

Comparing the inertia costs (£/GWs/annum) in the FRCR to prices bid in Stability Pathfinder Phase 1 Tender

FRCR Unit Inertia Costs

The table below has been taken from the FRCR 2024 (see 6.1.1 System residual risks vs. cost)

Scenario	140 GVA.s	120 GVA.s	110 GVA.s	102 GVA.s
Cost for system-wide controls (NB: system-wide controls include inertia and all response costs)	£374m	£242m	£209m	£193m
Cost to meet minimum inertia (this element is included in system wide cost)	£194m	£62m	£29m	£13m
Cost for Dynamic Containment (this element is included in system wide cost)	£51.83m	£51.98m	£52.06m	£52.12m
Incremental saving		£132m	£33m	£16m

Calculations

Cost (to meet minimum inertia) increase from
120 GWs to 140 GWs (£m) = £194m-£62m = £132m

Unit cost of inertia
(£m/GWs/annum) = £132m / (140GWs-120GWs)
=£6.6m/GWs/annum

SPP1 Unit Inertia Costs

Project with lowest accepted bid price according to Stability Pathfinder Phase 1 (SPP1) Tender:

<https://www.nationalgrideso.com/document/162081/download>

Company Name	Connection Point	Inertia (MVA.s)	Firm Cost (£/SP)	Power Consumption (MW)
Deeside Power (UK) Ltd	CONQ	1533	218.14	2

The SPP1 bids are in 2020 prices.

Calculations

<https://downloads.elexonportal.co.uk/file/download/34073?cachebust=3oittyf58w>

Average system imbalance price 2020-2023 £/MW	= £110/MWh
Annual MWh power consumption	= 2MW*8760 hours =17,520MWh
Cost of power consumption (£/annum)	= 17,520MWh *£110/MWh = £1,927,200/annum
£/annum firm cost (availability fee) / annum	= £218.14/SP*48 hours *365 days =£3,821,812/annum
£/annum firm cost (availability fee) / annum accounting for inflation (CPI April 2020- April 2024= 1.23)	=£3,821,812*1.23= £4,700,829/annum
Total Cost £/annum (cost of power consumption and firm cost)	= £1,927,200 + £4,700,829 = £6,628,029/annum
£/MWs/annum	= £6,628,029/ 1533MWs = £4,324/MWs/annum
£m/GWs/annum	= £4,324MWs/annum / 1000 =£4.32m/GWs/annum

Conclusion

The unit cost of inertia accepted in Stability Path Phase 1 Tender (£4.32m/GWs/annum in March 2024 prices) is much lower than the unit cost of inertia assumed by ESO in the FRCR 2024 (£6.6m/GWs/annum).