMC's final report have the potential to improve DNSP visibility and hosting capacity ability.

Document	Description	Relevancy to export limits
Unlocking CER benefits through flexible trading arrangements – rule change request	This rule change is aimed at amending the National Electricity Rules to allow for multiple settlement points at a connection to enable consumers greater access to energy products and services.	The design of flexible exports can impact upon trading arrangements. In designing flexible export limits, the expects DNSPs to consider developments under this rule change request.
Integrating price-responsive resources into the NEM – rule change request	This rule change request is aimed at amending the National Electricity Rules to integrate CER resources into AEMO's system planning and management of the wholesale market. The rule seeks to establish new arrangements for providing greater visibility and dispatchability of CER.	DNSP compliance approaches towards flexible export limits can have potential impacts on the dispatch of CER in the wholesale market. In designing flexible export limits, the expects DNSPs to consider developments under this rule change request and consult with relevant stakeholders.
Updating the national electricity objectives – rule change request	The incorporation of emissions reduction into the national energy objectives has triggered the need for rule changes to harmonise key provisions of the National Energy Rules.	Changes introduced by this rule change will trigger the need for AER guidance notes and guidelines to be updated.

B.3 Other

Document	Description	Relevancy to export limits
AEMO compliance with DER technical settings	Sets out findings on technical compliance with AS/NZS4777.2:2020 in the NEM, the impact of non-compliance and recommendations for uplifting compliance.	Compliance with technical standards will be a key enabler in capturing the benefits from DNSPs using export limits.
Project Edge	A trial being conducted in the Hume region of Victoria which is aimed at demonstrating a market-based trading mechanism for virtual power plants.	The project demonstrates how consumer participation in a consumer energy resources marketplace could be facilitated.
Project Edith	A trial that tests how dynamic pricing signals and dynamic operating envelopes can be implemented and work with existing systems.	Seeks to validate the proposition that DER can be optimised using dynamic network prices and dynamic operating envelopes.
RACE 2030 – measuring and communicating network export quality service	Outlines metrics and use cases for communicating export service performance.	The interim export limit guidance note seeks to leverage the findings from this report to provide guidance to DNSPs on useful metrics for communicating their performance to consumers and stakeholders.