



HARDMAN & CO.



# REIFs revisited – a compendium

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*N.B. Closing stock market prices on 17/03/2021 have been used, unless otherwise specified*

*N.B. Exchange rates used: £ to € – 1.16, £ to US\$ – 1.38, £ to Danish Krone – 8.63*

## Executive summary

- ▶ In this publication, Hardman & Co's focus is on the 17 quoted Renewable Energy Infrastructure Funds (REIFs), as we update our publication of February 2020 – the stocks analysed are members of the Association of Investment Companies (AIC). As a group, their combined market capitalisation is now ca.£10.6bn. The most valuable quoted funds are Greencoat UK Wind (£2.5bn) and TRIG (£2.4bn). Comparisons with the seven Infrastructure Investment Companies – a sector worth ca.£12.8bn – are also undertaken.
- ▶ All 17 REIFs and, for the most part, the Infrastructure Investment Companies, have weathered COVID-19 with relatively minor dislocation. Unlike many FTSE-100 bank, oil and leisure stocks, there have been few dividend cuts. But dividend cover in some cases, such as that of NextEnergy Solar, TRIG and JLEN, is tight – a feature that also applies to HICL, the leading quoted Infrastructure Investment Company.
- ▶ Lower power prices, due partly to the economic impact of COVID-19, have depressed valuations – TRIG took a £123.1m hit in 1H'20. While payments for both long-term Power Purchase Agreements (PPAs) and Renewable Obligations (ROs) have offered real protection, weak power prices will continue to drag down Net Asset Valuations (NAVs) and share price ratings; both are also sensitive to any upward discount rate adjustments.
- ▶ Up to 60% of the REIF sector's valuation is accounted for by wind power generation. On the back of subsidies, UK onshore wind power has prospered, and now exceeds 14GW of capacity. But the end of subsidies for new onshore wind plants from 2017 onwards has cut investment, especially in England and Wales.
- ▶ Offshore wind power is the new “go-to” investment sector, given the sea change in costs. The pivotal 2019 auction for the development of some North Sea sites saw several Contracts for Difference (CfDs) being awarded. The lowest, on the Dogger Bank, was struck at just £39.65p (2012 prices) per MWh. This figure should be compared with both the 2018 £100 per MWh Government offshore wind cost target and the £92.50 (2012 prices) per MWh price guarantee for the new nuclear plant at Hinkley Point C.
- ▶ Up to 25% of the REIF sector valuation is accounted for by solar power generation, which now exceeds 14GW in the UK. Most solar farms are based in the Midlands or further South, where irradiation levels are higher. The removal of subsidies for new solar plants from 2017 is challenging, but unit costs have plummeted. The levelised cost of solar power should eventually fall to well below £50 per MWh.
- ▶ The underlying sector premia over NAVs for most REIFs now average ca.8%; the two largest REIFs, Greencoat UK Wind and TRIG, currently trade at premia of 3.9% and 7.5%, respectively: both have major share issuance programmes under way currently. This range is comparable with most of the seven Infrastructure Investment Companies, although BBGI – at a formidable near 22% premium to its NAV – is a notable outlier.
- ▶ Despite more challenging times, targeted dividend increases underpin the attractions of these stocks. While major earnings shortfalls, especially among the wind and solar generators, are low-risk, TRIG and NextEnergy Solar have both confirmed that their projected dividends for 2021 will be held at the 2020 level. Underlying prospective dividend yields for most REIFs are currently just under 6%; the equivalent figure for the seven Infrastructure Investment Companies is ca.5%.
- ▶ The largest renewable generation capacity in the UK is owned by FTSE-100 stock SSE, which was privatised in 1991. Its portfolio now increasingly focuses

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on energy networks – with a Regulatory Asset Value (RAV) of £9.1bn – and on renewable generation - it has a capacity of ca.4GW – over twice that of TRIG.

- ▶ During the last six months, four funds have launched IPOs: Triple Point Energy Efficiency, Downing Renewables and Infrastructure, Ecofin US Renewables Infrastructure and Victory Hill GSEO. Furthermore, many successful – and oversubscribed – secondary fund raises have taken place.
- ▶ BBGI, one of 23 Investment Companies/Funds analysed in this report, is a client of Hardman & Co Research. Our Research Principles can be found [here](#).

## REIF market ratings

Underlying NAV premium of ca.8%

Set out below are the latest market ratings for the 17 REIFs under review. NAV figures are generally those published for December 2020 or, in some cases, September 2020.

The two tables below show:

- ▶ a market capitalisation for the 17 REIFs of £10.6bn;
- ▶ an average underlying NAV sector premium of ca.8%, with that for Greencoat UK Wind and TRIG – by some way, the two largest quoted REIF stocks – at 3.9% and 7.5%, respectively; and
- ▶ an underlying prospective sector dividend yield of almost 6%.

NAV data for the four most recent sector entrants – Downing Renewables and Infrastructure, Ecofin US Renewables Infrastructure, Triple Point Energy Efficiency and Victory Hill GSEO – are based on our estimates. The IPOs of all four have taken place within the last six months.

UK-quoted REIFs					
REIF	Share price (p)	Market cap. (£m)	NAV (p per share)	Premium to NAV	
Aquila European Renewables	94	298	86.0	9.3%	
Bluefield Solar	132	537	117.1	12.7%	
Downing Renewables and Infrastructure	96	117	98.0	0.0%	
Ecofin US Renewables Infrastructure (ex \$ to £)	74	93	71.5	3.7%	
Foresight Solar	103	626	95.8	7.5%	
Gore Street Energy Storage	107	154	99.6	7.4%	
Greencoat Renewables (ex € to £)	100	739	86.9	14.8%	
Greencoat UK Wind	127	2,508	122.2	3.9%	
Gresham House Energy Storage	112	391	100.8	11.1%	
JLEN	112	613	95.9	16.8%	
NextEnergy Solar	98	575	100.7	-2.7%	
Octopus Renewables	110	385	98.3	11.9%	
SEEIT	110	745	102.0	7.8%	
TRIG	124	2,360	115.3	7.5%	
Triple Point Energy Efficiency	102	102	99.0	3.0%	
US Solar (ex \$ to £)	74	148	69.8	6.2%	
Victory Hill GSEO	102	248	98.0	4.1%	
<b>Total</b>	<b>n/a</b>	<b>10,639</b>			

Note: Based on prices as at 17/03/2021; Source: Bloomberg, Hardman & Co Research

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Underlying sector dividend yield of almost 6%

The table below shows the prospective dividends and yields for the REIFs: some sector newcomers are expected initially to pay comparatively low dividends as they build up their portfolios.

UK-quoted REIFs – prospective dividends and yields		
REIF	Dividend (p)	Yield
Aquila European Renewables	4.30	4.57%
Bluefield Solar	8.00	6.06%
Downing Renewables and Infrastructure	3.00	3.13%
Ecofin US Renewables Infrastructure	0	0
Foresight Solar	6.98	6.78%
Gore Street Energy Storage	7.00	6.54%
Greencoat Renewables	5.21	5.22%
Greencoat UK Wind	7.18	5.65%
Gresham House Energy Storage	7.00	6.25%
JLEN	6.76	6.04%
NextEnergy Solar	7.05	7.19%
Octopus Renewables	5.00	4.55%
SEEIT	5.50	5.00%
TRIG	6.76	5.45%
Triple Point Energy Efficiency	2.00	1.96%
US Solar	3.96	3.84%
Victory Hill GSEO	1.00	0.98%

Source: Bloomberg, Hardman & Co Research

### REIFs revisited

This document is an update on our last major publication on the REIF sector, published in February 2020 – [UK Renewable Energy Infrastructure Funds](#). Subsequently, much has happened, with many of the 17 funds under review being involved in acquisitions and, in many cases, in further fundraising.

### Energy White Paper 2020

Aside from developments impacting the 17 REIFs themselves, we also analyse other relevant issues. In particular, the publication, in December 2020, of the Government's Energy White Paper, [Powering our Net Zero Future](#), is reviewed, especially regarding its impact on the development of UK renewable generation.

### Valuation issues

More specifically, comparisons are set out regarding the valuation data used by each of the leading REIFs. Consistency – on such issues as discount rates, power prices, asset valuations and asset lives – remains elusive, and precludes precise read-across comparisons between NAV premia and other valuation tools.

## UK generation

### Sea changes in late 1980s/early 1990s

A major transformation of the energy sector took place in the late 1980s and early 1990s, when most of the UK electricity supply industry was privatised. British Gas had been floated in 1986.

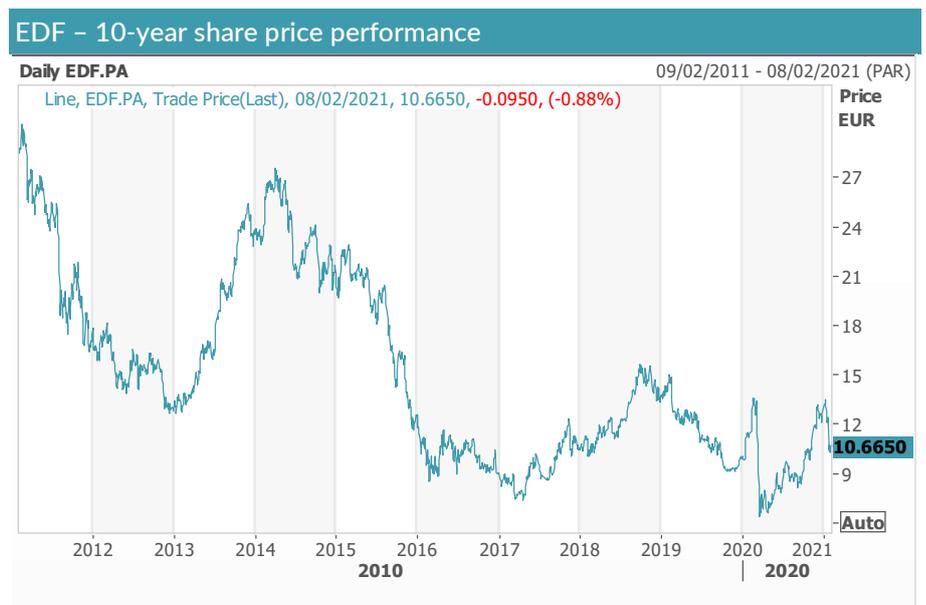
### Emergence of “Big Six”

Following a bout of corporate activity in the latter part of the 1990s, six major energy companies emerged – France’s EDF, the two German companies, RWE and E.ON, Spain’s Iberdrola, and the UK-owned Centrica and SSE. Importantly, over the past two decades, they have dominated the UK generation market.

### Dire EDF returns since 2011

Nonetheless, shareholder returns have been poor and, in some cases, dreadful. EDF, in which the French Government has a ca.84% stake, E.ON and RWE, have seen their share price ratings plunge, especially since the financial crisis and the subsequent recession in 2008/09. While RWE’s share price has rallied strongly, albeit from a low base, this has not been a feature of EDF’s share price rating.

The chart below shows EDF’s share price performance since 2011, as the finances of the nuclear power generation sector have seriously deteriorated.



Source: Refinitiv

### The quest for networks

Aside from consolidation in the generation sector, virtually all the networks’ businesses, mostly from the 12 Regional Electricity Companies (RECs), were acquired by bidders. Indeed, in recent years, as generation returns have plummeted, networks’ businesses – with their solid, regulated income – have become increasingly in vogue for investors.

Back in 1990, renewable generation, except for the two hydro-power portfolios owned by ScottishPower and the then Scottish Hydro Electric (now SSE), barely existed in the UK.

### The innovative Airtricity story

In subsequent years, the onshore wind sector has grown markedly, although not as quickly as the rise of Airtricity, an Irish wind generator, the value of which soared between its distinctly humble beginnings in 1997 and its subsequent sale to E.ON and SSE for ca.£1.5bn a decade or so later.

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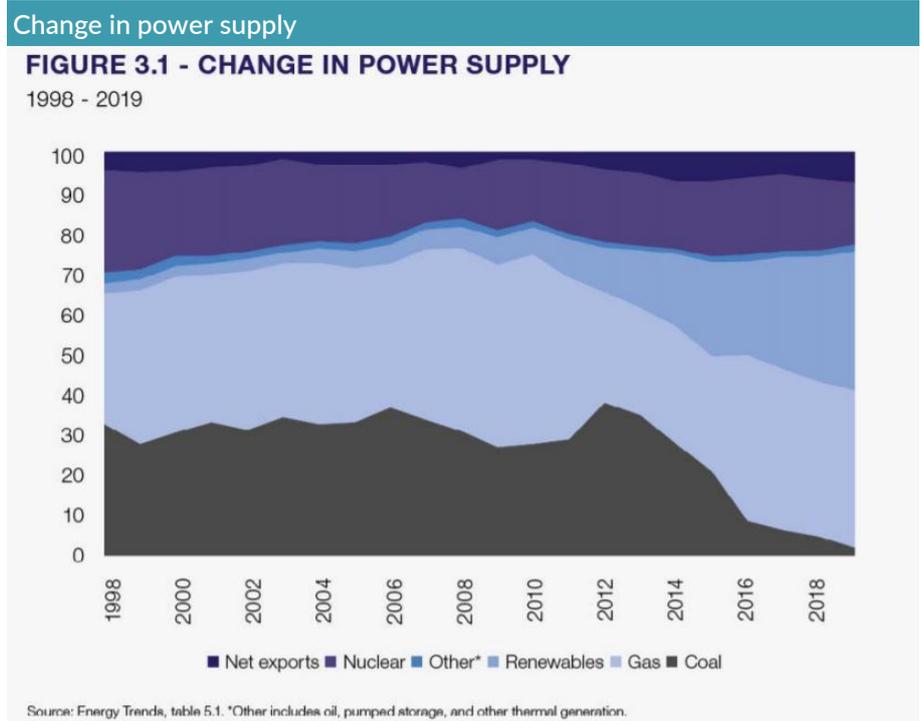
### Pronounced shift in generation mix

Nonetheless, there has been a pronounced shift in the UK generation mix in recent years, with coal-fired stations due to be phased out by 2025, or even earlier, and gas-fired plants being increasingly relegated to mid-merit status – while the high average age of the nuclear fleet inevitably raises concerns on several fronts.

### CCGT at Keadby 2 an exception

In terms of investment in new base-load capacity, SSE's 840MW Keadby 2 Combined Cycle Gas Turbine (CCGT) project in Lincolnshire is the only major gas-fired plant currently under construction in the UK.

The chart below, from the Energy White Paper 2020, illustrates the material changes in the UK's generation mix since 1998, with much-reduced coal-fired output and a pronounced rise in renewables output.



Source: Energy White Paper 2020

### A renewables record-breaker

Between July and September 2019, UK renewable power sources generated higher output – 29.5TWh – compared with the 29.1TWh produced by coal, gas and oil plants combined. Much of the remaining 15.3TWh was nuclear-generated. Importantly, this was the first time in the UK that fossil fuels had been outpaced over a three-month period since the inaugural coal-fired plant was commissioned in London in 1882 – it provides a telling commentary on modern trends.

### Renewables share up from 7% in 2010 to a third now

More recently, the Energy White Paper 2020 confirmed that the contribution from UK renewable generation was now ca.33%, compared with just 7% in 2010 – a very sharp rise over the decade.

### Coal's contribution plunges

For the 2019 full year, nuclear and renewable plants, including biomass, accounted for over 51% of Great Britain's electricity output, compared with the 40% contribution from fossil fuels. The pronounced sea change – especially of coal's virtual eclipse – over almost 30 years is highlighted by the table below.

% of output from differing fuel sources (GB)						
Year	Coal and others	Gas	Nuclear	Wind, solar and hydro	Biomass	Imports
1990	75.0	0.1	18.8	2.3	0.0	3.8
2019	2.1	38.4	16.8	26.5	8.2	8.0

Source: National Grid

## European renewables generation

### Denmark's wind turbine legacy

For decades, renewable power has enjoyed a high profile in Europe, with Denmark's wind turbine sector being very much to the fore.

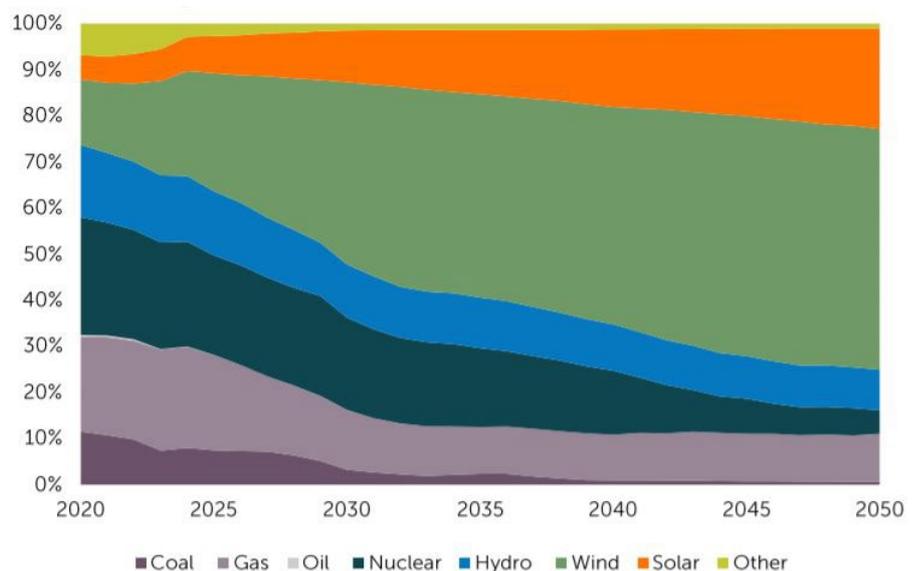
### Germany's big switch out of nuclear

More recently, Germany has been particularly aggressive in building new wind and solar plants. With its forthcoming phasing-out of nuclear power, Germany is set to invest heavily in new renewables plant, and especially in offshore wind developments in the Baltic Sea.

### ca.75% renewables by 2050?

The undoubted potential in Europe for renewable generation is highlighted in the chart below, compiled by Bloomberg New Energy. It provides projections until 2050, by which time wind and solar production is expected to account for around three quarters of total European generated output.

### European power generation mix to 2050



Source: BloombergNEF ("BNEF") New Energy Outlook 2020

Source: Bloomberg New Energy/JLEN September 2020 interim results presentation

### France and others lagging

Investment in wind generation continues to expand in Europe, although some countries are lagging behind, including France, whose wind power capacity is around a quarter of that of the 61.4GW in Germany.

### Germany, the comfortable leader

The table below shows the 2019 wind power capacity for the leading 10 EU countries. Despite Brexit, the UK is included in this analysis. Germany, by some way, hosts the largest capacity, with Spain in second place.

### European wind capacity, 2019

Country	Capacity (GW)
Germany	61.4
Spain	25.8
United Kingdom	23.5
France	16.6
Italy	10.5
Sweden	9.0
Denmark	6.1
Poland	5.9
Portugal	5.4
Netherlands	4.6

Source: Hardman & Co Research

#### Germany to the fore in solar capacity

On the solar front, capacity in Europe has grown solidly in recent years, especially – as might be expected – in Italy and Spain, as the chart below indicates. Data from the UK are also included.

### European solar generation capacity, 2019

Country	Capacity (GW)
Germany	49.0
Italy	20.9
United Kingdom	13.6
France	10.6
Spain	9.2
Netherlands	6.9
Belgium	4.5
Greece	2.8
Czech Republic	2.1
Austria	1.7

Source: Hardman & Co Research

#### REIFs expanding into mainland Europe

Of the 17 REIFs under review, most have some direct involvement in mainland Europe, especially through the ownership of generation capacity. TRIG and the Irish-based Greencoat Renewables are the sector leaders in this respect.

#### Aquila goes pan-European

While Aquila European Renewables eschews investment in the UK, it is totally aligned with the EU market: it now has investments across five different countries – from Portugal to Finland – and, once its deal in Greece is closed, this figure will rise to six. Octopus Renewables seems to be following a similar pan-European path.

#### SEEIT's 125MW Oliva portfolio in Spain

SEEIT, too, has expanded aggressively over the last two years, and it has now acquired the valuable 125MW Oliva Combined Heat and Power (CHP) portfolio in Spain. And, while NextEnergy Solar remains predominantly UK-based, its Solis portfolio in Italy provides it with some European exposure.

## Energy White Paper 2020

In looking to future UK energy provision, the Government published its long-awaited Energy White Paper 2020, [Powering our Net Zero Future](#).

#### The 10 Point Plan...

At a general level, it highlighted its 10 Point Plan, much of which extended well beyond conventional energy issues, especially on the transport front.

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### ...but four key messages for UK energy

More specifically, though, four key energy aspirations were set out, which – if implemented – would have very substantial implications for the UK energy market. These four policy proposals are:

- ▶ “Targeting 40GW of offshore wind by 2030”.
- ▶ “Supporting the developing of Carbon Capture Utilization and Storage (CCUS) in four industrial clusters”.
- ▶ “Establishing a new UK Emission Trading System (ETS)”.
- ▶ “Aiming to bring at least one large-scale nuclear project to the point of Final Investment Decision (FID) by the end of this Parliament”.

### Offshore wind to 40GW by 2030 – very big ask

Of these four commitments, the aim to increase offshore wind capacity to 40GW by 2030 is crucial. It represents a step-change in current capacity, which is ca.25% of this figure.

The defined time period is also challenging – less than a decade to quadruple UK offshore wind generation capacity is decidedly ambitious. While other renewable technologies will attract financial support, especially if they are low-cost, the offshore wind generation proposal is in a different league as regards capacity.

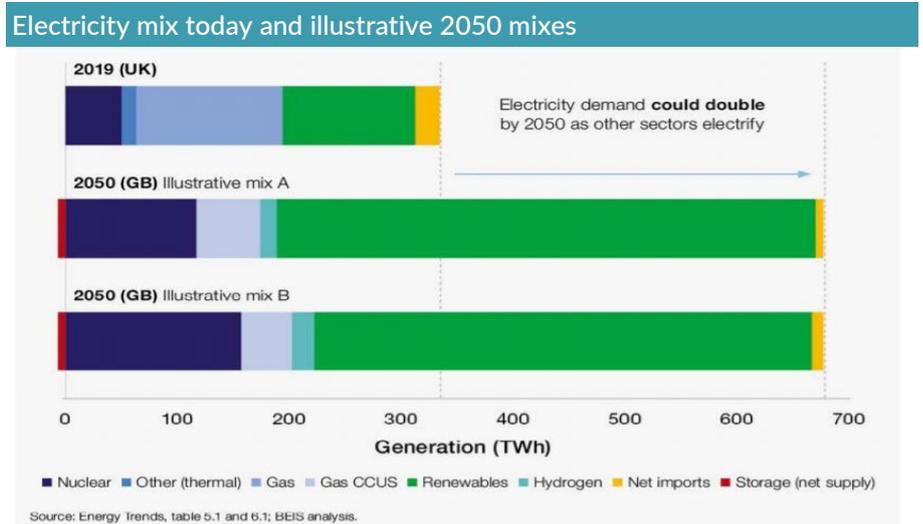
Significantly, two of the other commitments – on CCUS and an FID timeline for a large nuclear plant – have a history of decades of indecision and difficulty, despite the eventual – and controversial – go-ahead given to the £23bn 3,200MW new nuclear-build plant at Hinkley Point C.

### Demand to double by 2050?

Looking further forward, the Energy White Paper 2020 provided some long-term – and clearly very tentative – projections about the overall level of electricity demand and how it would be met. Extensive modelling was undertaken until 2050, when it was envisaged that GB power demand would reach 700TWh, compared with the present UK figure of ca.330TWh (in a normal, non COVID-19, year).

### 2050 generation capacity projections

The chart below shows how this massive increase in capacity would be undertaken – with offshore wind investment playing a pivotal role. Because of the inherent doubt, on several counts, about whether new nuclear power investment will emerge – post Hinkley Point C – assumptions A and B vary quite markedly in their reliance on new nuclear plants being built by 2050.



Source: Energy White Paper 2020

## Renewable generation developments

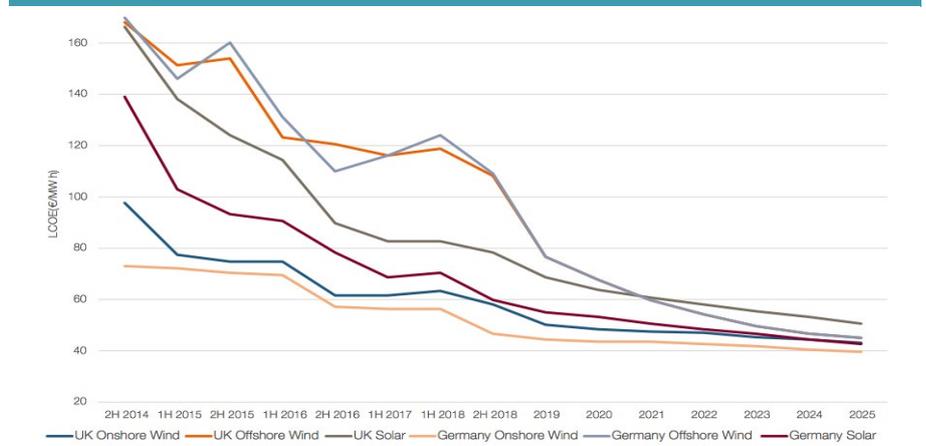
### Political drivers behind renewables

Despite widespread concerns about its costs, the large subsidies and its intermittency, renewable power has been heavily promoted by both the Government and the environmental lobby. Indeed, it forms a core element of the Energy White Paper 2020.

### Costs plummet

However, on the cost front, such concerns have been seriously misplaced, as the graph below – compiled by IRENA – shows. It focuses on the very sharp falls in generation costs since 2014 for onshore and offshore wind, as well as for solar, in both the UK and Germany.

Renewable power costs since 2014



Source: IRENA

### Seven renewable technologies

Aside from nuclear power, which has some renewable energy characteristics, there are seven generally accepted forms of renewable generation; they are listed below:

- ▶ wind (onshore and offshore);
- ▶ solar;
- ▶ hydro;
- ▶ marine (tidal and wave);
- ▶ biomass;
- ▶ geothermal; and
- ▶ fuel cells.

### Onshore wind a key renewable source

Undoubtedly, onshore wind has been the key renewable source in the UK; total onshore wind capacity now exceeds 14GW. Given the closure of the RO subsidy regime to new capacity in 2017, this figure is unlikely to grow as fast as previously, and certainly not in England.

### Sea-change in North Sea

Offshore wind development is set to be a major growth area, with a sea change in costs, far larger turbines and minimal environmental concerns – the 2020 Energy White Paper was unequivocal in its support.

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### Solar making real progress in southern England

Despite the UK's temperate climate, solar power – at least in southern England – is now making a very meaningful contribution.

While hydro power has been long-established in Scotland, few suitable sites remain to be exploited – and there are heavy initial capital costs.

### Marine still struggling

Marine-based renewable power projects – whether generated by tides or by waves – continue to struggle on both the technical and financial fronts. Seemingly eternal debates on various permutations of the much-discussed Severn Barrage are a case in point.

### The biomass challenges

Many biomass projects have been proposed, but few have been built. Drax Group, which accounts for a large proportion of biomass subsidies, is a notable exception in this respect. Potential biomass generators face many risks, including the securing of a reliable – and cheap – supply of wood, or of other combustible materials.

Unlike in Iceland, where it is key, the opportunities for geothermal power in the UK are very few, despite some modest potential in Cornwall.

### Ceres powers ahead – with help of Bosch

Moreover, fuel cells, despite some encouraging progress of late, still need to achieve critical mass. However, the UK-quoted Ceres Power has been investing in fuel cell technology for some years. After a very pronounced share price upturn of late, on the back of its expanding relationship with Bosch, from whom it will receive licensing fees, it is now valued at ca.£1.9bn.

## Onshore wind generation

### Age-old source of power

The principle of generating power from wind goes way back to classical times. In the Middle Ages, windmills were a common sight in parts of Europe, notably in the Low Countries. Eventually, base-load energy needs were met primarily by coal-fired generation, and supplemented by subsequent nuclear, oil and gas plants.

### Material contribution from onshore wind

In recent years, wind power has begun to make a material contribution, driven by politics and financed by heavy subsidies. For a wind plant to perform well, consistent wind speeds are needed. Prior to installation, anemometers are put in place to ensure that the most advantageous sites are used. Furthermore, prospective investors analyse the data in considerable detail to maximise wind yields.

In the UK, onshore wind power has expanded in recent years, initially via the privatised electricity companies, such as SSE. More recently, the growing REIF sector has become a key investor, led by Greencoat UK Wind and TRIG.

### Investment curbed by 2017 RO termination

The phasing-out of subsidies for new wind plants from 2017 has – not surprisingly – curtailed investment. Nonetheless, Greencoat UK Wind has confirmed that there are now over 23GW of operating wind farm capacity in the UK, of which ca.14GW is onshore and ca.9GW is offshore.

### Onshore wind benefits

Onshore wind generation offers several benefits compared with other renewable generation sources, including:

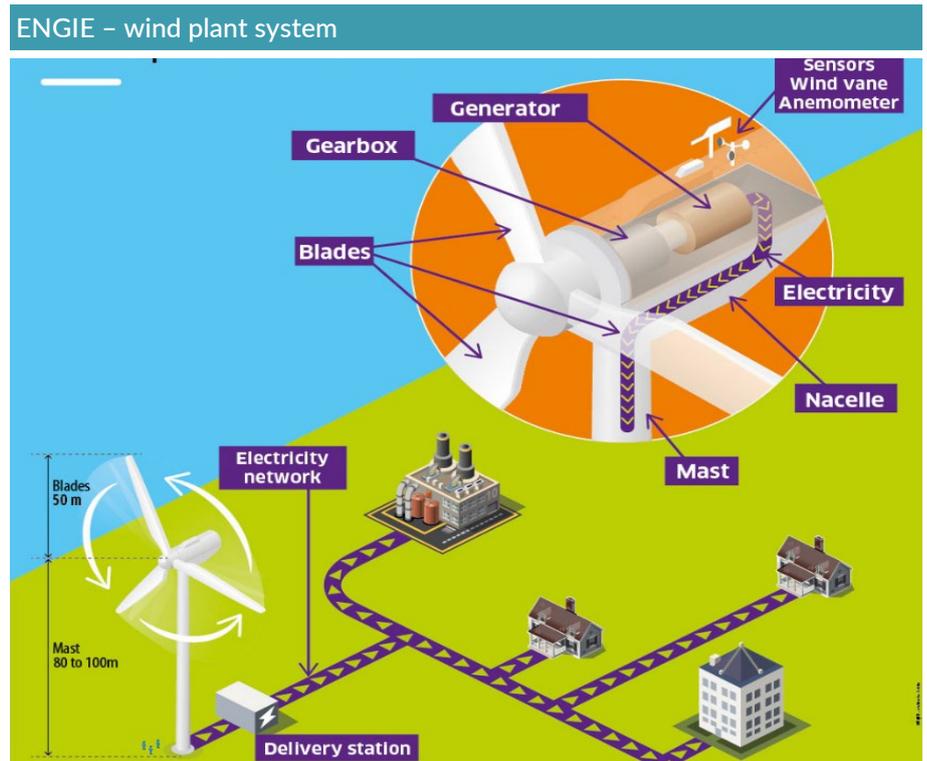
- ▶ The 30%-45% load factor is far higher than that of solar.
- ▶ Over half of the output is generated during the autumn and winter months, when demand and prices are higher – solar output is disproportionately geared towards the spring and summer months.
- ▶ A reasonably lengthy plant asset life – with a minimum 25-year period.

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### Scotland pivotal to wind investment

Scotland is arguably the centre of the UK onshore wind sector; indeed, Scottish wind plants generally have a higher capacity use than those in England. Greencoat UK Wind's portfolio underlines this factor: 52% of its portfolio is located there, compared with just 25% in England – on a population basis, the ratio should be 10-1 in favour of England.

In the diagram below, published by leading EU utility, ENGIE, a standardised wind generation network is depicted; it shows how the power is transmitted into the local grid network.



Source: ENGIE

## Offshore wind generation

### Offshore wind to fill generation gap

Over the next decade, the UK offshore wind sector offers real opportunities, especially as other power sources face very challenging issues: all UK coal-fired plants are due to close by 2025 or even earlier; the finances of gas-fired plants generally do not stack up, unless they are operated base-load; and nuclear plants remain both desperately expensive to build and subject to a vast number of risks.

The key development in the finances of offshore wind power has been the massive fall in costs, as highlighted by the Energy White Paper 2020.

### Offshore at <£40 per MWh vs. >£90 per MWh for nuclear from Hinkley Point C

Unquestionably, the 2019 Dogger Bank winning bid of £39.65p per MWh (2012 prices) compares very favourably with the 35-year £92.50 per MWh (2012 prices) CfD for the controversial – and desperately expensive – Hinkley Point C new nuclear plant.

Given the cost factor, a key driver behind the Energy White Paper 2020 target of 40GW of offshore wind power by 2030, it seems inevitable that the government, whether Conservative or Labour, will focus on rolling out offshore wind projects;

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the politics of doing so are very straightforward when set against controversial – and financially very challenging – new nuclear-build.

### UK leads Europe's offshore wind sector

Despite its relatively recent development, the UK is Europe's largest offshore wind developer. Apart from the obvious benefits of geography, there is no doubt, too, that the mightily impressive experience of the North Sea oil industry in surmounting often very stormy sea conditions has been a major advantage.

In recent years, the government has championed the offshore wind industry, not only as an integral part of its renewable energy policy, but also as a solution for replacing base-load fossil fuel plants.

Furthermore, for politicians, offshore wind development offers cheap power and minimal controversy – a very different scenario from that of onshore wind power in England, but to a lesser extent in Scotland. In many cases, offshore wind turbines will be invisible from the coast.

### Danish wind players excel

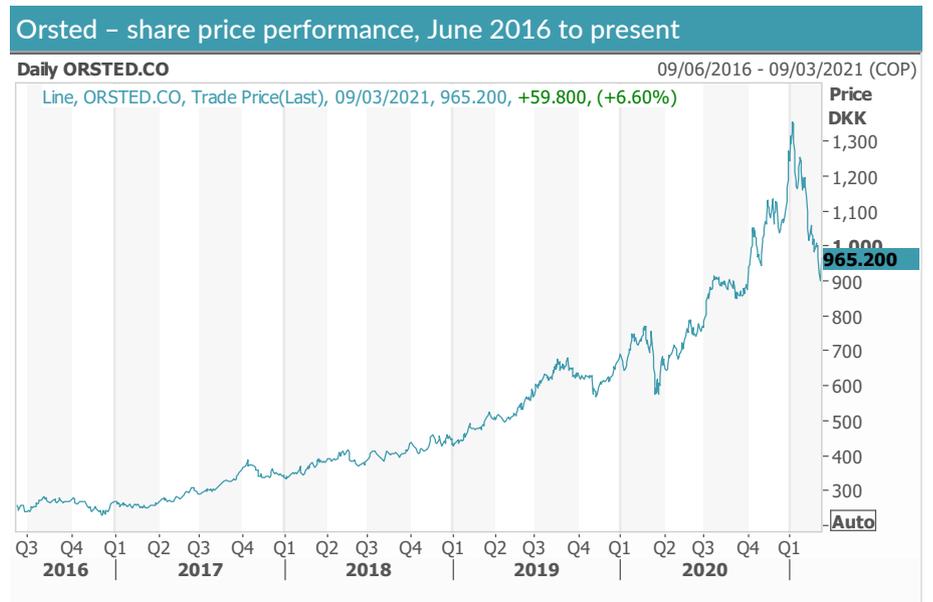
For investors, too, there are undoubted attractions, as the very impressive returns from two Danish companies – Orsted and Vestas – highlight.

### Orsted shares prosper – until very recently

Orsted, named after the eponymous discoverer of electromagnetism, emerged from the formerly publicly-owned Danish Oil and Natural Gas (DONG) Company. Orsted now accounts for ca.30% of the world's offshore wind market. By 2025, it plans to have raised its capacity to 15GW and, by 2030, this figure should have reached a formidable 30GW.

### ca.4x 2016 IPO price

As the offshore wind industry attracted greater interest – and more finance in its wake – Orsted's share price took off. However, it has fallen back sharply of late. As the graph below shows, its share price has risen by ca.4x since its IPO in June 2016; its market capitalisation is now ca.£48bn.



Source: Hardman & Co Research

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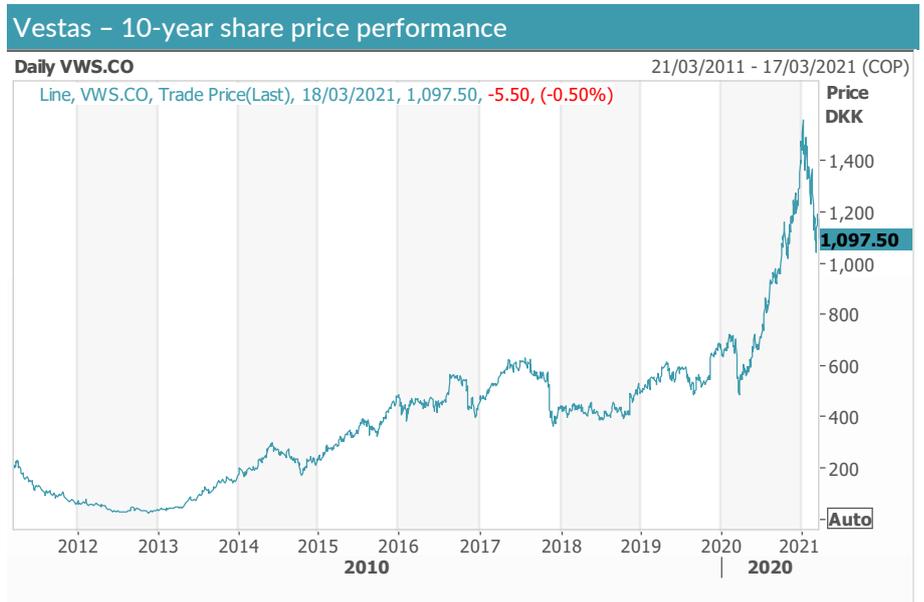
### Vestas back from brink

Vestas, which has installed no less than 132GW of mainly onshore wind plant capacity, has had a somewhat chequered existence – until very recently. Its share price in July 2012 was so low – as orders and cash dwindled, while debt rose – that serious questions were asked about its financial viability.

Yet its bucolic origins, dating back to 1898, as a blacksmith's shop in rural Denmark – via a steel window-frame business for parts of the 20<sup>th</sup> century – have culminated in the growth of a business now worth almost £25bn.

### Astonishing ca.40x rise since mid-2012

Like Orsted, its fortunes – until very recently – soared in the last two years on the back of demand for offshore wind capacity, as the 10-year share price graph below highlights. From its nadir in July 2012, Vestas's shares have risen by an astonishing ca.40x.



Source: Hardman & Co Research

The very sharp fall in prices for offshore wind generation merits further comment. After all, a few years ago, a target of £100 per MWh was set as a maximum price to be applicable for offshore wind plant operators by 2018 – at the time, meeting such a demanding price target was seen as an immense challenge.

### Pivotal 2017 offshore auction when sector came of age

In reality, as the 2017 offshore wind auction amply demonstrated, far lower prices were readily attainable. The lowest winning bids for CfDs in that round were submitted for the Hornsea 2 project by Orsted and ENGIE; the same winning price for the Moray East project was struck by the EDP-led consortium.

### Even lower prices on Dogger Bank in 2019

The 2019 offshore wind auctions for the Dogger Bank project produced even lower bids. The winning CfD bid for one element of the development was just £39.65p per MWh. The winning consortium included RWE and SSE, as well as the Norwegian pair, Equinor and Statkraft. Other CfDs were awarded for winning bids at slightly over the £40 per MWh mark.

Importantly, from a financial point of view, far larger turbines are installed in the North Sea offshore wind sector than is the case for onshore generation. By way of example, the massive Siemens SG 14-222DD, which is depicted below, has a rotor diameter of no less than 222 metres.

Size matters – a new 222 metre diameter turbine

### Siemens SG14-222DD



Source: Gamesa Siemens

TRIG the most likely to invest in European offshore projects

In terms of the REIFs, while Greencoat UK Wind owns 100% of the 60MW offshore North Hoyle project in Liverpool Bay, TRIG looks the most likely of the 17 REIFs to invest heavily in offshore wind generation projects in mainland Europe.

Currently, TRIG holds a 25% stake in the Gode 1 offshore development in the German North Sea, which has a total capacity of 330MW.

Assuming this minority stake yields the anticipated benefits, TRIG may invest further in offshore wind projects, in both the German North Sea and in the Baltic Sea, which are expected to be at the forefront of Germany's much-needed offshore wind investment. The expected generation output from this investment will help offset the nuclear power production that will be lost once all Germany's nuclear plants are shut down in the near future.

FLAGS revisited?

Furthermore, as indicated in the Energy White Paper 2020, transmission cables that are shared by different offshore wind generators, especially from the seabed to the shore, may well become a growing feature of the build-out of wind capacity in the North Sea. The oil industry comparator of the Far North Liquids and Associated Gas System (FLAGS), around which gas transportation has revolved for decades, provides an industry precedent in this respect.

While National Grid's effective electricity transmission monopoly endures, alternative companies are participating in procurement auctions being managed by Ofgem.

## Solar generation

Another age-old source of power

The principle of using solar power for heating purposes precedes the years of antiquity.

Importantly, in recent years, solar generation has begun to make a real contribution, especially in the southern states of the US, as well as in the warmer countries of the EU, notably Italy and Spain. Further north, solar investment has attractions that are less obvious, given much lower irradiation levels and longer night hours.

However, it is Germany that has been at the forefront of solar power development – more than 49GW are now installed there, well ahead of the ca.21GW located in Italy.

## REIFs revisited – a compendium

### Sharp rise in UK solar investment

In the UK, solar investment has risen sharply over the past decade. Not surprisingly, it is the south of England, where irradiation levels are higher, that has attracted most investment. Bluefield Solar now has 613MW of UK solar capacity under management, which accounts for ca.5% of the UK's utility-scale solar photovoltaic (PV) capacity.

### Solar reaches critical mass

Indeed, total UK solar capacity now amounts to ca.14GW, with heavy investment having been undertaken prior to 2017, when the renewable energy subsidy regimes were particularly enticing for discerning investors. The closure of the RO regime for new plants in 2017 has – not surprisingly – dampened the financial attractions of subsequent solar investment projects. But a handful of unsubsidised solar plants, including NextEnergy Solar's 50MW wind farm at Staughton in Bedfordshire, have been built.

### 21/04/17 – King Coal ousted

There have been periods in recent summer months when solar power has been able to meet 20% of the UK's total electricity demand. And, famously, on 21 April 2017, the day's entire electricity demand was met without firing up any coal-fired plants – the first time the UK had managed without such power for 130 years.

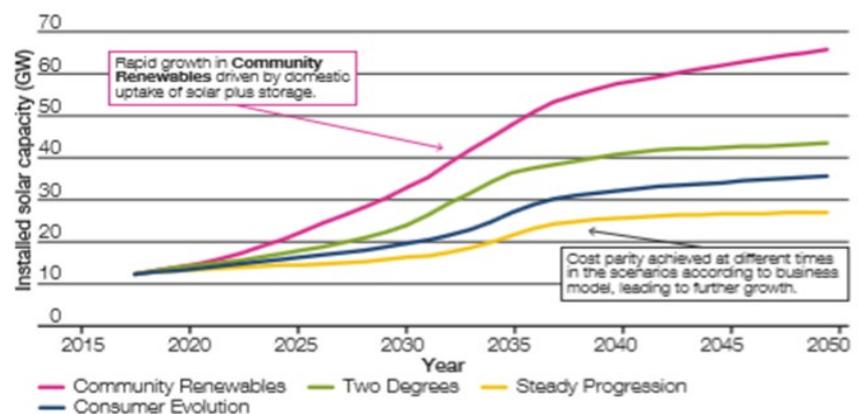
### Shell's view of solar power

It is clear, too, that solar power in the UK will not be a short-term fad – solar is here to stay. No less an authority than Shell's CEO, Ben van Beurden, is on public record in stating, "I have no hesitation to predict that, in years to come, solar will be the dominant backbone of our energy system, certainly of the electricity system". This view is beginning to prevail, not just in the UK, but elsewhere also.

### National Grid solar scenarios

More specifically, in its Future Energy Strategy 2018, National Grid set out its projections for solar power capacity until 2050, based on various scenarios. The more aggressive assumptions set out in the chart below, and especially the Community Renewables projections, show how solar power capacity seems destined to take off.

#### National Grid solar power scenarios: solar capacity



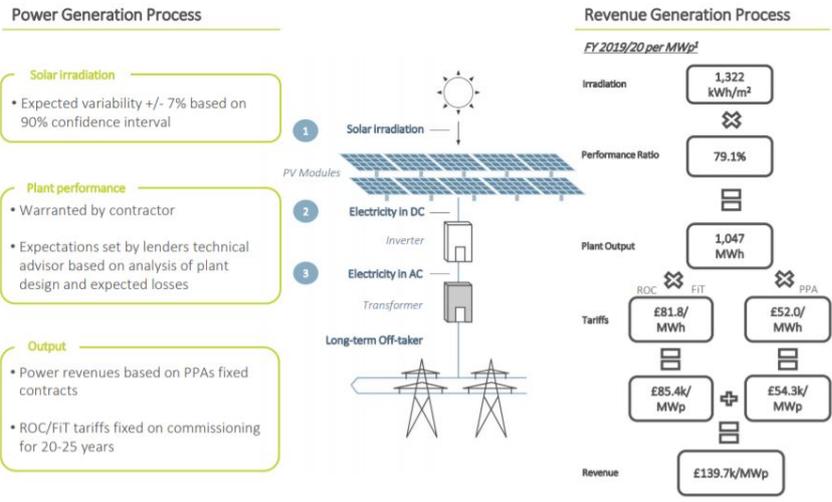
Source: National Grid Future Energy Strategy 2018

Within an operational solar park, there are effectively four core components: PV panels, inverters, a mounting structure, and the connection network for export to the grid. Most of these components generally last for at least 25 years, although inverters will need to be replaced probably around every 12 years. The chart below shows the process of generating solar power.

The conversion process

Solar power template

**SOLAR PV: REVENUE GENERATION**  
 Converting irradiance to portfolio income



Source: Bluefield Solar

The chart also shows how solar energy is converted into revenue, which is based partly on subsidies and partly on the prices negotiated within PPAs.

25-year minimum lifespan underpins revenues

High predictability over its estimated 25-year minimum working life is a key attraction of solar power investment. In fact, this time frame may look unnecessarily pessimistic; Bluefield Solar has now extended the projected lives of some of its solar assets to 40 years. Other solar generators have been reviewing the likely lifespans of their solar assets.

Furthermore, throughout the summer, solar power should be operational during both the morning and early evening peak demand periods, when electricity prices tend to be higher than average.

Intermittency challenge

In common with wind power, solar power is intermittent, as it depends on the weather and, especially, light conditions. In time, the ability to store more renewable power – and to be able to release it promptly into the grid during periods when demand and prices are high – will undoubtedly boost returns from renewable energy investments.

## Power prices/regulation

RO regime closed to new plants from April 2017, but not retrospectively

Central to the build-up of solar power, especially over the past decade, has been the proliferation of Government subsidies; these are now falling quite markedly. Most significantly, the RO subsidy regime was closed to new plants – although not retrospectively – in April 2017. Even so, some new renewable projects, especially those using immature technology, may still qualify for subsidies.

Renewable Obligation Certificate (ROCs) have been pivotal

The RO scheme was based on awarding a financial premium per MWh generated from eligible renewable power assets.

The premium paid is based on complex calculations derived from total renewable output over a full year; furthermore, its value varies, depending upon the type of renewable generation deployed. In addition, feed-in tariffs (FITs) have been payable for smaller plants, although their impact is relatively minor compared with the RO regime.

ROC buyout prices for 2020/21

For 2020/21, the Renewable Obligation Certificate (ROC) buyout price – paid by suppliers that otherwise are not meeting their RO requirements – is £50.05 per MWh.

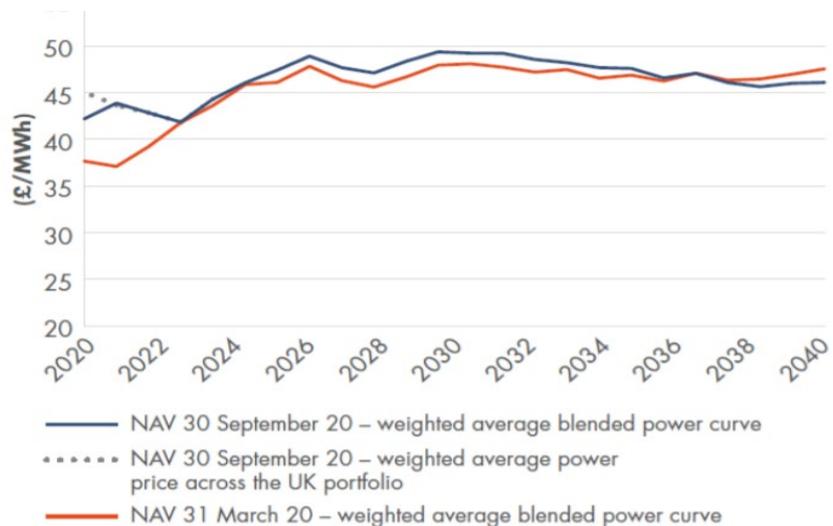
Gas input driver

Prior to 2020, UK power prices had been widely expected to rise in real terms over the following decade, before falling back thereafter. Gas input prices were – and continue to be – widely regarded as the underlying price driver.

However, the impact of COVID-19, which has materially reduced energy demand, along with certain other factors, has seen long-term power price projections cut back – as demonstrated by recent cuts in NAVs by both Greencoat UK Wind and TRIG, *inter alia*. During 2020, these two REIFs announced NAV cuts, due to lower long-term power prices, of ca.£70.0m and £123.1m, respectively.

The chart below, published by NextEnergy Solar, is based on power price data stretching out until 2040; it was compiled by three leading independent energy market consultants.

Forecast UK power price (real 2019 – £/MWh)



Source: NextEnergy Solar

## REIFs revisited – a compendium

Undoubtedly, in the light of eroding subsidies, cost reductions will play an increasingly prominent role in new solar investment. Indeed, a new solar plant has been commissioned by Bluefield Solar at Clay Hill in Milton Keynes, which is the UK's first non-subsidised solar plant; it is still expected to provide a competitive return for investors.

### The Staughton template

More recently, NextEnergy Solar has commissioned the much larger 50MW unsubsidised solar plant at Staughton. In time, it aims to install up to 150MW of unsubsidised solar capacity.

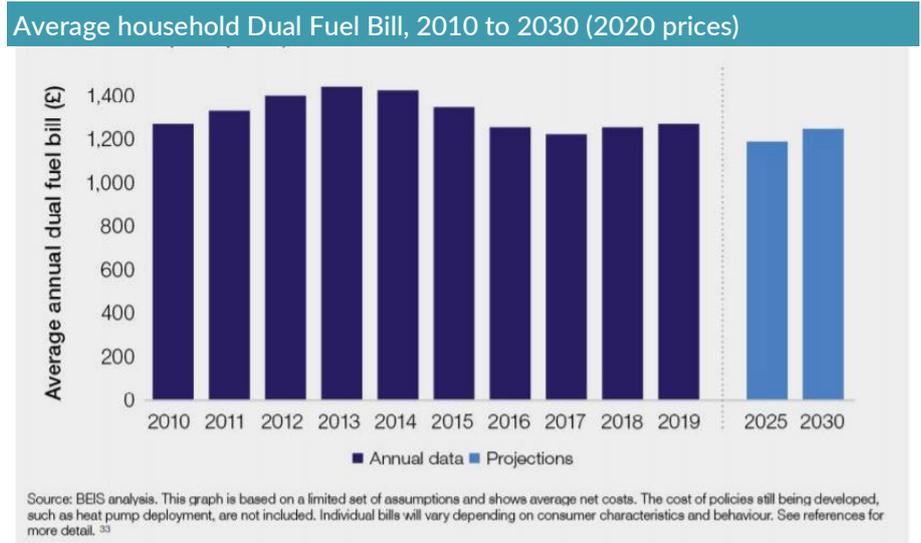
### The unsubsidised challenge

Nonetheless, as unsubsidised wind and solar plants comprise an increasing part of a REIF's portfolio, it will become increasingly challenging for REIFs to deliver the required returns for investors.

And, of course, there will be a major impact at the retail level, given that generation costs account for a substantial element of final bills.

As the chart from the Energy White Paper 2020 below illustrates, domestic electricity prices in the UK have fluctuated in recent years, with the gas input cost being a critical price-setting mechanism. Projections for both 2025 and 2030 are also set out.

### Power price projections to 2030



Source: Energy White Paper 2020

### The price cap

In 2019, at the instigation of the government, Ofgem introduced a controversial price "cap", which specifies a maximum figure for a typical household's consumption of electricity and gas.

### Cap now £1,042 – to rise by no less than £96 in April

The latest dual fuel "price cap" figure for a "typical default tariff customer" is £1,042. It is reviewed by Ofgem every six months, so that adjustments can be made to reflect changing costs, such as fluctuating gas input prices. From April 2021, the "price cap" will rise by no less than £96 to £1,138.

### High attrition rate of new entrants

There are now many domestic energy suppliers that are new to the market, although the attrition rate is very high. Indeed, there are several financial casualties every year, with their customers generally being taken on by erstwhile – and better-financed – competitors.

## Levelised costs

### Some generation costs have plummeted

Among the major sources of generation, there have been significant changes in costs over the past decade. Many renewable sources have been able to deliver major – and somewhat unexpected – cost reductions.

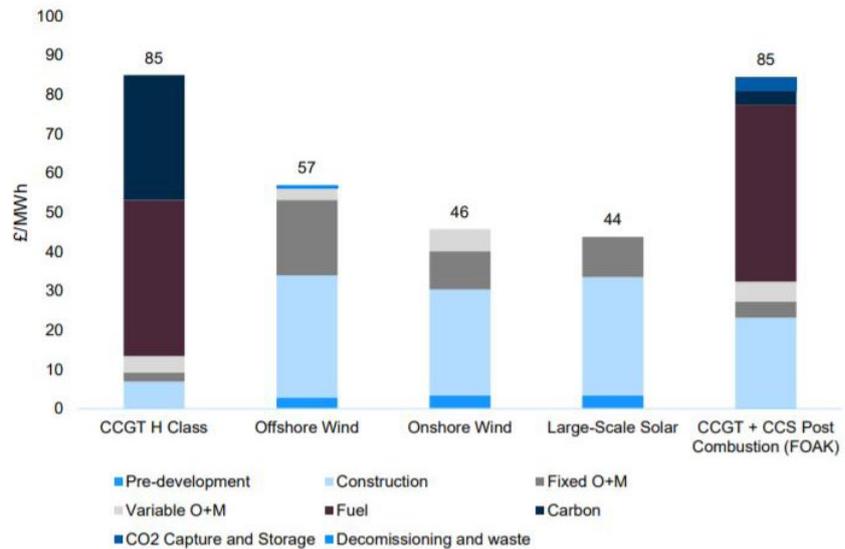
In *Electricity Generation Costs*, published in August 2020, the Department of Business, Enterprise and Industrial Strategy (BEIS) published several tables covering the issue of levelised generation costs. In compiling such data, many contentious assumptions were made, although little was said about the levelised costs of a nuclear plant.

### Renewables score very well on cost grounds

The BEIS figures on levelised generation costs are reproduced below, and are compiled on an ongoing basis; thus, first-of-a-kind (FOAK) costs are disregarded.

Projects commissioning in 2025

Chart 4.1: NOAK Projects commissioning in 2025, in real 2018 prices<sup>23</sup>



Source: Electricity Generation Costs by BEIS

Gas input costs are crucial

The table shows that CCGTs – the workhorses of the 1990s – look relatively expensive when compared with wind and solar plants. However, the financial returns of a CCGT plant are very dependent upon the gas input costs prevailing when the supply contract is actually signed – including the relevant price adjustment mechanism – and whether the plant operates as a base-load or as a mid-merit generator.

Phenomenal cost reductions in solar...

In the case of solar power, cost reductions have been achieved at a far greater level than anticipated. The scale of efficiency savings in the solar generation sector is illustrated by Bluefield Solar, which recently confirmed that its cost price had fallen to ca.£50 per MWh, compared with ca.£200 per MWh in 2010.

...replicated offshore

Such sharp reductions have also been seen in the offshore wind sector. By 2018, the Government had hoped that the £100 per MWh benchmark would be reached. In fact, this forecast proved unduly pessimistic, as the Dogger Bank project auctions demonstrated – the winning bid was below £40 per MWh.

Crown Estate auction

Nevertheless, the recent Crown Estate Round 4 auction of offshore seabed capacity attracted aggressive bidding, with high prices being paid, which will eventually feed through to the final generation price.

Hinkley Point’s infamous £92.50 per MWh 35-year nuclear CfD

By contrast, nuclear power costs seem to be heading – seemingly inevitably – in the opposite direction. The infamous inflation-linked 35-year £92.50 per MWh (at 2012 prices) CfD for Hinkley Point C demonstrates – quite unequivocally – that it is way out of kilter with rapidly falling renewable energy costs. And, already, costs at Hinkley Point C are well over budget.

## Peaking plant

### National Grid responsibility

For decades, National Grid, which has the responsibility for managing the power system in Great Britain, has had to operate within ever-lower plant capacity margins. In recent years, the virtual absence of new-build, base-load plants – the 884MW Carrington plant, commissioned in 2016, and the 840MW Keadby 2 plant, currently under construction, being exceptions – has further depressed capacity margins and heightened the risk of power cuts.

### 09/08/2019 partial blackout

On 9 August 2019, this issue became very high-profile, as a partial blackout took place affecting many public areas, including some airports and railway stations; numerous electric trains lost power, leaving their passengers stranded.

### Little Barford/Hornsea outages coincide

National Grid subsequently confirmed that virtually simultaneous outages took place at two plants – the gas-fired Little Barford station and the offshore wind farm at Hornsea. Lightning strikes were identified as a key factor, although National Grid's very low level of reserve power – of ca.1,000MW – was insufficient to replace the lost power of the two plants with a combined nameplate capacity of over 1,300MW.

In the past, there were various peak-load plants, some of which were oil-fired, that were kept open – at considerable cost – to supply power during periods of very high demand or to cover major system outages.

### Pumped storage plants

For very short-term demand “spikes”, power was often generated – within less than a minute's notice – from the two pumped storage plants in Wales, namely Dinorwig (1,728MW) and Ffestiniog (360MW); the latter dates back to the early 1960s.

More recently, the strong growth of renewable power output, along with increased off-grid generation, has made it far more challenging to manage the electricity system effectively – and to avoid power cuts, as the 9 August 2019 partial blackout demonstrated.

National Grid employs various measures to address this problem – and to avoid the need to build new – and under-used – peaking plant.

### Capacity auctions

The key change in recent years has been the holding of capacity auctions, whereby electricity generators bid to supply power to cover periods of expected high demand.

Such auctions have enabled several peaking plants to remain operational, while they have also – somewhat controversially – attracted very competitive bids from owners of small environmentally unfriendly diesel-fired generation units.

### Capacity auctions to resume

In November 2018, the European Court of Justice concluded that such auctions constituted a form of state aid and were therefore illegal under EU law. Subsequently, the European Commission has effectively reversed this judgment, so that capacity auctions in the UK have resumed.

### Large user demand management schemes

Importantly, there is also a demand management scheme in place for large energy users, who – in return for a favourable pricing regime – agree to be taken off supply during periods of very high demand.

## REIFs revisited – a compendium

### Gore and Gresham battery storage investment

Furthermore, several companies supply grid-related services, including those to maintain grid frequency and to undertake short-term energy storage. Two REIFs analysed in this document – Gore Street Energy Storage and Gresham House Energy Storage – operate in this niche space, and both have invested significantly in battery storage capacity over the last three years.

In the light of the events of 9 August 2019 and following strong pressure from both the government and Ofgem, it seems inevitable that National Grid will need to retain significantly higher reserve capacity to handle such incidents.

### Arenko's success

Recent trials between National Grid and Arenko, with whom Gore Street Energy Storage has a commercial relationship, demonstrated that battery storage systems can provide sustained reserve capacity, while also allowing competition with other participants to meet energy imbalances – and with a material saving in costs.

### Scalable and economic storage systems the big prize

In the longer term, the quest for durable – and scalable – energy storage systems is likely to result in much greater capacity being built to hold back large amounts of electricity – a much cheaper option than building new and rarely called-up peaking plant.

## For investors – defensive earnings

### Dire share price performance among the “Big Six” since 2009

Over the past decade, investors in the UK’s leading energy companies, Centrica and SSE, are unlikely to have prospered, although the latter’s share price rallied quite strongly during the latter months of 2020. To be sure, had they invested in the four other members of the “Big Six”, and especially in EDF, E.ON and RWE, they would probably have incurred significant losses – certainly until 2017. However, shares in the renewable generation-orientated Iberdrola have performed far better.

### Centrica's shares tumble

By way of example, the share price performance of Centrica – the UK’s leading gas business – is set out below. Unquestionably, its performance has been profoundly disappointing, as was demonstrated in its full-year results for 2020, and the shares have lost ca.85% of their value since early 2013.



Source: Hardman & Co Research

## REIFs revisited – a compendium

Apart from Centrica, other leading energy suppliers have suffered from the COVID-19 pandemic. Most obviously, the two UK oil majors have seen their shares plunge.

### Shell's historic 66% dividend cut – first since WW2

Shell's B shares have fallen by 39% over the last two years, on the back of both falling oil prices and, more specifically, the historic decision to cut its dividend by 66% – the first such cut since WW2. In BP's case, its dividend has also been cut, while its share price has fallen by 43% over the last two years. In recent months, though, on the back of an upturn in oil prices, shares in both Shell – both A and B – and BP have rallied.

### NextEnergy Solar's shares off by ca.16% over last two years

For the smaller REIFs, the impact of COVID-19 has been at the margins. Most REIFs have seen their share prices return either to – or close to – their pre-March 2020 ratings. However, both NextEnergy Solar and Foresight Solar have, so far, failed to do so, due partly to poor NAV returns, depressed by low energy prices. However, the REIFs have a strong record on dividend payments, although some, including TRIG and NextEnergy Solar, are holding their 2021 dividend payments at the 2020 level.

### REIF returns since 2013 reassuring

The impressive REIF share price performance is illustrated, over a longer time frame, by a chart compiled by Greencoat UK Wind, which shows total shareholder returns since 2013 from the leading wind and solar generators, six of which make up the group of 17 REIFs that are currently under review. The data show strong outperformance in 2018, along with the COVID-19 chasm in March 2020, as many investors panicked. Subsequently, though, REIF share prices have retreated.

#### Shareholder returns of leading REIFs since 2013

Total Shareholder Return vs Market Peers (Bloomberg)



Source: Greencoat UK Wind

### Reassuringly solid performance from Greencoat UK Wind

More specifically, the table below shows Greencoat UK Wind's own track record since 2013. During turbulent political times and amid many challenges for UK energy companies, it has demonstrated a reassuringly solid performance, although its dividend cover is declining. As the figures indicate, it has made several acquisitions over a period of almost seven years.

## REIFs revisited – a compendium

### Greencoat UK Wind's financial performance since 2013

Period	Output (GWh)	Cash generation (£m)	Dividend (p)	Dividend cover (x)	RPI increase	NAV growth
2013 (9m)	292	21.6	4.50	1.8	1.9%	2.5%
2014	565	32.4	6.16	1.6	1.6%	2.5%
2015	799	48.3	6.26	1.7	1.2%	0.5%
2016	978	49.0	6.34	1.4	2.5%	4.0%
2017	1,457	80.1	6.49	1.5	4.1%	2.4%
2018	2,003	117.3	6.76	1.6	2.7%	10.8%
2019	2,385	127.7	6.94	1.4	2.2%	-1.4%
2020	2,952	145.2	7.10	1.3	1.2%	0.6%

Source: Greencoat UK Wind

#### Close correlation with forecasts

The defensive element is reinforced by the relative reliability of output levels. The table below shows Greencoat UK Wind's average wind speed and output on a YoY basis, when compared with its management's projections. The correlation between the two variables is high.

Greencoat UK Wind's generation data							
Year	2014	2015	2016	2017	2018	2019	2020
Wind speed	-2%	+5%	-6%	-1%	-4%	-8%	+2%
Output	-3%	+8%	-6%	0%	-6%	-11%	-3%

Source: Greencoat UK Wind

#### Outperforming FTSE All-Share

On the solar front, the reassuring track record – at least until recently – of NextEnergy Solar illustrates how it has been able to prosper since 2014/15, during a period when the UK energy market has faced many challenges. The table below shows its shareholder returns since 2014/15 and how they compare with the FTSE All-Share; the 2020/21 figures will be less impressive.

### NextEnergy Solar shareholder returns

Benchmark	2019/20	2018/19	2017/18	2016/17	2015/16	2014/15
Cumulative shareholder return since IPO	37.5%	46.7%	33.6%	26.7%	6.1%	5.9%
Annualised shareholder return since IPO	6.3%	9.5%	8.5%	9.1%	3.2%	6.3%
Shareholder total return	-4.6%	11.8%	6.2%	21.1%	0.2%	5.9%
FTSE All-Share total return	ca.-20%	8.8%	1.4%	20.9%	-3.6%	5.5%

Source: NextEnergy Solar, Hardman & Co Research

#### Wind outperforming solar

Over the last year, REIF wind generators have generally outperformed their solar counterparts, with both NextEnergy Solar and Foresight Solar – although not Bluefield Solar – being notable underperformers.

#### Revenue risk

It should be noted that greater revenue uncertainty applies to many of the smaller REIFs; after all, it is still very early days for many of these, who are still in the process of building up their seed portfolios.

Looking forward, the impact of decreasing subsidies across a wind or solar generation portfolio will undoubtedly have a negative impact on NAVs, as unsubsidised new plants are progressively introduced.

## Benefits for investors

### Many tangible benefits

Infrastructure investment remains a key political issue. Not only is there a massive need for infrastructure replacement – many power stations are close to their decommissioning dates – but also the new online economy requires very heavy expenditure levels.

In the latter case, both expanding and improving broadband connections represent a vast challenge – and confronts British Telecom with crucial financial decisions regarding the allowed – as yet undecided – returns on its planned broadband rollout.

At a general level, infrastructure investment is prospering, especially on the back of both private equity and of the seven quoted Infrastructure Investment Companies. Brief profiles of the latter are included between p.55 and p.61 of this document.

### HICL's wide-ranging portfolio

The two largest quoted Infrastructure Investment Companies are HICL and 3i Infrastructure. HICL, with 117 investments, many of which are in the UK, invests across many sectors; for example, its portfolio ranges from a 33.2% stake in Affinity, a water company, to its investment in the A63 motorway in France.

### 3i Infrastructure and BBGI outperform

3i Infrastructure, whose shares have prospered over the last two years, concentrates on its ca.20 investments, some of which are telecoms-related. Others, such as BBGI, have focused on roads, bridges and health facilities, and – on the back of a portfolio of high-quality public sector contracts – have delivered very good shareholder returns.

### INPP and Cadent Gas

Within the portfolios of the seven quoted Infrastructure Investment Companies are various energy assets. HICL has stakes in offshore energy transmission companies, while GCP has a portfolio of renewable energy plants, mainly wind-powered. Its NAV was adversely impacted by lower power price projections in 2020. INPP's key energy holding is its stake in Cadent, a spin-off from BG's gas distribution portfolio.

### Renewable energy features very prominently

However, according to JLEN – citing research from Preqin – renewable energy has accounted for almost 60% of infrastructure deals in recent years, as the table below shows.

Key infrastructure investment sectors				
Primary industry	2015	2016	2017	2018
Renewable energy	48%	45%	50%	57%
Transport	15%	14%	9%	7%
Social	11%	14%	18%	6%
Energy	13%	13%	10%	12%
Utilities	10%	12%	9%	12%
Telecoms	1%	2%	2%	3%
Other	1%	1%	1%	2%

Source: Preqin

For investors, exposure to REIFs offers several benefits, although the sector inevitably remains subject to certain risks.

Aside from standard defensive earnings characteristics, there are other benefits for REIF investors; they include:

- ▶ Good shareholder returns, with some REIFs reporting – until very recently – total returns of more than 9% per year over a five-year period. Undoubtedly, these are attractive figures in what is – for the moment at least – a low-inflation, COVID-19-dominated environment.

- ▶ The payment of decent dividends, and likely – although modest – share price growth, with REIF share price ratings being boosted by the relative security of their earnings.
- ▶ Relatively low exposure to the commercial environment, and therefore a reduced risk of a serious revenue shortfall; this is an issue that has very much come to the fore in the stricken leisure sector; for example, during the COVID-19 pandemic. After all, the RO scheme still applies for many existing wind and solar generation assets.
- ▶ PPA contracts of up to 25 years' duration are in operation.

## The SSE template

### “Big Six” player

SSE is one of the UK’s “Big Six” energy companies. It was floated, along with the Iberdrola-owned ScottishPower, in 1991. As part of its privatisation, the then Scottish Hydro Electric (now SSE) inherited a portfolio of hydro-power assets, which it still retains – these plants have been solid generators of revenues in the intervening near-30 years.

Furthermore, over the last two decades, SSE has undertaken heavy investment in the wind power sector, which has proven to be particularly successful in Scotland, where wind levels are generally higher – and more consistent – than is the case in the south of England.

### The template for many REIFs?

On the basis that REIFs can retain their independence, many – and especially those currently operating wind and solar generation plants – will seek to emulate the success of SSE, a substantial part of whose underlying value is now accounted for by renewable generation.

As such, SSE offers a template, around which the UK renewable energy sector may develop. After all, SSE – in terms of both its hydro-power asset portfolio and its abundant sites for renewable power generation – has enjoyed a major advantage, especially compared with its startup competitors, which include all 17 REIFs.

### EV components

With a current Enterprise Value (EV) of ca.£25.0bn, SSE’s key business is its extensive energy network, whose returns are price-regulated. A RAV of £9.1bn for these assets, along with existing utility premia of ca.20%-25%, places a value on SSE’s regulated business of ca.£11.1bn; this figure represents ca.45% of SSE’s overall EV. Much of the remaining EV is attributable to SSE’s burgeoning renewable generation assets.

The table below provides a breakdown of SSE’s renewable assets for 2019/2020, in terms of both capacity and adjusted EBIT returns, which total £567m.

SSE renewable plant data		
	Capacity (MW)	2019/2020 Adj. EBIT (£m)
Hydro	1,459	191
Onshore wind	1,955	201
Offshore wind	487	175

Source: SSE

## REIFs revisited – a compendium

### Reliance on ROCs

In terms of remuneration schemes, SSE has published details of how most of its renewable plants are funded.

Existing/under construction capacity (MW)	
Existing capacity (MW)	Remuneration scheme
2,021	CfD – offshore construction under AR3
2,216	ROC – £ per MWh
235	CfD – £ per MWh
375	REFIT – € per MWh
850	Capacity mechanism – £ per MW

Source: SSE

### The read-across flaws

Given the many differences between SSE's renewables business and those of the leading REIFs, read-across valuation data have many flaws, ranging from differing remuneration regimes to Greencoat UK Wind's lack of a hydro-power portfolio.

Nonetheless, the table below provides some relevant comparisons between SSE Renewables and Greencoat UK Wind; apart from SSE's involvement in the Republic of Ireland, both companies resolutely decline to invest outside the UK.

SSE Renewables vs. Greencoat UK Wind	
SSE Renewables	Greencoat UK Wind
Capacity – ca.4,000MW	Capacity – 1,209MW
Output (2019/20) – 11.4TWh	Output (2020/21) – 2.9TWh
Market cap. (group) – £14.4bn	Market cap. – £2.5bn
Net debt (group) – £10.6bn	Net debt – ca.£1.1bn
Estimated EV (renewables only) range – £10.5bn to £12.0bn	EV – £3.6bn

Source: SSE, Greencoat UK Wind, Hardman & Co Research

### SSE Renewables value vs. Greencoat UK Wind

While SSE Renewables is undoubtedly the larger business, it should probably be valued – within the publicly-quoted SSE – at least 3x the quoted EV of Greencoat UK Wind.

## Biomass and Drax Group

### Governments like biomass schemes

Promoting biomass investment has been a pivotal energy policy for some 30 years – with distinctly mixed success. For the government, biomass schemes have the potential to deliver cleaner energy and, if household waste is used as a fuel, to reduce the controversial issue of waste disposal – much of which still goes to landfill.

### Reliable fuel supply is key

However, biomass investment raises many issues, on both the environmental front and the financing front. In the latter case, a rock-solid – and competitive – fuel supply contract is cherished by investors; to negotiate such deals is extremely challenging.

Given the various financial issues, the payment of subsidies is still the norm for biomass plants. Since various types of biomass technology attract different subsidy levels, the regime is very complex.

### Drax's vast subsidy receipts

By far the largest recipient of UK biomass subsidies is Drax Group, which is currently capitalised at almost £2.0bn. Its proposed Pinnacle Renewable Energy acquisition has been well received. Significantly, though, the Ember climate and energy think tank has calculated that Drax will have received ca.£10bn (at 2019 prices) of taxpayer subsidies – comprising ROC payments and CfDs – by 2027.

## REIFs revisited – a compendium

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### One-time world record-holder based on capacity

Drax's key asset is its eponymous power station, which – as a coal-fired plant – once boasted a 3,960MW nameplate capacity – at one time, the highest worldwide. Originally privatised in 1991 as a core plant within National Power's portfolio, it has undergone various changes of ownership subsequently.

### Four of six units converted

Major changes have also occurred at the operating front, as Drax has been progressively converting its six 660MW units from coal-firing to biomass. At present, four such units have been converted and are operational. It has just been announced that the proposal to convert one of the remaining two coal-fired units to a CCGT plant has been scrapped.

### Other large fossil fuel plants less favoured

The conversion of other core coal-fired plants to biomass fuelling has not taken place – the financial case is generally too weak. Hence, plants such as Eggborough and the various Barking power stations – at one time, pivotal units in the national network – have now been decommissioned.

While biomass investment may seem – at first sight – a natural option for REIFs, only JLN, SEEIT and TRIG have any such exposure, and, in all cases, it is quite modest. Drax aside, most UK biomass investment, unlike in Germany and Finland, *inter alia*, is quite small-scale.

## Corporate activity

Much of the activity in the REIF sector, which now comprises 17 members, has been the entry of new investment funds.

### New REIF entrants

Recent sector entrants include:

- ▶ Date: December 2019 – Octopus Renewables (market cap. £385m);
- ▶ Date: October 2020 – Triple Point Energy Efficiency (market cap. £102m);
- ▶ Date: December 2020 – Downing Renewables and Infrastructure (market cap. £117m);
- ▶ Date: December 2020 – Ecofin US Renewables Infrastructure (market cap. £93m);
- ▶ Date: February 2021 – Victory Hill GSEO (market cap. £248m).

Given the prodigious investment appetite for renewable energy, especially for wind and solar power generation, as well as for storage funds, further new entrants should be expected.

### Foresight Group has joined IPO party

Indeed, the Foresight Group – the stable from which Foresight Solar emerged – has recently undertaken its own IPO. Demand for its shares was strong. Further details are set out on p.61.

### Quiet on M&A front

In terms of M&A, activity in the REIFs sector has been minimal. Of course, the sector is very new, and there have been no obvious cases of serious underperformance. Also, unlike the troubled outsourcing sector, for example, there have been very few accounting issues.

Importantly, despite the absence – since 2017 – of subsidies for most types of new renewable energy plants, asset valuations have held up well – notwithstanding recent power price-related reversals – as potential investors chase the relatively few assets that become available.

## REIFs revisited – a compendium

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### Underlying NAV premia for REIFs now average ca.8%

The current underlying NAV premia for both the wind and solar generators average ca.8%, which is well below their ratings prior to March 2020. The two sector leaders, Greencoat UK Wind and TRIG, are currently trading at 3.9% and 7.5% premia to NAV, respectively.

By comparison, the Infrastructure Investment Company with the higher premium to NAV is BBGI – at over 22% to NAV, which is well above the current 9.7% premium for HICL.

With respect to those REIFs focused on wind generation, it could be argued that – given the undoubted enthusiasm for renewable generation investment in recent years – these premia are actually quite modest.

### Water sector RAV comparisons

Indeed, they compare poorly with the premia over RAV, a similar concept to NAV, which applies to companies in the regulated utilities sector. Leading water company, Severn Trent, is currently trading at ca.20% over its RAV.

### Gas takeout prices peaked

Furthermore, in recent years, the premia over RAV commanded by several gas distribution companies, which were sold by National Grid, have been way above those figures: Cadent, in which INPP has a significant stake, is a case in point.

### REC frenzy saw all 12 go

It should not be forgotten, either, that the 12 RECs, which were privatised in 1990, were all bought out between 1995 and 2000. Perhaps, inevitably, the first bid for Northern Electric by Trafalgar House in 1995 saw shares in all 12 RECs soar as takeover speculation became a frenzy.

### Usual suspects

Against that background, bids for any of the 17 REIFs could emerge, with the most likely targets being the more mature wind and solar generators. While no-one expects that the REC scenario will be replicated, it would be no surprise if a bidder were to emerge – and especially one seeking to build up a substantial portfolio of valuable renewable energy assets.

### Oil majors and renewable energy

With material premia over NAV, it may be argued that any bidder would be hard pushed to justify an aggressive bid for a REIF to its shareholders. There are, of course, some very highly capitalised quoted companies, who wax lyrical about renewable energy, and who could comfortably afford to pay a hefty takeover premium.

### Shell talks a good renewables game

Oil majors, Shell and BP, come to mind. In the former's case, while accepting that global oil production is now close to its peak, its recent high-profile Strategy Day presentations were very short on specifics, especially with respect to renewable energy.

Alternatively, private equity could enter the sector, possibly offering a model where higher gearing became the norm. Nevertheless, private equity owners would be hard-pressed to deliver major improvements to the financial models that are currently underpinning the cashflows of the more mature REIFs.

Even so, under either of these scenarios, REIF share prices would surely rise.

## Risks

### COVID-19 – a very left-field risk prior to 2020

The current COVID-19 pandemic was a risk that few investors would have foreseen or factored in prior to 2020, although its impact on REIF valuations – compared with, for example, the leisure sector – has been relatively minor.

### British Energy – a dotcom stock

As the list below indicates, REIFs are exposed to many risks, virtually all of which should be eminently manageable – there is no British Energy-type scenario, where shares in the privatised nuclear generator became regarded as a *quasi* dotcom stock: when wholesale energy prices fell sharply, British Energy duly went bust.

### Single technology risk

Nonetheless, those REIFs with a focus on a single technology, or on a single market, are more vulnerable to an adverse regulatory decision; a sudden halving of UK solar subsidies, although very unlikely, would be a case in point.

However, as with all investments, there are various risks attached to the UK wind and solar sectors, and to other REIF investments, although these are materially below those of other – and especially price-regulated – utility-related businesses. The main risks are set out below.

- ▶ Low power prices: in most cases, wind and solar generators are largely protected via PPAs, although reduced long-term power price projections will depress NAVs – the NAVs of both Greencoat UK Wind and TRIG were adversely impacted by lower long-term power prices in 2020.
- ▶ Inadequate wind resource: over a long period, wind speeds have been quite predictable, although they can vary on a year-to-year basis.
- ▶ Poor irradiation figures: historically, irradiation figures have also been quite predictable; furthermore, extensive plant portfolios across many sites mitigate this risk.
- ▶ Outages: major outages have far more impact if large plants are involved, as, on occasions, distribution network operators (DNOs) have temporarily disconnected power lines.
- ▶ Material regulatory changes: the closure of the RO to new capacity in 2017, although expected, has had a negative impact on future wind and solar power investment – crucially, phasing out the RO was not retrospective.
- ▶ Inadequate returns from unsubsidised new-build plants: this challenge will become an increasingly important feature of UK onshore wind and solar portfolios.
- ▶ Counterparty risk: the wind and solar sectors are far less exposed – at the physical level, if not via CfDs – to counterparty risks than most fossil-fuel generators, and especially biomass generators, who are very dependent upon reliable supplies of raw materials.
- ▶ Underperforming acquisitions: leading wind and solar REIFs have undertaken many “tuck-in” acquisitions, but there is no guarantee that the price paid will be justified subsequently by the earnings from the assets acquired – Foresight Solar’s Australian investments are an example.
- ▶ Revenue shortfalls: the three energy storage funds under review – Gore Street Energy Storage, Gresham House Energy Storage and Triple Point Energy Efficiency (still to acquire operational assets), as well as the more

wide-ranging SEEIT - are arguably more exposed to their revenue figures falling short of expectations.

- ▶ Missing NAV targets: falling short of NAV targets, for whatever reason, may well adversely impact a REIF's share price, especially if investors believe such a shortfall is not a one-off event; reduced long-term power price projections are often the cause.
- ▶ Low dividend cover: several REIFs are now reporting very thin dividend cover, which has led to some dividend payments being held – neither TRIG nor NextEnergy Solar plan to increase their dividends in 2021.
- ▶ Interest rate movements: any appreciable rise in interest rates would be negative for both the wind and solar generation sectors, as it would place upward pressure on the chosen discount rate and, therefore, on NAVs.
- ▶ Tax changes: as with every profitable business, tax changes can have an adverse impact – the UK Finance Act 2017 restricting tax relief on borrowing to 30% of EBITDA, along with the planned Corporation Tax increases in the 2021 Budget, being examples.
- ▶ Exchange rates: many REIFs, notably Aquila European Renewables, Downing Renewables and Infrastructure, Ecofin US Renewables Infrastructure, Greencoat Renewables, Octopus Renewables, SEEIT, TRIG and US Solar, are significantly exposed to exchange rate movements.
- ▶ Business Relief (BR) changes: currently, BR provides exemption from Inheritance Tax for most AIM shares that are held for at least two years; if this provision were to change, some REIF shareholders could become sellers as a result.
- ▶ Revised financial assumptions: assessing the NAVs of individual REIFs is not a precise art, with key decisions being made on the chosen discount rate – REIFs use different figures based on different criteria – and whether recent market transactions should materially impact individual NAV calculations.
- ▶ Political machinations: historically, the UK utilities sector has been very sensitive to political changes; however, following the decisive 80-seat majority achieved by the Conservative Party in the December 2019 General Election, this risk element has fallen away sharply.

## UK-quoted renewables

### AIC criteria

In defining REIFs, we have adopted the same criteria determined by members of the AIC. Within this group, there are 17 funds, four of which – Downing Renewables and Infrastructure, Ecofin US Renewables, Triple Point Energy Efficiency and Victory Hill GSEO – were recently the subject of IPOs.

The key market data of these 17 quoted funds are set out below.

UK-quoted REIFs			
REIF	Share price (p)	Market cap. (£m)	Prosp. yield
Aquila European Renewables	94	298	4.57%
Bluefield Solar	132	537	6.06%
Downing Renewables and Infrastructure	96	117	3.13%
Ecofin US Renewables Infrastructure (ex € to £)	74	93	0.00%
Foresight Solar	103	626	6.78%
Gore Street Energy Storage	107	154	6.54%
Greencoat Renewables (ex € to £)	100	739	5.22%
Greencoat UK Wind	127	2,508	5.65%
Gresham House Energy Storage	112	391	6.25%
JLEN	112	613	6.04%
NextEnergy Solar	98	575	7.19%
Octopus Renewables	110	385	4.55%
SEEIT	110	745	5.00%
TRIG	124	2,360	5.45%
Triple Point Energy Efficiency	102	102	1.96%
US Solar (ex \$ to £)	74	148	3.84%
Victory Hill GSEO	102	248	0.98%
<b>Total</b>		<b>10,639</b>	

*Note: Based on prices as at 17/03/2021; Source: Bloomberg, Hardman & Co Research*

### Iberdrola, RWE and SSE big renewables players

Beyond the REIFs, there are several UK companies with heavy exposure to the wind sector; these include the large international integrated energy businesses, such as Iberdrola and RWE, via the recently acquired Innogy, as well as the privatised SSE. However, while the valuations of SSE's wind plants have a marked impact on the company's overall valuation, its wide-ranging portfolio means that any significant sector developments are substantially diluted in overall terms.

### REIFs' two biggest hitters

There are two quoted REIFs, namely Greencoat UK Wind and TRIG, where UK wind output is pivotal in determining their cash generation and share rating. In total, this duo account for ca.45% of the 17 REIFs' total market capitalisation.

### TRIG is mainly wind

While Greencoat UK Wind has consistently been the most valuable REIF in recent years, TRIG, with a similar market capitalisation, has greater international reach. Following its 67MW Gronhult acquisition in Sweden, its latest capacity figure is 1,887MW, ca.90% of which are wind generation assets. It has recently acquired further onshore wind plants in France.



TRIG's recent international expansion has seen it acquire full ownership of the 213MW Jdraas onshore wind plant and a 75% stake in the Erstrask onshore wind plant. Both sites are in Sweden and represent major investments by TRIG.

Importantly, too, TRIG has acquired a 25% stake in the 330MW Gode 1 offshore wind project, which is located off the German coast in the North Sea. TRIG is widely expected to make further investments in offshore wind in both the Baltic Sea and the North Sea.

## REIFs revisited – a compendium

### TRIG's twin aims

Overall, TRIG's two key aims are:

- ▶ To provide investors with long-term stable dividends, while preserving the capital value of its investment portfolio.
- ▶ To invest in a diversified portfolio of renewable energy infrastructure assets in the UK and Northern Europe, with a focus on operating assets. Realising TRIG's European aspirations has been facilitated by the approval to raise the threshold to 65% for permissible investment outside the UK.

The chart below underlines the success of TRIG's investment policy, with a solid rise in its share price in the past five years.



Source: Refinitiv

Nonetheless, its recent acquisitions, notably in northern Europe, have certainly raised its international profile. Arguably, too, its overall risk profile has risen through its exposure to the Swedish market, where wholesale prices are generally below-average.

2021 dividend to be held, and discount rate down to 6.7%

TRIG's recent full-year 2020 results were notable for two reasons: first, due in part to a low dividend cover of just 1.13x, the 2021 dividend is to be held at the 2020 figure of 6.76p per share; secondly, the assumed discount rate was reduced to 6.7%, which gave rise to a £62.8m uplift to TRIG's valuation (at December 2019, the assumed discount rate was a more conservative 7.25%).

Greencoat UK Wind has very narrow investment window – UK and wind

Greencoat UK Wind, as its name implies, focuses exclusively on the UK wind sector, in which it is heavily invested. Its capacity, after recent acquisitions, is now 1,209MW. Its policy is narrowly defined as follows:



- ▶ To invest exclusively in operating UK wind farms, predominantly onshore, although offshore returns are now becoming more relevant.
- ▶ To "increase its dividend in line with the RPI".
- ▶ To "preserve capital on a real basis by re-investing excess cashflow in additional operating UK wind farms, and through prudent use of portfolio leverage".





The IPO of JLEN, formerly John Laing Environmental, took place in March 2014. Its origins derive from the eponymous building company. In recent years, it has been progressively increasing its energy portfolio, which is more widely spread than any other REIF.

#### Out of the John Laing stable

Currently, it has capacity of 309MW, 169MW of which is onshore wind, with all its plants – save for a small portfolio in France – being in the UK. JLEN has six solar plants, with a capacity of 80MW, all of which are UK-based, as well as 12MW of waste/waste water treatment capacity.

#### Anaerobic digestion focus

Exceptionally among the other REIFs, JLEN is well invested in Anaerobic Digestion (AD) facilities, with a UK capacity of 40MW. To date, these AD plants have earned good returns, since plant revenues are underpinned by payments from the Heat Incentive Scheme.

Looking forward, JLEN, in common with other REIFs, is struggling to find renewable energy projects that can achieve its desired returns commensurate with assuming the appropriate risks. Central to this search is Foresight Group, which is now the Investment Adviser to JLEN.

There are various quoted REIFs with major exposure to the solar sector. NextEnergy Solar and Bluefield Solar, in particular, offer a very undiluted investment in UK solar power.

#### Valuation benchmarks for unquoted solar sector

Consequently, both are ideal as sector benchmarks for unquoted solar generation portfolios, especially in terms of assessing underlying value.



In the case of NextEnergy Solar, it owned renewable generation capacity, as at March 2021, of 813MW. More than 95% of its capacity is in the UK, with the remainder sited in Italy.

Bluefield Solar's latest capacity figure is 613MW. The entire portfolio is based in – and is dependent upon – the UK.

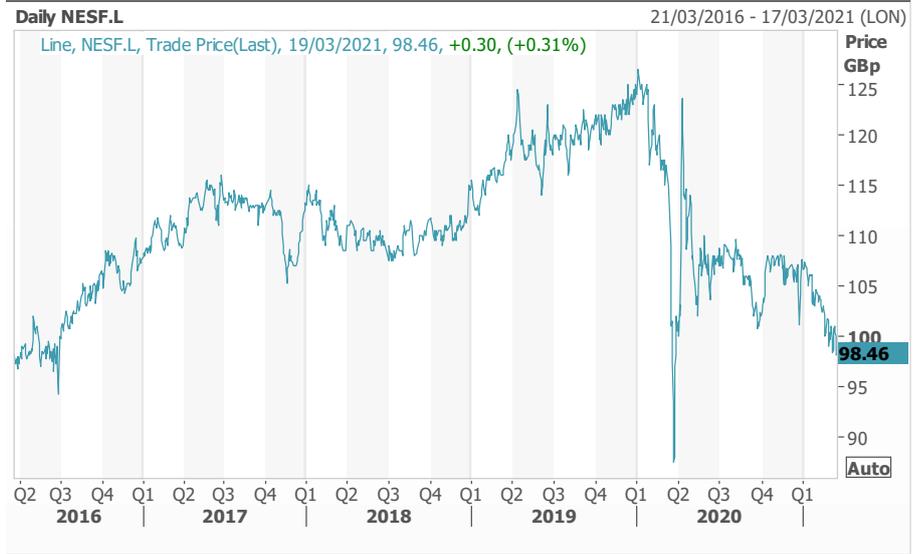
#### Some solar share price instability

NextEnergy Solar's shares have been less stable, with both a dip in 2015/16 and significant underperformance against the sector in recent months. Bluefield Solar's shares have rallied since the COVID-19-instigated market plunge in March 2020.

Significantly, NextEnergy Solar, at its IPO in 2014, assumed that power prices would be around a third higher than is currently the case. Nonetheless, its share price had risen steadily in the intervening years prior to the recent fall over the last year – down by almost 15%.

The charts below show how these two REIFs have performed over the past five years.

**NextEnergy Solar – five-year share price performance**



Source: Refinitiv

**Bluefield Solar – five-year share price performance**



Source: Refinitiv

50MW unsubsidised Staughton plant is pivotal

With the end of the RO for new plant in 2017, NextEnergy Solar and Bluefield Solar have built unsubsidised plants. In the former’s case, it plans to build up to 150MW of new solar capacity, 50MW of which relates to the now commissioned Staughton plant. In the latter’s case, it has built the smaller 10MW Clay Hill solar farm near Milton Keynes.

Economic viability of unsubsidised solar plants

There is some doubt about the economics of unsubsidised solar plants, with site selection being pivotal. Moreover, to reduce the merchant plant risk, there is a need to negotiate a favourable PPA – or a similar type of contract.

## REIFs revisited – a compendium

### Australian and Spanish investments

The third quoted solar generation REIF, Foresight Solar, is somewhat different, in that 146MW of its 994MW capacity is located in Australia, where there are prolonged and divisive debates about the merits of financing renewable generation projects. It has also recently acquired a 125MW solar plant portfolio in southern Spain, for which it paid €92m.



Nevertheless, Foresight Solar's core business remains in the UK, where it operates solar plants with a capacity of 723MW. Like other REIFs, Foresight Solar has weathered the COVID-19 pandemic without undue alarm, but its shares have performed sluggishly of late, due partly to lower power expectations, which have depressed its NAV. Indeed, its shares have seriously underperformed those of Bluefield Solar. Both Foresight Solar and Bluefield Solar undertook IPOs in 2013.

### Changes afoot?

Looking forward, changes may be afoot, as Foresight Solar's former parent company, Foresight Group, whose interests extend well beyond its core renewable energy sector, has recently undertaken an IPO. Its market capitalisation is now £444m.

### REIF sector's biggest guns

Undoubtedly, the three largest UK-quoted wind generators – including the Irish-based Greencoat Renewables – and the three solar generators form the backbone of the quoted REIF sector, which now comprises a membership of 17 funds. In market capitalisation terms, these six REIFs account for over 70% of the sector's overall value.

In assessing comparative capacity levels, the three quoted pure solar companies – Bluefield Solar, NextEnergy Solar and Foresight Solar – are included in the table below, along with Greencoat UK Wind, TRIG and JLEN. Plant capacity levels of these six REIFs are also shown in the table.

UK solar and wind capacity				
REIF	Installed capacity (MW)	UK	Solar	Wind
Bluefield Solar	613	100%	100%	0%
Foresight Solar	994	73%	100%	0%
Greencoat UK Wind	1,209	100%	0%	100%
JLEN	309	97%	26%	55%
NextEnergy Solar	813	96%	100%	0%
TRIG	1,887	58%	8%	91%

Source: Company websites

## Valuation issues

### NAV premia and discounts share price drivers

In valuing REIFs, movements in their NAVs are pivotal. Currently, for many quoted REIFs, there are significant premia over NAV, although this has not always been the case. With the recent surge in renewable energy activity, despite lower power prices, investors continue to be attracted to the sector, especially as more traditional energy investments have often performed poorly.

### Back-tracking NAVs

The table below tracks the latest published NAVs for the seven wind and solar generators under review, and compares them with those reported one year and two years previously.

The 2020 NAV figures quoted below are based upon the latest published data, namely from either September 2020 or December 2020. Most NAVs have been flat or have actually declined since December 2018, especially in the cases of Foresight Solar and NextEnergy Solar, which partly explains their share price underperformance against the sector over the last year.

## REIFs revisited – a compendium

### Historical NAV data

REIF	NAV at either 09/2020 or 12/2020 (p)	NAV at 12/2019 (p)	NAV at 12/2018 (p)	Current premium/discount to 12/2018 NAV
Bluefield Solar	117.1	116.6	113.3	+3.4%
Foresight Solar	95.8	103.6	111.2	-13.8%
Greencoat Renewables	€1.101	€1.031	€1.034	-2.3%
Greencoat UK Wind	122.2	121.4	123.1	-0.7%
JLEN	95.9	101.8	102.8	-6.7%
NextEnergy Solar	100.7	106.1	108.8	-7.4%
TRIG	115.3	115.0	108.9	+5.9%

Source: Hardman & Co Research

#### Lack of valuation consistency

In analysing the REIFs, and especially the more mature wind and solar generators, it is very apparent that there is a pronounced lack of consistency in setting individual fund valuation methodologies. Many of the key valuation tools, such as discount rates, future power price assumptions, inflation projections, asset lives and energy yields, *inter alia*, are – in many cases – inherently subjective.

#### Fluctuating power prices impact valuations

In terms of long-term power prices, for example, difficult judgments need to be made about future trends, which rely on a mix of inter-related factors, as last year's financial results for Greencoat UK Wind and TRIG demonstrate. To undertake this key task, REIFs outsource the work to the few credible energy forecasting organisations that are competent to undertake it – and meet the necessary technical standards.

#### The NAV drivers

To establish a credible NAV for a REIF, various factors need to be analysed at the outset. As a starting point, the gross asset value (GAV), say of a wind or solar generation plant, must be determined – funds vary somewhat as to how the opening figure is set.

Several other valuation parameters are then prescribed, which have a key influence on the NAV.

The most important are:

- ▶ discount rates;
- ▶ power prices;
- ▶ long-term inflation;
- ▶ asset lives;
- ▶ energy yields; and
- ▶ exchange risk.

Each of these key REIF valuation parameters is analysed below.

#### *Discount rates*

#### Discount rates are pivotal

The selected discount rate is, of course, key to the overall NAV – and indirectly to the share price rating. As such, investment managers accord a high priority to ensuring that the discount rate applied is appropriate – and properly reflects the many variables that determine it.

## REIFs revisited – a compendium

### Unlevered vs. levered

Accounting for the debt element is also important. Some REIFs hold debt at the group level, while others allocate it to individual renewable plants. In allowing for the impact of the debt component, some REIFs, such as NextEnergy Solar, ascribe different figures for levered and unlevered assets; the difference is generally at least 1%.

Importantly, so-called unlevered assets may be just that at the devolved level, but there is generally some debt at the group level, which does need to be accounted for.

### Country variations

Some REIFs accord different discount rates to their overseas assets. NextEnergy Solar, for example, uses a 6.25% discount rate for its unlevered UK assets, up to 7.25% for levered UK assets and 7.75% for its small Solis portfolio in Italy.

### Bluefield Solar's aggressive 6% and JLEN's wide range

Depending on various factors, including location and leverage, discount rates vary. They range from Bluefield Solar's aggressive 6.0% figure – down from 7.18% at June 2019 – to the 8.60% used by Foresight for its solar plants in Australia. The widest range is undoubtedly that of JLEN, where assets are discounted at between 5.5% and 9.2%.

The table below compares the weighted discount rates used by the seven leading wind and solar generation REIFs – along with some pertinent comments about the discount rate policy that individual REIFs have adopted. For various reasons, direct "read-across" analysis between the various discount rates and the valuation methodologies used by the seven REIFs, while not precluding some valid comparisons, is potentially misleading.

### Comparable discount rates

Discount rates of top leading REIFs		
REIF	Blended discount. rate	Comment
Bluefield Solar	6.00%	Was 7.18% at 06/2019.
Foresight Solar	6.74%	6.5% for levered UK assets, the Australian plants discounted at 8.60%.
Greencoat Renewables	6%-7%	Down by 0.2% in 2020.
Greencoat UK Wind	6.90%	ROC and merchant revenues valued differently.
JLEN	7.30%	Wide range of between 5.5% and 9.2%.
NextEnergy Solar	6.80%	6.25% for unlevered and 7.25% for levered UK assets; Italian Solis portfolio discounted at 7.75%.
TRIG	6.70%	Was 7.25% in 2019 – now more exposed to EU investments, with implications for its discount rate.

Source: Fund reports, Hardman & Co Research

### Read-across distortions

It should be noted that Greenfield UK Wind's discount rate is calculated on an unleveraged basis, a factor that materially distorts any direct read-across comparisons. Indeed, if Greencoat UK Wind were to use a leveraged discount rate, its figure would probably exceed 8%.

### Sharp variations

Greencoat UK Wind's conservative approach to the discount rate issue is undoubtedly one factor why its NAV premium had consistently been ahead of the REIF sector average, although lower power prices have trimmed its rating of late.

### Power prices

#### Power prices and “group think”

Clearly, long-term power prices are key drivers of the valuation of leading REIFs, along with the renewable subsidies that enhance them. Nonetheless, forecasting long-term power prices is complex, with many variable factors being part of the equation. Since very few organisations are equipped to undertake this detailed financial modelling work, it means that an element of “group think” is inevitable.

#### NextEnergy Solar prospers, despite far lower power prices

The fact that, at its IPO in 2014, NextEnergy Solar was forecasting that power prices would be materially higher than is currently the case underlines the unpredictability of this market. Conveniently, both the wind and solar generation sectors have been able to offset this downside by enhanced output and lower unit costs.

#### Sharp power price-driven writedowns

Most REIFs base their power price assumptions on their consultants’ modelled projections until 2050 – and then make appropriate adjustments to reflect their individual energy portfolio. That long-term power prices are key factors in NAV calculations has been demonstrated recently by both TRIG and Greencoat UK Wind:

- ▶ In its 2019/20 full-year results, TRIG took a £123.1m writedown, due to lower power price projections.
- ▶ In its 2020 half-year results, Greencoat UK Wind took a ca.£70m writedown, due to lower power price projections.

The table below compares the long-term power prices assumptions, all in real terms, of the leading REIFs.

#### Tight range to 2050

Comparative long-term power price assumptions	
REIF	Long-term power price assumption
Bluefield Solar	Blend of three power curves - £43 per MWh by 2050
Foresight Solar	Real prices to rise slightly to £49 per MWh by mid-2030s, before falling to £43 by 2050
Greencoat Renewables	€57 per MWh to 2030, €62 thereafter to 2040 (RoI only)
Greencoat UK Wind	Average £44.53 per MWh to 2050
JLEN	ca.£43 per MWh by 2050
NextEnergy Solar	£46.7 per MWh for UK plants and €46.5 for Italian plants until 2040
TRIG	£44/€42 per MWh between 2021/25 and £42/€46 from 2026 to 2050

Source: REIF Annual Reports

While the above projections are similar – perhaps not surprisingly, since some REIFs use the same energy consultants – they do illustrate the range within which long-term energy prices need to stay before marked changes to NAVs – either upwards or downwards – ensue. Any such movement would impact the underlying valuation of most of the 17 REIFs.

### Long-term inflation

#### Inflation may well be a mid-term concern

Despite very low inflation figures currently, inflation assumptions remain highly relevant for REIF valuation purposes. For many years, UK inflation has been both low and consistent. Clearly, if the UK inflation levels of the mid-1970s – which peaked at ca.26% in 1975 – were to recur, NAVs would be heavily impacted.

## REIFs revisited – a compendium

### Net debt well over £2tr

Given the recent surge in public borrowing, due primarily to the COVID-19 pandemic – with the UK’s net public debt now well over £2tr – the reappearance of endemic inflation certainly cannot be totally discounted, although gilt yields, and therefore financing costs, remain very low at present.

Furthermore, there is no consistency among the REIFs regarding their long-term inflation assumptions – a scenario not helped by the parallel existence, for the moment at least, of both RPI and CPI inflation benchmarks. Over a 30-year period, this disparity certainly has valuation implications.

### Varying inflation assumptions

The table below shows the variable long-term inflation assumptions of the leading REIF generators.

Long-term inflation rate assumptions	
REIF	Long-term inflation assumption
Bluefield Solar	3% to 06/2024, 2.75% thereafter
Foresight Solar	UK – 3% until 2030, 2.25% thereafter
Greencoat Renewables	CPI 2%
Greencoat UK Wind	RPI - 3.3% to 2030, 2.3% thereafter; CPI 2.3% from 2020 onwards
JLEN	2.75%
NextEnergy Solar	1.1% short-term, 3.0% long-term
TRIG	2.0% for EU, 2.75% for UK

*Source: Fund Annual Reports*

### Asset lives

#### Asset lives being stretched

Currently, most wind and solar generation assets have an accounting life of between 20 and 30 years. However, this figure is edging up, as Bluefield Solar’s extension to 40 years, for part of its solar portfolio, demonstrates. The leading REIFs have variable policies on the asset life issue, with some extending asset life assumptions following successful lease negotiations. Others accept that solar plants will become less productive as they near the end of their lives, and they adjust their assumptions accordingly.

### Energy yields

#### P90 vs. P50

Projected output figures over an extended period are also a key valuation issue. Since wind and solar generation output should be reasonably predictable in the medium and long term, this variable should not cause major fluctuations in the NAV, although both TRIG and Greencoat UK Wind highlight, in the charts below, the pronounced impact of P90 and P10 outcomes – the 90% probability output scenario vs. its 10% equivalent. However, there is some inconsistency among the leading REIFs, with the P90 benchmark being used in some cases, rather than the P50 yardstick.

### Exchange risk

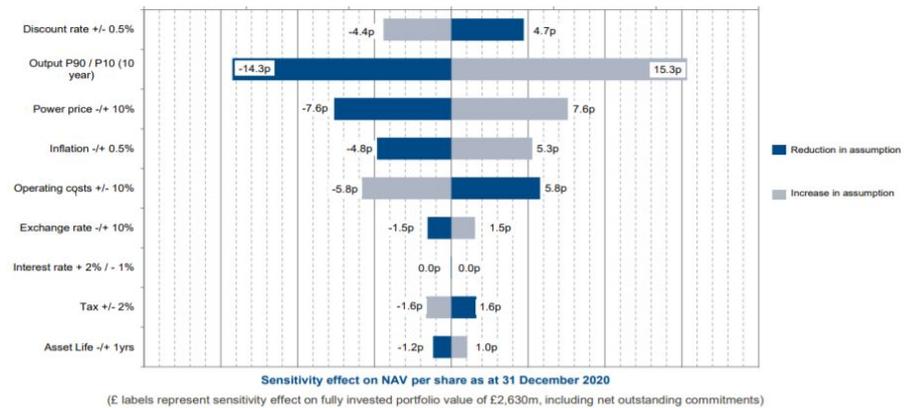
#### Exchange risk coming to the fore

In future years, the exchange risk will become increasingly relevant. Several REIFs, including the Irish-based Greencoat Renewables – its assets are Euro-denominated – and TRIG, have been expanding overseas recently. TRIG ascribes the impact of exchange rate movements to its NAV, although they are comparatively modest compared with output and power price fluctuations.

#### TRIG’s sensitivity analysis

TRIG, which – along with Greencoat UK Wind – leads the REIF sector, is now increasingly exposed to mainland EU markets, notably France, Germany and Sweden. It has recently published a summary of its sensitivity to key valuation assumptions, including those relating to future power prices.

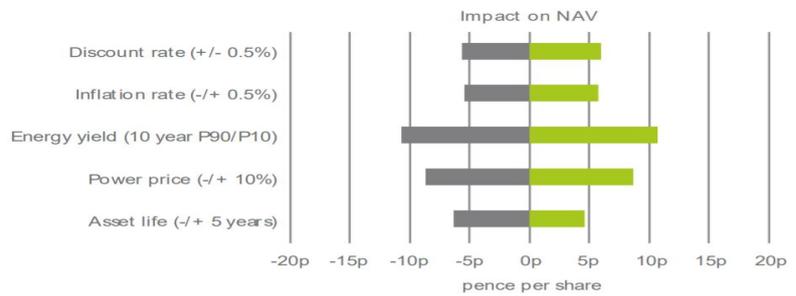
**TRIG – NAV sensitivities**



Notes: Inflation rate sensitivity assumes that power prices move with inflation, as well as subsidies that are indexed  
 Exchange rate sensitivity relates to the direct sensitivity of exchange rates changing, not the indirect movement relating to exposure gained through power prices  
 Source: TRIG

Greencoat UK Wind has also published a sensitivity analysis on NAV, assessing the impact of the above factors – it is reproduced below.

**Greencoat – NAV sensitivities**



Source: Greencoat UK Wind

## Dividends

The table below shows projected dividend payments and the relevant prospective yields for the REIF sector. Overall, the underlying prospective yield currently averages just under 6%. Despite several REIFs having low dividend cover, most are targeting modest annual dividend increases – a clear contrast with one of the UK's leading utilities, Centrica, which cut its dividend in 2019 by a formidable 58%.

Dividend profiles			
REIF	Financial year-end	Prospective dividend (p)	Prospective yield
Aquila European Renewables	December	4.30	4.57%
Bluefield Solar	June	8.00	6.06%
Downing Renewables and Infrastructure	December	3.00	3.13%
Ecofin US Renewables Infrastructure Solar	December	0	0.00%
Foresight Solar	December	6.98	6.78%
Gore Street Energy Storage	March	7.00	6.54%
Greencoat Renewables	December	5.21	5.22%
Greencoat UK Wind	December	7.18	5.65%
Gresham House Energy Storage	December	7.00	6.25%
JLEN	March	6.76	6.04%
NextEnergy Solar	March	7.05	7.19%
Octopus Renewables	December	5.00	4.55%
SEEIT	March	5.50	5.00%
TRIG	March	6.76	5.45%
Triple Point Energy Efficiency	March	2.00	1.96%
US Solar	December	3.96	3.84%
Victory Hill GSEO	December	1.00	0.98%

Source: Fund websites, Bloomberg

### REIF dividends look attractive vs. Centrica's 58% cut

Undoubtedly, the dividend payout record in recent years from the REIFs has been reassuring, especially given the intense pressure that UK energy stocks, such as Centrica, have faced. With the relative lack in the market of good-quality stocks on decent yields, and the many dividend cuts and/or suspensions by well-known quoted companies, it is hardly surprising that REIFs have attracted the interest of many discerning investors.

### Thin dividend cover in many cases

Nonetheless, there are abiding concerns about relative dividend cover ratios. In some cases – Foresight Solar, JLEN and NextEnergy Solar – their cash dividend cover is below 1.3x; indeed, JLEN recently confirmed, in its 1H'20/21 results, a dividend cover of just 1.1x. NextEnergy Solar has also trimmed its dividend payout expectations – with a held dividend forecast for 2021 – as lower power prices have cut its earnings projections. TRIG is in a similar position.

### Consistent NAV premia

Except for the period when the COVID-19 pandemic panic was at its height in March 2020, most REIFs have continued to trade at a significant premium to their NAV, in common with utilities such as regulated water stocks. Severn Trent is currently trading at a ca.20% premium to its RAV (a similar concept to NAV), despite the decidedly tougher regime imposed following the PR19 periodic review.

Whether this scenario continues depends on various factors, most notably major changes in power prices and any upward movement in interest rates.

## The other 10 REIFs

The remaining 10 REIFs under review all have markedly lower market capitalisations than the two sector leaders. They range from SEEIT, with a £745m market capitalisation, to the much smaller recent market entrants, Downing Renewables and Infrastructure, Ecofin US Renewables and Triple Point Energy Efficiency, all of which are currently valued at below £150m.

### Energy storage duo are different

In the cases of Gore Street Energy Storage and Gresham House Energy Storage, they do offer some characteristics of a typical REIF; indeed, they are listed as such under the AIC criteria. However, their business models and, more specifically, their cashflows are somewhat different from those of a relatively mature wind and solar generation business.

### Triple Point still to show its hand

Similar comments apply to SEEIT and sector newcomer, Triple Energy Efficiency Point, both of whom – while invested in the energy sector – have very distinct business models. The former has expanded aggressively overseas in several energy sub-sectors, while the latter still has to announce a major investment following its IPO last October.

Brief profiles of these 10 REIFs, focusing on their business aims, generation capacity and financial status, are provided below:



### *Aquila European Renewables*

Aquila European Renewables, which was floated in 2019, is based in Hamburg, Germany, a country that will see a very sharp increase in wind power investment – especially offshore – in the coming years, as its nuclear power plants are phased out. Wind power, solar power and hydro power assets are Aquila European Renewables' target markets.

Over the last two years, Aquila European Renewables has expanded aggressively and now has a generation capacity of 267MW. The Nordic Region, especially Norway, has emerged as its key market. Currently, it has 94MW of capacity in Norway, of which almost 55MW is accounted for by The Rocks onshore wind project. It also owns valuable assets at Olhava in Finland and Svindbaek in Denmark. In southern Europe, it has acquired a portfolio of hydro assets in Portugal, along with Albeniz, a 50MW onshore wind business, in southern Spain.

At the time of its IPO in May 2019, Aquila European Renewables raised €154m, which has been progressively invested in a diversified portfolio of renewable generation assets across mainland Europe, although not in the UK. More recently, in November 2020, it raised a further €127.5m.

### *Downing Renewables and Infrastructure*



Downing Renewables and Infrastructure has completed its first acquisition. It has bought eight hydro – mainly run-of-river – plants in Sweden, with a capacity of 26MW, from Fortum AB, for ca.€65m. Discussions are also under way regarding the acquisition of a ca.40% stake in a new wind plant project at Lake Vanern, also in Sweden.

As part of its IPO in December 2020, Downing Renewables and Infrastructure raised £122.5m of proceeds (gross), part of which it has used to finance its recent hydro plant portfolio in Sweden. If the planned acquisitions are completed, either new debt or a further fund raise are likely.



### *Ecofin US Renewables Infrastructure*

Ecofin US Renewables Infrastructures' priority has been to conclude the acquisition of its four seed portfolios; this has now been achieved. The 49.5% stake in two Californian solar plants, with a capacity of 108MW, is key in terms of its valuation. Seeds 2, 3 and 4, with a total capacity of 23MW, were completed earlier, so that Ecofin US Renewables Infrastructure is now the owner of several energy assets in Massachusetts. Further initiatives are expected now that Ecofin US Renewables Infrastructure has completed the acquisition of its seed portfolio.

At its IPO in December 2020, Ecofin US Renewables Infrastructure raised \$125m (gross). If further substantial acquisitions are undertaken, further fundraising – whether debt or equity – will be needed.

### *Gore Street Energy Storage*



This fund continues to invest in a diversified portfolio of utility-scale battery storage projects – it operates in the same space as Gresham House Energy Storage. More specifically, Gore Street Energy Storage uses battery cell technology to provide frequency balancing services to grid operators – an expanding market, given the well-publicised partial blackouts in parts of the UK in August 2019. Moreover, it is optimistic about revenue growth arising from its "dynamic containment" technical initiative.

Country-wise, Gore Street Energy Storage is focused on the UK and the Republic of Ireland; in both countries, it has been assembling a portfolio of battery storage investments. In terms of capacity, Gore Street Energy Storage now owns a total of 320MW, 110MW of which is operational. Currently, all the capacity is UK-based, except for the two 30% stakes in the 30MW Kilmannock and the 30MW Porterstown battery storage systems in the Republic of Ireland.

In terms of its finances, Gore Street Energy Storage has been raising funds – at times, with difficulty – to finance its expansion, in both the UK and the Republic of Ireland. The National Treasury Management Agency (NTMA), a Republic of Ireland public sector organisation, has been a cornerstone investor, although its shareholding is now 8.15%. In December 2020, proceeds of £60m (gross) were raised, which will help finance further deals.

### *Gresham House Energy Storage*



Gresham House Energy Storage is the larger of the two quoted REIFs in the energy storage sub-sector. Investing in battery storage systems is its core business, which enables it to provide frequency balancing services to grid operators. On the trading front, Gresham House Energy Storage expects to benefit from the many arbitrage opportunities that will inevitably arise as UK renewable generation output rises; the recent well-publicised short-term spikes in power prices provide an obvious example.

Gresham House Energy Storage now has 395MW of utility-scale battery storage assets at 16 different sites in England, after a pronounced build-up over the last two years. Once the completion of the 30MW Byers Brae plant in Scotland takes place, capacity will rise to 425MW.

Since its IPO in November 2018, Gresham House Energy Storage has undertaken subsequent fund raises, with the latest being in November 2020, which secured total proceeds of £120m (gross). There is a solid project pipeline in place, so that further fund raises are likely.

## octopus renewables

### *Octopus Renewables*

Octopus Renewables undertook its IPO in December 2019. In seeking to build up its portfolio, it is focusing on the wind and solar generation market. While the UK is expected to account for much of the investment, there are other countries of investment interest, including mainland Europe – with wind projects in the north and solar projects in the south – as well as Australia. Interestingly, Octopus Renewables has prescribed a maximum 60% exposure – by gross asset valuation – for both wind and solar investments.

To date, Octopus Renewables has acquired a total generation capacity of 315MW, of which 123MW is UK solar plant. A further 192MW of capacity has been bought overseas. The 120MW solar portfolio in France is the most significant overseas acquisition. Octopus Renewables has also acquired 48MW of wind capacity in Sweden. Looking forward, Octopus Renewables plans a major investment in a 175MW wind farm in Andalucía, Spain. It should be noted, too, that asset transfers from other Octopus funds may be undertaken; in such cases, independent valuations would be used.

Having raised proceeds of £350m (gross), there is no immediate need for additional funding, although Octopus Renewables has a formidable investment pipeline, some of which may necessitate, in time, further fundraising. However, the recent negotiation of a £150m revolving credit facility suggests that this will be its prime source of raising short-term funds.

## SEEIT

### *SEEIT*

SEEIT's focus is primarily on the UK/European and US energy efficiency markets, and it has been very active in seeking out – and investing in – deals that meet its investment criteria.

Having developed its seed capital portfolio, which originally comprised mainly CHP investments, SEEIT has announced further acquisitions. In the US, it has acquired – via its now 65% stake in Primary Energy – a 298MW portfolio of recycled energy and co-generation projects in Indiana. Elsewhere in the US, it is investing \$150m in ONYX, a solar generation and energy storage business with a capacity of over 175MW; it has projects in 18 states. In Europe, SEEIT has acquired a 125MW co-generation portfolio in Spain, comprising five CHP plants, two olive processing plants and two biomass plants. More recently, it has completed the £107m acquisition of the Gesnatet gas distribution business in Stockholm, Sweden.

Having raised £100m (gross) in December 2018, SEEIT has undertaken several equity raises subsequently. In 2020 alone, it undertook two fund raises, which secured a combined £215m (gross) of funding. With its aggressive acquisition programme, which seems set to continue, further fund raises are expected.

### *Triple Point Energy Efficiency*

Triple Point Energy Efficiency is focused on three specific sectors: low carbon heat (local and distributed); social housing retrofit and industrial energy efficiency; and distributed generation (hydro and solar). Given that all three of these sub-sectors are complex and that any deal will necessarily involve several parties, it is perhaps not surprising that no firm investment announcements have been forthcoming to date – its IPO took place in October 2020.

As part of its IPO, Triple Point Energy Efficiency raised £100m (gross) of proceeds; part of these proceeds seems likely to fund UK acquisitions in the specified fields within the next few months.





### *US Solar*

US Solar's declared aim is to invest in solar power assets, predominantly in the US, where many states offer attractive financial incentives for solar power development – the investment pipeline disclosed at listing included 14 opportunities, made up of more than 60 projects, located across 13 US states. While, in time, investments in Canada and Mexico are also possible, the focus is very much on states on the US east and west coasts, as well as in Utah.

To date, US Solar has assembled a portfolio of 443MW of solar generation capacity across 41 projects. When its sixth acquisition at Mount Signal 2 in California is completed – probably in two tranches – this figure will rise further. Within US Solar's portfolio, its largest investments now are its 177MW operational solar portfolio, bought from Heelstone Renewable Energy for just \$38m – but including the existing project level debt – and the 128MW solar power plant in Milford, Utah. US Solar now has generation facilities across five separate states.

In April 2019, as part of its listing on the London market, US Solar raised proceeds of \$200m (gross). Given its overtly expansionist aims, the issue of further equity is likely.



### *Victory Hill GSEO*

Victory Hill GSEO plans to “invest in a diversified portfolio of global sustainable energy infrastructure assets”. It has identified a seed portfolio – “the enhanced pipeline” – of potential investments, with a total investment cost of ca.£305m. The lead project is in the UK, which is predominantly a Carbon Capture and Storage (CCS) and CHP scheme. Other possible investments include a terminal storage scheme in the US, a standalone battery storage project in Australia and a solar power distribution network, also in Australia.

At its recent IPO, Victory Hill GSEO raised over £242m of gross proceeds, much of which seem destined to finance the seed portfolio. Given the size of the planned UK project, it will clearly be core to Victory Hill GSEO's future cashflow and very relevant to any further fundraising.

## Key REIF data

### Aquila European Renewables

Issue	Comments
Ticker/website	AERS / <a href="http://www.aquila-european-renewables-income-fund.com">www.aquila-european-renewables-income-fund.com</a>
Fund aim	“Will seek to generate stable returns, principally in the form of income distribution, by investing in a diversified portfolio of renewable energy infrastructure investments”
Core portfolio capacity	267MW – pan-European
Latest NAV/NAV per share	€317m (£273m)/86.0p
Market cap./share price	£298m/94p
Premium/discount to NAV	+9.3%
Dividend/yield	4.30p/4.6%
Return record	Shares have risen marginally since being first quoted in June 2019

*Source: Fund website, Bloomberg*

### Bluefield Solar

Issue	Comments
Ticker/website	BSIF / <a href="http://www.bluefieldsif.com">www.bluefieldsif.com</a>
Fund aim	“Acquisition management of a diversified portfolio of large-scale solar energy in the UK, with the objective of delivering long-term stable yield”
Core portfolio capacity	613MW – all UK solar
Latest NAV/NAV per share	£477m/117.1p
Market cap./share price	£537m/132p
Premium/discount to NAV	+12.7%
Dividend/yield	8.00p/6.1%
Return record	Since IPO in July 2013, total shareholder returns have averaged ca.10% per year

*Source: Fund website, Bloomberg*

### Downing Renewables and Infrastructure

Issue	Comments
Ticker/website	DORE / <a href="http://www.doretrust.com">www.doretrust.com</a>
Fund aim	Securing “a diversified portfolio of renewable energy generating assets and other infrastructure assets”
Core portfolio capacity	26MW – all Swedish hydro
Latest NAV/NAV per share	£120m/98p (est.)
Market cap./share price	£117m/96p
Premium/discount to NAV	0.0
Dividend/yield	3.00p/3.1%
Return record	n/a

*Source: Fund website, Bloomberg*

### Ecofin US Renewables Infrastructure

Issue	Comments
Ticker/website	RNEP / <a href="http://uk.ecofinvest.com">uk.ecofinvest.com</a>
Fund aim	“To provide shareholders with an attractive level of current distributions by investing in a diversified portfolio of mixed renewable energy and sustainable assets, predominantly located in the US”
Core portfolio capacity	77MW – all solar in US
Latest NAV/NAV per share	£90m/71.5p (est.)
Market cap./share price	£93m/74p
Premium/discount to NAV	+3.7%
Dividend/yield	0.0/n/a
Return record	n/a

*Source: Fund website, Bloomberg*

## REIFs revisited – a compendium

### Foresight Solar

Issues	Comments
Ticker/website	FSFL / <a href="http://foresight.group.eu">foresight.group.eu</a>
Fund aim	"To provide investors with a sustainable and inflation-linked quarterly dividend ...and it aims to preserve and, where possible, enhance capital value through the re-investment of excess cashflow"
Core portfolio capacity	994MW – 723MW is UK solar and 146MW is Australian solar
Latest NAV/NAV per share	£582m/95.8p
Market cap./share price	£626m/103p
Premium/discount to NAV	+7.5%
Dividend/yield	6.98p/6.8%
Return record	Since IPO in 2013, total shareholder return has averaged 5.9% per year <i>Source: Fund website, Bloomberg</i>

### Gore Street Energy Storage

Issues	Comments
Ticker/website	GSF / <a href="http://gsenergystoragefund.com">gsenergystoragefund.com</a>
Fund aims	"To focus on projects that are well-positioned for growth in strategic location with high barriers to entry and with a sustainable low operating cost structure" and "to generate value for our companies and investors beyond capital"
Core portfolio capacity	320MW of battery storage systems – mainly UK
Latest NAV/NAV per share	£136m (est.)/99.6p
Market cap./share price	£154m/107p
Premium/discount to NAV	+7.4%
Dividend/yield	7.00p/6.5%
Return record	Fund was floated in May 2018; shares have risen noticeably of late, despite some initial fundraising concerns <i>Source: Fund website, Bloomberg</i>

### Greencoat Renewables

Issues	Comments
Ticker/website	GRP / <a href="http://www.greencoat-renewables.com">www.greencoat-renewables.com</a>
Fund aim	"Initially to focus on investing in operating wind assets in Ireland.... over time, it will also target certain other Eurozone countries"
Core portfolio capacity	557MW of wind, mainly in the Republic of Ireland
Latest NAV/NAV per share	€749m (£644m)/86.9p
Market cap./share price	£739m/100p
Premium/discount to NAV	+14.8%
Dividend/yield	ca.6.06c (5.21p)/5.2%
Return record	Following a lacklustre performance, after fund was first quoted in 2017, shares have rallied recently <i>Source: Fund website, Bloomberg</i>

### Greencoat UK Wind

Issue	Comments
Ticker/website	UKW / <a href="http://www.greencoat-ukwind.com">www.greencoat-ukwind.com</a>
Fund aim	It "invests in UK wind farms" and "seeks to provide investors with an annual dividend that increases in line with RPI inflation whilst preserving the capital value of its investment portfolio in the long term"
Core portfolio capacity	1,209MW – all UK wind
Latest NAV/NAV per share	£2,230m/122.2p
Market cap./share price	£2,508m/127p
Premium/discount to NAV	+3.9%
Dividend/yield	7.18p/5.6%
Return record	Since IPO in March 2013, total shareholder return has been 102% <i>Source: Fund website, Bloomberg</i>

## REIFs revisited – a compendium

### Gresham House Energy Storage

Issue	Comments
Ticker/website	GRID / <a href="http://greshamhouse.com">greshamhouse.com</a>
Fund aim	"To provide investors with an attractive and sustainable dividend over the long term by investing in a diversified portfolio of utility-scale operational energy storage systems"
Core portfolio capacity	395MW of UK battery storage systems
Latest NAV/NAV per share	£236m/100.8p
Market cap./share price	£391m/112p
Premium/discount to NAV	+11.1%
Dividend/yield	7.00p/6.2%
Return record	Fund first quoted in November 2018; shares have recovered strongly since COVID-19 crisis began

*Source: Fund website, Bloomberg*

### JLEN

Issue	Comments
Ticker/website	JLEN / <a href="http://jlen.com">jlen.com</a>
Fund aim	"To provide shareholders with a sustainable dividend paid quarterly, that increases progressively in line with inflation and to preserve the capital value of its portfolio on a real basis over the long term"
Core portfolio capacity	309MW, 55% of which is wind and 26% solar – almost entirely UK
Latest NAV/NAV per share	£524m/95.9p
Market cap./share price	£613m/112p
Premium/discount to NAV	+16.8%
Dividend/yield	6.76p/6.0%
Return record	Since IPO in March 2014, total shareholder return has been 8.5% per year%

*Source: Fund website, Bloomberg*

### NextEnergy Solar

Issue	Comments
Ticker/website	NESF / <a href="http://www.nextenergysolarfund.com">www.nextenergysolarfund.com</a>
Fund aim	"Seeks to provide investors with a sustainable and attractive dividend that increases in line with RPI over the long term. In addition, the company seeks to provide investors with an element of capital growth..."
Core portfolio capacity	813MW of solar capacity, mainly in the UK, but with a small Italian portfolio
Latest NAV/NAV per share	£591m/100.7p
Market cap./share price	£575m/98p
Premium/discount to NAV	-2.7%
Dividend/yield	7.05p/7.2%
Return record	Since IPO in 2014, total shareholder return has averaged 7.1% per year

*Source: Fund website, Bloomberg*

### Octopus Renewables

Issue	Comments
Ticker/website	ORIT / <a href="http://www.octopusrenewablesinfrastructure.com">www.octopusrenewablesinfrastructure.com</a>
Fund aim	"Seeks to provide investors with an attractive and sustainable level of income returns, with an element of capital growth by investing in a geographically and technology-diversified spread of renewable energy assets"
Core portfolio capacity	315MW – pan-European assets
Latest NAV/NAV per share	£344m/98.3p
Market cap./share price	£385m/110p
Premium/discount to NAV	+11.9%
Dividend/yield	5.00p/4.6%
Return record	Has performed well since its IPO in 2019

*Source: Fund website, Bloomberg*

## REIFs revisited – a compendium

### SEEIT

Issue	Comments
Ticker/website	SEIT/ <a href="http://www.seeitplc.com">www.seeitplc.com</a>
Fund aim	“To provide an attractive total return for shareholders of 7%-8% per annum .... with a stable dividend income, capital preservation and the opportunity for capital growth”
Core portfolio capacity	SEEIT has built up a diversified international portfolio of energy assets
Latest NAV/NAV per share	£693m (est.)/102p
Market cap./share price	£745m/110p
Premium/discount to NAV	+7.8%
Dividend/yield	5.50p/5.0%
Return record	Despite an aggressive acquisition policy, share price has edged upwards <i>Source: Fund website, Bloomberg</i>

### TRIG

Issue	Comments
Ticker/website	TRIG / <a href="http://trig-ltd.com">trig-ltd.com</a>
Fund aim	“To invest principally in a diverse range of operational renewable energy infrastructure assets, with a focus on the UK and other parts of Northern Europe...and to seek to provide an attractive long-term income-based return with a positive correlation to inflation”
Core portfolio capacity	1,887MW of capacity, 91% wind and 8% solar – UK, France, Germany and Sweden are key markets
Latest NAV/NAV per share	£2,213m/115.3p
Market cap./share price	£2,360m/124p
Premium/discount to NAV	+7.5%
Dividend/yield	6.76p/5.5%
Return record	Since IPO in 2013, total shareholder return has averaged 8.1% per year <i>Source: Fund website, Bloomberg</i>

### Triple Point Energy Efficiency

Issue	Comments
Ticker/website	TEEC / <a href="http://tenergyefficiency.com">tenergyefficiency.com</a>
Fund aim	“The company’s investment objective is to generate a total return for investors comprising sustainable and growing income and capital growth”
Core portfolio capacity	Nil
Latest NAV/NAV per share	£99m/99p (est.)
Market cap./share price	£102m/102p
Premium/discount to NAV	+3.0%
Dividend/yield	2.0p/2.0%
Return record	n/a <i>Source: Fund website, Bloomberg</i>

### US Solar

Issue	Comments
Ticker/website	USFP / <a href="http://www.ussolarfund.co.uk">www.ussolarfund.co.uk</a>
Fund aim	“To provide its shareholders with attractive and sustainable dividends, with an element of capital growth, through investing in a diversified portfolio of solar power assets located in North America and other OECD countries in the Americas”
Core portfolio capacity	443MW of solar plant in US
Latest NAV/NAV per share	\$194m (£140m)/69.8p
Market cap./share price	£148m/74p
Premium/discount to NAV	+6.2%
Dividend/yield	\$5.50/(3.96p)/3.8%
Return record	Following recent decline, shares now trading similar to IPO price in April 2019 <i>Source: Fund website, Bloomberg</i>

## Victory Hill

Issue	Comments
Ticker/website	VICT / <a href="http://victory-hill.com">victory-hill.com</a>
Fund aim	"Seeks income yield and NAV growth by investing in stable, yielding, sustainable energy infrastructure investments that are in operation, in construction or "ready-to-build"..."
Core portfolio capacity	Nil
Latest NAV/NAV per share	£238m/98.0p (est.)
Market cap./share price	£248m/102p
Premium/discount to NAV	+4.1%
Dividend/yield	1.00p/1.0%
Return record	n/a

Source: Fund website, Bloomberg

## Key data for UK Infrastructure Investment Companies

### Seven stocks in sector, led by HICL

Currently, there are seven quoted UK Infrastructure Investment Companies; they are capitalised at a total £12.8bn, with HICL at £3.3bn, INPP at £2.7bn and 3i Infrastructure at £2.6bn, being the most valuable in the sector. The newcomer to the sector, Cordiant Digital, is currently capitalised at £370m.

While there are some valid comparisons with the leading REIFs, the reality is that these Infrastructure Investment Companies are far more wide-ranging in their activities. HICL, for example, has ca.117 separate investments.

Nevertheless, to provide an element of “read-across”, an analysis of six of these Infrastructure Investment Companies, along with their key financial data, is presented below. Cordiant Digital is discussed on p.61.

### *3i Infrastructure*



**Investment sectors:** 3i Infrastructure’s investments are wide-ranging, but its focus lies on mid-market economic infrastructure investments – within a typical equity range of £100m to £300m. 3i Infrastructure periodically recycles its portfolio assets. Early in 2020, it sold its very profitable 93% stake in WIG and its UK Projects investments for a combined total of ca.£580m.

**Fund aims:** “To provide shareholders with a total return of 8% to 10% per annum to be achieved over the medium term, with a progressive annual dividend per share”.

**Portfolio:** 3i Infrastructure owns a portfolio comprising 20 investments. Based on asset value, 40% of the total is accounted for by utilities, while transport and communications (effectively the Norwegian Tampnet fibre infrastructure business) represent 22% and 13%, respectively. The UK-based waste business, Infinis, is the largest single investment, at 16%. In terms of jurisdiction, the assets are split quite widely, with 21% covering the Netherlands, 19% France and 16% the UK. Lower weightings are applicable to Norway and Belgium, with 13% and 11%, respectively.

**Latest results:** 3i Infrastructure published its half-year results for 2020/21 in November 2020. The figures were generally reassuring, even though TCR, an aviation-related business, was adversely affected by COVID-19. Low oil prices also depressed returns. Importantly, there was confirmation of a £355m net cash position, some of which will be used to finance new investment and some of which will enable higher dividends to be paid. The 9.8p per share dividend target for 2020/21 represents an impressive 6.5% of year-on-year growth. 3i Infrastructure’s latest income statement is shown in the table below.

**3i Infrastructure – half-year income statement, 2020/21**

£m	to 30/09/2020	to 30/09/2019
<b>Net gains on investment</b>	<b>73</b>	<b>85</b>
Investment income	43	55
Fees payable on investment activities	0	-1
Interest receivable	6	0
<b>Investment return</b>	<b>122</b>	<b>139</b>
Movement in FV of derivative instruments	-24	-15
Management, advisory and performance fees	-12	-15
Operating expenses	-1	-1
Finance cost	-1	-1
<b>Profit before tax</b>	<b>84</b>	<b>107</b>
Income taxes	0	0
<b>Profit after tax and profit for the year</b>	<b>84</b>	<b>107</b>
<b>Total comprehensive income for the year</b>	<b>84</b>	<b>107</b>
<b>EPS (basic and diluted, p)</b>	<b>9.4</b>	<b>13.3</b>

Source: 3i Infrastructure, Hardman & Co Research

**3i Infrastructure – databox**

Ticker/website	3IN / <a href="http://www.3i-infrastructure.com">www.3i-infrastructure.com</a>
Key sectors	Utilities, transportation
Portfolio	20 infrastructure assets
Latest NAV/NAV per share (09/20)	£2,312m/259.4p
Market cap./share price	£2,603m/292p
Premium/discount to NAV	+12.6%
Prospective DPS/yield	9.80p/3.4%
Return record	Since IPO in 2007, total shareholder return has averaged 12.7% per year

Source: 3i Infrastructure, Hardman & Co Research

**BBGI**


**Investment sectors:** BBGI is a diversified social infrastructure company. It seeks to invest in long-term, low-risk essential infrastructure investments that deliver stable, predictable cashflows. Most of its investments are via Public, Private Partnerships (PPP) or derivatives thereof – and all are availability-based, not demand-based, supported by government-backed revenues.

**Fund aims:** BBGI follows “a low-risk, globally diversified and internally managed investment strategy to deliver long-term predictable returns to our shareholders. We target an internal rate of return (IRR) in the region of 7%-8% on the IPO price of 100p per ordinary share”.

**Portfolio:** Within its 49-strong asset portfolio, investment in bridges and roads features prominently. Crucially, the portfolio concentrates on low-risk, public sector-financed, availability-based infrastructure investments. Its two leading markets are the UK and Canada, but the US is also important for BBGI.

**Latest results:** BBGI has reported its results for the half-year ending June 2020; the key details are shown below. BBGI’s 2020 full-year results are due on 25 March 2021. While there have been some Fair Value (FV) adjustments, BBGI’s NAV has continued to grow in recent years – total shareholder returns have increased by 10.6% per year since the IPO in 2011. A full-year dividend of 7.18p per share is expected.

**BBGI – half-year income statement, 2020**

£000	to 30/06/2020	to 30/06/2019
<b>Operating income</b>	<b>36,846</b>	<b>42,797</b>
<b>Operating expenses</b>	<b>-10,721</b>	<b>-10,363</b>
Operating profit	26,125	32,434
<b>Profit before tax</b>	<b>19,151</b>	<b>25,741</b>
<b>Profit from continued operations</b>	<b>17,654</b>	<b>24,341</b>
<b>EPS (basic and diluted, p)</b>	<b>2.80</b>	<b>3.86</b>

Source: BBGI, Hardman & Co Research

**BBGI – databox**

Ticker/website	BBGI / <a href="http://www.bb-gi.com">www.bb-gi.com</a>
Key sectors	Roads, bridges
Portfolio	49 investments
Latest NAV/NAV per share (06/20)	£861m/136.4p
Market cap./share price	£1,111/167p
Premium/discount to NAV	+22.4%
Prospective DPS/yield	7.18p/4.3%
Return record	Since IPO in 2011, total shareholder return has averaged 10.6% per year

Source: BBGI, Hardman & Co Research

For more information about BBGI, please see our research report published in December 2020, '[Delivering NAV and dividend growth since 2011](#)'.

### GCP Infrastructure

**Investment sectors:** GCP Infrastructure, along with GCP Asset Backed, is one of two quoted GCP/Gravis closed-ended investment funds, while GCP Student Loans is a FTSE-250 REITs fund. All three are quoted, with their latest market capitalisations being £906m, £483m and £713m, respectively. GCP Infrastructure seeks "to create a diversified portfolio of debt and similar assets secured against UK infrastructure projects". It focuses on debt investments in the renewable generation sector and in PPP schemes.

**Fund aims:** GCP Infrastructure aims to "provide shareholders with regular, sustained, long-term dividends and to preserve the capital value of its investment assets over the long term".

**Portfolio:** GCP Infrastructure holds 49 Investments, with an average life of 14 years – all are located in the UK. Most notably, it has heavy exposure to the renewable energy sector, with onshore wind investment at 11 separate sites. These wind farms represent 21% of its portfolio. Solar generation is also a core business – it accounts for 20% – and there is some exposure to the biomass market, which has faced certain raw material challenges of late, due to COVID-19. Outside the energy sector, GCP Infrastructure has 25% of its investment value tied up within PPPs. Supported living projects account for a further 15%.

**Latest results:** In its full-year results for the period ending in September 2020, GCP Infrastructure showed the extent to which it had been adversely impacted by lower long-term power prices, which caused a 6.6p per share cut in earnings. Cashflows are under pressure, and GCP Infrastructure is finding it increasingly hard to grow its business, as PF1 and PF2 (Private Finance Initiatives) are no longer the government's favoured procurement vehicles. The progressive phasing-out of renewable subsidies is also a negative factor for GCP Infrastructure. Hence, having paid an annual dividend of 7.6p for seven consecutive years, it has now cut this figure to 7p. GCP Infrastructure has also confirmed NAV of 102.7p per share as at December 2020 – a decline of almost 10p per share when compared with the December 2018 NAV figure. At face value, the full-year results for 2019/20 compare poorly with the 2018/19 figures – due to heavy FV adjustments; they are set out below.



**GCP Infrastructure – full-year income statement, 2019/20**

£000	to 30/09/2020	to 30/09/2019
<b>Income</b>		
Net income/gains on FV financial assets	15,987	63,662
Other income	9	11,300
<b>Total income</b>	<b>15,996</b>	<b>74,962</b>
<b>Expenses</b>		
Investment advisory fees	-8,420	-8,789
Operating expenses	-3,650	-2,662
Total expenses	-12,070	-11,451
<b>Total operating profit before finance costs</b>	<b>3,926</b>	<b>63,511</b>
Finance costs	-4,652	-4,399
<b>Total profit and income for the period</b>	<b>-726</b>	<b>59,112</b>
<b>EPS (basic and diluted, p)</b>	<b>-0.08</b>	<b>6.74</b>

Source: GCP Infrastructure, Hardman & Co Research

**GCP Infrastructure – databox**

Ticker/website	GCP/ <a href="http://www.graviscapital.com">www.graviscapital.com</a>
Key sectors	Renewable energy, PPP, social housing
Portfolio	11 wind plants and many solar units
Latest NAV/NAV per share (12/20)	£904m/102.7p
Market cap./share price	£906m/103p
Premium/discount to NAV	+0.3%
Prospective DPS/yield	7.0p/6.8%
Return record	Since its IPO in 2010, total shareholder return has averaged 8% per year

Source: GCP Infrastructure, Hardman & Co Research

### HICL Infrastructure



**Investment sectors:** HICL Infrastructure has a very extensive range of investments across many sectors. Significantly, almost three quarters of its investments are in PPPs, with a similar percentage of its assets being in the UK. It has also been attracted by demand-based investments.

**Fund aims:** “To deliver long-term, stable income from a well-diversified portfolio of infrastructure investments positioned at the lower end of the risk spectrum”.

**Portfolio:** HICL Infrastructure has the largest and widest range of the seven Infrastructure Investment Companies under review, with no less than 117 separate investments. This portfolio has been built up over a sustained period at a cost of £2.8bn, of which £2.4bn has been equity-financed. Importantly, in terms of risk, PPP schemes now account for 72% of these assets, while the demand-based component is 19%.

HICL Infrastructure’s favoured sectors are health and transport, both of which account for ca.30% of its total portfolio value. Education and accommodation also feature prominently, with their shares being 14% and 13%, respectively. Importantly, it also has significant demand-based investments, including HS1 (which has seen demand plummet in recent months), the Northwest Parkway in Colorado, US, and the A63 motorway in SW France.

HICL Infrastructure’s portfolio is heavily slanted to the UK, which accounts for 74% of its investments, with 19% of the remainder in mainland EU. Its North American exposure is modest.

**Latest results:** HICL Infrastructure has published its half-year results for 2020/21. Despite the challenging operating environment, the income and earnings lines showed growth of ca.25%. Nevertheless, with a cash/dividend cover for the

2020/21 half-year of just 0.83x, HICL Infrastructure has decided to hold its dividend at 8.25p – rather than to increase it, as intended previously. Furthermore, HICL Infrastructure has confirmed that the 8.25p dividend payment figure has also been assumed for 2021/22; hence, an unchanged dividend for three years.

#### HICL Infrastructure – full-year income statement, 2019/20

£m	to 30/09/2020	to 30/09/2019
Total income (IFRS basis)	105.5	80.6
Fund expenses	-1.5	-1.3
Profit before tax	104.0	79.3
Earnings	104.0	79.3
Earnings per share (basic and diluted, p)	5.5	4.4

Source: HICL Infrastructure, Hardman & Co Research

#### HICL Infrastructure – databox

Ticker/website	HICL / <a href="http://www.hicl.com">www.hicl.com</a>
Key sectors	Health, transport
Portfolio	117 assets
Latest NAV (09/20)/NAV per share	£2,982m (IFRS)/154.0p
Market cap./share price	£3,274m/169p
Premium/discount to NAV	+9.7%
Dividend/yield	8.25p/4.9%
Return record	Since IPO in 2006, total shareholder return has averaged ca.9% per year

Source: HICL Infrastructure, Hardman and Co Research

#### INPP

**Investment sectors:** INPP's origins lie with Babcock & Brown, an Australian Investment Bank. INPP is very long-term-orientated, with an investment life span of some 34 years. Its focus has been very much on the energy sector, and especially on gas transportation and electricity transmission.

**Fund aims:** "We aim to provide our investors with long-term, inflation-linked returns by growing our dividend and creating the potential for capital appreciation".

**Portfolio:** INPP's key investments are in the utilities sector, notably in its offshore electricity transmission operations and in its Cadent gas distribution business; these two components account for ca.40% of its portfolio. However, its biggest single investment is in the 25km Tideway super sewer, alongside the River Thames. Much of the remainder of the portfolio is made up by transport and education investments, including 267 schools. These two sectors account for ca.20% each.

In terms of location, the UK is INPP's key market, with almost 75% of its portfolio being sited here. Of the remainder, Australia and Belgium (the latter with its Diabolo rail link contract to service Brussels airport) account for 9% and 8%, respectively.

**Latest results:** While asset availability, at 99.6%, is undoubtedly impressive, INPP confirmed, in its 1H'20 income statement, that it had been adversely impacted by some COVID-19 issues with the Tideway super sewer project, which have caused delays, and, not surprisingly, by a major fall-off in demand on its Diabolo rail link to Brussels airport: the latter's revenue is very dependent on rail passenger numbers. INPP has recently agreed to invest a further €10m in the business and to provide a contingency commitment of €14m for it. In its 1H'20 income statement, there were also several FV adjustments that distorted the underlying numbers.



**INPP – half-year income statement, 2020**

£000	to 30/06/2020	to 30/06/2019
Interest income	39,775	36,533
Dividend income	17,439	22,654
Net change in investment at FV via P&L	-1,418	40,427
<b>Total investment income</b>	<b>55,796</b>	<b>99,614</b>
Other operating income/expenses	-4,251	745
<b>Total income</b>	<b>51,545</b>	<b>100,359</b>
Management costs	-13,027	-11,607
Administration costs	-852	-945
Transaction costs	-150	-2,449
Directors' fees	-209	-198
<b>Total expenses</b>	<b>-14,238</b>	<b>-15,199</b>
<b>Profit before finance costs and tax</b>	<b>37,307</b>	<b>85,160</b>
Finance costs	-1,888	-1,480
Profit before tax	35,419	83,680
Tax credit	171	37
<b>Profit for the period</b>	<b>35,590</b>	<b>83,717</b>
EPS (basic and diluted, p)	2.21	5.64

Source: INPP, Hardman &amp; Co Research

**INPP – databox**

Ticker/website	INPP / <a href="http://www.internationalpublicpartnerships.com">www.internationalpublicpartnerships.com</a>
Key sectors	Energy, transport and education
Portfolio	Electricity, gas and water assets
Latest NAV/NAV per share (06/20)	£2,409m/149.2p
Market cap/share price	£2,675m/165p
Premium/discount to NAV	+10.6%
Prospective DPS/yield	7.36p/4.5%
Return record	Since IPO in 2006, total shareholder return has averaged 8.9% per year

Source: INPP, Hardman and Co Research

*Sequoia Economic Infrastructure*

**Investment sectors:** Sequoia Economic Infrastructure is a specialist investor in economic infrastructure debt. It runs a portfolio of debt – 93% of which is private – and bond investments, with generally shorter timeframes than those of other quoted infrastructure investment companies.

**Fund aims:** “To provide investors with regular, sustained, long-term distributions and capital appreciation from a diversified portfolio of senior and subordinated economic infrastructure debt investment”.

**Portfolio:** Currently, Sequoia Economic Infrastructure has over 70 investments, across eight sectors. In terms of asset allocation, transport is the largest component, at over 31%, with technology, media and telecom (TMT) at 15%, and power at 13%. Accommodation and renewables account for ca.11% each of the portfolio.

Sequoia Economic Infrastructure has diversified across many mature jurisdictions. Slightly under half of its assets are in North America, with a further 30% being located in Europe. The UK component represents 19%, with just two major investments – Infinis, the waste business, and the Bannister healthcare accommodation scheme; the latest values are £65.0m and £41.6m, respectively.

**Latest results:** Sequoia Economic Infrastructure’s half-year results for 2020/21 were much improved on the 2019/20 full-year results, which had been heavily distorted by the application of FV accounting to both its non-derivative and derivative financial assets. NAV recovered sharply from the March 2020 COVID-19-dominated figures, which had also suffered from plunging oil prices. Sequoia Economic Infrastructure’s board has undertaken a “comprehensive portfolio and Balance Sheet review”. With an improving economy, recovering oil prices, a very

recently completed £110m (gross) placing (omitted from the NAV figure reproduced below), and better news on the lending front, Sequoia Economic Infrastructure's prospects now look decidedly brighter.

Sequoia Economic Infrastructure – half-year income statement, 2020		
£	to 30/09/2020	to 30/09/2019
<b>Revenue</b>		
Net gains on non-derivative financial assets at FV	82,993,765	64,525,295
Net gains (losses) on derivative financial assets at FV	16,586,260	-48,152,440
Investment income	18,031,334	42,035,685
Net foreign exchange loss	524,882	-1,361,595
<b>Total revenue</b>	<b>118,136,241</b>	<b>-57,046,945</b>
<b>Expenses</b>		
Investment adviser fees	5,583,041	4,849,982
Investment manager fees	172,804	178,366
Directors' fees and expenses	123,327	113,723
Other professional fees	1,117,583	926,465
Other expenses	106,176	243,799
<b>Total operating expenses</b>	<b>7,102,931</b>	<b>6,312,335</b>
Loan finance costs	1,802,530	2,825,180
<b>Total expenses</b>	<b>8,905,461</b>	<b>9,137,515</b>
<b>Loss/profit and comprehensive loss/income for the year</b>	<b>109,230,780</b>	<b>47,909,430</b>
<b>EPS (basic and diluted, p)</b>	<b>6.60p</b>	<b>4.10p</b>

Source: Sequoia Economic Infrastructure, Hardman & Co Research

Sequoia Economic Infrastructure – databox	
Ticker/website	SEQI / <a href="http://www.seqifund.com">www.seqifund.com</a>
Key sectors	Economic infrastructure debt
Portfolio	Transport, TMT, power
Latest NAV/NAV per share (12/20)	£1,685m/101.6p
Market cap/share price	£1,851m/105p
Premium/discount to NAV	+3.3%
Prospective DPS/yield	6.25p/6.0%
Return record	Since IPO in 2015, total shareholder return has been ca.6.5%

Source: Sequoia Economic Infrastructure, Hardman and Co Research

Cordiant Digital and Foresight Group – warrant a mention, given that both have undertaken IPOs of late, although the latter is not listed under the AIC infrastructure head.

#### Cordiant Digital's popular IPO

In the case of Cordiant Digital, which is listed by the AIC as an Infrastructure Investment Company, it recently raised £370m in an IPO that saw material oversubscription. Some of the funds raised are destined to be invested in operating digital infrastructure assets, with a predominant focus on data centres, mobile telecommunications and fibre-optic network assets. The target markets are the UK, the EEA, the US and Canada.

#### Foresight Group has also undertaken an IPO

Another major player in the quoted UK infrastructure sector is Foresight Group, which recently undertook an IPO. It is now valued at £444m. However, its core business is managing its 292 infrastructure assets, which account for ca.70% of its revenues, and its 104 private equity holdings. Foresight Group, which does not have a declarable stake in Foresight Solar, is focused on the renewable energy market, especially in the UK, where most of its assets are located.

The table below shows the latest NAVs per share for each of the seven Infrastructure Investment Companies under review, except for the newcomer, Cordiant Digital. BBGI's rating is particularly noteworthy, given the very high premium – 22.4% – over its NAV.

## REIFs revisited – a compendium

Latest NAV data					
	NAV per share (p)		Share price (p)		Premium/discount to NAV
<b>3i</b>	259	V	292	=	+12.6%
<b>BBGI</b>	136	V	167	=	+22.4%
<b>GCP</b>	103	V	103	=	+0.3%
<b>HICL</b>	154	V	169	=	+9.7%
<b>INPP</b>	149	V	165	=	+10.6%
<b>Sequoia</b>	102		105		+3.3%

Source: Hardman & Co Research

### 3i Infrastructure's impressive performance

In the case of 3i Infrastructure, which has a somewhat different risk profile compared with the six other Infrastructure Investment Companies, its five-year share price performance has been very robust, as the graph below demonstrates.



Source: Refinitiv

### Wider diversification

Importantly, the larger Infrastructure Investment Companies have far greater diversification, which limits their exposure to any single adverse event, such as HICL's ill-fated investment in the collapsed Carillion. Nonetheless, several have invested heavily in controversial Private Finance Initiatives (PFIs) and related schemes in the UK, whose standing has been badly impaired by the collapse of support service companies such as Carillion and Interserve.

### Labour Party and PFI

In fact, the current government has cut back sharply on this method of financing public sector construction projects. Since the Labour Party was heavily defeated at the last General Election in 2019, its trenchant views on PFI and related financing structures are – for the moment at least – somewhat academic.

### The HS2 project – under deepest of reviews

Several Investment Infrastructure Companies are exposed – directly or indirectly – to the highly controversial and desperately expensive – ca.£100bn – High Speed 2 (HS2) railway project. Despite periodic enquiries, including the Oakervee Report – and desperate efforts to bring the project either to an end or, at least, to heel – HS2 survives.

However, given the massive increase in debt to finance COVID-19 expenditure, which has pushed the UK's net debt through the £2tr threshold, major cuts in HS2 are still possible, especially since rail passenger demand has collapsed – and may not regain previous levels – during the COVID-19 pandemic.

**Sector held up well despite COVID-19**

Overall, the Infrastructure Investment Companies sector has fared well during the COVID-19 crisis, although transport sector investments – in cases, where revenues are demand-led – have suffered; INPP's Diabolo investment in Belgium is a case in point.

**Long-term, secure wind and solar asset cashflow ideal for BR investment vehicles**

## Business relief (BR)

It should be noted that investment in REIFs has been stimulated by their ability to generate decent and risk-averse returns, along with an attractive cashflow, which is eminently suitable for BR purposes. Consequently, several UK investment funds, such as Octopus Energy, have focused on renewable power as a core component of their portfolios.

BR emerged from Business Property Relief, which was introduced within Inheritance Tax legislation in 1976. In order to minimise the need for small businesses to be broken up on the death of the owner, various reliefs were specified.

Owners of shares in unquoted businesses, subject to various anti-avoidance provisions, are exempt from Inheritance Tax. The same criteria are applicable to most AIM-listed stocks.

For many investors, BR has undeniable appeal, as it allows them to place assets into an appropriate business that, after a two-year period, becomes exempt from Inheritance Tax. To benefit from these reliefs, two major product lines are available, namely AIM portfolio services or those that are outside AIM. HMRC has also specified various categories of assets where such relief will not be granted; in particular, various investment-orientated undertakings and property-related businesses are among those categories deemed ineligible.

**Simplifying Inheritance Tax**

It is the case, too, that the Office of Tax Simplification, which has been asked by the Government to propose ways to simplify Inheritance Tax, has questioned whether third-party investors – as opposed to the original owners of the business – in AIM-listed stocks should continue to benefit from this important BR exemption.

However, despite speculation about possible tax changes in this area, no major announcements have been made. Certainly, if this tax exemption were removed, there would be a noticeable impact on many AIM stocks.

## Conclusion

### Is the going getting tougher?

The REIFs sector still looks to be well-placed. After all, REIFs' earnings are high-quality, and their dividend payment profiles are both attractive and, in most cases, secure, although any increases may be modest.

Of course, both the leading REIF sub-sectors – wind and solar generation – are exposed to potentially lower power prices, despite the valuable PPA protection, and higher interest rates, which would adversely affect all funds – although some to a greater extent than others.

While COVID-19 has had a somewhat marginal impact on the sector, it is noticeable that, for varying reasons, dividend cover has become quite thin for several REIFs – as indeed it has for some Infrastructure Investment Companies.

### Decent growth, rising dividends and modest risks – and more unsubsidised output

Nonetheless, quoted REIFs, in common with most of the seven Infrastructure Investment Companies, continue to offer appeal on several fronts – decent growth, rising dividends and, for most REIFs, modest risks, which are related mainly to future power price projections and the negative impact of higher interest rates on discount rates. However, for many REIFs, especially those involved in generation, it will be challenging over the next decade to deliver shareholder value from an increasing proportion of revenues from unsubsidised plants.

# Appendix 1

Glossary	
AD	Anaerobic Digestion
AIC	Association of Investment Companies
BEIS	Department for Business and Industrial Strategy
BR	Business Relief
CCGT	Combined Cycle Gas Turbine
CCS	Carbon Capture and Storage
CfD	Contract for Difference
CHP	Combined Heat and Power
CPI	Consumer Price Index
Discount to NAV	Amount a fund's shares trade below NAV
DNO	Distribution Network Operator
EV	Enterprise Value
FID	Final Investment Decision
FIT	Feed-in Tariff
FLAGS	Far North Liquids and Associated Gas System
FOAK	First-of-a-Kind
FV	Fair Value
GAV	Gross Asset Value
GWh	Gigawatt hour – electricity generation per hour
HS2	High-speed 2 West Coast Railway Line Project
IFRS	International Financial Reporting Standards
IPO	Initial Public Offering
IRR	Internal Rate of Return
MWh	Megawatt hour – electricity generation per hour
NAV	Net Asset Value
NTMA	National Treasury Management Agency
PFI	Private Finance Initiative
PPA	Power Purchase Agreement
PPP	Public/Private Partnership
Premium to NAV	Amount a fund's shares trade above NAV
PV	Photovoltaic
RAV	Regulatory Asset Value
REC	Regional Electricity Company
REFIT	Renewables Energy Feed-in Tariff
REIF	Renewable Energy Infrastructure Fund
RoI	Republic of Ireland
RO Scheme	Renewable Obligation Scheme
ROC	Renewable Obligation Certificate
RPI	Retail Price Index
TMT	Technology, Media and Telecom
TWh	Terawatt hour - electricity generation per hour

*Source: Hardman & Co Research*

## Appendix 2

### Possible questions

We list below various questions that might reasonably be asked of the Directors of REIFs.

- ▶ How is your NAV calculated?
- ▶ Do you make any adjustments to your NAV for significant sector-related transactions?
- ▶ What is your leverage policy for valuation purposes?
- ▶ What is the blended discount rate that you use for your NAV calculations?
- ▶ How vulnerable are you to upward movements in interest rates?
- ▶ What percentage of your revenues is subsidy-driven?
- ▶ To what extent have you been adversely impacted by COVID-19?
- ▶ How do you account – in valuation terms – for “tuck-in” acquisitions?
- ▶ Which overseas markets do you see as the most attractive for REIF investment – and why?
- ▶ What is your target annual fund growth rate?
- ▶ What percentage of your revenues is covered by PPAs?
- ▶ What long-term power price assumptions are used in your NAV calculations?
- ▶ What is your latest dividend cover?
- ▶ What is your long-term dividend policy?
- ▶ How damaging is the 2017 closure of the RO for new investment?
- ▶ Are you planning any extension to your asset lives?

### About the author

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*Nigel Hawkins is responsible for analysing the UK Utilities, including those privatised in the 1980s and 1990s, as well as newer arrivals in the sector. He has been involved in the Utilities sector since the late 1980s, as a feature writer at Utility Week magazine and as an analyst at Libertas Capital, which specialised in the renewable energy sector. Prior to that, he was the Telecoms analyst at Williams de Broë. Between 1989 and 1995, he worked at Hoare Govett as the Water and Electricity sector analyst.*

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