



Flexible energy to deliver net zero





Preparing the ground for the ANT transformation

Creating the environment for advanced nuclear to prosper and integrate

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The UK nuclear landscape

Where we are now, and where we're headed

- Government target of 24GW/25% of UK electricity generation by 2050
- LWR technology prioritised in recent Great British Nuclear SMR selection process
- Consultation expected soon on advanced nuclear technology (ANT) SMRs
- These are admirable achievements and goals – **but much more is needed**
- **The global nuclear industry is approaching a tipping point** in the scale, cost and role of plants as well as policy/financing backdrop



Department for
Energy Security
& Net Zero

GBN

will drive rapid
expansion of
nuclear power



**Shortlist revealed
in competition for
new nuclear**

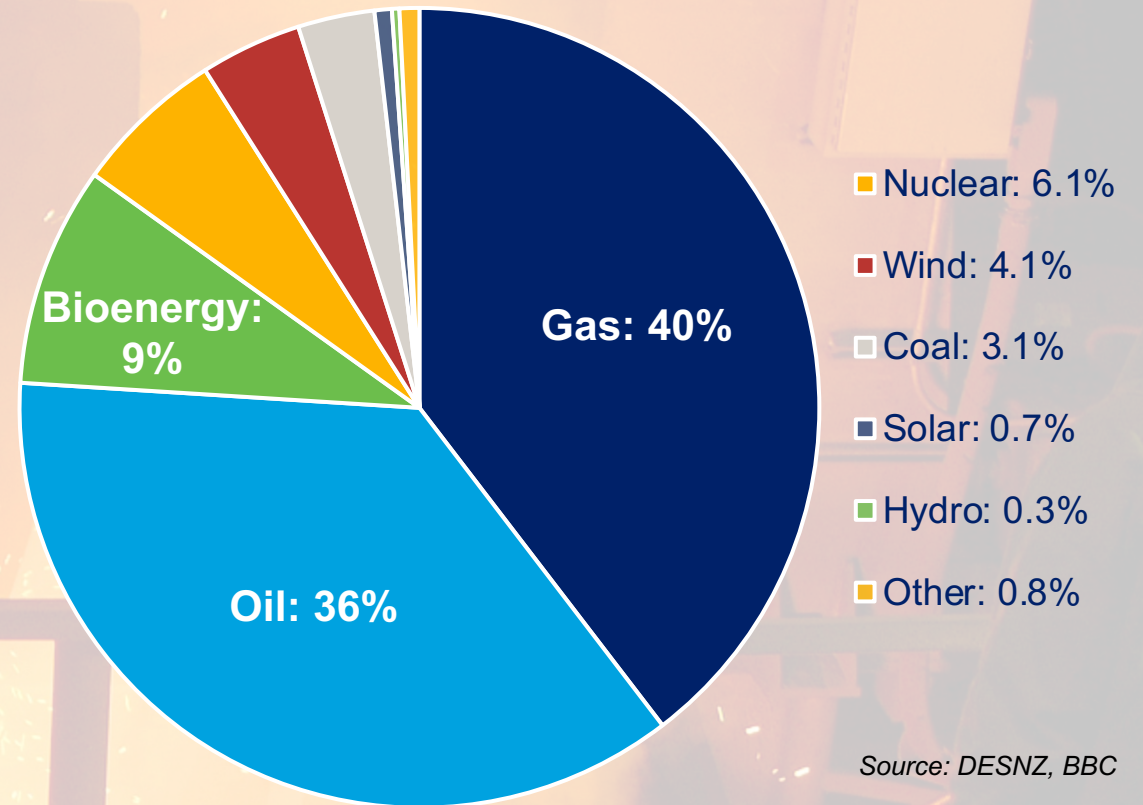


The vital need for ANTs

Meeting the challenge of deep decarbonisation

- Growth of intermittent renewables (wind, solar) requires flexible generation as back-up
- Increasing electrification pressurising the grid requires more generation local to point of demand/off-grid
- **ANTs can provide this flexibility**
- Hard to decarbonise sectors such as industrial process heat – typically provided by fossil fuels
- **ANTs can provide this heat, and ensure economic viability at a lower cost than unabated fossil fuels**
- Low-carbon tech must expand into the wider market, **or we will fail to meet net zero goals**

UK primary energy use 2022:
1,934 TWh / 166 mtoe



Source: DESNZ, BBC

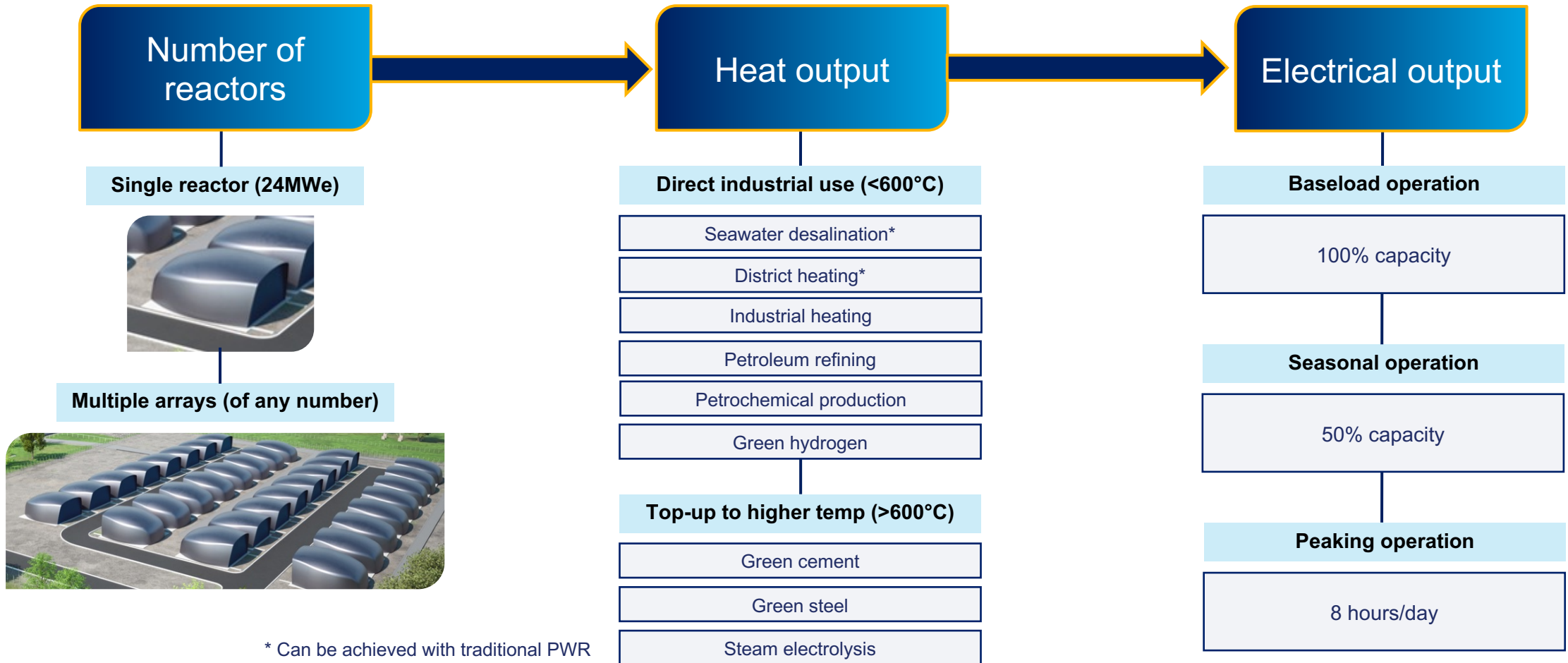
What needs to happen

Westminster must urgently enable ANTs

- Privately financed – can **deliver by the early 2030s**
- **Generational benefit** in energy security and industrial competitiveness
- Narrow window of opportunity – needs **clarity, foresight and commitment**
 - Comprehensive **nuclear roadmap** to stimulate broad investment
 - **Siting policy** that matches the ambition
 - **Sovereign capability** to intelligently assess, and deploy the technology
 - **Regulatory access and capacity** to assess designs
- **Commitment and cross-party support** needed to ensure long-term stability and deliver the roadmap

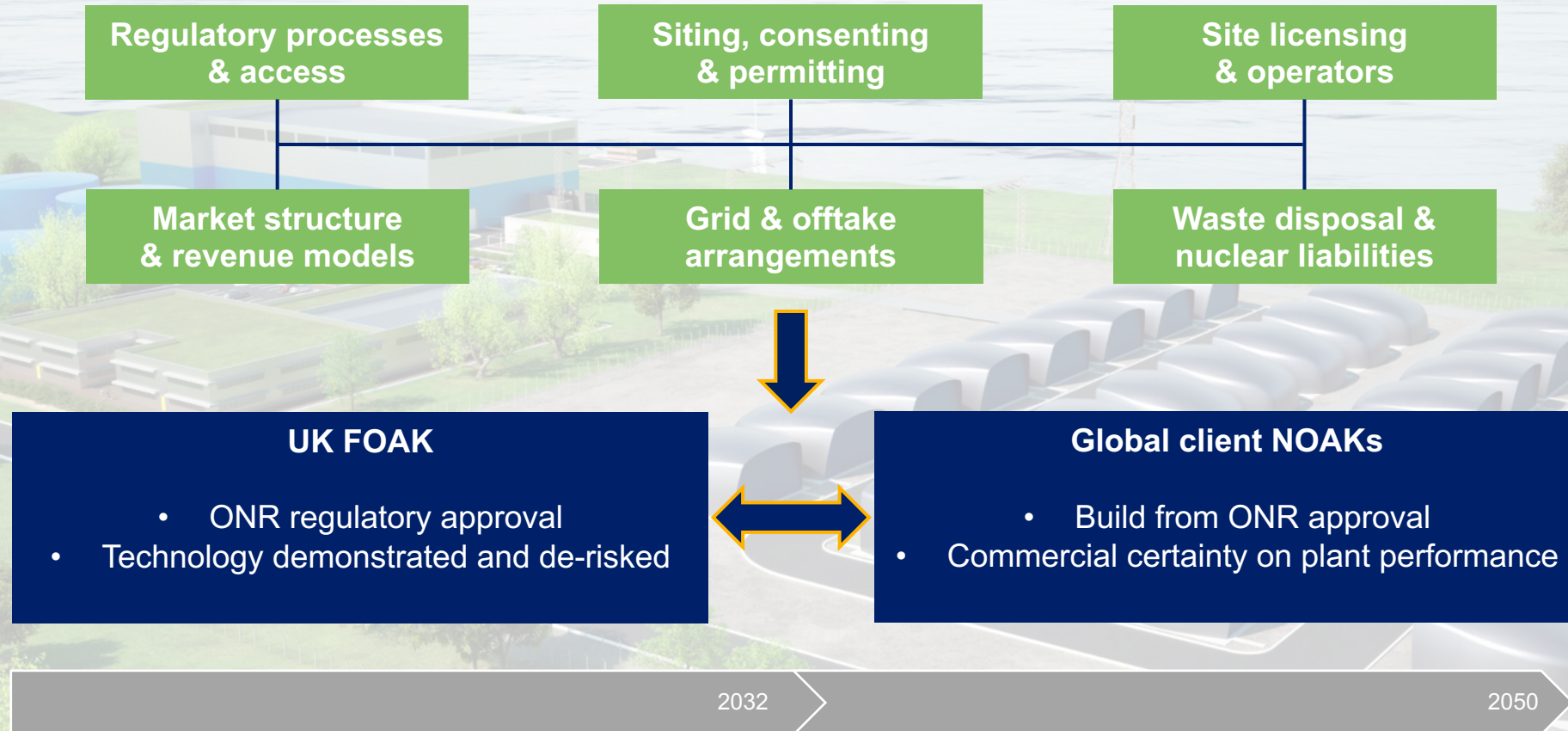
Our own example

Multiple use cases offer flexibility for customers and end-market from the early 2030s



The policy & enabling framework

These factors must be in place for ANTs to meet the 2050 timescale





Thank you

If you have any questions, please contact davidlandon@moltexenergy.com