Maximising onsite generation, storage and flexibility

Session Chair

Brendan Coyne – The Energyst

Speakers

Vincent de Rul – EDF

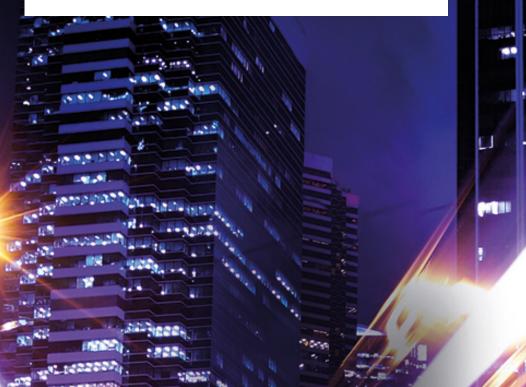
James Johnston – Piclo

Stewart Reid – Scottish & Southern Energy Networks (SSEN) Peter Dennis – Ecotricity



Optimising onsite generation, storage and flexibility





EDF Energy

Vincent De Rul, **Energy Solutions Sales Director** EDF Energy Customers





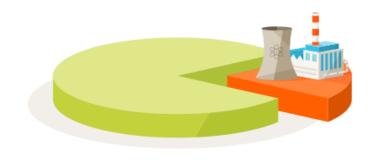
Intro

- The changing landscape
- The flexibility opportunity
- Our capability, experience and platform to deal with Flexibility monetisation.



EDF Energy....from supplier

- EDF Energy is one of the largest energy companies in the UK, supplying around 5 million residential and business accounts with electricity or gas.
- We produce around one-fifth (20%) of the nation's electricity and we are also the largest supplier by volume







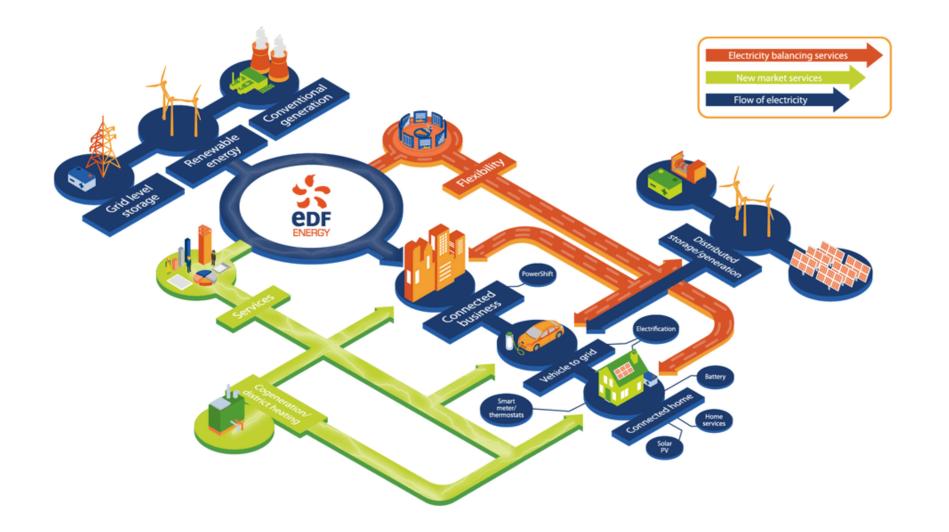






.. To flexible energy solutions provider





The flexibility opportunity

FLEX: From assets you own

SAVE: From reduced energy costs

EARN: From trading energy on the wholesale markets.





Your assets and the flexibility market

Most asset types have some level of flexibility that can be optimised against different markets

| Engines | Batteries | CHP | Solar | | |
|---|--|---|---|--|--|
| CM Triads STOR | CM Triads FFR | CM Triads | Live Balancing Balancing Mechanism Short Term Trading | | |
| Live Balancing Balancing Mechanism | Live Balancing Balancing Mechanism | STOR Live Balancing Balancing Mechanism | Short term trading | | |
| Short Term Trading Locational | Short Term Trading Locational | Short Term Trading | | | |
| | | Locational | | | |
| Backup | Industrial | Thermal | Hydro | | |
| Generators | Processes | Storage | | | |
| | | | | | |
| СМ | СМ | СМ | СМ | | |
| CM Triads | CM Triads | | CM Triads | | |
| | | СМ | | | |
| Triads | Triads | CM Triads | Triads | | |
| Triads STOR Live Balancing Balancing Mechanism | Triads FFR | CM Triads FFR | Triads STOR Live Balancing | | |
| Triads STOR Live Balancing | Triads FFR STOR Live Balancing Balancing Mechanism | CM Triads FFR STOR | Triads STOR Live Balancing Balancing Mechanism Short Term Trading | | |
| Triads STOR Live Balancing Balancing Mechanism | Triads FFR STOR Live Balancing | CM Triads FFR STOR Live Balancing | Triads STOR Live Balancing Balancing Mechanism | | |

Flexibility in action



Cannington battery



Trading renewable power on the wholesale markets.



Second life battery partnership



V2G partnership



Final thought.....

Build your flexibility profile, – collaborate with experts to make your one change towards a more sustainable, profitable future.



Keep in touch

Visit our stand B12 Email: energysolutionssales@edfenergy.com

edfenergy.com/energysolutions



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Thank you



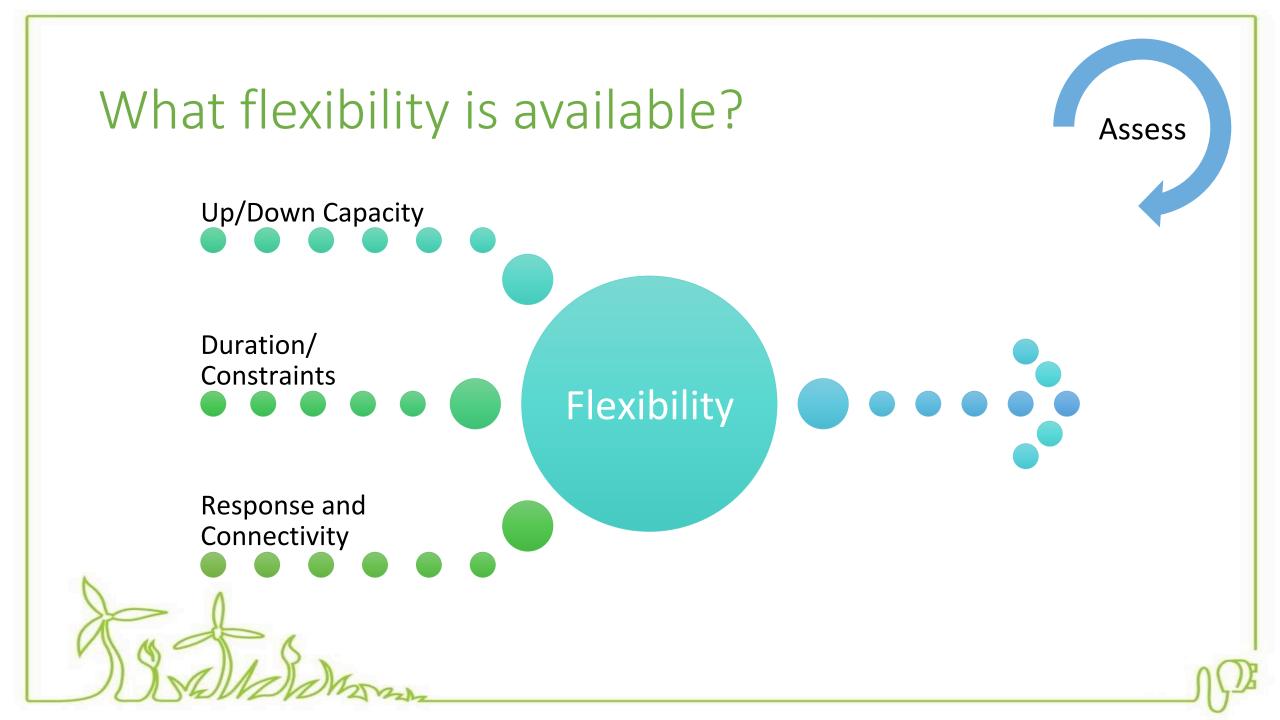


Optimising onsite generation, storage and flexibility

Energyst Event 2nd May





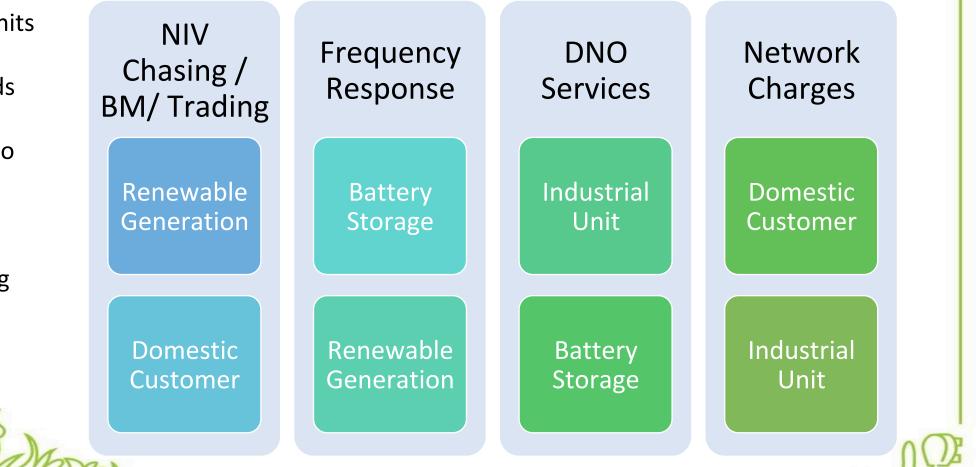


Match units to applications

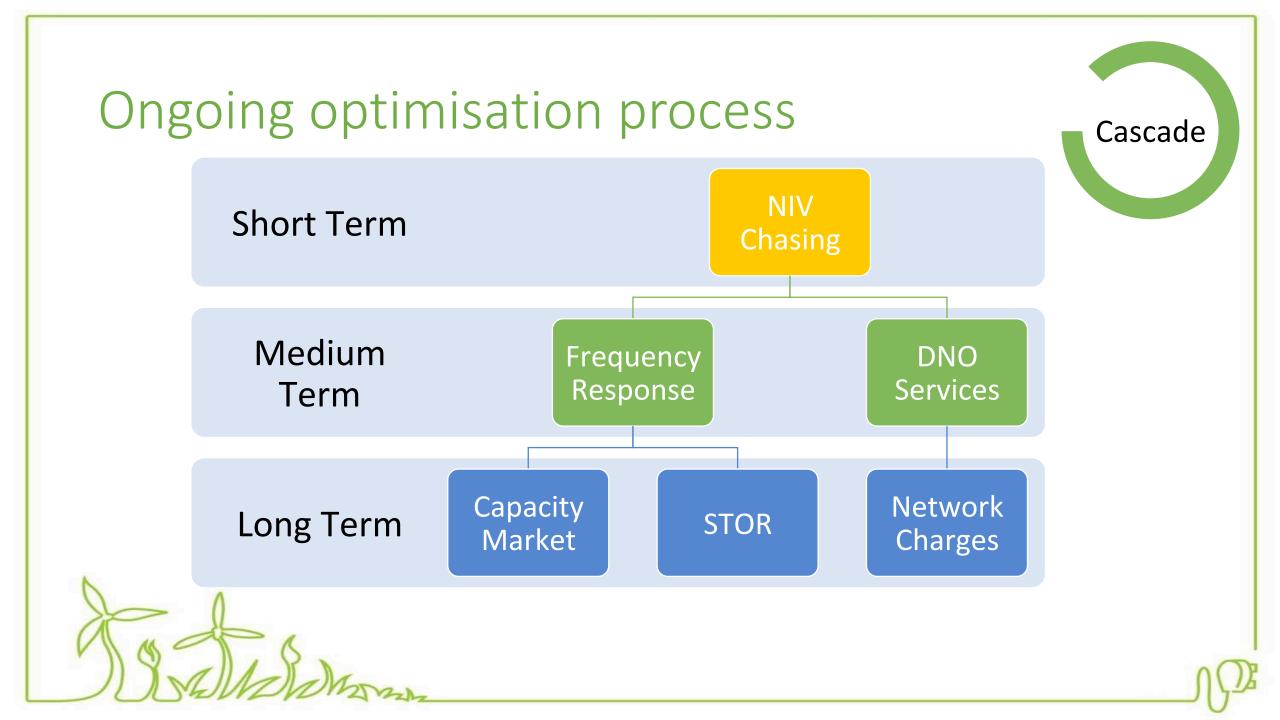
- Group similar units
- Reach thresholds
- Qualify units into

the scheme

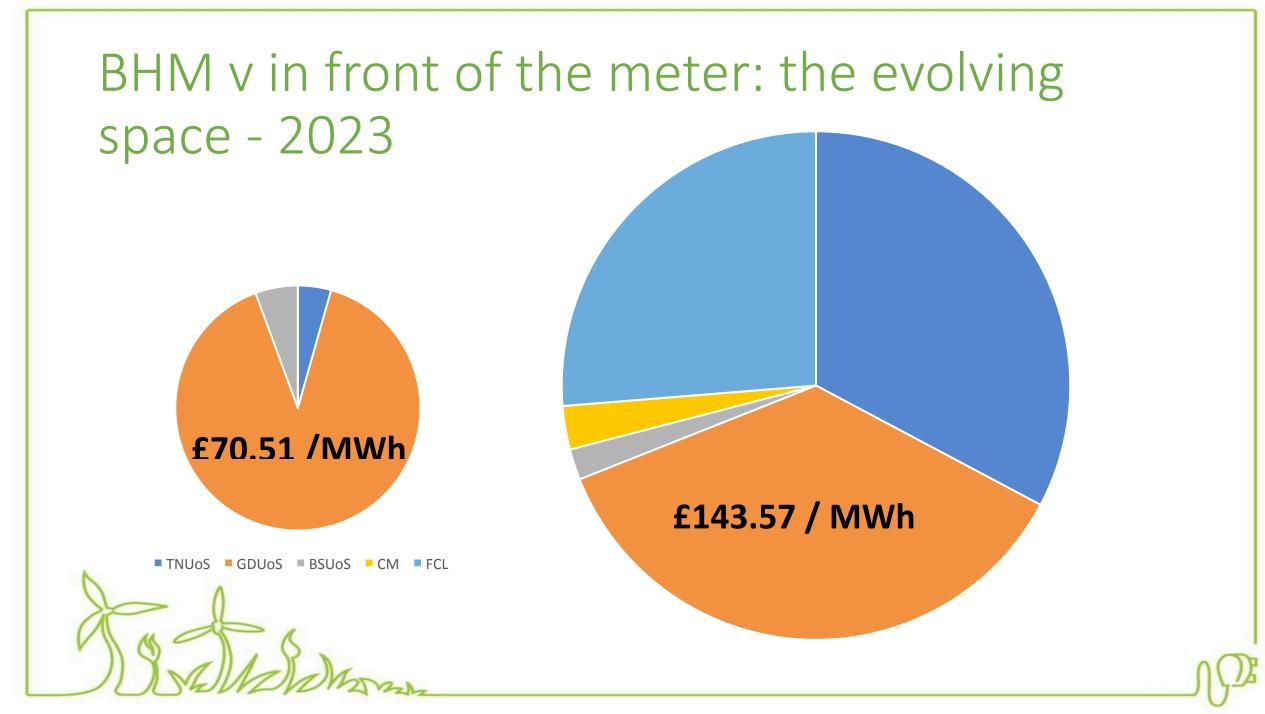
• Carry out testing

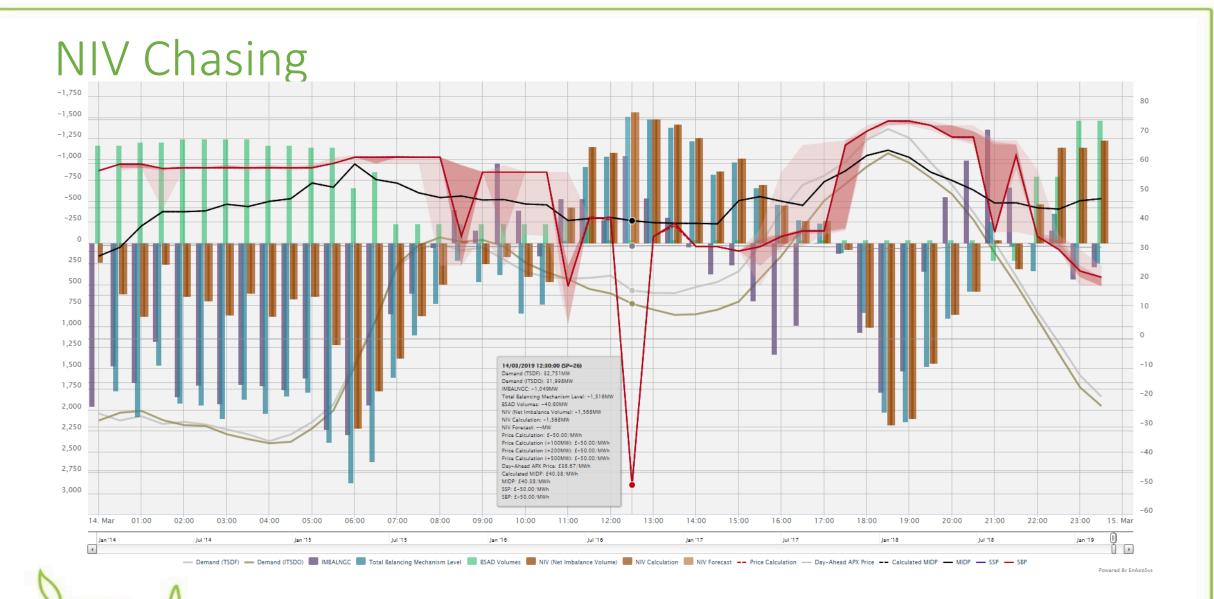


Qualify



BHM v in front of the meter: the evolving space - 2019 £116.02 / MWh £70.43 /MWh TNUOS GDUOS BSUOS CM FCL TNUOS DUOS BSUOS CM FCL





- Probabilistic method to forecast system price
- Too late to trade once this is known! Only option is within SP action



DNO Services

• Local constraints within DNO

networks now calling for flex

• Two way communication

with providers flagging

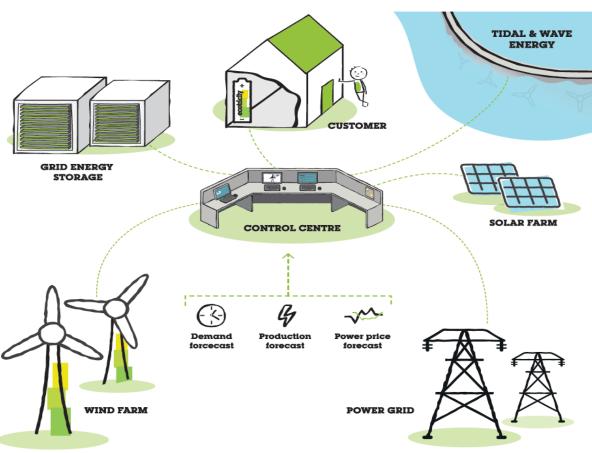
available units



Thank you for listening!

- Encourage clean energy
- Support the energy network
- Earn new revenue
- Be part of the Smart Grid!





smartgrids@ecotricity.co.uk

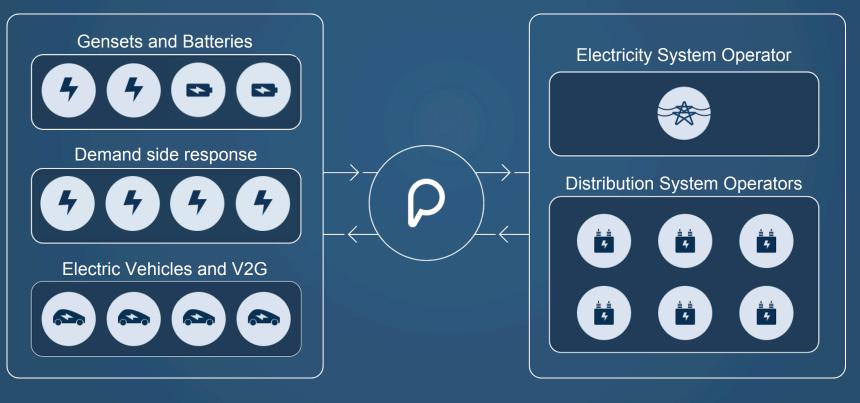
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Piclo Flex – Energyst Event 2nd May 2019

James Johnston CEO & Co-founder

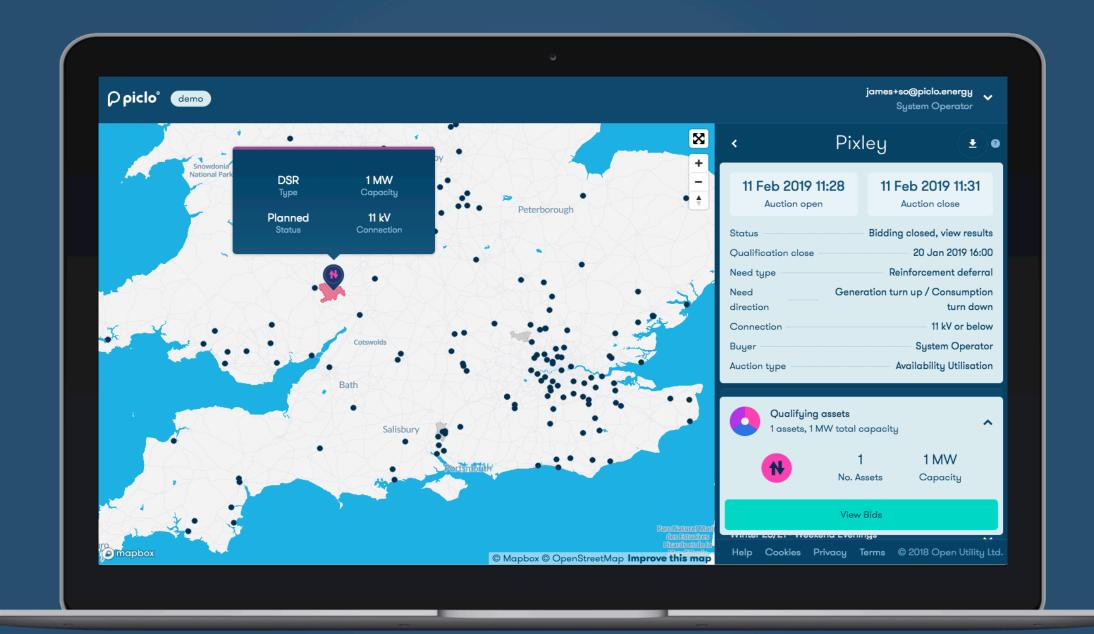
Our vision: a flexibility marketplace

• An open and transparent marketplace for buying and selling flexibility

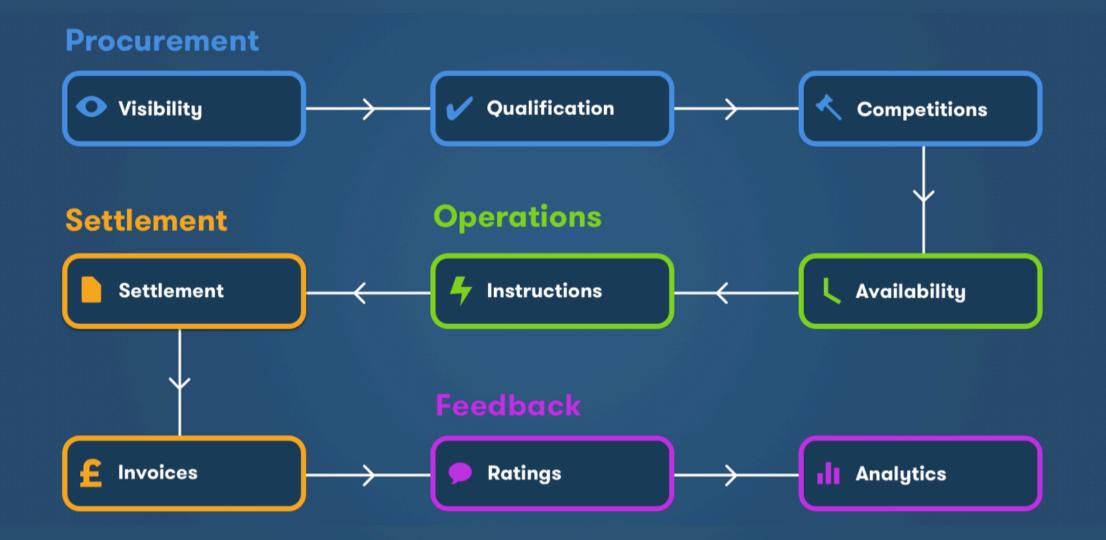


Flex Providers

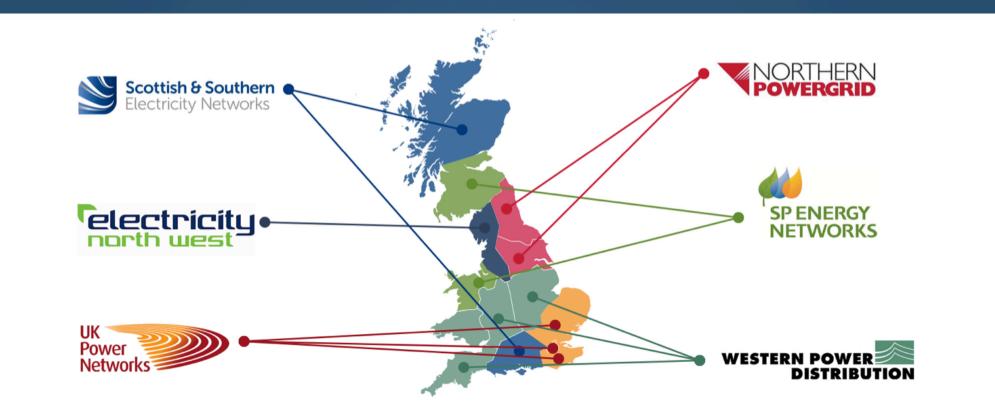
System Operators



Piclo Flex services and features



BEIS funded trials with all 6 DSOs



DSO trial parameters

| Flex Need Type | | Number of | DSO name | Total Capacity (MW) | Total Volume (MWh) |
|---------------------------|---------------|--------------|----------|---------------------------|-----------------------|
| | | competiti | UKPN | 103 | 199,780 |
| | | ons | SSEN | 51 | 65,252 |
| Reinforcement Deferral | | 33 | ENWL | 9 | 10,562 |
| Planned maintenance | | 10 | SPEN | 116 | 48,693 |
| | | | NPg | 13 | 11,168 |
| | | WPD | 165 | 132,352 | |
| | Pre- fault | 4 | Total | 457 | 467,807 |
| interrunti | | | | | |

pico®

Thank you

James Johnston

CEO and Co-founder

james@openutility.com +44 7880 603 378

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