

# Preliminary Results

12 Months Ended 31 December 2015

23 February 2016



# Agenda

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## Operations and Business Review

**Dorothy Thompson**

Chief Executive

## Financial Review

**Will Gardiner**

Chief Financial Officer

## Biomass – the Reliable Renewable

**Dorothy Thompson**



# Overview

Dorothy Thompson – Chief Executive

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## Drax Power

Severe deterioration in commodity markets

LEC removal and delayed CfD approval

Strong operations

Mitigating actions

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## Haven Power

Long-term sales target achieved

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## Drax Biomass

Operational with production increasing

EBITDA

**£169m**

Underlying Earnings Per Share

**11.3p**

Total Dividends

**5.7p/share** (£23m)

# Operations and Business Review



# Safety and Sustainability

## Safety

### Maintaining very good safety performance

- Strong UK / improved US performance
- TRIR<sup>(1)</sup> – 0.31 (2014: 0.33)
- Consistently in top quartile of peer group

## Sustainability

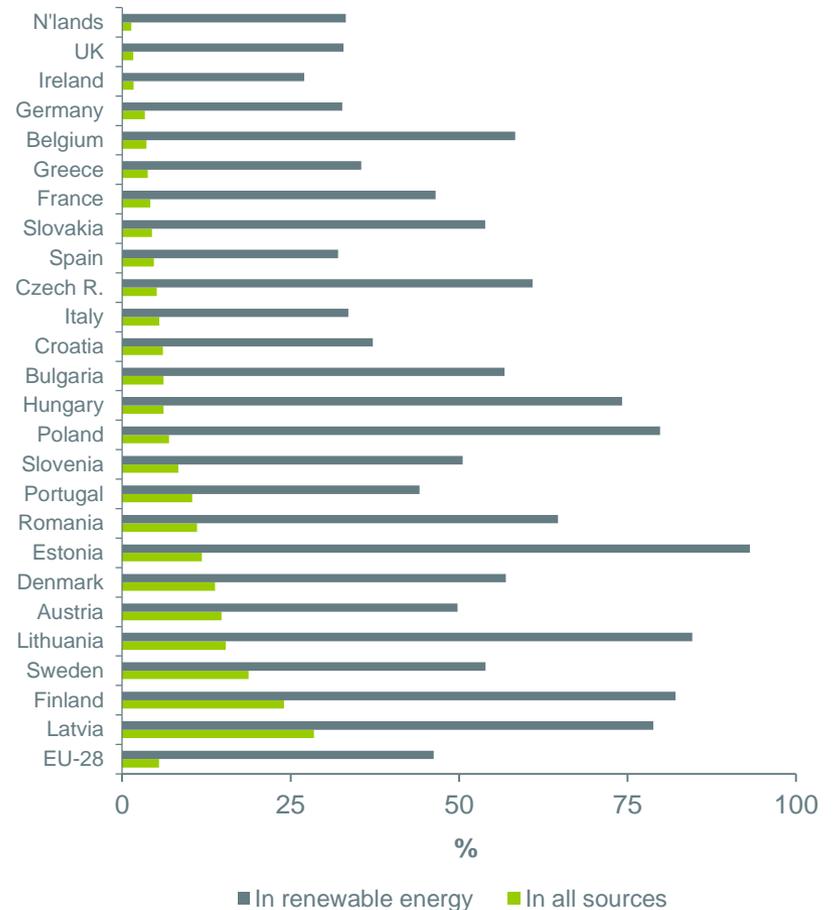
### Over 80% carbon lifecycle savings vs. coal

- Fully compliant with DECC mandatory standards

### Sustainable Biomass Partnership (SBP)

- Global sustainability standard launched in 2015
  - Based on regulatory requirements of Belgium, Denmark, Netherlands and UK

### Wood as a Source of Energy<sup>(2)</sup>



1) TRIR = Total Recordable Injury Rate

2) Eurostat (2013)

# Drax Power – Commodity Markets

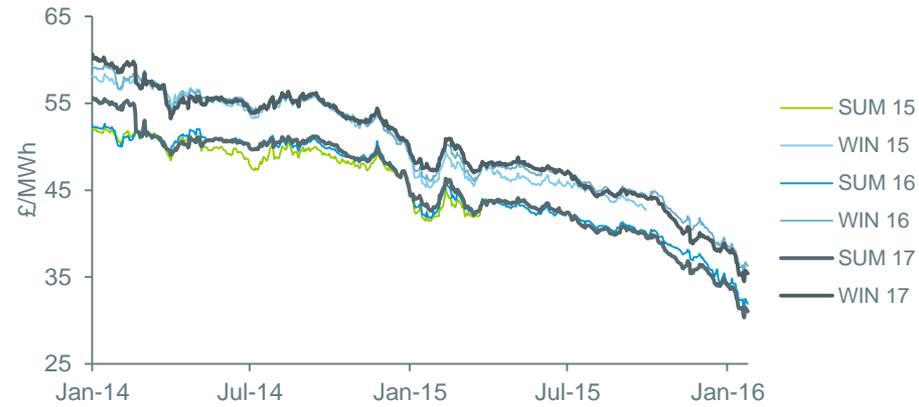
## Commodity markets

- Warm and windy weather
- Lowest coal spreads since Drax listing
- Weak gas and coal markets

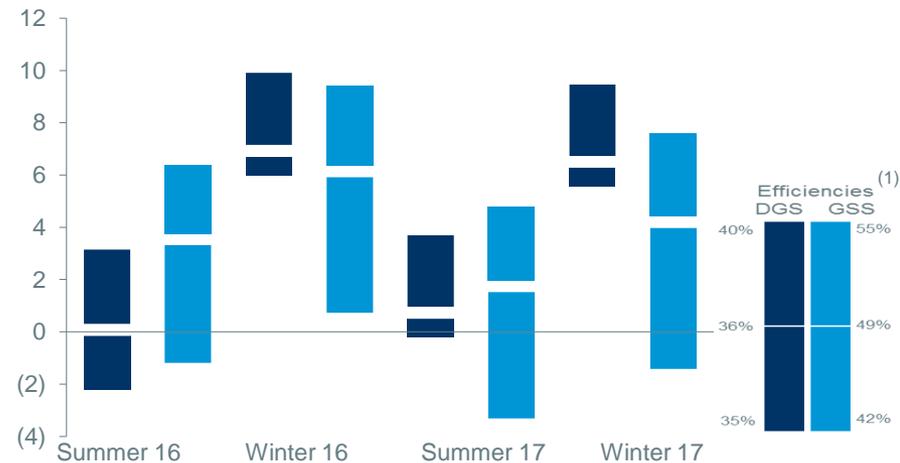
## Forward power sales

- RO units: 18-24 months
- CfD unit: provides additional hedge for 1 unit
- Coal units: shorter-term opportunistic sales

Power Prices



Range of Fossil Fuel Spreads by Efficiency (Baseload)



Group Power Sales Contracted at 15 <sup>th</sup> February	2016	2017
Power Sales – TWh	19.3	9.8
<b>Comprising:</b>		
Fixed Price TWh at Average Achieved Price £ per MWh	16.8 @ 46.6	6.1 @ 45.6
Gas Hedges TWh p/therm	2.5 49.6	3.7 48.7

# Drax Power – Biomass

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## Strong Operations

Predominantly biomass fuelled from Q4 2015

Reliable, responsive generation

CfD necessary to underpin acceleration of long-term biomass supply chain development

## Regulation

UK sustainability standards now mandatory

EC State aid investigation of CfD continuing

- Referred to Phase 2

Future biomass conversions

## Generation by Fuel Type

Generation (Net Sales)	2015		2014	
	TWh	%	TWh	%
Coal	15.2	57%	18.8	71%
Biomass	11.5	43%	7.9	29%
Total	26.7		26.7	

# Drax Power – Coal

## Strong operations

### Response to new market conditions

- Focus on operational flexibility
  - Capture peaks, avoid low value periods
  - Increased prompt market opportunities
- Network support
  - Active role for Drax supporting grid stability
- Fuel optionality
  - Capture value through advantaged fuels

## Regulation

### Capacity market

- Contracts secured for 2018-20
  - Two coal units c.£10m pa per unit
- Option for a third coal unit in future auctions
  - T-1 auction

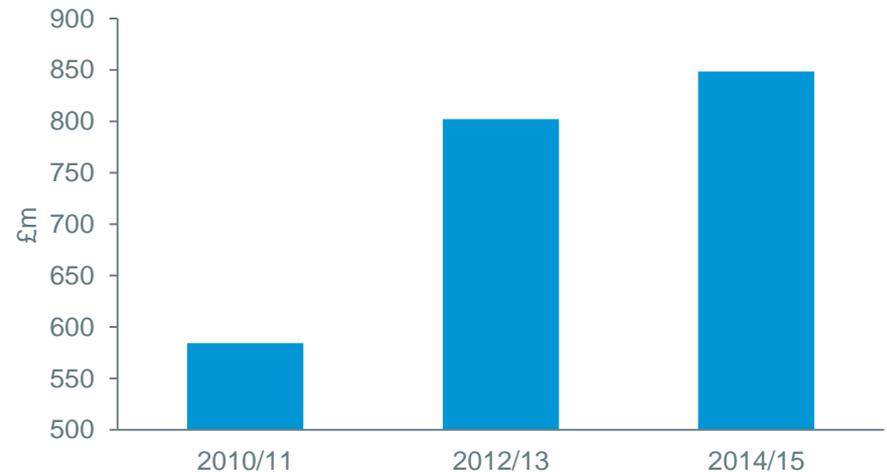
### Future of coal

- Consultation on coal closure by 2025

## Generation by Fuel Type

Generation (Net Sales)	2015		2014	
	TWh	%	TWh	%
Coal	15.2	57%	18.8	71%
Biomass	11.5	43%	7.9	29%
<b>Total</b>	<b>26.7</b>		<b>26.7</b>	

## NGC System Service Costs<sup>(1)</sup>



Source: National Grid

1) Cost of maintaining a reliable system through Grid procurement of system support services

# Haven Power – Retail

## Credit-efficient route to market

### Retail sales 13.8TWh (2014: 11.8TWh)

- I&C and SME markets<sup>(1)</sup>
- 13TWh contracted for 2016
- Retail sales £1.3bn (2014: £1.1bn)

### 2015 – sales target achieved

- Continued good progress with large contracts
- Strong I&C renewal performance maintained
- Credit quality remains good with low bad debt experience
- Consistent strong service performance

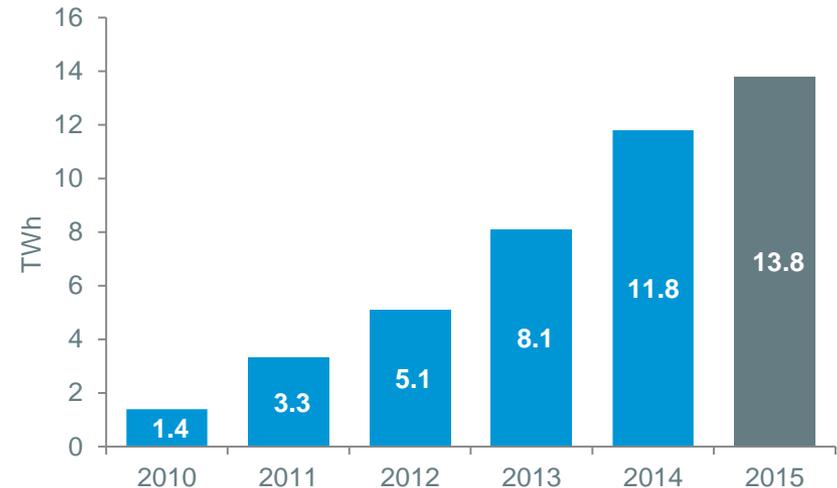
### Response to loss of LECs

- New renewable power products introduced

### New opportunities

- Heat market – Billington Bioenergy

Haven Power Sales



1) I&C = Industrial and Commercial, SME = Small and Medium Enterprises

# Drax Biomass – Biomass Self-supply

## US Gulf

### Port facility and pellet plants

- Commissioned and operational
- Baton Rouge port – 3Mt pa export facility
- Amite and Morehouse pellet plants – each 450kt pa
  - Supplying first and second converted units
- Pellet production increasing

Amite Pellet Plant



Baton Rouge Port – Shiploader



# Financial Review

Will Gardiner



# 2015 Financial Highlights

EBITDA

£169m

Underlying EPS<sup>(1)</sup>

11.3p

Total Dividends

5.7p (£23m)

Final dividend 0.6p (£2m)

Net Debt<sup>(2)</sup>

£187m

2015

**Action taken to mitigate market and regulatory headwinds**

- Solid hedge
- Strong and flexible operations
- Increasing biomass generation
- RCF<sup>(3)</sup> refinancing complete

2016

**Operating in challenging markets**

- Flexible coal operations
- Cost reduction and capital discipline
- Working capital initiatives

1) Excludes the following non-cash items (and the associated tax): unrealised gains on derivative contracts of £124m and asset obsolescence charges of £109m

2) Cash and short-term investments of £134m less borrowings of £321m

3) Revolving Credit Facility

# Group Income Statement

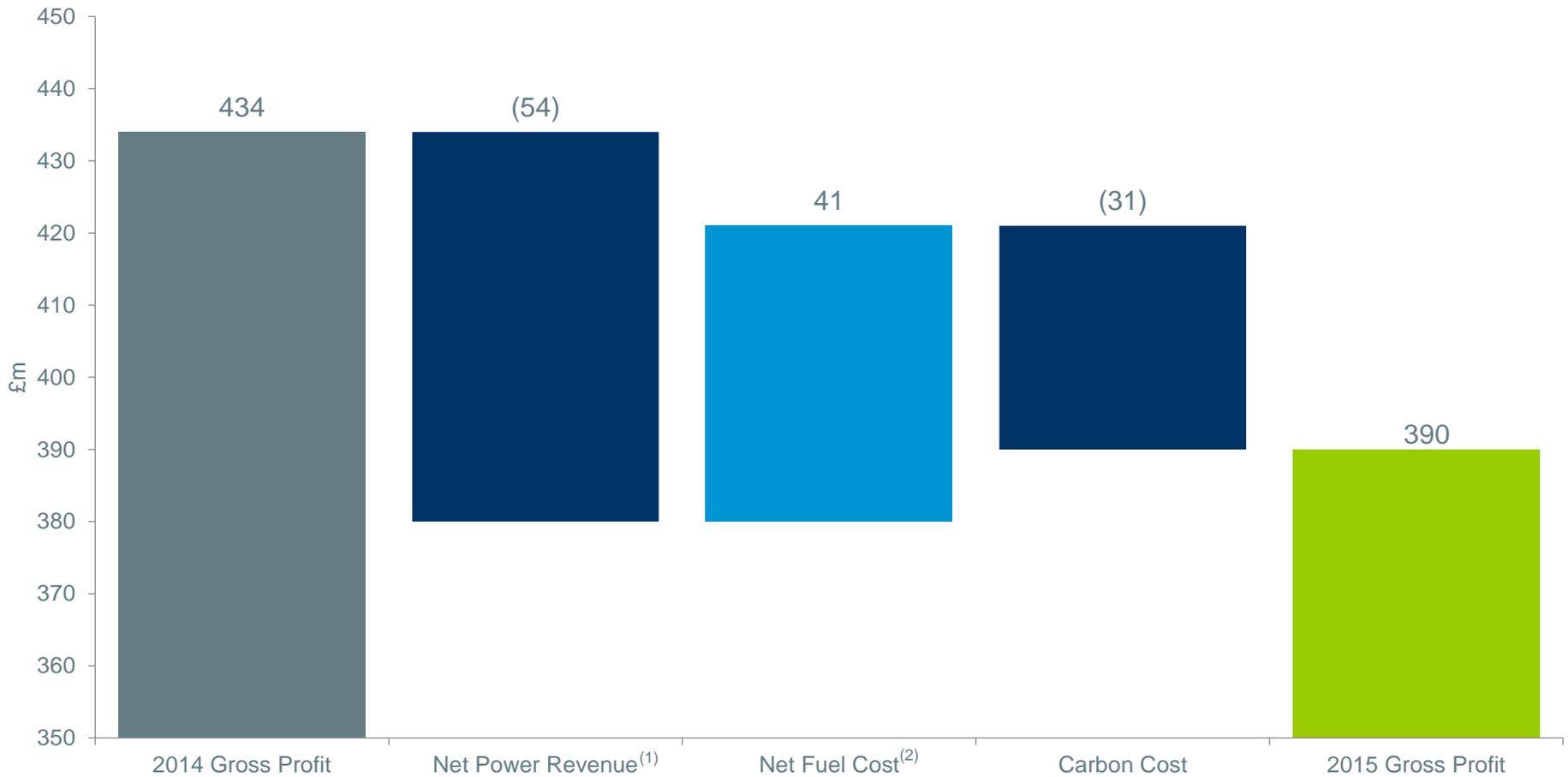
Income Statement	2015 £m	2014 £m	▲%
Revenue	3,065	2,805	
Gross Profit	409	449	
<b>EBITDA</b>	<b>169</b>	<b>229</b>	<b>(26)%</b>
Depreciation and Losses on Disposal	(108)	(80)	
Net Finance Costs	(17)	(29)	
<b>Underlying Profit Before Tax</b>	<b>44</b>	<b>120</b>	
Underlying Tax Credit / (Charge)	2	(24)	
<i>Underlying Tax Rate (%)</i>	-	20%	
<b>Underlying Earnings</b>	<b>46</b>	<b>96</b>	<b>(52)%</b>
Unrealised Gains on Derivative Contracts	124	66	
Other Items <sup>(1)</sup>	(109)	(20)	
<b>Reported Earnings<sup>(2)</sup></b>	<b>56</b>	<b>129</b>	

1) Asset obsolescence charges (2015) and net settlement of Community Energy Savings Programme (2014)

2) Comprising underlying earnings adjusted for unrealised gains on derivative contracts, exceptional items and associated tax effect



# Drax Power – Gross Profit



1) Revenue includes sales to Haven Power of £863m (2014: £735m). Bar also includes net impact on gross margin of other income and grid charges

2) Net Fuel Cost includes cost of coal and biomass, less ROC and LEC support

Tabular gross profit analysis included in Appendix 4

# Adding Value in a Low Spread Environment

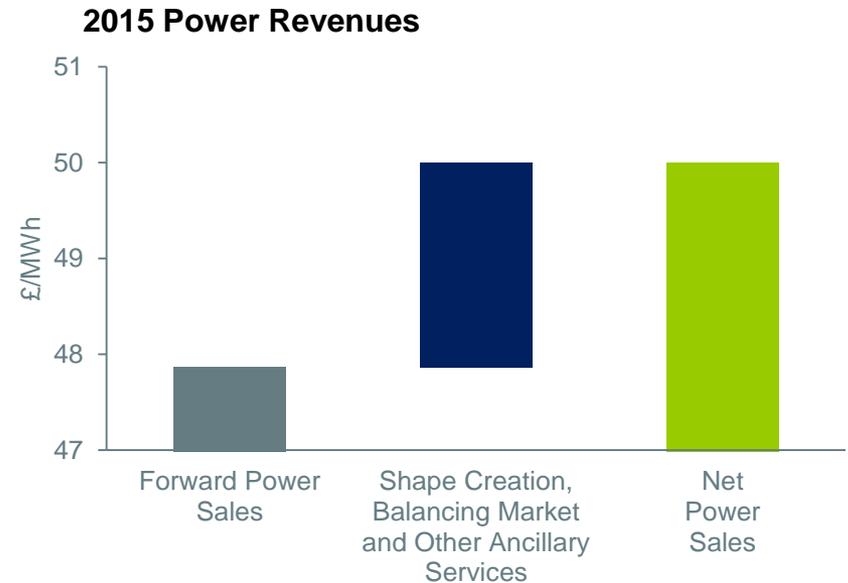
## Challenging market for coal generators

- Lowest coal spreads since Drax listing
- High cost of carbon

## Actions taken to improve coal margins

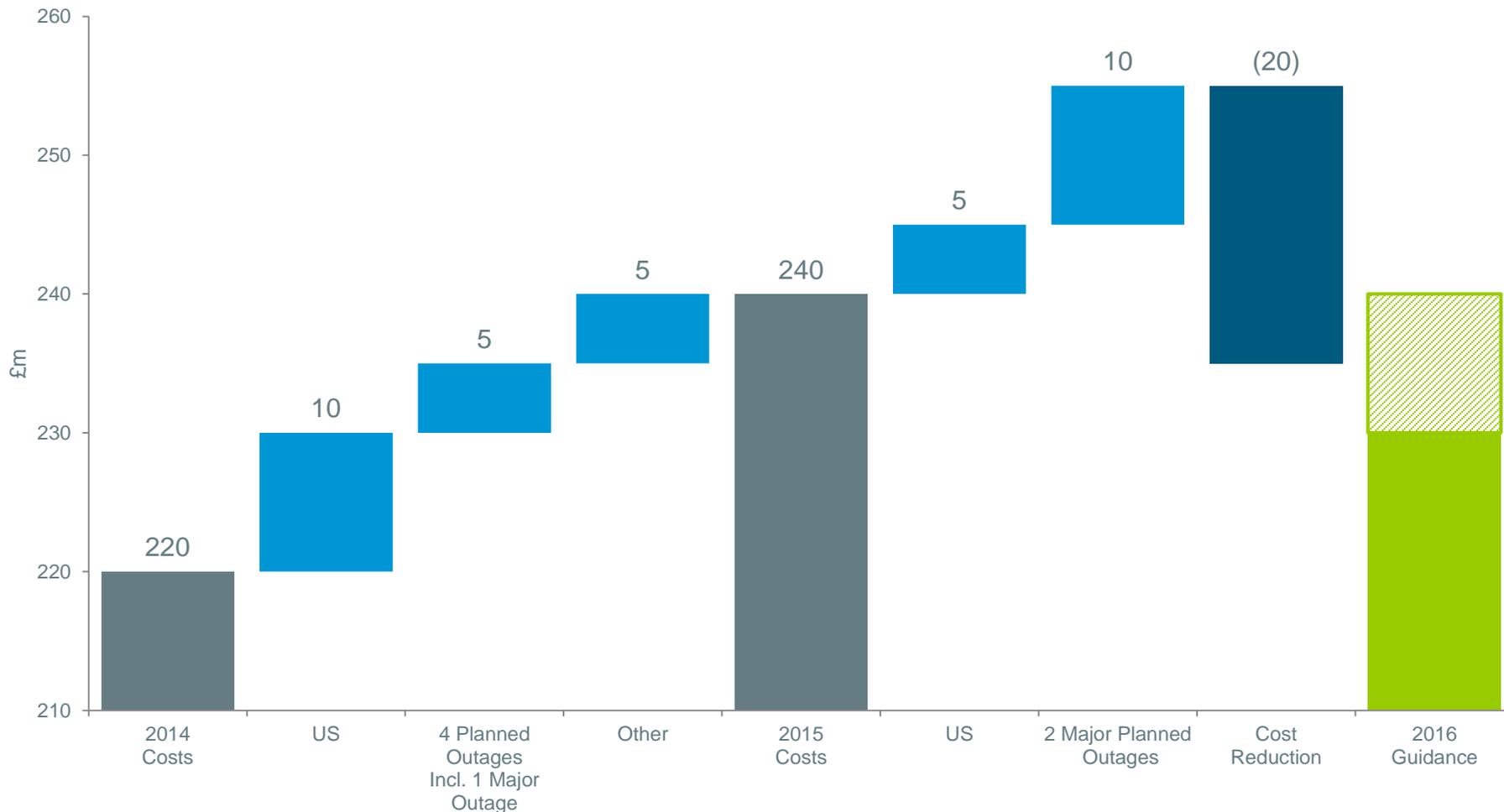
- Flexible operations – near term activity
  - Sell forward power
  - Prompt market: capture higher value periods and buy back to avoid low value periods
  - Balancing market
  - Other ancillary services
- Fuel flexibility

**Expect importance and value of dispatchable plant to become increasingly evident**



# Group Operating Costs

## 2014 - 2016 Operating Costs Development and Guidance



# Group Capex

## Biomass transformation will be delivered in 2016 – in line with original cost guidance

### £650m - £700m

- 3 unit conversions, US pellet investments and IED<sup>(1)</sup> compliance

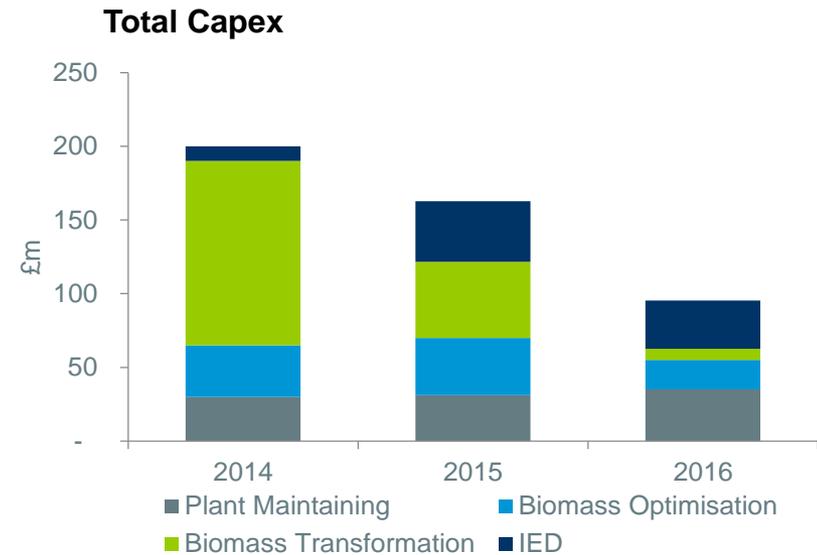
### 2015 capex £174m

- Includes accelerated IED compliance and biomass optimisation

### 2016 total capex guidance £80m - £100m

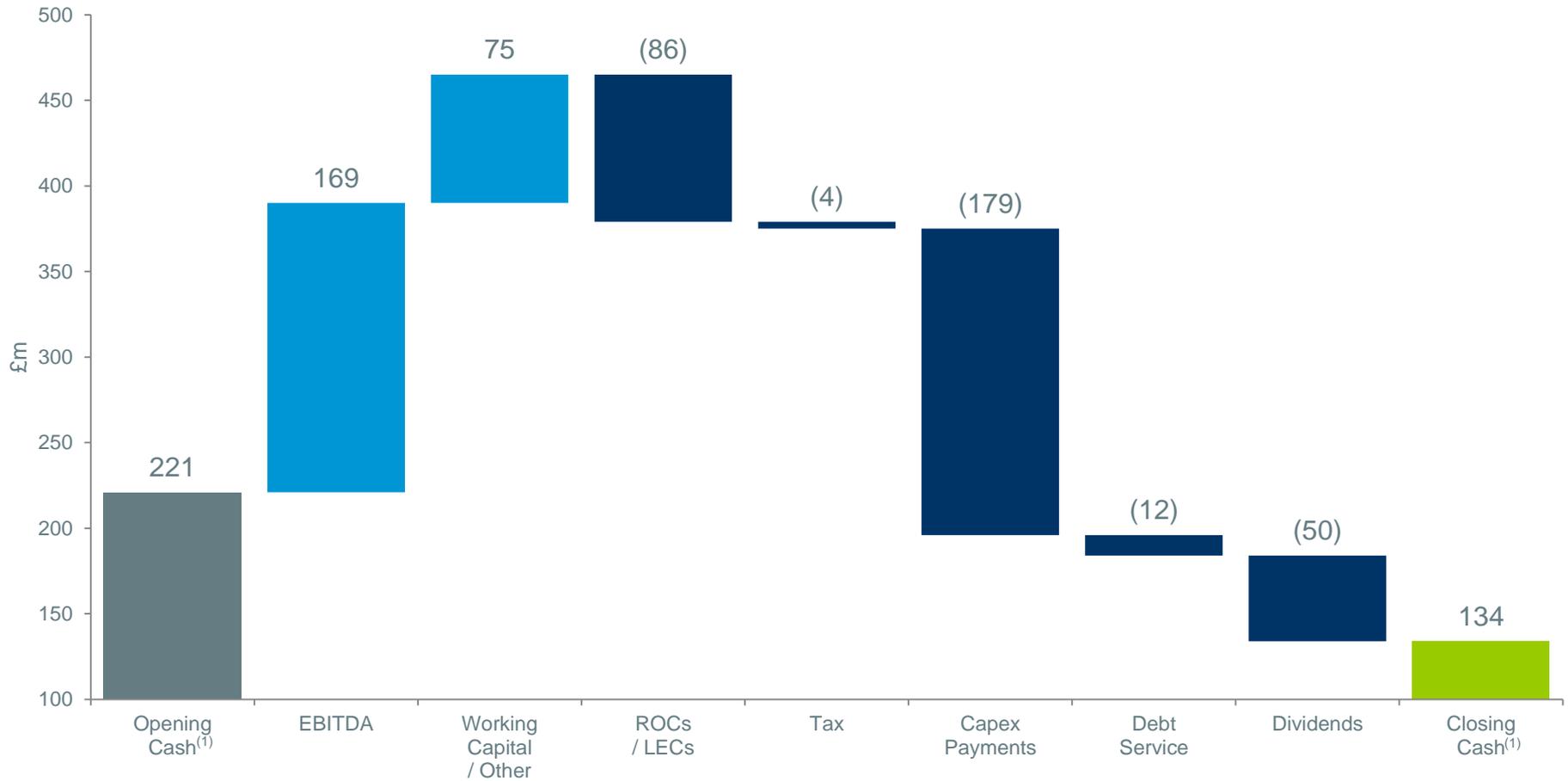
### Focus on capital discipline

- Future investment in existing plant will be lower following completion of biomass transformation



1) IED = Industrial Emissions Directive

# Group Cash Flow



1) Cash and cash equivalents plus short-term investments

# Financing and Working Capital Management

## Debt facilities

### £400m working capital and LC<sup>(1)</sup> facility

- Refinanced December 2015 – matures in 2019
- Improved pricing

### £325m of term loans

- Smooth repayment profile

### Commodity trading line

### Credit rating BB+

- Robust sub-investment grade business model

## Cash flow management

### Working capital

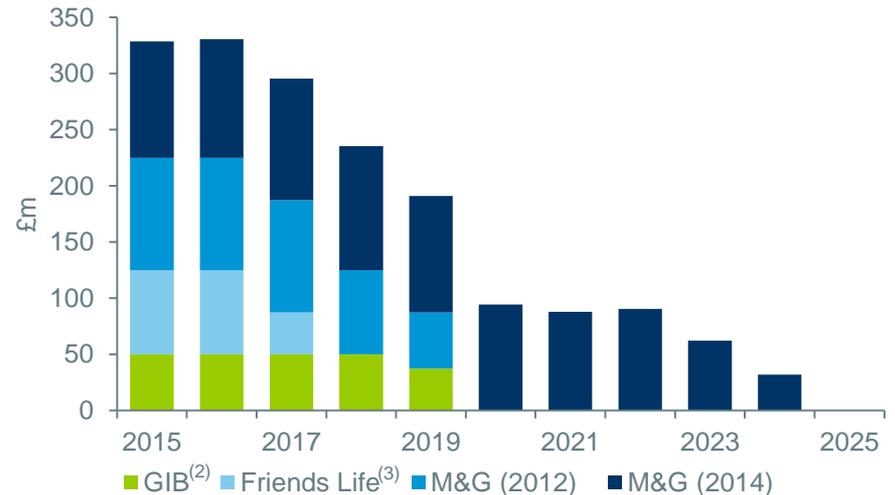
- ROC monetisation agreements of £200m
- Exploring opportunities to reduce working capital

1) LC = Letter of Credit

2) GIB = UK Green Investment Bank

3) Underpinned by Infrastructure UK guarantee

Term Loan Maturity Profile



# Financial Summary and Outlook

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## Difficult commodity markets expected to persist in 2016

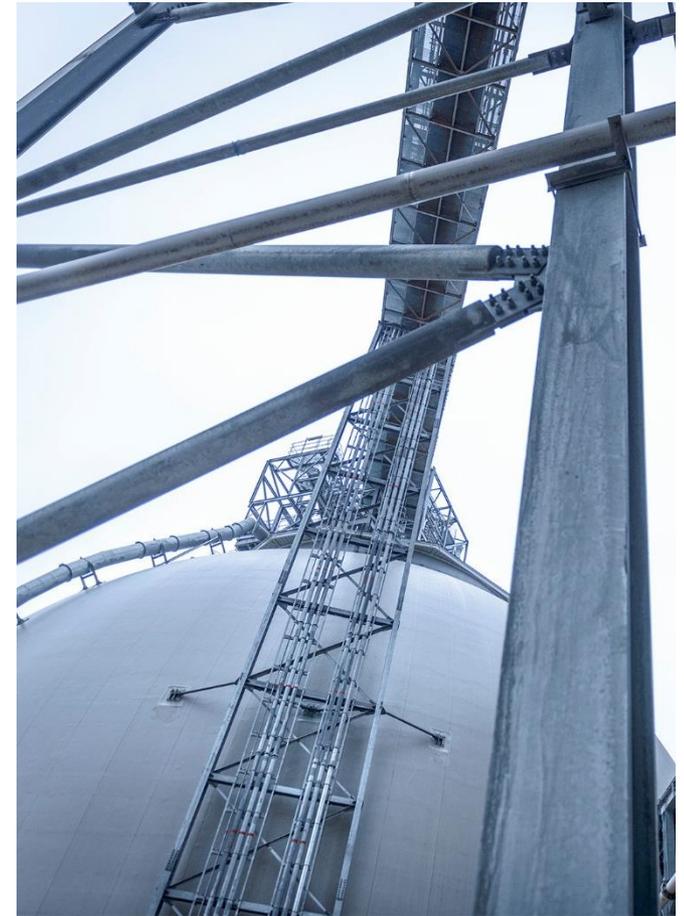
- Full year impact of LEC removal
- CfD approval will provide significant support

## Actions taken will support 2016 financial outcome

- Revenue, cost, capex and working capital initiatives

## 2016 will be a challenging year for profitability

## Biomass Infrastructure at Drax



# Biomass – the Reliable Renewable



# Government Energy Objectives

<b>Requirement</b>	<b>UK needs secure, affordable and clean electricity</b>
<b>Aim</b>	<b>Removal of coal from system by 2025</b>
<b>Issues</b>	<p><b>Reducing coal is desirable but difficult</b></p> <ul style="list-style-type: none"><li>• Crucial to grid stability and security of supply</li><li>• &gt; 35% of dispatchable generation</li></ul> <p><b>New gas unlikely to be deployed in time</b></p> <ul style="list-style-type: none"><li>• No new plant in next 3 years</li><li>• Estimate 15-20<sup>(1)</sup> new gas plants required in 7 years</li></ul> <p><b>Implications</b></p> <ul style="list-style-type: none"><li>• Scarcity pricing becoming more extreme<ul style="list-style-type: none"><li>- £3,000/MWh, increasing to £6,000/MWh in 2018</li></ul></li><li>• Higher prices for consumers – including cost to prevent blackouts</li></ul>
<b>Solution</b>	<p><b>Sustainable biomass</b></p> <p><b>Fastest, most affordable and reliable way to move from coal to renewables</b></p> <p><b>UK lags Europe significantly in use of wood for energy</b></p>

1) Assumes plant capacity of c.1GW

# Focus on Whole System Costs

## Affordability is critical to Government

### Whole system cost

- Direct generation costs
- Indirect costs / benefits
  - Grid connection and losses
  - Backup and system stability measures
  - Balancing costs
  - Fuel and carbon savings

## Biomass has lowest whole system cost

### NERA / Imperial College research

- £2bn consumer saving from one additional biomass unit vs. other low carbon technologies

### DECC whole system cost research

- Expect publication in 2016

### DECC Whole System Cost Project

*“DECC recognises the importance of considering the whole system impacts (both costs and benefits) of different electricity technologies when formulating future government policy, since it is a crucial element in delivering secure, clean and affordable energy to consumers”*

**Andrea Leadsom, Energy Minister**  
January 2016

### Today's System Flexibility Scenario £/MWh

Technology	LCOE <sup>(1)</sup>	SIC Today <sup>(2)</sup>	Whole System Cost
Onshore wind	100	25	125
Offshore wind	132	16	148
Solar PV	123	33	156
Biomass Conversion	108	(1)	107

1) LCOE = Levelised Cost of Electricity (2012 prices)

2) SIC = System Integration Cost (2012 prices), average of costs in 2020, 2025 and 2030

Source: Nera Economic Consulting & Imperial College London, UK Renewable Subsidies and Whole System Costs, February 2016

# Critical Importance of Drax

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## Coal

System support at time of stress

Capacity when needed

Supports transition to low carbon technologies

## Biomass

### Low carbon and sustainable

- Largest decarbonisation project in Europe
- New biomass technologies deliver sustainable sourcing, logistics and operations
  - >80% reduction in emissions compared to coal
  - >60% compared to gas

### Reliable, flexible and responsive generation

- Supports wind and solar

### Affordable

- Upgrade of existing infrastructure with latest technology for fast, cost effective reduction in coal
- Ready to compete with other technologies in CfD auctions



# Questions



# Appendices

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2. IAS 39 Treatment
3. Group Income Statement
4. Drax Power – Gross Profit
5. Haven Power – Gross Profit
6. ROC Reporting
7. Tax Reconciliation
8. 2016 Financial Guidance
9. Power Market
10. Gas Market
11. Coal Market
12. Carbon Market
13. ROC Market
14. Forward Spread Movements
15. Commodity Price Movements
16. Coal Capacity and IED
17. Carbon Price Floor (CPF)

**Dust Extraction System**



# Appendix 1: Definitions

<b>API2/4/6</b>		API2 is the main reference price (including cost, freight and insurance) for steam coal to be delivered to Amsterdam, Rotterdam and Antwerp. API4 is the reference price for steam coal to be delivered free on board ("FOB") to Richards Bay, South Africa. API6 is the reference price for steam coal to be delivered FOB to Newcastle, Australia.
	<b>AVERAGE ACHIEVED PRICE</b>	Power revenues divided by volume of net sales (includes imbalance charges).
<b>BM</b>	<b>BALANCING MECHANISM</b>	The mechanism through which the System Operator can call upon additional generation/consumption or reduce generation/consumption, through market participants' bids and offers, in order to balance the system minute by minute.
<b>CESP</b>	<b>COMMUNITY ENERGY SAVING PROGRAMME</b>	CESP was created as part of the Government's Home Energy Saving Programme. It required gas and electricity suppliers and electricity generators to deliver energy saving measures to domestic consumers in specific low income areas of Great Britain. CESP came into force on 1 September 2009. The CESP obligation period ran from 1 October 2009 to 31 December 2012.
<b>CCL</b>	<b>CLIMATE CHANGE LEVY</b>	A tax on electricity delivered to non domestic users, intended to encourage energy efficiency and reduced carbon emissions
<b>DECC</b>	<b>DEPARTMENT FOR ENERGY AND CLIMATE CHANGE</b>	
<b>EBITDA</b>		Profit before interest, tax, depreciation, amortisation and unrealised gains/(losses) on derivative contracts.
<b>ELV</b>	<b>EMISSION LIMIT VALUES</b>	One of the mechanisms available to implement the LCPD. This sets annual limits on the emissions of NO <sub>x</sub> , SO <sub>2</sub> and particulate which will be incorporated into the forthcoming PPC permit.
<b>EUA</b>	<b>EU ALLOWANCE</b>	European Union Allowances, the tradable unit under the EU ETS. Equals 1 tonne of CO <sub>2</sub> .
<b>EU ETS</b>	<b>EU EMISSIONS TRADING SCHEME</b>	Trading Scheme within the European Union. The first compliance phase ran from 2005-07, the second compliance phase continued from 2008-12 and the third phase is proposed to run from 2013-2020.
<b>IUK</b>	<b>INTERCONNECTOR UK</b>	Sub sea gas pipeline and terminal facilities providing a bi-directional link between the UK and continental European energy markets.
<b>LCPD</b>	<b>LARGE COMBUSTION PLANT DIRECTIVE</b>	European Union Large Combustion Plant Directive sets emission standards for NO <sub>x</sub> , SO <sub>2</sub> and particulate from all Large Combustion Plant (>50MW).
<b>LEC</b>	<b>LEVY EXEMPTION CERTIFICATE</b>	Evidence of Climate Change Levy exempt electricity supplies generated from qualifying renewable sources.
<b>LNG</b>	<b>LIQUIFIED NATURAL GAS</b>	
<b>LTIR</b>	<b>LOST TIME INJURY RATE</b>	The frequency rate calculated on the following basis (number of accidents/hours worked * 100,000). Accidents are defined as occurrences where the injured party is absent from work for more than 24 hours.

# Appendix 1: Definitions (cont.)

<b>NERP</b>	<b>NATIONAL EMISSIONS REDUCTION PLAN</b>	One of the mechanisms available to implement the LCPD and the one selected by Drax. This sets annual limits on the emissions of NO <sub>x</sub> , SO <sub>2</sub> and particulate which will be incorporated into the forthcoming PPC permit.
<b>NOx</b>		Nitrogen oxides, emissions of which are regulated under the LCPD.
<b>OFGEM</b>	<b>OFFICE FOR GAS AND ELECTRICITY MARKETS</b>	
	<b>OPTED-IN / OPTED-OUT</b>	An opted-in plant is a power station that has elected to comply with the LCPD emissions standards. Opted-out plant has not elected to comply and is therefore only permitted to run for 20,000 hours and must in any event close by the end of 2015.
	<b>ADVANTAGED FUELS</b>	Fuel that gives a price advantage against standard bituminous coals. Such fuels include, off specification coals and petcoke.
<b>RO</b>	<b>RENEWABLES OBLIGATION</b>	The obligation placed on licensed electricity suppliers to deliver a specified amount of their electricity from eligible renewable sources.
<b>ROC</b>	<b>RENEWABLES OBLIGATION CERTIFICATE</b>	The obligation requires licensed electricity suppliers to ensure that specified and increasing amounts of the electricity they supply are from renewable sources. Eligible generators of electricity using renewable energy sources receive a pre-specified number of ROCs per MWh of renewable power generation dependant on date of commission and technology. These certificates can then be traded.
<b>SNCR</b>	<b>SELECTIVE NON CATALYTIC REDUCTION</b>	
<b>SBP</b>	<b>SUSTAINABLE BIOMASS PARTNERSHIP</b>	The Sustainable Biomass Partnership (SBP) is an industry-led initiative formed by major European utilities that use biomass, mostly in the form of wood pellets, in large thermal power plants
<b>SBR</b>	<b>SUPPLEMENTAL BALANCING RESERVE</b>	Contract with plant which would otherwise have closed, mothballed, or have been unavailable to the market and which can be called on by National Grid as a last resort after all commercial balancing actions have been taken
<b>SO<sub>2</sub></b>		Sulphur dioxide, emissions of which are regulated under the LCPD.
<b>TRIR</b>	<b>TOTAL RECORDABLE INJURY RATE</b>	TRIR is calculated on the following basis (lost time injuries + worse than first aid injuries)/ hours worked * 100,000.
<b>UKCS</b>	<b>UK CONTINENTAL SHELF</b>	Gas reserves found off shore in UK waters.
<b>UK NAP</b>	<b>UK NATIONAL ALLOCATION PLAN</b>	Allocation of UK emissions allowances at the national level to individual sites under EU ETS.

## Appendix 2: IAS 39 Treatment

Financial Instrument	Location of Gains and Losses in the Annual Report
Power	Hedge Reserve
International Coal	Hedge Reserve and Income Statement
Financial Coal	Largely Hedge Reserve
Foreign Exchange	Hedge Reserve and Income Statement
Carbon	Hedge Reserve
Gas	Income Statement
Oil	Income Statement
Freight	Income Statement

# Appendix 3: Group Income Statement

In £m	2015	2014	▲%
Revenue	3,065	2,805	
Cost of Sales	(2,656)	(2,356)	
<b>Gross Margin</b>	<b>409</b>	<b>449</b>	
Operating Costs	(240)	(220)	
<b>EBITDA</b>	<b>169</b>	<b>229</b>	<b>(26)%</b>
IAS39 Unrealised Gains on Derivative Contracts	124	66	
Depreciation and Losses on Disposal	(108)	(80)	
Other Items <sup>(1)</sup>	(109)	(20)	
<b>Operating Profit</b>	<b>76</b>	<b>195</b>	
Net Finance Costs	(17)	(29)	
<b>Profit Before Tax</b>	<b>59</b>	<b>166</b>	
Tax Charge	(3)	(37)	
<b>Reported Earnings</b>	<b>56</b>	<b>129</b>	
<b>Underlying Earnings</b>	<b>46</b>	<b>96</b>	<b>(52)%</b>
<b>Reported Basic Earnings Per Share (pence)</b>	<b>14</b>	<b>32</b>	
<b>Underlying Basic Earnings Per Share (pence)</b>	<b>11.3</b>	<b>23.7</b>	<b>(52)%</b>
<b>Total Dividend Per Share (pence)</b>	<b>5.7</b>	<b>11.9</b>	

1) Asset obsolescence charges (2015) and net settlement of Community Energy Savings Programme (2014)

# Appendix 4: Drax Power – Gross Profit

In £m	2015	2014	▲ %
<b>Revenue<sup>(1)</sup></b>			
Power Sales	2,163	2,080	
ROC/LEC Sales	452	315	
Ancillary Services Income	14	13	
Fuel Sales	2	33	
Other Income	7	9	
	<b>2,638</b>	<b>2,450</b>	<b>8%</b>
<b>Cost of Sales</b>			
Generation Fuel Costs	(1,147)	(1,042)	
Fuel Sold	(2)	(33)	
ROC/LEC Support	505	359	
Carbon Tax	(158)	(118)	
Cost of Carbon Allowances	(67)	(76)	
ROCs/LECs Sold or Utilised	(451)	(314)	
Cost of Power Purchases	(844)	(710)	
Grid Charges	(84)	(82)	
	<b>(2,248)</b>	<b>(2,016)</b>	<b>12%</b>
<b>Gross Profit</b>	<b>390</b>	<b>434</b>	<b>(10)%</b>

1) Includes sales to Haven Power of £863m (2014: £735m)

2) Excludes cost of fuel sales

## Key Metrics

Net sales volume and average achieved price

- 2015: 26.7TWh (£49.5/MWh)
- 2014: 26.7TWh (£51.3/MWh)

Cost of coal and biomass

- 2015: £43.0/MWh<sup>(2)</sup>
- 2014: £39.0/MWh<sup>(2)</sup>

Value of ROC/LECs generated

- 2015: £43.9/MWh
- 2014: £45.4/MWh

Carbon tax

- 2015/16: £18/t
- 2014/15: £10/t

Carbon allowances expensed and average price

- 2015: 13.2m (£5.1/t)
- 2014: 16.6m (£4.6/t)

# Appendix 5: Haven Power – Gross Profit

In £m	2015	2014	▲ %
<b>Revenue</b>	<b>1,290</b>	<b>1,090</b>	<b>18%</b>
<b>Cost of Sales</b>			
Cost of Power Purchases	(710)	(629)	
Grid Charges	(285)	(253)	
Other Retail Costs	(276)	(191)	
	<b>(1,271)</b>	<b>(1,073)</b>	<b>18%</b>
<b>Gross Profit</b>	<b>19</b>	<b>17</b>	

## Key Metrics

### Retail sales

- 2015: 13.8TWh (£93.5/MWh)
- 2014: 11.8TWh (£92.4/MWh)

### Power purchases

- Increase reflects sales growth at a lower cost per MWh
- 2015: £51.5/MWh
- 2014: £53.3/MWh

### Grid charges

- Distribution, transmission and balancing costs
- Increasing partly due to more intermittent generation

### Other retail costs

- Increasing cost of Renewables Obligation, Feed-in-Tariffs and LECs

# Appendix 6: ROC Reporting

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## Balance sheet reconciliation

- ROC/LECs generated – estimated benefit of generating electricity with biomass
- Sold or utilised – original estimated balance sheet value charged to cost of sales on subsequent sale of ROC/LECs
- Value at balance sheet date – estimate of cumulative ROC/LEC value generated not sold

## 2015 Balance Sheet – ROC and LEC Assets

ROC and LEC Assets	£m
<b>At 31 December 2014</b>	<b>185</b>
ROCs / LECs Generated	516
Purchased	20
Sold or Utilised	(451)
<b>At 31 December 2015</b>	<b>270</b>

# Appendix 7: Tax Reconciliation

## UK corporation tax (CT) rates

- 20.25% for 2015 and 21.5% for 2014

## 2015 tax rate

- Underlying rate excludes after tax impact of unrealised gains and losses on derivative contracts and asset obsolescence charges
- Other items includes impact of reduction in UK tax rates on deferred tax liability

## Tax Reconciliation

In £m (unless otherwise stated)	Reported		Underlying	
	2015	2014	2015	2014
Profit Before Tax	59	166	44	120
Tax at UK CT Rate	(12)	(35)	(8)	(26)
Adjustment to Prior Year Taxes and Other Items	9	(2)	10	2
<b>Tax (Charge) / Credit</b>	<b>(3)</b>	<b>(37)</b>	<b>2</b>	<b>(24)</b>
<b>Effective Tax Rate</b>	<b>n/a</b>	<b>22%</b>	<b>n/a</b>	<b>20%</b>

# Appendix 8: 2016 Financial Guidance

Summary	
Group Opex	c.£230m - £240m
Group Capex	c.£80m - £100m
Depreciation	c.£110m - £115m
Net Interest	c.£30m
Total Tax	Small tax charge / credit
Impact of LEC Removal on EBITDA	c.£60m



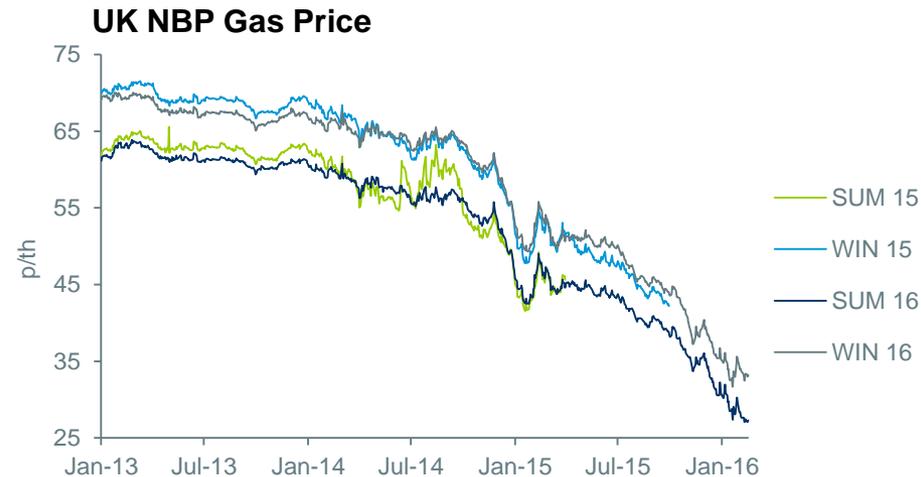
# Appendix 9: Power Market

## UK power market

Challenging commodity markets driven by oil and gas

## Dispatch dynamics

- Reduction in coal plant generation due to lower dark green spreads and coal-to-gas switching
- Introduction of Supplemental Balancing Reserve
- 8GW of coal closures announced / indicated
  - Ferrybridge, Longannet, Fiddlers Ferry, Rugeley and Eggborough
- Wind and solar capacity continues to grow



Sources: Brokered Trades, Spectron

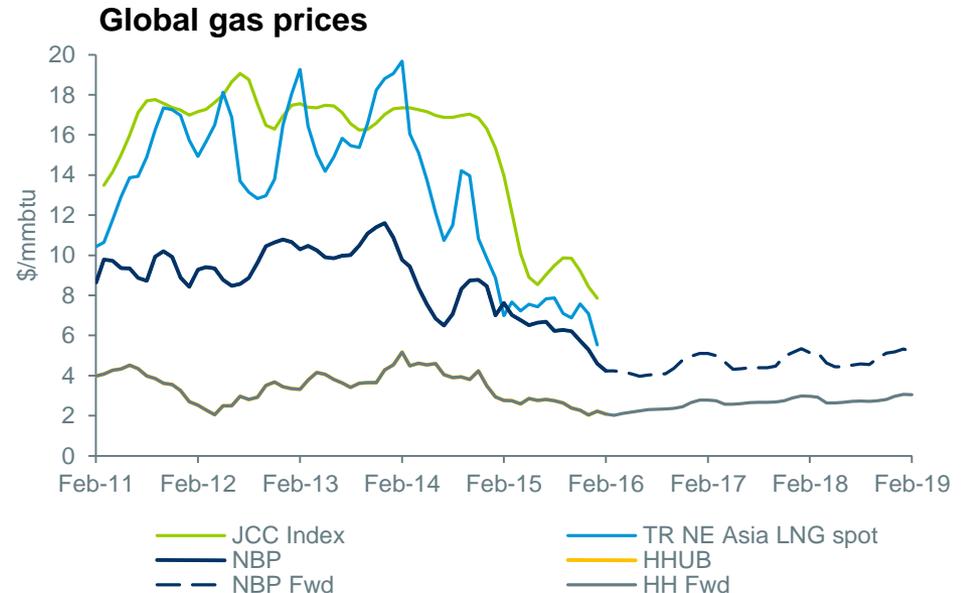
# Appendix 10: Gas Market

## Gas prices at lowest level since 2003

- Continued oversupply
- OPEC unwilling to give up market share despite increased US shale production
- Lower oil prices filter through to gas contracts with an oil-indexation element

## LNG prices under pressure

- Lower oil filtering through to LNG
- Narrowing spread between Asia and Europe
- US LNG exports beginning Q1-16
- Coal-to-gas switching adds demand to the UK gas system



Source: Thomson Reuters Eikon

# Appendix 11: Coal Market

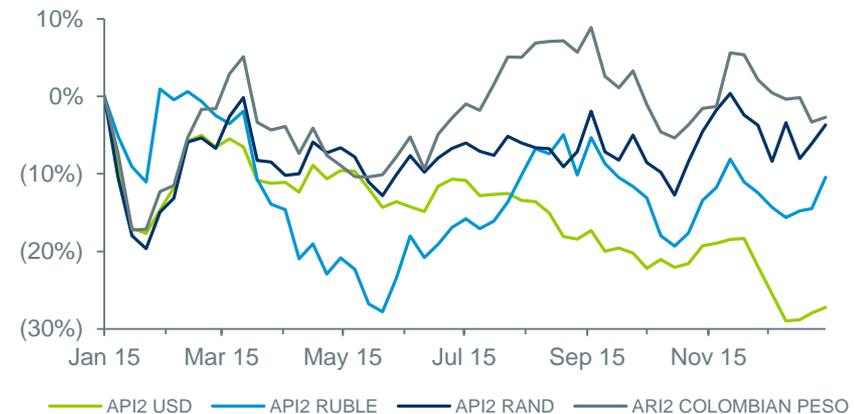
## Global coal markets remain oversupplied

- Seaborne market looking at Asia for demand growth
- Columbian production increase
- Strength of USD is protecting some producers from weak coal prices
- Freight costs continue to fall and oil indexed elements of production costs have increased the downward pressure

## Seaborne Steam Coal Imports



## Change in API2 spot price in major currencies



Source: IHS CERA 2016

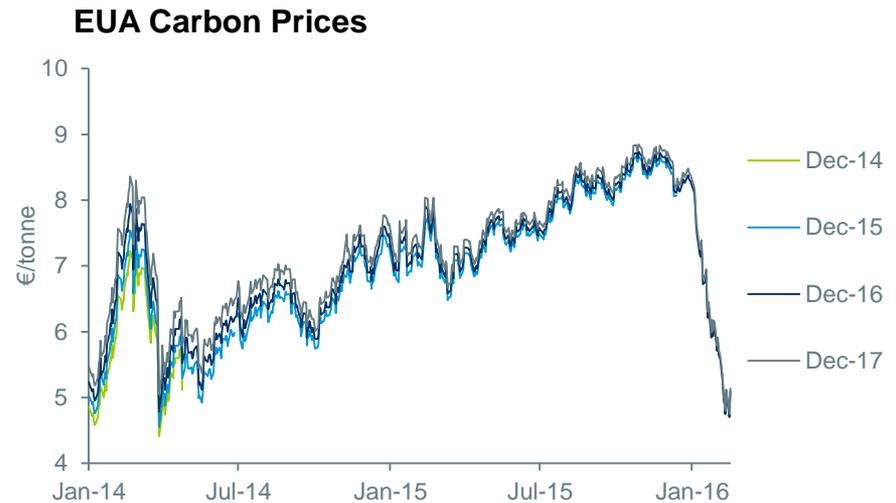
# Appendix 12: Carbon Market

## Phase III EU ETS

- MSR<sup>(1)</sup> approved, commences January 2019
  - [Polish legal challenge launched](#)
- Market oversupply remains at 2.1bn

## Phase IV EU ETS

- COP21 in Paris outcome does not require any changes to EU ETS Phase IV, but further global agreements could influence European negotiators to consider more ambitious targets



1) MSR = Market Stability Reserve

# Appendix 13: ROC Market

## CP14 ROC market

- Wind generation (offshore and onshore) remains the dominant source of ROCs
- Material increase in solar PV generated ROCs, up to 8%

## CP15 ROC market

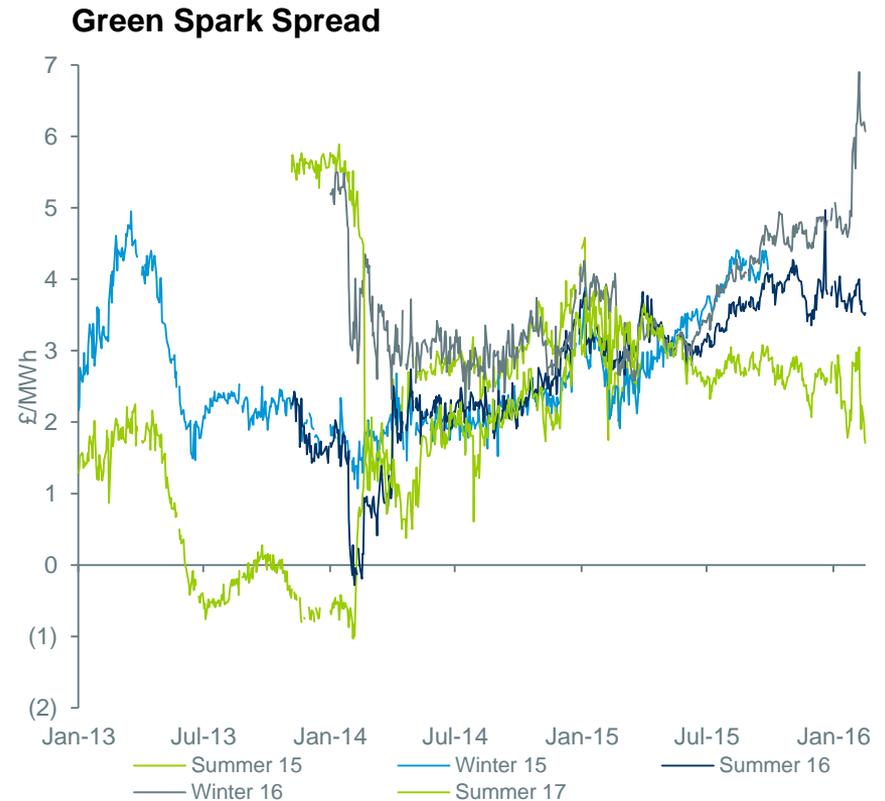
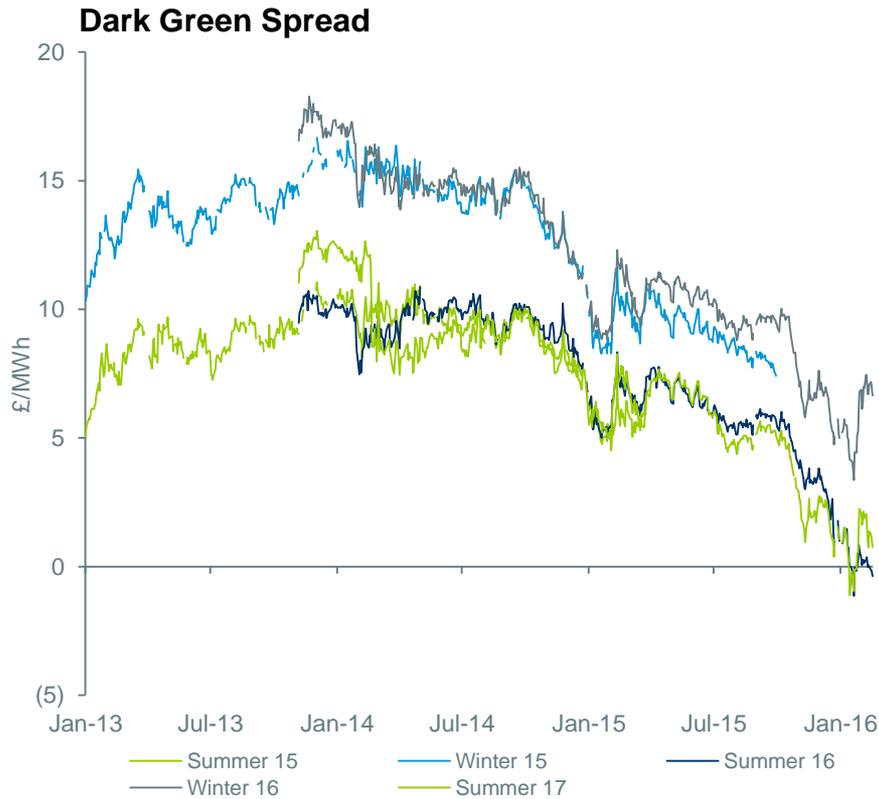
- Market commentators forecasting an overall ROC shortage for CP15

2015 ROC prices from eROC monthly auction



Source: eROC auctions

# Appendix 14: Forward Spread Movements



Source: Drax. Assumed typical efficiencies: Dark Green Spread – 36%, Green Spark Spread – 49%  
Prices as of 17th February 2016

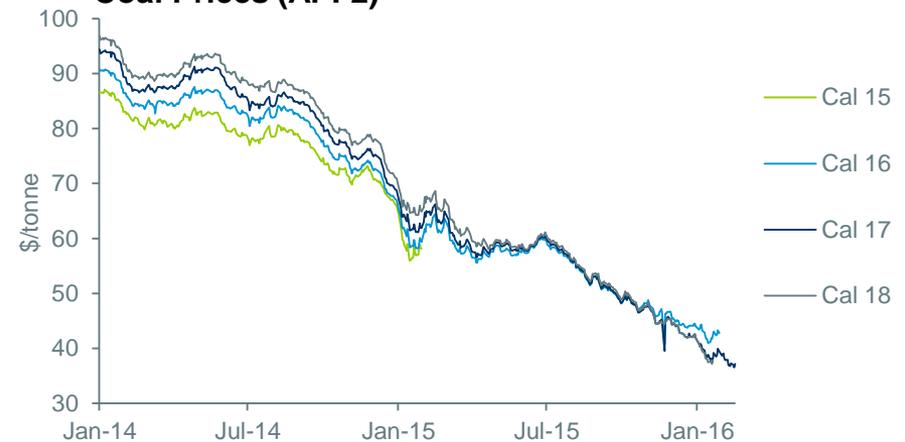
# Appendix 15: Commodity Price Movements

## Power Prices



Sources: Brokered Trades, Spectron

## Coal Prices (API 2)



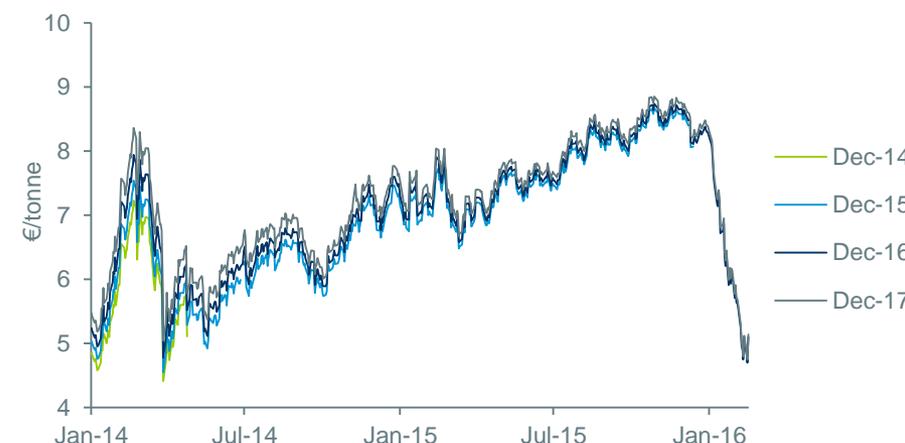
Source: McCloskeys, Brokered Trades

## UK NBP Gas Price



Source: Spectron

## EUA Carbon Prices



Source: ICE ECX

# Appendix 16: Coal Capacity and IED

Installation	Operator	Fuel	Installed Capacity (GWe)	Operational in 2017 (GWe)	Closure - Status	Supplementary Balancing Reserve	IED Decision
Rugeley	Engie	Coal	1.0	-	Closing in early summer 2016	-	TNP
Ferrybridge	Scottish & Southern Energy	Coal	2.0	-	U1,2 & 4 closed, U3 closing in early summer 2016	-	LLD
Fiddlers Ferry	Scottish & Southern Energy	Coal	2.0	-	Consulting on closure (3 units) - likely by April 2016	1 unit in SBR - 422MW de-rated capacity for W16	TNP
Longannet	Scottish Power	Coal	2.3	-	Closure by April 2016	-	TNP
Eggborough	EPL	Coal	1.9	-	Closure by April 2016	681MW de-rated capacity for W16	LLD
Cottam	EDF Energy	Coal	2.0	2.0	-	-	TNP
West Burton	EDF Energy	Coal	2.0	2.0	-	-	TNP
Aberthaw	RWE npower	Coal	1.6	1.6	-	-	TNP
Drax	Drax Power	Coal	2.0	2.0	-	-	TNP
Ratcliffe	E.ON UK	Coal	2.0	2.0	-	-	TNP
<b>Total GWe</b>			<b>18.8</b>	<b>9.6</b>			

TNP = Transitional Nation Plan  
LLD = Limited Life Derogation

# Appendix 17: Carbon Price Floor (CPF)

## Introduced in Budget 2011 – effective April 2013

### Climate Change Levy (CCL) amended to indirectly supplement EU ETS carbon price

- Based on fuel (coal) consumption

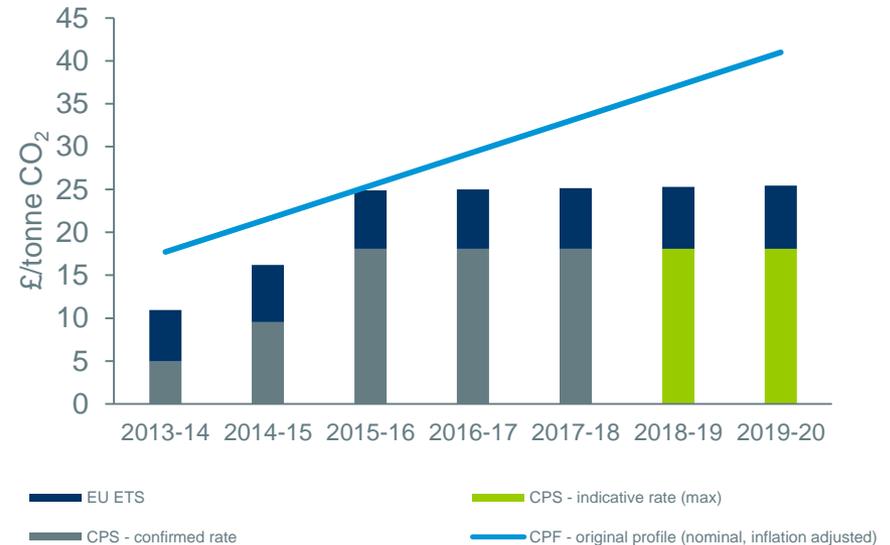
### Carbon Price Support (CPS) per tonne CO<sub>2</sub> set annually – 2 years in advance

- Based on difference between Government (HMT) target carbon price trajectory and traded price
- 2013/14 – c.£5/tonne CO<sub>2</sub>; (c.£12/tonne coal)
- 2014/15 – c.£10/tonne CO<sub>2</sub>; (c.£23/tonne coal)
- 2015/16 – c.£18/tonne CO<sub>2</sub>; (c.£43/tonne coal)

### 2013/14 Budget

- CPS capped at 2015/16 level for a further four years

## HMT Projected Carbon Price Floor to 2020 with CPS and EU ETS



# Preliminary Results

12 Months Ended 31 December 2015

23 February 2016

