AUSTRALIAN ENERGY REGULATOR

Incentivising and measuring export service performance

Stakeholder workshop

6 December 2022

Acknowledgement of country

Housekeeping

- Questions may be raised at any time (use the chat box or ‘raise hand’)
- Please remain on mute unless speaking
- Views expressed by AER staff are not to be attributed to the AER

Agenda

Item	Time (AEDT)
Welcome, introductions and context	2pm
Incentive arrangements for export services	2.10pm
Export service performance reports	2.40pm
Break	3.45pm
Updates to benchmarking reports	3.50pm
Next steps	4.55pm

AUSTRALIAN ENERGY REGULATOR

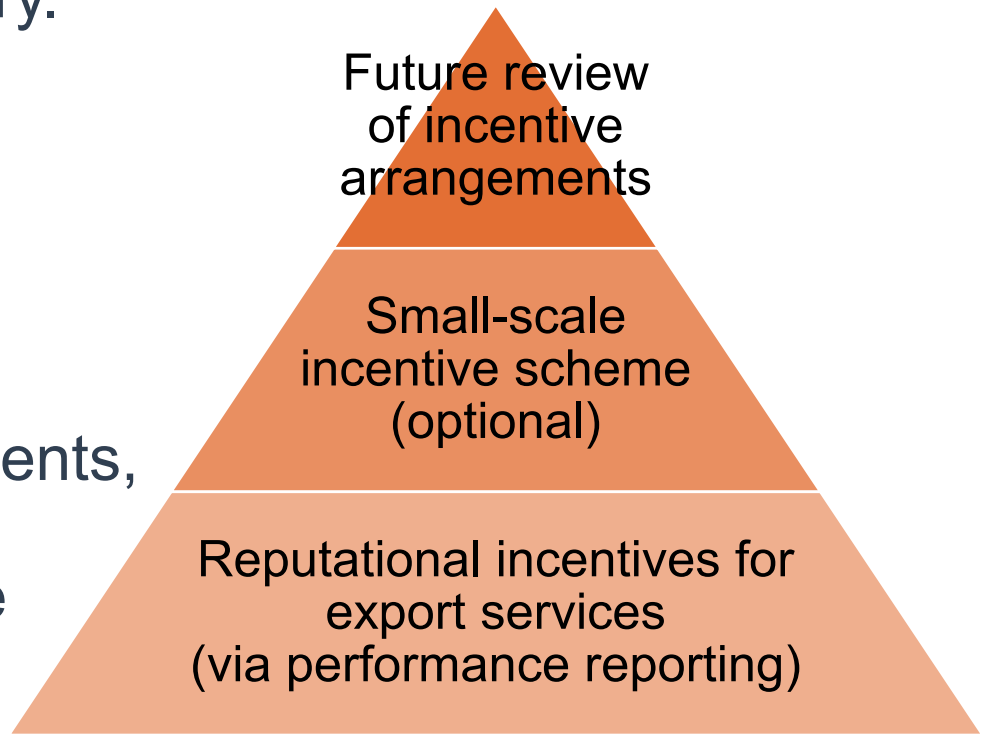
Tuesday, 7 February 2023

Incentive arrangements for export services

Facilitated by Pat Devlin

Our position

- Do not extend the Service Target Performance Incentive Scheme (STPIS) to export services in the immediate term.
- No amendments to AER guidelines are necessary.
- Introduce reputational incentives to encourage networks to improve their delivery of export services (via annual performance reporting).
- Develop a new small-scale incentive scheme to allow for bespoke incentive scheme proposals.
- Undertake a future review of incentive arrangements, reflecting on initial application of export tariffs, introduction of flexible export limits, performance against bespoke incentive scheme metrics and annual performance reporting.



Key questions

- Do you agree with our proposed timeline for a future review of incentive arrangements? (by 2027)
- What factors may prompt an earlier or later review?
- Developing a new small-scale incentive scheme:
  - Do the benefits of introducing a new scheme outweigh the costs?
  - What is the appropriate level of revenue at risk?
  - What other factors should we consider when developing a new scheme?
  - Are there elements of the scheme that should not be principles-based?
    - What service level metrics are measurable?
    - What elements of service quality do customers value?
    - Which customers “pay” for DNSP rewards? And which “benefit” from DNSP penalties?

AUSTRALIAN ENERGY REGULATOR

Tuesday, 7 February 2023

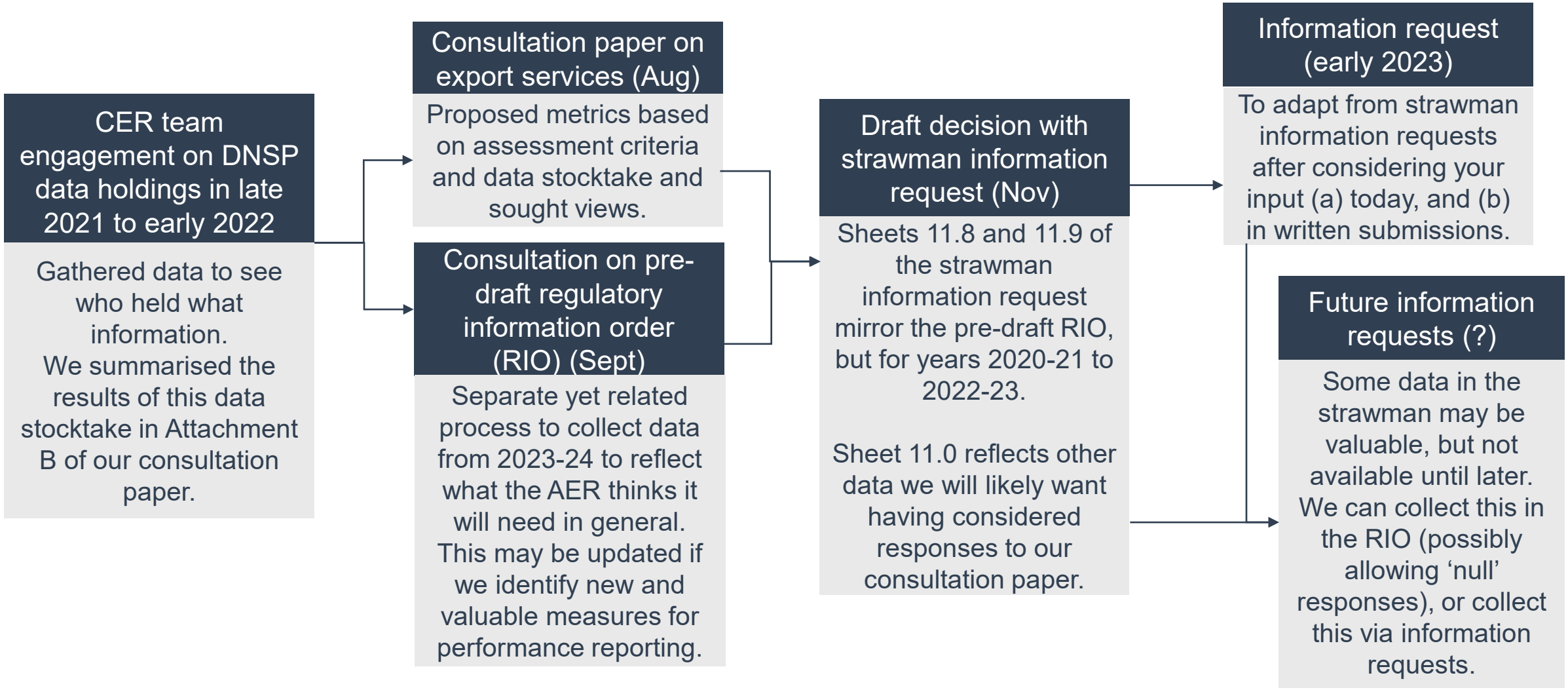
Export service performance reports

Facilitated by Lisa Beckmann

Purpose of discussion

- To get stakeholder input to inform the data we:
  - Collect for the inaugural export performance report
  - Set ourselves up to collect and include in subsequent export performance reports
- To complement or inform your written submission:
  - If you are unable to provide a written submission, you can still provide input today
  - Others' views expressed today may inform the content of your written submission – e.g. new ideas you want to support or provide evidence against

Development of the information request



Metrics added after being raised in submissions

Metric (unit)	Years	Disaggregation level
Average time to connect consumer energy resources to the distribution network (days)	From 2020/21	Customer type
Duration of full export access (%)	2022/23	Customer type, energy resource type (i.e. PV, battery, PV+ battery)
Duration of no export access (%)	2022/23	Customer type, energy resource type
Total utilised consumer energy resources generated (kWh)	2022/23	Feeder classification, customer type
Average upper limit for customers with flexible export limits (kW)	2022/23	Feeder classification, customer type
Average time the upper limit was unavailable for customers with flexible export limits (hours)	2022/23	Feeder classification, customer type
Average non-zero static export limit (kW)	From 2020/21	Feeder classification, customer type

Metrics considered but not proposed for current collection

Metrics raised in submissions (proposed by)	Rational for not proposing to collect data next year
Average voltages and percentage exceedances. Requires: • 10-minute average data (count) for voltages between 207-260V • Count of active smart meters of which the distribution business accessed voltage (Cadency)	We need a clearer understanding of benefits given: • we will already report on customers experiencing overvoltage • we understand this would result in one data point every 10 minutes for every export connection.
Jurisdictional voltage regulations (AusNet)	We question whether an information request is required to collect get this data.
Weather, climate, customer preferences (ENA, CP/PC/UE)	Further specification is first required.
Basic export levels in (i) current year (ii) next year (iii) 24 months (ECA, AusNet)	We do not need to issue an information request to collect this data.
Rooftop solar system compliance (ECA)	We question the practicalities and appropriateness of DNSPs collecting data on others' compliance
How well networks are communicating to other parties on export limits and fees (ECA)	We question whether DNSPs should collect qualitative information on their performance
A solar size satisfaction score (ECA)	As above
Storage capacity in kVAh (proposed by AER in consultation paper)	We are already proposing to report installed capacity disaggregated by energy resource type

Metrics raised in the consultation paper, but not in pre-draft RIO

Metric (unit)	Years	Disaggregation level (*notes*)
Customers with flexible export limits (0's)	2022/23	Feeder classification, customer type (*following submissions, we are also proposing to collect data on the size of various export limits—discussed 2 slides back*)
Customers with static zero exports (0's)	Since 2020/21	As above
Customers with static non-zero export limits (0's)	Since 2020/21	As above
Complaints relating to overvoltage (0's)	Since 2020/21	Feeder classification, customer type (*allow N/A response. Collect as once-off to proxy export services complaints*)
Inverter compliance with AS4777.2 (0's)	Since 2020/21	By (i) compliant inverters, (ii) non-compliant inverters, (iii) inverter compliance unknown

Metrics raised in the consultation paper and in pre-draft RIO

Data for the 2020-21, 2021-22 and 2022-23 regulatory years

Metric (unit)	Disaggregation level (*notes*)
Opex for the provision of export services ($'s, nominal)	By 'export service related overvoltage complaint management' and 'other opex'
Capex for the provision of export services ($'s, nominal)	By 'ICT', 'network monitoring' and 'other capex'
Export volumes – Net metered volume of energy exported (MWh)	Feeder classification
Exporting customer capacity (kVA)	Feeder classification, customer type, energy resource type
Export services customer numbers ('s)	Feeder classification, energy resource type
Complaints relating to export services ('s)	Feeder classification, customer type (*allow N/A*)
Customers receiving overvoltage ('s)	Feeder classification, customer type
Customers requesting export capacity ('s)	Feeder classification, customer type (*should only capture requests for specific fixed limits*)
Export capacity requested (kVA)	Feeder classification, customer type
Export capacity approved in connection agreements that year (kVA)	Feeder classification, customer type

Break (5 mins)

AUSTRALIAN ENERGY REGULATOR

Tuesday, 7 February 2023

Updates to benchmarking reports

Facilitated by Anthony Weir and Claire Preston

Our position on benchmarking

- Not to proceed with the development of an interim export services OEF at this time.
- Focus on what data we can begin to collect to enable a future determination of materiality and implement any required changes.
- Initiate by 2027 a full benchmarking review to:
  - determine materiality of export services impacts on PIN models
  - assess the feasibility of implementing any required adjustments to PIN models
  - assess the conceptual merits and empirical feasibility of updating the econometrics models.
- Subject to review findings, update the PIN models and progress work on the econometric models, if feasible.

High level questions on the revised approach to benchmarking

- Do you agree with the AER's revised approach of:
  - focusing first on what data and information we can begin to collect to inform a future review
  - initiating a full review of the benchmarking models by 2027 to determine:
    - the materiality of impacts on the PIN models and if / how to adjust them
    - the conceptual merits and empirical feasibility of also updating the econometrics models.

Questions on draft views in Table 2 of the Draft Report

- The following slides will go through each of the possible impacts export services may have on the benchmarking results (as listed in Table 2 of the Draft Report). We seek your views in today's workshop on:
  - how we have characterised the possible impacts and options to address them
  - our preliminary views on the current materiality of the impacts, and the materiality checks we propose to undertake in 2027 using the PIN models
  - the key issues to resolve before changes to the PIN models can be implemented
  - the data we should start collecting now and over the medium term to inform the 2027 review.
- We will provide refined guidance in the Final Report on possible impacts / options to address / materiality checks / data we will seek to collect.

Possible impact 1: export services inputs counted but not outputs

- Option: Remove export service opex costs and capital stock inputs from the PIN benchmarking models.
- Materiality: Impact on PIN model opex MPFP is likely to be small at present based on available opex data.
- Merits: Potentially a simpler and less data intensive approach but not preferred as:
  - it moves away from the holistic nature of the benchmarking
  - it is not clear how feasible it would be to disaggregate or allocate costs / capital stock related to export services, given the multiple drivers of these costs.
- Do you agree with not considering this option further?

Possible impact 2: energy exports are counted in energy throughput (ETP) but self-consumption is not

- Option: Account for ETP avoided by self-consumption to measure the level of underlying energy demand rather than energy actually delivered across the network.
- Materiality: Impact on PIN model opex MPFP is likely to be small at present but will increase over time.
- Merits: What are the merits of changing ETP from a measure of energy delivered to one of underlying energy demand? Does customer self-supply represent a service provided by the DNSP to the customer?
- Data / implementation issues: How available is data for the materiality test and to update PINs (i.e. reliability, access, cost etc.)?

Possible impact 3: energy exported and energy self-consumed decrease maximum demand measured at connection points and may prevent ratcheted maximum demand (RMD) from increasing

- Option: Account for additional RMD created via energy exported / avoided by energy self consumed to measure underlying maximum demand rather than maximum energy actually delivered by the network.
- Materiality: Impact on PIN opex MPFP is likely to be small at present and uncertain if it will increase over time.
- Merits: What are the merits of changing RMD from a measure of energy delivered to one of underlying energy demand? Does customer self-supply represent a service provided by the DNSP to the customer?
- Data / implementation issues: How available is data for the materiality test and to update PINs (i.e. access, reliability cost etc.)?

Possible impact 4: potential for export services expenditures to impact existing reliability output (CMOS)

- Option: No change to the reliability output is required. However, to the extent the reliability / CMOS output does not capture benefits of export services expenditure, this may boost the case for a new output measuring the level of export services.
- Materiality: Unlikely export services expenditures would have a material impact on the existing reliability measure (by reducing CMOS).
- Merits: Do you agree that export service expenditures are unlikely to have a material impact on the existing reliability output?
- Data / implementation issues: Export services expenditure data and additional information would be needed to understand any incremental impact on reliability (and CMOS). How available is this type of information (i.e. reliability, access, cost etc.)?

Possible impact 5: currently no output in benchmarking to explicitly account for the level of export services provided by DNSPs

- ***Option A:*** Develop a broad proxy for the level of export hosting services provided by a DNSP and new PIN model output and output weight.
  - New export services output could be based on export services customer numbers as a % of total customer numbers or energy exported as a % of energy throughput
  - The output weight could initially be calculated using cost data on a stand-alone basis (i.e. separately to the existing Leontief cost function used for circuit line length, customer number, ETP and RMD weights), then later incorporated into total weight consideration.
- What are your views on the best proxy to use (i.e. customer numbers, energy exported, other)? How available is this data (i.e. access, reliability cost etc.)?
- What are you views on initially using cost data to calculate the new output's weight? How available is this data (i.e. access, reliability cost etc.)?

Possible impact 5: currently no output in benchmarking to explicitly account for the level of export services provided by DNSPs (contd.)

Option A continued…

- Materiality: Impact on PIN opex MPFP is likely to be small at present due to likely small cost-based weight. It is uncertain how this will change over time.
- Merits: What are the merits of a new export services output?
  - Is a new output justified against the AER output criteria (i.e. is it significant in its impact on customers or DNSP costs?)
  - Would it still be required given ETP already accounts for energy exported and after possible changes to ETP and RMD?
- Data / implementation issues:
  - What data can we start to collect to eventually allow materiality testing and development of an export services output and weight, if required?

Possible impact 5: currently no output in benchmarking to explicitly account for the level of export services provided by DNSPs (contd.)

- ***Option B:*** Develop a curtailment measure to proxy the level of export hosting services provided and use the CECV to weight this output.
- Materiality: Impact on PIN opex MPFP is likely to be small as the CECV is forecast to approach zero over time.
- Merits:
  - Is a curtailment measure preferred to a broad proxy? Is a broad proxy appropriate to use in the absence of data to develop a curtailment measure?
- Data / implementation issues:
  - What are your views on the best curtailment measure to use? How available will this data become over time (i.e. access, reliability cost etc.)?
  - What are you views on using the CECV to determine the output weight?

Possible impact 6: capital inputs may not adequately capture changes in export services capital stock

- Option: Disaggregating ‘transformers and other capital’ input into a ‘transformers capital input and an ‘other capital’ input.
- Materiality: Impact on PIN opex MPFP is uncertain without testing it.
- Merits: Aim is to ensure that relative weighting of the additional inputs needed to provide export services (which are currently subsumed in the ‘transformers and other capital’ output measure and its weight) are adequately reflected in the benchmarking models.
  - What are your views on the merits of this change?
- Data / implementation issues:
  - No additional data is likely needed from DNSPs to implement this option.

Updating the econometric opex cost function models

- The 2027 review will also assess the conceptual merits and empirical feasibility of making changes to econometric models
- This would potentially require Canadian and New Zealand data to update definitions of RMD and adding a new output to explicitly account for the level of export services provided by DNSPs.
- What analysis do you think is needed to decide on the use of international data, and what alternatives are possible?
  - What are the obstacles to using the existing international data set?
  - What data and / or information could we start collecting to assist us in assessing the merits and feasibility of updating the econometric models in 2027?

Next steps

Project step	Date
Submissions to the draft report close	30 Jan 2023
Issue information request to collect 2020-21 and 2021-22 data	Feb 2023
Publish final review report	Early March 2023
Publish draft small-scale incentive scheme for export services	
Issue information request to collect 2022-23 data	May 2023
Publish initial version of 2023 electricity network performance report	July 2023
Publish updated version of 2023 electricity network performance report (including report on export service performance)	Dec 2023