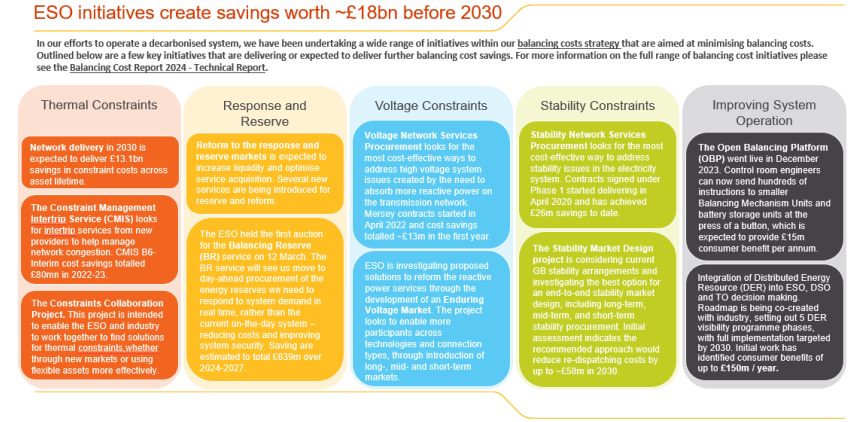
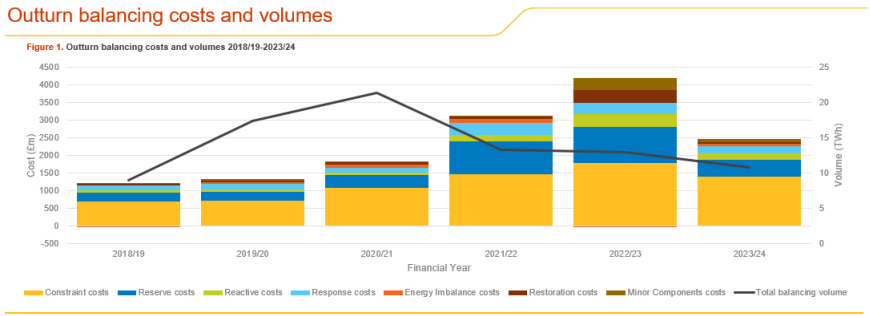
Balancing Costs: Annual Report and Future Projections

Industry Webinar

May 2024

ESO





Overall Balancing Costs are significantly lower in 2023/24 (total spend £2.4 bn) compared to 2022/23 (total spend £4.1 bn). Absolute Balancing Volumes have also reduced in 2023/24 (10.8 TWh) and are much lower than the 2020/21 peak (21.4 TWh).

This decrease in costs can be attributed in part, to a substantial reduction in wholesale energy prices. The ESO has also directly contributed to this reduction through implementation of the initiatives outlined in our balancing costs strategy and elaborated upon in this report.

- ESO's first Annual Balancing Costs Report to be published today
- ESO continues to be transparent on balancing costs and we are always looking for improved ways of achieving this
- This report will contain, a look back at previous costs, future projections and outline ESO continued efforts to minimise balancing costs

Key messages

Balancing costs are projected to rise out to 2030.

Although wholesale prices have been a major driver of balancing costs in recent years, constraint costs are also rising due to significant changes to the GB generation mix, with up to 80 GW connecting by 2030 in our most ambitious decarbonisation scenario. Constraints will be the main driver of future balancing costs. ESO initiatives are mitigating this increase.

Decisions made now will shape balancing costs into the 2030s.

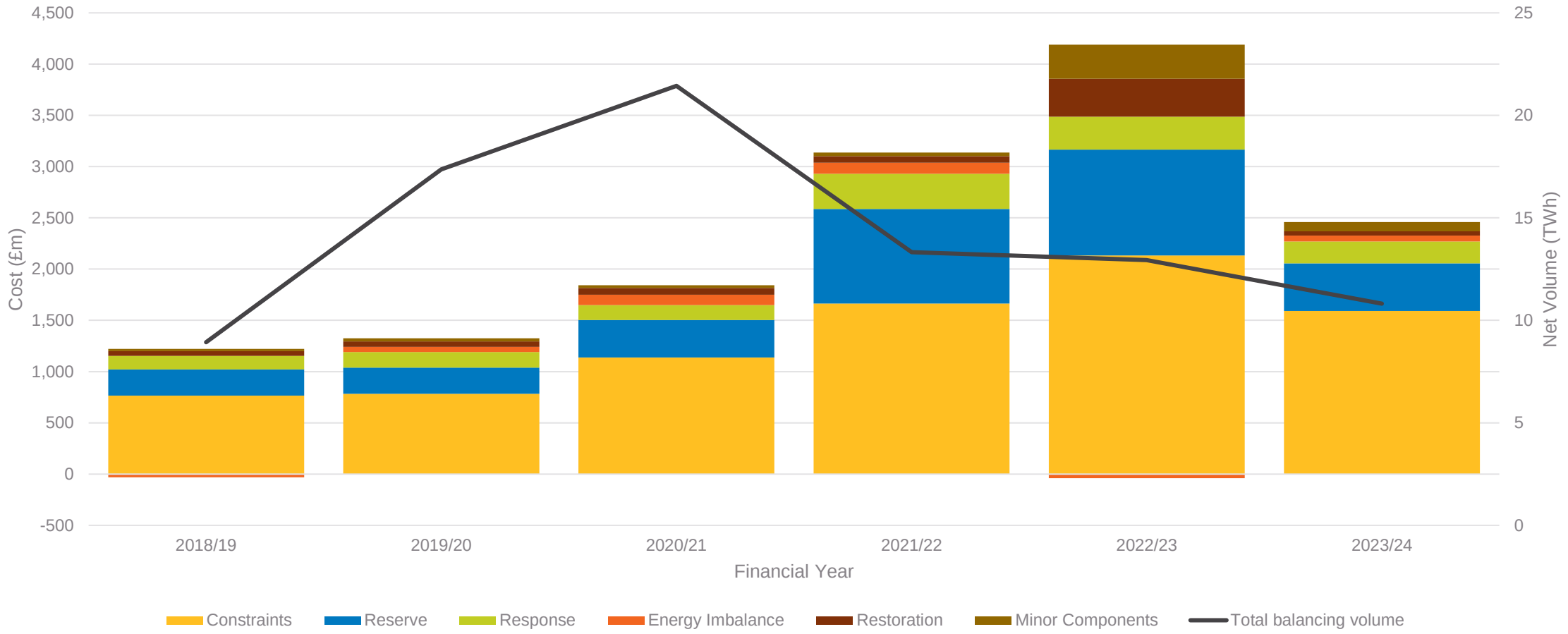
As we take on new roles in whole system planning, we can have a positive impact post-2030. Key decisions that will impact Balancing Costs include those considered in REMA, and those in Network Development, Connections, and new markets to aid balancing.

ESO initiatives create savings worth ~£18bn before 2030.

Future balancing costs are not fixed and can still be influenced by proactive initiatives from us and industry to reduce costs. We have been undertaking a wide range of initiatives within our balancing costs strategy that are aimed at minimising balancing costs, including our Beyond 2030 report, ASTI, new markets such as Balancing Reserve, and many others.

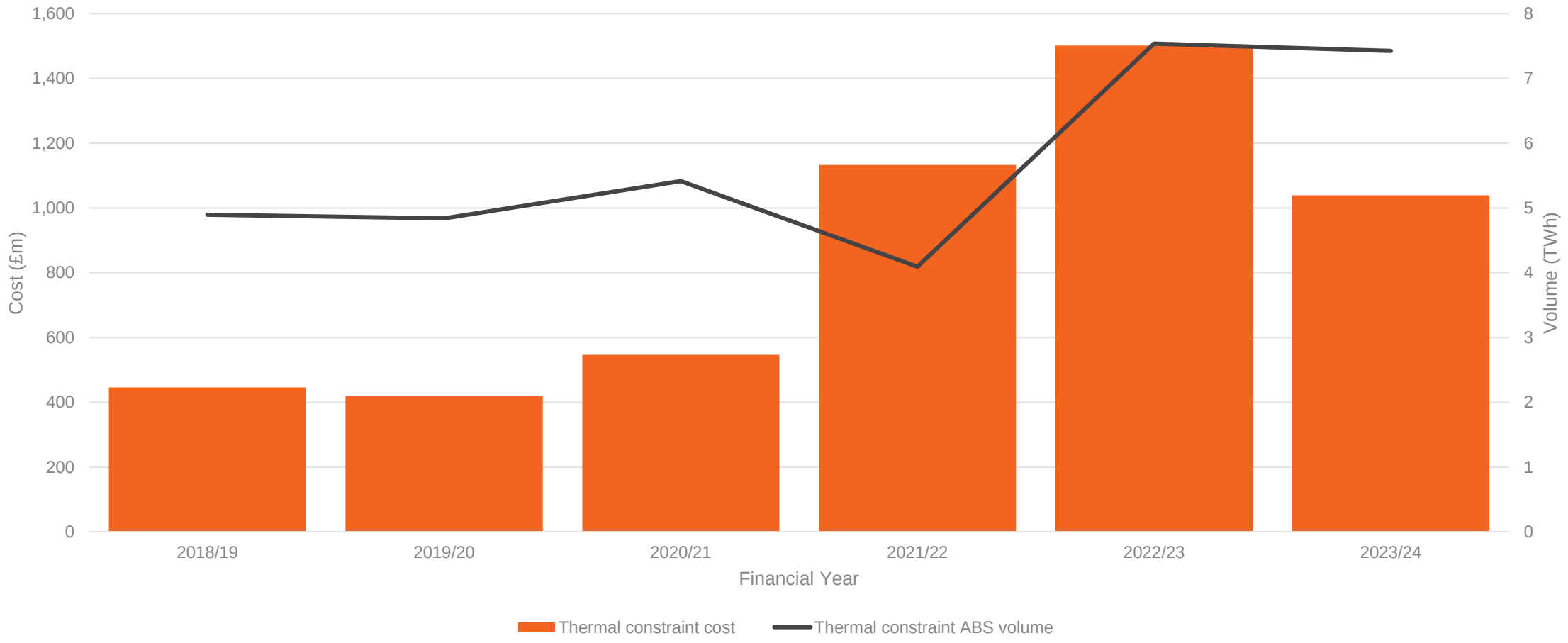
Overview of balancing costs and volumes in recent year

Figure 1. **Outturn balancing costs and volumes 2018/19-2023/24**



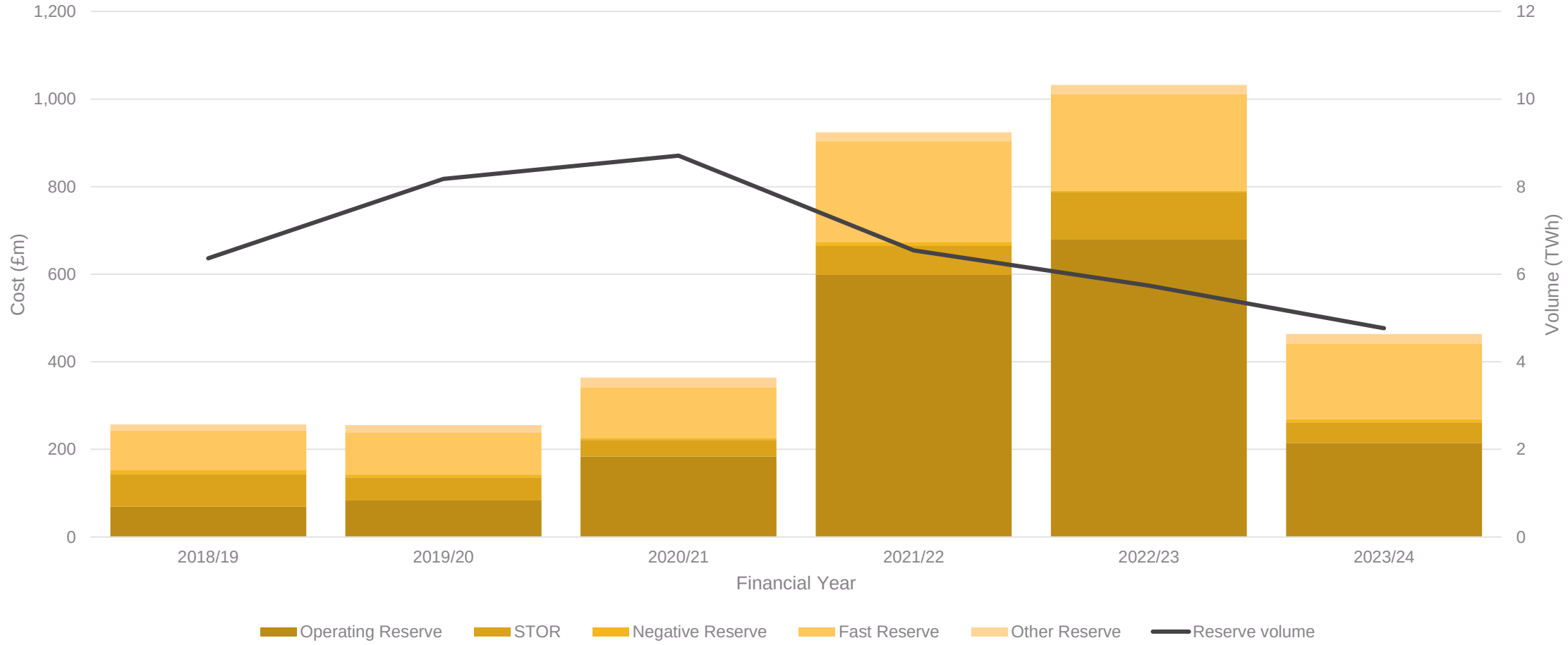
Overview of thermal constraint costs and volumes

Figure 2. **Outturn thermal constraint costs and volumes 2018/19-2023/24**



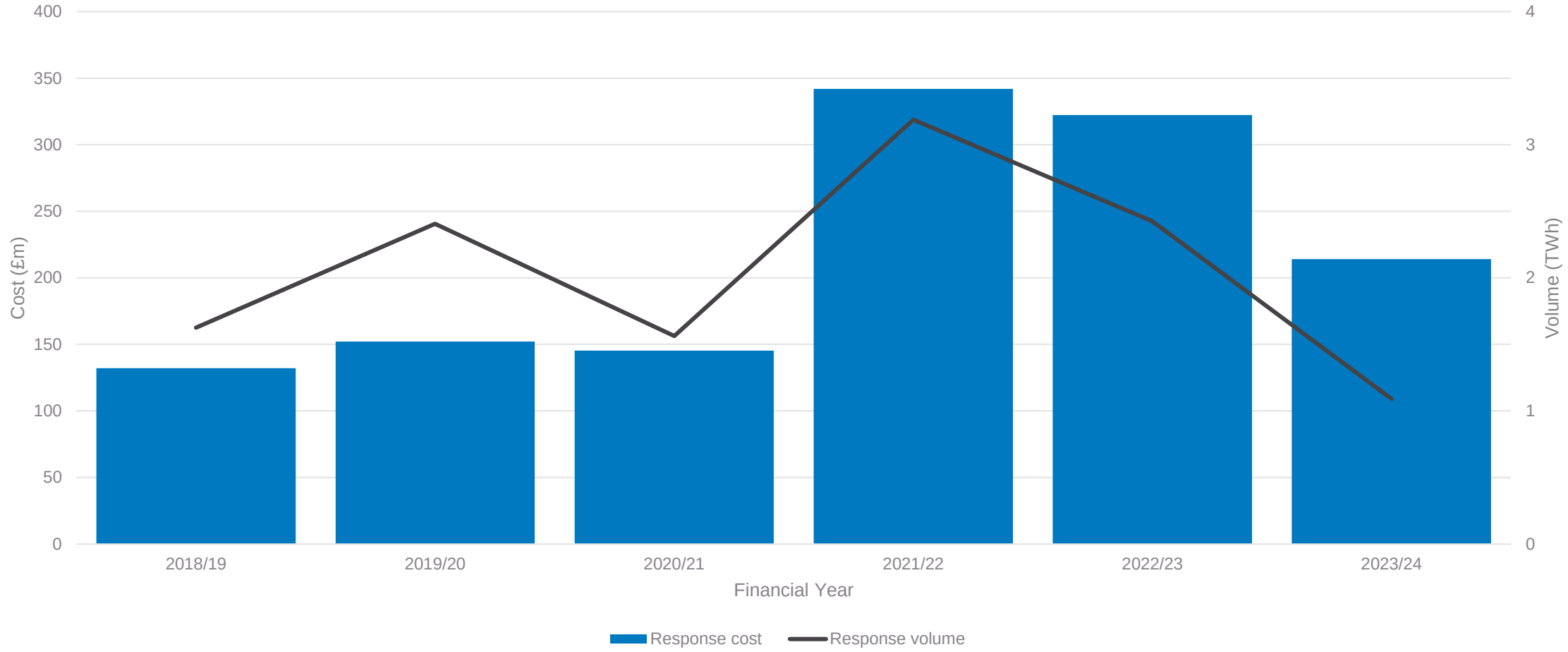
Overview of reserve costs and volumes

Figure 3. **Outturn reserve costs and volumes 2018/19-2023/24**



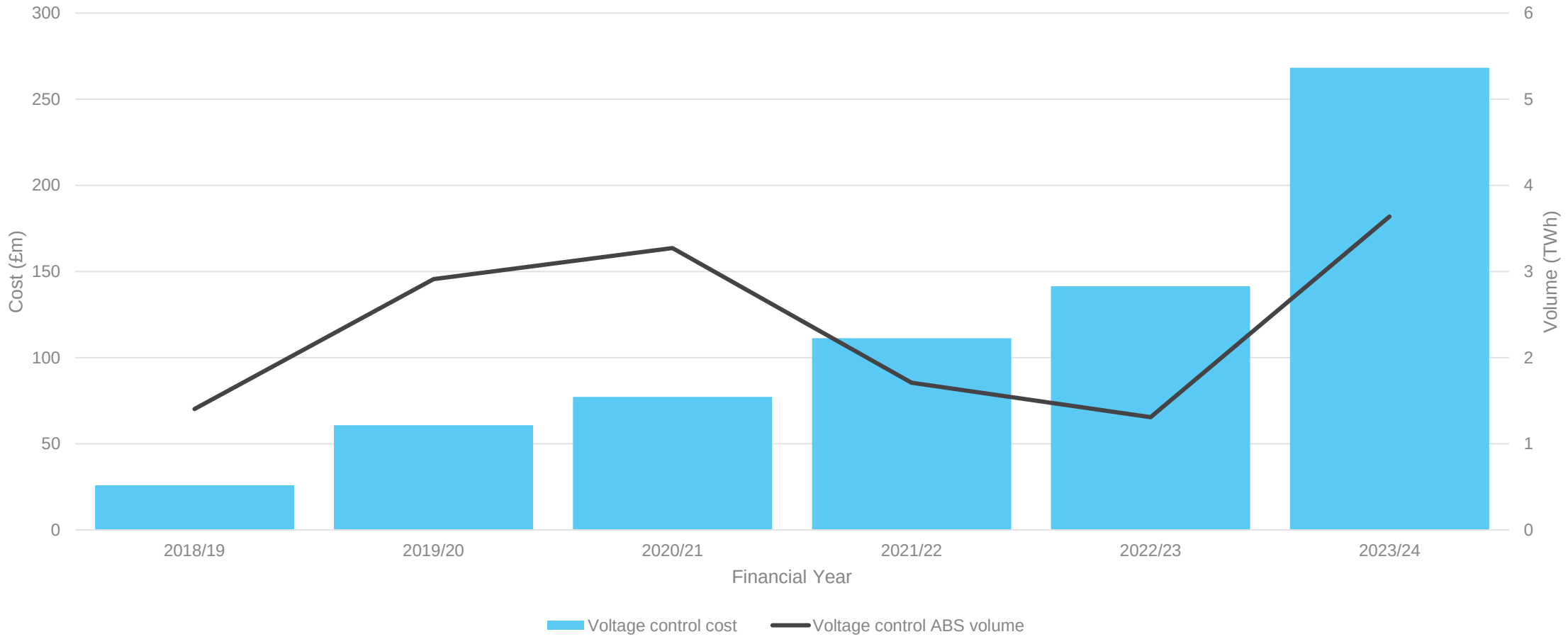
Overview of response costs and volumes

Figure 4. **Outturn response costs and volumes 2018/19-2023/24**



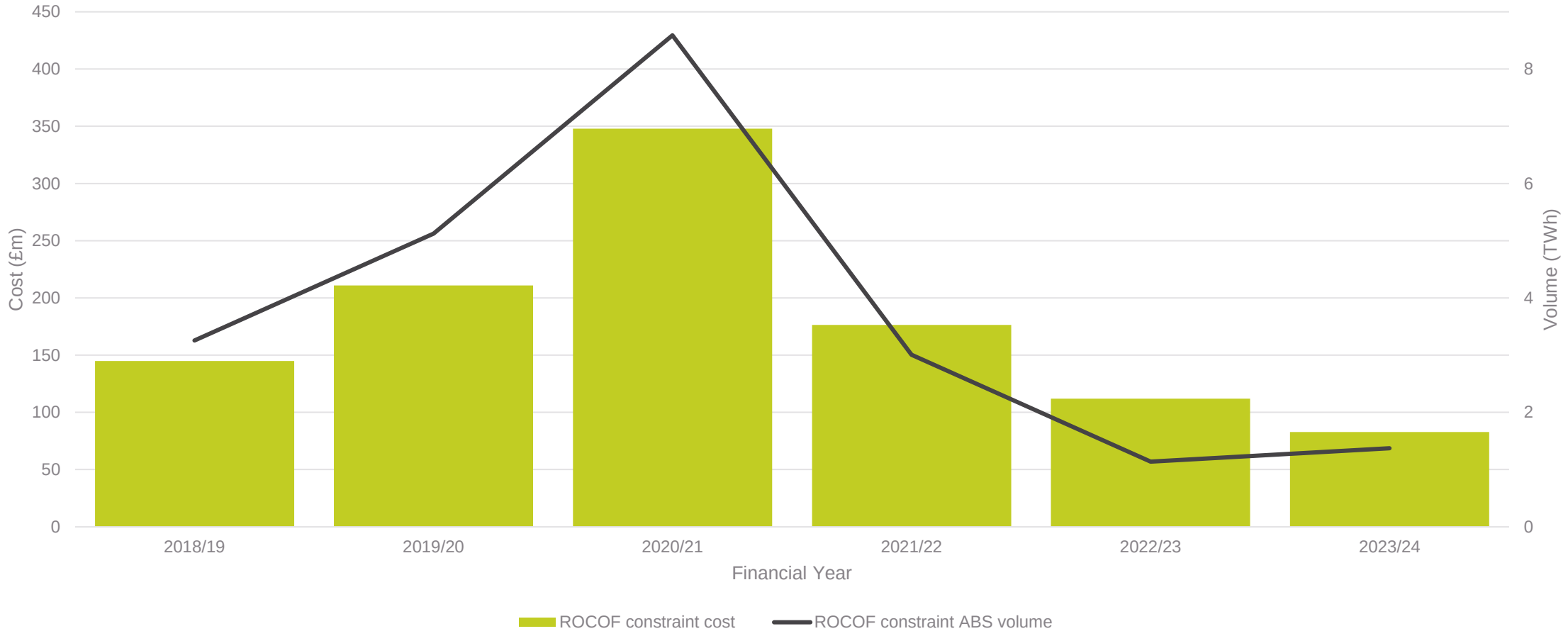
Overview of voltage costs and volumes

Figure 5. **Outturn voltage costs and volumes 2018/19-2023/24**



Overview of inertia costs and volumes

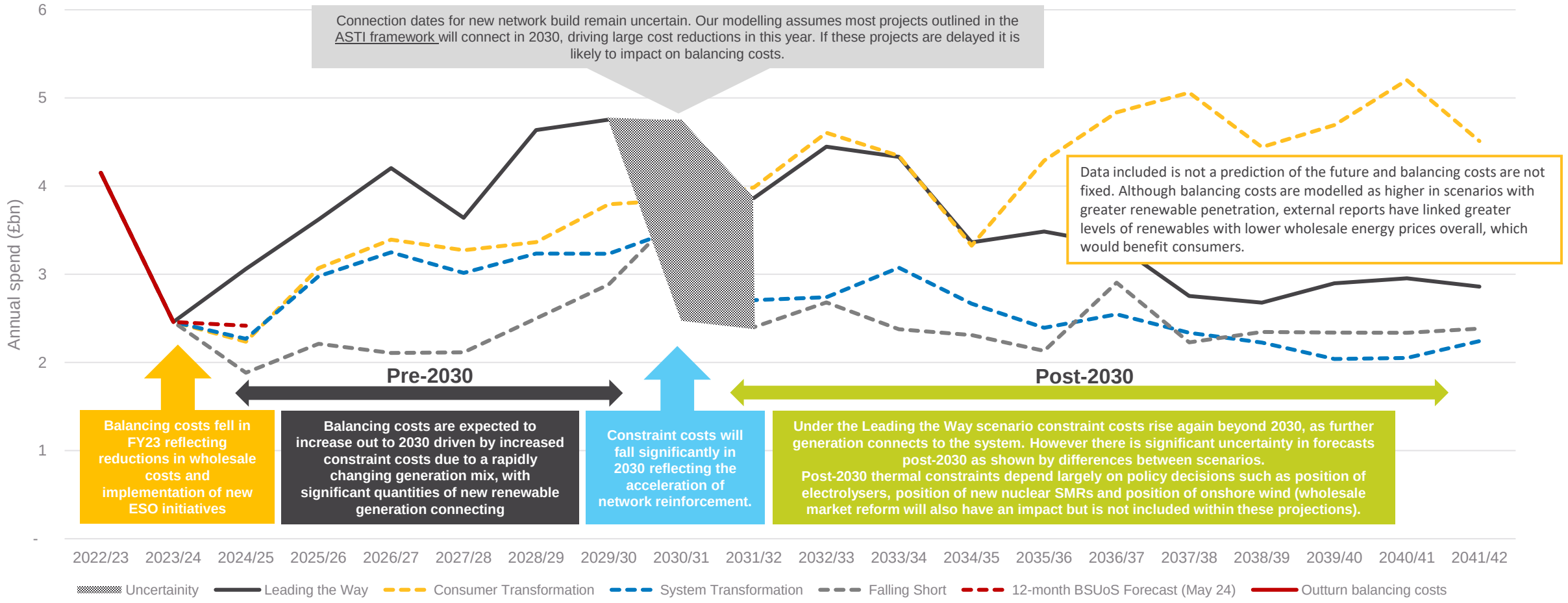
Figure 6. **Outturn inertia costs and volumes 2018/19-2023/24**



Balancing costs are projected to rise out to 2030 and decisions made now will shape balancing costs into the 2030s

Balancing costs currently contribute to ~4% of electricity bills for an average domestic consumer, making them a minor component of electricity bills.

Figure 7. Projection of balancing costs extrapolated from Leading the Way residual thermal constraint projection



For more information on pathways see our latest Future Energy Scenarios (FES) report

ESO's Balancing Cost Strategy

Levers to minimise balancing costs

Network Planning & Optimisation

Designing the GB network and managing delivery of changes to optimise availability and reduce Constraints.

Commercial Mechanisms

Designing and Procuring new services, with greater competition at an optimised price.

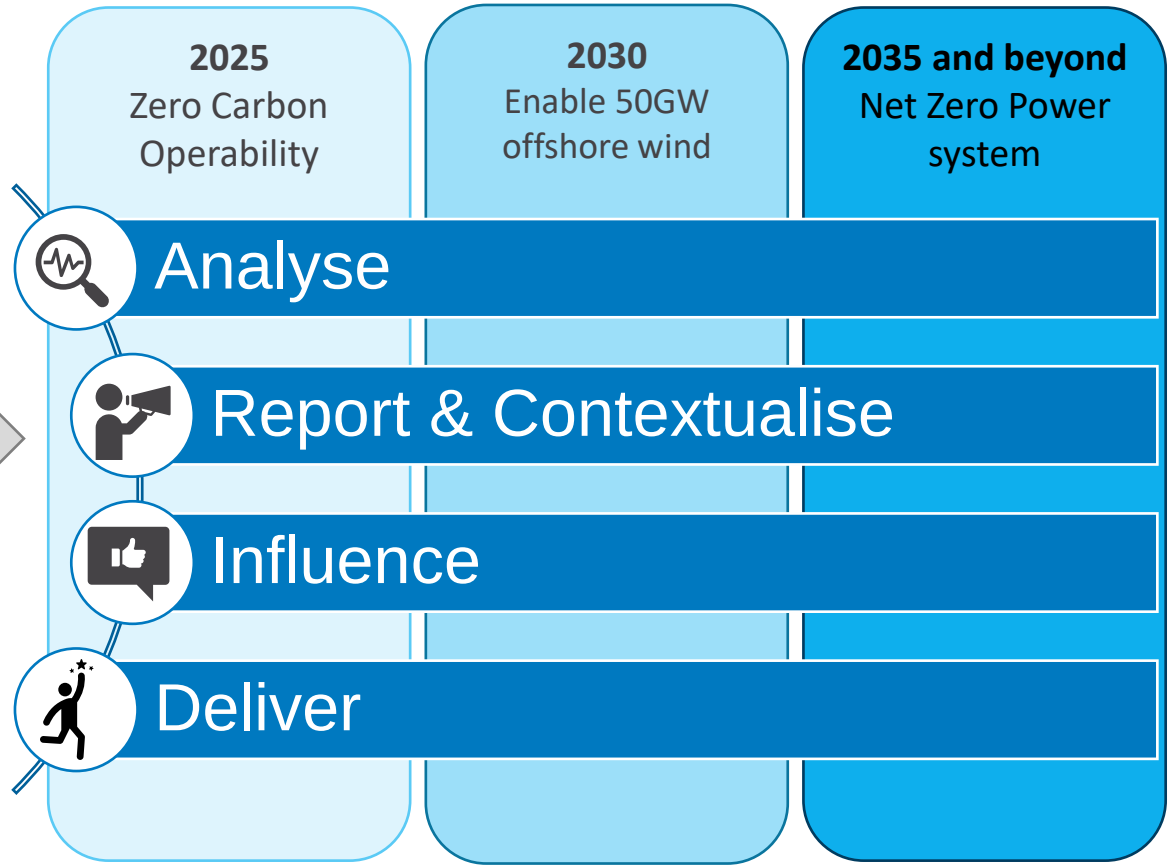
Research, Innovation, Engagement

Experimenting with first in sector approaches and technologies, collaborating with Industry and Academia.

ESO Capabilities

Using enhanced products and services provided to the Control Room, optimising security, supply and cost.

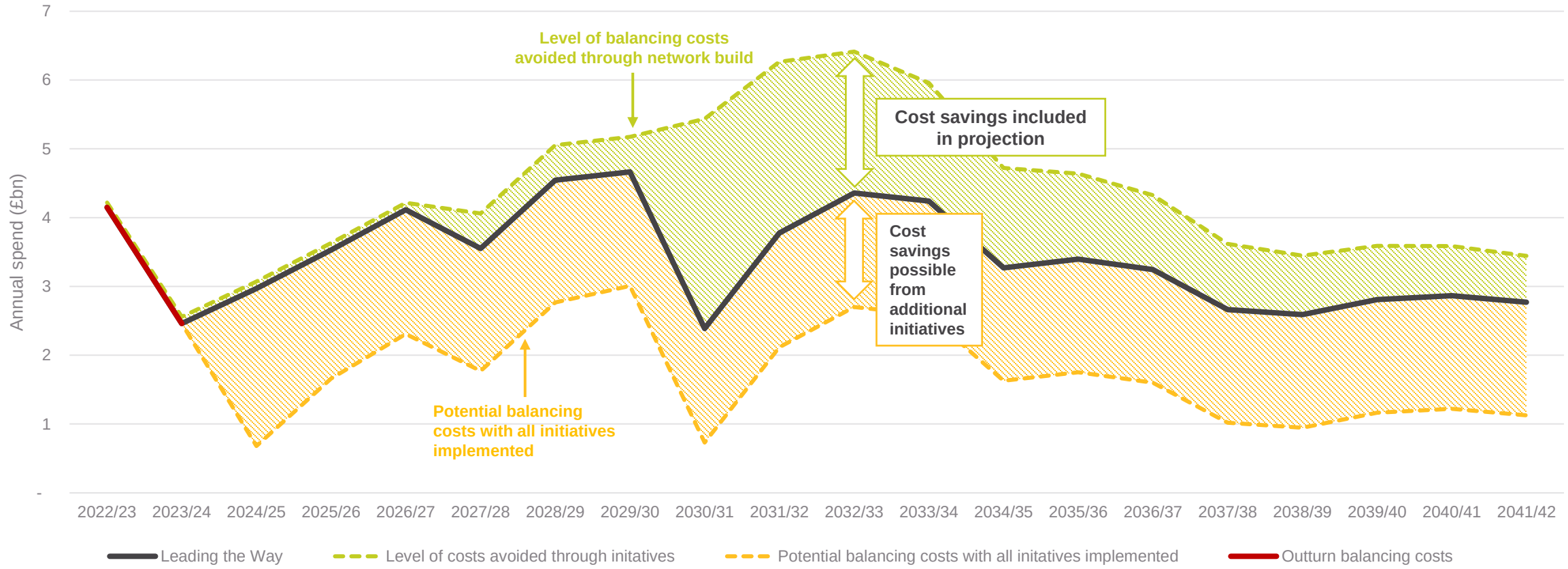
How we use these levers



See our full Balancing Cost Strategy here

ESO initiatives create savings worth ~£18bn before 2030

Figure 8. **Balancing cost savings delivered through network reinforcement and initiatives**



Some cost saving initiatives are already baked into the cost projection and are therefore already reflected in our baseline balancing cost assumptions. These avoided costs **(green)**, largely account for network reinforcement projects outlined in initiatives such as the Holistic Network Design (HND) that aim to manage thermal constraints. Network delivery in 2030 is currently expected to deliver £13.1bn savings in constraint costs across asset lifetime, significantly lowering costs around this period.

The ESO is also undertaking a number of further initiatives that have the potential to reduce balancing costs below the projection. Additional potential savings **(orange)** consider a much broader range of options to lower costs associated with reserve, voltage, response, inertia, ESO operations, and market activities.

ESO initiatives create savings worth ~£18bn before 2030

We continue to implement innovative solutions to build on our already delivered consumer savings of £5.6 bn in Business Plan 1 (2021-2023)

- Thermal Constraints
- Response and Reserve
- Voltage Constraints
- Stability Constraints
- Improving System Operation

Balancing costs Portfolio

If you have any questions or queries relating to the Balancing Costs Strategy, please reach out to box.Balancing.Costs@nationalgrideso.com

For further information on ESO publications please visit: nationalgrideso.com

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