

DER access and pricing models



Potential applications

Solar trough—to efficiently utilise or expand limited solar hosting capacity

Community batteries—to transport energy 2 ways without incurring full network costs

VPPs—to minimise network impacts of aggregated battery charging +/- discharging

P2P trading—to allow through meter without compromising market metering, billing & settlements

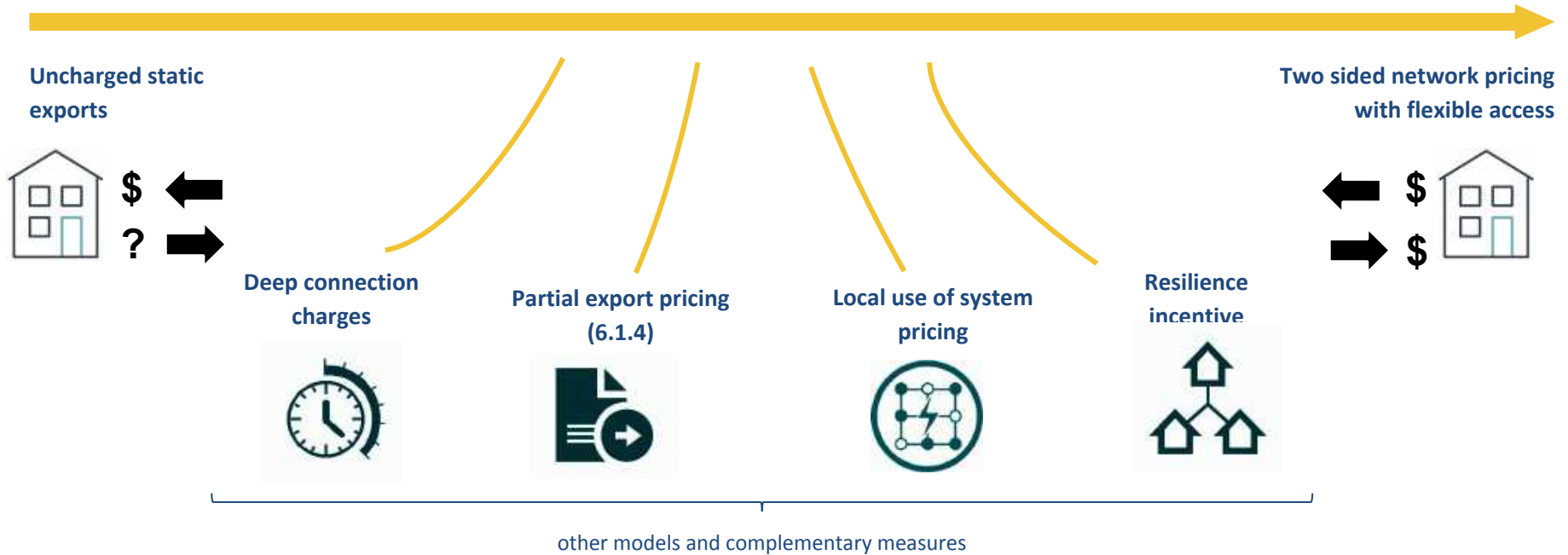
Other new energy services markets—eg demand response, network support or ancillary services

HILP/WALDO events—to incentivise resilient local networks

DER access and pricing models

STATUS QUO

ENDPOINT



DER access and pricing models

1. Deep connection charges	DER owners pay for future deep network augmentation costs upfront—likely in return for firm access for exports
2. Partial export pricing (6.1.4)	Networks charge and/or reward for DER exports depending on network impacts. DER owners offered choice of static export limit (status quo) or dynamic export tariff.
3. Local use of system pricing	DUOS reflects extent of network utilised between generation & load – ie DER exporters pay for extent of system utilised.
4. Resilience incentive	Benefits recognised of nested/islandable local grids during long duration upstream blackouts (HILP/WALDO events).
5. Full two-way pricing	Users pay for combined imports & exports to recover all network costs. Probably locational & dynamic. Examples: <ul style="list-style-type: none">• Agreed or actual capacity tariffs• Agreed or actual demand tariffs

But wait, there's more...

- **Compulsory or optional for networks to adopt?**
- **Locational and temporal or smeared (postage stamp) pricing?**
- **What should DER owners expect in return—eg firm access?**
- What is the best way for networks to recover costs—connection agreements (fixed), energy charges (kWh) or capacity charges (kW)?
- Should networks be able to take into account other market benefits when charging or rewarding for DER transactions?
- How would this mechanism interact with a DSO model?
- Does this reform require an equivalent reform of transmission pricing?

Current and no regrets actions

IMPORT ISSUES

- **Under-recovery of network revenue from PV customers**
 - Tariff reform (eg demand tariffs)

EXPORT ISSUES

- **Overvoltage**
 - Smart inverters
 - Dynamic DER management (eg by SAPN)
- **Thermal constraints**
 - Tariff reform (eg solar sponge tariffs)