drax

2020
Half Year Results

29 July 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

2020 Half Year Performance Highlights

Robust performance, delivering for stakeholders, progressing biomass strategy

Financial

- 30% increase in Adjusted EBITDA to £179m
- No change to estimated full year impact of Covid-19 on Adjusted EBITDA – c.£60m
- High level of contracted revenues 2020-2022
- Strong balance sheet and liquidity
- Sustainable and growing dividend – 7.5% expected increase for 2020
- Impairment of coal assets – end of commercial coal generation March 2021

Operational

- Increased biomass production, improved quality, reduced cost
- Strong Generation portfolio performance
- Increased demand for system support services

Strategic

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

Covid-19

Supporting all stakeholders

Supporting the energy system

- Flexible, renewable and low-carbon electricity 24/7
- System support services
- Maintained fully operational international supply chain

Employees

- No furloughing
- Implemented established business continuity plan for social distancing at operational sites and work from home

Supporting customers

- Additional customer support and debt management
- Restructuring of payment plans for certain customers

Communities

- 853 laptops with pre-paid internet donated to 50 schools
- Free energy supply to 189 independent care homes
- £150K to Money Advice Trust's Business Debtline
- Charitable donations to communities in US

Shareholders

- No change to full year Adjusted EBITDA expectations
- Strong balance sheet
- Investment in growth
- Sustainable and growing dividend

Customers

Supporting customers, managing impact of Covid-19, focus on underlying strength in portfolio

Principal impact of Covid-19 reflected in SME business in H1-20

- Reduction in demand
- MtM cost to exit previously hedged power contracts
- Increased bad debt provisions

Development of portfolio

- Substantial forward power sales
- New I&C supply contracts with large water utilities – five-year revenue visibility
- New SME credit thresholds introduced to drive higher quality customers

Support Group's flexible, renewable and low-carbon proposition

- Helping customers meet ESG objectives
- Providing route to market for 2,000 renewable generators
- Demand-side management – system support services
- EV fleet services opportunities

Adjusted EBITDA
£(37)m
(H1-19: £9m)

Power sales
7.3TWh
(H1-19: 8.0TWh)

Gas sales
1.5TWh
(H1-19: 1.7TWh)

Bad debt
£26m
(H1-19: £13m)

Safety, Sustainability and ESG

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

Safety

- TRIR 0.32 (H1-19: 0.30) – implemented campaign to improve risk assessment, awareness and correct use of PPE

Environment

- Participant in Carbon Disclosure Project
- Development of TCFD disclosure

Social

- Covid-19 – supporting colleagues, customers and communities

Governance

- CEO quarterly report to Board on ESG matters
- CDP scorecard target linking sustainability to remuneration

Positive momentum in ESG ratings

UN Sustainable Development Goals (SDGs)

- Six SDGs where Drax can have greatest impact

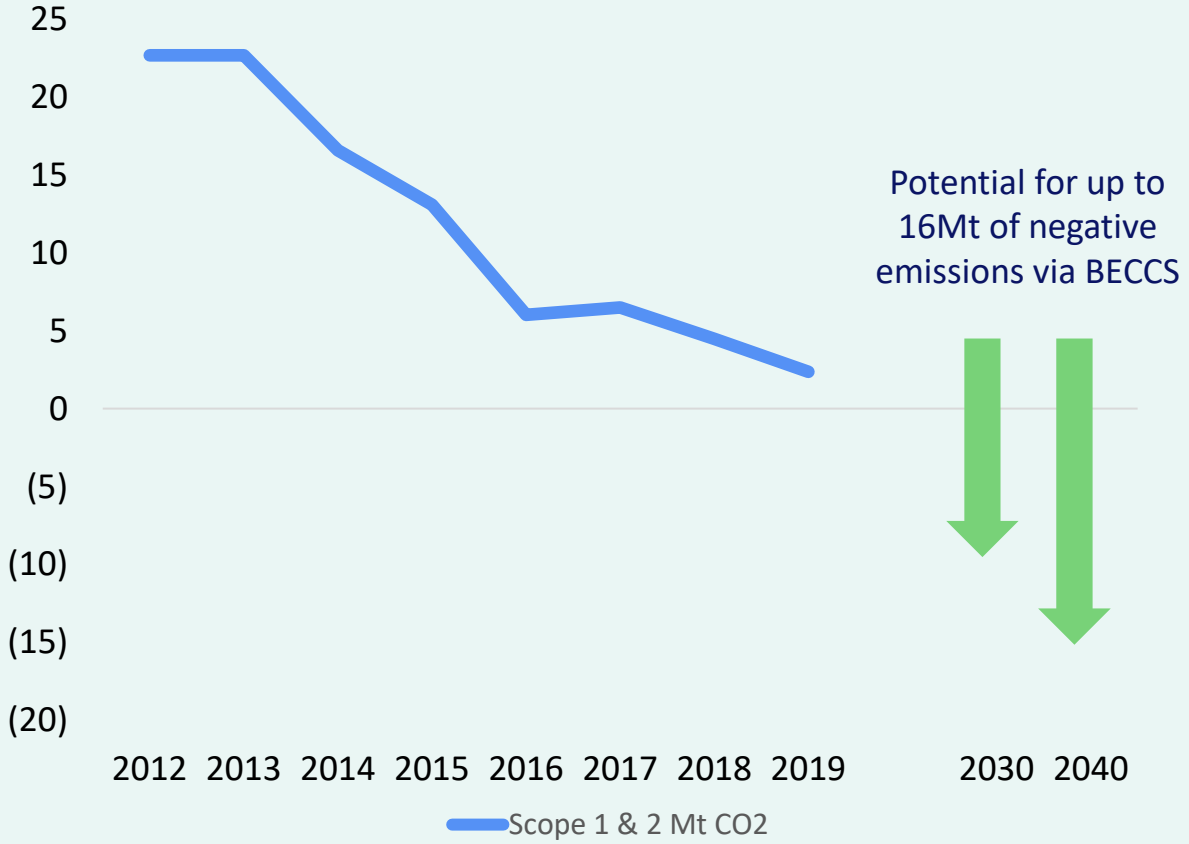
Progress Towards a Carbon Negative Future

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

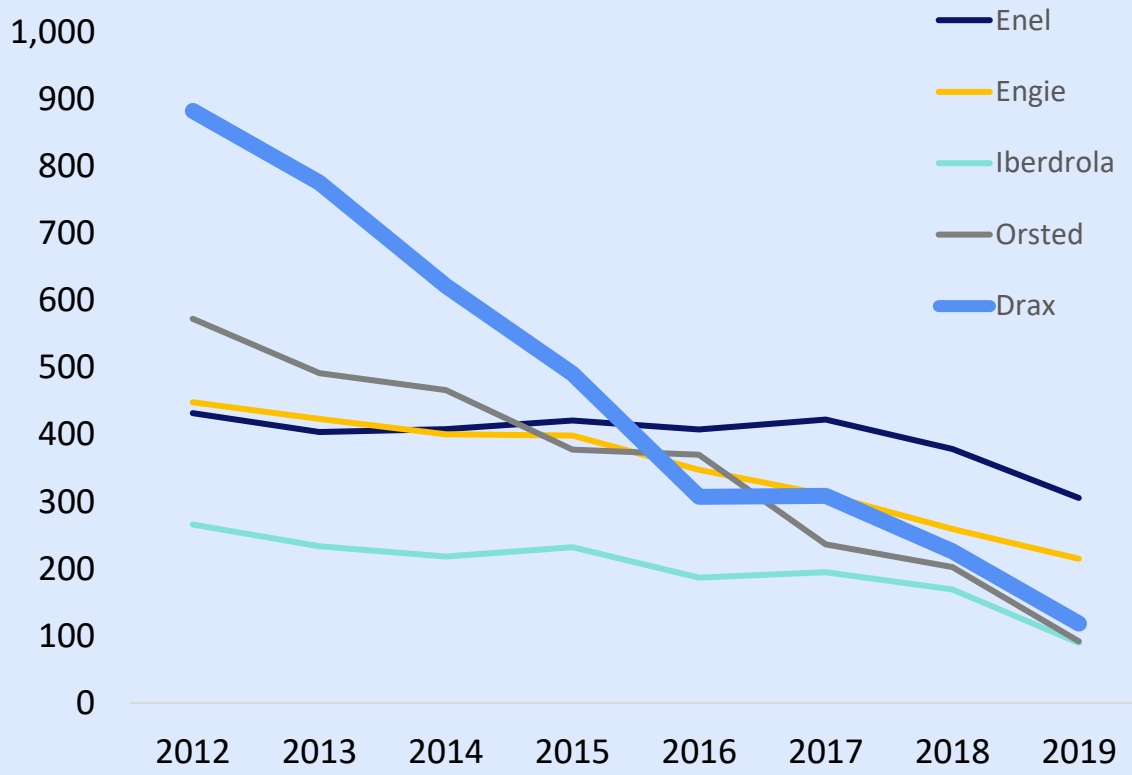
End of commercial coal generation in March 2021

Pioneering options for negative emissions by 2030

Drax Group historic CO_{2e} & negative emissions potential (Mt)



European utility CO_2 intensity (tCO_2/GWh)



Source: Bloomberg

Generation

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

Multi-technology UK-wide portfolio

- Sustainable biomass, hydro and gas

Strong operational performance

- High level of operational availability

Strong performance in system support market

- Flexible operation of portfolio to support power system

Hydro and gas generation

- £54m Adjusted EBITDA (H1 2019: £36m)
- Cruachan synchronous compensation contract commenced July 2020 – six-year contract, up to £5m pa

High proportion of non-commodity related earnings

- Renewables, system support and Capacity Market payments
- Strong contracted power position 2020-2022

End of commercial coal generation March 2021

Adjusted EBITDA £214m (H1-19: £148m)	**System support**(1) £66m (H1-19: £61m)	**% of UK renewables** 11%(2) (Q4 2018 to Q1 2019: 11%)
Portfolio availability(3) 91% (H1-19: 87%)	**Biomass generation** 7.4TWh (H1-19: 6.4TWh)	**Hydro generation** 0.3TWh (H1-19: 0.2TWh)
Gas generation 1.3TWh (H1-19: 1.4TWh	**Coal generation** 1.0TWh (H1-19: 0.4TWh)	**CO_2** 0.2t/MWh (H1-19: 0.2t/MWh)

1) Balancing mechanism, Ancillary Services and portfolio optimisation
2) Q4 2019 to Q1 2020
3) Availability of each generation asset weighted by EBITDA contribution

Trading and Optimisation

Forward power sales protect from weaker merchant prices, while retaining flexibility to provide system support services

Strong contracted power sales for Generation 2020-2022

- 34TWh contracted at £51.4/MWh

Portfolio restricts exposure to lower merchant power prices post 2022

- Biomass CfD – fixed price, index-linked contract to 2027
- Biomass ROC – index-linked to 2027, power largely hedged 2020-21
- Gas – peak power and system support
- Pumped storage and hydro – system support and peak power

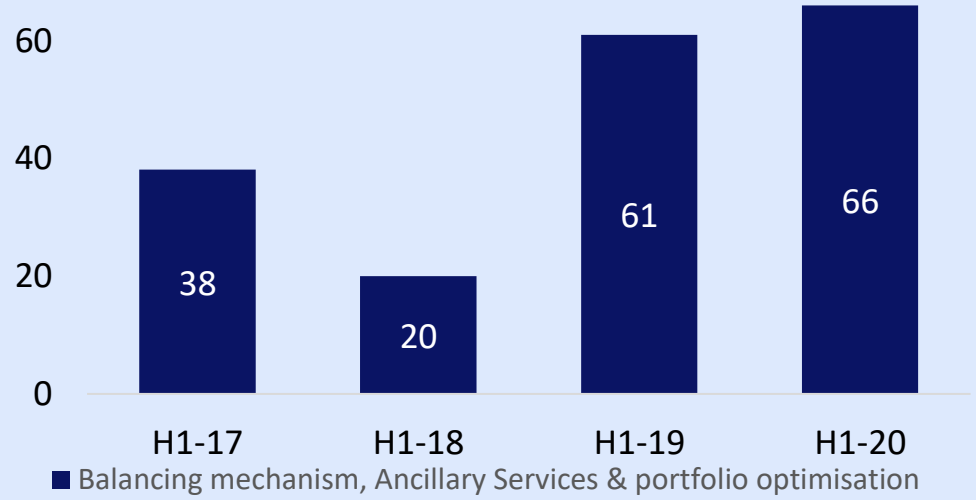
Contracted Generation power position

Contracted Power at 22 July 2020	2020	2021	2022
Fixed price power sales (TWh)	17.6	11.4	4.8
At an average achieved price (£ per MWh)	53.8	49.0	48.2

Covid-19 – increased demand for system support services

- Additional system balancing actions required to manage lower demand and high levels of intermittent renewables
- Wide range of system services provided by Drax portfolio

System support (£m)



Pellet Production

Increased production, improved quality, reduced costs

Strong operational performance

- 15% increase in production
- Improved pellet quality
- 9% reduction in cost

Programme of cost reduction and increased self-supply

- Expect to deliver $27m pa of savings by end of 2020 – a saving of $18/t (versus 2018 base)
- 0.35Mt low-cost expansion – first plant commissioning late 2020

New investment in satellite plants

Strong fibre baskets

- Actively managed commercial forestry driving increased forest stock, fibre yield and carbon abatement

Adjusted EBITDA
£25m
(H1-19: £8m)

Pellet production
0.75Mt
(H1-19: 0.65Mt)

Production cost
$154/t(1)
(H1-19: $170/t)

Expanding US Gulf capacity

Operational:
- 1.5Mt operational

Developments:
- 0.35Mt expansion of existing sites
- 0.12Mt – satellite plants

Satellite plants

Three 40Kt plants:
- $40m investment
- Potential for 500kt in US Gulf

Low production cost:
- Utilise sawmill residues
- Leverage on Drax infrastructure
- c.20% below current production cost

1) Cost of production in US biomass self-supply business – raw fibre, processing into a wood pellet, delivery to port of Baton Rouge and loading to vessel for shipment to UK and overheads – 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

Financial Review

Financial Summary

Strong financial performance

Adjusted EBITDA[1]
£179m
(H1-19: £138m)

Interim Dividend
6.8p/share (£27m)
(H1-19: 6.4p/share, £25m)

Cash Generated from Operations
£226m
(H1-19: £229m)

Adjusted Basic Earnings Per Share[1]
10.8p/share[2]
(H1-19: 2.0p/share)

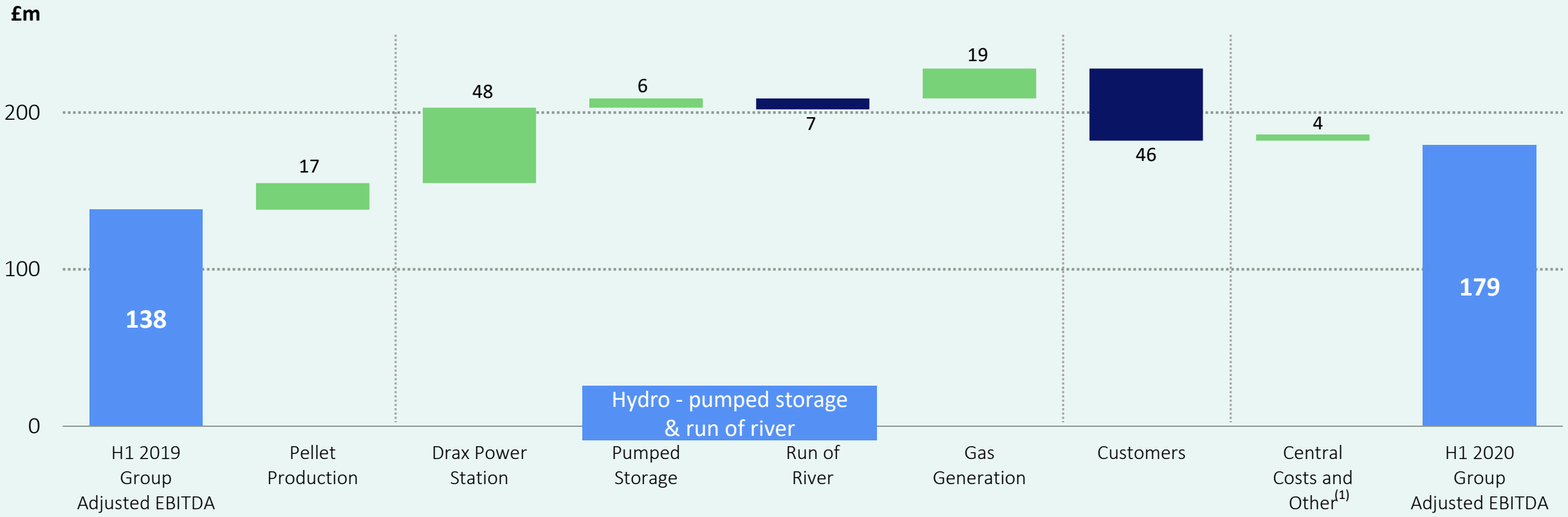
Expected Full Year Dividend
17.1p/share (£68m)
(2019: 15.9p/share, £63m)

Net Debt June 2020[3]
£792m
(December 2019: £841m)

Coal Obsolescence Charge
£224m
No impact on Adjusted EPS

1) Adjusted results are stated after adjusting for exceptional items (including acquisition and restructuring costs, asset obsolescence charges and debt restructuring costs), and certain derivative financial instruments fair value remeasurements
2) Includes £6 million adjusted impact of UK Government's reversal of corporation tax rate reduction resulting in revaluation of deferred tax asset and increased current tax charge
3) Cash and short-term investments of £482m less borrowings of £1,274m

Group Adjusted EBITDA Bridge H1-19 – H1-20



Pellet Production
H1-20: £25m
H1-19: £8m

Generation
H1-20: £214m
H1-19: £148m

Customers
H1-20: £(37)m
H1-19: £9m

Central costs and Other(1)
H1-20: £(23)m
H1-19: £(27)m

1) Includes innovation

Financial Impact of Covid-19

No change to estimated full year impact of Covid-19 on Adjusted EBITDA in 2020, mostly reflected in H1 2020

	H1-20	FY-20	Impact
Pellet Production	Nil	Nil	- Supply chain continuing to perform well
Generation	5	15	- Strong contracted position protects from lower power demand and prices - Lower end user demand leading to small reduction in ROC recycle fees - Increased system support services and higher system costs - Additional outage costs associated with social distancing measures
Customers	14 15 15	60 combined	- Reduction in demand and increased third party costs - MtM cost to exit previously hedged power contracts - Increased expectation of business failure
Other	(5)	(15)	- Reduced opex costs
Total	**44**	**60**	

Assumptions

- Easing of lockdown in line with Government announced plans, continued social distancing for remainder of 2020
- Impacts continue to evolve – potential changes in Government policy, macroeconomic policy and the behaviours of individuals and markets may impact risks

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

Plans for existing capacity to reduce costs by $64m ($35/t, £13/MWh[(1)]) by 2022 on 1.85Mt vs. 2018 base

Savings from projects delivered

- Low-cost fibre
- LaSalle – rail spur, woodyard 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
- Low-cost fibre
- Improved logistics

Additional benefits from development of satellite plants

Savings versus 2018 base year	2019	2020	2021	2022
Annual savings from projects delivered to date				
- Low-cost fibre, LaSalle improvements and HQ relocation ($m)	19	8	1	1
Cumulative annual savings ($m)	19	27	28	29
Annual savings from projects to be delivered 2020-2022				
- Capacity expansion, low-cost fibre, logistics and other ($m)			18	17
Cumulative annual savings ($m)	-	-	18	35
Total cumulative annual savings ($m)	**19**	**27**	**46**	**64**
Total cumulative annual savings ($/t)	*13*	*18*	*31*	***35***

1) At a constant FX rate of $1.45/£

Capital Investment

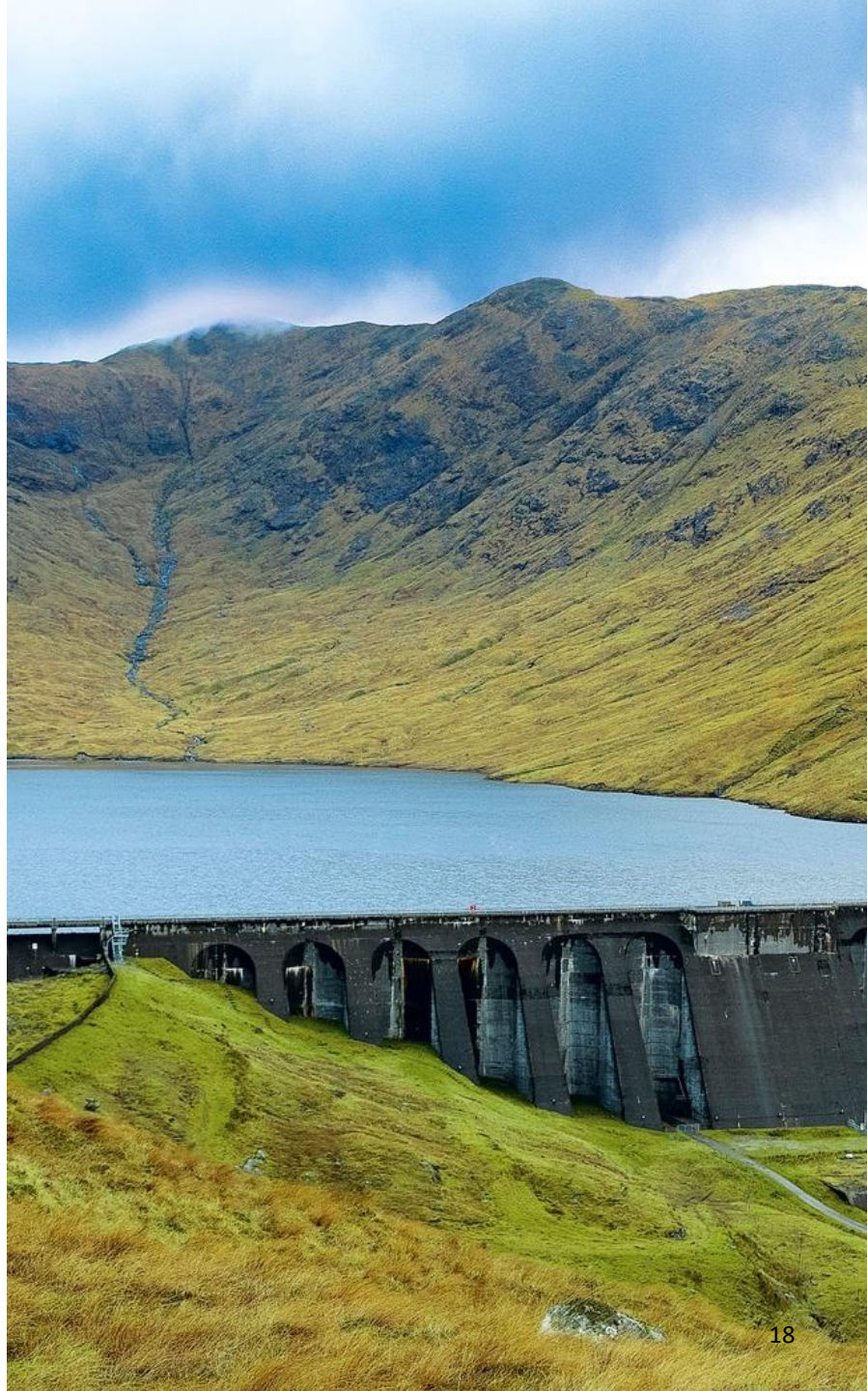
Investment to drive operational efficiency, strategic initiatives and growth

2020 current estimates	Key projects	Investment
Maintenance	Maintain operational performance	£60-70m
Acquired assets	Hydro and gas	£30m
Enhancement	Efficiency and operational improvements	£10m
Strategic	Biomass self-supply	£80-90m
Other		£10m
Total		**£190-210m**

£78m investment in H1 2020

Reduced full year investment includes:

- Delay of non-essential maintenance works as a result of Covid-19
- Delay of some biomass investments



Balance Sheet

Long-term structures in place to support growth

Net debt / Adjusted EBITDA

- Remain on track for c.2x at end of 2020

£694m cash and total committed facilities

Maturity profile to 2029

- ESG facility maturity extended three years to 2025

Group cost of debt <4%

Strong credit profile

- S&P/Fitch – BB+ stable
- DBRS investment grade rating – BBB stable

Target opportunities for balance sheet efficiency and reduced cost of debt

Instrument	Maturity	Description
Infrastructure private placement (2019)	2024-2029	£375m
Bonds	2025	$500m
	2022	£350m
ESG facility	2025	£125m
Revolving Credit Facility	2021	£350m (including index-linked term loan)

Clear Capital Allocation Policy

Implemented in 2017, designed to support strategy

Maintain credit rating

Commitment to robust financial metrics

- (BB+ / BBB range)

Net debt / Adjusted EBITDA

- Target c.2x at end of 2020

Invest in core business

£190-210m in 2020

- £60-70m maintenance
- £50m enhancement and other
- £80-90m strategic

Sustainable and growing dividend

2020 expected full year dividend

- Up 7.5% to 17.1 pence per share
- Subject to good operational performance and impact of Covid-19 in line with expectations

Interim dividend

- 6.8 pence per share, 40% of full year

11% pa average growth 2017-2020

Return surplus capital beyond investment requirement

Investment in strategy

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 a large, 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
Targeting savings from established projects of $64m by 2022 vs. 2018 base (£35/t / £13/MWh on 1.85Mt)

Biomass Opportunities Post-2027

All opportunities underpinned by development of large, low-cost sustainable biomass supply chain

Generation model	- Low-cost biomass generation including 5Mt from self-supplied biomass - Flexible operation targeted on periods of higher demand - System support services - Opportunity for capacity payments - Operational efficiencies and lower operating cost
BECCS model	- As above - Up to 16Mt of negative emissions at Drax Power Station alongside renewable power generation - Subject to right support from UK Government
Pellet production model	- 5Mt of low-cost self-supplied biomass available to sell in an under-supplied global market - Evaluating opportunities to service growing global biomass demand - Development of capability for optimisation and trading of biomass globally to achieve best value - Drax Generation in UK, other biomass markets or both

Global Wood Pellet Market Outlook

Growing global demand

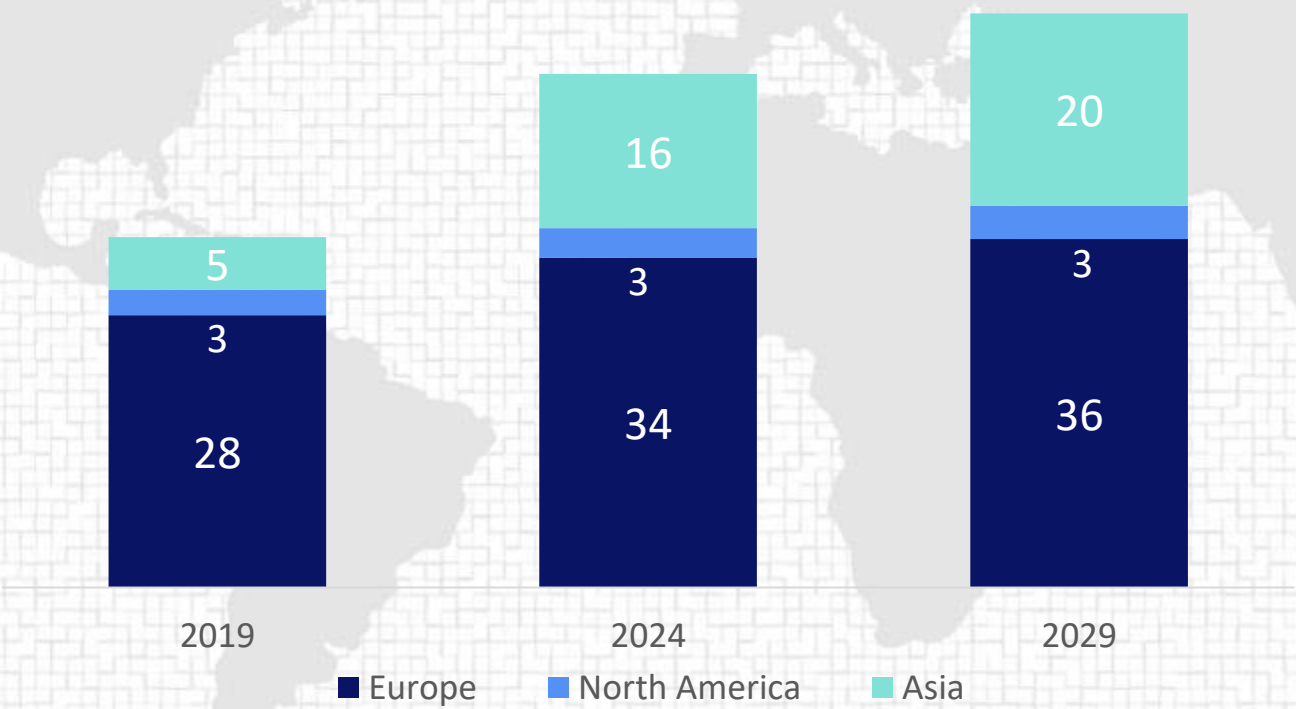
Market development

- Growing Asian demand, long-term contracts post 2027 and premium to European pricing
- Growth in European (non-UK) demand

Drax position in global market

- 4th largest pellet producer
  - 1.5Mt operational capacity (0.5Mt in development)
  - Ambition to expand to 5Mt
  - Current annual demand for Generation >7Mt
- Offtake agreements with three largest suppliers

>60% increase in global demand (Mt) in next decade(1)

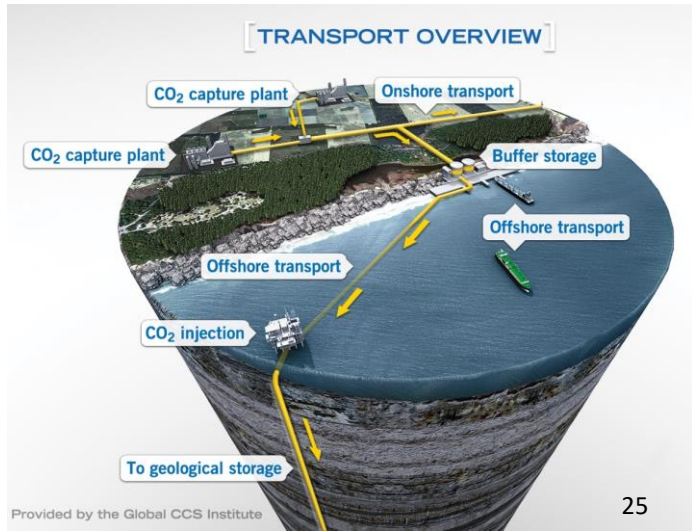


Source: Hawkins Wright – The Outlook for Wood Pellets (Q1 2020) / Drax

1) *Assumes closure of Lynemouth Power Station in UK and Drax demand maintained at 7Mt*

Why BioEnergy Carbon Capture and Storage (BECCS)?

A key part of the path to net zero



BECCS required to achieve UK net zero carbon emissions by 2050 (UK Committee on Climate Change)

- UK is committed by law to net zero by 2050
- ~90Mt of negative emissions p.a. required to offset residual UK emissions in 2050
- BECCS most scalable negative emissions technology – Drax could deliver ~16 million tonnes p.a.

National Grid Future Energy Scenarios (FES)

- UK cannot achieve Net Zero in any scenario without negative emissions from BECCS
- BECCS in the 2020s can help power system go carbon negative as early as 2033
- All FES feature at least one Drax-size unit by 2027

BECCS is the most cost-effective way to deliver negative emissions globally

- UK has ~80,000Mt of CO_2 storage accessible offshore
- Humber region is largest area of carbon intensity – opportunity for economies of scale

Supporting UK Government green recovery

- Support job retention and creation in Humber region and North of England

The UK can become a global leader in BECCS

- Drax is a pioneer in large-scale renewable power from sustainably sourced biomass

Globally there is an abundance of sustainable biomass available to support BECCS

BECCS Technologies

Continued development of technology options

Technology test zone at Drax Power Station

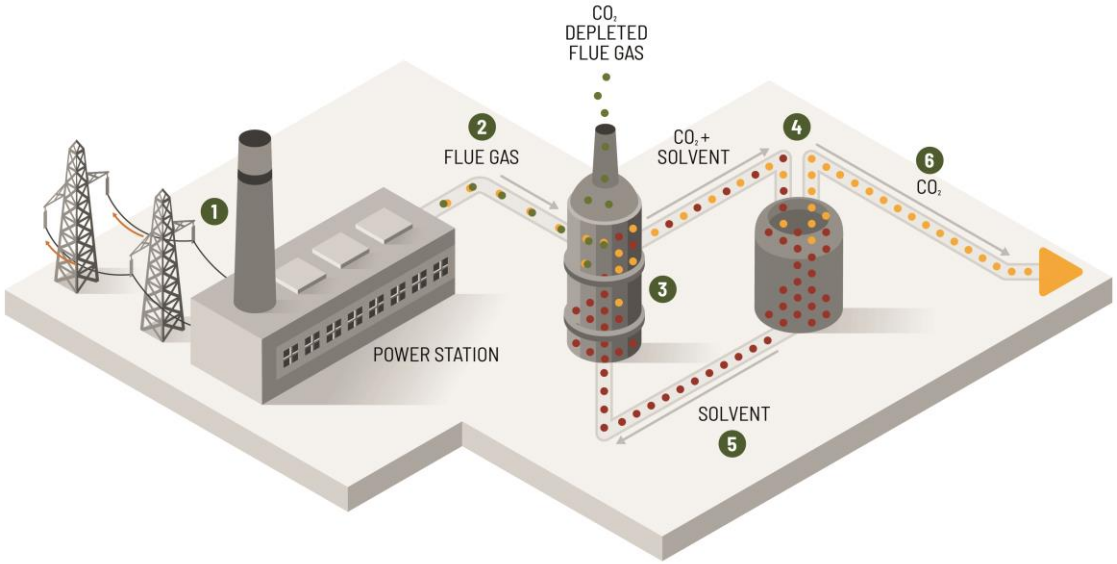
Developing proven and innovative technology options

- Mitsubishi Heavy Industries
  - Proven post-combustion solvent treatment
  - Operating at over 13 sites globally including Petra Nova, USA (1.4Mt pa)
- C-Capture
  - Organic and potentially lower cost alternative solvent treatment
  - Testing programme at Tiller facility, Norway
- Expect to conduct further trials

Assessing alternative uses for CO_2

- 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

Investment Framework for BECCS Will Continue to Develop Throughout 2020

Emerging clarity on milestones for regulatory support

Q1

- **Spring Statement:** at least £800m committed by UK Government to CCS infrastructure ✓
- Launch of **BEIS Expert Groups** on CCS business models (power, industry and CO_2 transport & storage) ✓

Q2

- **Committee on Climate Change** report to Parliament **recommendations:** ✓
  - UK Government should publish BECCS support scheme by H1 2021
  - BECCS should happen in second half of 2020s
  - Bioenergy, power, CCS and hydrogen addressed as priority issues in Q4 Energy White Paper

Q4

- **Energy White Paper:** UK Government position paper on energy market design through to 2030 and 2050
- **'Cost of net zero' review:** HM Treasury assessment of technologies to deliver net zero, costs and support schemes
- **Draft heads of terms:** UK Government to publish T&Cs for future support contracts for CCS projects
- **Greenhouse gas removals:** UK Government to publish call for evidence on support options for BECCS and other negative emissions technologies

2020 Outlook and Priorities

We will build a long-term future for sustainable biomass

- Biomass cost reduction and expanded supply capability
- Trading and optimisation capability
- Options for carbon negative generation

We will be the leading provider of power system stability

- Flexible generation and I&C portfolio
- Options for new assets – hydro, synchronous compensators and gas (including hydrogen fuelling)

We will give our customers control of their energy

- Monitoring and optimisation of Customer to ensure alignment with strategy
- Help customers deliver their ESG objectives

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Half Year Results

29 July 2020

Appendices

H1 2020 Group Adjusted EBITDA

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

Business unit		Assets	Installed capacity	EBITDA (£m)	*% of EBITDA*
Pellet Production		Three pellet plants in US Gulf Export facility – Port of Baton Rouge	1.5Mt 2.4Mt	**25**	*14%*
Generation	Drax Power Station	Biomass Coal	*2.6GW* *1.3GW*	***161***	*90%*
	Hydro	Cruachan Pumped Storage Lanark and Galloway hydro schemes Daldowie – energy from waste	*0.4GW* *0.1GW*	***35***	*20%*
	Gas	Damhead Creek Power Station Ryehouse Power Station Shoreham Power Station Blackburn Power Station	0.8GW 0.7GW 0.4GW 0.1GW	***18***	*10%*
Customers		Haven Power – I&C Opus Energy – SME		**(37)**	*(21)%*
Central Costs & Other	Innovation & core services			**(23)**	*(13)%*
Total				**179**	***100%***

Group Income Statement

	H1-20			H1-19		
In £m	**Adjusted**	**Exceptional**	**Total**	**Adjusted**	**Exceptional**	**Total**
Revenue	2,205	14	2,219	2,227	5	2,232
Cost of sales	(1,804)	94	(1,709)	(1,863)	(4)	(1,867)
Gross profit	**401**	**108**	**510**	**364**	**1**	**365**
Adjusted EBITDA	**179**	**-**	**-**	**138**	**-**	**-**
Depreciation	(77)	-	(77)	(83)	-	(83)
Amortisation	(19)	-	(19)	(20)	-	(20)
Loss on disposal	1	-	1	-	-	-
Asset obsolescence charge	-	(224)	(224)	-	-	-
Acquisition and restructuring costs	-	-	-	-	(3)	(3)
Operating profit / (loss)	**84**	**(116)**	**(32)**	**35**	**(1)**	**34**
Foreign exchange gains	4	-	4	4	-	4
Net interest charge	(33)	-	(33)	(32)	(2)	(34)
Profit / (loss) before tax	**56**	**(116)**	**(61)**	**7**	**(4)**	**4**
Tax	(13)	18	5	1	(0)	(0)
Profit / (loss) after tax	**43**	**(98)**	**(56)**	**8**	**(4)**	**4**
Basic earnings per share (pence)	**10.8**	**(24.8)**	**(14.0)**	**2.0**	**(1.0)**	**1.0**

Consolidated Adjusted EBITDA

H1-20 £m	Power Generation	Pellet Production	Customers	Adjustments	Consolidated
Segment Adjusted EBITDA	**214**	**25**	**(37)**	**-**	**202**
Central Costs & Other[1]					(23)
Consolidated Adjusted EBITDA					**179**

H1-19 £m	Power Generation	Pellet Production	Customers	Adjustments	Consolidated
Segment Adjusted EBITDA	**148**	**8**	**9**	**(3)**	**162**
Central Costs & Other[1]					(24)
Consolidated Adjusted EBITDA					**138**

1) Includes innovation

Generation – Adjusted EBITDA

In £m	H1-20	H1-19
Revenue		
Power sales	1,107	1,141
System support and optimisation	85	64
ROC sales	328	310
CfD income	157	117
Capacity Market income	34	-
Gas sales to Customers business	33	29
Fuel sales	10	12
Other income	3	4
	1,757	**1,677**
Cost of sales		
Generation fuel costs	(669)	(589)
Cost of system support and optimisation	(19)	(3)
Fuel sold	(5)	(2)
ROC support	269	229
Carbon tax	(25)	(17)
Carbon certificates	(32)	(14)
ROCs sold or utilised	(328)	(307)
Cost of power purchases	(593)	(691)
Grid charges	(37)	(21)
	(1,439)	**(1,415)**
Gross profit	**318**	**262**
Operating costs	(104)	(114)
Adjusted EBITDA	**214**	**148**

System support and optimisation

£m	H1-20	H1-19
System support and optimisation		
Balancing mechanism	85	64
Ancillary Services	(19)	(3)
Portfolio optimisation		
Margin from system support and optimisation	**66**	**61**
Advantaged fuels – coal		8
Value from flexibility	**66**	**69**

Average achieved power price

	H1-20	H1-19
Gross power sales (£m)	1,107	1,141
Cost of power purchases (£m)	(593)	(691)
Net power sales (£m)	**514**	**450**
Net power sales (TWh)	10.0	8.3
Average achieved price (£/MWh)	**51.4**	**54.2**

Pellet Production – Adjusted EBITDA

In £m	H1-20	H1-19
Revenues	118	97
Cost of sales	(65)	(64)
Gross profit	**53**	**33**
Operating costs	(28)	(25)
Adjusted EBITDA	**25**	**8**

Drax US production cost

	H1-20	H1-19
Cost of sales ($m)	82	83
Operating costs ($m)	36	33
Total cost ($m)	**118**	**116**
Other adjustments ($m)	(2)	(5)
Underlying cost of Drax pellets ($m)	**116**	**111**
Drax pellet production (Mt)	0.75	0.65
Cost per tonne ($/t)	**154**	**170**

Revenues

- Free on Board price for biomass at port of Baton Rouge
- Drax Generation incurs cost of ocean freight, UK port and rail costs

Customers – Adjusted EBITDA

In £m	H1-20	H1-19
Revenue	**1,032**	**1,128**
Cost of sales		
Cost of power and gas purchases	(434)	(518)
Grid charges	(229)	(234)
Other costs	(339)	(304)
	(1,002)	**(1,056)**
Gross profit	**30**	**72**
Operating costs	(41)	(50)
Bad debt charge	(26)	(13)
Adjusted EBITDA	**(37)**	**9**

Estimated impact of Covid-19

£m	H1-20
Reduction in demand and increased third party costs	14
MtM cost to exit previously hedged power contracts	15
Increased expectation of business failure	15
Total	**44**

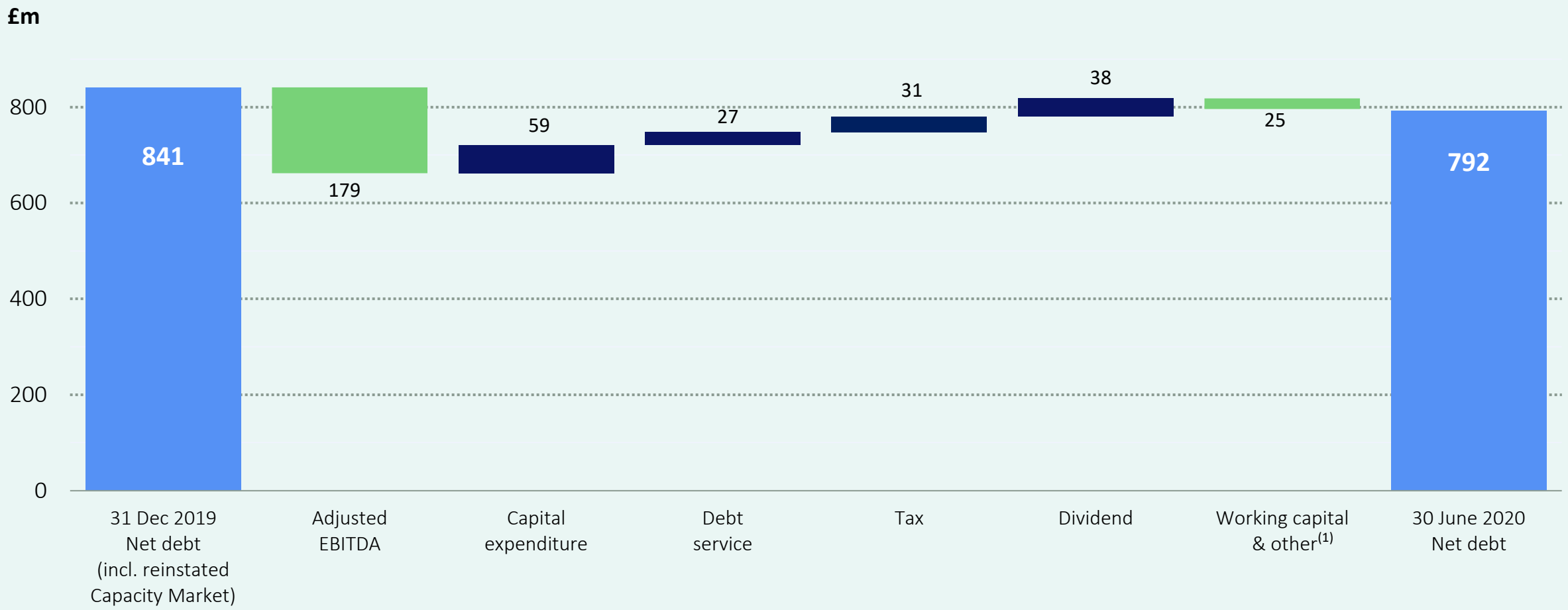
Group Cash Flow Statement

In £m	H1-20	H1-19
Adjusted EBITDA	179	138
Working capital	47	91
Cash generated from operations	**226**	**229**
Debt service	(27)	(23)
Tax[1]	(31)	(7)
Net cash from operating activities	**168**	**199**
Capital investment	(59)	(68)
Capital investment – acquisition	-	(692)
Net refinancing	-	549
Dividend	(38)	(34)
Share buy back	-	(3)
Other	7	4
Net cash flow	**78**	**(45)**
Cash and cash equivalents at the beginning of the period	404	289
Net cash flow	78	(45)
Cash and cash equivalents at the end of the period	**482**	**244**

1) HMRC changed payment on accounts from in arrears to in advance, therefore H1-20 has 4 payments rather than 2, including Q3 and Q4 2019

Group Net Debt Bridge

On track for 2 x net debt to Adjusted EBITDA by end of 2020



1) Includes £25m in relation to revaluation of US denominated balances at end of June 2020 – non-cash

Capacity Market Agreements

Clear revenue profile to 2024 with option to develop new gas generation subject to future Capacity Market agreements

£m[1]	2020	2021	2022	2023	2024[2]	Total
Hydro	10	10	4	5	7	**36**
Gas	37	37	16	16	30	**136**
Coal	24	25	9	-	-	**58**
Total	**71**	**72**	**29**	**21**	**37**	**230**

	Oct-19 to Sept-20	Oct-20 to Sept-21	Oct-21 to Sept-22	Oct-22 to Sept-23	Oct-23 to Sept-24
£/KW[1]	19	24	9	7	17

1) Nominal pricing
2) Nine months only, T-4 to take place in Q1 2021

End of Coal Generation at Drax Power Station

Progress to becoming a carbon negative company

Decision aligned with UK's 2050 net zero objective

Time scale

- End of commercial coal generation March 2021
- Completion of Capacity Market agreements September 2022

Financial impact

- Asset obsolescence charge of £224m
- Annualised reduction in D&A c.£30m
- Estimated cost of closure c.£25-35m
- Remaining inventories of c.£54m – used prior to September 2022
- Ongoing opex savings of c.£25-35m pa when complete

Development of lower cost operating model for biomass

- Coal closure represents progress towards profitable biomass generation at Drax Power Station post 2027

Sustainable Biomass Sourcing and Carbon Life Cycle

Science-led biomass sourcing policy ensures long-term sustainability and contribution to natural environment

Key principles

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

Objectives

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

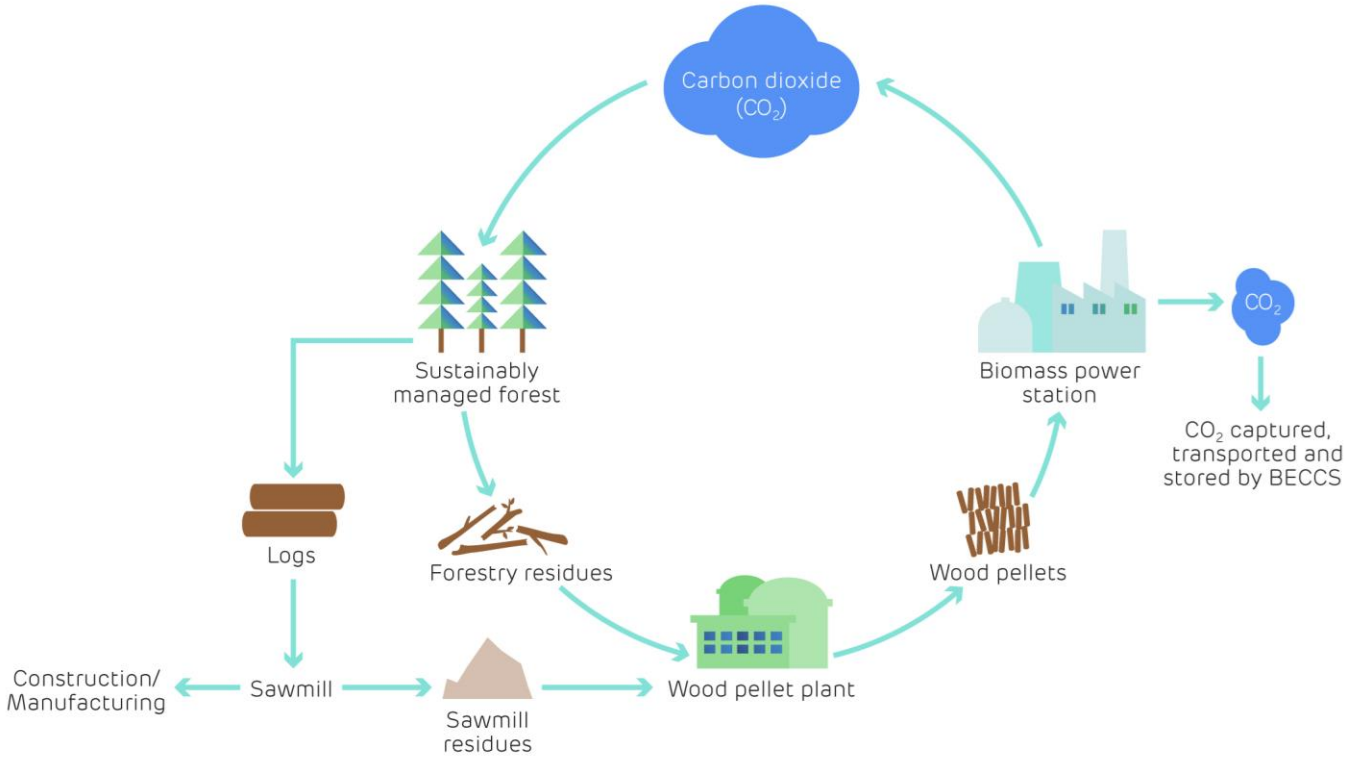
Policy

- Reflects Committee on Climate Change bioenergy review and Forest Research(1) recommendations
- Independent Advisory Board provides assurance

Strong regulatory mechanisms ensure biomass sustainability

- European Union Renewable Energy Directive II
- UK ROC and CfD reneweable schemes

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

Sources of Biomass Supply

Drax Group sources of fibre by location – H1 2020

	Sawmill residues	Branches, tops and bark	Thinnings	Low grade round wood	Agri. residues	Total
USA	22%	5%	16%	21%	1%	**65%**
Canada	17%	1%	-	1%	-	**19%**
Latvia	3%	-	-	5%	-	**8%**
Estonia	-	-	-	-	-	**-**
Portugal	-	-	-	1%	-	**1%**
Brazil	-	-	-	2%	-	**2%**
Other European	2%	-	-	-	3%	**5%**
Total	**44%**	**6%**	**16%**	**30%**	**4%**	**100%**

Drax Group sources of fibre by location – H1 2019

	Sawmill residues	Branches, tops and bark	Thinnings	Low grade round wood	Agri. residues	Total
USA	19%	10%	18%	15%	1%	**63%**
Canada	15%	2%	-	-	-	**17%**
Latvia	4%	-	-	5%	-	**9%**
Estonia	1%	-	1%	-	-	**2%**
Portugal	-	-	1%	2%	-	**3%**
Brazil	-	-	-	2%	-	**2%**
Other European	2%	-	-	-	2%	**4%**
Total	**41%**	**12%**	**20%**	**24%**	**3%**	**100%**

Drax self-supply sources – H1 2020

	Sawmill residues	Branches, tops and bark	Thinnings	Low grade round wood	Agri. residues	Total
USA	20%	-	45%	35%	-	**100%**

Drax self-supply sources – H1 2019

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

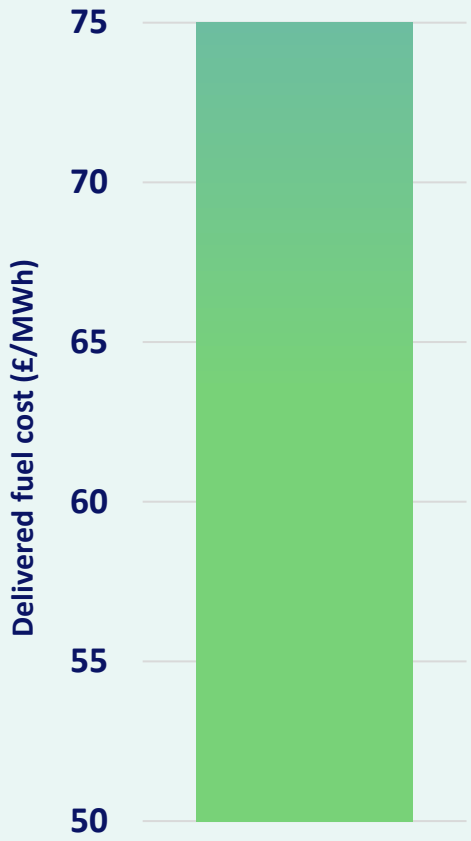
Biomass Cost Reduction

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 $64m pa savings by 2022 ($35/t / £13/MWh[1] savings on 1.85Mt)
- $27m pa of savings by 2020

Expansion of self-supply to deliver 5Mt of capacity

- Satellite pellet plants in US Gulf – lower fibre and processing cost, shared infrastructure
  - Opportunity for up to 0.5Mt
  - 40kt plants, c.$10-15m per site, FID on three plants ($40m)
  - Potential to replicate in other geographies
- Evaluating other opportunities

Expansion of fuel envelope

- Developing and scaling low-cost alternative biomass sourcing in multiple geographies

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/£

US Satellite Plants

Development of up to 0.5Mt of new capacity

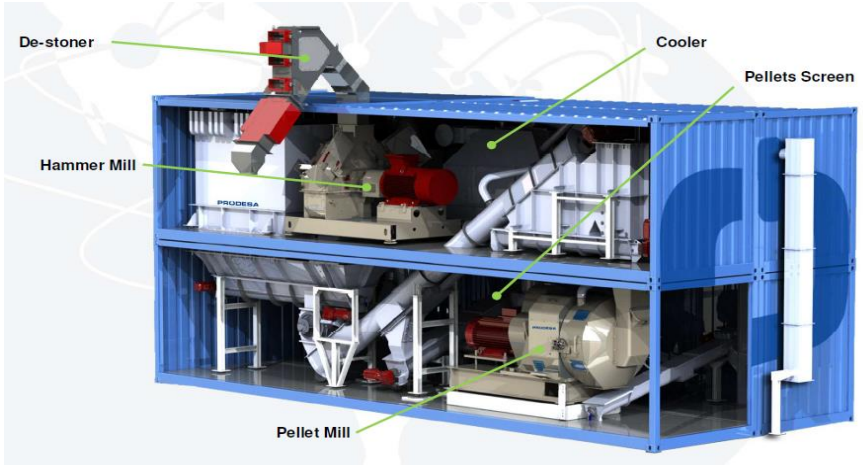
Investment in three new satellite pellet plants in US Gulf

- Low-cost containerised plants solution
  - 40Kt plants, investment of $40m for three plants
  - Sited close to existing sawmills for access to lower cost fibre
  - Removes debarking, chipping and drying process
  - Production cost c.20% below current level
- Commissioning from 2021

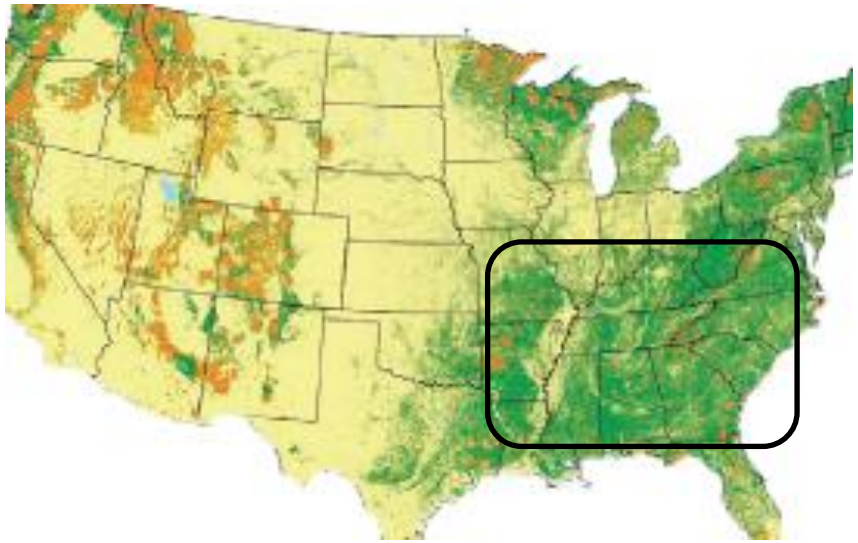
Locational benefits of US Gulf

- Vast resources of sustainable forestry
- Carbon stocks increased >90% since 1950
- Well established commercial forestry industry and infrastructure
- Structural decline in incumbent users of low value fibre
- Established Drax infrastructure

Containerised pellet plant



US forestry coverage



System Support Services

Decarbonisation leading to reduction in system support capable assets

Generation type	Biomass	Pumped Storage	Gas	Hydro	Nuclear	Wind	Inter-connector	Batteries
Frequency response	Yes	Yes	Yes	Yes	Partial	Partial	Yes	Yes
Reactive power	Yes	Yes	Yes	Partial	Yes	Partial	Yes	Yes
Voltage management	Yes	Yes	Yes	Partial	Yes	Partial	Yes	Yes
Inertia	Yes	Yes	Yes	Yes	Yes	No	No	No
Reserve power	Yes	Yes	Yes	No	No	Partial	Yes	Partial

Change in UK generation mix (GW)[1]

Generation type	2012	2018
Biomass and other renewables	3.2	7.4
Pumped Storage	2.7	2.7
Hydro	1.6	1.6
Gas	66.0	48.0
Nuclear	9.9	9.3
Wind	3.9	9.4
Coal and other	32.5	17.3

1) Digest of UK Energy , 2019

Positions Under Contract

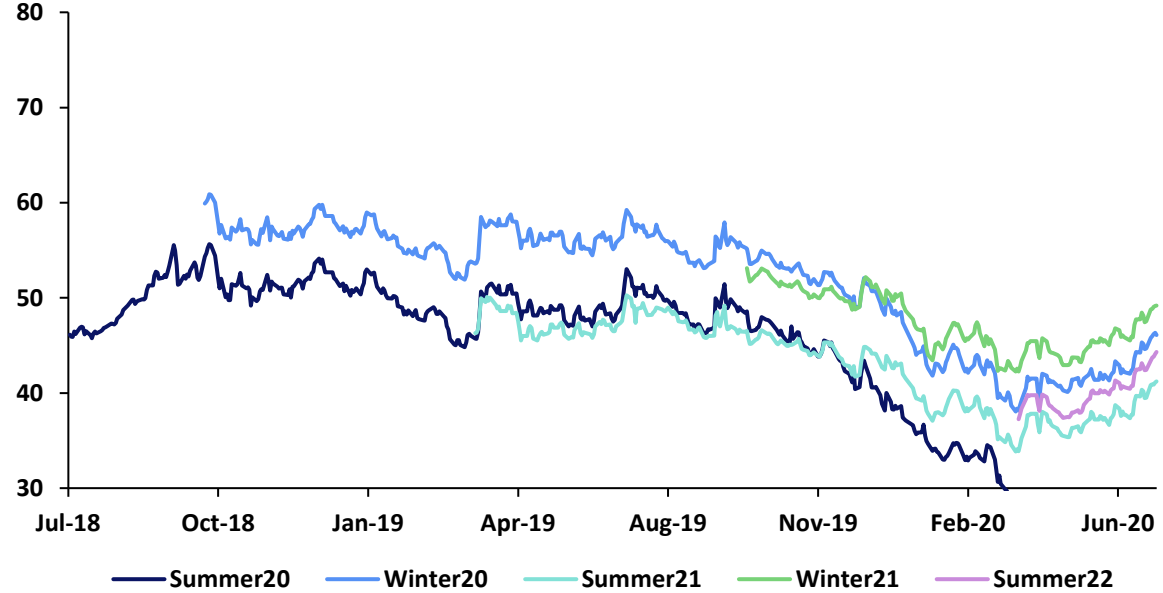
Power	- Largely sold forward on ROC units 18-24 months - Portfolio optimisation to maximise margins - CfD unit neutral to power price, provides underlying firm volume - Upside to market tightness via gas and hydro units
Biomass	- Typical third party contracts operate on five year basis, with fixed formula pricing - Hedge underlying freight exposure - Hedge indexation via ROC and CfD contacts
FX	- Managed on a rolling five-year basis to meet USD, CAD and Euro requirements - Effective rate of low 1.40sUSD/GBP

Contracted Generation power position

Contracted Power at 22 July 2020	2020	2021	2022
Fixed price power sales (TWh)	17.6	11.4	4.8
At an average achieved price (£ per MWh)	53.8	49.0	48.2

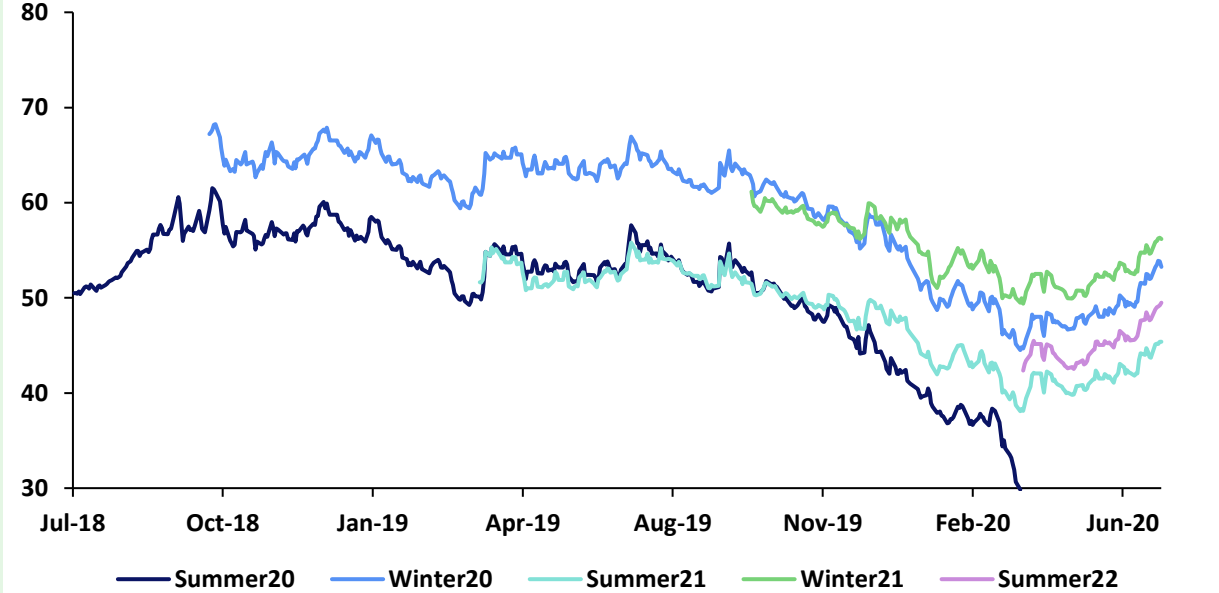
Merchant Forward Power Prices

Seasonal Power Price (£/MWh)



Source: ICE

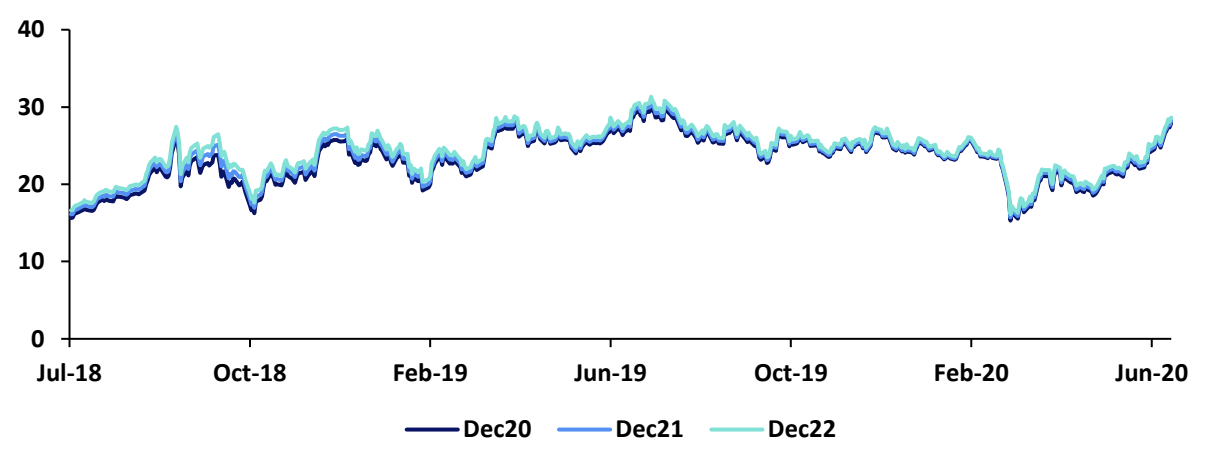
Peak Power Price (£/MWh)



Source: ICE

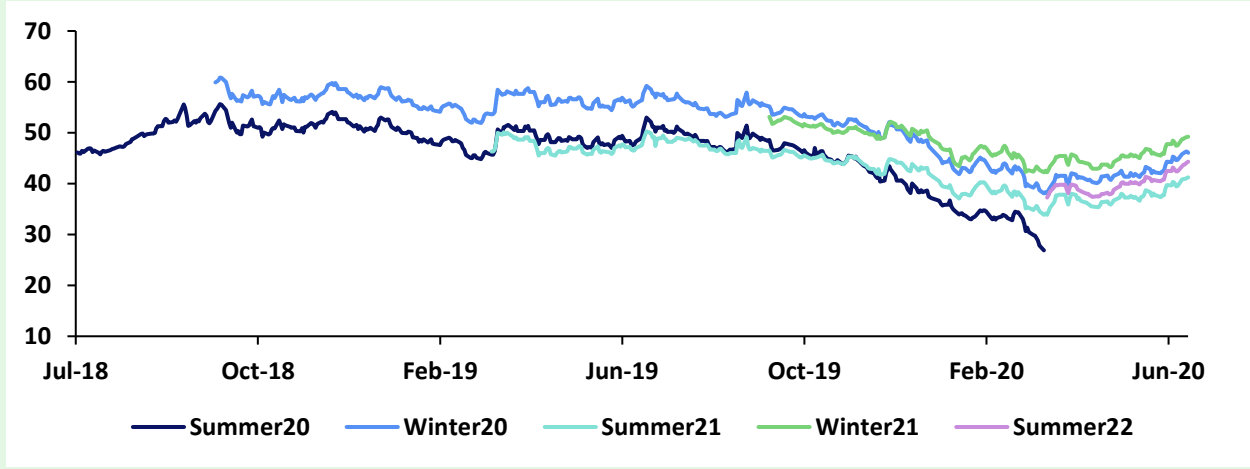
Merchant Forward Commodity Prices

EU ETS Carbon (€/t)



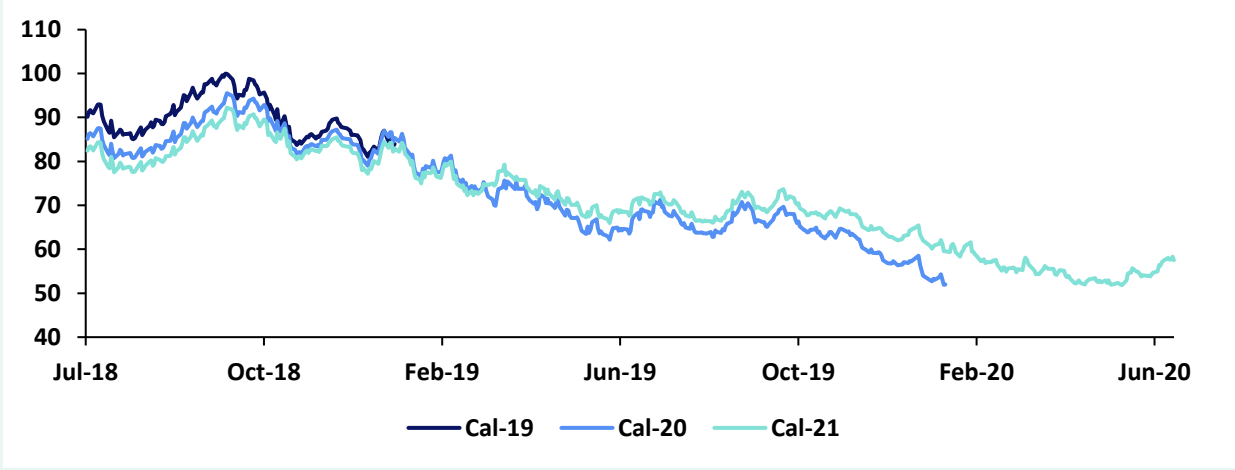
Source: ICE

Power Price (£/MWh)



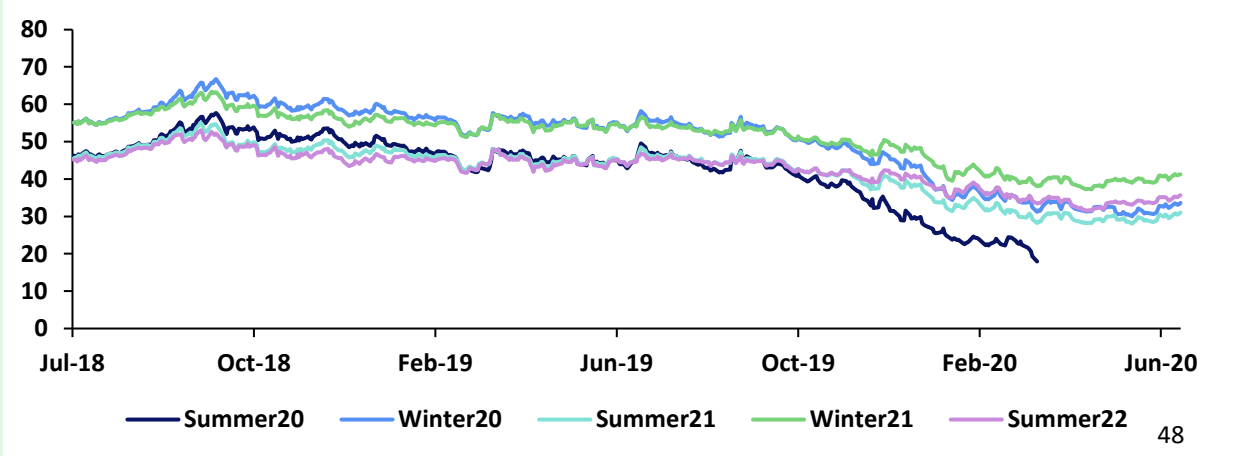
Source: ICE

API2 Coal Price ($/t)



Source: ICE

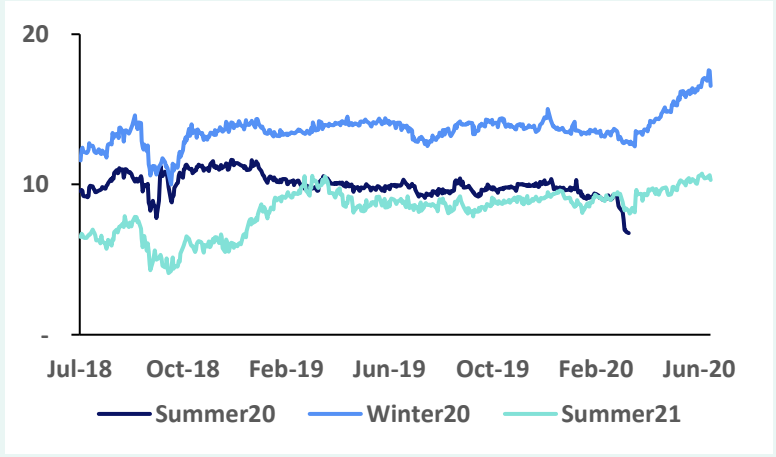
NBP Gas Price (p/therm)



Source: ICE

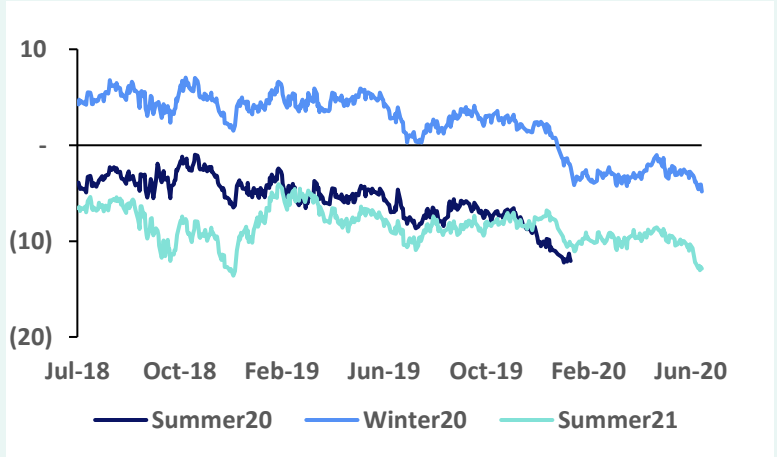
Merchant Forward Spreads

Peak CSS (£/MWh)



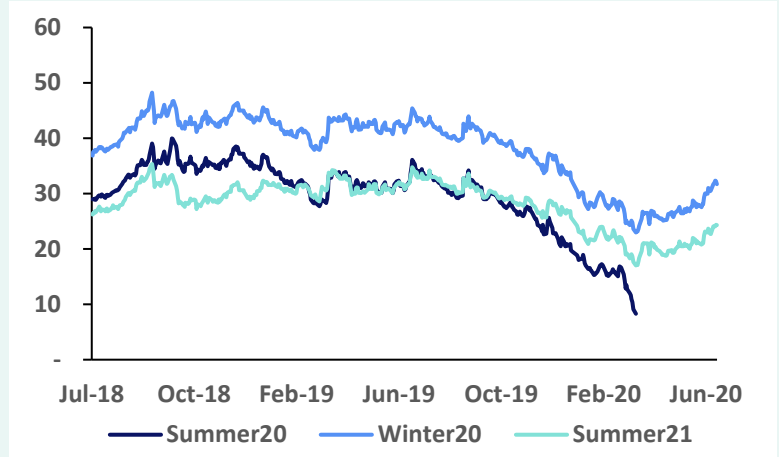
Source: ICE, Reuters and Drax

Peak DGS (£/MWh)



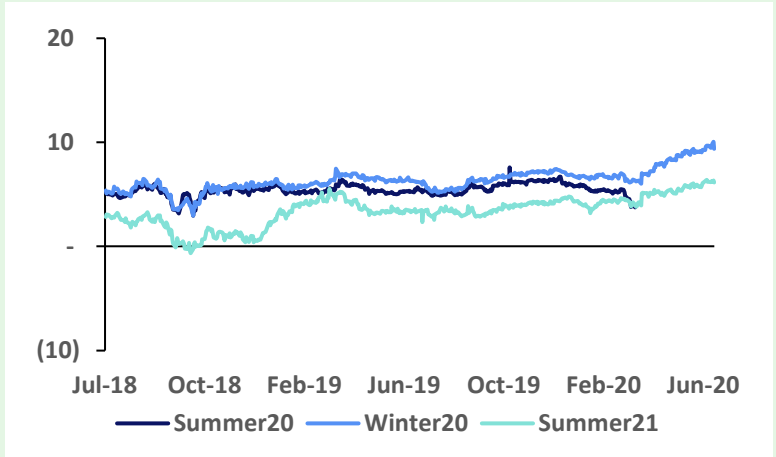
Source: ICE, Reuters and Drax

Peak ROC Bark Spread (£/MWh)



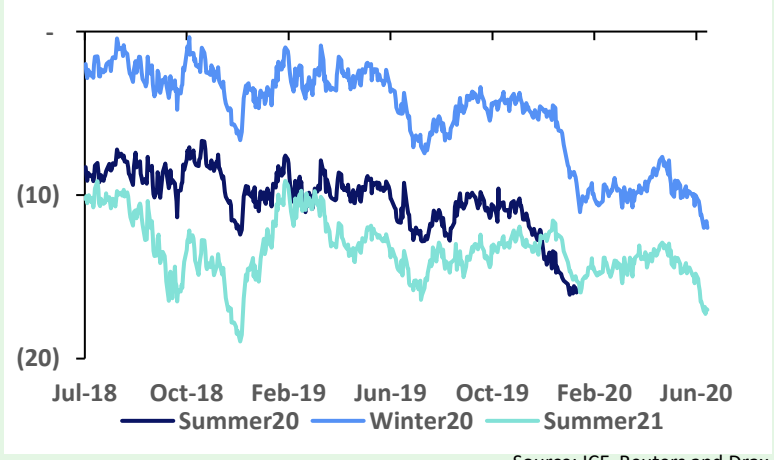
Source: ICE, Reuters and Drax

Baseload CSS (£/MWh)



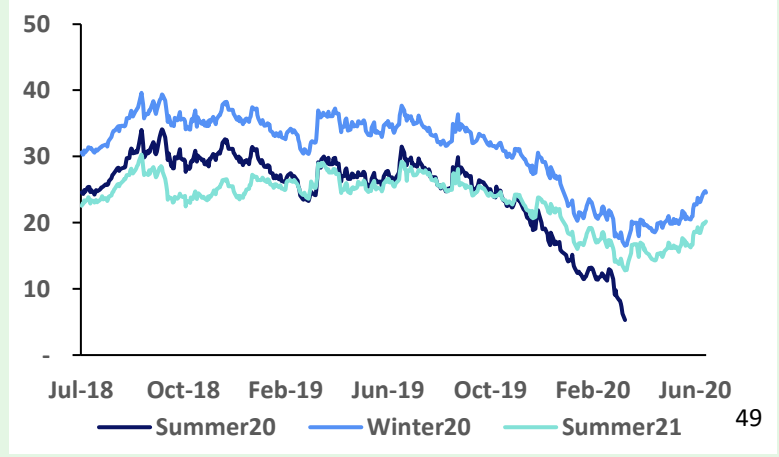
Source: ICE, Reuters and Drax

Baseload DGS (£/MWh)



Source: ICE, Reuters and Drax

Baseload ROC Bark Spread (£/MWh)



Source: ICE, Reuters and Drax

Forward Looking Statements

This announcement may contain certain statements, statistics and projections that are or may be forward-looking. The accuracy and completeness of all such statements, including, without limitation, statements regarding the future financial position, strategy, projected costs, plans and objectives for the management of future operations of Drax Group plc ("Drax") and its subsidiaries (the "Group") are not warranted or guaranteed. By their nature, forward-looking statements involve risk and uncertainty because they relate to events and depend on circumstances that may occur in the future. Although Drax believes that the expectations reflected in such statements are reasonable, no assurance can be given that such expectations will prove to be correct and because these statements involve risks and uncertainties, actual results may differ materially from those expressed or implied by those forward-looking statements. There are a number of factors, many of which are beyond the control of the Group, which could cause actual results and developments to differ materially from those expressed or implied by such forward-looking statements. These factors include, but are not limited to, factors such as: future revenues being lower than expected; increasing competitive pressures in the industry; and/or general economic conditions or conditions affecting the relevant industry, both domestically and internationally, being less favourable than expected. We do not intend to publicly update or revise these projections or other forward-looking statements to reflect events or circumstances after the date hereof, and we do not assume any responsibility for doing so.

drax

2020
Half Year Results

29 July 2020