Lessons from Dynamic Network Pricing

Project Edith

CSIP-AUS Connect

2 October 2025

Alan Luc – DSO Systems Lead

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Acknowledgement of Country

We acknowledge Aboriginal and Torres Strait Islander peoples as the Traditional Owners of this land and we pay our respect to their Elders past and present.

We have come from the lands of the Gadigal to Ngunnawal Country

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1 Price Responsive Resources

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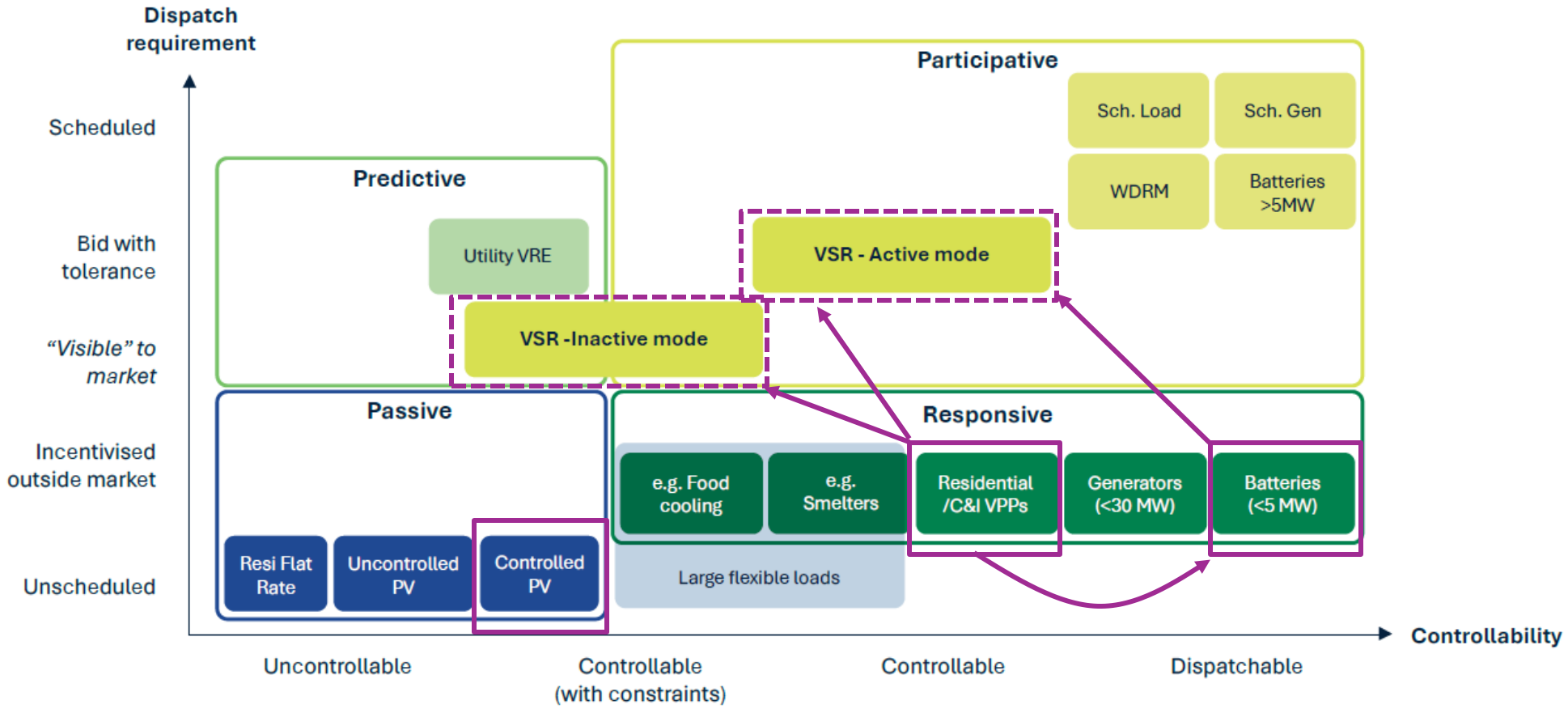
NEM Wholesale Market Settings Review

Project Edith is looking at dispatchable / price-responsive CER

Figure 34 – Targeting the participative gap



CER Taskforce – Roles & responsibilities (M3/P5)

Challenges of the current market design (from Cambridge Economic Policy Analysts – CEPA):

- Managing congestion on the distribution network. Off-market mechanisms include using:
  - operating envelopes
  - dynamic network pricing
  - flexibility services.
- Predicting the behaviour of CER
- Understanding consumer requirements – accommodate customers with price-responsive CER who choose not to participate in the market.
- Addressing wholesale market inefficiencies (e.g. regional reference price distorts useful locational price signals)

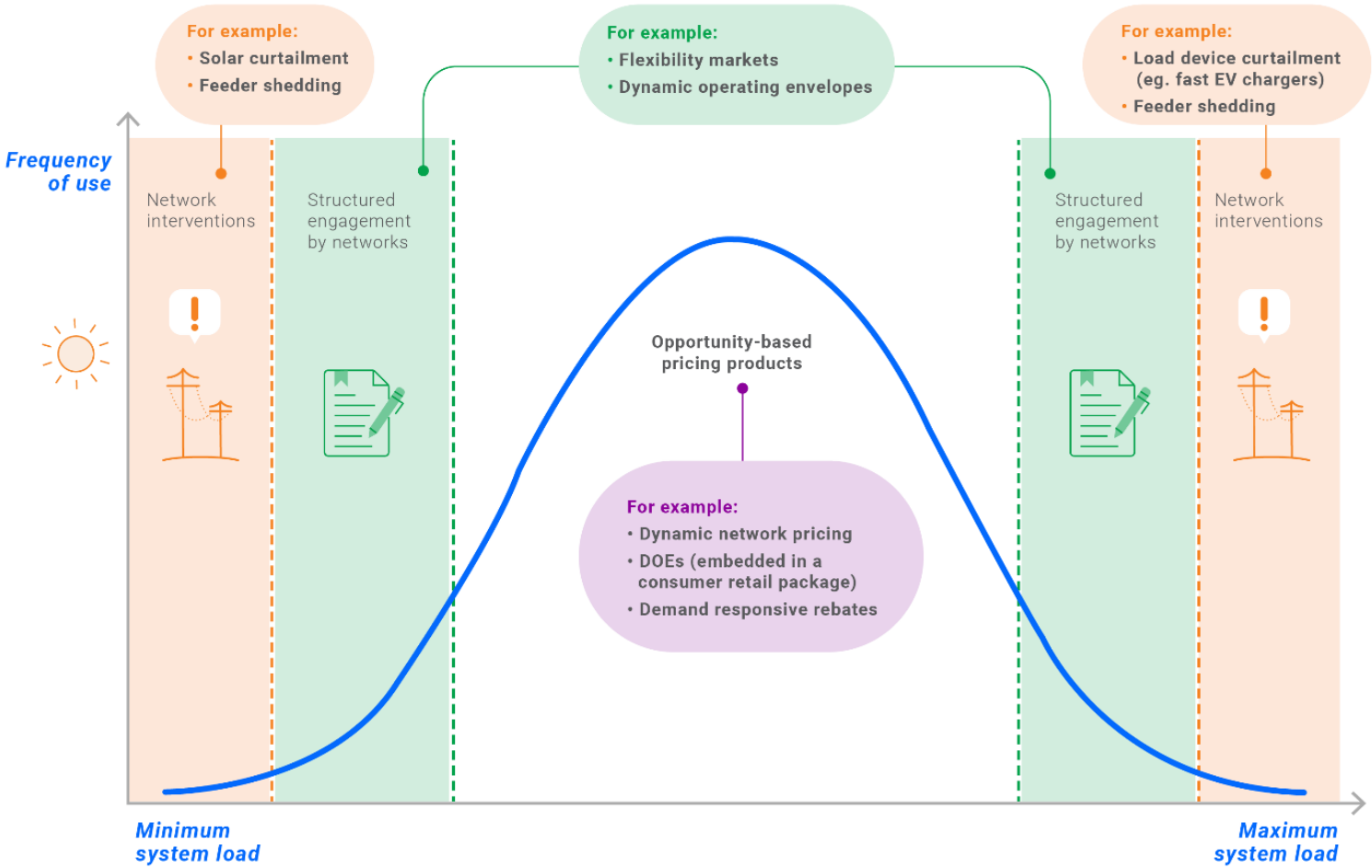


Figure 5: Actions to incentivise and control CER to maintain network integrity

2 Project Edith Introduction

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What is Project Edith?

Project Edith is testing how **dynamic network pricing** can be used to:

- Support greater **customer participation** in markets
- Shaping customer demand and export patterns to a more responsive load pattern that takes advantage of low **network utilisation** periods.

The project is one of several initiatives underway to facilitate the participation of consumer energy resources (CER) in the energy and services market.

We currently have 1186 customers participating across the Ausgrid network area, through four customer agents.

reposit ShineHub origin EnergyAustralia

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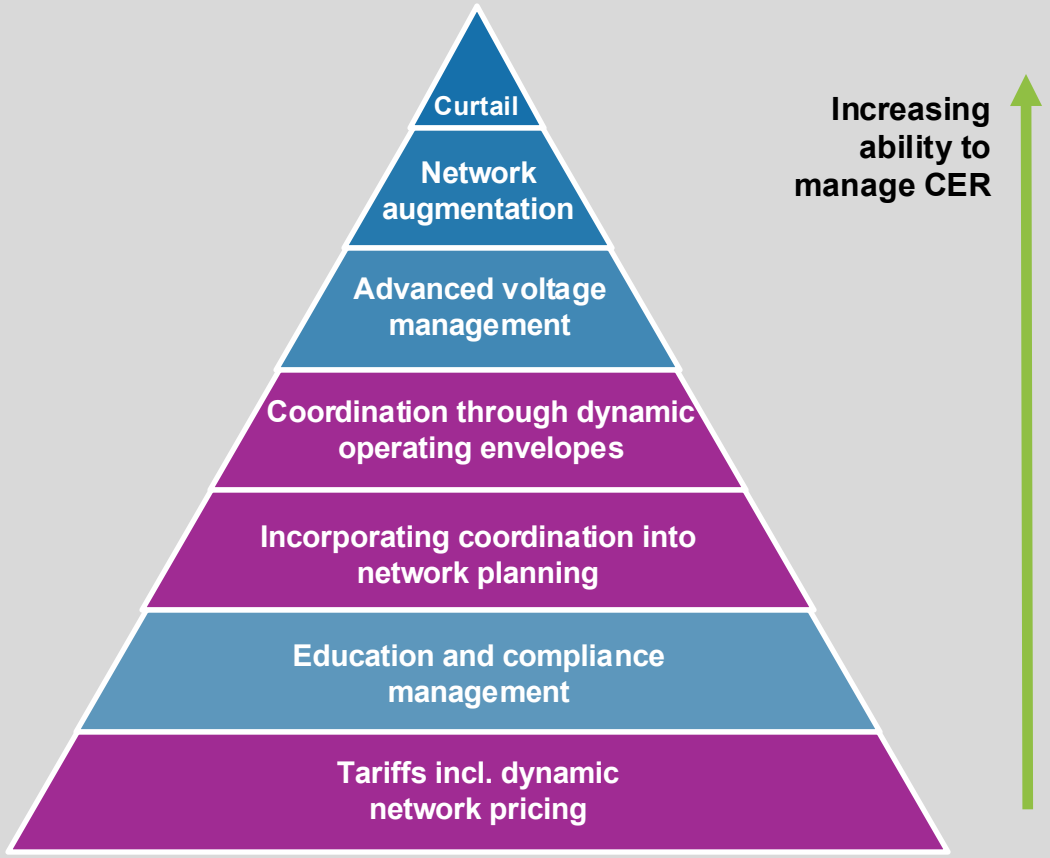
Hierarchy of activities to enable CER



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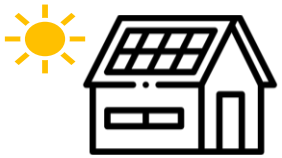
Dynamic network pricing

Current network pricing

- Averaged across regions – **'postage stamp pricing'**
- Do not fully reflect available network capacity at each time and location

Weather: **rain and clouds**
PV production: **low / zero**
Usage charge: **$$**

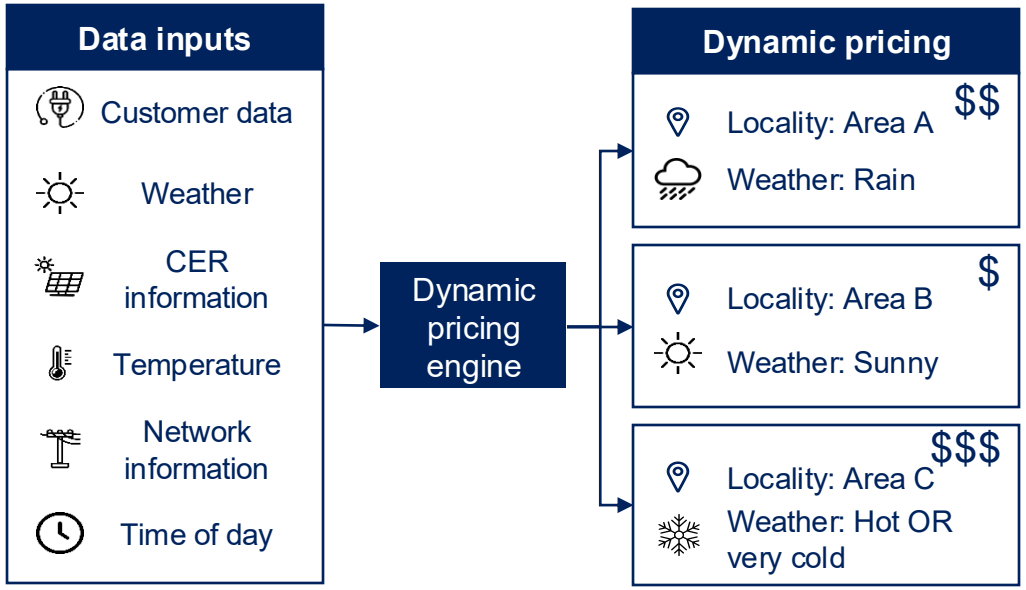


Weather: **sunny**
PV production: **high**
Usage charge: **$$**

Customers face the same usage charge, regardless of real-time conditions (e.g., weather)

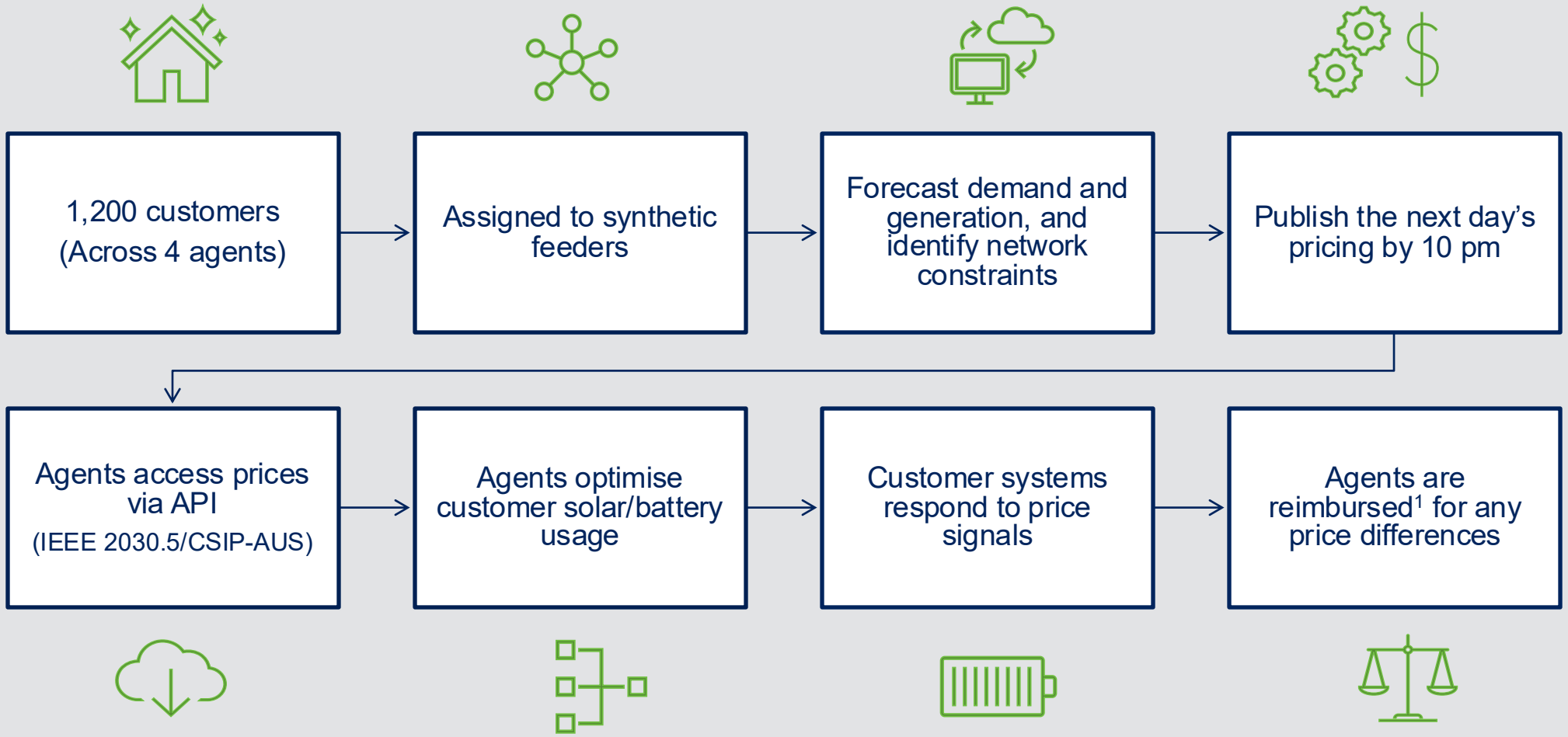
Dynamic network pricing

- **What?** Considers the cost to serve customers and operate the network, based on operational conditions
- **How?** Using time and location-specific incentives to make unused network capacity available to customers



*Note: dynamic network pricing can include both **positive** and **negative** prices.*

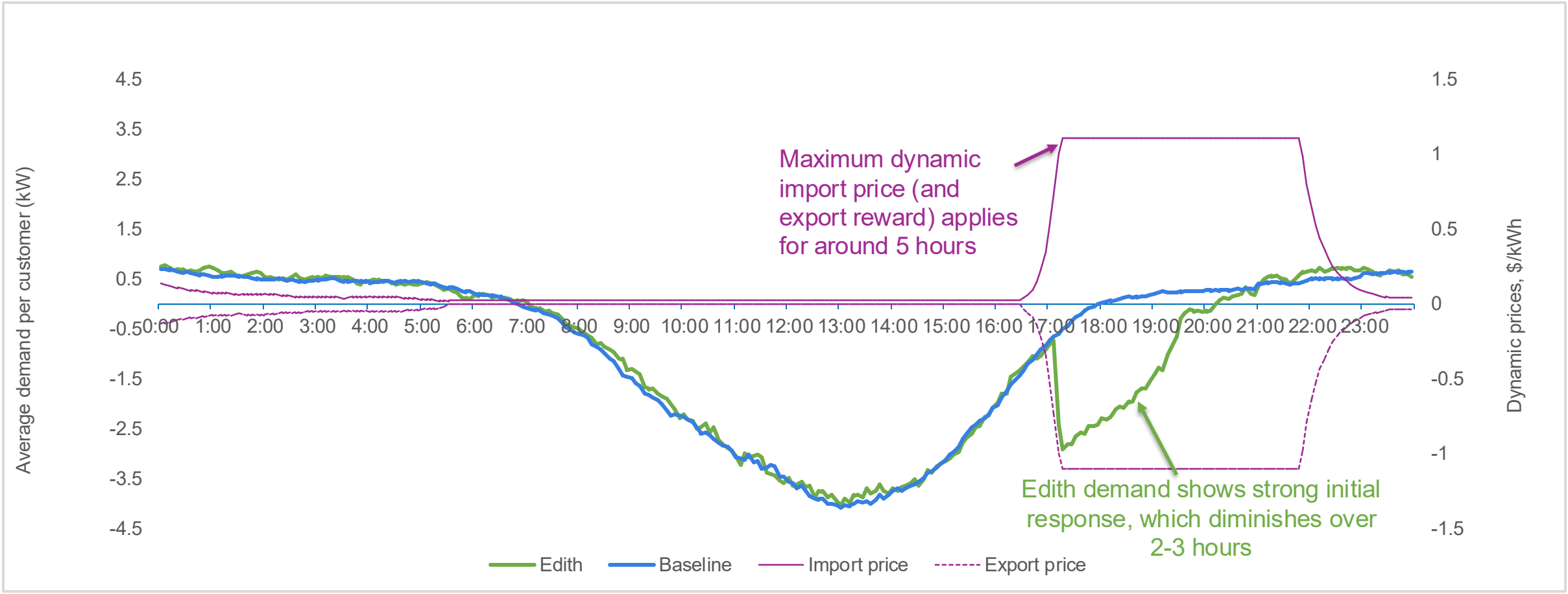
A day in the life of Edith



1. This is the current off-market arrangement; on-market bill settlement will use standard approach with retailers.

3 Results and lessons

Customer responses to dynamic prices



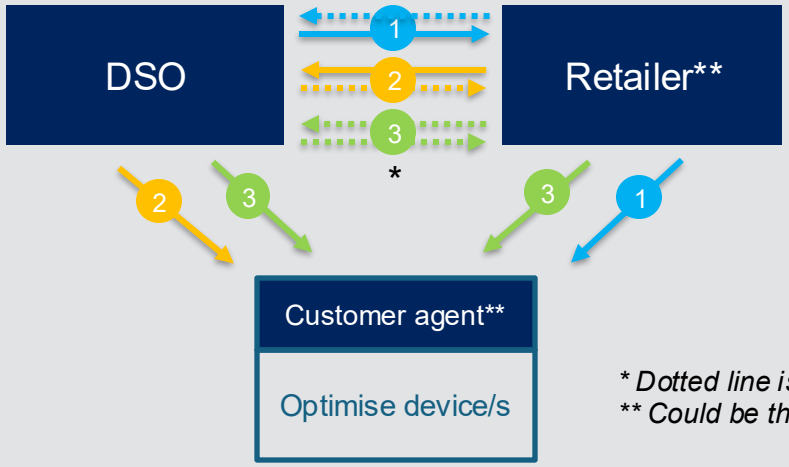
Learnings feeding into CSIP-AUS v1.3

- IEEE 2030.5 pricing is chatty – simplify
- Test cases for clients and servers

Requirements to communicate prices that have been discuss:

- Network vs retail components without prescribing a specific architecture
- Identifying multiple $/kWh price components
- Periodic charges ($/day)
- Where does the price apply
- Credit vs debit
- Import vs export
- GST vs non-GST

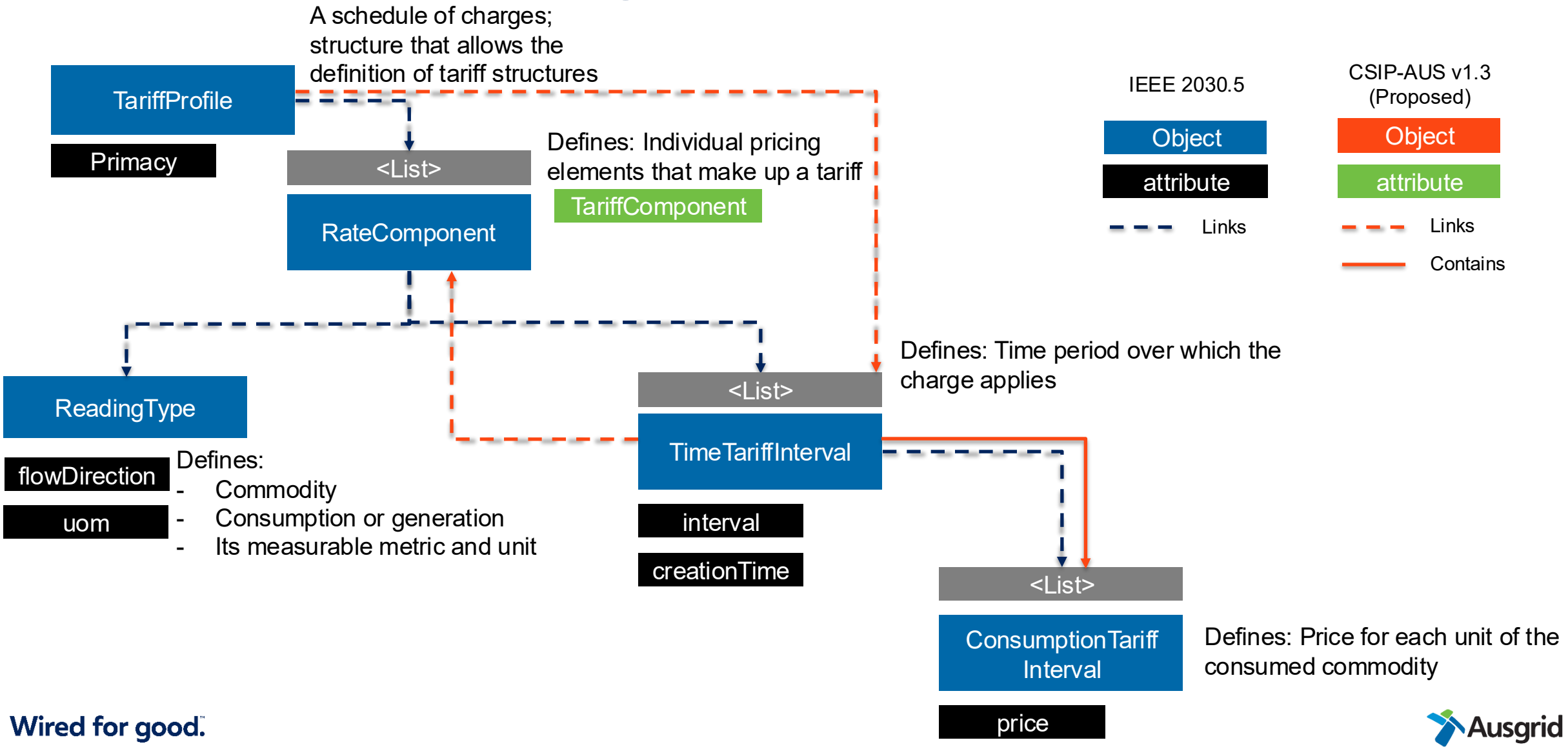
Pricing architecture options



** Dotted line is optional*
*** Could be the same party*

1. Retailer aggregates pricing
2. DSO aggregates pricing
3. Independent pricing streams
4. All of the above

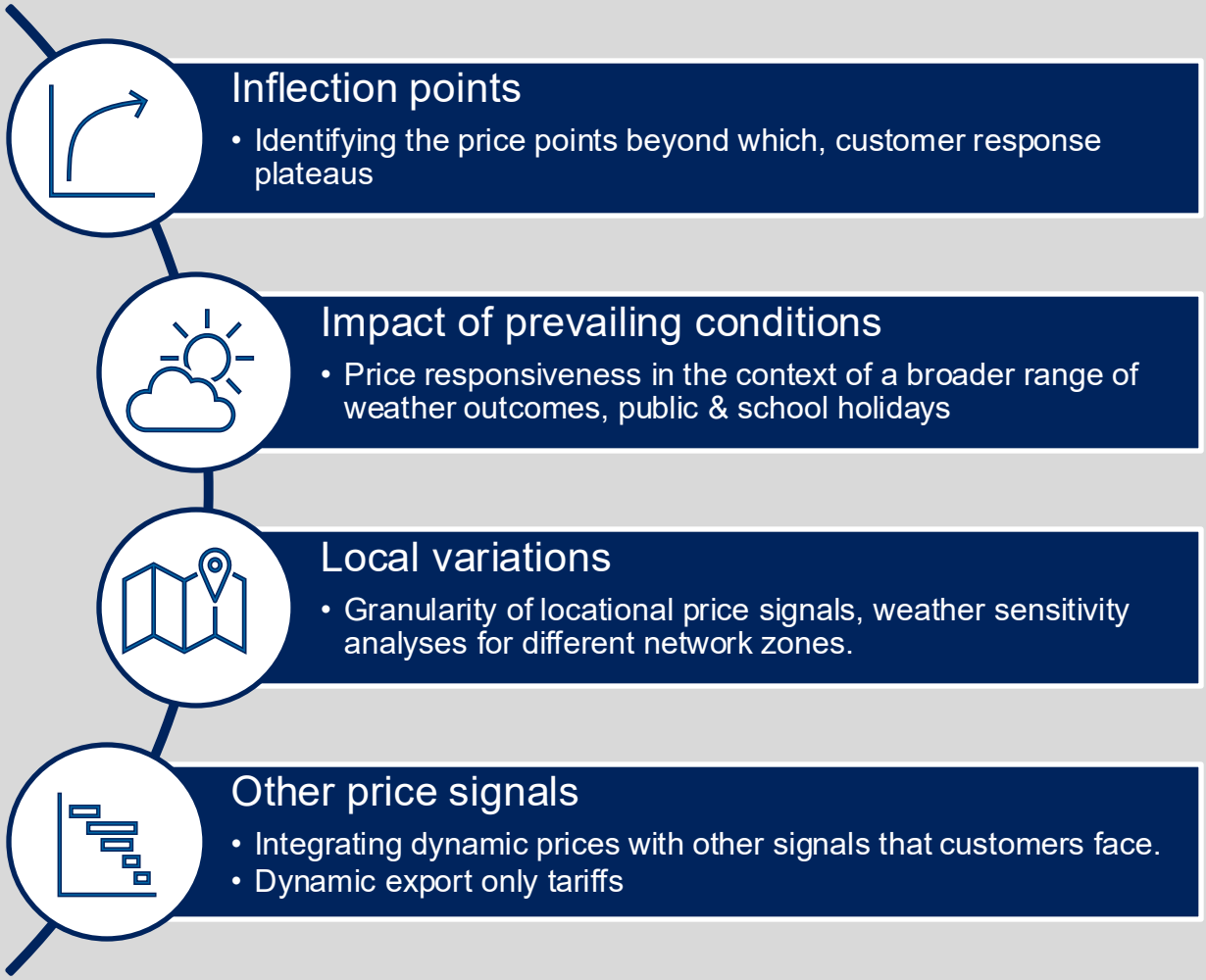
IEEE 2030.5 Pricing Structure



Findings and future focus areas

Findings and outcomes:

- Customers are highly responsive to dynamic price signals, to a point
- Their ability to respond to price signals is bounded by:
  - limits of the available technology
  - their own electricity consumption needs
- Improved our understanding of the system investments
- Closer partnerships with customer agents



Project Edith path to implementation

Rapid demonstration

2022-23
~200 customers

Expansion

2023-24
~1,000 customers

We are here: 1,186 customers

Refinement

FY25 & FY26
~2,000 customers

Trial tariffs

FY27 – FY29
~10,000 customers

Listed tariffs

2029-34

reposit ShineHub origin EnergyAustralia

Engagement & Knowledge Share activities

Rule changes and/or guidelines?

AEMC

AUSTRALIAN ENERGY REGULATOR

Questions?

For further information please contact:

Alan Luc:
aluc@ausgrid.com.au

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