# Modification P229: Introduction of a seasonal Zonal Transmission Losses scheme

## Industry overview and education


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- 18 November 2009

# Agenda

- Transmission losses background
- Proposed Modification P229
- Alternative Modification P229
- Rationale for analysis
  - Load flow modelling and cost-benefit analysis
- Results of cost-benefit analysis
- Views of the Modification Group
- Next steps for P229
- Questions and discussion

# Transmission losses background

- The current arrangements
- The identified issue
- P229 Overview

# Transmission losses

- Energy is 'lost' when electricity is transmitted over the Transmission System
- This lost energy is **transmission losses**
- **Total** transmission losses are the sum of fixed and variable losses
  - Total losses equate to the difference between total metered generation and total metered demand

# Transmission losses

- **Fixed losses** do not vary significantly with power flow
  - Arise in transformers and overhead lines
- **Variable (or heating) losses** are due to heat caused by the flow of current through transformers and lines
  - Increase with current flow and length of line

# Current arrangements

- Total transmission losses are the difference between total generation and total demand in any Settlement Period
- Allocated based on Metered Volumes
- Currently allocated via a **45:55 split:**
  - 45% of total losses go to generation
  - 55% of total losses go to demand (i.e. Suppliers)

# Transmission losses calculation 1: TLF

» Three components to transmission losses calculation:

$$\mathbf{TLF + 1} + TLMO^{+/-} = TLM$$

1. **Transmission Loss Factor (TLF)**
   - Parameter for non-uniform allocation of losses
   - Currently set to **zero**
   - P229 would change TLF

# Transmission losses calculation 2: TLMO

$$TLF + 1 + \mathbf{TLMO^{+/-}} = TLM$$

2. **Transmission Losses Adjustment (TLMO)** allocates transmission losses to Parties by adjusting Metered Volumes
   - **TLMO$^{+}$** uniformly adjusts Metered Volumes of **delivering** BMUs so they receive 45% of total losses
   - **TLMO$^{-}$** uniformly adjusts Metered Volumes of **offtaking** BMUs so they receive 55% of total losses

# Transmission losses calculation 2: TLM

$$TLF + 1 + TLMO^{+/-} = \mathbf{TLM}$$

3. **Transmission Loss Multiplier (TLM)** is the factor applied to BM Unit Metered Volumes

Because TLF = 0:

» TLM for all delivering BMUs - less than 1

- Generation scaled down: must generate more energy to meet contracted positions

» TLM for all offtaking BMUs - greater than 1

- Demand scaled up: Suppliers must contract for more energy than contracted to supply

# Identified issues

General arguments

- North/South divide in generation/demand with no signals to despatch/locate generation near demand
- Cross-subsidy; Southern generators and Northern Suppliers pay part of cost to transport electricity from North to South
- No incentive to reduce losses

# P229 summary

- Retains **45:55** losses allocation to generation/demand
- Retains **uniform** allocation of **fixed** losses through TLMO
- Creates TLF zones based on GSP Groups
- Applies single TLF value to **all BM Units** in a Zone
- Requires **new BSC Agent** (the TLF Agent) to calculate Zonal TLF values for each Season

# Previous related Modifications

- Number of previous losses Modifications: P198, P200, P203 and P204 (and earlier)
- P229 Proposed solution is substantially the same as that proposed by Modification P203
- Potential P229 Alternative solution is substantially the same as that proposed by Modification P204
- Main difference for each is the inclusion of offshore connections

# Proposed Modification P229

- The Proposed solution
- Rationale

# P229 Proposed Summary

- 14 TLF Zones based on the 14 GSP Groups
- TLF for each BSC Season for each TLF Zone for following year calculated annually
- New BSC Agent, the TLF Agent
- Main differences between P229 and some/all of previous losses Mods (P198/200/203/204):
  - Uses seasonal TLF values (not annual)
  - No transitional scheme/phased implementation
  - Includes offshore connections

# P229 Proposed Rationale

- The current method of allocating variable losses situation amounts to an inherent and unjustified cross-subsidy in the existing arrangements
- P229 Proposed Modification would remove this cross-subsidy and enable costs associated with variable transmission losses to be allocated on a more cost-reflective basis

# Proposed solution

- Load Flow Model is a mathematical model of Transmission System
  - ‘DC model’ of AC system
  - Nodes represent points where circuits meet or energy flows on/off System
- Nodes identified by Transmission Company
- Allocated to TLF Zone using Network Mapping Statement (NMS) maintained by ELEXON
- TLF Zones set by the Panel based on the geographic areas covered by GSP Groups
  - 14 GSP Groups = 14 TLF Zones

# Load Flow Model

- ELEXON provides inputs to the TLFA:
  - Network Mapping Statement
  - Load Periods and Sample Settlement Periods
  - Network Data and Metered Volume data
- Load Flow Model represents transmission network - calculates Nodal TLFs
  - Only losses between adjacent Nodes used
- Load Flow Model Reviewer inspects Load Flow Model and confirms it is fit for purpose
- Panel must approve Load Flow Model before TLFA applies it - decision based on Load Flow Model Reviewer's report

# Types of Network Mapping Statement

**Initial NMS** used to calculate TLF each year

- Affects TLFs for forthcoming BSC Year
- Subject to annual consultation, Panel approval

**Prevailing NMS**

- Updated between issue of Initial NMS
- Reflects changes in Nodes, BM Unit registrations, zonal boundaries
- Used to give TLFs to newly registered BM Units
- No review/approval - does not affect TLFs until new TLFs are calculated using new Initial NMS

# TLF calculation

- TLFs calculated for each BSC Year on an ex-ante basis (i.e. before relevant year) using:
  - Metered Volumes
  - Network Data
  - For Sample Settlement Periods from preceding 12-month period (Reference Year)
- Metered Volumes provided by Central Data Collection Agent (CDCA)
- Network Data provided by Transmission Company

# Transmission Loss Factor Agent (TLFA)

- Runs Load Flow Model annually before each BSC Year
- Load Flow Model calculates how incremental power changes at each Node impacts total variable losses
- Produces a TLF for each Node in each Sample Settlement Period: Nodal TLFs

# Nodal TLFs

- Positive Nodal TLFs if incremental generation increase/demand reduction decreases losses
- Negative Nodal TLFs if incremental generation increase/demand reduction increases losses
- **Example:**
  - 1kWh injection at node
  - Leads to variable loss increase of 0.02kWh
  - Nodal TLF is -0.02

# Zonal and Seasonal Zonal TLFs

- Averaging Nodal TLFs across all Nodes in each Zone (volume weighted averaging) produces:
  - Zonal TLF value for each TLF Zone for each Sample Settlement Period
- Time weighted averaging converts Zonal TLFs to Seasonal Zonal TLFs
  - Four Seasonal Zonal TLFs calculated for each TLF Zone (one for each BSC Season)

# Adjusted Seasonal Zonal TLFs

- TLFA adjusts Seasonal Zonal TLFs using a fixed 0.5 scaling factor
- Aim is that energy allocated via TLFs is comparable to variable losses calculated by Load Flow Model
- ELEXON publishes Adjusted Seasonal Zonal TLFs at least three months before use in TLM calculation for applicable BSC Season

# Treatment of BM Units

- ELEXON assigns BM Units to Zones using NMS
- Panel resolves any questions/disputes
- TLFA determines TLF applied to BM Units (i.e. Adjusted Seasonal Zonal TLF for relevant Zone)
- **All BM Units in a Zone receive same TLF for all Settlement Periods in BSC Season**
  - Positive TLF increases TLM used to scale a BM Unit's Metered Volume (benefit to generators, disadvantage to Suppliers)
  - Negative TLF decreases TLM (benefit to Suppliers, disadvantage to generators)

# BM Unit-Specific TLFs

- All BM Units in a Zone and for a particular Season assigned the same BM Unit-Specific TLF
- TLFA calculates BM Unit-Specific TLFs:
  - CRA registers in BSC Systems
  - Balancing Mechanism Reporting Agent (BMRA) uses in Balancing Mechanism Reporting Service (BMRS)
  - Settlement Administration Agent (SAA) uses in Settlement calculations

# Offshore Nodes and Zones

- P229 includes Offshore Transmission Systems, implying new requirements
  - Allocating offshore Nodes to TLF Zones (based on onshore GSP Group connected to)
  - Offshore networks connected to distribution systems must be considered as joined to the main Transmission System for the purposes of the Load Flow Modelling
  - Developing legal text to handle future developments e.g. offshore HVDC networks

# P229 process detail

**31 Aug 2011 (End of Ref. Year)**

ELEXON:

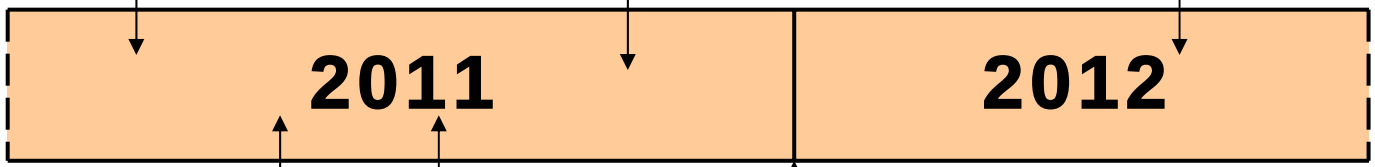
- Sends data to TLFA, CDCA and Transmission Company
- Publishes on BSC Website
- Issues draft NMS for consultation

**30 Nov 2011**

TLFA sends Adjusted Seasonal Zonal TLFs and BM Unit-specific TLFs to ELEXON

**1 Apr 2012**

TLFs based on pre-August 2011 data are applied in Settlement from now




**5 Oct 2011**

Transmission Company sends Network Data to ELEXON

CDCA sends Metered Volumes to ELEXON

**19 Oct 2011**

ELEXON sends NMS to TLFA and publishes on BSC Website

ELEXON sends Network Data and Metered Volumes to TLFA

**31 Dec 2011**

ELEXON sends BM Unit-specific TLFs to CRA

ELEXON publishes Adjusted Seasonal Zonal TLFs on BSC Website

# TLF effective dates

- BSC Year: 1 April – 31 March
- BSC Spring: 1 March – 31 May
- BSC Summer: 1 June – 31 August
- BSC Autumn: 1 September – 30 November
- BSC Winter: 1 December – 28/29 February
- **Note split application of Spring TLF**

| Period of BSC Year | 1 Apr – 31 May | 1 Jun – 31 Aug | 1 Sep – 30 Nov | 1 Dec – 28 Feb | 1 Mar – 31 Mar |
|---|---|---|---|---|---|
| Adjusted Seasonal Zonal TLF applied | Value for BSC **Spring** in BSC Year | Value for BSC Summer in BSC Year | Value for BSC Autumn in BSC Year | Value for BSC Winter in BSC Year | Value for BSC **Spring** in BSC Year |

# Alternative Modification P229

- The Alternative solution
- Rationale

# P229 Alternative summary

- As under Proposed:
  - TLFs calculated for each TLF Zone (i.e. the 14 GSP Groups) for each BSC Season
  - TLF calculation done ex-ante (forecast) using load flow model and data from reference year
- Difference under Alternative:
  - Calculated scaling factors replace fixed scaling factor (fixed at 0.5 under Proposed)
  - Aim: adjust TLFs so when TLMs applied to zones no BM Units are 'credited' with energy
  - TLFA annually calculates Seasonal scaling factors and applies to Seasonal zonal TLFs

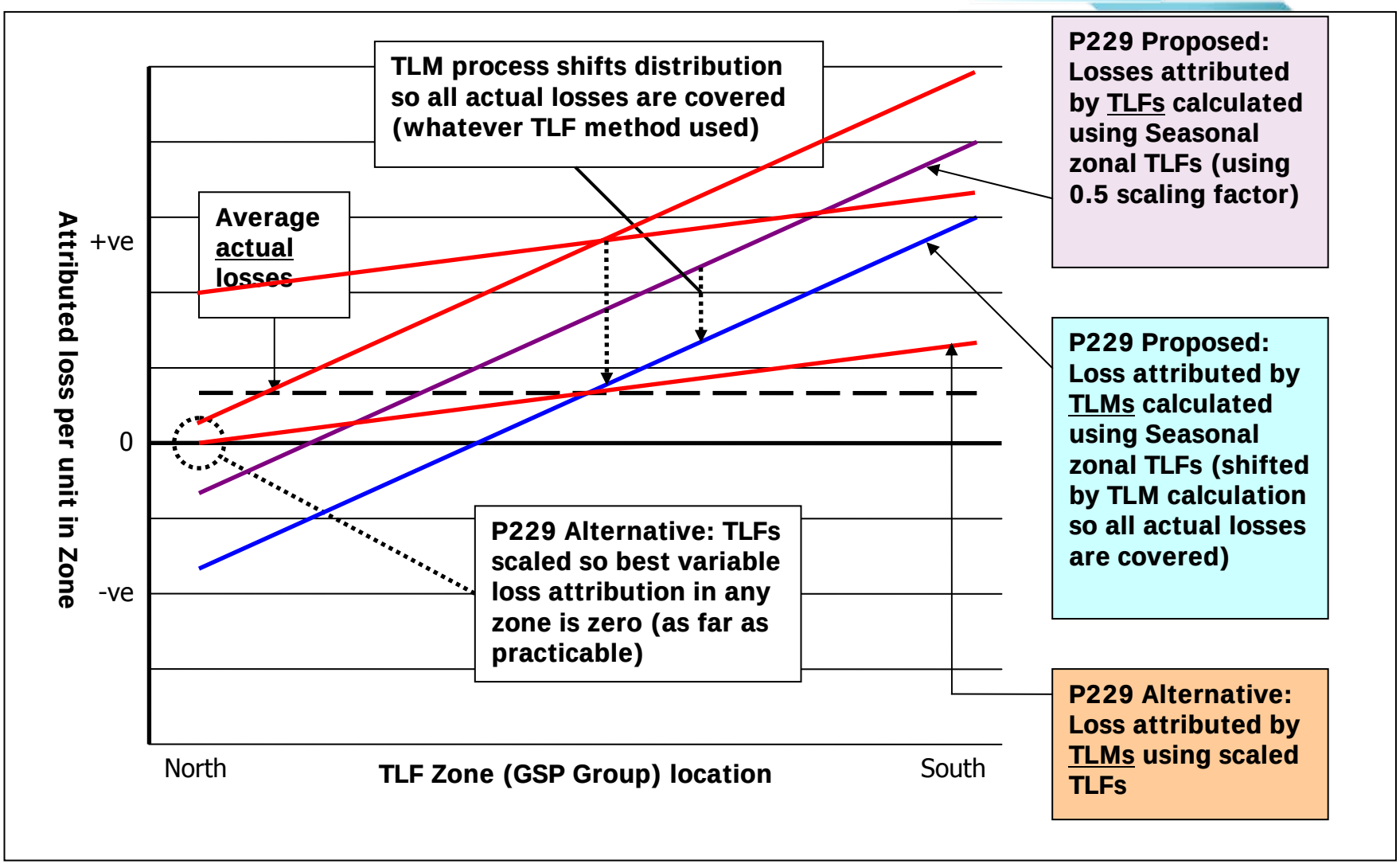
# P229 Alternative rationale

- Some BM Units (Southern generators, Northern Suppliers) 'credited' energy via TLM (generation scaled up, consumption scaled down)
- Volumes of other BM Units scaled down/up such that they are 'debited' energy volumes
- Rationale for Alternative is that best outcome for BM Unit should be no variable losses allocated to it (no metered volume scaling, no energy debit/credit)

# Key features

- Annually calculate Adjusted Seasonal Zonal TLFs so no BM Unit credited energy volumes due to variable loss allocation via TLMs
  - Best outcome uniform fixed losses allocation
- Annually calculate scaling factors (β)
  - Four Seasonal scaling factor values
  - Determine using calculated variable losses, zonal average TLFs and TLF weighted flows
  - Apply same value to delivering and offtaking BM Units in each Season
- Apply scaling before input into Settlement
- Annually publish scaling factors

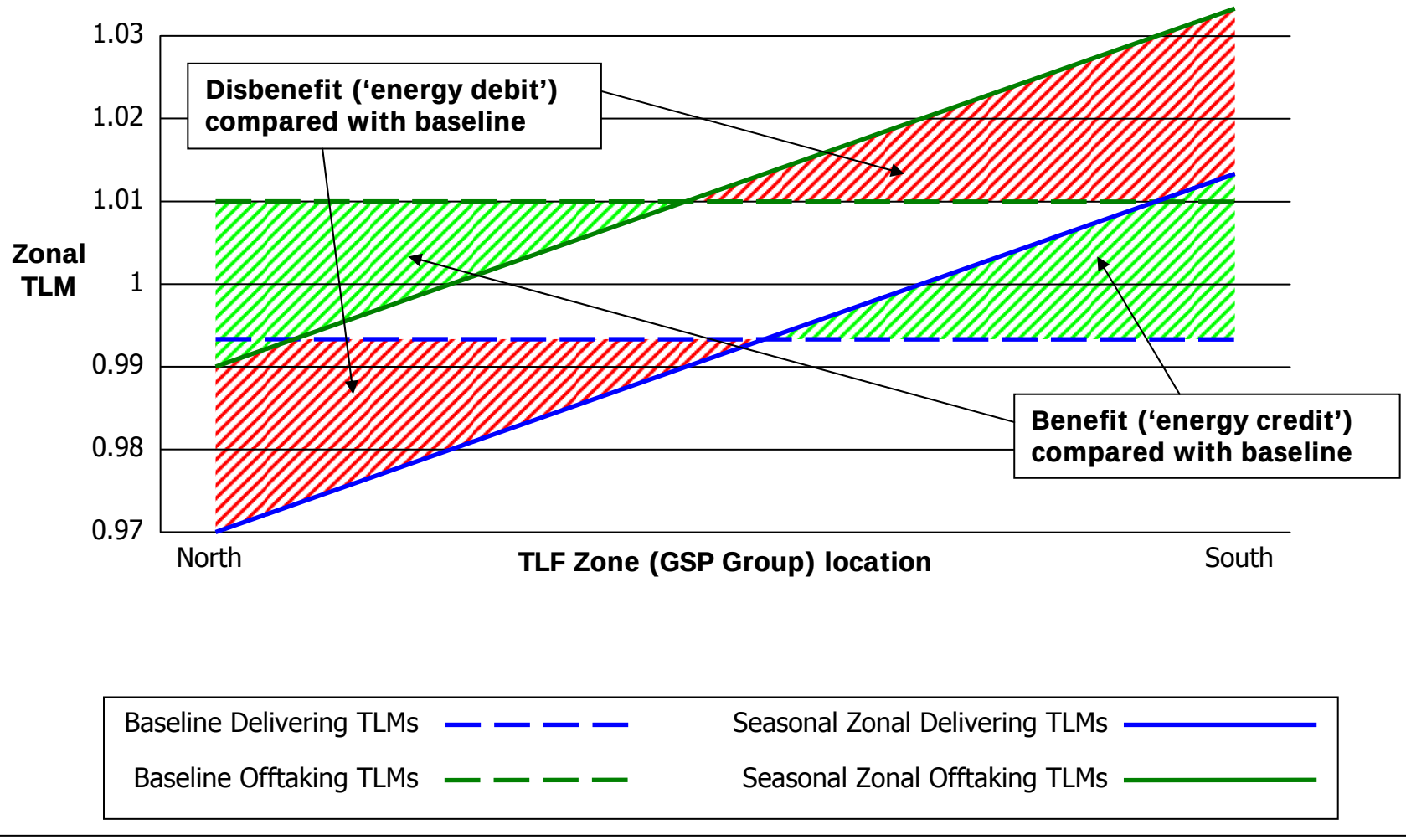
# Scaling TLFs (delivery only)



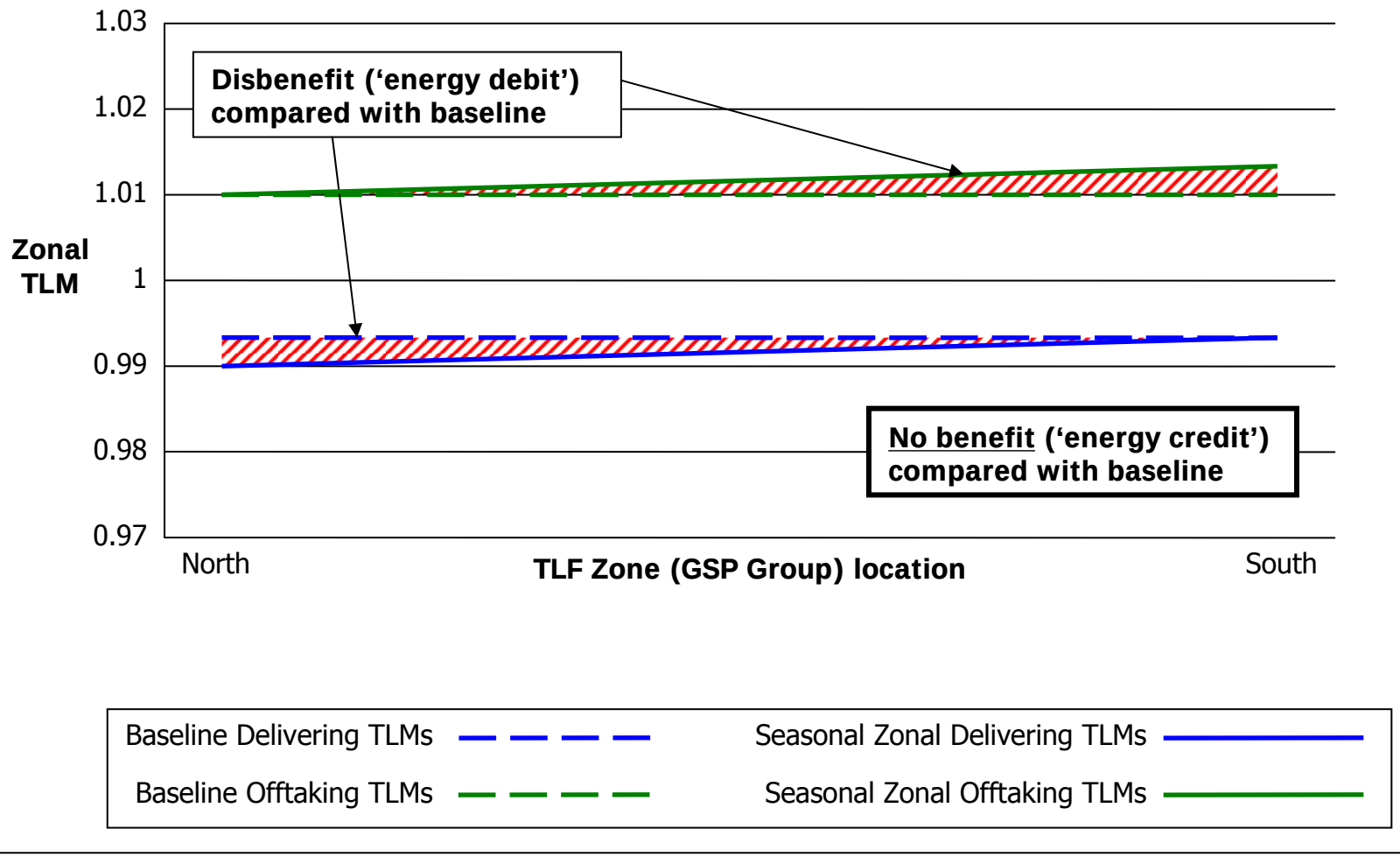
# Financial impact

- Scaling up/down of Metered Volumes, and consequent energy credit/debit under Proposed, causes money transfer:
  - **From** BM Units in unfavourable zones (Northern generators, Southern Suppliers)
  - **To** BM Units in favourable zones (Southern generators, Northern Suppliers)
- Produces signals to encourage reduction of variable losses
- Alternative reduces financial transfer

# Indicative TLM distribution - Proposed



# Indicative TLM distribution - Alternative



# P229 Alternative

- Arguments **for**:
  - Retains marginal signals to reduce losses
  - Reduction in signal strength (and overall benefits of P229) balanced by reduction/ removal of 'windfall gains' and 'windfall losses' by Parties
- Argument **against**: any 'windfall' gains/losses are result of removing existing cross-subsidy and therefore justified

# Rationale for analysis

- Load flow modelling
- Cost-benefit analysis

# Load flow modelling analysis

Three main aims of P229 Load Flow Modelling:

1. Calculate Seasonal Zonal TLFs for use in Cost Benefit Analysis
2. Assess sensitivity of TLFs to a range of factors
3. Highlight any potential issues with the P229 methodology

# Calculate TLFs and test sensitivity

1. Calculate 'baseline' P229 TLFs
2. Assess impact of TLF calculation time period (month/year vs Season)
3. Test how well Seasonal Average Zonal TLFs represent Nodal TLFs
4. Effect of varying interconnector operation
5. Test effect of participants responding to TLF signals - move generators nearer to demand
6. Overall effect of 5 on heating losses

# Calculate TLFs and test sensitivity

7. Effect of plant breakdown/withdrawal - set some generators' metered volumes to zero
8. Impact of intermittent generators (e.g. wind)
9. Impact of including existing/planned offshore generation as transmission connected
10. Impact of long-term offshore developments:
    - Large-scale generation
    - New interconnectors
    - Offshore networks

# Cost Benefit Analysis (CBA)

- Quantify impact on losses, generation, demand:
  - Use TLFs, Load Flow Modelling data, IA results
  - Iterative development of modelled TLFs
  - Economic despatch modelling
- Differences from previous analysis:
  - Offshore transmission considered
  - Environmental impact included
  - Greater modelling granularity (hourly vs 'snapshots')
  - Length of analysis period and modelled start date

# Key CBA tasks

- Quantification of:
  - BSC Parties' Implementation Costs
  - Initial distributional impact on Parties
  - Impact on Transmission Losses
  - Impact on Generation (and Interconnectors)
  - Impact on Demand
  - Impact on Transmission System
  - Environmental impact

# CBA tasks

- **BSC Parties' Implementation Costs**
  - Implementation costs to Parties quantified
  - Based on impact assessment and public data
- **Initial distributional impact on Parties**
  - Movement of money between Parties due to P229 quantified over CBA period
  - Prior new build decisions taken into account
- **Impact on Transmission Losses**
  - Changes in transmission losses due to P229 and the costs of such losses quantified

# Impact on Generation (and Interconnectors)

- Changes to signals to generators and extent generators would respond quantified, including:
  1. Existing generators operation/despatch
  2. Impact on future generation
- Quantified impact on:
  - Interconnector Imports/Exports
  - Connection types (132kV vs 275/400kV)
  - Wholesale prices
  - Cost of carbon emissions
  - Required GB generation capacity

# Impact on Demand

- Economic signals for demand quantified
- Demand response and growth
- Year 1 April 2011 to 31 March 2012 used for sensitivity analysis on influence of demand-side effects on generation

# Impact on Transmission System

- Impact on operation and development of the GB transmission system will be quantified, including:
  1. Impact on Transmission System constraints
  2. Impact of Transmission System constraints on the costs and benefits associated with P229

# Environmental impact

- Short- and long-term impacts quantified
  - Cost of carbon due to changes in transmission losses from the current baseline
  - Impact on carbon and SOx/NOx emissions
  - Impact on renewable generation
  - Impact of fuel transportation due to locational signals

# CBA sensitivity testing

- How sensitive is cost-benefit to input changes?

Modelled 'change case' under varied conditions:

- Central change case: best estimate
- Sensitivity scenarios: altered market conditions
  - Long term volatility in fuel prices
  - High gas price
  - Low gas price
  - Increased offshore development
  - Alternate nuclear developments

# Results

» Cost-benefit analysis

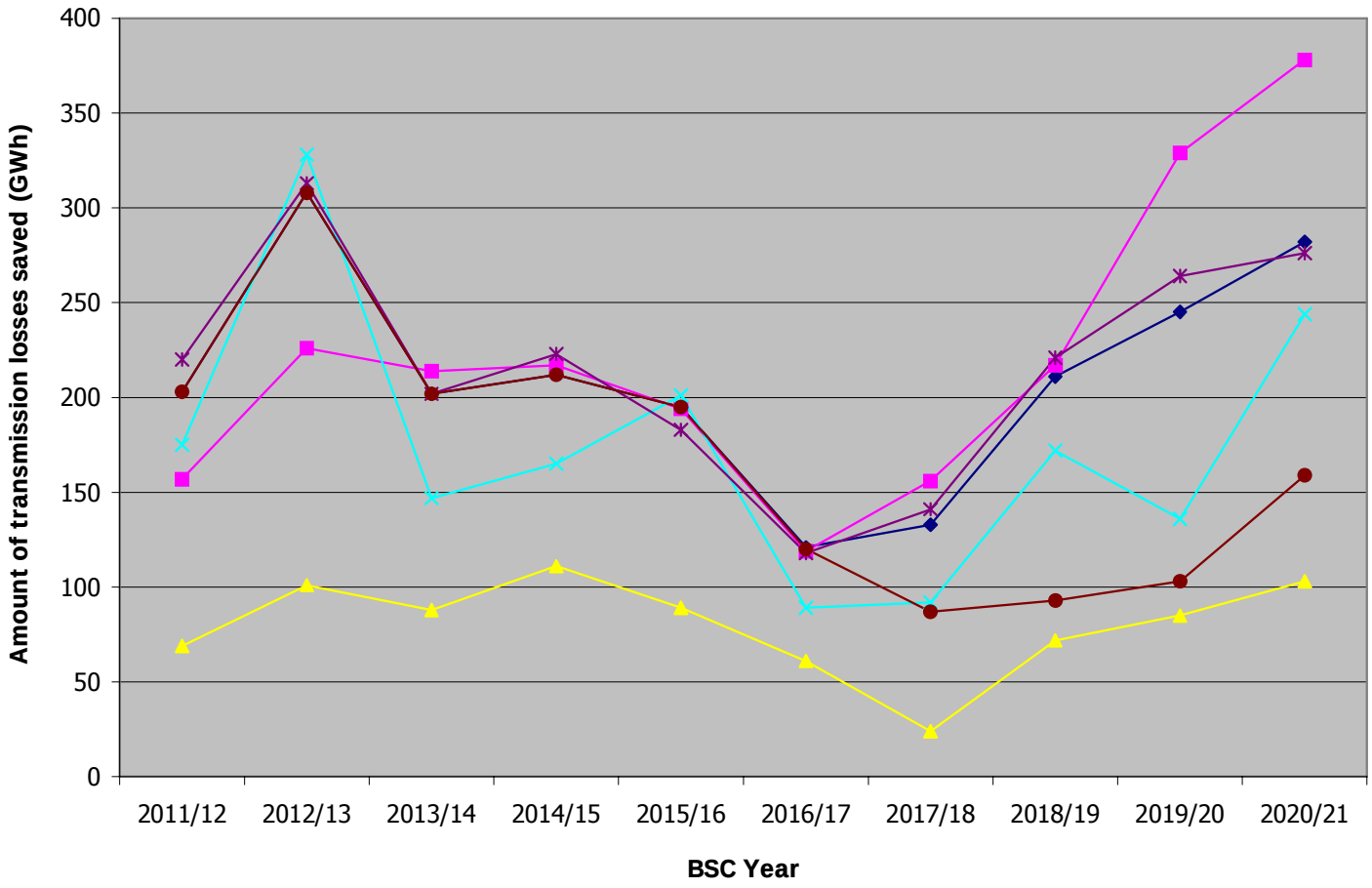
# Cost-benefit overview

- CBA methods applied to results of modelled 10-year analysis period (2011-2021)
- Cost-benefits are net of estimated implementation and operational costs
- Discounted using post-tax WACC of 4.2%
- Indicates significant benefits due to NOx and SOx reductions
  - Results presented with and without these emissions effects

# Cost-benefit analysis

- Central finding of CBA is that P229 would affect despatch by generators
- Benefits of demand response relatively small compared with those of generation response
- P229 Proposed net benefits would be positive
- Cost-benefit positive for all scenarios without the inclusion of SOx/NOx emissions benefits
- Including SOx/NOx effects generally increases benefits, except for the high gas price scenario
- Benefits reduced under Alternative

# Transmission losses saved under Proposed Modification (GWh)

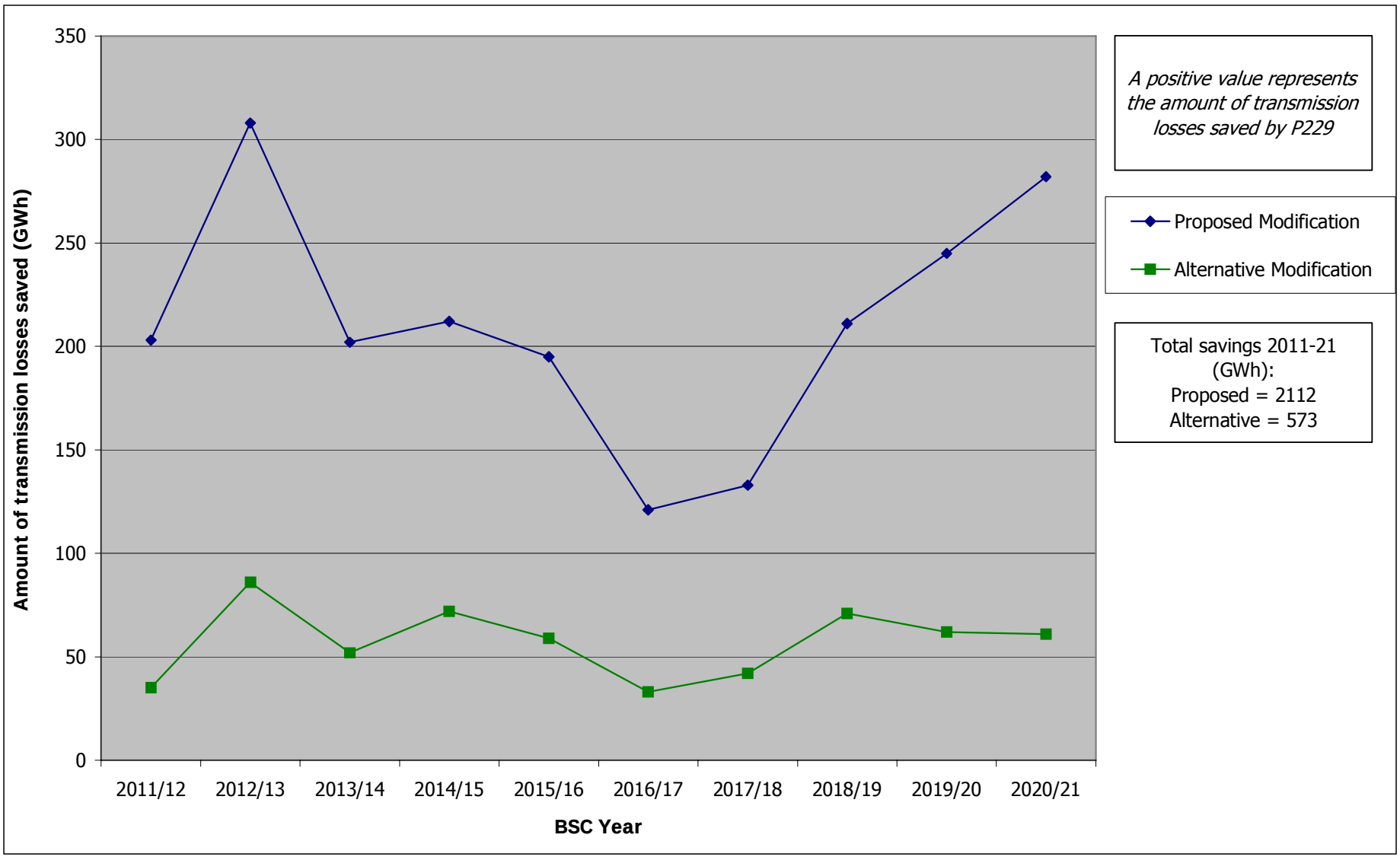



*A positive value represents the amount of transmission losses saved by P229 Proposed Modification*

- Reference (BAU + P229)
- High Gas Price
- Low Gas Price
- Volatile Fuel Price
- Aggr. Offshore Wind
- Alternative Nuclear

Total savings 2011-21 (GWh):
Reference = 2112
High Gas = 2207
Low Gas = 803
Volatility = 1749
Wind = 2161
Nuclear = 1682

# Transmission losses saved under Alternative Modification P229 (GWh)



# Cost-benefit analysis

- Following table shows overall cost-benefit of
  - Central reference scenario (P229 Proposed)
  - The five sensitivity scenarios
  - The P229 Alternative scenario
- The distributional impacts on different participants, depending on their type and location, are not shown in the table below, and are covered separately

# Cost-benefit analysis

| Benefits associated with each CBA scenario (figures to nearest £0.5m) | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **Proposed** (reference) | **High gas** | **Low gas** | **Volatile fuel** | **Wind** | **Nuclear** | **Alternative** |
| **Benefits, £m (no SOx/NOx)** | **46** | **98** | **4** | **46.5** | **52** | **39** | **12.5** |
| **Benefits, £m (inc. SOx/NOx)** | **275** | **-20** | **73** | **173** | **266** | **222** | **76** |
| **Demand benefits, £m** | **2** | **3** | **0.5** | **1.5** | **2** | **2** | **0** |
| **Total benefits £m** | **277** | **-17** | **73.5** | **174.5** | **268** | **224** | **76** |

# Distributional impact

- Following table shows the distributional impact of P229 under the various scenarios
  - Transfers between participants in Northern regions and those in Southern regions
- Figures for supply and generators are amounts that would be 'paid' by some and 'received' by others
- Net transfer would be zero (i.e. all money paid by one participant is received by another)

# Distributional impact

- Overall magnitude of transfer is sum of both of amount paid magnitude and amount received magnitude for both supply and generators
- Group believes this best represents true distributional impact on Parties
  - Amount paid by a group of participants is a disadvantage to them
  - Amount received by a group of participants is a benefit to them

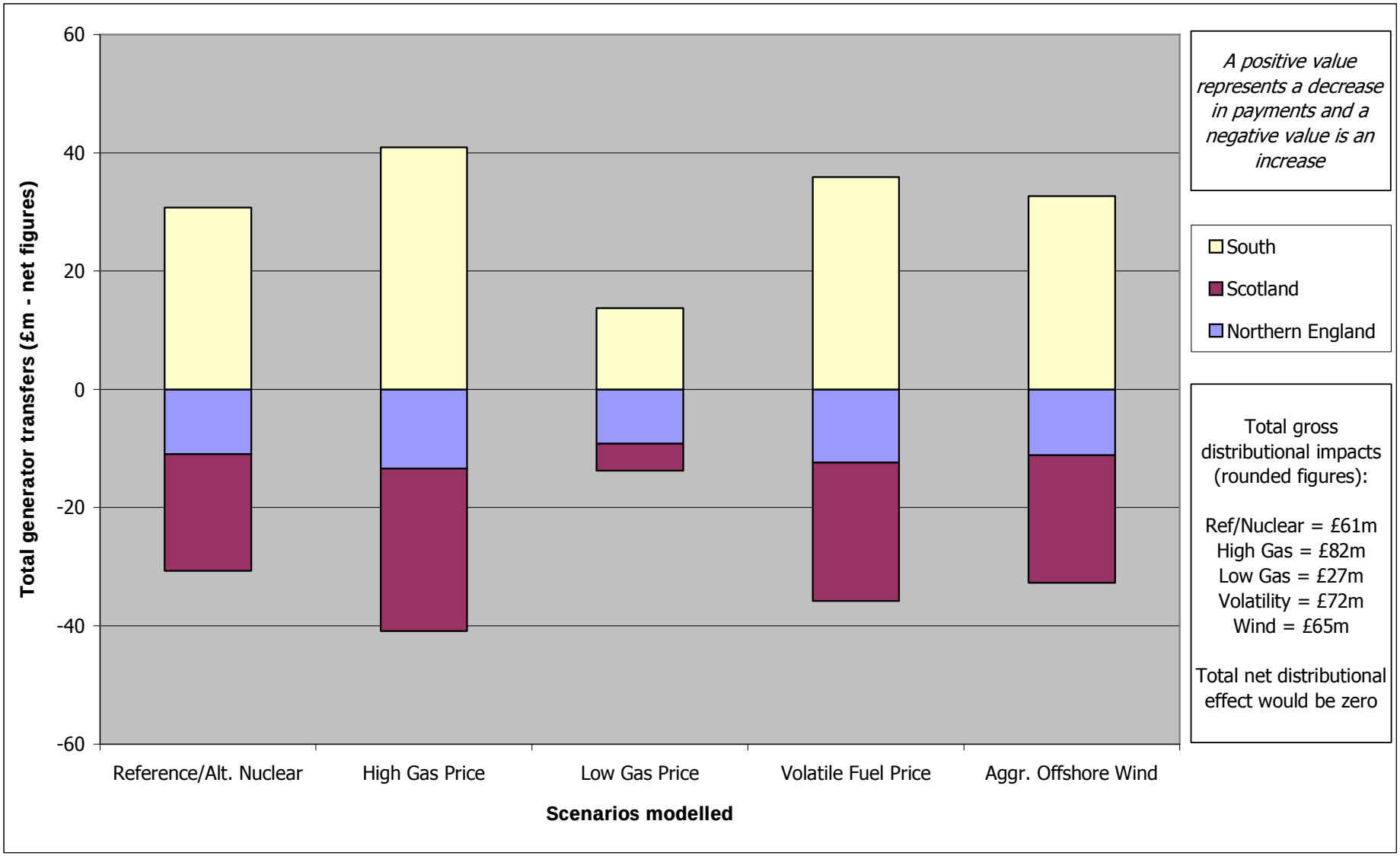
# Distributional impact

- Group believes measure of relative benefits or disadvantages to Parties is the total of quantified benefit for some and quantified disadvantage for others
- Applies whether the distributional impact is regarded as:
  - Removal of existing cross-subsidy (i.e. positive); or
  - Windfall gains and losses (i.e. negative)

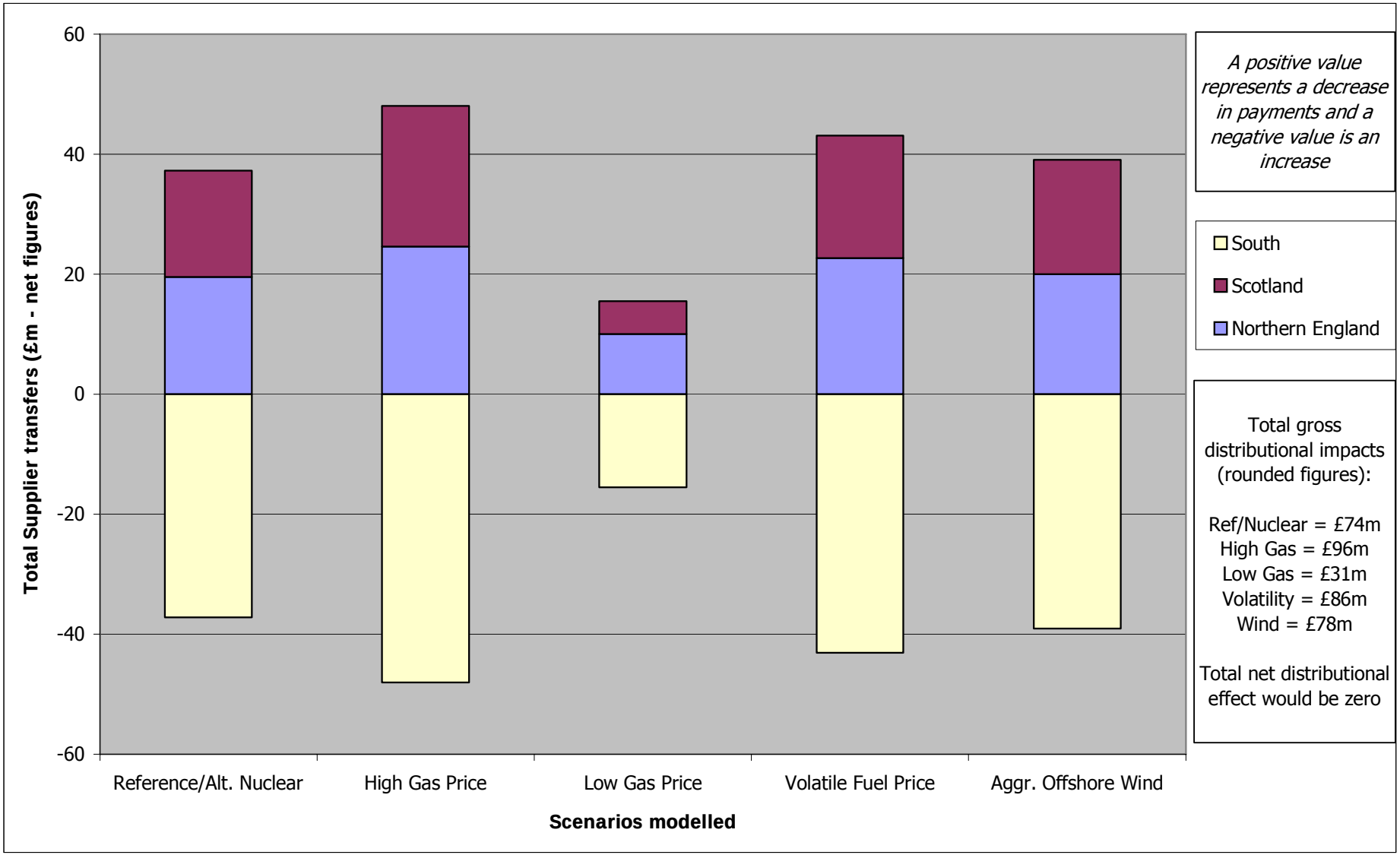
# Distributional impact

| Distributional impact of CBA scenarios (figures to nearest £0.5m) | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **Proposed** (reference) | **High gas** | **Low gas** | **Volatile fuel** | **Wind** | **Nuclear** | **Alternative** |
| **Supply £m (South to North)** | **37** | **48** | **15.5** | **43** | **39** | **37** | **16** |
| **Generators £m (North to South)** | **31** | **41** | **14** | **36** | **33** | **31** | **13** |
| **Magnitude of transfer £m** | **135** | **178** | **58** | **158** | **143** | **135** | **58** |

# Annualised distributional impacts on generators by geographic region



# Annualised distributional impacts on Suppliers by geographic region



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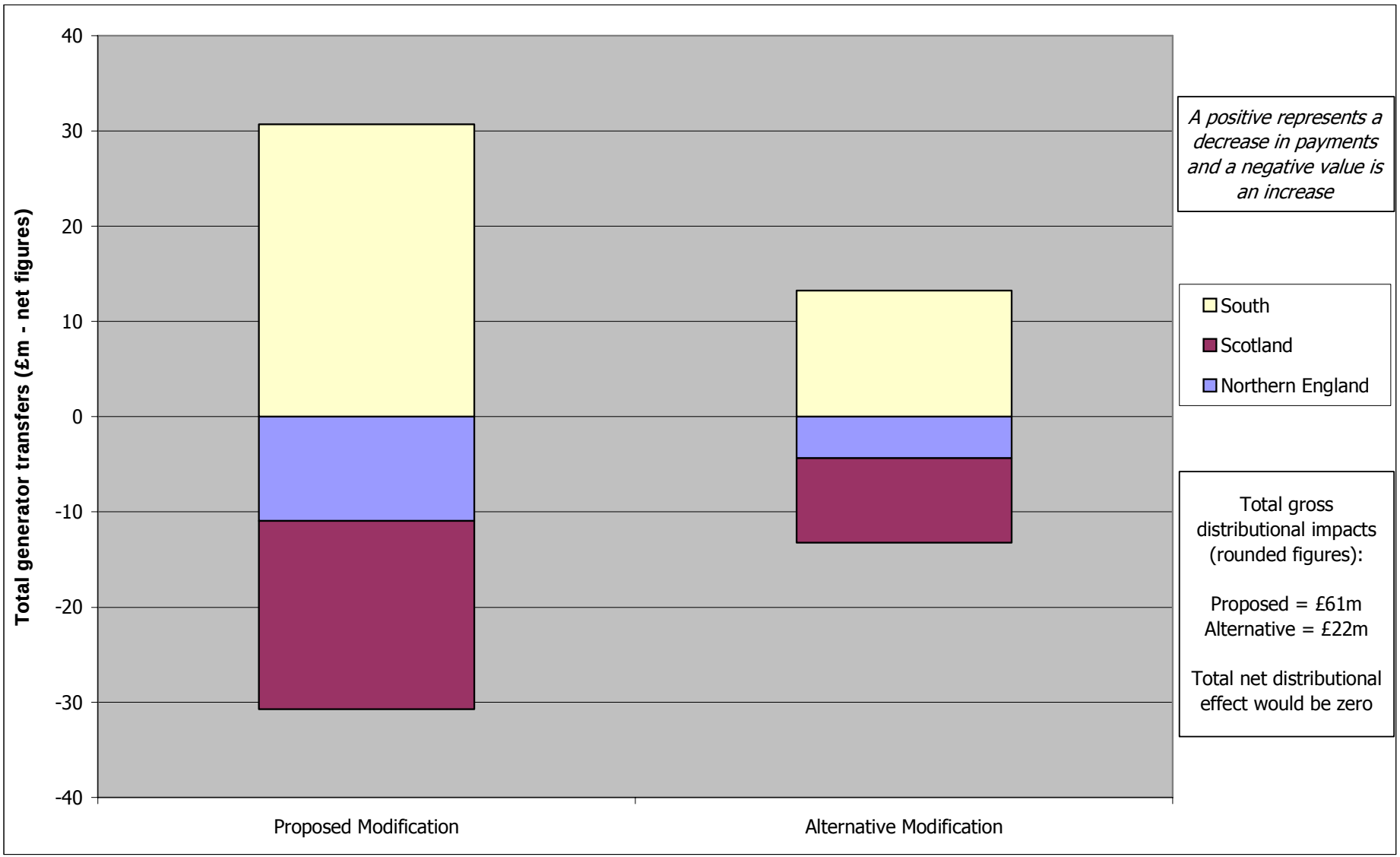

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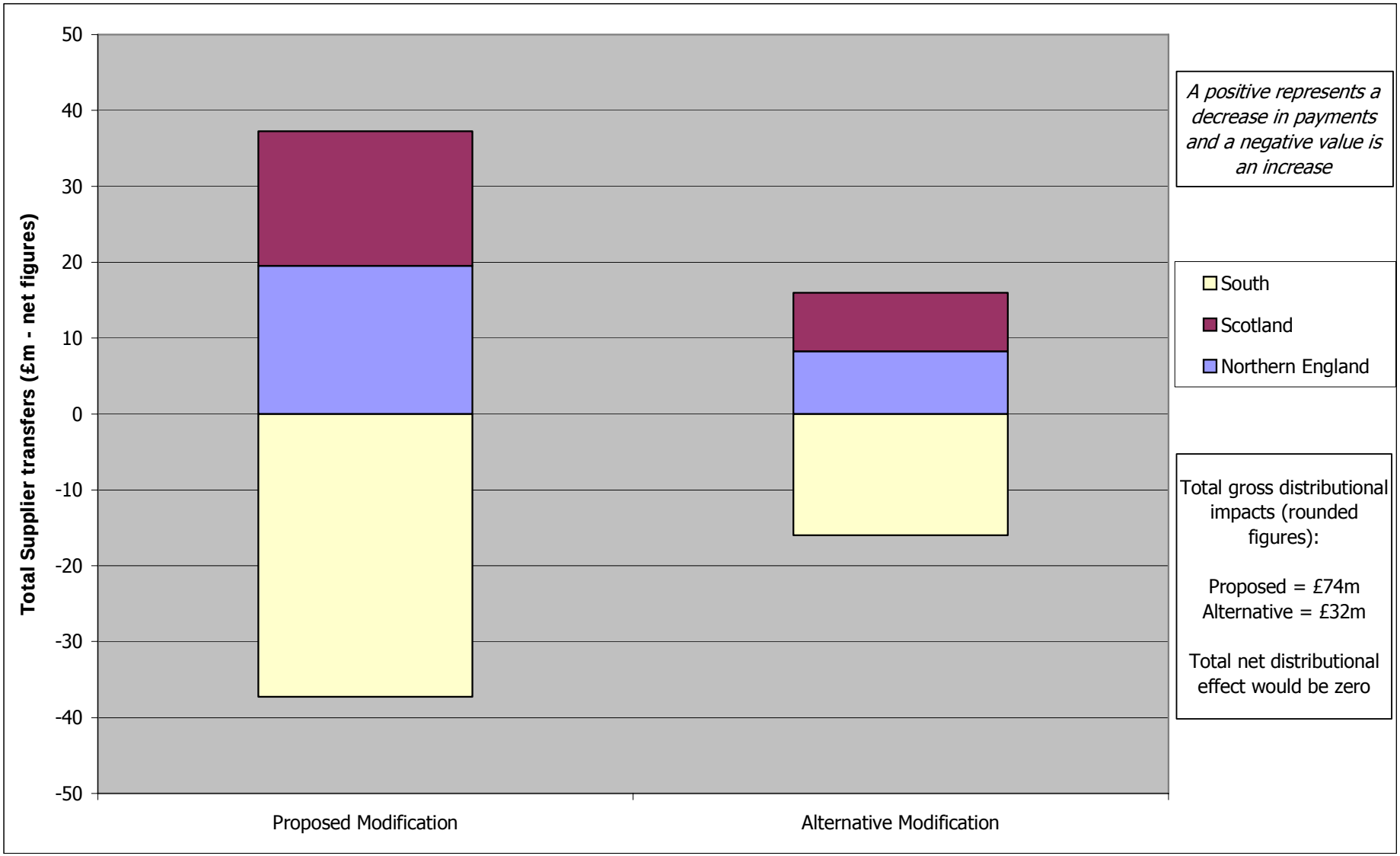

# Views of Modification Group

- Benefits and drawbacks
- Initial views on Applicable BSC Objectives

# Proposed vs baseline - Group views on Objective (b)

**Benefits - Majority:**

- Efficient despatch - cost signals allow variable losses to be taken into account
- More efficient market entry/exit due to cost signals
- Production savings, reduction in variable losses - reduced generation due to more efficient despatch, also environmental benefit due to reduced emissions

**Benefits - Minority:**

- Remove cross-subsidy inherent in current uniform allocation of variable losses
- Allocate variable losses on a more cost reflective basis, promoting competition
- Cost signals better reflect contribution to variable losses, enhancing competition and reducing overall variable losses

**Drawbacks - Minority:**

- Inherent inaccuracies in TLF calculation mean it would not deliver costs reflecting BM Unit impact on losses in every Settlement Period; therefore would not result in more accurate and appropriate allocation
- Would discourage investment in wind generation in the North and encourage investment in the South, with a negative overall effect on investment, and therefore a negative environmental impact

# Proposed vs baseline - Group views on Objective (c)

## Benefits - Minority:

- Removes cross-subsidy inherent in current uniform allocation of variable losses
- Allocates variable losses on a more cost reflective basis than the baseline which would promote competition
- Produces cost signals that would better reflect participants contribution to variable losses, which would enhance competition and reduce overall variable losses

## Drawbacks - Majority:

- Distributional transfers are windfall gains/ losses, and detrimental to competition
- Transfer disproportionate to benefit
- Not cost reflective; allocates negative losses
- Introduces new cross-subsidy
- Disproportionate impact on participants who can not respond
- Inherent inaccuracies; does not guarantee more accurate/appropriate allocation - i.e. a new, less transparent cross subsidy
- Socialisation of losses within zones - inappropriate signals
- Negative impact on investment in renewables due to increased cost of investment in unfavourable zones
- Discriminates; new/existing generators

# Proposed vs baseline - Group views on Objective (d) and overall

**Benefits - Minority:**

- Neutral - no significant additional expenditure or complexity

**Drawbacks - Majority:**

- Adds additional complexity, but must be measured against the benefits a particular change would bring
- Added complexity not significant; considerations minor compared with those under (b) and (c)

# Proposed vs baseline - overall Group views

- No benefits or drawbacks against Objective (a)
- Group agreed by majority
  - Objective (b) better facilitated
  - Objective (c) not better facilitated
  - Objective (d) not better facilitated
- Group provisionally agreed by narrow majority that P229 Proposed would not better facilitate the Applicable BSC Objectives compared with the current baseline

# Alternative vs baseline - additional Group views on Objectives

## Benefits:

**Objective (a):** No additional views

**Objective (b):** No additional views

**Objective (c):**

- **Partially** removes the cross-subsidy inherent in the current uniform allocation of variable losses
- Risk of windfall gains/losses sufficiently mitigated by use of scaling factor to cap benefit for individual generators at zero allocation of variable losses; therefore a net benefit for competition

**Objective (d):** No additional views

## Drawbacks:

**Objective (a):** No additional views

**Objective (b):**

- Additional inherent inaccuracy of arbitrary adjustment of losses to avoid crediting energy to BM Units

**Objective (c):**

- Additional inherent inaccuracy of arbitrary adjustment of losses to avoid crediting energy to BM Units

**Objective (d):** No additional views

# Alternative vs baseline - overall Group views

- No benefits or drawbacks against Objective (a)
- Group agreed by majority
  - Objective (b) better facilitated
  - Objective (c) better facilitated
  - Objective (d) not better facilitated
- Group provisionally agreed by majority P229 Alternative would better facilitate Applicable BSC Objectives compared with the baseline

# Proposed vs Alternative - Group views on Objectives

## Proposed:

### Objective (b) - Majority:

- More efficient Transmission System operation due to better despatch
- Benefits of reduced losses (i.e. savings due to reduced generation and environmental benefits) greater under P229 Proposed
- Contains fewer sources of inaccuracy

### Objective (c) - Majority:

- More cost reflective and sends the right signals to participants (compared with the Alternative which sends diluted signals)
- More properly allocates variable transmission losses to participants
- Contains fewer sources of inaccuracy

## Alternative:

### Objective (b) - Minority:

- More cost reflective than the Proposed (i.e. reflects that all participants contribute to losses) which would lead to more efficient operation of Transmission System as decisions made on more cost-reflective basis

### Objective (c) - Minority:

- More cost reflective; reflects that all participants contribute to losses and does not introduce new cross subsidies
- Reduces magnitude of windfall gains/losses relative to Proposed
- Mitigates risks of windfall gains/losses and uncertainty of benefits realisation under P229 Proposed

# Proposed vs Alternative - overall Group views

- No relative benefits or drawbacks identified against Objectives (a) or (d)
- Group agreed by majority
  - Objective (b) better facilitated by Proposed
  - Objective (c) better facilitated by Proposed
- Group provisionally agreed by narrow majority P229 Alternative would not better facilitate the Objectives compared with P229 Proposed

# Provisional Group recommendations

- P229 Proposed **should not** be approved
- Provisional **majority** view of P229 Proposed:
  - Neutral with respect to Objective (a) with a minor negative impact on (d)
  - Would better facilitate Objective (b); but
  - Would not better facilitate Objective (c), and this outweighs benefits under (b).
- By a **narrow majority** the P229 Alternative would not better facilitate the Objectives compared with P229 Proposed

# Clarifying Group voting

- Proposed would not better facilitate Objectives
- Alternative would better facilitate Objectives
- Alternative would not better facilitate Objectives compared with the Proposed

**i.e. reject P229 Proposed; no Alternative**

- All who believe Proposed superior to baseline also believe Alternative is better than baseline (but Proposed is better than Alternative)
- Nobody who believes Alternative superior to Proposed thinks Proposed better than baseline

# Next steps for P229

- Assessment Report
- Report phase

# Next steps for P229

- **3 December** 2009: consultation responses due
- **December** 2009: Group consider responses and produce P229 Assessment Report
- **January** 2010: P229 Assessment Report presented to the Panel, which will give initial views on P229 and issue the draft Modification Report for consultation - **this will be the last chance for Parties to comment on P229 as part of the BSC Modification process**
- **February** 2010: issue final P229 Modification Report, with final Panel views, to Authority for decision

# Implementation activities

- Most Parties indicate 9-12 months
- 12 month P229 Implementation would include:
  - TLFA procurement
  - Load Flow Model Reviewer appointment
  - TLFA establishing the Load Flow Model
  - Development of TLFA systems, processes and documentation
  - Calculation of Adjusted Seasonal Zonal TLFs
  - Three months' notice to Parties between publishing and using Seasonal Zonal TLFs (i.e. nine months for Parties to amend processes etc before first TLFs published)

# Implementation dates

- P229 implementation on:
  - 1 April (aligning with Parties' annual contract rounds); **or**
  - 1 October (aligning with mid-yearly rounds)
- Final P229 Modification Report due to go to the Authority in February 2010
  - Earliest possible Implementation Date is 1 October 2011 (if approval received from Authority before 1 October 2010); or
  - Back-up date: 1 April 2012 if approval received from Authority before 1 April 2011

# Questions?