

A photograph of an offshore wind farm at dusk or dawn. The sky is a deep blue, and the sea is dark. Several wind turbines are visible, with the largest one in the center foreground. The turbines are silhouetted against the sky.

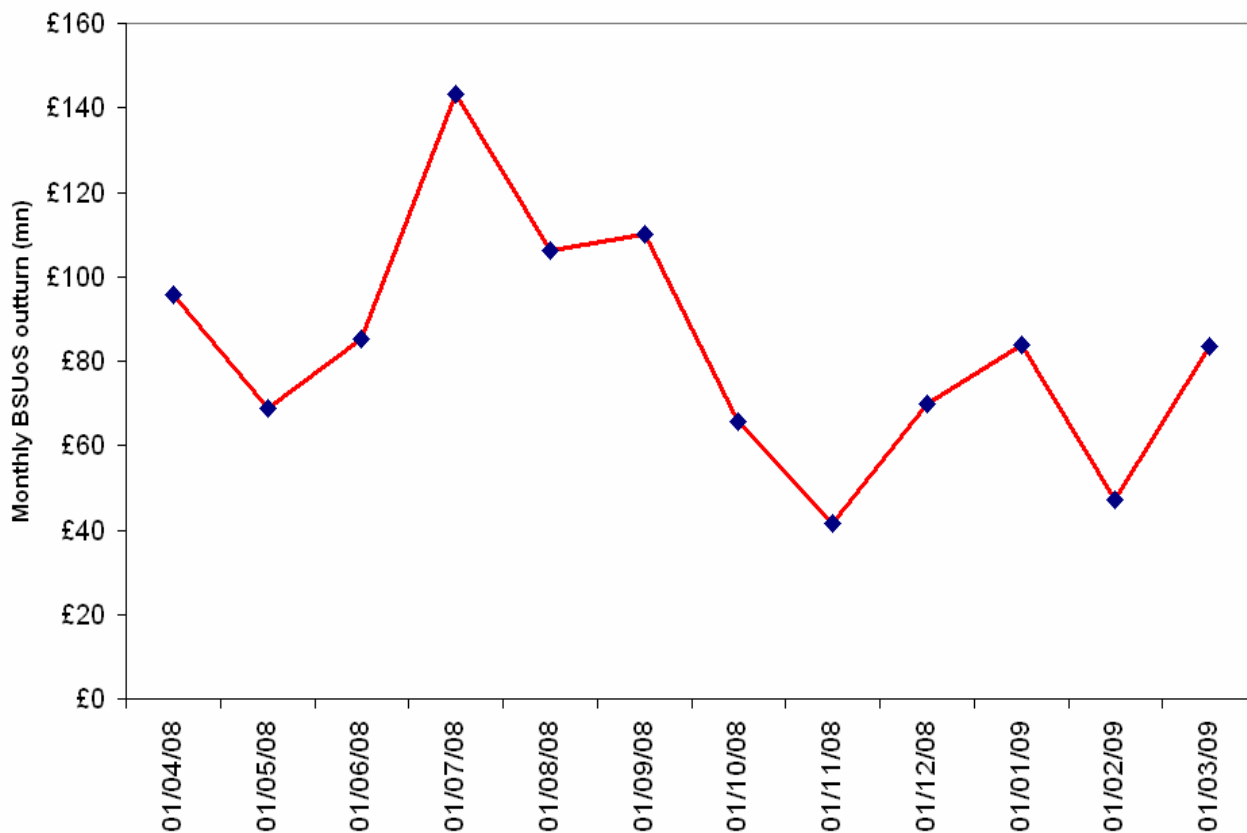
# Smoothing BSUoS – a methodology for reducing the volatility of balancing charges

30<sup>th</sup> September 2009

**centrica**  
energy

## Over the 2008/2009 period BSUoS charges were highly volatile

Over the last year the highest industry monthly outturn was £143 million



- Balancing costs for the industry was over £1 billion in the 2008/2009 period, which was significantly higher than initial forecasts.
- The range between the highest daily average and the lowest daily average was significant.
- The lowest daily average was - £0.89/MWh and the highest was £4.68 £/MWh.

# The high volatility of BSUoS costs is an issue for generators, suppliers and consumers

As BSUoS costs are only known after the event

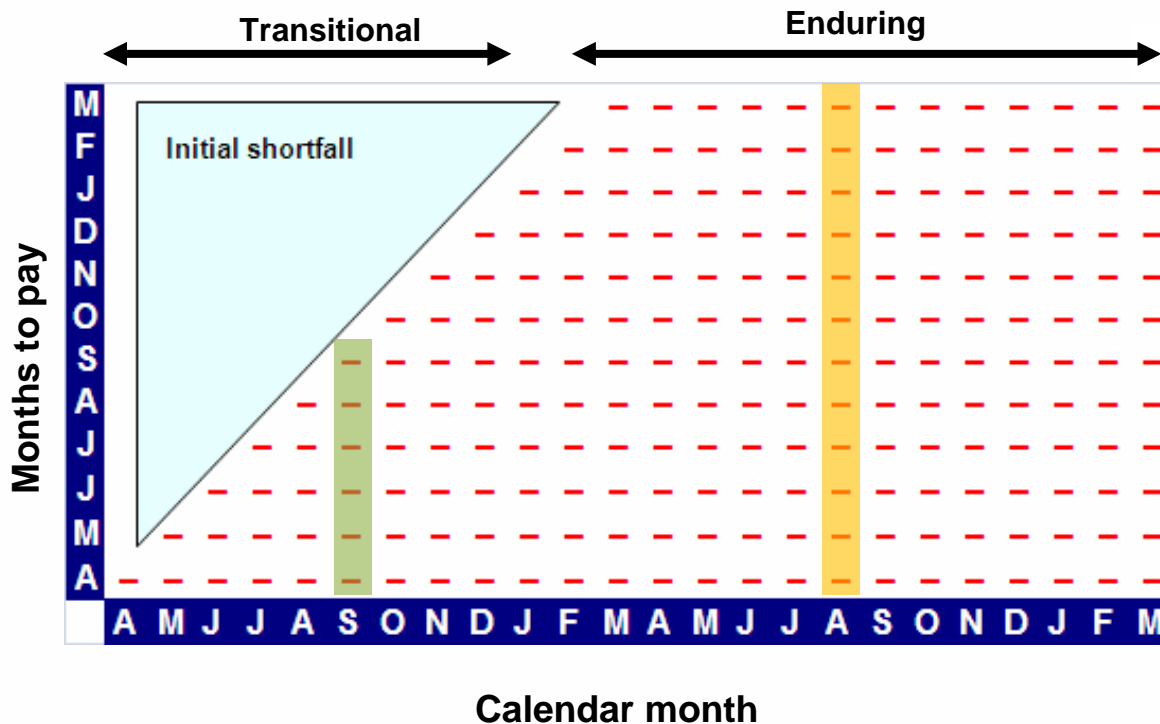
- Suppliers have to provide contracts to customers without knowing what their balancing costs will be => makes it difficult for suppliers to offer customers fixed contracts
- Generators have to take decisions on dispatch without actually knowing their costs => could lead to uneconomic dispatch
- These factors have a negative impact on the market
  - Negative effect on efficiency due to uneconomic dispatch of plant
  - Volatility of BSUoS may act as a barrier to new market entrants

## We believe that adopting a methodology to smooth BSUoS costs within year would improve the functioning of the market

- We believe that a number of current events make a new BSUoS scheme even more essential:
  - Transmission Access Review and the potential impact on constraint costs
  - The changing dynamics of the UK's power generation fuel mix
  - Recent consultation / debate on future of BSUoS charging

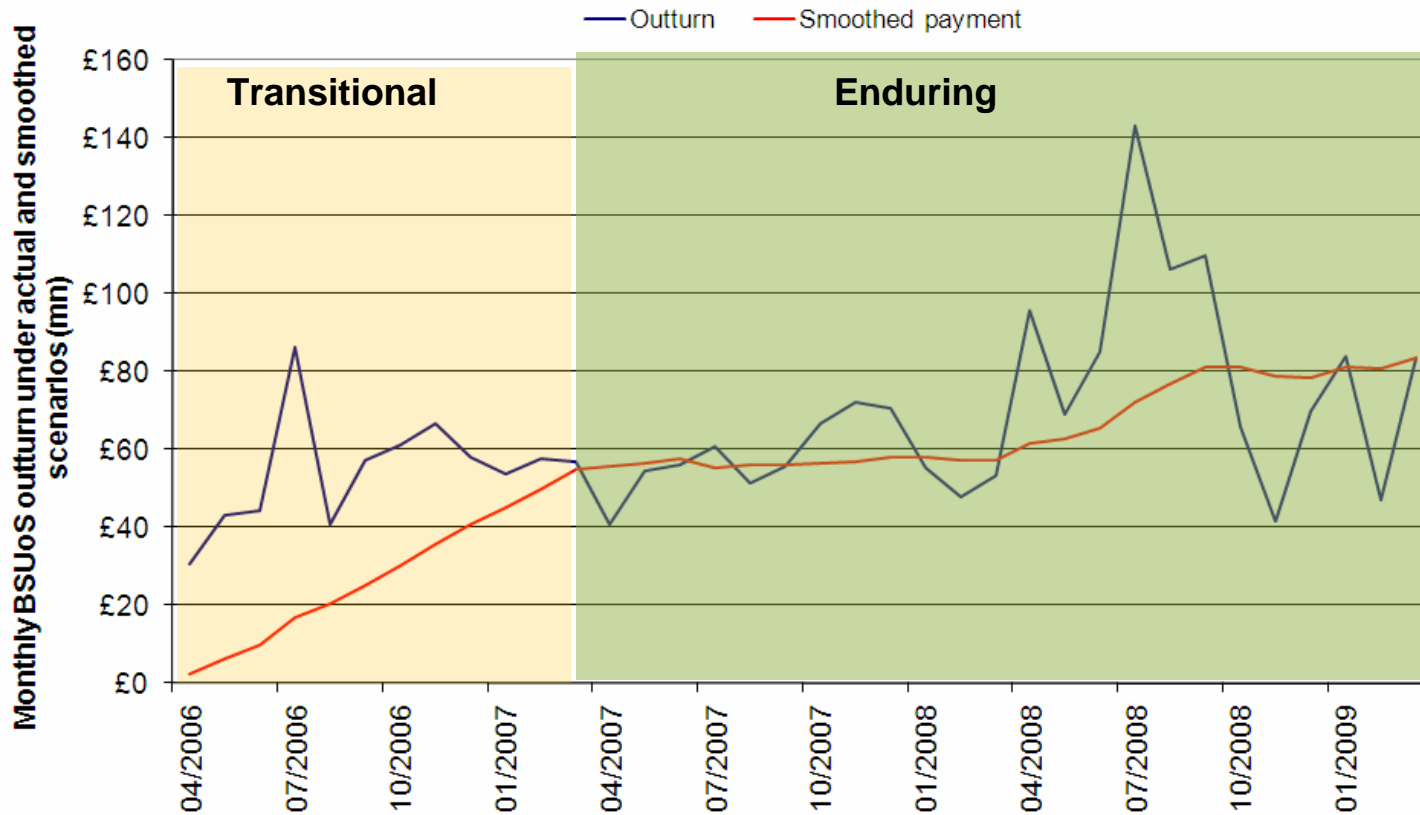
# Methodology 1 involves smoothing BSUoS costs by 'smoothing' monthly charges

The smoothing scheme would see users pay 12/12<sup>th</sup>s of the previous 12 months BSUoS charges



- The monthly BSUoS charge is calculated as 1/12<sup>th</sup> of each of the previous 12 months' outturn.
- In month one of starting the methodology (say April), Users pay 1/12<sup>th</sup> of that month's outturn.
- In the next month, Users would pay 1/12<sup>th</sup> of May's charge and another 1/12<sup>th</sup> of April's outturn.

# This methodology has a significant impact on reducing the volatility of BSUoS costs



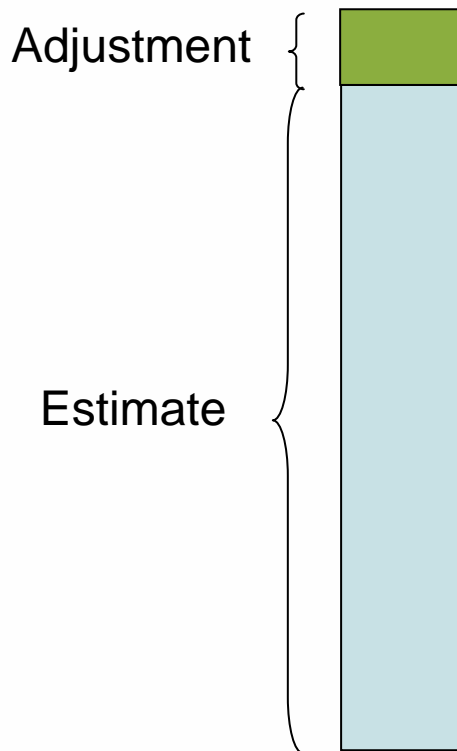
## There are a number of additional issues to consider with this methodology

- **Given the shortfall there are two financial issues that need to be considered:**
  - Security => e.g. credit note from Parties
  - The financing of the shortfall => debt financed by industry / deposit
- **The methodology shown sees BSUoS smoothed on a monthly basis, but this could be done on a more granular basis:**
  - An increase in granularity would lead to an decrease in volatility (e.g. weekly)
  - A decrease in granularity would lead to an increase in volatility (e.g. every two months)

# We have evolved our initial methodology to partially overcome the issue of over and under-recovery

## This Month's Bill = Estimate + Adjustment for previous errors

### As an example, assume:



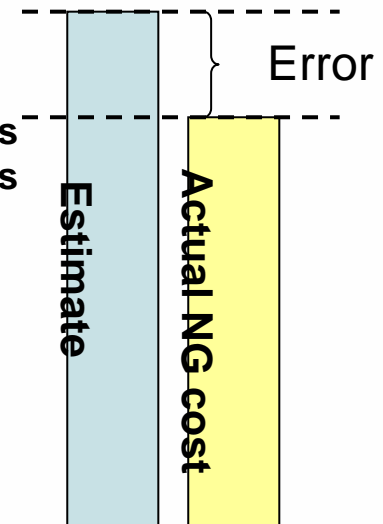
- Estimate is 1/12<sup>th</sup> of each of last 12 months 'total' bill

- Adjustment is:

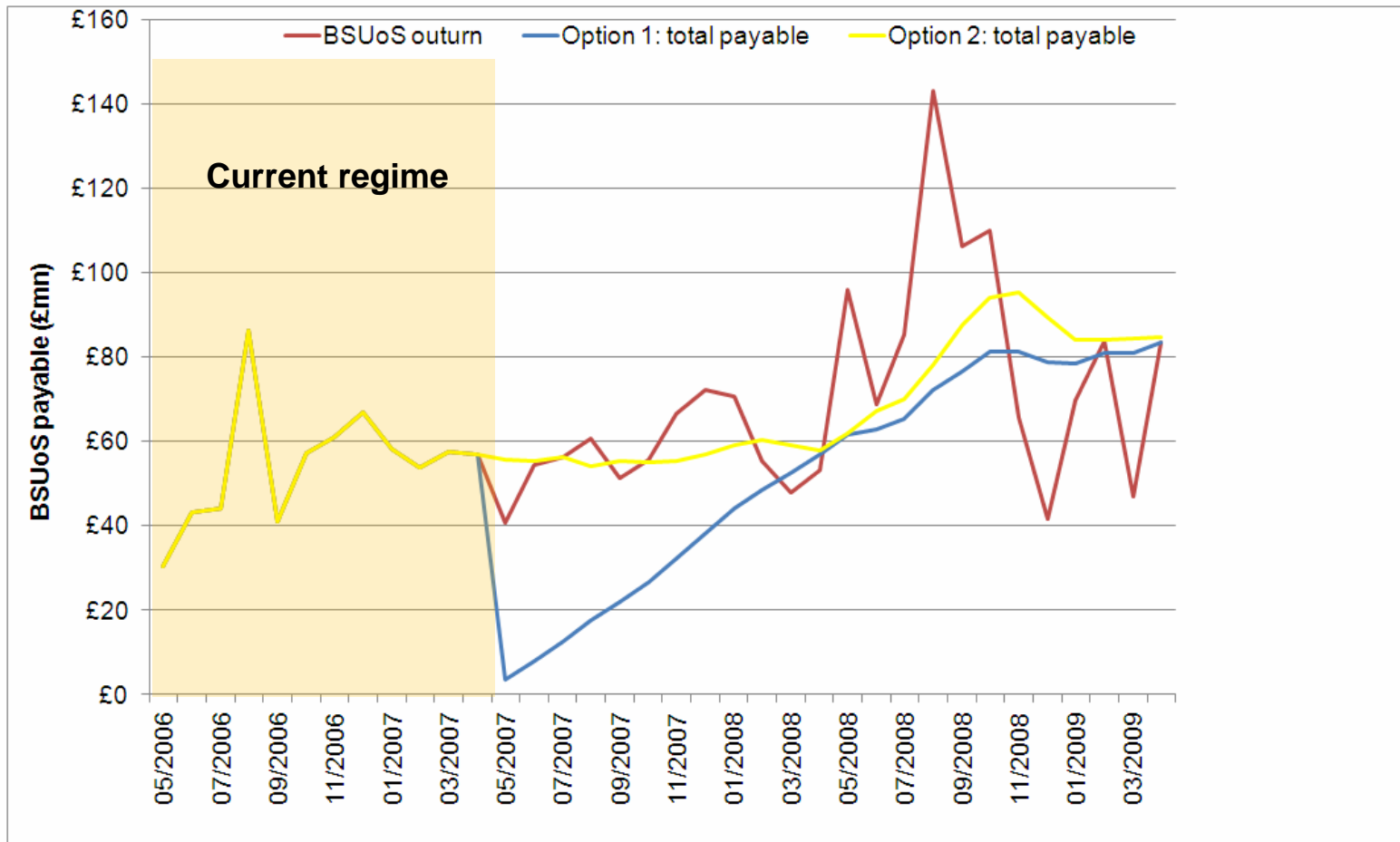
- 1/12<sup>th</sup> of error 12 months ago plus/minus
- 1/12<sup>th</sup> of error 11 months ago plus/minus
- .
- .
- 1/12<sup>th</sup> of error 1 month ago
- 1/12<sup>th</sup> of error this month

- Error = Difference between months Estimated and Actual Cost to NG

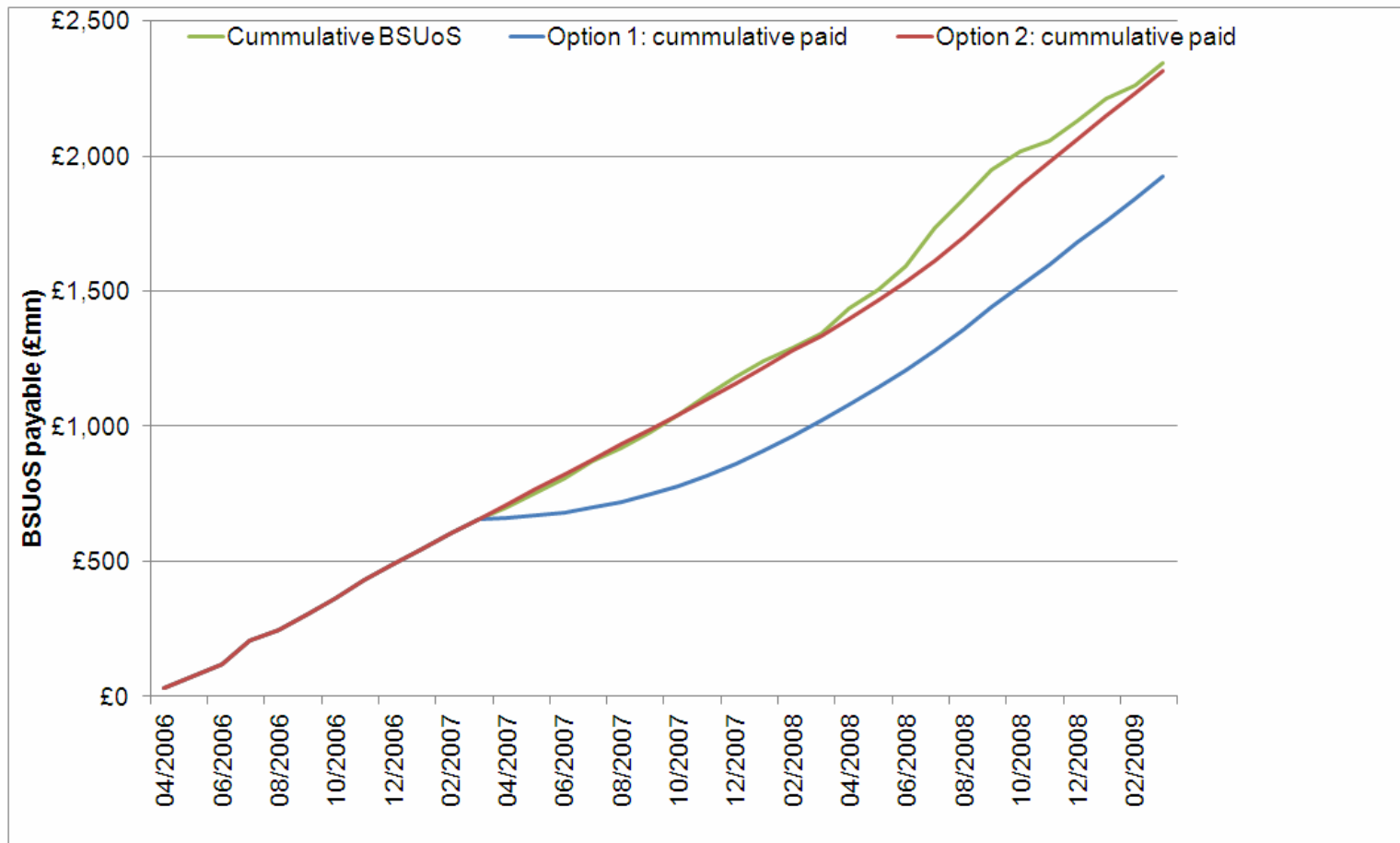
- Note: Errors and Adjustments can be positive or negative



# The second methodology also produces a similar smoothing effect



# The amount National Grid recovers under the second methodology is much closer to its expenditure



# In conclusion, the second methodology smoothes BSUoS whilst minimising the recovery issue

	Current	Meth. 1	Meth. 2
Reduces volatility / improves predictability	X	✓	✓
Need for significant credit avoided	✓	X	✓
Avoids NG cash flow issue	✓	X	✓ (mostly)