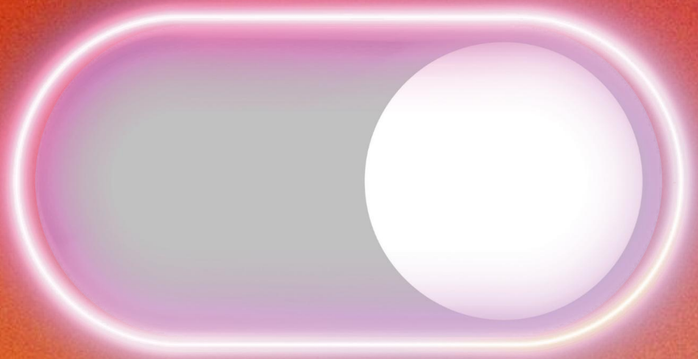
Case Study

Counties Energy DSO in action

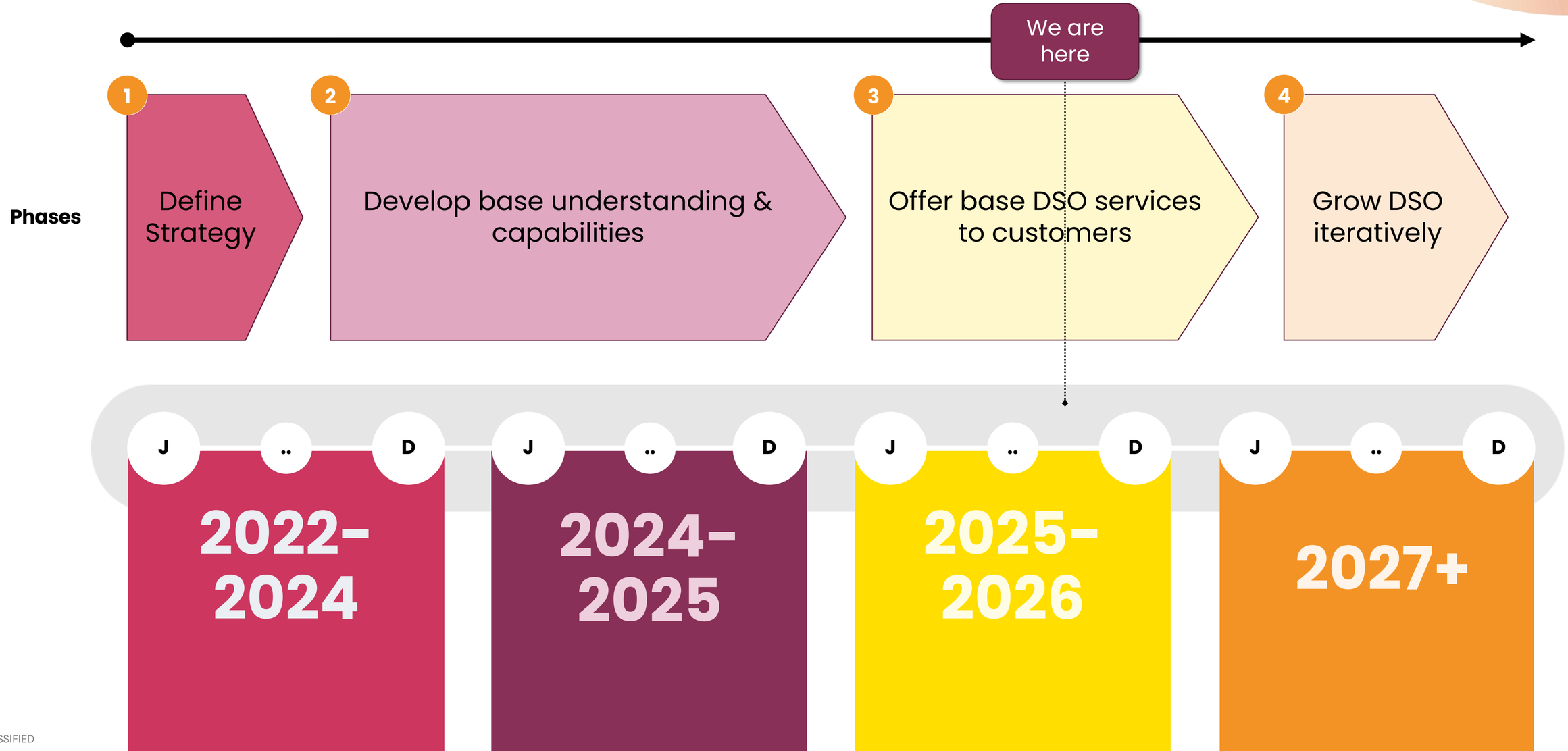


Off | On

EEA Conference 2026 –
Pre-conference DSO Workshop

22nd September 2026

High-level Strategic Roadmap (simplified)



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Our Strategic choice – Orchestration-first DSO approach



Bi-directional Orchestration-first

- Build visibility and dispatch layer, then layer markets on top
- Value is unlocked at the point of connection, today
- Flexibility becomes a network operating tool instantly
- Services have a process, a price and a customer agreement
- Customer sees a faster connection and a lower bill

Capacity Marketplace-second

- Design the market, then find the technology to serve it
- Value is unlocked when the market eventually scales/matures
- Flexibility could remain a procurement question
- Trials demonstrate capability; they do not deliver a service
- Customer sees nothing until the market exists/grows

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The Centerpiece – Gridex our DSO Orchestration Platform

A platform product, not a project

Gridex is a standing capability with a roadmap and an owner.

It does not have an end date, a closure report or a benefits realisation memo. It has releases.

Standards-compliant by design

A CSIP-AUS compliant server means any conforming inverter, battery or aggregator connects without bespoke integration.

Onboarding is configuration, not a project.

Independently conformance tested

Australian National University and Australian market conformance testing is the credibility anchor.

This is not self-certified capability — it is tested against the standard, by a third party.

Understanding CSIP-AUS - https://www.csipaus.org/about.

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Gridex - the heartbeat of the DSO

Transmission and Wholesale market

Transmission System Operator

Wholesale Flex and Reserves Markets

TSO/DSO Coordination Exchange

EDB/DSO Core Orchestration Layer

Counties Energy Distribution System Operator

Authorisation, Access, Control

Gridex Orchestration Platform

Communications & Integration

Procurement of large scale Flex

Flex procurement marketplaces

DER visibility & dispatch

DER Aggregators

Flexibility Service Providers and Energy Retailers

DER visibility & dispatch

DER visibility & dispatch

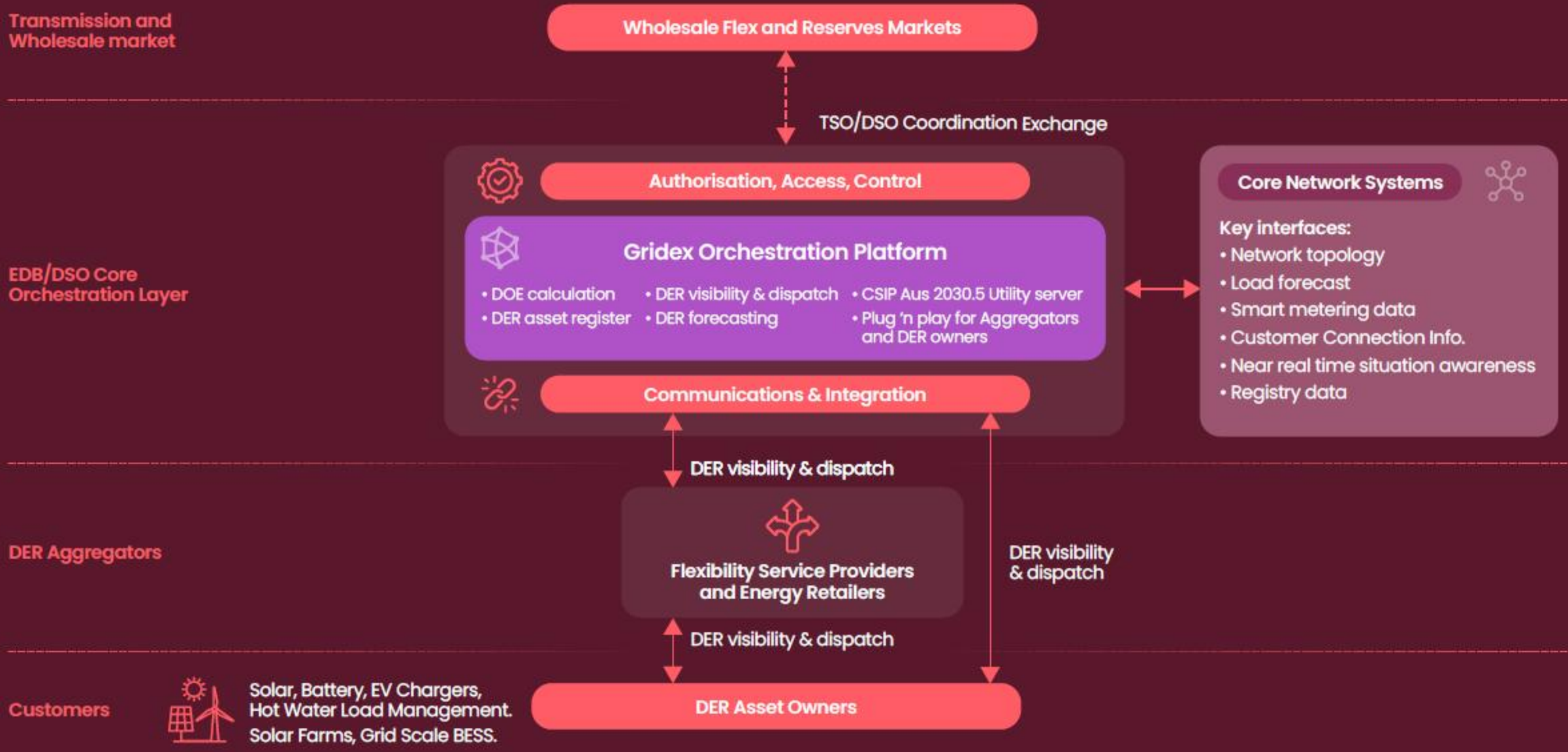
Customers



Solar, Battery, EV Chargers, Hot Water Load Management. Solar Farms, Grid Scale BESS.

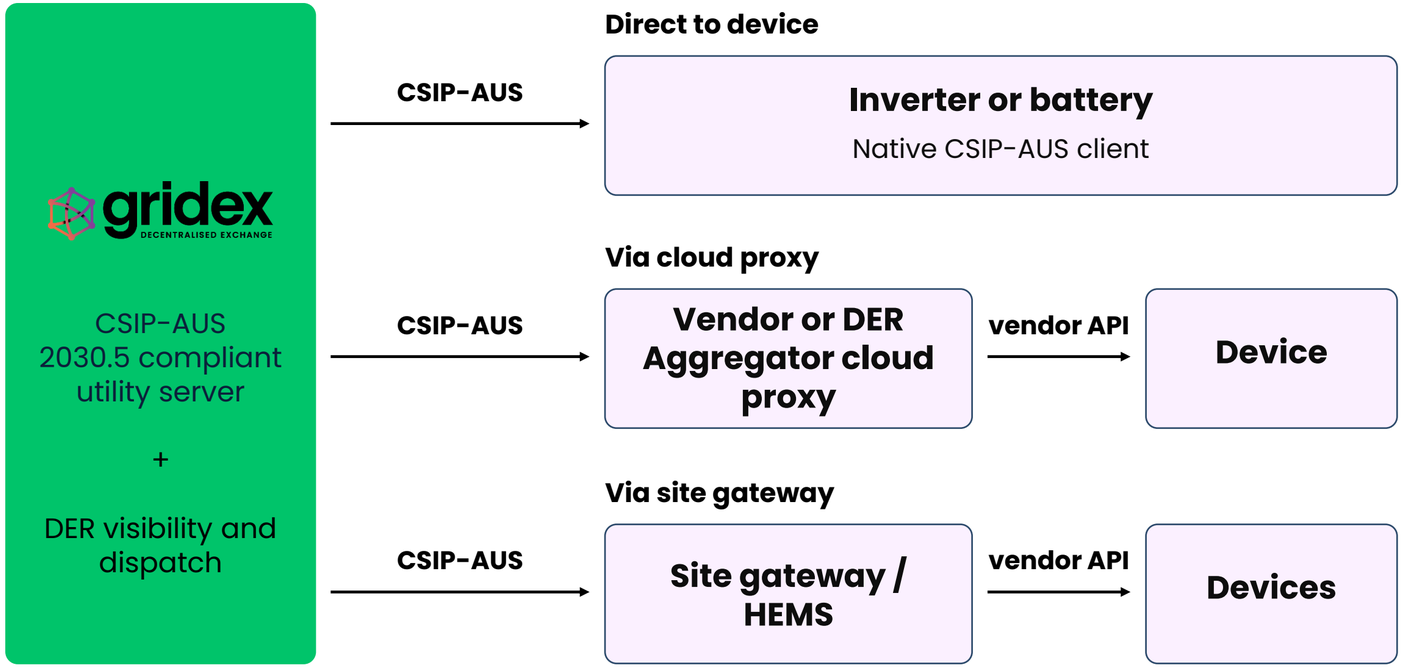
DER Asset Owners

What can Gridex do?



Open Standards and Interoperability Aligned to Australia by design

Gridex speaks CSIP-AUS (SA TS 5573:2025, on IEEE 2030.5) and supports every connection pathway the Australian market uses.



Why this is the whole point

- Any inverter, battery or aggregator already selling into the Australian market ships CSIP-AUS hardware.
- On our network it works on day one.
- No bespoke integration, no per-vendor project, no New Zealand-only stack for anyone to maintain.

17 of 18	minimum device requirements covered
Aus states	mandate it for their DNSPs today
End-to-end	conformance tests, not just protocol

Full comparison of CSIP AUS and OpenADR 3.0 can be found in Standards Australia CER Interoperability Report, June 2026.

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DSO Flexibility Service Catalogue

	DSO Service Category	Firmness Level (Aligned to Australian Tiers)	Service Name	Customer Segment	Service Status
1	**Flexible Connections**	**High**	Flexible capacity for Large Commercial Loads	Commercial customers	Completed, Scaling up to BAU
			Flexible capacity for Public/Commercial EV Charging	Public CPOs, eBus and eTruck Operators	Completed, Scaling up to BAU
2	**Flexible Imports**	**Low/ Medium**	Retailer Hot Water Demand Flex	Retailers and Aggregators	Completed, BAU service
		Low/Medium	Flexible Imports for Residential EV customers; V2X/V2G (next)	Residential EV customers	Customer testing WIP, Go-live by Oct 2026
3	**Flexible Exports**	**Low/Medium**	Flexible Exports for Residential Solar	Residential Solar customers	Customer testing WIP, Go-live by Nov 2026
		Medium/High	Flexible Exports for Commercial Solar	Commercial Solar customers	Customer testing WIP, Go-live by Nov 2026
			Flexible Exports for large Generation	Large scale generation customers	Customer testing WIP, Go-live by Nov 2026

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Three DSO Flexibility Services, in service today

LIVE

Flexible Connections

Large load connected at full requested capacity against constrained firm capacity, with agreed curtailment exposure.

- **Connect in weeks, not upgrade cycles**
- **Avoids or defers a capital investment**

LIVE

Flexible Imports

Managed charging and controllable load on constrained transformers and LV circuits.

- **New load absorbed without reinforcement**
- **Avoids LV and transformer investment**

LIVE

Flexible Exports

Dynamic export headroom replaces a static limit. Customers export more, more often, without a network breach.

- **More export, more equitably allocated**
- **Headroom is equally allocated amongst customers**

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Scaling up our DSO Flexibility Services

10

Aggregators tested and onboarded onto Gridex.

36,000

DERs connected and managed by Gridex.

40MW

Flex available via Gridex nationally.

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Karaka Harbourside DSO Pilot

New Zealand's first smart energy neighbourhood

- 500 - 550 ICPs
- 5min smart metering data
- 300kVA average Dtx capacity
- Average Demand
  - Peak 70%
  - Off-peak 5%
- Peak Times
  - Morning 5am – 8am
  - Evening 5pm – 8 pm

ELECTRICITY AUTHORITY TE MANA HIKO Power Innovation Pathway

Counties Energy

EECA



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Harbourside Flex: Lessons Learnt

Network Visibility allows us to:

- Map DTx <> Phase <> LV Circuit <> Open Point <> ICP → Accurate and Reliable LV network model
- Data collection of Consumption and PQ → Operational context of network and forecasting
- Identify and monitor DG, EV Chargers, BESS → Behavioural context of DERs
- Identify abnormal operating conditions → Enhance network and public safety + outages

Standardisation and interoperability

Integration point	Comms. approach	Justification
Core network systems (GIS, AMI, ADMS, Historian, Maximo, DERMS)	use available proprietary API	• Too difficult to move, and too slow to adapt • OT/IT cyber security considerations • Compute requirements within each environments
DER Aggregation / Direct Control	CSIP AUS IEEE 2030.5	• Common for direct IBRs control • Major aggregators support out-of-box (e.g. Tesla, Sigenergy, and more) • V2G/EV Chargers not far away

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Harbourside Flex: Reimaging ourselves

Reimagining the way we run our business

Business unit	Action taken	Observed Result	Challenge
Connections	• Documenting triggers that create consideration for NNS/NWAs and Flexible Connections solutions • Training staff on benefits of NNS/NWAs and Flexible Connections • Creating appropriate Ts&Cs and Pricing that is attractive for customers and provides assurance to asset managers	Since April, in the pipeline: • 5 x Flexible Connections; • 2 x NNS/NWAs; • 2 x Flexible Imports/Exports Totalling >10MW of capacity Happier customers ☺	• Training people • Resistance to change
Planning	• Documenting an approach that creates consideration of NNS/NWA and flex procurement/dispatch solutions as part of project justification process • Training staff and creating tools that can be used to compare Traditional and Alternative solutions • Providing and creating evidence to demonstrate reliability and performance of the solutions	• Consideration of HW Flex as part of Planning process • Active consideration of EOIs/RFI/RFPs for flex procurement to defer large projects • V2G/EV Chargers not far away	• Demonstrating evidence to establish trust in flex • Testing financials and landing on a value for flex
Operations	• Creating tools through Gridex that provide transparency and appropriate override capability • Training staff on the benefits, expected behaviours and complexity of data interpretation and decision-making	• Used flex in both in unplanned and planned outage scenarios • Made available for dispatch during CAN/WRN/GEN notice	• Scaling back expectations

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Harbourside Flex: Industry opportunity

Opportunities to take a common/standardised approach

- **Product and Service offers**
  - Flexible Exports / Imports and the Terms and Conditions for operation
  - Flexible Connections and the Terms and Conditions for operation
  - Direct market flex procurement
- **Software**
  - Network Systems (e.g. GIS, ADMS, etc.)
  - Aggregators and direct to DER Devices (where necessary),
  - Energy Retailers and Transpower
- **Commercial & Legal**
  - Standardised flexibility dispatch hierarchy
  - Terms & Conditions for procurement, dispatch, acceptable SLAs, obligations and liabilities
  - Value of flex under different procurement scenarios; i.e. high, medium, low firmness
  - Flexibility tariff naming, structure, and pricing methodology
- **Regulatory**
  - Alignment on the above will create a strong position for informed regulation

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Counties Energy

To learn more about Gridex, our publicly available resources and our journey, please scan the QR code:

Ngā mihi