



DYNAMIC EXPORTS

Enabling more solar for South Australians



Information for **INDUSTRY**

A pair of new technical standards require that prescribed generating systems connecting to the South Australian distribution network are capable of being dynamically export limited and for export limits to be updated remotely.

From 1 July 2023 new and replacement generators connected to the distribution network must:

- Utilise an inverter from the Clean Energy Council List of Inverters with Software Communication Clients or - prior to 1 April 2024 - from the transitional listing published by SA Power Networks
- If the customer is in an area where flexible connections are available, also install any additional equipment such as metering and or gateway devices to ensure the site is able to receive and implement an export limit
- If the customer intends to utilise the flexible connection agreement - also complete the required on site testing to achieve compliance

Exemptions and deemed to comply arrangements apply to:

- Replacements under warranty
- New generators where a connection agreement is lodged prior to 1 July 2023, and the installation is completed before 1 September 2023
- Plants permanently configured to zero export
- Batteries installed before 1 March 2024
- Plants exceeding 30kVA installed before 1 July 2024
- SCADA controlled plants





FAQ

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Q Do you know if other states are considering this?

A Queensland has implemented a dynamic connection offering with equipment compliance requirements and dynamic export limits.

Solar Victoria recently announced in a notice to market that from March 2024, PV inverters installed through its solar homes program must be dynamic export capable and certified for CSIP-AUS and IEEE 2030.5.

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Q All sites approved before July 1st. If SEG is done before is there a cut-off date for installation?

A Any site which applied for a SEG prior to 1 July 2023 can avoid the need for dynamic export compliance if it is installed and commissioned prior to 1 September 2023 (2 month window).

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Q So we can install after July 1st assuming we had approval prior to this date?

A Any installation with a SEG application prior to 1 July 2023 can be installed without dynamic exports compliant equipment until 1 September 2023.

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Q Who is responsible for regulating and enforcing communications are maintained to inverters? And if comms are lost will systems revert back to fixed 1.5 exports?

A The commissioning of the installed equipment is the responsibility of the solar installer, once commissioned the owner of that site is responsible for maintaining communications.

SA Power Networks have indicated that they will monitor dynamic/flexible sites and provide warnings to the homeowner if communications are lost for extended periods of time.

A compliant system will be restricted to 1.5kW export limit if the communications are not restored within a reasonable timeframe.



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Q Are dynamic exports able to be applied over diesel generators with the controls required to achieve this?

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Wind, hydroelectric, diesel and gas fired generators connected to the grid via a low voltage inverter are exempt from dynamic export compliance requirements.

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Q Penalties will apply to households and sites that cannot control their exports?

A

From 1 July 2023, newly installed solar that can export energy to the grid must be dynamic export capable (unless otherwise exempt). Some system owners may opt-in to a flexible connection arrangement with SA Power Networks to utilise this capability however this is voluntary. There is no penalty for installation of a dynamic export capable system that is not connected under a flexible connection arrangement – these sites can utilise a static export limit.

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Q What will be the difference between existing flexible exports zones and new dynamic export installations?

A

Prior to 1 July 2023, flexible exports eligible areas were set up by SA Power Networks as part of their trial arrangements.

From 1 July 2023, those zones will continue to offer a flexible connection agreement that can be used for dynamic export compliant installations.

SA Power Networks are also planning to expand the areas where these flexible connections are offered over the next 12-24 months in order to manage the rollout.

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Q A zero-export site can apply to a new export limit if they change their inverter technology to a compliant inverter?

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Yes, any site on a zero-export connection can change to a flexible connection by ensuring that the installed inverter is compliant and any required gateway or monitoring equipment is installed.



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Q

Is the reason that there are areas where dynamic exports are not allowed that the equipment of

the ‘surrounding’ sites are legacy technology unable to do dynamic exports?

A

Flexible connection offerings are being gradually rolled out by SA Power Networks from 1 July 2023. It is expected that these will become available throughout SA with time.

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Q

Do we know when dynamic export requirements apply to MEG sized plants?

A

MEG sized plants (>30kW-200kW) are exempt from dynamic export compliance until 1 July 2023.

MEG plant over 200kW is already required by SA Power Networks to install SCADA equipment, which is recognised as deemed-to-comply with dynamic exports requirements.

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Q

If a fixed export plan is selected, is the SmartInstall commissioning

capability test still required?

A

No, The SmartInstall commissioning test is only required for those site that have chosen to connect through a Flexible export connection.

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Q

Can we upgrade an existing system to become dynamic exports capable?

A

Some modern inverters may have dynamic export compliance enabled through firmware updates in future, specific inverter OEMs should be able to advise where this may apply.

Any existing system will also require the necessary monitoring or gateway equipment installed to achieve compliance at that site.



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Q What happens if the customer's internet connection goes offline?

A A dynamic export capable system will automatically self-restrict site exports to the agreed value (1.5kW) if communications are lost for an extended period.

This will be automatically corrected as soon as communications are restored and the site can receive a valid export limit.

For extended outages, SA Power Networks is planning a notification system to alert customer to their inverters comms status.

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Q If a house needs major upgrades e.g. meter relocation/ mains upgraded and can't be installed prior to Sep 1st, will there be exceptions granted in those cases?

A The OTR is willing to receive and consider exemption application outside those cases already addressed in the dynamic export guidelines on a case by case basis.

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Q What if an existing customer has multiple inverters and one fails. Do they have to upgrade the entire site?

A If a customer needs to replace an inverter outside of warranty, it must comply with all technical regulator guidelines. If that site stays on a fixed export connection, only the new inverter will need to be dynamic export compliant. If the customer opts to take up a flexible export connection then the entire site must be made compliant.

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Q Who will reach out to existing homeowners to let them know that they are now eligible for Flexible Exports?

A SA Power Networks has made tools publicly available to homeowners to self-check their connection offering options and availability of flexible/dynamic exports at their address.



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Q If comms are lost you mentioned that the solar system will revert back to 1.5kw export limit. How is this achieved?

A CSIP-AUS/IEEE 2030.5 allows for a ‘fallback’ export level to be set for a participating site. Should communications be lost the inverter will automatically apply this lower export level to ensure exports do not exceed safe levels until communication is restored.

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Q Will there be exceptions for 2 phase house in regards either multiple inverters or more than 5kw on one phase?

A SA Power Networks have indicated that flexible export connections will allow for 1.5-10kW per phase, and there are currently no exemption offered by the Technical Regulator for two-phase sites. The CSIP-AUS/IEEE 2030.5 standards allow for coordination of multiple inverters on one site, further details regarding the availability of this functionality should be sought directly from equipment OEMs.

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Q Why is SwitchDin listed on the dropdown for flexible connection but also listed as only in progress on the compliance side?

A SwitchDin have been available as part of flexible export trial activities (which are separate from SA Gov dynamic export requirements) in the last few years, but are still required to seek certification and listing for the full CSIP-AUS standard to be dynamic export compliant.

SwitchDin are now listed as deemed to comply under the transitional arrangements. You can find more information at: sapowernetworks.com.au

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Q If commercial business owners don't want to pay for a MEG application, can we offer a zero-export system?

A MEG systems with generation greater than 30kW are exempted from Dynamic Export requirements until 1 July 2024.



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How does flexible system work. Are export limits communicated

over the internet from SAPN or AEMO. Where can information be found regarding commissioning?



Flexible export systems communicate from a CSIP-AUS software client located either in the inverter or a gateway device (or the cloud) connected to the inverter.

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Solar installations on sheds that have sub boards a long way from

main switch boards, how can this be made compliant for dynamic exports. Or is this exempt?



There are currently no exemptions for sub-boards on solar PV sites. Several methods are available to solar installers for such installations including wireless relays, or extended cable runs. Details on appropriate equipment should be sought from equipment OEMs to determine a compatible solution.

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How do I update a 1.5kW static site to flexible?



The site requires a certified compliant inverter or gateway device and any required monitoring equipment to be installed.

It also requires a new SEG application for that site to provide the flexible agreement.

A correctly configured and commissioned Dynamic Exports compliant installation should then be able to update from 1.5kW to a Flexible connection by successfully completing the dynamic exports capability test completed during SmartInstall.

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Sites having 2 generators – a string and a hybrid inverter with batteries. Would this fall under combined site dynamic limit? If yes, would it impact VPPs?



The export limit in both static and flexible connection agreements is for the site, not for individual equipment and so that site must be able to comply with its agreed export limit.

Exemptions from dynamic export compliance exist in the guidelines for AC coupled battery installations which don't use a hybrid inverter, refer to the guidelines for determining if that impacts your particular site installation.



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Are the flexible export limits that are calculated published anywhere

other than via the inverter protocol? For example for showing in a reporting dashboard?



SA Power Networks developing public web tool to view past flexible exports limits at an address.

Further information regarding export limit publication should be requested from SA Power Networks who are running the export limit calculations and communications systems.

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For sites with multiple NMIs which would currently be considered a cluster. Would dynamic exports override the need for a MEG application?



Dynamic exports compliance is allowing for some changes to current 'cluster' sites.

Dynamic export compliant installations will allow for changes to cluster connection offerings.

SA Power Networks is trialling Flexible Exports for clustered SEG, overriding the need for a MEG application in some situations. For more information, please visit sapowernetworks.com.au/connections/connect-solar-and-ev-chargers/cluster-rule-for-generators/



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Acknowledgement of Country

As guests here on Kurna land, the Department for Energy and Mining (DEM) acknowledges everything this department does impacts on Aboriginal country, the sea, the sky, its people, and the spiritual and cultural connections which have existed since the first sunrise. Our responsibility is to share our collective knowledge, recognise a difficult history, respect the relationships made over time, and create a stronger future. We are ready to walk, learn and work together.