



CLEANBRIDGE

# Energy Perspectives

MONTHLY MARKET UPDATE

December 2022



## December 2022 Review

### Notable Mergers & Acquisitions and Asset Transactions

#### MERGERS & ACQUISITIONS

- Solarpack Corporacion Tecnologica finalized the acquisition of Solaer Holding. Solaer has a 2.8GW pipeline of solar projects in Spain and Italy. Financial details of the transaction were not disclosed
- Shell Petroleum NV, a wholly owned subsidiary of Shell plc, reached an agreement with Davidson Kempner Capital Management LP, Pioneer Point Partners and Sampension to acquire a 100% stake in Nature Energy for nearly \$2 billion. Based in Denmark, Nature Energy is a producer of RNG from agricultural, industrial, and household wastes
- Strata Clean Energy, a US solar and storage developer, acquired Crossover Energy Partners. Crossover Energy Partners have contracted or developed over 10GW of renewable energy projects and over 11GWh of BESS projects
- BlackRock Alternatives, through a fund managed by its Diversified Infrastructure business, agreed to acquire Jupiter Power from ENCAP Energy Transition Fund I and co-investment partners Yorktown Partners and Mercuria Energy for an undisclosed amount. Jupiter has an 11GW development pipeline and owns and operates a large storage fleet in Texas with a combined capacity of 655MWh. It currently has 340MWh of new projects in or near construction

#### ASSET TRANSACTIONS

- Sonnedix Power Holdings Ltd acquired 5 solar PV projects with a combined capacity of 299MW from Lightsource bp in the UK
- Greenalia acquired 3 utility-scale solar PV farms with a combined capacity of 502MWp in Texas, US. The project portfolio includes 265MWp Donegal Solar, 119MWp Leitrim Solar and 118MWp Roscommon Solar PV projects. The projects are expected to reach commercial operations in early 2025
- Duke Energy Sustainable Solutions acquired the 100MW Wildflower Solar project from Clearway Energy Group in Mississippi, US. The solar project will achieve commercial operations in late 2023

### Notable Fund Raisings & Project Finance Transactions

#### FUND RAISINGS

- Encavis Asset Management and BayernLB launched a €600 million fund dedicated to renewable energy. The fund namely, Encavis Infrastructure Fund 5 is directed at insurance companies, pension and retirement funds and will target investments in wind, solar, battery storage and power-to-gas solutions. The fund has received initial €50m of seed funding from HitecVision-backed OMP Capital
- Alcazar Energy Partners II, a sustainable infrastructure fund focused on utility-scale renewable energy projects in emerging markets, reached its first close at \$337 million. The transaction will enable the development and construction of over 2GW of clean energy infrastructure across selected emerging markets

#### PROJECT FINANCE TRANSACTIONS

- CaixaBank and BNP Paribas signed a €500 million syndicated green loan with Iberdrola SA, backed by Spain's Export Credit Agency, Cesce. The 15-year will be allocated to finance renewable wind and solar PV projects, as well as battery and transmission grid projects in the UK, Ireland, Portugal and Poland
- Aspen Power Partners secured a \$350 million investment from Carlyle. The investment will support Aspen's organic and acquisition-driven growth strategy targeting the community, multifamily, C&I solar and storage markets
- Leeward Renewable Energy closed \$615 million in financing for its 196MW Big Plain Solar Facility in Ohio and 100MW Oak Trail Solar Facility near North Carolina, US. Leeward received approximately \$420 million in construction-to-term financing from MUFG Bank along with a \$195 million tax equity commitment from Wells Fargo
- Northland Power raised €690 million in non-recourse debt refinancing for its onshore wind and solar assets in Spain. The senior debt package, provided by CaixaBank, will aid Northland to refinance and restructure the debt associated with a 551MW portfolio of projects across Spain

#### FINANCIAL ADVISORY GROUP

CleanBridge's Investment Banking Group works with leading multinational corporations, developers, and financial institutions on structuring and capital raising for long term, commercially sustainable investments. We develop innovative investment approaches, designed to achieve attractive levels of investment return through investment in infrastructure, and operational businesses positioned to benefit from long term trends in resource efficiency.

As an organization, CleanBridge holds a privileged position within environmental capital markets that includes a combination of governments, financial institutions, multinational corporations, multilateral development banks, NGOs, and leading institutional investors who are each active within the environmental and social markets. CleanBridge's Investment Banking Group provides creative solutions across complex and critical mandates. The hallmarks of our practice are an independent, conflict-free structure, a team that is one of the most highly experienced and expert in our selected industries, supplemented by our global relationships and reach.

## Selected Recent Renewable Energy - M&amp;A TRANSACTIONS

DATE	BUYER	TARGET	TRANSACTION TYPE	AMOUNT	SECTOR	DESCRIPTION
30-Nov	Sonnedix Power Holdings Ltd	5 solar PV projects with a combined capacity of 299MW (Lightsource bp)	Acquisition		Solar	Sonnedix Power Holdings Ltd acquired 5 solar PV projects with a combined capacity of 299MW from Lightsource bp in the UK.
30-Nov	Galileo	20% stake in Mozaik Energies	Acquisition		Solar	Pan-European investment platform Galileo acquired 20% stake in Mozaik Energies. Both the companies plan to jointly develop a pipeline of projects and deploy several financial instruments to support the long-term growth trajectory of Mozaik Energies.
29-Nov	Shell Petroleum NV	100% stake in Nature Energy	Acquisition	\$2 billion	Renewable Natural Gas	Shell Petroleum NV, a wholly owned subsidiary of Shell plc, reached an agreement with Davidson Kempner Capital Management LP, Pioneer Point Partners and Sampension to acquire a 100% stake in Nature Energy for nearly \$2 billion. Based in Denmark, Nature Energy is a producer of RNG from agricultural, industrial, and household wastes.
28-Nov	Greenalia	3 utility-scale solar PV farms with a combined capacity of 502MWp	Acquisition		Solar	Greenalia acquired 3 utility-scale solar PV farms with a combined capacity of 502MWp in Texas, US. The project portfolio includes 265MWp Donegal Solar, 119MWp Leitrim Solar and 118MWp Roscommon Solar PV projects. The projects are expected to reach commercial operations in early 2025.
28-Nov	Bravo Infrastructure Group LLC	Radiance Solar LLC	Acquisition		Solar	Bravo Infrastructure Group LLC acquired Radiance Solar LLC. Radiance specializes in turnkey solar power installations for commercial, institutional and utility customers and has installed over 125MW of clean, renewable solar power projects in the southeastern US and Mexico.
24-Nov		375MW solar project portfolio (Sunwin Energy)	Divestment		Solar	Sunwin Energy reached a framework agreement with an undisclosed European firm to sell its 375MW solar project portfolio in Italy. The projects are expected to come online between next year and 2026.
22-Nov	Duke Energy Sustainable Solutions	100MW Wildflower Solar project (Clearway Energy Group)	Acquisition		Solar	Duke Energy Sustainable Solutions acquired the 100MW Wildflower Solar project from Clearway Energy Group in Mississippi, US. The solar project will achieve commercial operations in late 2023.

## Selected Recent Renewable Energy - M&amp;A TRANSACTIONS

DATE	BUYER	TARGET	TRANSACTION TYPE	AMOUNT	SECTOR	DESCRIPTION
18-Nov	Solarpack Corporacion Tecnologica	Solaer Holding	Acquisition		Solar	Solarpack Corporacion Tecnologica finalized the acquisition of Solaer Holding. Solaer has a 2.8GW pipeline of solar projects in Spain and Italy. Financial details of the transaction were not disclosed.
17-Nov	ICG	Dos Grados	Acquisition		Onshore Wind and Solar	ICG, on behalf of its ICG Infra I fund, acquired Dos Grados, a leading renewable platform located across Spain and Portugal. Dos Grados has a portfolio of 900MW of renewable projects under development across Iberia, comprising 4 solar PV assets and 2 hybrid assets which includes solar and wind projects.
16-Nov	Strata Clean Energy	Crossover Energy Partners	Acquisition		Renewable energy	Strata Clean Energy, a US solar and storage developer, acquired Crossover Energy Partners. Crossover Energy Partners have contracted or developed over 10GW of renewable energy projects and over 11GWh of BESS projects.
15-Nov	BlackRock Alternatives	Jupiter Power	Acquisition		Energy Storage	BlackRock Alternatives, through a fund managed by its Diversified Infrastructure business, agreed to acquire Jupiter Power from ENCAP Energy Transition Fund I and co-investment partners Yorktown Partners and Mercuria Energy for an undisclosed amount. Jupiter has an 11GW development pipeline and owns and operates a large storage fleet in Texas with a combined capacity of 655MWh. It currently has 340MWh of new projects in or near construction.
9-Nov	Hydro Rein and Commerz Real	2 solar projects with a combined capacity of 362MW capacity (GreenGo Energy)	Acquisition		Solar	Hydro Rein and Commerz Real agreed to form an equally-owned JV to acquire and develop 2 early-phase solar projects with a combined capacity of 362MW from GreenGo Energy in Jylland, Denmark. Financial details of the transaction were not disclosed.
9-Nov	Sonnedix	262MWp solar PV portfolio	Acquisition		Solar	Sonnedix entered the Portuguese market with the acquisition of a 262MWp solar PV portfolio. The portfolio comprises 7 ground-mounted projects under construction or in the late-stage development. Financial details of the transaction were not disclosed.

## Selected Recent Renewable Energy - M&amp;A TRANSACTIONS

DATE	BUYER	TARGET	TRANSACTION TYPE	AMOUNT	SECTOR	DESCRIPTION
9-Nov	DIF Capital Partners	Majority stake in Alight Energy	Acquisition	€150 million	Solar	DIF Capital Partners acquired a majority stake in Swedish solar developer Alight Energy. As part of the agreement, DIF will invest €150 million in Alight and conduct a secondary buy-out of a number of existing shareholders.
4-Nov	Westbridge Renewable Energy Corporation	300MW solar PV portfolio plus 200MW BESS project	Acquisition		Solar & Energy Storage	Westbridge Renewable Energy Corporation acquired a 300MW solar PV portfolio plus 200MW BESS project in Alberta, Canada.
4-Nov	Allianz Capital Partners	147MW Galloway 2 solar PV project (Avantus)	Divestment		Solar	Avantus sold the 147MW Galloway 2 solar PV project in Texas, US to Allianz Capital Partners, keeping a minority stake in the scheme. The project is expected to go online in 2023.
3-Nov	Equinor	BeGreen	Acquisition		Solar	Equinor agreed to acquire Danish solar developer BeGreen for an undisclosed sum. BeGreen has a project pipeline of more than 6GW, with an average project size of 300MW and has developed, sold and delivered more than 700MW of solar PV projects.
3-Nov	Fengate Asset Management	160MW Prairie Switch Wind project (Triple Oak Power)	Acquisition		Onshore Wind	Fengate Asset Management acquired the 160MW ready to build Prairie Switch Wind project from Triple Oak Power in Texas, US. As part of this transaction, Fengate signed a long term PPA with Meta to supply wind energy to support the latter's operations.
1-Nov	Macquarie Asset Management's Green Investment Group	BayWa r.e. Bioenergy GmbH	Acquisition		Biogas	Macquarie Asset Management's Green Investment Group, via its Macquarie GIG Energy Transition Solutions fund, acquired BayWa r.e. Bioenergy GmbH from BayWa r.e. Bioenergy's portfolio consists of a pipeline of development assets in Italy and 5 operational assets in Germany. The company's present operational assets generate about 140GWh of biomethane yearly. Financial details of the transaction were not disclosed.
1-Nov	WEC Energy Group	80% stake in the 250MW Maple Flats Solar Energy Centre	Acquisition	\$360 million	Solar	WEC Energy Group agreed to buy an 80% stake in the 250MW Maple Flats Solar Energy Centre for a consideration of around \$360 million. The project is expected to become operational in early 2024.

## Selected Recent Renewable Energy - FINANCING RELATED TRANSACTIONS

DATE	BORROWER	FINANCIER	TRANSACTION TYPE	AMOUNT	SECTOR	DESCRIPTION
28-Nov	Leeward Renewable Energy	MUFG Bank and Wells Fargo	Financing	\$615 million	Solar	Leeward Renewable Energy closed \$615 million in financing for its 196MW Big Plain Solar Facility in Ohio and 100MW Oak Trail Solar Facility near North Carolina, US. Leeward received approximately \$420 million in construction-to-term financing from MUFG Bank along with a \$195 million tax equity commitment from Wells Fargo.
24-Nov	NextEra Energy Partners, LP	Ontario Teachers' Pension Plan Board	Financing	\$805 million	Solar, Onshore Wind & Energy Storage	Ontario Teachers' Pension Plan Board signed an agreement to invest approximately \$805 million in a convertible equity portfolio financing with NextEra Energy Partners, LP to help the latter acquire a nearly 2GW renewable portfolio of solar, storage and wind assets across the US. The transaction is expected to close later this year, subject to customary closing conditions and receipt of certain regulatory approvals.
21-Nov	Econergy	RGreen Invest	Financing	\$259 million	Renewable Energy	Econergy secured \$259 million from RGreen Invest to promote its renewable energy projects across Europe. The financial package includes \$90 million in corporate financing plus \$169 million to support the construction of Econergy's solar and wind project portfolio in Europe.
21-Nov	HP Solartech	Omnes Capital	Financing		Solar	Omnes Capital made an investment of an unspecified amount in Sweden's HP Solartech. The investment was carried out as part of a capital raising initiated by HP Solartech. Details about the deal, and the names of other investors that took part in the funding round were not disclosed.
17-Nov	Northland Power	CaixaBank	Refinancing	€690 million	Onshore Wind and Solar	Northland Power raised €690 million in non-recourse debt refinancing for its onshore wind and solar assets in Spain. The senior debt package, provided by CaixaBank, will aid Northland to refinance and restructure the debt associated with a 551MW portfolio of projects across Spain.
15-Nov	Longroad Energy Partners LLC	KeyBank N.A. and U.S. Bank	Financing	\$200 million	Solar	Longroad Energy Partners LLC secured \$200 million in financing and started construction of its planned 110MW Three Corners Solar Project in Kennebec County, Maine. KeyBank N.A. and U.S. Bank served as lenders while U.S. Bank was the sole tax equity investor for the project. KeyBanc Capital Markets also served as coordinating lead arranger in the transaction.

## Selected Recent Renewable Energy - FINANCING RELATED TRANSACTIONS

DATE	BORROWER	FINANCIER	TRANSACTION TYPE	AMOUNT	SECTOR	DESCRIPTION
11-Nov	Solaria Energía y Medio Ambiente	Banco Sabadel	Financing	€134 million	Solar	Solaria Energía y Medio Ambiente secured €134 million in funding from Banco Sabadell. The financial package will be used to build 285MW of solar PV plants in Spain.
8-Nov	Iberdrola SA	CaixaBank, BNP Paribas and Cesce	Financing	€500 million	Renewable Energy	CaixaBank and BNP Paribas signed a €500 million syndicated green loan with Iberdrola SA, backed by Spain's Export Credit Agency, Cesce. The 15-year loan will be allocated to finance renewable wind and solar PV projects, as well as battery and transmission grid projects in the UK, Ireland, Portugal and Poland.
4-Nov	Aspen Power Partners	Carlyle	Financing	\$350 million	Solar & Energy Storage	Aspen Power Partners secured a \$350 million investment from Carlyle. The investment will support Aspen's organic and acquisition-driven growth strategy targeting the community, multifamily, C&I solar and storage markets.
3-Nov	Gresham House Energy Storage Fund plc		Financing	\$178 million	Energy Storage	Gresham House Energy Storage Fund plc secured \$178 million of incremental term debt through an accordion arrangement under existing senior debt facilities. Gresham House will use the incremental debt to finance its near-term pipeline of large-scale energy storage assets.
2-Nov	Swift Current Energy	Mitsubishi UFJ Financial Group and CaixaBank	Financing		Onshore Wind	Swift Current Energy secured project financing for the 197MW Castle Gap Wind project in Texas, US. Mitsubishi UFJ Financial Group (MUFG) and CaixaBank served as joint coordinating lead arrangers and green loan structuring agents. MUFG also served as the administrative and collateral agent in the transaction. The wind farm is expected to become operational in early 2023.

## Selected Recent Renewable Energy - PROJECT RELATED DEVELOPMENT

DATE	COMPANY	LOCATION	CAPACITY	SECTOR	DESCRIPTION
30-Nov	National Grid Renewables	USA	275MW solar and 125MWh battery storage	Solar & Energy Storage	National Grid Renewables started the commercial operations of its Noble Solar and Storage Project in Texas, US. The portfolio comprises 275MW solar plus 125MWh BESS projects located in the ERCOT market.
30-Nov	Leeward Renewable Energy	USA	100MW solar and 20MW battery storage	Solar & Energy Storage	Leeward Renewable Energy completed construction and started the commercial operations of its 100MW Rabbitbrush Solar project located in California, US. The facility also includes a 20MW BESS project.
30-Nov	Brookfield Renewable Corp	USA, Spain, the UK, Italy and India	602MW	Onshore Wind and Solar	Brookfield Renewable Corp signed PPA with Amazon to supply 602MW of electricity from its wind and solar power plants to power the latter's operations in Europe, North America and India. The PPA will supply electricity to 7 Amazon projects: 3 in the US, 3 in Europe and 1 of its first projects in India. The projects are expected to generate 1,370GWh of electricity annually.
29-Nov	Colbún	Chile	230MW solar and 8MW battery storage	Solar & Energy Storage	Colbún inaugurated the Diego de Almagro project in the Atacama region, Chile. The project portfolio comprises 230MW solar PV and 8MW BESS projects.
28-Nov	Endesa	Spain	150GWh	Renewable Energy	Saint-Gobain signed a PPA with Endesa to procure 150GWh of renewable energy annually from the latter's renewable energy portfolio in Spain. The PPA agreement will start in 2024 and will cover around 55% of Saint-Gobain's Spanish electricity needs.
28-Nov	ib vogt	Spain	149MWp	Solar	Google signed a 12-year PPA with ib vogt to procure electricity from the 149MWp Garnacha solar power plant in Spain. The project is expected to reach commercial operations by October 2023.
24-Nov	Energia Group	UK	900MW	Onshore Wind and Solar	Microsoft signed a corporate PPA with Energia Group to procure 900MW of electricity from the latter's wind and solar assets in Ireland, UK.
24-Nov	Galileo and Enviria	Germany	5GW	Solar	Galileo and Enviria formed a JV to develop utility-scale ground-mounted solar plants across Germany. The JV will add approximately 1GW of solar power projects to its pipeline every year for the next 5 years.
24-Nov	Voltaia	France	350MW	Solar	Voltaia signed a 15-year PPA with Renault Group in France to supply 350MW of electricity from the solar PV farms to be installed at the carmaker's sites.
23-Nov	Harmony Energy Ltd	UK	196MWh	Energy Storage	Harmony Energy Ltd brought online the 196MWh Pillswood battery energy storage project in East Yorkshire, UK.

## Selected Recent Renewable Energy - PROJECT RELATED DEVELOPMENT

DATE	COMPANY	LOCATION	CAPACITY	SECTOR	DESCRIPTION
23-Nov	Renewable Power Capital and Eelpower	UK	1.24GW	Energy Storage	Renewable Power Capital entered into a JV with Eelpower. The JV will acquire, build and operate utility-scale storage projects and is targeting to build up to 1GW of storage projects, with a pipeline of 240MW to be built over the next 24 months.
22-Nov	Atlas Renewable Energy	Mexico	300MW	Solar	Atlas Renewable Energy started the commercial operations of the 300MW La Pimienta solar project in Campeche, Mexico. The plant is expected to generate 789GWh of power annually.
21-Nov	Enel North America	USA	115MW	Onshore Wind	Enel North America signed a 12-year virtual renewable PPA with Campbell Soup Company to support the latter's goals to reduce greenhouse gas emissions. Under the agreement, Campbell will purchase the electricity and the associated renewable energy credits from Enel's 115MW Seven Cowboy wind project in Oklahoma, US. The contract is expected to commence in July 2023.
19-Nov	Vale	Brazil		Solar	Vale started the commercial operations in 4 of its 17 sub-farms of the Sol do Cerrado solar park with a combined capacity of 766MW in Brazil. The project is expected to reach its full capacity in July 2023.
17-Nov	Omega Energia	Brazil	212MW	Onshore Wind	Omega Energia signed a PPA with Brazilian pharmaceutical company Eurofarma to supply electricity from the 212MW Assurua 4 wind project.
17-Nov	EDP Renovaveis SA	USA	180MW	Onshore Wind	EDP Renovaveis SA signed a deal to sell electricity from a 180MW portion of a 200MW wind project it plans to build in the US state of Indiana. EDPR will sell the electricity under a 15-year PPA to an unnamed off-taker.
16-Nov	Keppel Infrastructure and MET Group	Western Europe	1GW	Onshore Wind and Solar	Keppel Infrastructure and MET Group formed a JV company namely, Keppel MET Renewables. The new JV will invest in both greenfield and brownfield solar and onshore wind assets across Western Europe. It has a target to scale up rapidly to at least 1GW of operating and RTB renewable energy projects.
15-Nov	Telis Energy	UK, France, Spain, and Germany	10GW	Solar	Carlyle launched Telis Energy, a newly created renewables platform to develop renewable energy projects, with a focus on solar in the UK, France, Spain, and Germany. Telis will develop and partner on high-quality renewable energy projects and has a target project pipeline of more than 10GW in place by 2030.
15-Nov	BayWa r.e.	Spain	116MW	Solar	BayWa r.e.'s renewables business signed a PPA with windows maker Velux Group to supply electricity from 2 solar parks with a combined capacity of 116MW in Southern Spain by 2024.

## Selected Recent Renewable Energy - PROJECT RELATED DEVELOPMENT

DATE	COMPANY	LOCATION	CAPACITY	SECTOR	DESCRIPTION
14-Nov	Source Energie and Galileo	Ireland, the UK and Norway	5GW	Onshore Wind, Offshore Wind and Energy Storage	Source Energie and Galileo formed a JV namely, Source Galileo to develop and build over 5GW of offshore and onshore wind energy and electricity storage projects across Ireland, the UK and Norway.
10-Nov	OYA Renewables and Oil Well Shares	USA	3GW	Solar & Energy Storage	OYA Renewables and Oil Well Shares formed a JV namely, Chrysalis Energy, to develop and construct community and utility-scale solar and storage projects. The JV aims to develop 3GW of renewables capacity in Pennsylvania, Ohio and West Virginia, US.
10-Nov	AES Andes S.A.	Chile	1,069GWh	Renewable Energy	Compañía Minera Teck Quebrada Blanca S.A., a subsidiary of Teck Resources Limited, entered into 17-year PPA with AES Andes S.A. to procure 1,069GWh of electricity per year for the Quebrada Blanca Phase 2 copper project in Chile.
10-Nov	Potentia Renewables Inc. and Greengate Power Corporation	Canada	198MW	Onshore Wind	Microsoft entered into a 15-year PPA with Potentia Renewables Inc. and Greengate Power Corporation to procure electricity from the 198MW Paintearth Wind Project in Alberta, Canada. The wind project is expected to start commercial operations in 2023.
10-Nov	SUNOTEC and secureenergy solutions AG	Germany	1GW	Solar	SUNOTEC and secureenergy solutions AG established a JV namely, SECURSUN to develop and construct a 1GW portfolio of solar PV projects by 2026 in Germany.
10-Nov	Better Energy	Denmark	9GWh	Solar	Coloplast signed a PPA with Better Energy to procure 9GWh of electricity per year over a 10-year period. The agreement ensures the construction of a new solar park expected to be operational during 2023.
9-Nov	Eku Energy	Australia and UK	190MW	Energy Storage	Macquarie Asset Management's Green Investment Group launched Eku Energy, a global battery storage platform. Upon receiving relevant regulatory approvals, Eku Energy will have over 3GWh of developed, acquired or identified projects, including 2 BESS projects under construction - a 150MW project in Victoria, Australia and a 40MW project in Essex, UK.
9-Nov	Statkraft	Norway	2.9TWh	Onshore Wind	Statkraft entered into a new long-term energy contract with Norske Skog Skogn. Under the agreement, Statkraft will deliver a total of 2.9TWh of electricity annually to Norske Skog and the PPA will enter into effect on 1st January 2024.
8-Nov	Eurowind Energy A/S and Capstone Infrastructure Corporation	USA	1GW	Renewable Energy	Eurowind Energy A/S and Capstone Infrastructure Corporation formed a JV to pursue clean energy opportunities in the US. The new company is developing more than 1GW of battery storage, wind and solar PV projects in California.

## Selected Recent Renewable Energy - PROJECT RELATED DEVELOPMENT

DATE	COMPANY	LOCATION	CAPACITY	SECTOR	DESCRIPTION
8-Nov	Aracari and Vestinas	Germany	500MW	Solar	Aracari and Vestinas established their strategic partnership via their JV company namely, Aracari Solar GmbH. Aracari Solar will develop and build 500MW of solar capacity over the next few years in Germany.
4-Nov	Reden	France	207GWh	Solar	SNCF Energie entered into a 25-year PPA with Reden to procure 207GWh of electricity annually from 4 solar power plants that Reden is currently building in France.
4-Nov	Cemig	Brazil	79.2GWh	Renewable Energy	Gestamp signed 2 PPAs to procure 79.2GWh of electricity from Cemig. The PPAs, which begins in January 2024, are for a duration of 10 years.
3-Nov	European Energy North America and Elio Energy	USA	2GW	Energy Storage and Solar	European Energy North America partnered with Elio Energy to develop a 2GW solar PV pipeline and energy storage assets in Arizona and its surrounding states in the US. The projects are expected to enter into the construction phase between 2023 and 2025.
3-Nov	SB Energy Global, LLC	USA	942MW	Solar	Google signed a PPA with SB Energy Global, LLC to procure 942MW of electricity produced from the latter's 4 solar projects currently under development in Texas, US. The projects namely, Orion 1-3 and Eiffel are expected to be operational by mid-2024.
3-Nov	BayWa r.e. and Exilion	Finland	350MW	Onshore Wind	BayWa r.e. entered into Finnish wind market by acquiring a 50% stake in a JV with investment company Exilion. The two companies will develop and invest in the 350MW Karhakkamaa wind farm project.
01-Nov	NextEra Energy Resources LLC	USA	140MW	Onshore Wind	Pioneer Natural Resources entered into a PPA with NextEra Energy Resources LLC to off-take electricity from a 140MW wind farm project in Texas, US.
1-Nov	Eolian, L.P.	USA	200MW	Energy Storage	Eolian, L.P. received approval from the Ohio Power Siting Board to build the 200MW Flint Grid BESS Project in Ohio, US.

## Selected Recent Renewable Energy - FUND RELATED TRANSACTIONS

DATE	FUND NAME	GP	INVESTMENT	SECTOR	DESCRIPTION
18-Nov	Encavis Infrastructure Fund 5	Encavis Asset Management and BayernLB	€600 million	Renewable Energy	Encavis Asset Management and BayernLB launched a €600 million fund dedicated to renewable energy. The fund namely, Encavis Infrastructure Fund 5 is directed at insurance companies, pension and retirement funds and will target investments in wind, solar, battery storage and power-to-gas solutions. The fund has received initial €50m of seed funding from HitecVision-backed OMP Capital.
16-Nov	QE V	Qualitas Energy	\$1.1 billion	Renewable Energy	Qualitas Energy reached the first close of its flagship €1.6 billion fund at more than €1.1 billion. The fund, QE V will primarily invest across Germany, the UK, Spain, Italy, and Poland, targeting renewable energy assets in operation and under development, including assets with repowering potential and infrastructure projects enabling the energy transition, such as batteries and other energy transition projects.
14-Nov	Alcazar Energy Partners II	Alcazar Energy	\$337 million	Renewable Energy	Alcazar Energy Partners II, a sustainable infrastructure fund focused on utility-scale renewable energy projects in emerging markets, reached its first close at \$337 million. The transaction will enable the development and construction of over 2GW of clean energy infrastructure across selected emerging markets.
4-Nov	Taaleri SolarWind III Fund	Taaleri Energia		Renewable Energy	Taaleri Energia launched a new renewable energy investment fund namely, Taaleri SolarWind III Fund. The fund will have projects with a 3GW capacity potential in its seed portfolio and will seek to acquire, develop, contract, construct, operate and exit utility-scale onshore wind, solar and battery storage assets.

## Comparable Companies Trading Analysis (as of December 13, 2022)

Utilities and IPPs Large Cap (in \$ Millions)											
COMPANY NAME	HQ	STOCK PRICE	% OF 52-WK. HIGH	LTM EBITDA	'1YR EBITDA GROWTH	LTM EBITDA MARGIN	FIRM VALUE	MARKET CAP	FV TO EBITDA		
									LTM	2022E	2023E
NextEra Energy	U.S.	87.15	93.3%	7,983.0	74.0%	40.2%	243,615	173,181	29.1x	20.5x	17.4x
Duke Energy	U.S.	103.10	89.3%	11,997.0	11.0%	43.5%	156,460	79,393	12.6x	13.2x	12.1x
Iberdrola	Spain	11.71	96.0%	12,283.4	5.6%	25.6%	135,883	73,377	10.0x	10.1x	9.2x
Enel	Italy	5.59	68.8%	14,100.8	0.2%	10.8%	165,092	56,762	10.4x	8.1x	7.7x
Électricité de France	France	12.78	93.7%	7,562.2	0.0%	6.5%	60,017	47,726	6.5x	-	3.1x
Ørsted	Denmark	94.57	71.6%	2,863.3	26.3%	17.1%	46,606	39,735	14.5x	10.6x	12.6x
Verbund	Austria	88.68	73.1%	2,230.4	88.9%	23.7%	34,730	30,810	14.1x	10.9x	7.7x
RWE	Germany	45.02	96.6%	800.2	56.1%	2.1%	52,631	30,445	37.5x	8.7x	8.6x
EnBW Energie Baden-Württemberg	Germany	92.62	84.9%	2,340.4	0.0%	4.5%	38,441	25,087	14.4x	-	-
SSE	U.K.	21.17	87.8%	1,108.1	23.6%	9.3%	34,016	22,712	19.7x	-	9.8x
EDP Renováveis	Spain	23.54	86.7%	1,394.9	18.7%	68.4%	31,368	22,610	16.1x	14.1x	13.2x
E.ON	Germany	9.75	69.4%	9,080.2	-1.7%	8.3%	57,145	20,942	5.3x	6.9x	7.2x
Marubeni	Japan	11.50	94.4%	3,454.5	27.5%	5.0%	38,665	19,649	6.5x	-	9.6x
AES	U.S.	29.27	100.0%	3,440.0	0.3%	27.9%	42,422	19,551	12.3x	11.7x	10.0x
EDP Energias de Portugal	Portugal	4.95	89.8%	2,893.2	12.6%	14.2%	45,593	19,548	13.0x	10.2x	9.1x
Fortum	Finland	16.38	52.1%	3,857.6	-36.0%	3.4%	24,739	14,701	6.1x	9.5x	7.9x
Brookfield Renewable Partners	Bermuda	28.22	68.6%	2,996.0	8.3%	64.9%	50,410	13,369	16.2x	24.8x	23.0x
<b>Mean</b>			<b>83.3%</b>	<b>5,317</b>		<b>22.1%</b>	<b>73,990</b>	<b>41,741</b>	<b>14.4x</b>	<b>12.3x</b>	<b>10.5x</b>
<b>Median</b>			<b>87.8%</b>	<b>3,440</b>		<b>14.2%</b>	<b>46,606</b>	<b>25,087</b>	<b>13.0x</b>	<b>10.6x</b>	<b>9.4x</b>

Utilities and IPP's Small/Mid Cap (in \$ Millions)											
COMPANY NAME	HQ	STOCK PRICE	% OF 52-WK. HIGH	LTM EBITDA	'1YR EBITDA GROWTH	LTM EBITDA MARGIN	FIRM VALUE	MARKET CAP	FV TO EBITDA		
									LTM	2022E	2023E
Acciona	Spain	192.80	90.7%	1,614.7	24.5%	14.8%	17,361	10,504	10.2x	8.8x	8.6x
NextEra Energy Partners	U.S.	76.80	88.4%	753.0	27.2%	64.0%	20,409	6,646	20.3x	11.8x	10.6x
ERG	Italy	32.26	88.0%	575.3	-7.2%	47.5%	6,003	4,824	10.1x	10.5x	10.2x
Neoen	France	42.05	93.3%	325.8	29.3%	79.4%	7,631	4,504	22.5x	18.4x	15.3x
Innogy Renewable Energy	Canada	12.33	77.0%	433.9	29.7%	68.5%	6,868	2,517	15.1x	13.6x	13.3x
Terna Energy	Greece	21.19	98.5%	190.3	3.9%	32.0%	3,159	2,441	15.2x	17.7x	13.1x
Voltaia	France	18.63	78.4%	152.0	40.3%	28.5%	3,703	2,437	22.9x	18.0x	12.6x
Solaria Energia	Spain	18.28	73.2%	129.2	62.4%	87.1%	3,054	2,285	21.4x	18.9x	12.8x
Canadian Solar	Canada	34.04	72.4%	660.5	8.9%	9.4%	4,060	2,188	5.9x	7.9x	4.7x
ContourGlobal	U.K.	3.10	96.4%	802.0	-4.4%	31.2%	5,641	2,040	6.7x	7.0x	7.2x
Enlight Renewable Energy	Israel	2.11	81.9%	105.9	0.0%	69.0%	3,986	2,015	35.5x	-	-
Scatec Solar	Norway	9.14	51.3%	173.0	-7.5%	62.8%	3,496	1,451	12.7x	12.7x	10.0x
Greenergy Renovables	Spain	32.13	71.0%	48.4	45.1%	20.5%	1,372	965	25.7x	21.4x	12.8x
Opdenenergy Holding	Spain	4.08	77.7%	30.5	0.0%	41.8%	983	604	30.3x	8.8x	5.4x
Azure Power	India	4.71	22.1%	207.0	36.9%	87.8%	1,846	302	8.6x	9.0x	8.2x
Econergy Renewable Energy	Israel	4.72	58.1%	(7.1)	0.0%	-374.0%	261	215	-	-	-
<b>Mean</b>			<b>76.2%</b>	<b>387</b>		<b>23.1%</b>	<b>5,615</b>	<b>2,871</b>	<b>17.5x</b>	<b>13.2x</b>	<b>8.6x</b>
<b>Median</b>			<b>94.9%</b>	<b>199</b>		<b>42.6%</b>	<b>3,844</b>	<b>2,236</b>	<b>15.2x</b>	<b>12.3x</b>	<b>10.4x</b>

Note: Public Comparable data has been taken from S&P CAPIQ. For ease of calculation, data in other currencies have been converted to USD using applicable exchange rate

## Comparable Companies Trading Analysis (as of December 13, 2022)

Energy Storage (in \$ Millions)											
COMPANY NAME	HQ	STOCK PRICE	% OF 52-WK. HIGH	LTM EBITDA	'1YR EBITDA GROWTH	LTM EBITDA MARGIN	FIRM VALUE	MARKET CAP	FV TO EBITDA		
									LTM	2022E	2023E
Enersys	U.S.	78.49	95.5%	321.8	9.9%	9.1%	4,318	3,205	11.8x	-	11.6x
Fluence	U.S.	21.73	60.3%	(276.4)	0.0%	-23.1%	2,233	2,504	-	-	-
Stem	U.S.	11.31	57.2%	(77.0)	0.0%	-29.6%	1,997	1,747	-	-	-
Microvast	U.S.	1.95	20.6%	(156.2)	0.0%	-75.7%	510	600	-	-	-
Invinity Energy Systems	Jersey	0.69	53.2%	(28.3)	0.0%	-656.4%	49	81	-	-	-
EOS Energy Enterprises	U.S.	0.99	11.6%	(203.1)	0.0%	-1106.0%	204	73	-	-	-
Redflow Limited	Australia	0.16	38.7%	(8.6)	0.0%	-750.0%	22	28	-	-	-
<b>Mean</b>			<b>48.2%</b>	<b>(61.1)</b>		<b>-376.0%</b>	<b>1,333</b>	<b>1,177</b>	<b>11.8x</b>	<b>-</b>	<b>11.6x</b>
<b>Median</b>			<b>53.2%</b>	<b>(77.0)</b>		<b>-75.7%</b>	<b>510</b>	<b>600</b>	<b>11.8x</b>	<b>-</b>	<b>11.6x</b>

Note: Public Comparable data has been taken from S&P CAPIQ. For ease of calculation, data in other currencies have been converted to USD using applicable exchange rate

## About CleanBridge

CleanBridge has a deeply experienced team, combining professionals with financial expertise (investment banking, capital markets) and operational experience (engineering, project development, business process management). These complementary skill sets allow us to understand the most attractive opportunities for growth within the following value chains.

### Sustainable Energy



### Climate Finance



### Sustainable Living



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