

BSIS Initial consultation - Electricity

Aim

- ◆ Present the high level 2008/9 forecast
- ◆ Highlight the main drivers for cost changes
- ◆ Outline the scheme proposals
- ◆ Describe the proposed indexation

Initial Proposals

- ◆ Ofgem published letter outlining the process for the Initial Proposals
- ◆ Stated that National Grid would be undertaking the process
- ◆ Initial Proposals Consultation document published on 7 December
 - ◆ Responses required by 25 January
- ◆ Web site and email set up for correspondence

Initial Proposals

- ◆ Looking to engage the industry by:
 - ◆ Consultation document
 - ◆ Presentations
 - ◆ Ops Forum
 - ◆ Other
 - ◆ Workshop – Gas and Electricity
 - ◆ 10 January – Stratford Manor Hotel
 - ◆ Bilateral meetings / discussions

Initial Proposals

- ◆ Ofgem will continue to over see the process
 - ◆ Final proposals will be made by Ofgem considering all industry feedback

Initial Proposals consultation content

- ◆ Forecast overview & detail
- ◆ Cost drivers
- ◆ Scheme risks
 - ◆ Profile of risk
 - ◆ Some unknowns e.g. LCPD
- ◆ Potential scheme format options
 - ◆ Provide a menu of options associated with the potential make up of the schemes

2008/9 forecast

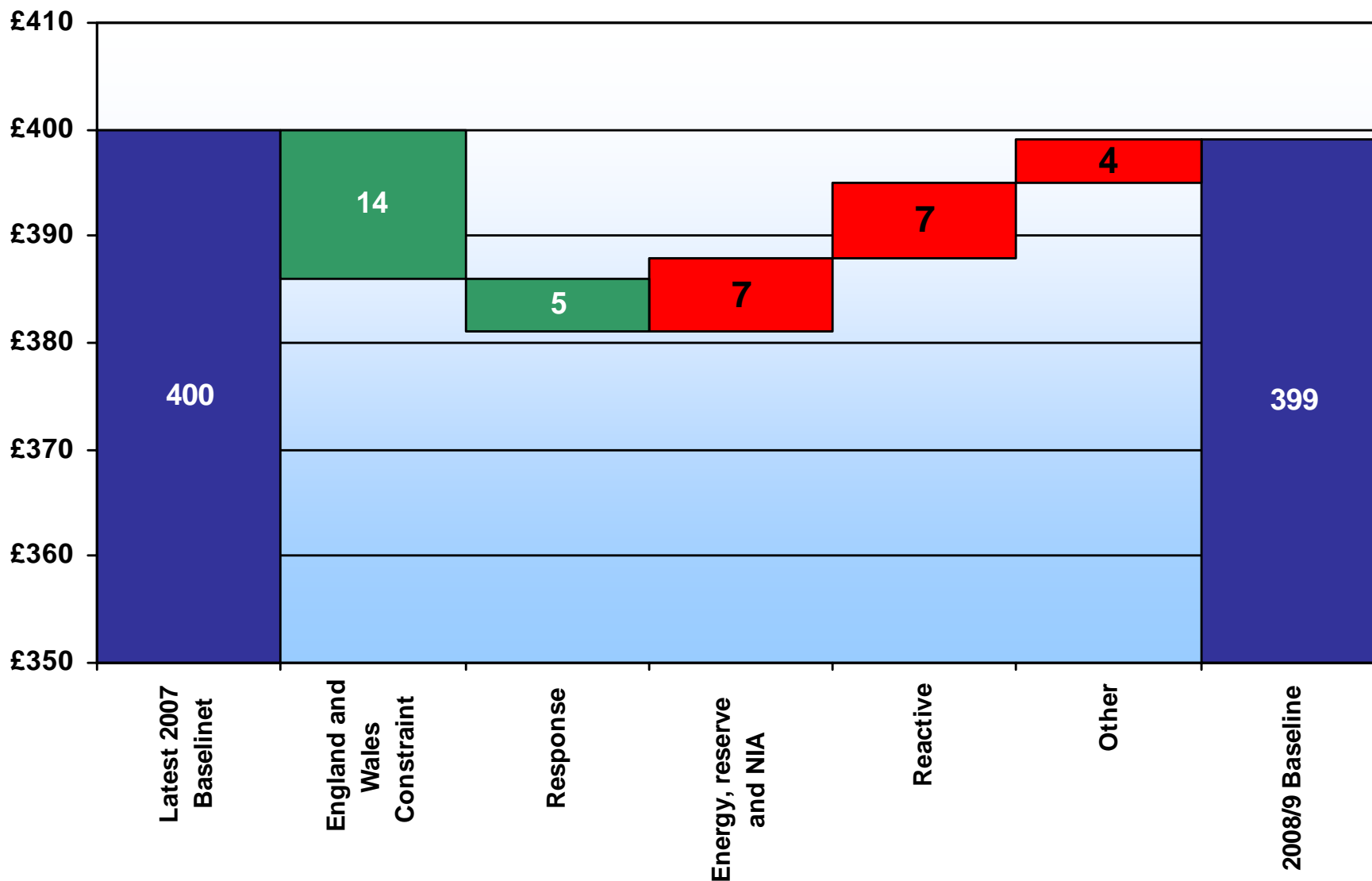
- ◆ Forecast is based on the implementation of a similar scheme to current
 - ◆ One year bundled scheme
- ◆ Does not consider changes to governance or market rules
- ◆ Presentation breaks down costs into 'baseline' costs and the costs of the three main driver

2008/9 baseline forecast

- ◆ Compares 2008/9 baseline costs against like for like 2007/8 baseline costs
- ◆ Cost are £399m for 2008/9, compared to £400m for 2007/8
- ◆ Comparison does not take into account the changes in power price or for inflation

2008/9 - 2007/8 Baseline Forecast Comparison

£Million

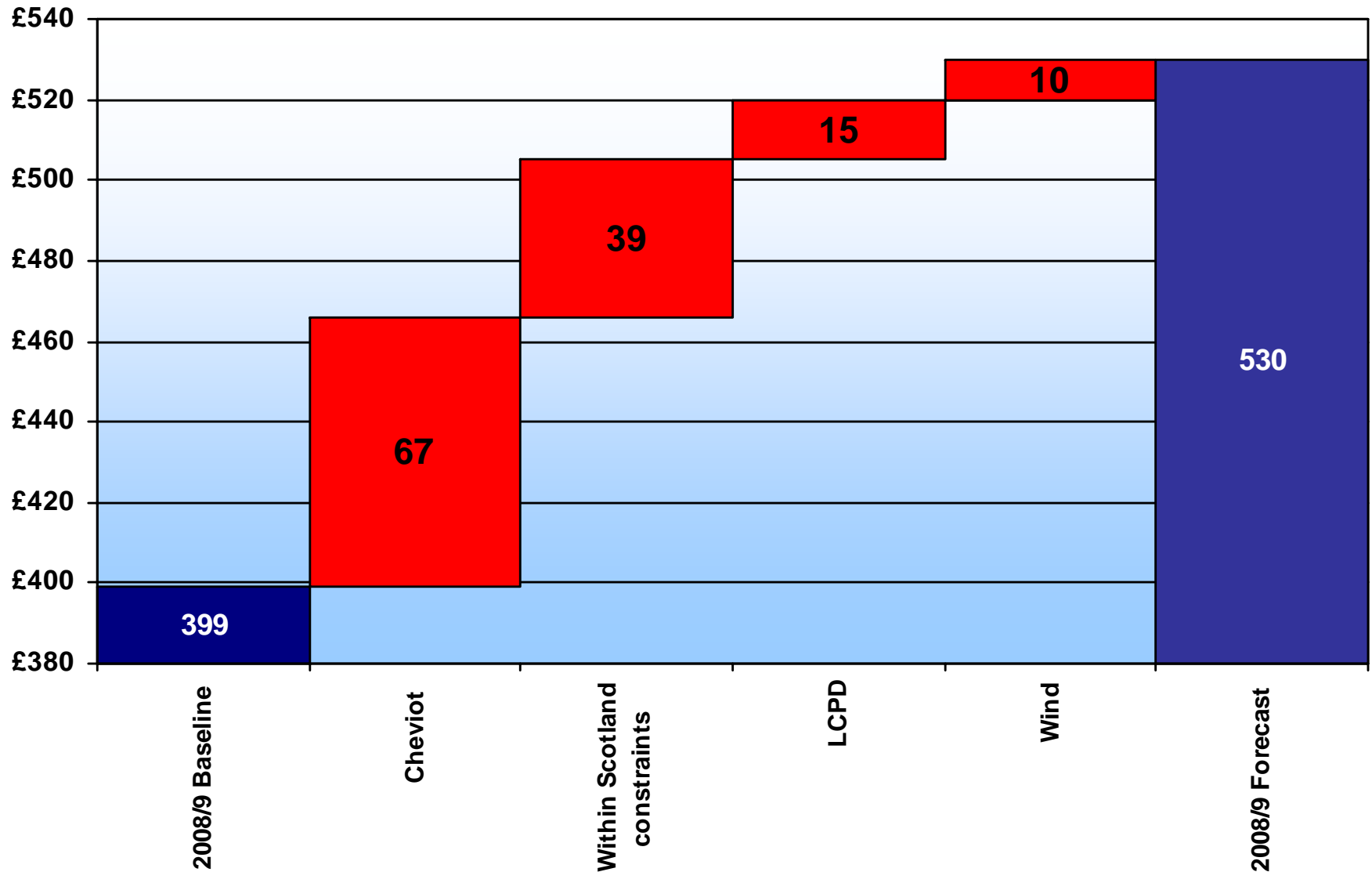


2008/9 Cost Increases

- ◆ Three main drivers:
 - ◆ Increasing outages on critical boundary circuits
 - ◆ The introducing of the Large Combustion Plants Directive
 - ◆ The continuing increase in wind generation. The cost effect of this increase is forecast to be £10m

2008/9 Forecast

£Million



2008/9 Forecast - Cheviot

- ◆ Cheviot Constraints increase from £35m in 2007/8 to £67m for 2008/9, an increase of £32m
 - ◆ Constraint cost for Cheviot is £67m with a range of £42m to £98m
 - ◆ Change is mainly associated with an increase in network outages
 - ◆ Forecast 30 outage weeks in 2008/9 as compared with 8 weeks in 2007/8
 - ◆ For 2008/9, our Cheviot cost model forecasts a central cost of £33m with 8 weeks outages
 - ◆ Main outage increase associated with **T**ransmission **I**nvestment for **R**enewable **G**eneration (TIRG) works
 - ◆ Additional outages due to National Grid substation works
 - ◆ Outages levels on the Cheviot boundary will continue to be high until improvement works are complete

2008/9 Forecast – within Scotland

- ◆ Within Scotland constraints increase from £22m for 2007/8 to £39m for 2008/9, an increase of £17m
 - ◆ Forecast increase is associated with an increase in network outages across critical boundaries
 - ◆ 8 weeks in 2007/8 to 30 weeks in 2008/9
 - ◆ Outages associated with TIRG works and other system reinforcement works

2008/9 Forecast – Wind

- ◆ Wind
 - ◆ Interaction with:
 - ◆ Reserve
 - ◆ Expected increase in reserve requirements
 - ◆ Response
 - ◆ Potential increase in dynamic requirements
 - ◆ Demand forecast
 - ◆ Embedded wind generation is seen as demand volatility
 - ◆ Constraints
 - ◆ Dependant on connection location

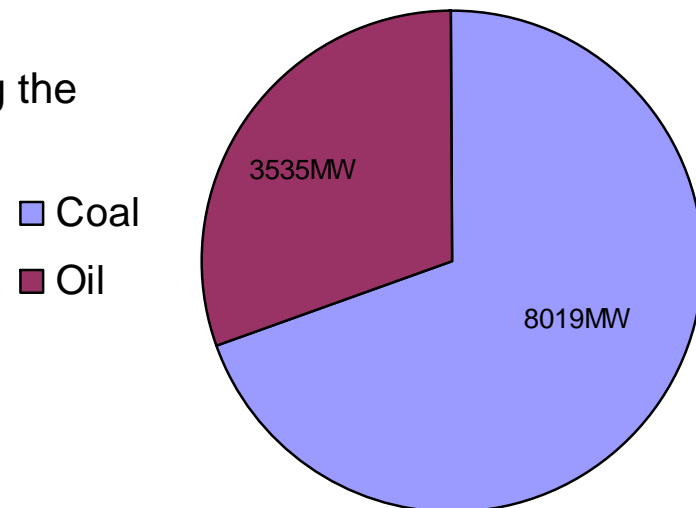
2008/9 Forecast - Wind

- ◆ Wind capacity changes forecast to increase operational costs by £7.5 - £11.5m
- ◆ Central forecast of £10m
 - ◆ Reserve costs of £5.6m - £9.6m
 - ◆ Central forecast of £8m
 - ◆ Increase in intermittency increases reserve requirements
 - ◆ Increase costs to manage system frequency
 - ◆ Short term correction of wind variation
 - ◆ Increase in dynamic response requirements over periods with large volumes of wind, low demand

2008/9 Forecast - LCPD

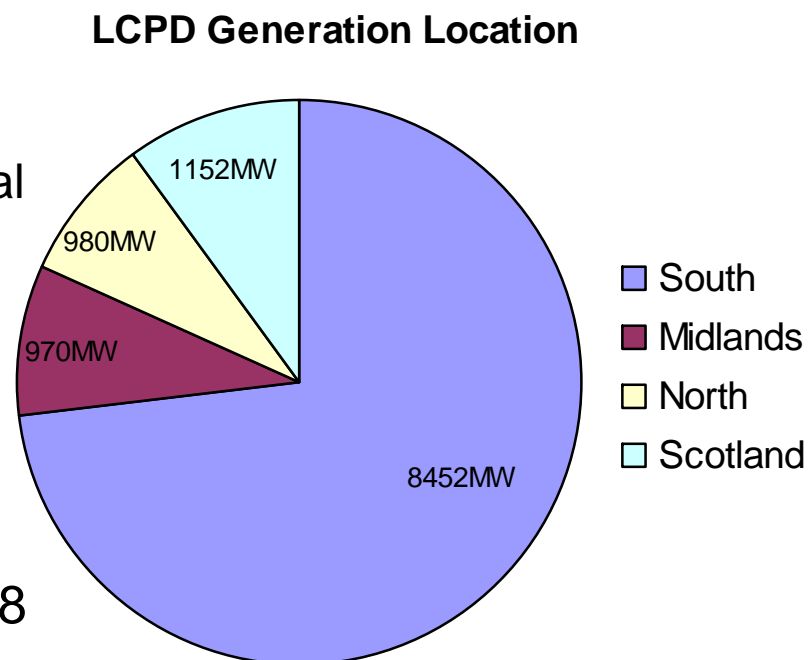
- ◆ LCPD
 - ◆ Introduction of LCPD may change the operation regime of opted-out plant
 - ◆ Two main scenarios considered for forecast – both assume 2500hours running / year
 - ◆ Summer-cold regime
 - ◆ Generation targets output during the winter months
 - ◆ Year-round running regime
 - ◆ Generation targets output during the high price periods

LCPD Generation by fuel type



2008/9 Forecast - LCPD

- ◆ LCPD
 - ◆ Reserve increase of £10m
 - ◆ Potential change in operating regime
 - ◆ Leads to an increase in marginal cost of reserve services
 - ◆ Affect on constraints - £5m
 - ◆ Wider system constraints
 - ◆ Local constraints
 - ◆ Significant unknown
 - ◆ Comes into effect in January 2008
 - ◆ 2007/8 scheme has no cost risk for LCPD

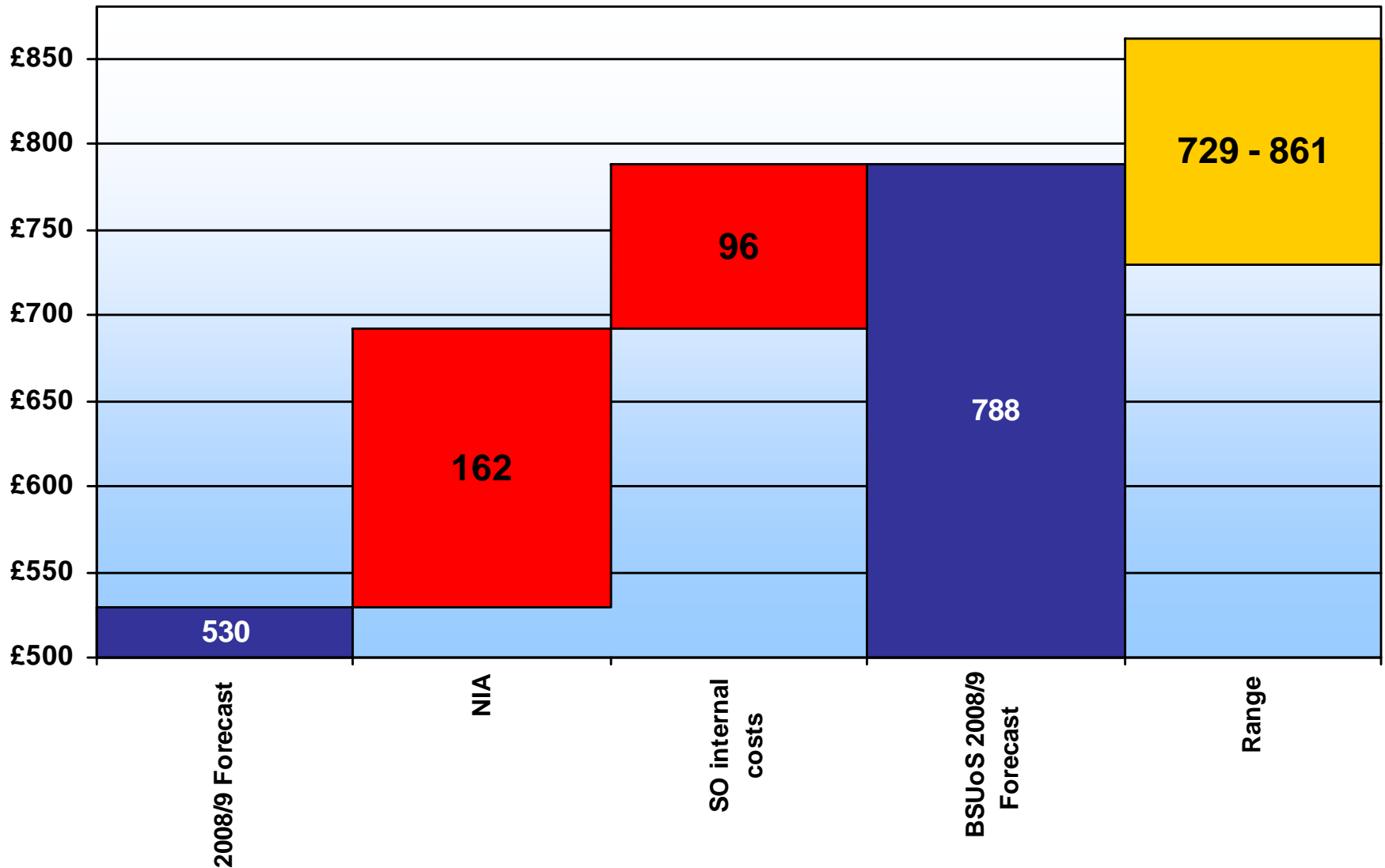


2008/9 Forecast - Other changes

- ◆ TLA for 2007/8 projected to be £22m over initial forecast
 - ◆ Reasons being investigated and we will report findings when known
 - ◆ For 2008/9, outturn forecast at £0m
 - ◆ Therefore no effect on the overall 2008/9 forecast
- ◆ Changes in Power Price
 - ◆ Recent increase in power price
 - ◆ Trend continues into next year
- ◆ Changes in NIV

2008/9 BSUoS Forecast

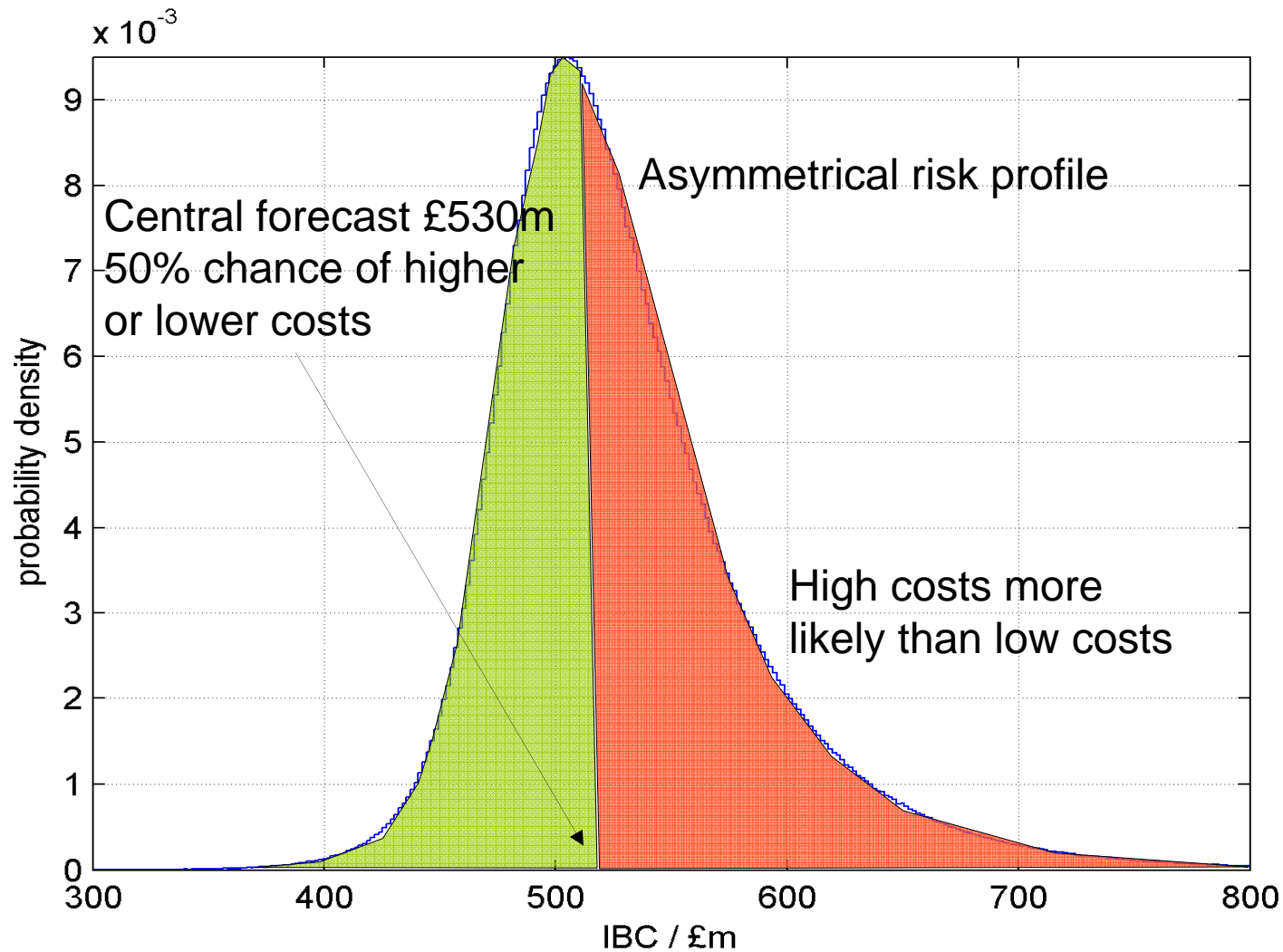
£Million



Cost Range

- ◆ Number of uncertainties with forecast
 - ◆ Power price
 - ◆ Service volumes
 - ◆ Length of market
 - ◆ Outages
 - ◆ Arrangements for the utilisation of capacity on the interconnector
- ◆ Uncertainties lead to a wide range of potential outturn costs
- ◆ We have developed a range of costs with a central forecast
 - ◆ Range and profile important when setting up scheme parameters

Cost Range Profile



Scheme Options

- ◆ Options provide a range of risk profiles for the system operator / industry
- ◆ Sharing factors based on cost risk profile
- ◆ Options reflect asymmetric cost profile

Scheme Options

Scheme	1	2	3	4	5	6
Target, £m	481	495	530	520 to 540	530	540
Upside sharing factor, %	35%	35%	15% from £530 to £520m 40% below £520m	40	35	15
Cap, £m	20	20	10	10	10	7
Downside Sharing factor, %	27%	27%	15% from £530m to £540m 20% above £540m	15	27	15
Collar, £m	20	20	10	15	10	7
Indexes	1. Cheviot Outage weeks 2. Power price option (a)	1. Cheviot Outage weeks	None, but could be added	None, but could be added	None, but could be added	None, but could be added

Scheme Options

- ◆ Options provides the industry a number of risk profiles
- ◆ Options range from higher risk / reward to low risk / reward for the SO
- ◆ Schemes can be mixed and matched
 - ◆ Caps / collars moved across schemes
 - ◆ Sharing factors
 - ◆ Indexation

Indexation

- ◆ Designed to adjust the scheme target
- ◆ Removes SO uncontrollable uncertainties from scheme
- ◆ Two indexes proposed
 - ◆ Power price
 - ◆ Cheviot outage weeks

Power Price Indexation

- ◆ Adjusts scheme target based on power price
- ◆ Scheme target changes by +/- £2m for each £1/MWh change in power price

Power Price	Indexed Central Target
Base = £48/MWh	£530m
2007/8 = £41/MWh	£516m
Rise in price to £60/MWh	£554m

- ◆ Target can go up or down
- ◆ Avoids windfall gains and losses associated with power price changes

Cheviot Outage weeks Indexation

- ◆ Adjusts scheme target based on number of Cheviot outage weeks
- ◆ Baseline costs are for 8 weeks of outages
- ◆ Each additional outage week increases costs by £1.57m

Number of outage weeks	Indexed Central Target
Baseline = 8 weeks / year	£495.4m
Forecast = 30 weeks / year	£530m
Outturn = 26 weeks / year	£523.7m

Summary

- ◆ Central forecast of £530m
- ◆ Change in costs mainly associated with:
 - ◆ A rise in Transmission Network outages to allow the construction of increased transmission capacity for renewable generation
 - ◆ Introduction of LCPD
 - ◆ Increase in wind capacity
- ◆ Scheme options developed to provide the industry with a choice of risk / reward profiles
- ◆ Consultation responses due on 25 January
- ◆ Looking for industry feedback
 - ◆ Please contact us via the email:
soincentives@uk.ngrid.com
 - ◆ Info and contact details on the web site at:
<http://www.nationalgrid.com/uk/Electricity/SolnIncentive/>