



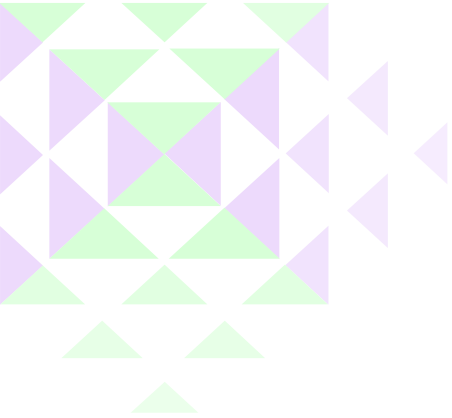
**SP Transmission**

# Transmission Price Control Review

Initial Proposals Workshop

5 July 2006

London

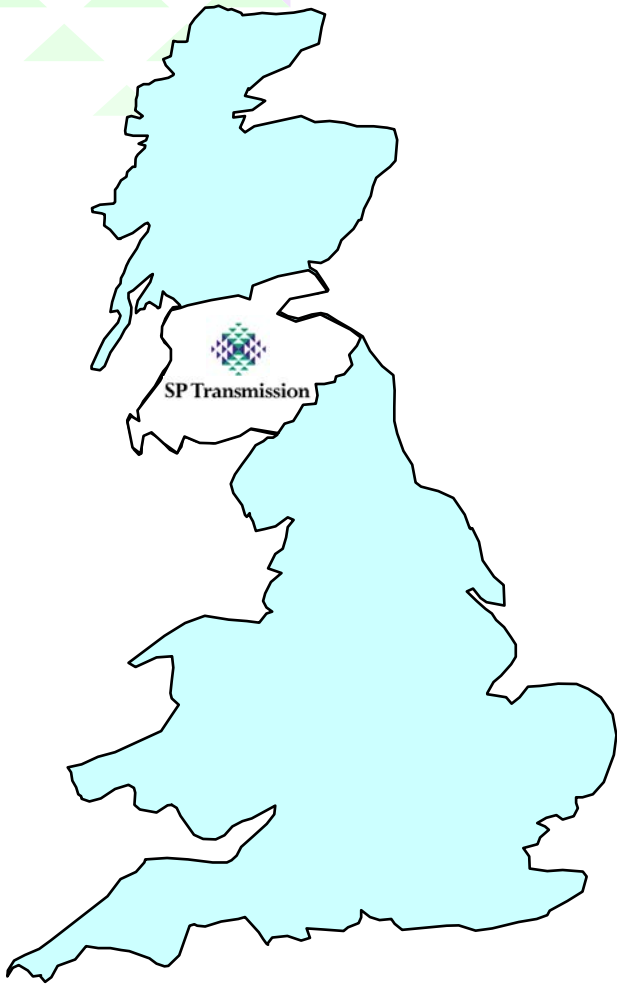


# Jeff Hunt

## Price Reviews and Technical Manager



# SPT Objectives for TPCR4



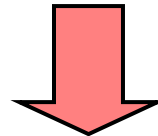
We face major challenges :

- Large parts of our network require to be modernised
- Significant investment is required for connection of renewable generation



# Non-Load Related Capital Expenditure

- We have critical assets of national importance that must be modernised to ensure ongoing security of supply
- Transmission assets are high / medium criticality and many are reaching the end of their design life
- Our investment strategy is to :
  - Meet the expectations of our customers & deliver sustainable shareholder value through long term ownership and effective stewardship of network assets
  - Ensure compliance with legal & licence obligations by maintaining the safety, integrity and performance of our network as its age increases

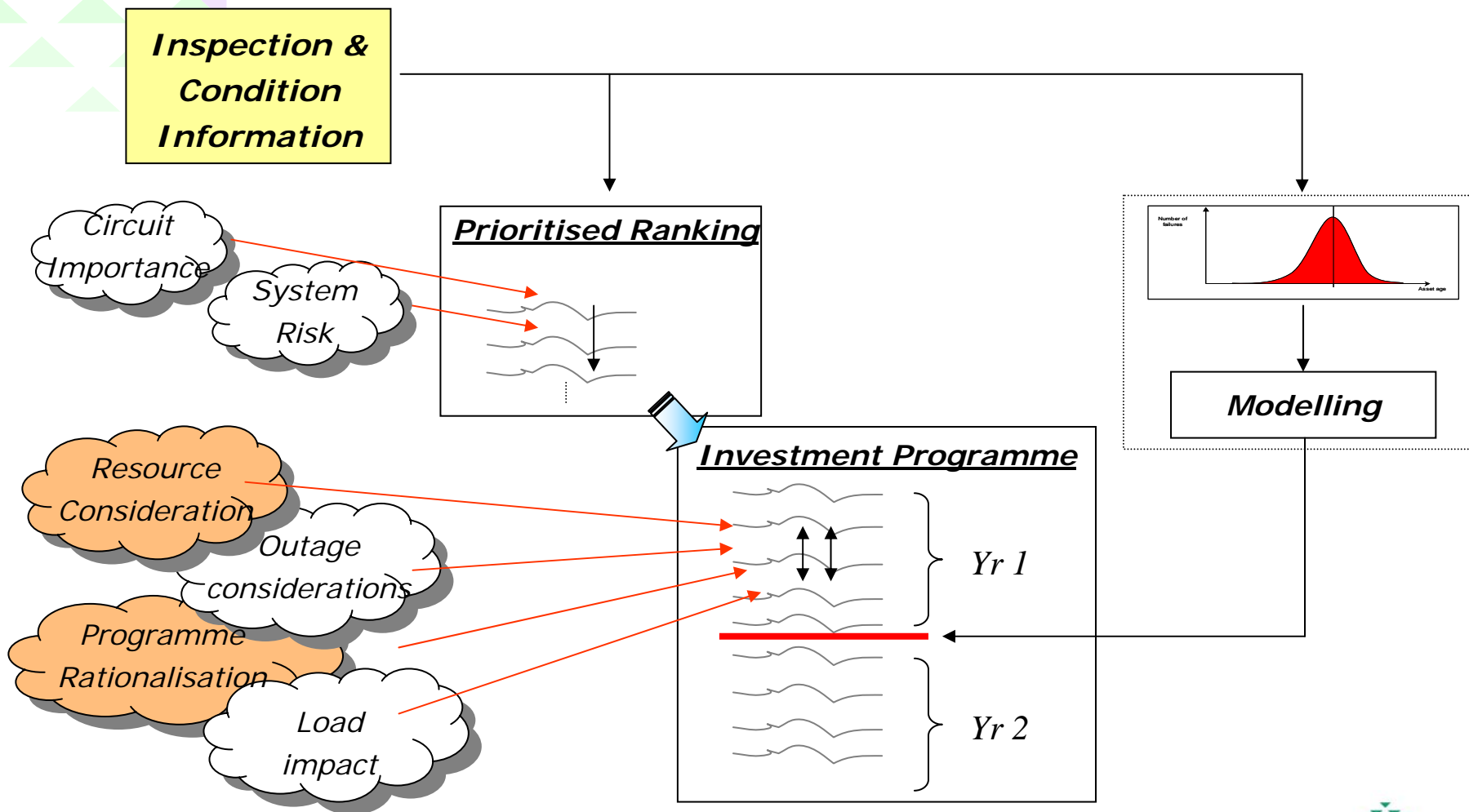


- **Manage business risk through effective prioritisation of investment, asset criticality and risk assessment, and replace before failure**



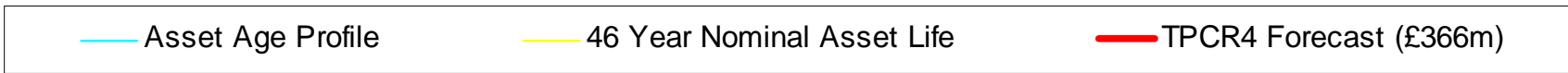
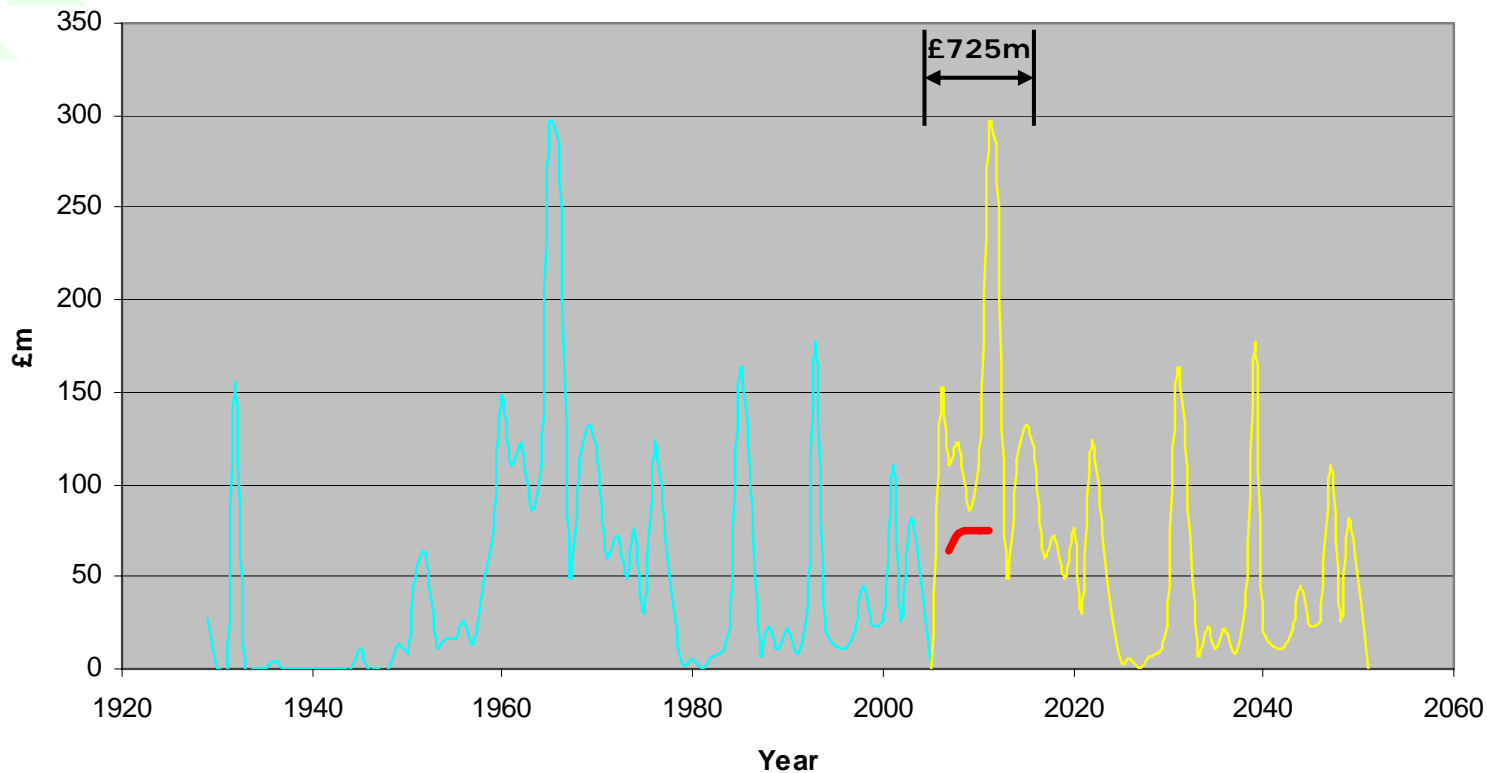
# Non-Load Related Capital Expenditure

## Programme Development



# Non-Load Related Capital Expenditure

## Asset Age Profile



# Non-Load Related Capital Expenditure

- Historic levels of capex are insufficient to maintain safety, performance, resilience & sustainability as asset base ages
- TPCR3 and the 2-year extension reflects long-term plan to progressively increase investment to address this issue
- Average expenditure in TPCR4 needs to be increased by 35% compared with the 2-year extension
- Investment will need to continue at this level for at least the next three Price Control periods
- Increased focus on overhead lines and transformers

Asset	TPCR3	2-year Extension	TPCR4	£m TPCR4	% > 50 years
Overhead Lines	23%	32%	46%	126	28
Transformers	11%	10%	16%	43	8
Switchgear	48%	41%	19%	53	7
Cables	17%	17%	19%	53	12
	100%	100%	100%	275	



# Ofgem Proposals on Non-Load Related Capital Expenditure

## Major Assets

Asset (£m)	TPCR3	2-year Extension	FBPO	Table 7.3 Reduction	Initial Proposals	Reduction %
Overhead Lines	21	25	126	-26	101	-20.2%
Transformers	10	8	43	-17	26	-39.8%
Switchgear	41	32	53	-11	42	-20.3%
Cables	16	13	53	-3	50	-6.2%
Protection & Control	20	15	47	-28	20	-58.1%
Substation Other	32	14	40	-6	34	-15.5%
	140	107	363	-90	272	-24.9%





# Non-Load Related Capital Expenditure

## Summary

- We have critical assets of national importance that must be modernised to ensure ongoing security of supply
- Transmission assets are high / medium criticality
- Many assets are reaching end of design life
- An increase in investment levels is necessary

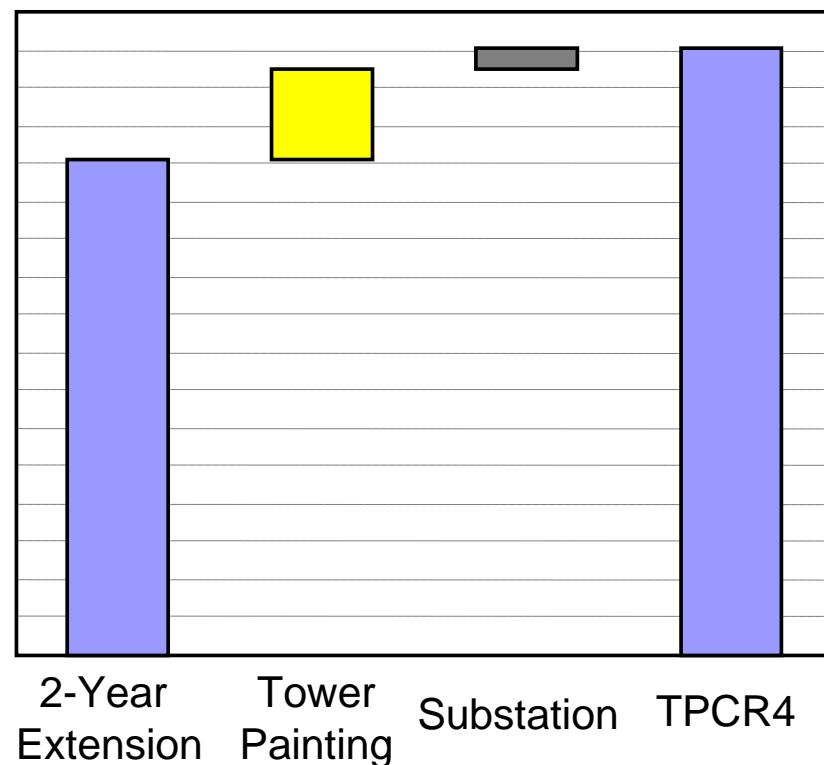
Our strategy :

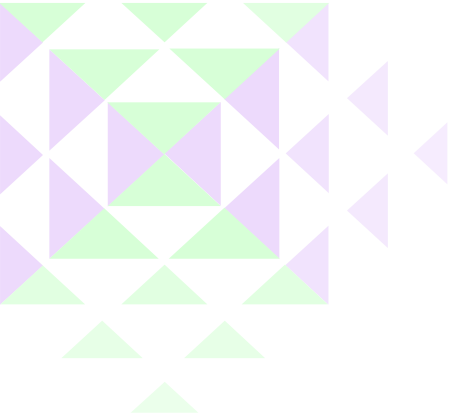
- Maximises remaining asset life
- Minimises risk of unexpected failures
- Prioritises asset replacement
- Considers resource & network access constraints
- Safeguards long term network sustainability



# Operating Costs

- Ofgem proposed reduction in controllable opex allowance for 5yr period of £21.6m (23%)
- Allowance based on normalised 2004/05 recurring controllable cash costs (RCCC)
- 1.5% p.a. efficiency improvement applied
- £10m efficiencies identified in tower painting and plant maintenance programmes
- £12.2m additional allowance for increased maintenance volume associated with deteriorating asset base





# Alan Michie

Transmission Technical Manager



# Load Related Capital Expenditure

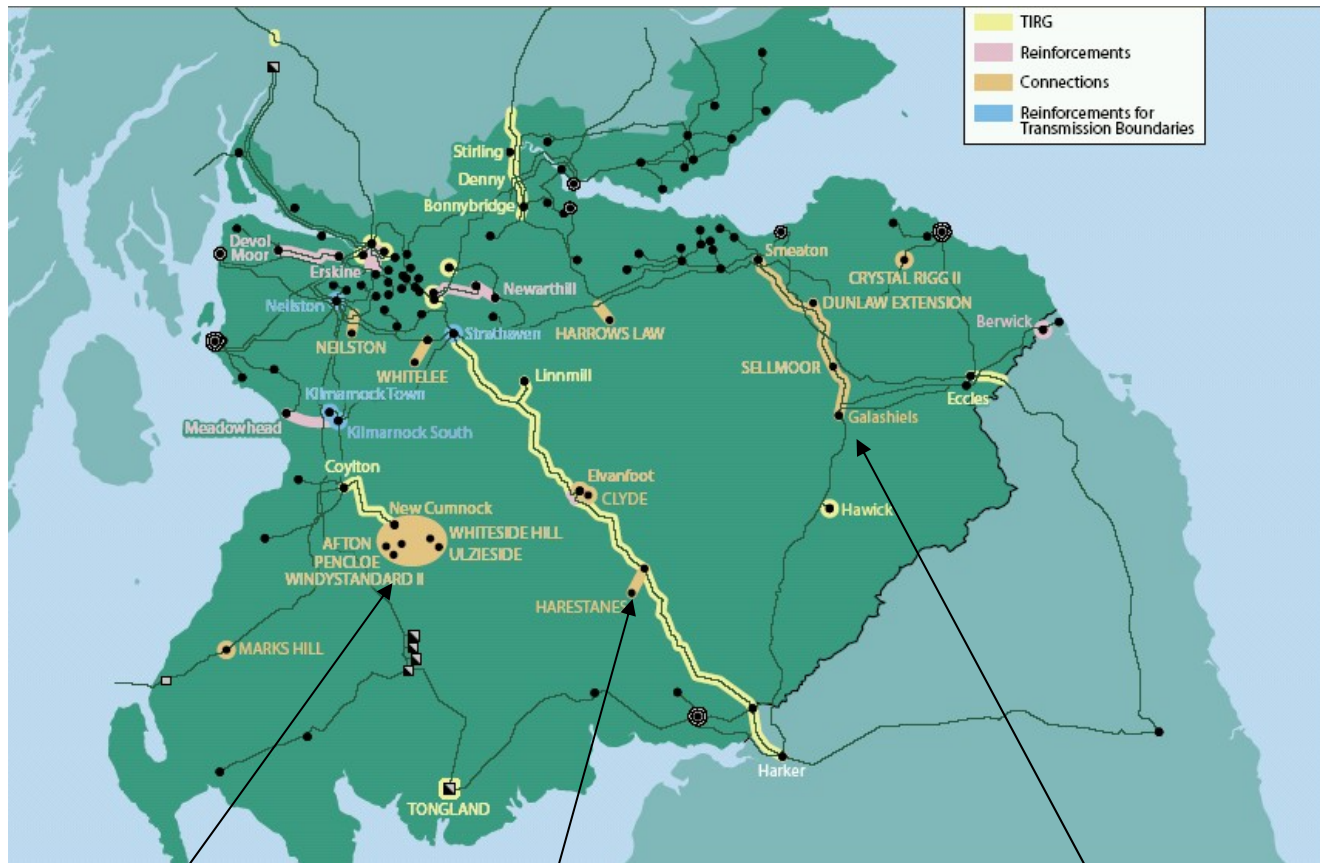
## Building Blocks

	<u>FBPO</u>
	<u>£m</u>
<b>(i) Connection Infrastructure</b>	
- Local infrastructure	122
- Collectors	48
- Connection assets ("plugs")	33
<b>(ii) Boundary reinforcement</b>	130
<b>(iii) Other reinforcements</b>	14
	<hr/>
<b>Total</b>	<b>£347m</b>



# Load Related Capital Expenditure

## (i) Connection Infrastructure - Collectors



New Cumnock  
Collector

Moffat  
Collector

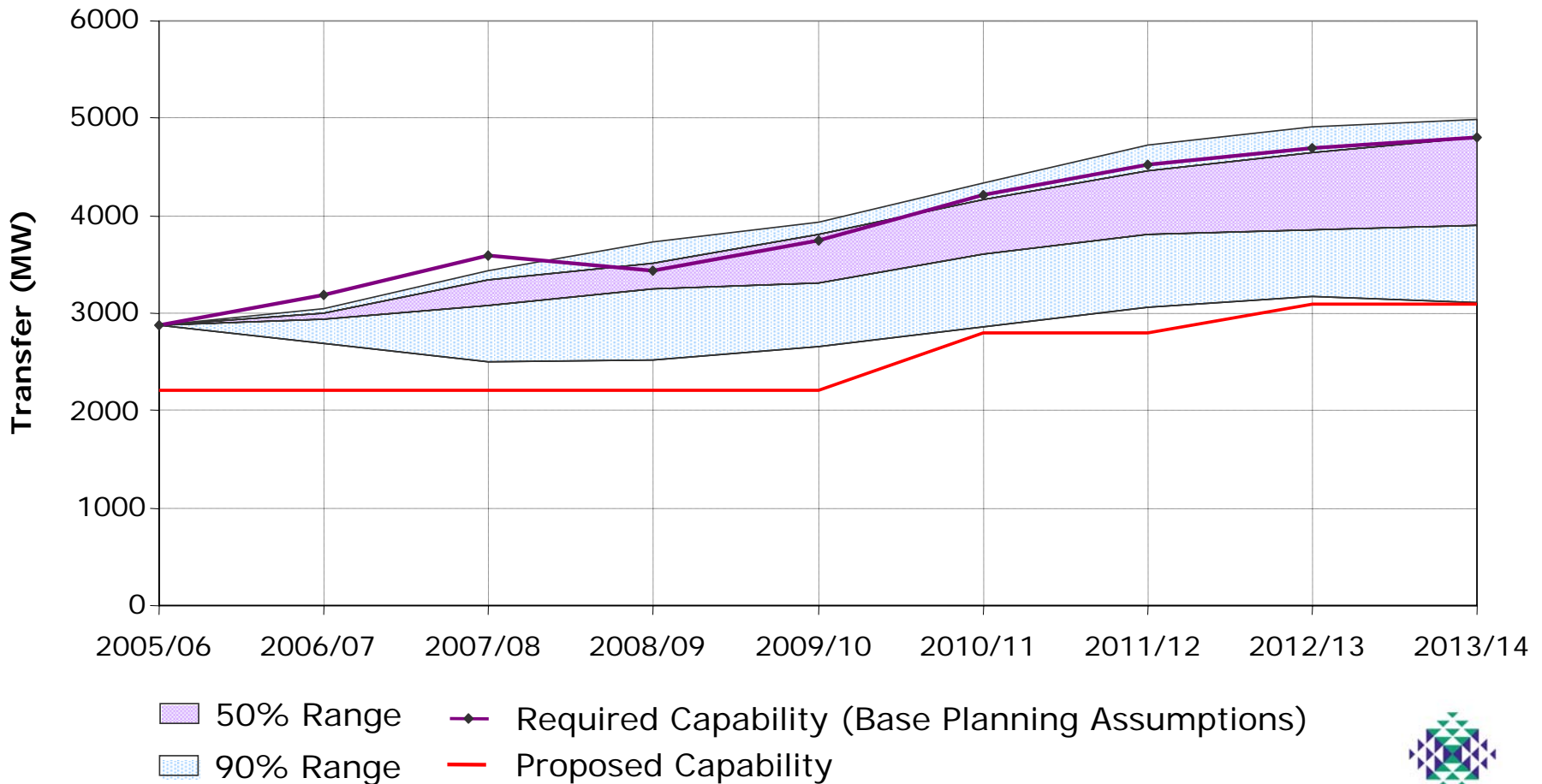
Galashiels – Smeaton  
Collector



# Load Related Capital Expenditure

## (ii) Boundary Reinforcement

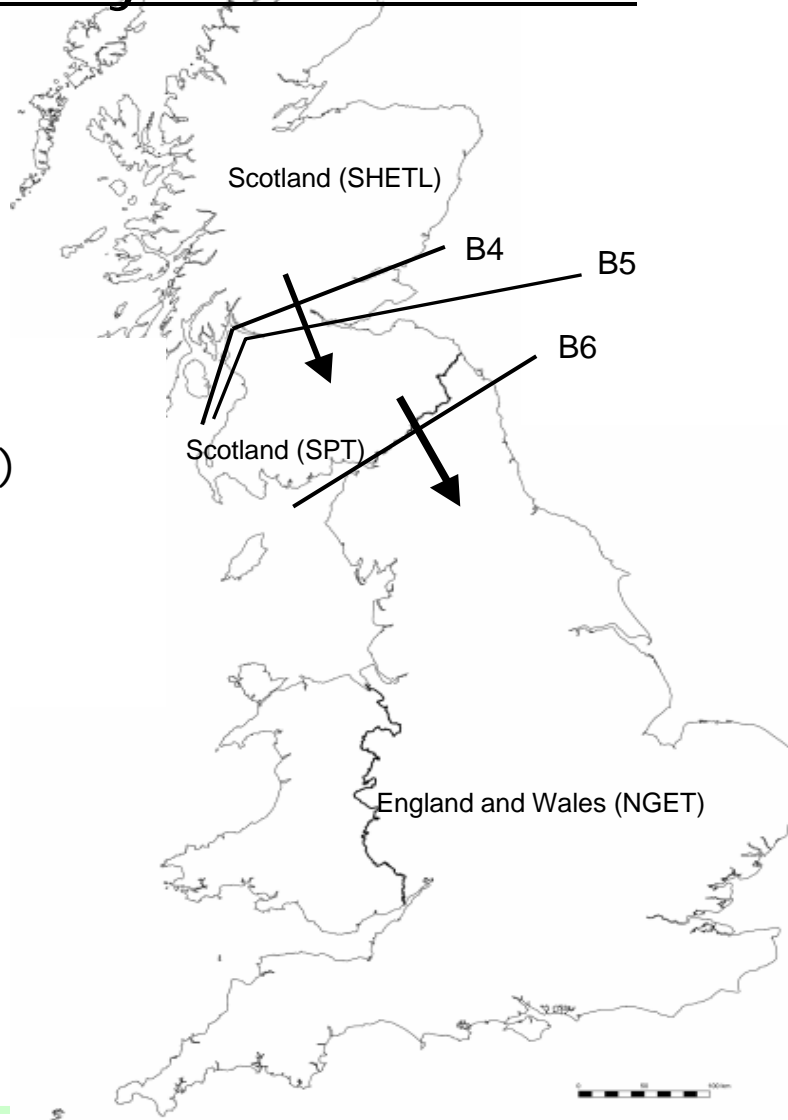
### Required B6 Boundary Capability (SPT - NGET)



# Load Related Capital Expenditure

## (ii) Boundary Reinforcement

	<u>£m</u>	
B4	0	(TIRG Baseline)
B5	26	
B6	104	
<hr/>		
Total	£130m	



# Load Related Capital Expenditure

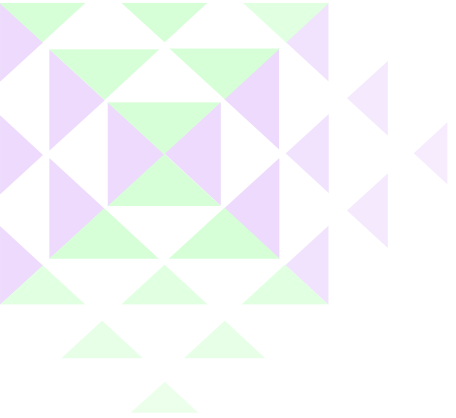
## Ofgem's Proposals

<b>FBPQ Submission</b>	<b>£346.7m</b>
Less entry volume adjustment	(39.8)
Adjusted FBPQ Forecast	306.9
Less infrastructure adjustment	(27.6)
<b>Ofgem allowance</b>	<b>£279.5m</b>
Ofgem allowance as % original FBPQ forecast	-19%
Ofgem allowance as % adjusted FBPQ forecast	-9%
LR baseline reduction as % FBPQ submission	-11%

- We need to understand the assumptions behind Ofgem's proposed reductions:
  - £39.8m due to "lower future generation and associated system boundary flows for the baseline"
  - £27.6m for more "efficient connection designs" for smaller wind farms and removal of "avoidable/deferrable" investment relating to demand growth







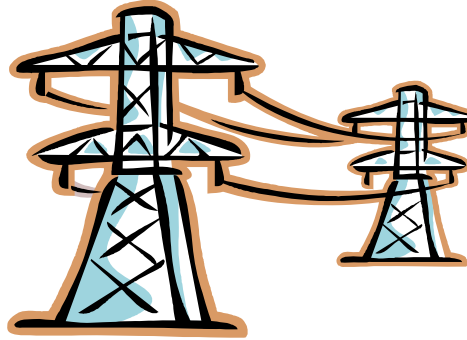
Scott Mathieson

Regulation Director



# Value Chain

## SP Transmission Network



### Cost Drivers

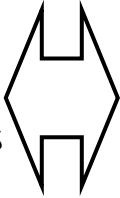
#### Non-Load Related

- Network Performance
- Asset Reliability
- Asset Condition
- Safety

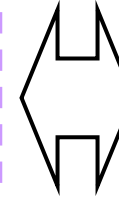
#### Load Related

- Stability
- Churn
- Supply Security
- Demand Growth
- Renewables Growth

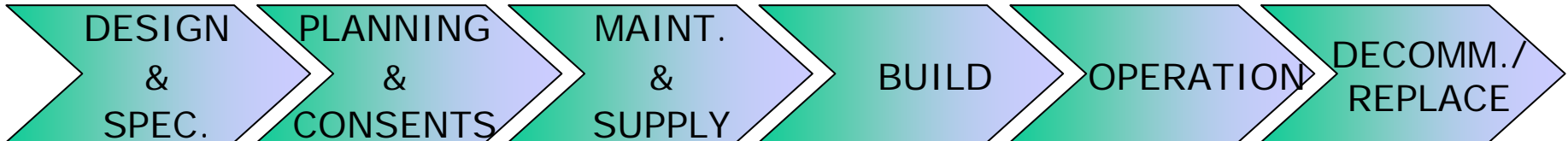
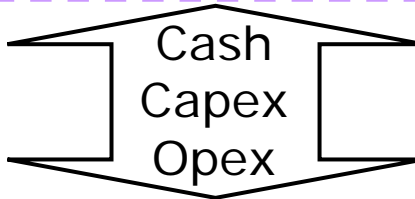
- GBSO
- Customers
- Developers
- Manufacturers
- Contractors



- Ofgem
- DTI
- Scottish Executive
- Government



Cash  
Capex  
Opex





# Principle concerns

- Ofgem have proposed significant reduction to non-load related capex submission
  - May lead to operational risk
  - Work required with Ofgem and Consultants
- Ofgem have reduced the load-related baseline allowance by £67m (20%)
  - Revenue drivers need significant work
  - Post BETTA charging and connection policies need to be reviewed
- Cost of Capital





# Cost of Capital

- 4.2% post-tax real (pre-tax real 6.0%) Cost of Capital is inconsistent with other industry sectors
  - e.g. 6.9% (DPCR4), 7.3% (Water), 7.75% (BAA) (all pre-tax)
  - Lower than expected
  - Does not reflect risk facing industry
- Need to attract equity to business
- Ofgem need to consider specific issues of scale and operations in the case of Scottish companies





# Financeability

- Ofgem acknowledge importance of financial indicators
  - Allowances need to maintain investment grade criteria
  - What are the applicable targets?
- Depreciation cliff-edge
- Revenue Drivers could potentially affect Financeability by delaying revenue





# Revenue Drivers

- SPT welcome :
  - Principle of a baseline allowance
  - Principle of a (cost reflective) “local works” revenue driver
  - “Revenue driver adjusting event” (RDAE) or pass through of cost of incremental “spare” capacity (e.g. collectors, boundary reinforcement)
- What are Ofgem’s baseline assumptions?
- Deep reinforcement revenue driver?



# Key Requirements - Summary

- Non-load related capex allowance sufficient to:
  - Ensure safety & integrity of network as asset base deteriorates with age
- Load related capex sufficient to :
  - Maintain security of supplies
  - Accommodate network growth and connection of demand/generation
  - Support achievement of government renewables targets
- Capex & Opex allowances must recognise increase in input costs above RPI
- Incentives
  - Must be simple and only applied where necessary
  - Within control of Transmission Owner
- Impact of depreciation “cliff edge” must be addressed
- Revenue drivers
  - Must be cost reflective
  - Timing of cash flows must address financeability
  - Must not increase risk significantly
- Cost of capital
  - Must be sufficient to support increased levels of investment and maintain / attract equity
  - Must recognise company specific / regional factors

