
National Grid ESO
Delivering Inertia Services
nationalgridESO

Day to day operations

As the electricity system operator for GB, we move electricity safely, reliably and efficiently through the system.

We don’t generate or sell electricity and we are not responsible for the infrastructure, for example the pylons and cables, needed to move electricity around.

Find out more about the ESO’s role here

We balance the system in real time ensuring that supply and demand is
always met.

We operate 24/7, 365 days a year.

We help ensure the rules which govern the industry’s roles and responsibilities are fit for purpose.

Zero Carbon Operation by 2025

An electricity system that can operate carbon free

Key Enablers

New Technology

New providers of inertia, short circuit infeed and dynamic voltage support to deliver innovative sources of flexibility and dynamic stability

New Players

Increasing participation of demand side along with the emergence of new business models and combined technologies

New Markets

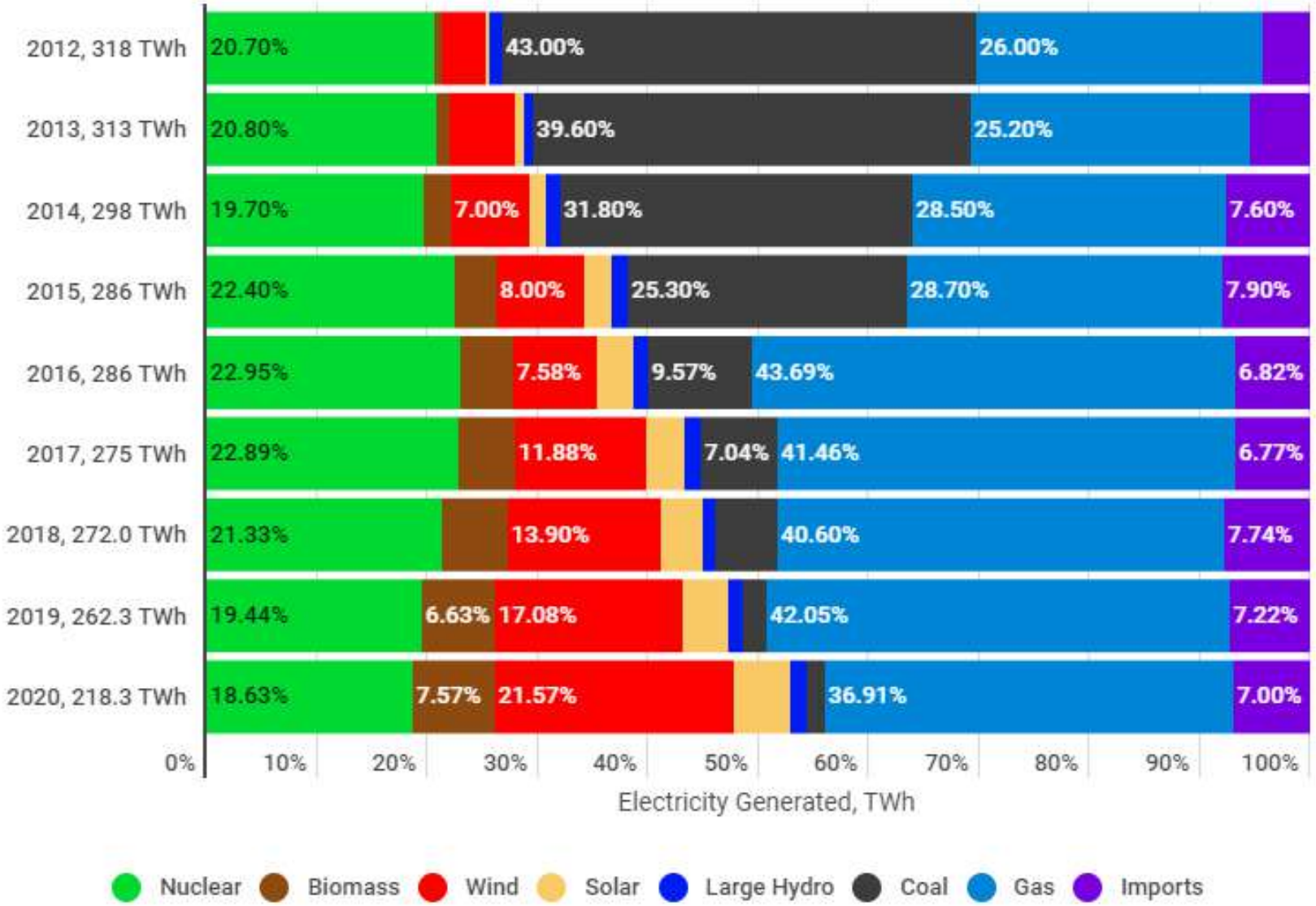
Marketplaces to efficiently source all of the new products and services that are needed, and opening up the markets to all

New Control Room tools

Advanced situational awareness and monitoring of system status plus real time dynamic analysis of system stability, improved forecasting

Timeline

Our changing energy mix



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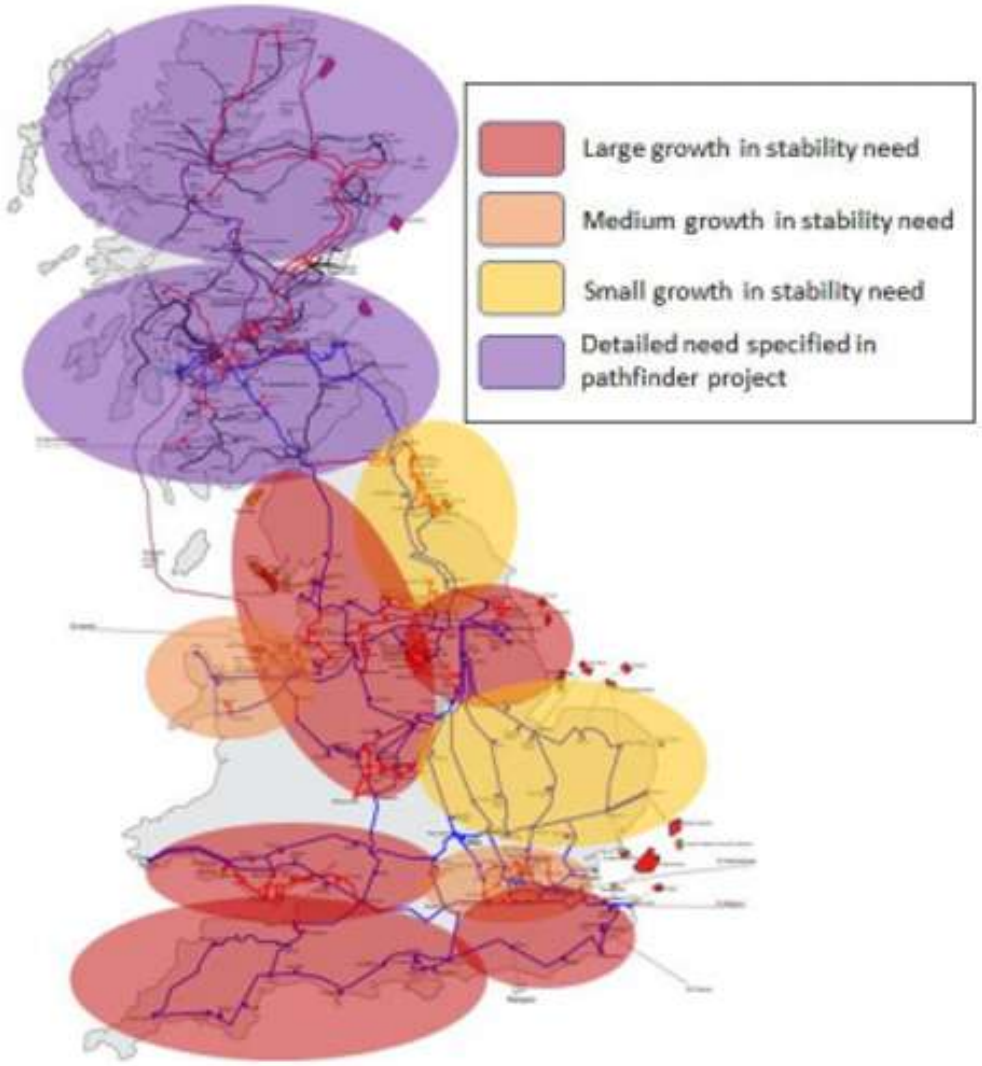
Stability Pathfinders

- Our assessment shows that our need for stability products is different across the country.
- In January we announced the results of our first tender for stability services – including inertia.
- This first phase looks at using existing and retrofitted assets to provide services.
  - In total, the six contracts selected the first round will provide 12.5 GVA seconds of inertia, the equivalent of the inertia provided by approximately 5 coal fired power stations.
- Phase 2, focusing on Scotland will open procurement to a broader range of technology types than Phase 1. We will tender for this service next summer with the view to contract signing in September 2021.

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Introduction to Welsh Power

ENA Parliamentary Event

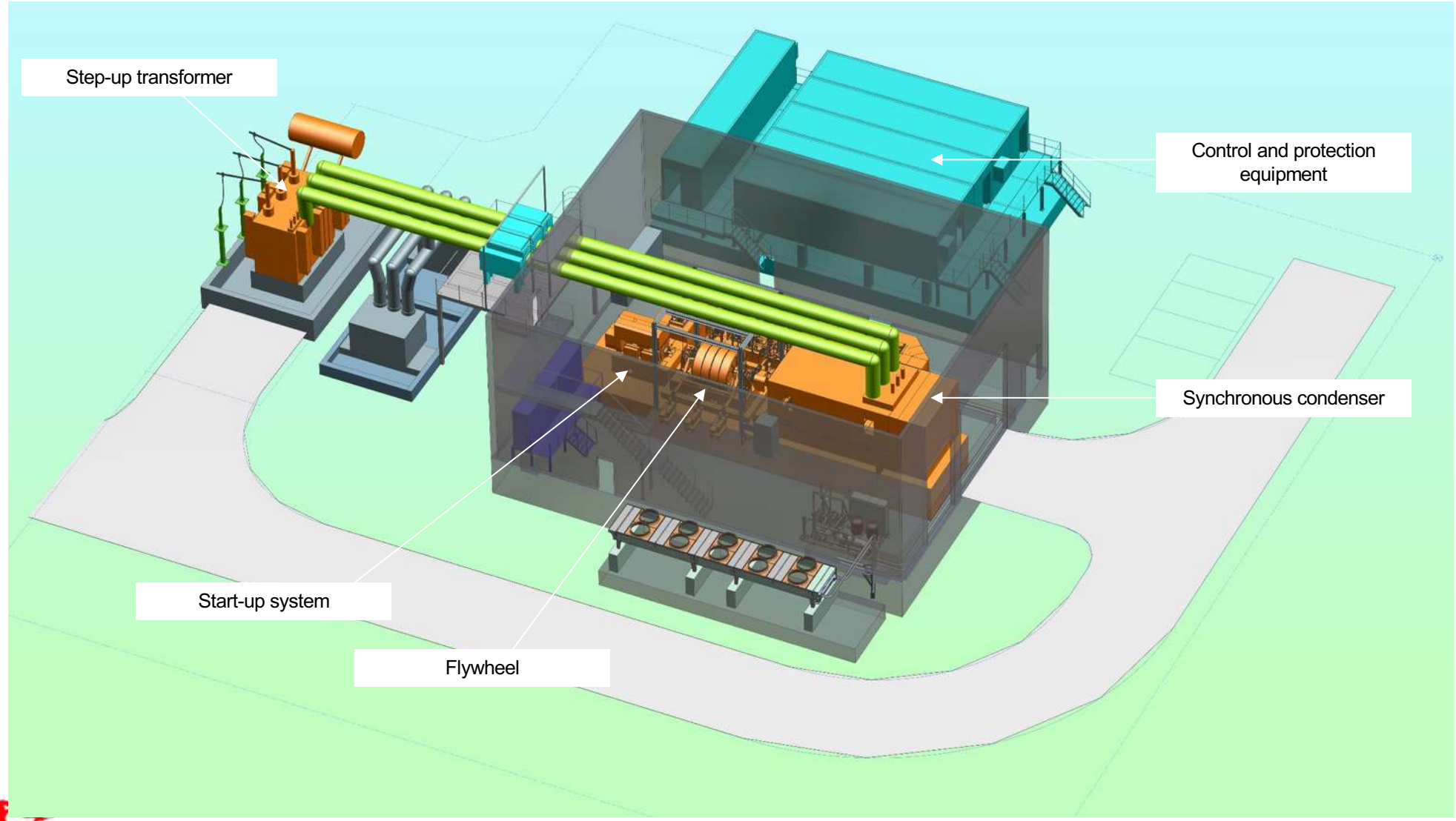
16/11/20

Welsh Power
Grid Services

Welsh Power – a brief history

- Welsh Power was formed in 2004
- Company has owned assets across the power generation value chain:
  - Power generation
    - Conventional and renewable
    - Large (850MW CCGT) and small (10MW peaking plant)
  - Electricity supply business
  - Power engineering
- Privately owned following an MBO in June 2011; now *employee owned*
- Over 140 years accumulated power industry experience in senior management team
- Currently managing 32 power projects for different customers. 550MW in total
- 36 employees; headquarters in Cardiff

Phase 1 stability project in South Wales



Welsh Power

Phase 1 stability project in South Wales

- https://www.current-news.co.uk/news/work-begins-on-welsh-power-inertia-site-under-national-grid-eso-contract
- Provides about 1% of GB inertia requirement
- Final investment decision during lockdown 1
- Supports highly-skilled jobs (in North of England and South Wales) during construction and operation
- Construction continues in COVID-safe environment

Welsh Power

Welsh Power's observations on system stability in a high-renewables world

1. Don't worry! The industry has got this covered!

2. NGESO are leading the way globally and doing exactly the right thing by publishing solution – neutral requirements and letting the private sector come forward with solutions

3. Regulation needs to keep up and there are currently gaps
   a) Key role for BEIS and Ofgem
   b) If done right, this will enable a level playing field, promote competition and reduce costs for consumers

Welsh Power