



Transmission Charging fit for 2020?

The case for a review

Evolution of the current methodology

- Developed in 1999/2000 for introduction with NETA in 2001
- Baseline of generation over-capacity
- Most new plant CCGT
 - Flexible siting options
 - Flexible dispatch
- Zero/very low aspiration to decarbonise energy production

What about 2010?

- Pending generation shortages
 - LCPD/IED
 - Age
- Siting decisions no longer flexible
 - Renewables – close to energy source
 - CCS – near to infrastructure/storage
 - Nuclear – 12 sites set by Government
- Big increase in inflexible plant
- Government targets for carbon abatement and renewables

Problems with cost reflectivity

- Charging is based on 100% use
 - not renewables and back-up or storage plant
- Boundaries are different
 - Inconsistent charges (eg London varies £6/kW)
- Calculated, not real investment costs used
 - Shetland Isles £120/kW vs £40/kW
- Upgrade through uprating existing lines - charging methodology assumes replacement of whole line

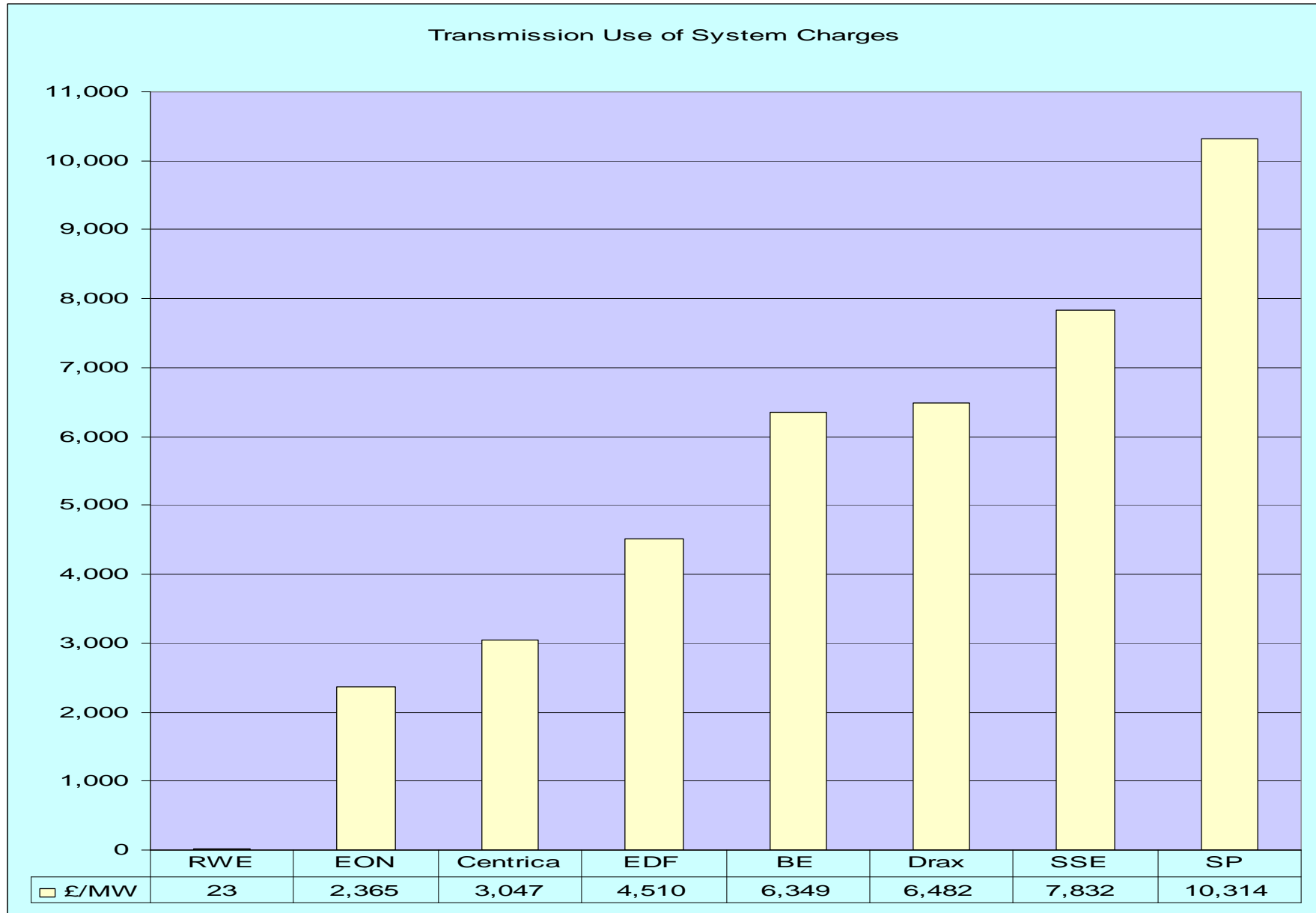
Problems with locational signals

- National Grid predicts constraint costs for both Scotland and the Thames Estuary of ca £100m for 2010/2011 yet
 - Scotland has very high tariffs
 - Mainly negative charges in the Thames Estuary
- Scotland and Wales anticipate new generation of 7-8GW at a cost of £1.5 - £2bn yet
 - Scotland charges from £11 - £22/kW
 - Wales charges £4 - £7/kW

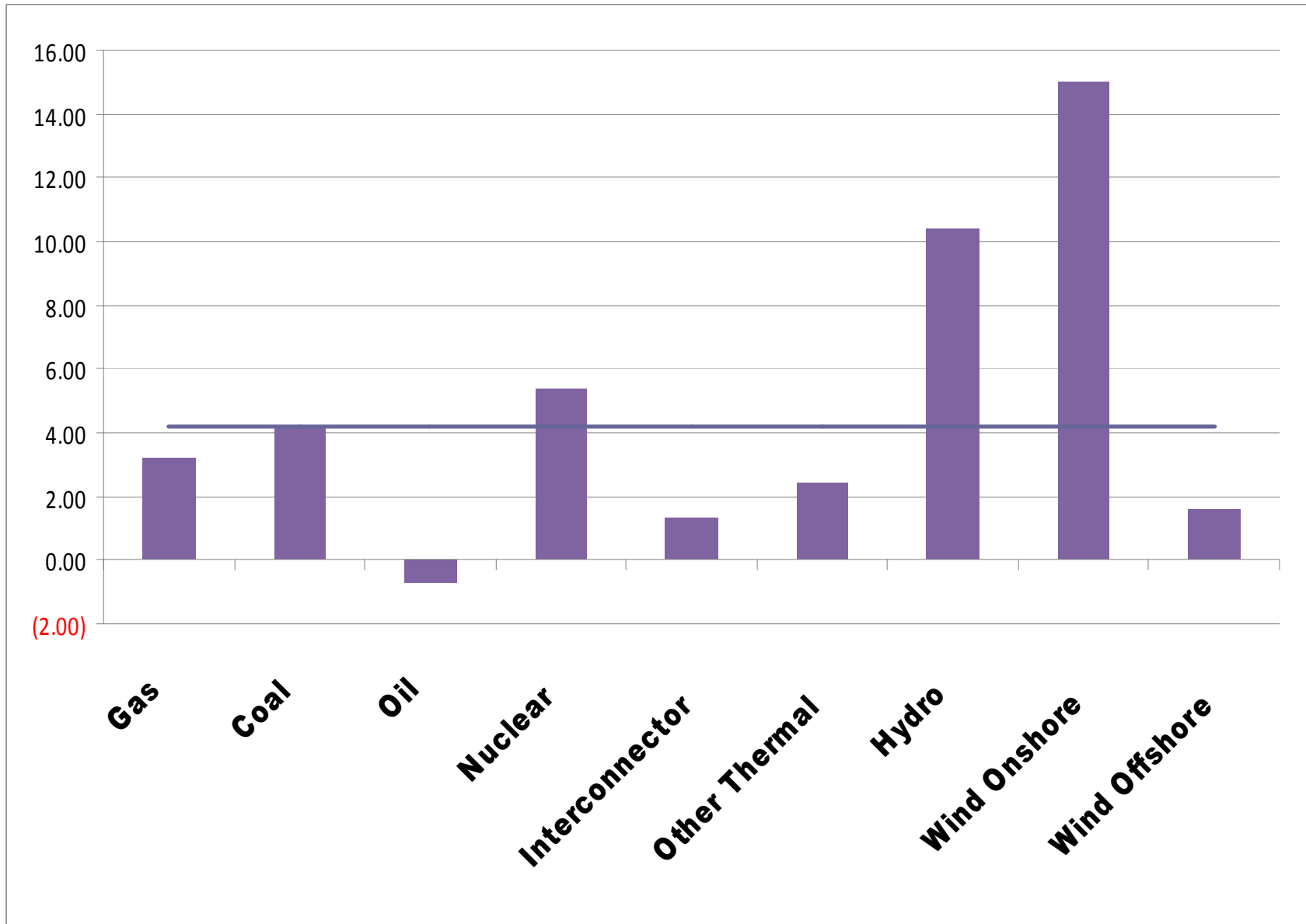
Problems with predictability

- The addition of offshore transmission assets will perversely reduce onshore transmission charges right across the network
- Adding new infrastructure to accommodate generation that locates despite high charges leads to **reduced** charges
- DC technology miscalculations
 - Bootstrap estimates overcharge by 5 times

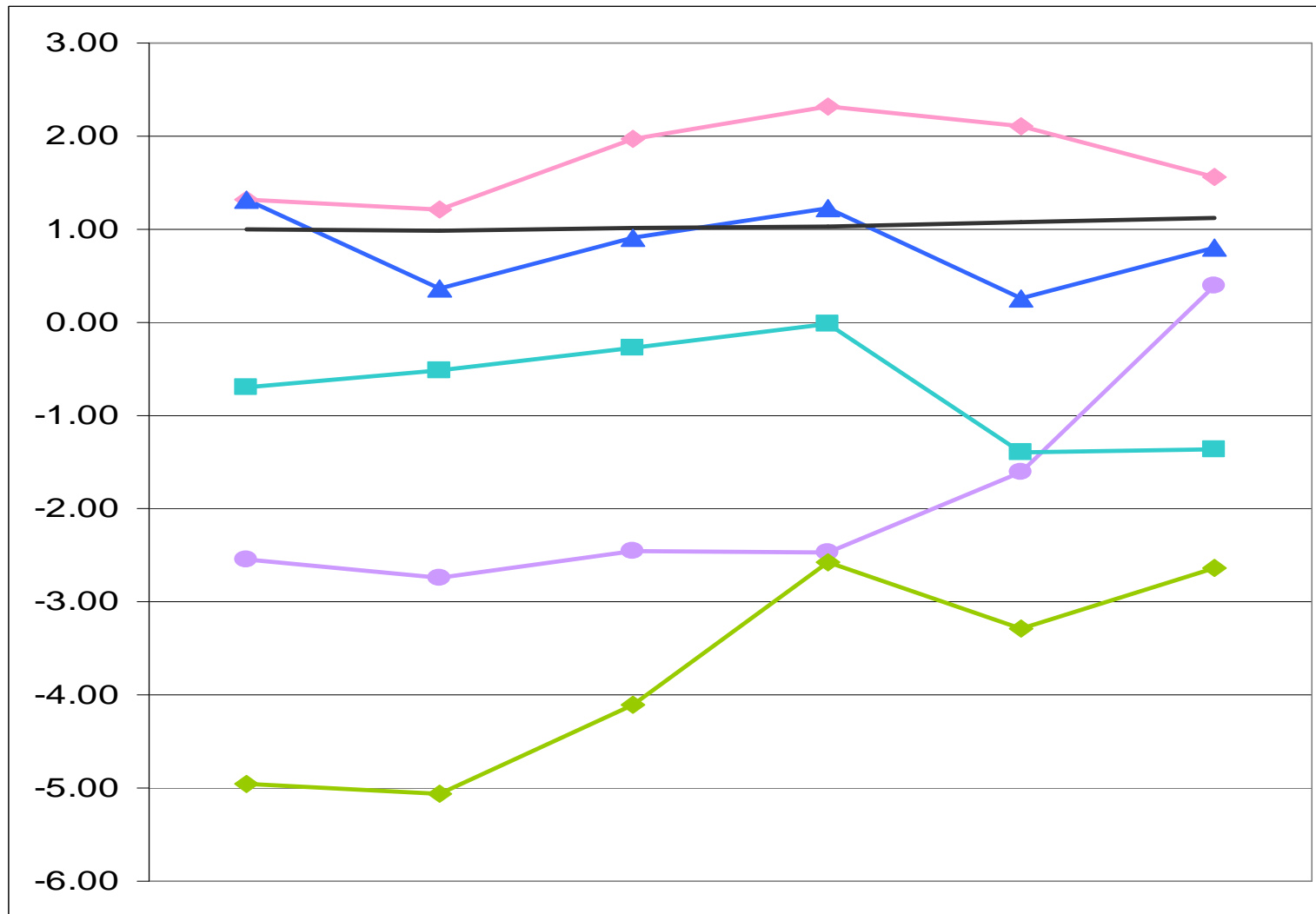
Value transfer between generators



Value transfer between technologies



Problems with stability



Problems with cross-border trade

- The methodology is inconsistent with other EU Member States with implications for cross border trade
- A generator in South West Ireland pays £6/kW to supply a customer in the North of Scotland where the local generator has to pay £22/kW
- Supplying England from anywhere in France is cheaper than from anywhere in Scotland

How does GB compare in EU

- Only 11 of the 27 Member States have a generation charge
- Of the 11 GB has the second highest generation share of TNUoS, only Romania is higher
- Most have shares of less than half of GB
- Only 5 of the 11 have a locational component to generation TNUoS
- Of those 5, GB has the widest range (€14/MWh compared to 8.5, 4.5, 2.0 and 1.5)
- Of those 5, GB has the highest charge (€12/MWh compared to 11, 9, 9, and 5)

Principles of charging

- ***Facilitate Competition*** - in the generation and supply of electricity
- ***Cost Reflective*** - the Use of System Charging Methodology should result in charges which reflect, as far as reasonably practicable, the costs
- ***Business Reflective*** - properly takes account of the developments in transmission licensees' transmission businesses

National Grid's objectives

- clarity of principles and transparency of methodology
- inform existing Users and potential new entrants with accurate and stable cost messages
- charge on the basis of services provided and on the basis of incremental rather than average costs
- be implementable within practical cost parameters and time-scales

Evaluation of principles/objectives

		Agreed?	Met?
Principle	Facilitate Competition	Yes	Partly
	Cost reflective	Yes	No
	Business Reflective	?	?
Objective	Clear and Transparent	Yes	No.
	Accurate and	No	No
	Stable	Yes	No
	Service based	Yes	No
	Incremental cost basis	No	Yes
	Implementable	No	No

Principles going forward

- Keep the agreed ones
- Modify competition principle in line with Energy Acts' amendments to Ofgem's duties
 - Future consumers
 - Security of supply
 - Climate change targets
- Keep it simple
- Transmission should facilitate and support generation and users

Infrastructure should facilitate

- OFTO regime
- Potential lifetime cost savings (Ofgem)
 - £1bn over 33GW = £33m/GW
- BUT
- 1 year delay in generation project
 - 1% IRR = £25m/Gwpa = £200m over 20years
- Uncertainty and higher risk for investor
 - IRR +0.5% = £13m/Gwpa = £100m over 20 years

Next steps

- Carry out review and implementation expeditiously
- Build on ENSG and DECC approach
- Consider transitional arrangements
 - Recognise commercial differences
 - Avoid unnecessary barriers

Conclusion

- Investors need long-run and stable signals that look forward, not short-run unpredictable ones that were developed in the past