drax

2019
Full Year Results

27 February 2020

Agenda

Operational Review

Financial Review

Biomass Strategy Update

Presenters

Will Gardiner, CEO

Andy Skelton, CFO

Our Purpose

Enabling a zero carbon, lower cost energy future

Our Strategy

We will build a long-term future for sustainable biomass

We will be the leading provider of power system stability

We will give our customers control of their energy

Our Ambition

To be a carbon negative company by 2030

Operational Review

2019 Performance Highlights

Strong financial and operational performance, progression of strategy

Financial

- 64% increase in Adjusted EBITDA to £410m
- £114m Adjusted EBITDA from acquired hydro and gas generation assets
- £413m net cash from operating activities
- 1.9x[(1)] net debt / Adjusted EBITDA
- 13% growth in dividends per share

Operational

- Biomass self-supply – increased production, reduced cost
- 47% reduction in CO_2 emissions vs 2018[(2)]
- Strong performance in system support markets

Strategic

- Investment in biomass supply chain expansion and cost reduction
- Development of BECCS

1) Adjusted to reflect cash flows from reinstatement of Capacity Market received in January 2020, reflected in 2019 Adjusted EBITDA
2) Scope 1 and 2 greenhouse gas emissions

End of Coal Generation at Drax Power Station

A key milestone in the path to becoming a carbon negative company

Decision aligned with UK's 2050 net zero objective

End of commercial coal generation in March 2021

- Remain available to fullfil Capacity Market obligation until September 2022

Consultation process on coal closure

- 200-230 roles affected

Financial impact

- Estimated cost of closure c.£25-35m
- Ongoing opex savings of c.£25-35m pa when complete
- Carrying value of assets impacted c.£240m
- Inventories of c.£100m – used prior to September 2022

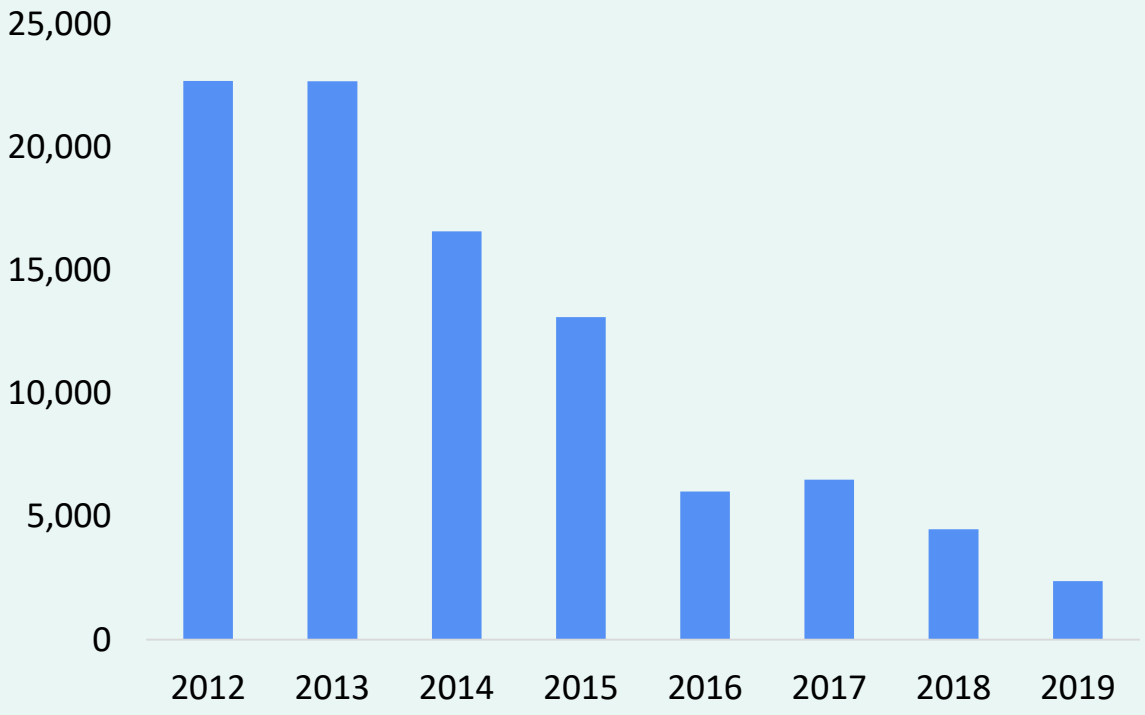
Development of lower cost operating model for biomass

- Commencement of wider review of operations at Drax Power Station to support safe, efficient and lower cost biomass operations post 2027

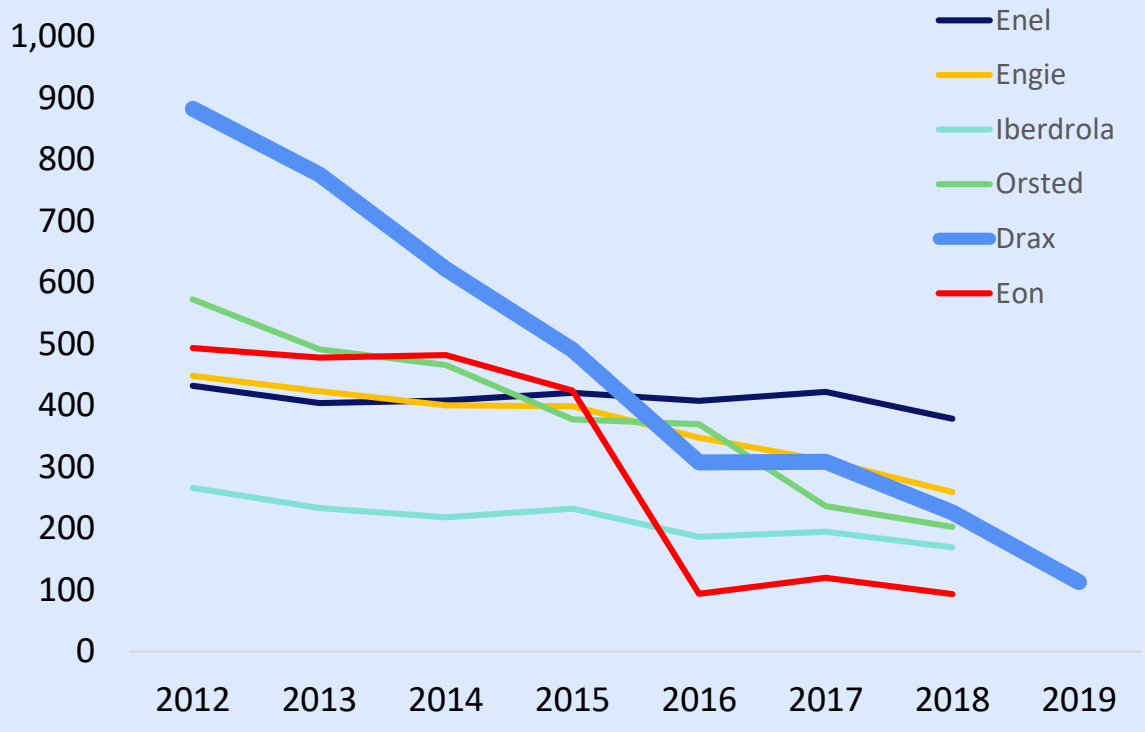
Progress Towards a Carbon Negative Future

>85% reduction in Drax Group Scope 1 & 2 CO_{2e} emissions since 2012

Drax Group CO_{2e} emissions (kt)[1]



European utility CO_2 intensity (tCO_2/GWh)



1) Scope 1 and 2 greenhouse gas emissions

Source: Bloomberg

100% Sustainably Sourced Biomass

Science-led biomass sourcing policy

Objectives

- Reduce CO_2 emissions
- Protect the natural environment
- Support people and societies
- Research, outreach and intervention

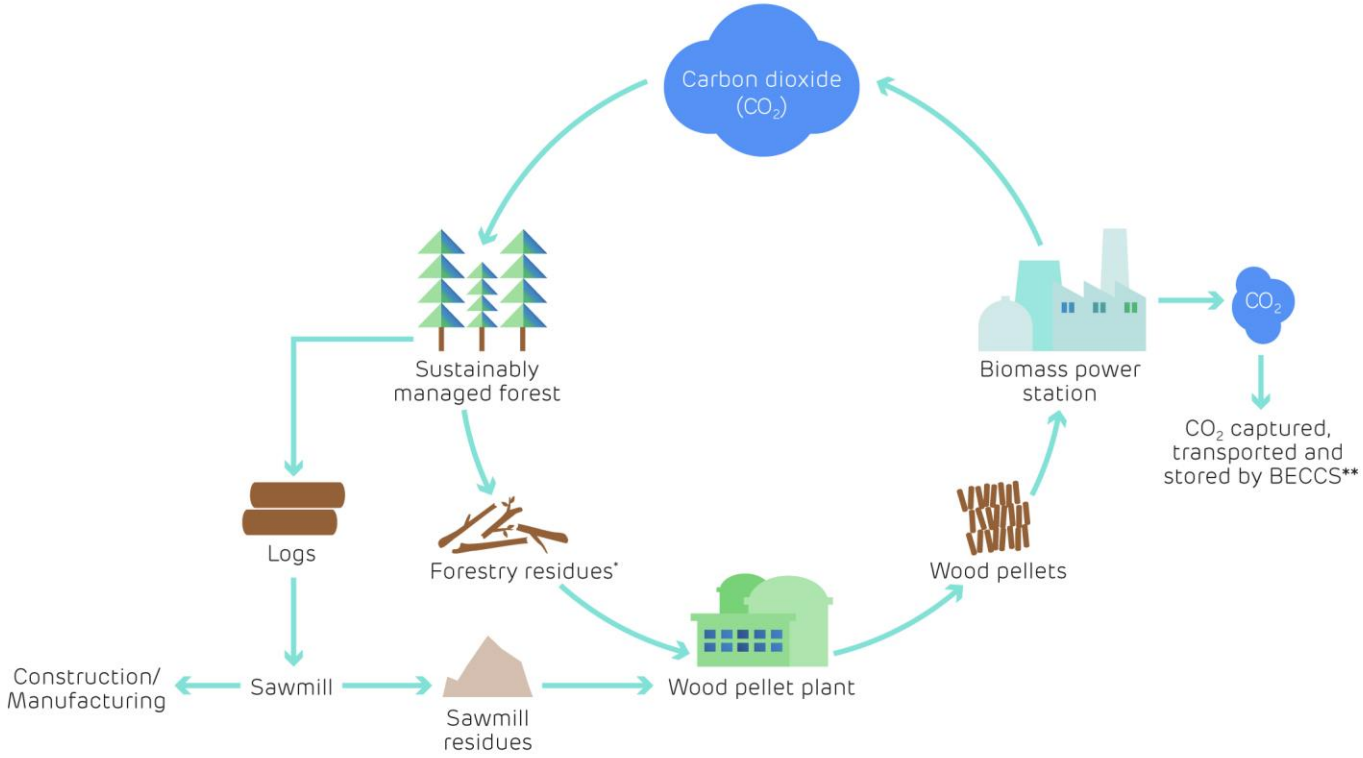
Policy

- Reflects evolving science, Committee on Climate Change bioenergy review and commitment to future development
- Based on Forest Research(1) recommendations
- Independent Advisory Board, chaired by former Government Chief Science Advisor, Sir John Beddington
  - Confirmed policy follows Forest Research recommendations (January 2020)

Key principles

- No deforestation
- No carbon debt
- More standing volume in forest area than before

Biomass generation carbon life cycle



1) Forest Research is Great Britain's principal organisation for forestry and tree related research and is internationally renowned for the provision of evidence and scientific services in support of sustainable forestry

Safety, Sustainability and ESG

Achieving a positive long-term economic, social and environment impact

Safety

- TRIR 0.22 (2018: 0.22)

Environment

- >85% reduction in CO_2 since 2012
- Expanded biomass sustainability policy
- Participant in Carbon Disclosure Project

Social

- Participant in UN Global Compact
- Carbon negative opportunities to protect 55,000 jobs and new green jobs creation in north of England

Governance

- Development of sustainability KPIs
- Increased stakeholder engagement

Financing

- £125m ESG facility linked to CO_2 emissions

UN Sustainable Development Goals (SDGs)

- Six SDGs where Drax can have greatest impact

Generation

UK's largest single source of renewable power and fourth largest generator

Multi-technology UK-wide portfolio

- Sustainable biomass, hydro and gas generation assets

Good operational performance with optimised generation

- Restricted biomass generation in Q1 2019
- Record biomass generation November / December 2019

Hydro and gas generation assets complete performing strongly

- £114m EBITDA in 2019 (2019 guidance £90-110m)
- Integration into generation portfolio

High proportion of non-commodity related earnings

- Renewables, system support services, Capacity Market and contracted power

Adjusted EBITDA
£408m
(2018: £232m)

Value from flexibility(1)
£129m
(2018: £79m)

% of UK Renewables
12%(2)
(Q4 2017 to Q3 2018: 12%)

Portfolio availability(3)
88%
(2018: 89%)

Biomass Generation
13.4TWh
(2018: 13.8TWh)

Hydro Generation
0.3TWh
(2018: N/A)(4)

Gas Generation
2.9TWh
(2018: N/A)(4)

Coal Generation
0.6TWh
(2018: 4.5 TWh)

CO_2
0.1t/MWh
(2018: 0.2t/MWh)

1) Value from Flexibility: Balancing Mechanism, Ancillary Services and advantaged fuels
2) Q4 2018 to Q3 2019
3) Portfolio availability is calculated as economic forced outage rate of each generation asset weighted by expected contribution to Adjusted EBITDA
4) Previously ScottishPower Generation

Power System Stability

Growing value from system support services

Growing demand for services

- Increase in wind, reduction in synchronous generation

Drax portfolio provides full range of services

- Frequency response, reactive power, voltage control, inertia, blackstart, constraint management, headroom and footroom, reserve

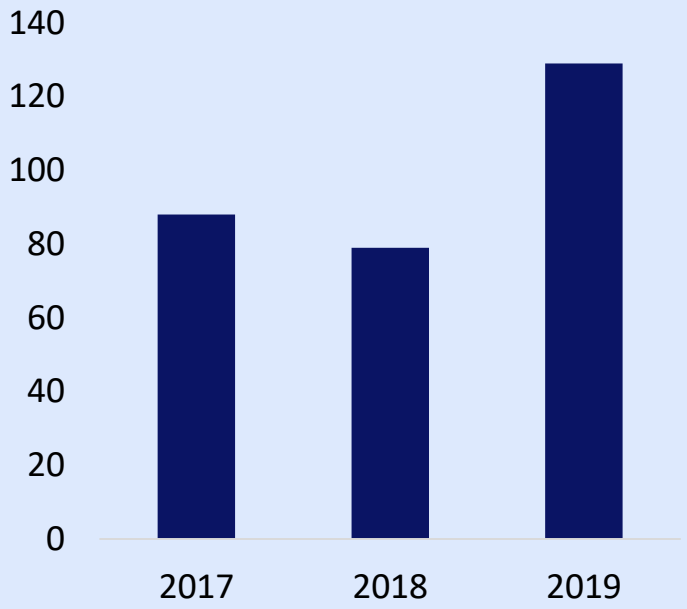
Synchronous compensation tender (January 2020)

- Contract for reactive power and inertia
  - Six-year contract commencing Q2 2020
  - Incremental EBITDA of £5m pa for Cruachan
- Further tenders expected

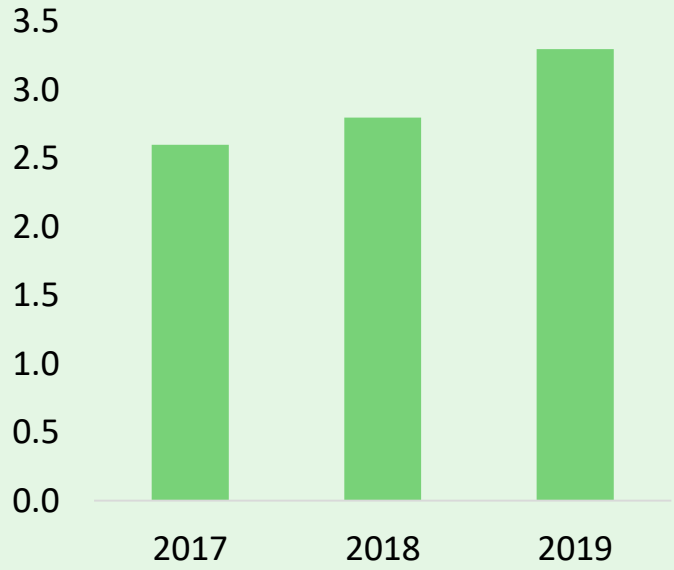
Future development options

- CCGT[3] & OCGT[3]
- Hydro – Cruachan expansion
- Synchronous compensator machines

Value from flexibility[1] – Drax (£m)



Growing BSUoS[2] charge (£/MWh)



1) Value from Flexibility: Balancing Mechanism, Ancillary Services and advantaged fuels
2) Balancing Services Use of System
3) Combined Cycle Gas Turbine and Open Cycle Gas Turbine

Pellet Production

Increasing production, reducing costs

Adjusted EBITDA
£32m
(2018: £21m)

Pellet production
1.41Mt
(2018: 1.35Mt)

Production cost
$161/t(1)
(2018: $166/t)

Operational performance weighted to H2

- Weather restricted pellet production in H1
- Increased output in H2

Reduction in pellet production cost

- Down 3% year-on-year
- Increased use of sawmill residues and improved logistics
- Run-rate savings of $17/t with full year of operation in 2020 (versus 2018)

Programme of cost reduction and increased self-supply

- Planned savings of c.$35/t by 2022 (versus 2018)
- 0.35Mt low-cost expansion 2019-2021

Further opportunities for growth and cost reduction

- Evaluating options for 0.5Mt of satellite sites
- Evaluating options to widen fuel envelope

1) Cost of production in US biomass self-supply business – raw fibre, plus processing into a wood pellet, delivery to port of Baton Rouge and loading to vessel for shipment to UK – Free on Board (FOB). Cost of ocean freight, UK port and rail cost reflected in UK generation business accounts in addition to price paid to US business for the wood pellet.

Customers

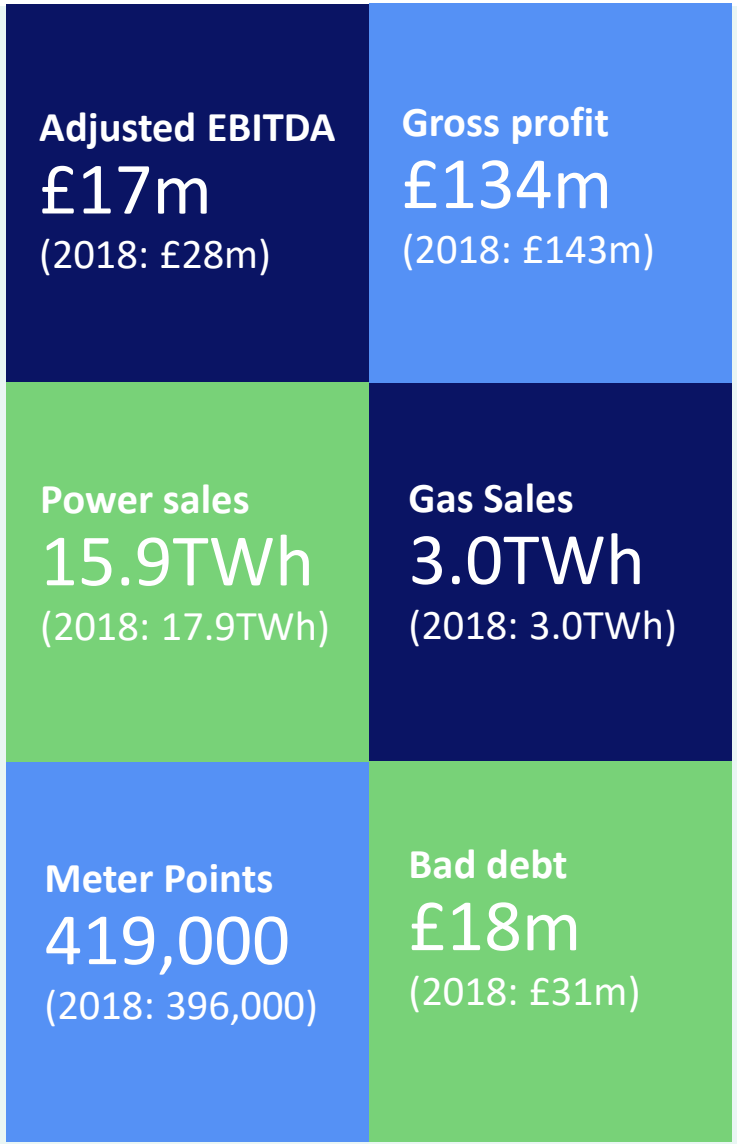
Growth in margin per MWh and customer meters

Focus on quality of business

- Adjusted EBITDA includes £8m of restructuring costs
- Increased margin/MWh through focus on value over volume
- 6% growth in customer meters
- Improvement in bad debt expense

Focus on driving future earnings growth

- Reduce cost to serve
- Operational excellence
- Improved customer quality driving lower bad debt



Financial Review

Financial Summary

Strong financial performance

Adjusted EBITDA[1]
£410m
(2018: £250m)

Adjusted EBITDA[1] from hydro and gas generation assets
£114m
(2018: N/A)

Net Debt December 2019[2]
£841m
(December 2018: £319m)

Net Debt to Adjusted EBITDA[2]
1.9x[3]
(December 2018: 1.3x)

Net Cash from Operating Activities
£413m
(2018: £311m)

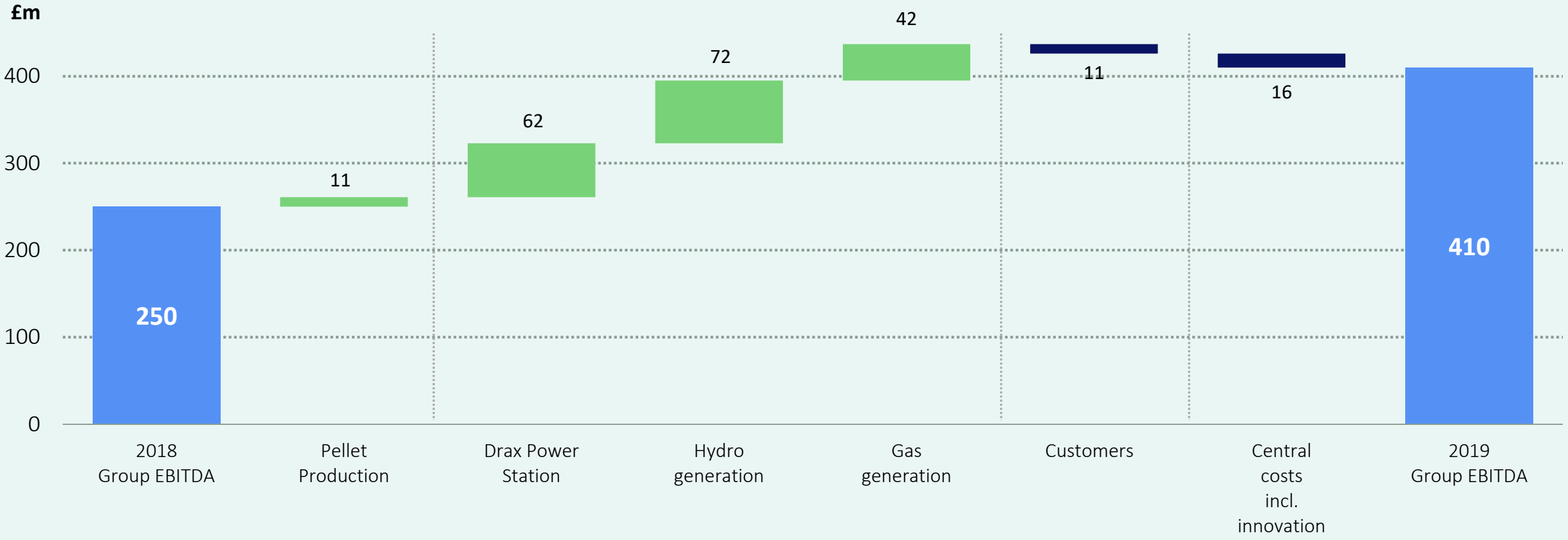
Adjusted Basic Earnings Per Share[1]
29.9p/share
(2018: 10.4p/share)

Proposed Final Dividend
9.5p/share (£37m)
(2018: 8.5p/share, £34m)

Total Dividend
15.9p/share (£63m)
(£63m) (2018: 14.1p/share, £56m)

1) Adjusted Results are stated after adjusting for exceptional items (including acquisition and restructuring costs, asset obsolescence charges and debt restructuring costs), and certain remeasurements
2) Cash and short-term investments of £404m less borrowings of £1,245m
3) Adjusted to reflect cash flows from reinstatement of Capacity Market received in January 2020, reflected in 2019 Adjusted EBITDA

Group Adjusted EBITDA Bridge 2018 – 2019



Pellet Production
2019: £32m
2018: £21m

Generation
2019: £408m
2018: £232m

Customers
2019: £17m
2018: £28m

Central costs
2019: £47m
2018: £31m

2019 Group Adjusted EBITDA Analysis

High quality, enduring earnings from a multi-technology portfolio and integrated value chain

Drax Power Station

- Four biomass units, two coal
  - Coal represents c.3% of Group power generation

Hydro

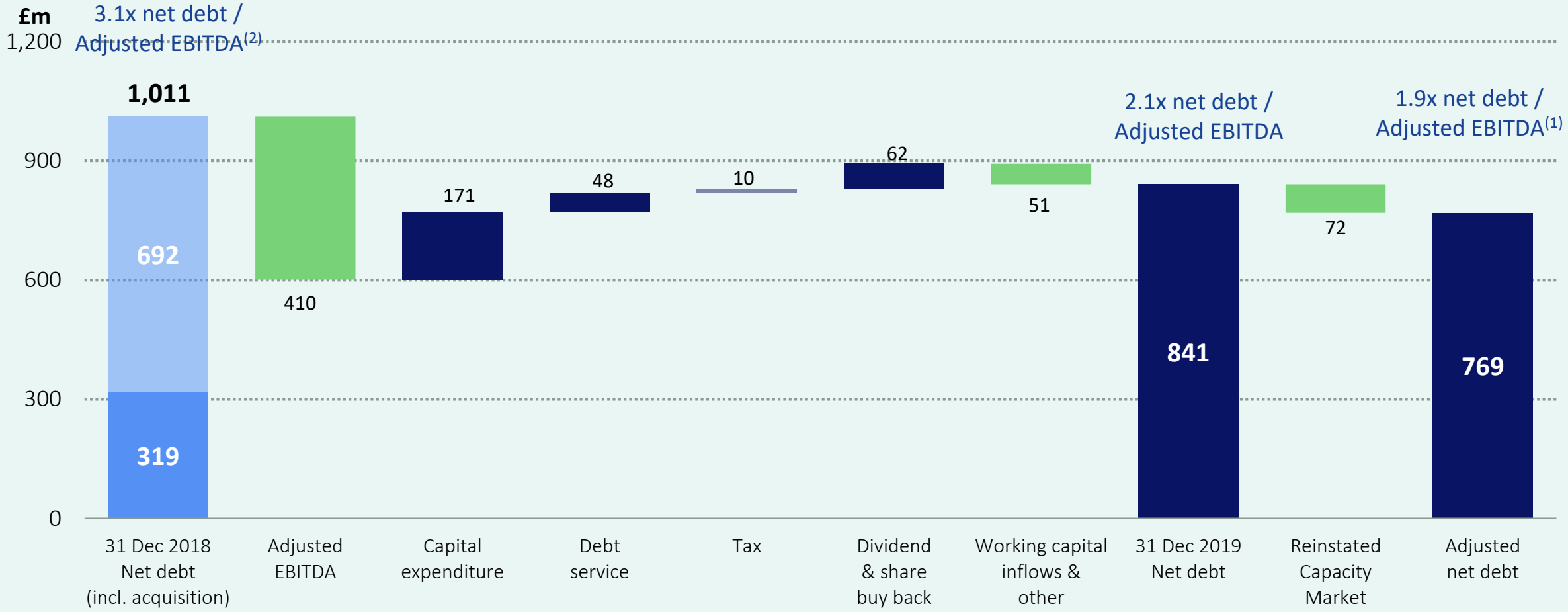
- A significant contribution to Group EBITDA
  - Cruachan Pumped Storage Power Station
  - Lanark and Galloway hydro schemes

Business Unit		TWh	Gross Profit	Reported Opex	EBITDA	*% of EBITDA*
Pellet Production			84	(52)	**32**	*8%*
Generation	Drax Power Station	*13.4 (biomass) 0.6 (coal)*	*481*	*(187)*[1]	***294***	*72%*
	Hydro[2]	*0.3*	*99*	*(27)*	***72***	*18%*
	Thermal – gas	*2.9*	*69*	*(27)*	***42***	*10%*
Customers			134	(117)	**17**	*4%*
Corporate				(47)	**(47)**	*(12)%*
Totals		**17.2**	**867**	**(457)**	**410**	*100%*

1) 2019 cost includes two major planned biomass unit outages, with one major planned outage in 2020
2) Cruachan pumped storage; Lanark and Galloway hydro schemes; Daldowie energy from waste plant

Net Debt Bridge

Delivered 1.9x net debt / Adjusted EBITDA(1)



1) Adjusted to reflect cash flows from reinstatement of Capacity Market received in January 2020, reflected in 2019 Adjusted EBITDA
2) Reported net debt to Adjusted EBITDA plus cost of acquisition of hydro and gas generation assets from ScottishPower – completed 31 December 2018 with cash settlement in January 2019 and associated Adjusted EBITDA

Capital Investment

Investment to support operational excellence, strategic initiatives and growth

2019

Actual	Key Projects	Investment
Maintenance	Maintain operational performance	£59m
Acquired assets	Hydro and gas	£15m
Enhancement	Efficiency and operational improvement	£24m
Strategic	Biomass self-supply and gas options	£67m
Other		£7m
Total		**£172m**

2020

Current Estimate	Key Projects	Investment
Maintenance	Maintain operational performance	£60-70m
Acquired assets	Hydro and gas	£40m
Enhancement	Efficiency and operational improvements	£10m
Strategic	Biomass self-supply	£110-120m
Other		£10m
Total		**£230-250m**

Development of Biomass Self-supply to Expand Capacity and Reduce Cost

Clear line of sight from existing projects to reduce costs by $35/t (£13/MWh)[1] by 2022 on 1.85Mt

Savings from projects completed in 2019

- LaSalle – rail spur, woodyard decommissioning and sawmill co-location
- Relocation of HQ from Atlanta to Monroe

Savings from projects to be delivered 2020-2022

- 0.35Mt capacity expansion – LaSalle, Amite and Morehouse
- Amite and Morehouse sawmill co-locations
- Amite and Morehouse woodyard decommissioning
- Port of Baton Rouge chambering yard
- Increased use of low-cost fibre

Savings versus 2018	2019	2022
Savings from projects completed in 2019 ($m)	**19**	**26**
Savings from projects to be delivered 2020-2022 ($m)	**-**	**38**
Total savings ($m)	**19**	**64**

Reported 2018 Adjusted EBITDA (£m)	**21**
Savings from projects delivered in 2019	14
Indexation on intergroup sales	3
Weather-affected fibre supply	(6)
Reported Adjusted EBITDA (£m)	**32**

1) At a constant FX rate of $1.45/£

Balance Sheet

Long-term structures in place to support growth

Net debt / Adjusted EBITDA

- 1.9x[(1)] in 2019 when adjusted for Capacity Market

Successful refinancing completed in 2019

- Extended maturity profile into 2029
- Infrastructure private placement and ESG facility combined all-in rate sub 3%

Group cost of debt now below 4%

Commitment to robust financial metrics

- (BB+ / BBB range)

Continue to target opportunities for balance sheet efficiency and reduced cost of debt

Instrument	Maturity	Description
Infrastructure private placement	2024-2029	£375m
Bonds	2025	$500m
	2022	£350m
ESG facility	2022	£125m
Revolving Credit Facility	2021 (+1)	£350m (including index-linked term loan)

1) Adjusted to reflect cash flows from reinstatement of Capacity Market received in January 2020, reflected in 2019 Adjusted EBITDA

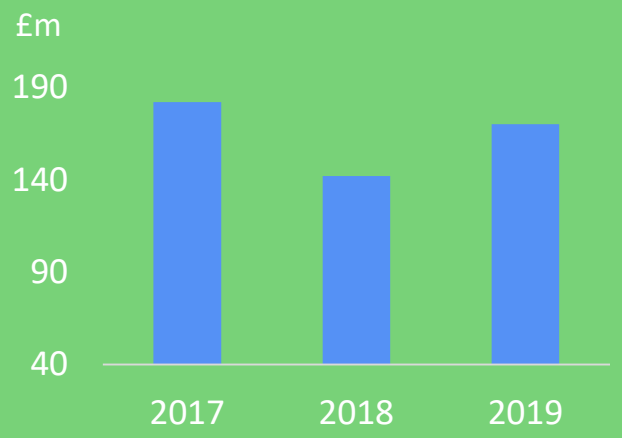
Clear Capital Allocation Policy

Implemented in 2017, designed to support strategy

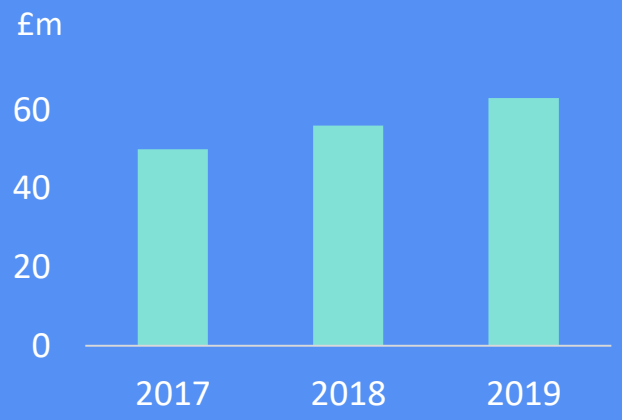
Maintain credit rating

BB+/BBB range

Invest in core business – capex



Pay a sustainable and growing dividend



Return surplus capital beyond investment requirement

Financial Summary and Outlook

Strong financial performance in 2019

Pellet Production

- Further progress reducing cost and expanding capacity of biomass self-supply

Generation

- Cost and savings associated with the closure of coal
- Flexible, renewable and low-carbon generation with system support services

Customers

- Focus on quality of business and future earnings growth

Biomass Strategy Update

Biomass Strategy

Ensure the long-term future of biomass power generation through world leading safety and sustainability, ongoing cost reduction and the delivery of negative emissions

Ambition: to create the world's largest, low-cost sustainable biomass supply chain

Increase self-supply to 5mt

Reduce biomass self-supply cost to £50/MWh(1) by 2027

World leading sustainability policy

Optimisation and trading of biomass supply

Development of carbon negative technology

1) From c.£75/MWh in 2018 to £50/MWh, assuming a constant FX rate of $1.45/£ and 5Mt pa by 2027. Interim target from established projects of £13/MWh on 1.85Mt by 2022

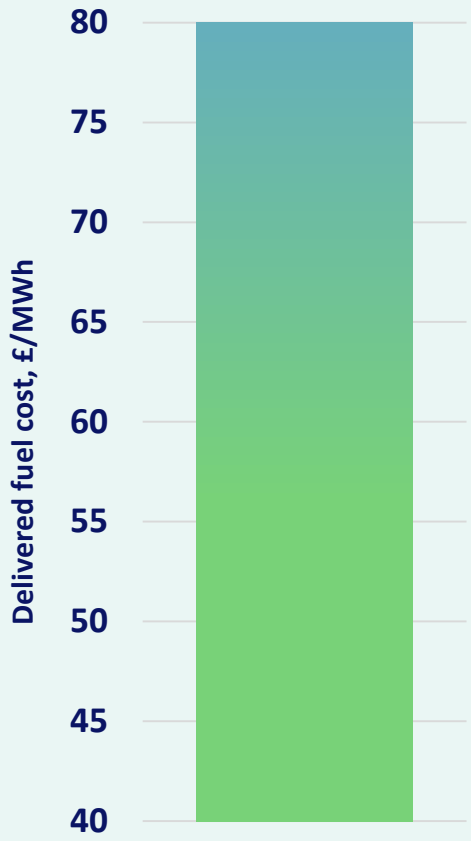
Biomass Cost Reduction Route

Increased control of supply chain to reduce overall cost of biomass generation to c.£50/MWh[1]

2019

2027

Portfolio £/MWh



Initiatives

Opportunities from existing self-supply business

- Established programme of improvements and expansion to deliver £13/MWh[1] savings on 1.85Mt by 2022
- $30m run rate savings in 2020, rising to $60m pa in 2022 vs 2018 base

Expansion of self-supply to deliver 5Mt of capacity

- Satellite pellet plants in US south – lower cost fibre and processing cost
  - Opportunity for up to 0.5mt
  - c.40kt sites, c.$10-15m per site
  - Potential to replicate in other geographies
- Evaluating other opportunities

Expansion of fuel envelope – viable fuels

- Developing and scaling low-cost alternative biomass in multiple geographies
- For example, bagasse (sugarcane residue) – potential for > 1Mt pa

R&D into next generation cost reduction opportunities

Underpinned by further opportunities in logistics and operations and work with 3rd party suppliers

1) At a constant FX rate of $1.45/£

BioEnergy Carbon Capture and Storage (BECCS)

Progression of technology options

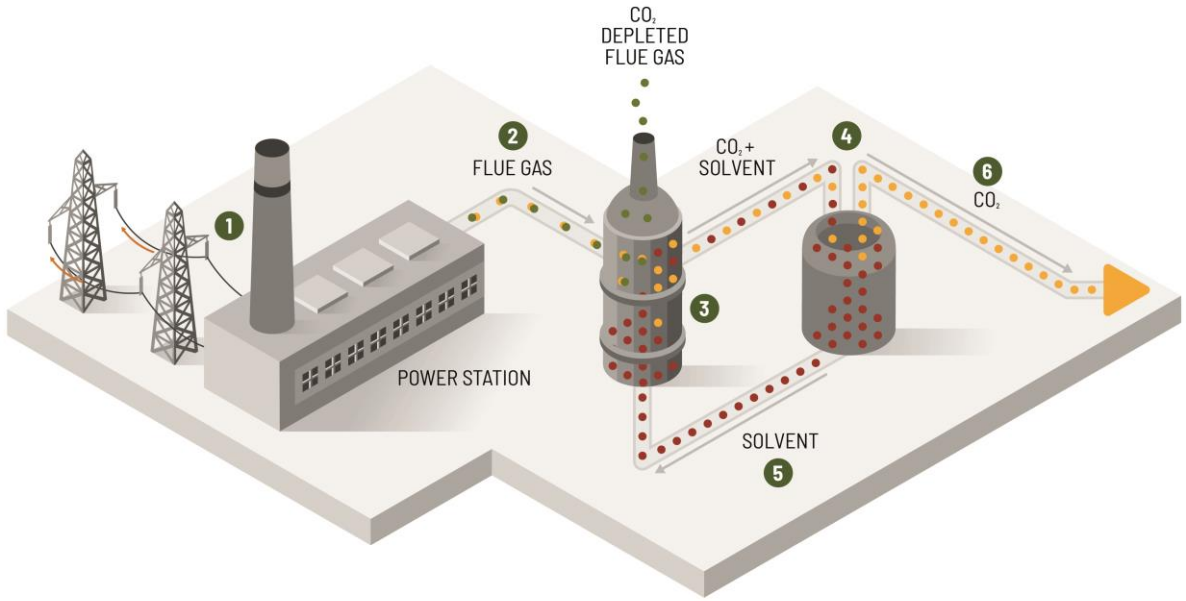
Developing technology options for BECCS

- Proven amine technology solution to deliver BECCS at scale
  - Operating in industry for over 30 years
  - Two reference plants in North America capturing >1Mt of CO_2 pa – Petra Nova, USA and and Boundary Dam, Canada
- C-Capture trial
  - Organic and potentially lower cost alternative to amine
  - Testing programme now underway at Tiller facility, Norway

Assessing alternative uses for CO_2

- Technology test zone established at Drax Power Station
- Trials to assess use of biogenic CO_2 in plastic and animal food use
- Synthetic zero-carbon fuels from hydrogen

BECCS process illustration



KEY

- Flue gasses
- Solvent
- Carbon dioxide (CO_2)

1. Electricity is produced and enters the national grid system
2. Flue gas containing CO_2 leaves the power production process. It is cooled and treated before entering an absorption tower
3. Inside the absorption tower, a chemical reaction takes place which extracts CO_2 from the flue gas. CO_2 depleted flue gas is released to the atmosphere
4. The solvent containing the CO_2 is heated in a re-boiler, which reverses the chemical reaction separating the CO_2 from the solvent
5. The solvent is then re-circulated back into the carbon capture system
6. The now pure stream of CO_2 is transported via pipeline for permanent storage under the southern North Sea

BECCS and the Humber Cluster

Humber region is area of highest CO_2 intensity in UK

Humber pipeline

- Drax and other industries capture CO_2 emissions
- Transported in a pipe along Humber estuary
- Long-term storage under North Sea bed

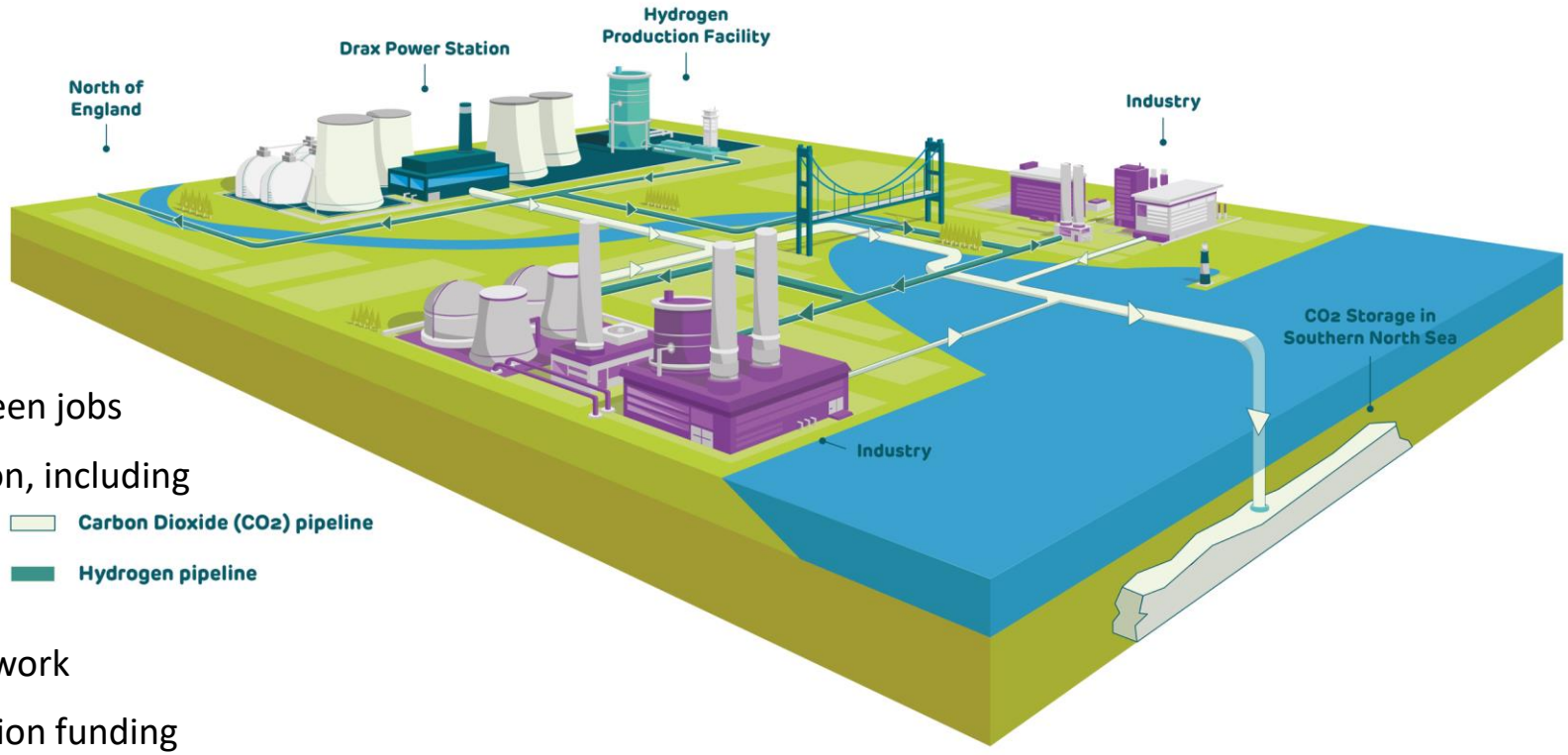
Potential benefits

- World's first carbon negative industrial cluster
- Major economies of scale, reducing unit costs
- Major carbon savings (>40 MTs p.a. by 2040)
- 55,000 industrial jobs safeguarded and new green jobs
- Stimulate low–carbon technologies in the region, including hydrogen and synthetic fuels

Status

- Development of blueprint for regional CO_2 network
- Joint bid submitted for up to £132m of innovation funding

What a zero carbon cluster could look like in the Humber region



Expected Regulatory Framework for BECCS Will Develop Throughout 2020

Supports CCS recommendations for net zero economy

Q1

- **Energy white paper** – to set out UK Government's vision for CCS and negative emissions in 2020s/30s
- **Spring Budget** – expect announcement on £800m Conservative manifesto commitment towards CCS

Q3

- **Treasury net zero review** – funding options for new decarbonisation policies (such as negative emissions)

Q4

- **Draft heads of agreement** – UK Government to publish draft T&Cs for future support contracts for CCS projects
- **COP 26** – likely to feature a number of CCS announcements including award of innovation funding

2020 Outlook and Priorities

We will build a long-term future for sustainable biomass	We will be the leading provider of power system stability	We will give our customers control of their energy
- Biomass cost reduction and increased capacity in US operations - Development of options for carbon negative generation	- Flexible generation and I&C customer portfolio - Options for new assets – gas (including hydrogen fuelling), hydro and synchronous compensators	- Operational excellence and cost reduction - Help customers deliver their ESG objectives

2019
Full Year Results

Appendices

Biomass Supply – Sources

Capacity Market Agreements

Group Income Statement

Power Generation – Adjusted EBITDA

Pellet Production – Adjusted EBITDA

B2B Energy Supply – Adjusted EBITDA

Consolidated Adjusted EBITDA

Group Cash Flow Statement

Group Balance Sheet

Positions Under Contract

Forward Power Prices

Forward Commodity Prices

Forward Spreads

Biomass Supply – Sources

Drax Group sources of fibre by location – 2019

	Sawmill residues	Branches, tops and bark	Thinnings	Low grade round wood	Agri. residues	Total
USA	19%	10%	19%	16%	1%	**65%**
Canada	14%	2%	-	-	-	**16%**
Latvia	4%	-	-	5%	-	**9%**
Estonia	1%	-	1%	-	-	**2%**
Portugal	-	-	1%	1%	-	**2%**
Brazil	1%	-	-	-	1%	**2%**
Other European	2%	-	-	-	2%	**4%**
Total	**41%**	**12%**	**21%**	**22%**	**4%**	**100%**

Drax Group sources of fibre by location – 2018

	Sawmill residues	Branches, tops and bark	Thinnings	Low grade round wood	Agri. residues	Total
USA	15%	10%	17%	20%	-	**62%**
Canada	15%	3%	-	-	-	**17%**
Latvia	5%	-	-	5%	-	**10%**
Estonia	2%	-	2%	1%	-	**4%**
Portugal	0%	-	1%	2%	-	**3%**
Brazil	0%	-	-	1%	-	**1%**
Other European	1%	-	-	-	1%	**2%**
Total	**38%**	**13%**	**20%**	**29%**	**1%**	**100%**

Drax self-supply sources – 2019

	Sawmill residues	Branches, tops and bark	Thinnings	Low grade round wood	Agri. residues	Total
USA	12%	-	53%	35%	-	**100%**

Drax self-supply sources – 2018

	Sawmill residues	Branches, tops and bark	Thinnings	Low grade round wood	Agri. residues	Total
USA	8%	-	60%	32%	-	**100%**

Capacity Market Agreements

Clear revenue profile to 2023 with option to develop new gas generation subject to future Capacity Market agreement

£m	2020	2021	2022	2023[1]	Total
Hydro	10	10	4	3	27
Gas	37	36	16	9	98
Coal	24	25	9	-	58
Total	**71**	**71**	**29**	**12**	**183**

	Oct-19 to Sept-20	Oct-20 to Sept-21	Oct-21 to Sept-22	Oct-22 to Sept-23
£/KW	19	24	9	7

1) Nine months only, T-4 to take place in March 2020

Group Income Statement

	2019			2018		
In £m	**Adjusted**	**Exceptional**	**Total**	**Adjusted**	**Exceptional**	**Total**
Revenue	4,703	10	4,713	4,237	(8)	4,229
Cost of sales	(3,836)	(143)	(3,979)	(3,636)	46	(3,590)
Gross profit	**867**	**(133)**	**734**	**601**	**38**	**639**
Adjusted EBITDA	**410**	**-**	**-**	**250**	**-**	**-**
Depreciation	(166)	-	(166)	(129)	-	(129)
Amortisation	(42)	-	(42)	(45)	-	(45)
Loss on disposal	(1)	-	(1)	(4)	-	(4)
Asset obsolescence charge	-	-	-	-	(27)	(27)
Other gains / (losses)	3	-	3	4	-	4
Acquisition and restructuring costs	-	(9)	(9)	-	(28)	(28)
Operating profit / (loss)	**204**	**(142)**	**62**	**76**	**(16)**	**60**
Foreign exchange gains and losses	(2)	2	-	-	-	-
Net interest charge	(60)	(5)	(65)	(39)	(7)	(46)
Profit / (loss) before tax	**142**	**(145)**	**(3)**	**37**	**(23)**	**14**
Tax	(24)	27	3	5	1	6
Profit / (loss) after tax	**118**	**(118)**	**0**	**42**	**(22)**	**20**
Basic earnings per share (pence)	**29.9**	**(29.8)**	**0.1**	**10.4**	**(5.4)**	**5.0**

Power Generation – Adjusted EBITDA

In £m	2019	2018
Revenue		
Power sales	2,356	1,897
ROC sales	1,102	981
CfD income	260	322
Capacity Market agreements	78	6
Ancillary services income	50	19
Fuel sales	42	52
Other income	59	55
	3,947	**3,332**
Cost of sales		
Generation fuel costs	(1,171)	(1,122)
Fuel sold	(22)	(55)
ROC support	490	442
Carbon tax	(33)	(68)
Cost of carbon allowances	(26)	(22)
ROCs sold or utilised	(1,088)	(967)
Cost of power purchases	(1,336)	(1,046)
Grid charges	(53)	(58)
Other	(58)	(40)
	(3,297)	**(2,936)**
Gross profit	**650**	**396**
Operating costs	(242)	(164)
Adjusted EBITDA	**408**	**232**

Pellet Production – Adjusted EBITDA

In £m	2019	2018
Revenues	229	214
Cost of sales	(145)	(149)
Gross profit	**84**	**65**
Operating costs	(52)	(44)
Adjusted EBITDA	**32**	**21**

Customers – Adjusted EBITDA

In £m	2019	2018
Revenue	**2,269**	**2,242**
Cost of sales		
Cost of power and gas purchases	(971)	(952)
Grid charges	(468)	(460)
Other costs	(690)	(687)
	(2,135)	**(2,099)**
Gross profit	**134**	**143**
Operating costs	(117)	(115)
Adjusted EBITDA	**17**	**28**

Consolidated Adjusted EBITDA

2019 £m	Power Generation	Pellet Production	Customers	Adjustments	Consolidated
Segment Adjusted EBITDA	**408**	**32**	**17**	**(1)**	**456**
Central costs					(46)
Consolidated Adjusted EBITDA					**410**

2018 £m	Power Generation	Pellet Production	Customers	Adjustments	Consolidated
Segment Adjusted EBITDA	**232**	**21**	**28**	**(3)**	**278**
Central costs					(28)
Consolidated Adjusted EBITDA					**250**

Group Cash Flow Statement

In £m	2019	2018
Adjusted EBITDA	410	250
Working capital / other	61	86
Debt service	(48)	(24)
Tax	(10)	(1)
Net cash from operating activities	**413**	**311**
Capital investment	(171)	(132)
Capital investment – acquisition	(692)	-
Net refinancing	636	(13)
Dividend	(59)	(53)
Share buy back	(3)	(47)
Other	(9)	1
Net cash flow	**115**	**67**
Cash and cash equivalents at the beginning of the period	289	222
Net cash flow	115	67
Cash and cash equivalents at the end of the period	**404**	**289**

Group Balance Sheet

In £m	2019	2018
Non-current assets	3,042	3,176
Current assets	1,729	1,418
Current liabilities	(1,389)	(1,730)
Non-current liabilities	(1,665)	(1,037)
Net assets	**1,716**	**1,827**
Shareholder's equity	**1,716**	**1,827**

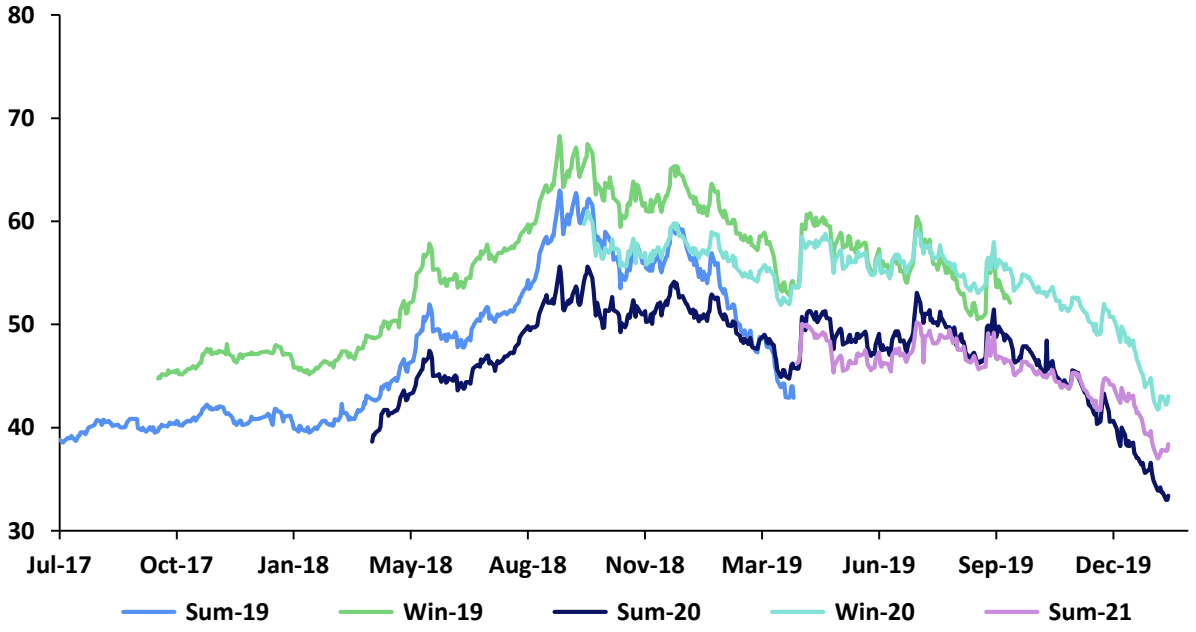
Positions Under Contract

Power	- Sold forward on ROC units 18-24 months - Buy back forward sold positions if prices fall - CfD unit neutral to power price, provides underlying firm volume - Upside to market tightness via gas and coal units
Biomass	- Typical third party contracts operate on five year basis, with fixed formula pricing - Hedge of underlying freight exposure - Hedge of indexation via ROC and CfD contacts
FX	- Managed on a rolling five-year basis to meet USD, CAD and Euro requirements - Effective rate of mid 1.40s$/GBP

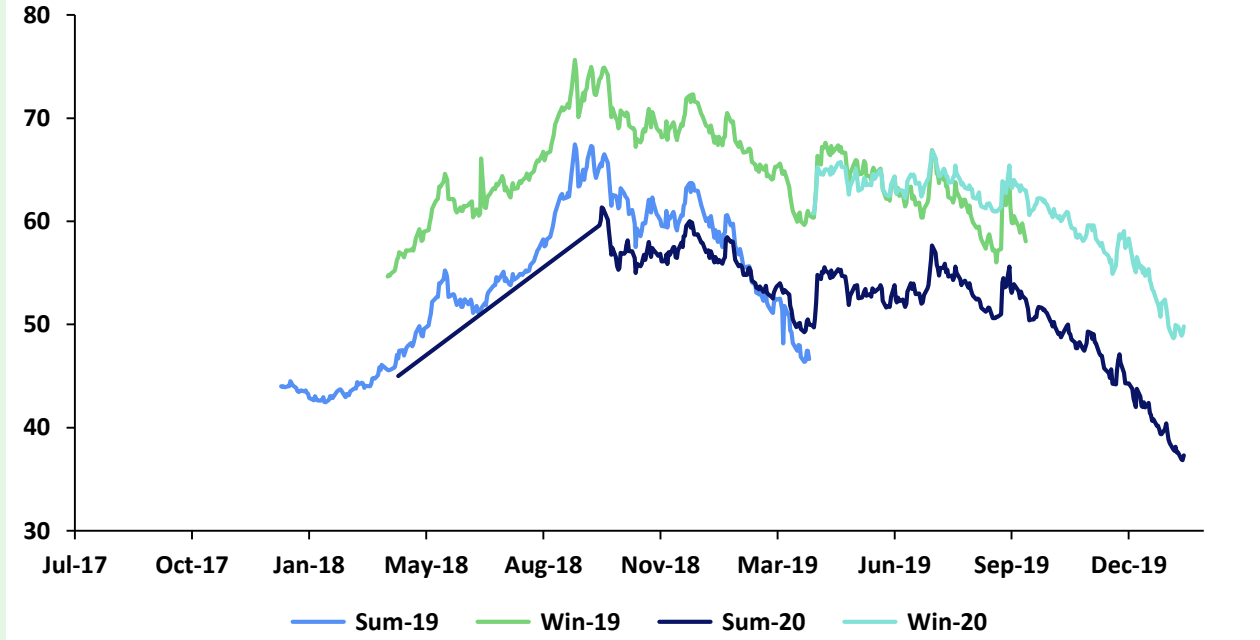
Contracted Power at 12 February 2020	2020	2021	2022
Power sales (TWh)	**16.0**	**8.4**	**3.3**
- Fixed price power sales (TWh)	15.8	8.7	3.3
Of which CfD unit (TWh)	*3.1*	-	-
At an average achieved price (£ per MWh)	53.9	50.5	49.3
- Gas hedges (TWh)	0.2	(0.3)	-
At an achieved price (pence per therm)	29.9	28.1	-

Forward Power Prices

Seasonal Power Price (£/MWh)

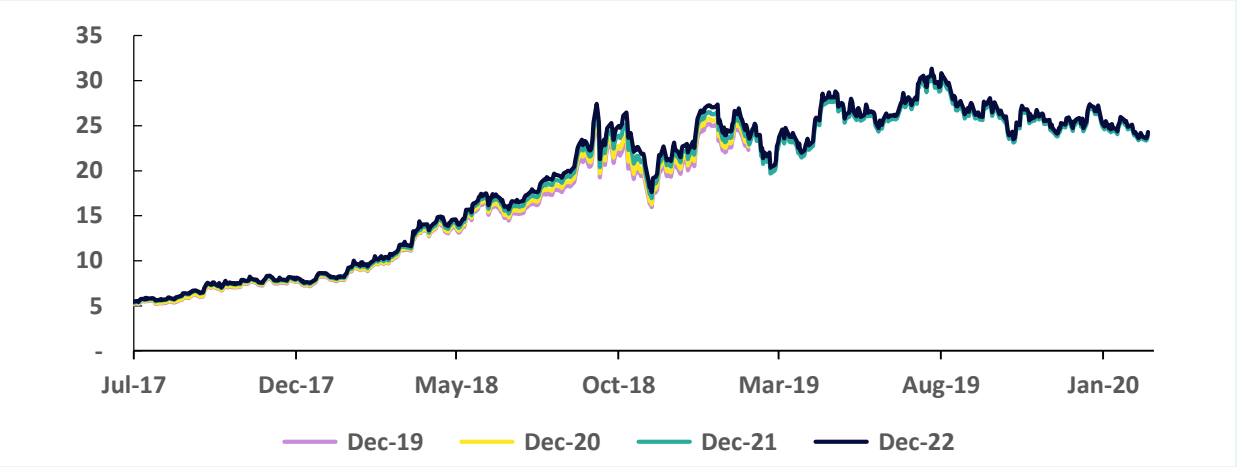


Peak Power Price (£/MWh)

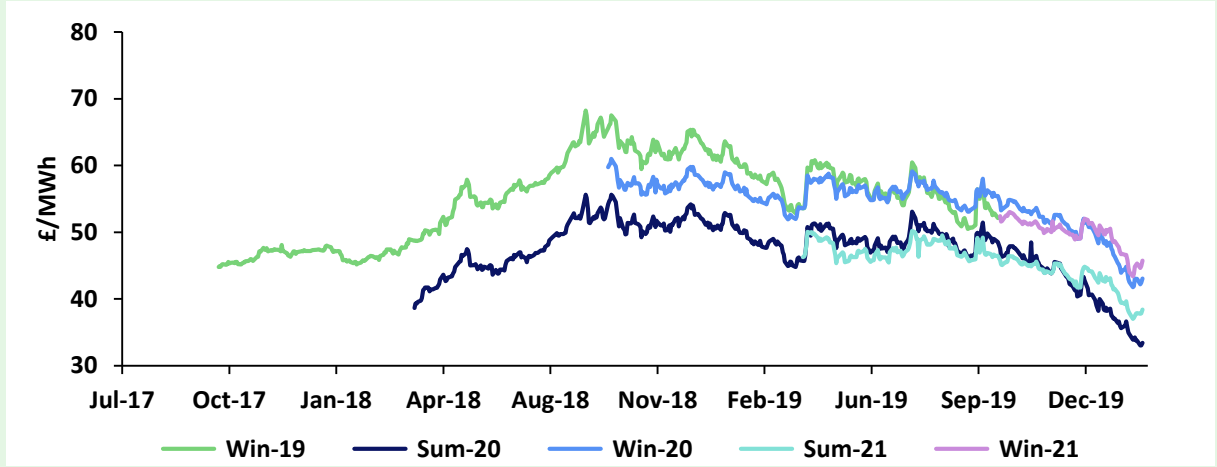


Forward Commodity Prices

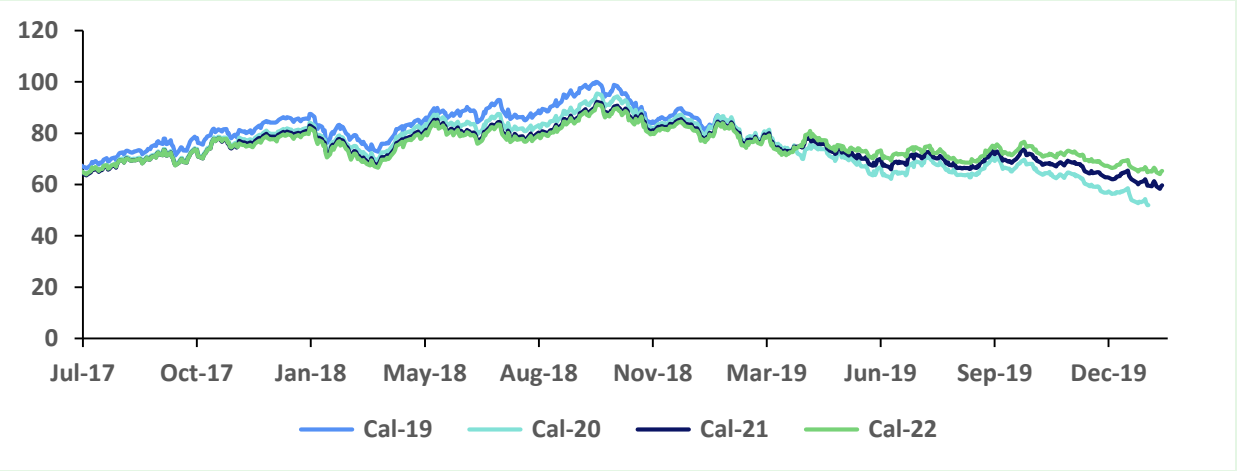
EU ETS Carbon (€/t)



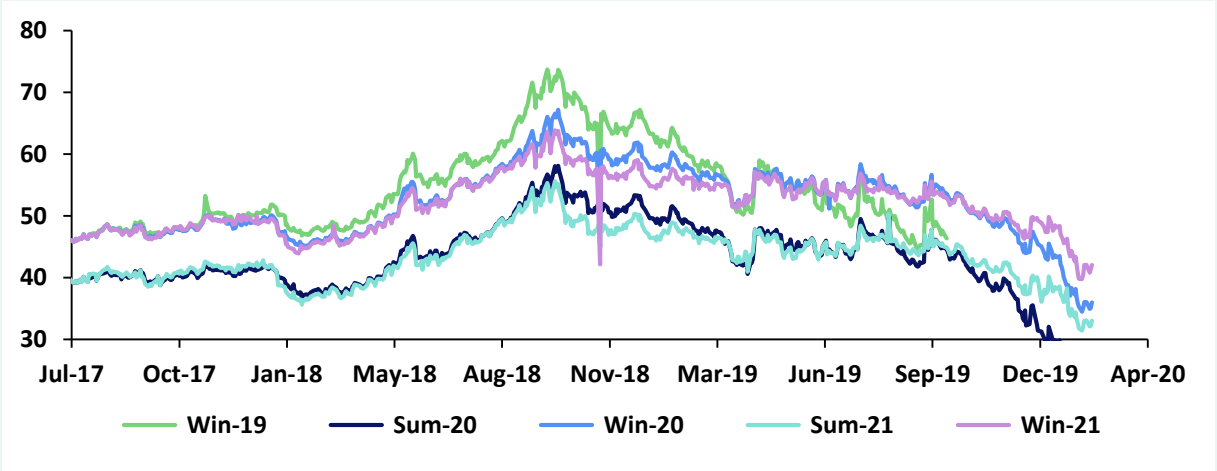
Power Price (£/MWh)



API2 Coal Price ($/t)

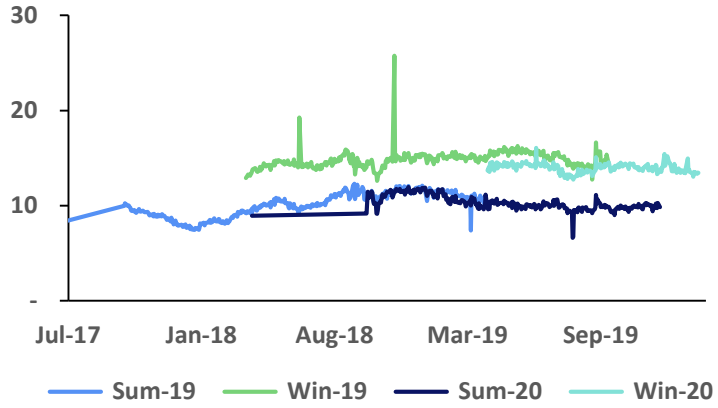


NBP Gas Price (p/therm)

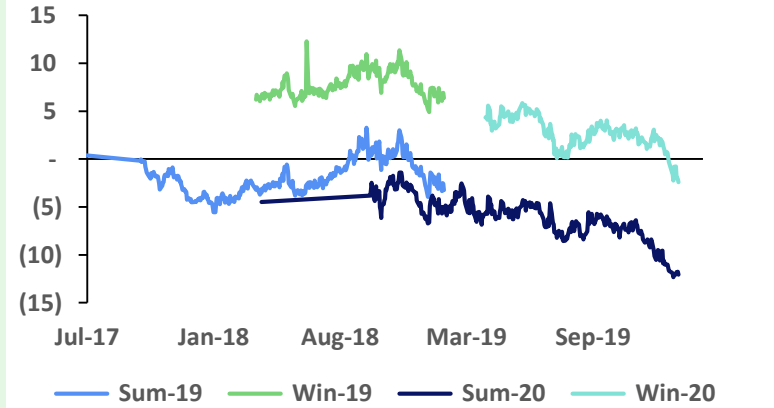


Forward Spreads

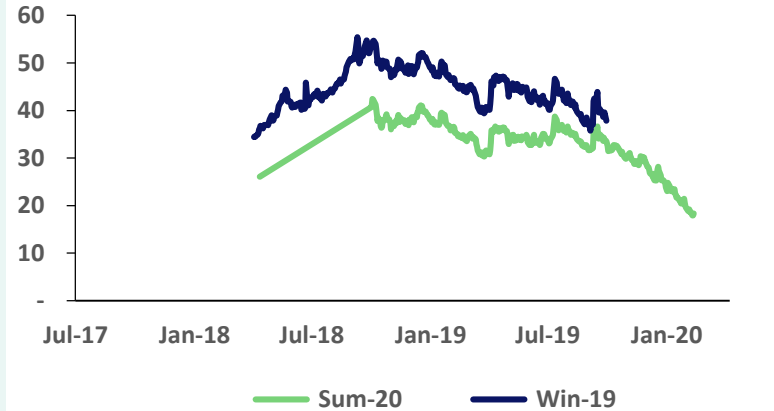
Peak CSS (£/MWh)



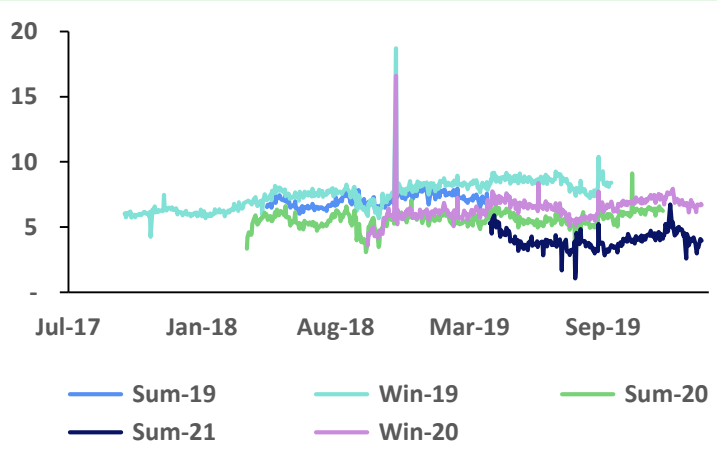
Peak DGS (£/MWh)



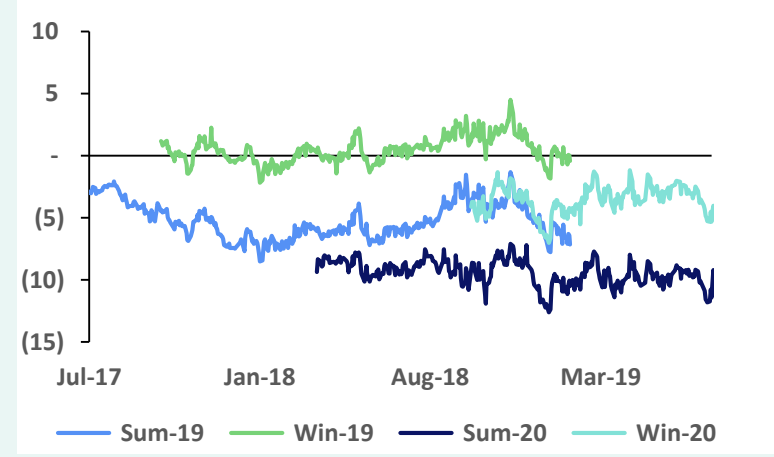
Peak ROC Bark Spread (£/MWh)



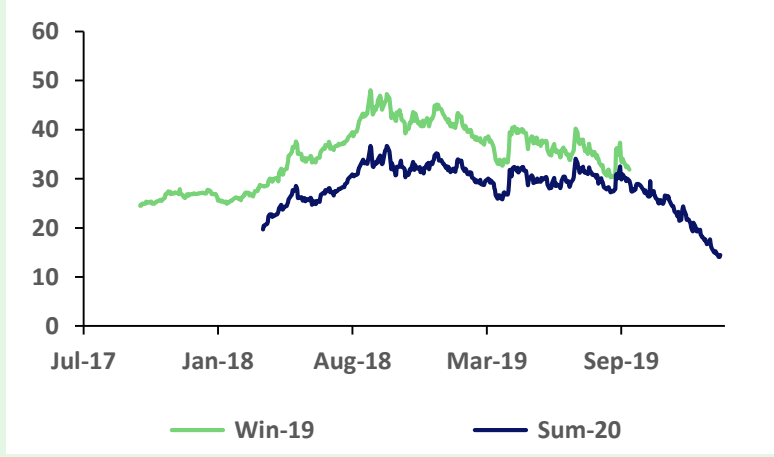
Baseload CSS (£/MWh)



Baseload DGS (£/MWh)



Baseload ROC Bark Spread (£/MWh)



2019
Full Year Results