Solar Utilities Spain

Most preferred
Grenergy | TP 52.5 €

Least preferred
Solaria | TP 15.8 €

Spanish suns

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Price 02/02/21	Reco.	Curr.	Price	TP
Grenergy renovables	Outperform	EUR	41.50	52.50
Solaria	Underperform	EUR	22.32	15.80

In 2020, the renewable energies segment has outperformed buoyed by the growth targets for the greening of the energy mix in Europe and worldwide, the regular increase in installed capacity and the visibility offered by the auction mechanism. With the expansion of our coverage we are initiating two Spanish stocks, Grenergy on Outperform with a target price of € 52.5 and Solaria on Underperform with a target price of € 15.8.

The renewables energy segment very dynamic on the stock market

Operators have seen a frenzy of interest from investors over the last few quarters. Despite market volatility stemming from the health crisis, the valuation of pure players in renewable energies (mainly small caps) is being driven by their tried-and-tested green profile, a secure pricing framework, ongoing capacity expansion and constant growth in investment flows from thematic funds and ETFs (Exchange Traded Funds). At this stage, the sensitivity of business profiles to renewable energies represents a differentiating factor for integrated energy groups.

Renewables: still set for growth

Wind and photovoltaic energy has experienced remarkable growth worldwide and particularly in Spain (installed capacity +53% by 2025). They now account for around 25% of the world's installed electricity capacity (2,537 GW) and more than one third of the volumes produced (i.e. around 8,500 TWh out of the 26,000 TWh of electricity produced worldwide). They benefit from trends linked to decarbonisation of the production mix, continued decline in production costs (fall below grid parity) and the generalisation of auction mechanisms. The trajectories expected by the sector's forecasting bodies make it reasonable to expect continued growth (2018-2030e CAGR of 3.9% for onshore wind, +10.7% for solar and 20.7% for offshore), with, however, a slowdown in onshore wind to the benefit of solar PV and offshore wind.

Grenergy: initiating coverage on Outperform, target price of € 52.5

We are initiating coverage on Grenergy with an Outperform recommendation and a target price of € 52.5, based on a DCF (€ 55.5 per share) at 80% and SOP (€ 40.4 per share) approach at 20%. The stock is trading at a discount of 10% on a 2023e EV/EBITDA multiple vs independent renewable power producers. It has an integrated business model which covers all phases from development, construction and financial structuring to project sale and/or operation. At end-2020, Grenergy had installed capacity of 163 MW and a project pipeline of over 5.0 GW at various stages of development (~4GW group-owned and ~1GW to be sold). The group is targeting installed capacity of 2.5GW in 2023 with robust growth anticipated in Spain and continued growth in Chile.

Solaria: initiating coverage on Underperform, target price of € 15.8

We are initiating coverage on Solaria with an Underperform recommendation and a target price of € 15.8, based on a DCF (€ 17.4 per share) and SOP (€ 14.1 per share) approach. The stock market performance has been underpinned by control of the value chain which has enabled the group to grow its portfolio of projects, but also a technical factor, i.e. the integration of the stock in the portfolios of the two largest ETFs in the US, with a significant increase in outstandings during 2020. Solaria is one of the very few pure players in the field of renewable energy based on a single (solar) technology and an Iberian focus. Solaria boasts installed capacity of 440 MW and is targeting installed capacity of 6.2 GW in 2025. Of the 10 GW in the portfolio of projects, 5.7 GW, located in Spain, benefiting from an advance development status, which gives credence to the target of 2.15 GW at end-2021.

	Currency	Market Cap (m)	Rating		TP		EPS		PE (x)	
			Revised	Former	Revised	Former	2020e	2021e	2020e	2021e
Grenergy renovables	€	1 009	Outperform		52.5		0.54	1.05	29.2	39.7
Solaria	€	2 789	Underperform		15.8		0.19	0.32	67.2	70.8

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A SEGMENT THAT REMAINS DYNAMIC ON THE STOCK MARKET

Operators have seen a frenzy of interest from investors over the last few quarters. Despite market volatility stemming from the health crisis, the valuation of pure players in renewable energy (mainly small caps) is being driven by their tried-and-tested green profile, a secure pricing framework, ongoing capacity expansion and constant growth in investment flows from thematic funds and ETFs. At this stage, the sensitivity of business profiles to renewable energies represents a differentiating factor for integrated energy groups.

2020 intrinsically renewable

In the electricity producers' universe as a whole, the absolute share performance in 2020 and since the start of the year again seems to be driven by the growth prospects for installed capacities in general.

In 2020, of the 17 leading companies operating in the electricity segment, the seven best share price performances were delivered by companies dedicated to renewable energy, namely wind power, generally speaking onshore, and especially solar power.

In this category, it is essentially the pure players which are developing onshore wind farm capacity and solar energy which deliver the best performances. In the second tier, those integrated electricity producers the most committed to renewable energy (including hydroelectricity as is the case for Verbund) via developments which include, like Orsted, Iberdrola and RWE a marked focus on offshore wind but also, more generally, the overall renewable/network strategies.

Absolute stock market performance of electricity producers 2020 (%)

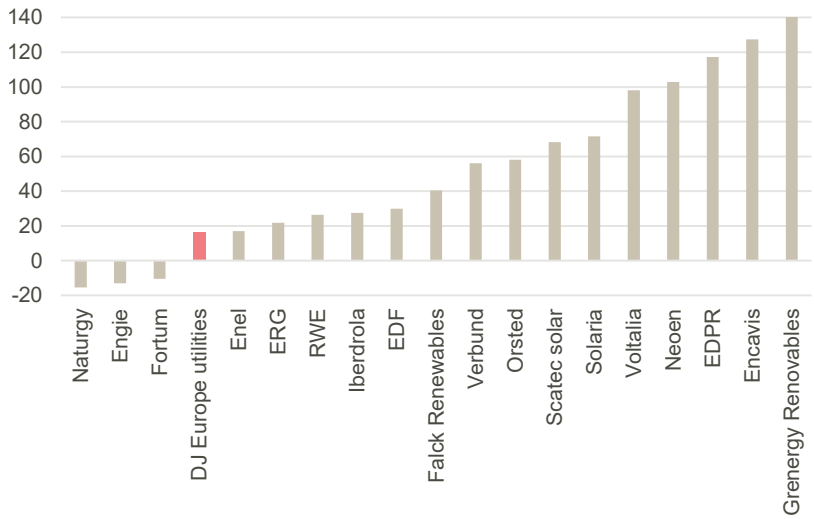


Chart 1 - Source: FactSet

An equivalent profile at the beginning of 2021

For this early part of the 2021, the renewable profile continues to dominate with the pure players in the lead in terms of absolute performance, even though Naturgy benefits from the partial bid launched by the fund IFM on 22.6% of its capital. That said, we note the volatility on Grenergy (best absolute performance in 2020) and Voltalia (fifth best absolute performance in 2020).

Absolute stock market performance of electricity producers YTD at 02/02/2021 (%)

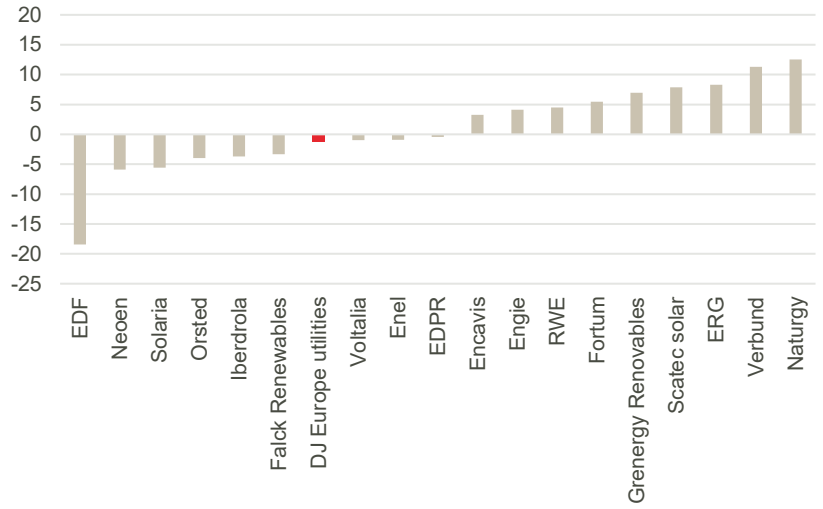


Chart 2 - Source: FactSet

We think that this hierarchy between the electricity producers factors in the capacity for growth harboured by the renewable energies segment in terms of development and the coming on stream of new assets, despite competition which has intensified since the arrival of the infrastructure and private equity funds in the bid tenders.

The visibility offered by the bid tender and auction mechanisms and the simultaneous disappearance of subsidies has rekindled the confidence of equity investors and reduced political risk.

American ETFs, a significant technical impact on the valuation

To these fundamental elements has for several months been added the impact of the technical phenomenon linked to enthusiasm of investors on the other side of the Atlantic for stocks entering the renewable energies segment.

Over and above standard portfolio management, on listed stocks, the development of ETFs constitutes a notable point.

Even though on the financial markets there are a great number of indexed-products duplicating performance in the renewable energies segment, we would highlight two US trackers which show the largest assets under management in their domestic market, i.e. BlackRock's Ishare Global Clean Energy and Invesco Solar

Given the real narrowness of the free floats on a number of stocks such as EDP Renovaveis and Neoen, it is easy to see how the growth of this type of product has a marked impact on the volumes traded of the underlying shares integrated in the two portfolios.

Details of Ishare Global Clean Energy's Invesco Solar's assets (01/29/2021)

Ishare Global Clean Energy	M$		Invesco Solar	M$	
AUM	6 655		AUM	4 729	
TOP 25	Actifs net total	M$ investis	TOP 25	Actifs net total	M$ investis
Plug Power Inc.	10.89%		Enphase Energy Inc.	10.63%	
Enphase Energy Inc.	5.35%		SolarEdge Technologies Inc.	7.38%	
Verbund AG	**4.82%**	**321**	SunRun Inc.	6.74%	
Meridian Energy Ltd.	4.65%		GCL Poly Energy Holdings Ltd.	6.42%	
Ormat Technologies Inc.	4.34%		Xinyi Solar Holdings Ltd.	6.15%	
Daqo New Energy Corp. ADR	4.08%		SunPower Corp.	6.04%	
Xinyi Solar Holdings Ltd.	4.04%		Daqo New Energy Corp. ADR	5.99%	
First Solar Inc.	3.99%		First Solar Inc.	5.75%	
Vestas Wind Systems A/S	3.97%		Scatec ASA ORD	4.07%	
Oersted A/S	3.88%		Hannon Armstrong Sustainable I.C.	3.52%	
EDP Renovaveis S/A	**3.87%**	**258**	**Encavis AG ORD**	**3.48%**	**165**
Contact Energy Ltd.	3.84%		Canadian Solar Inc.	3.45%	
Scatec ASA ORD	3.52%		Atlantica Sustainable Infrastructure PLC	3.29%	
Boralex Inc. Cl A	3.13%		**Neoen S.A.**	**3.19%**	**151**
SolarEdge Technologies Inc.	3.00%		JinkoSolar Holding Co. Ltd. ADR	3.18%	
SunRun Inc.	2.84%		Clearway Energy Inc. Cl C	2.92%	
Innergex Renewable Energy Inc.	2.63%		Sunnova Energy International Inc.	2.82%	
Encavis AG ORD	**2.40%**	**160**	**Solaria Energia y Medio Ambiente S.A.**	**2.48%**	**117**
Canadian Solar Inc.	2.39%		Flat Glass Group Co. Ltd.	1.85%	
Neoen S.A.	**2.33%**	**155**	Renova Inc.	1.82%	
Companhia Energetica de Minas Gerais ADR	2.28%		**SMA Solar Technology AG**	**1.70%**	**80**
Atlantica Sustainable Infrastructure PLC	2.28%		Xinyi Energy Holdings Ltd.	1.52%	
Sunnova Energy International Inc.	2.04%		West Holdings Corp ORD	1.02%	
Doosan Fuel cell	1.87%		Meyer Burger Technology AG	0.95%	
Power cell	1.87%		Azure Power Global Ltd.	0.86%	
RenewableEnergy inc	1.74%		ReneSola Ltd ADR	0.76%	
Solaria Energia y Medio Ambiente S.A.	**1.73%**	**115**	Maxeon Solar Technologies Ltd	0.63%	
Companhia Paranaense de Energia AD	1.22%		Beam Global	0.47%	
Enlight Renewable Energy LTD	0.35%		**Grenergy Renovables**	**0.44%**	**21**
As of 29/01/2021	95.34%		As of 29/01/2021	97.22%	

Table 3 - Source: Marketwatch

Inflows on these products has been, and remains, significant, automatically driving substantial purchase volumes for the shares of the stocks in the portfolio.

By way of illustration, for 2020 alone, assets under management on the ETF BlackRock Ishare Global Clean Energy increased fifteen-fold, doubling since November 2020 and today.

Trend in assets under management on Ishare Global Clean Energy

Date	Assets under management ($ m)
30/12/2019	382
30/01/2020	471
28/02/2020	572
31/03/2020	452
30/04/2020	521
31/05/2020	579
30/06/2020	642
31/07/2020	782
31/08/2020	1 117
30/09/2020	1 316
31/10/2020	1 680
30/11/2020	2 571
31/12/2020	3 838
29/01/2021	6 655

Table 4 - Source: Trackinsight

This trend is set to continue in the US where green investment is seeing a degree of success.

The new US administration, far more favourable to renewable energies and the health crisis, constitutes an undeniable support for the continued raising of environmental awareness, naturally via non-fossil fuels.

Solaria and Grenergy vs peers

We are initiating coverage on Grenergy on Outperform with a target price of € 52.5 and Solaria on Underperform and a target price of € 15.8.

Summary of our valuations

€	%	Solaria	%	Grenergy
DCF	50	17.4	80	55.5
Sum-of-the-parts	50	14.1	20	40.4
Target price (average)		**15.8**		**52.5**

Table n°5 - Source: ODDO BHF Securities

We are initiating coverage on Grenergy with an Outperform recommendation and a target price of € 52.5, based on a discounted cash flow (€ 55.5 per share) at 80% and sum-of-the-parts (€ 40.4 per share) approach at 20%. We overweight the DCF method in our valuation because it incorporates the Group's future growth, whereas the SOP method is more of a static method that only incorporates the valuation of the Group's current pipeline. The stock is trading at a discount of 10% on a 2023e EV/EBITDA multiple vs independent renewable energy producers.

It has an integrated business model which covers all phases from development, construction and financial structuring to project sale and/or operation.

At end-2020, Grenergy had installed capacity of 163 MW and a project pipeline of over 5.0 GW at various stages of development (~4GW group-owned and ~1GW to be sold). The group is targeting installed capacity of 2.5GW in 2023 with robust growth anticipated in Spain and continued growth in Chile.

Over the period 2020-2030 we forecast CAGR of EBITDA and EPS of around 30%.

From a balance sheet perspective, the group should see a peak in terms of leverage in 2022 with a net debt/EBITDA ratio of 7.0x, before benefiting from the effect of the size of its fleet in terms of cash flow generation. This will bring the leverage ratio down to around 6.0x by 2025 and 5.0x by 2030, in line with the cruising speed of some competitors.

We are initiating coverage on Solaira with an Underperform recommendation and a target price of € 15.8, based on a discounted cash flow (€ 17.4 per share) and sum-of-the-parts (€ 14.1 per share) approach.

The stock market performance has been underpinned by control of the value chain which has enabled the group to grow its portfolio of projects, but also by a technical factor, i.e. the integration of the stock in the portfolios of the two largest ETFs in the US, with a significant increase in outstandings during 2020.

Solaria is one of the very few pure players in the field of renewable energy based on a single (solar) technology and with an Iberian focus.

Solaria boasts installed capacity of 440 MW and is targeting 6.2 GW in 2025. Of the 10 GW in the portfolio of projects, some 5.7 GW, located in Spain, benefits from an advanced development status, which gives credence to the target of 2.15 GW at end-2021.

Over the 2019-2025e period, we anticipate sales CAGR of 28% per annum driven by Spain, 44% for EBITDA and 31% for attributable net profit, in light of a choice of financing new projects essentially by debt from 2020 and a tax system that is gradually losing the benefit of tax-loss carryforwards. Our 2020-2025e estimates are within the ranges of the FactSet consensus.

From a balance sheet perspective, the group should see a peak in terms of leverage in 2020 with a net debt/EBITDA ratio of 12.1x, before benefiting from the effect of the size of its fleet in terms of cash flow generation combined with the reduction of its investments. This will bring the leverage ratio down to around 5.4x by 2025, in line with the cruising speed of some competitors.

In our universe of coverage, given the stock market performances registered by the majority of the stocks that we cover, the breakdown of our recommendations with three stocks on Underperform, two on Neutral and just two on Outperform reflects this state of affairs.

A peer-based approach looks less than ideally suited. In fact, the multiples of renewable energy pure players are dependent on embedded growth in the context of strategic plans aimed at growing installed capacity and the pace at which this growth is achieved.

An instantaneous analysis of the valuation multiples is therefore distorted by the prism of growth.

Valuation multiples in the renewable energy segment of our coverage

Company	Recommendation	Share price	TP	Market cap.	P/E			EV/EBITDA			EV/EBIT		
x		(€)	(€)	(€ m)	2021e	2022e	2023e	2021e	2022e	2023e	2021e	2022e	2023e
EDPR	Underperform	22.7	11.0	19 801	56.3	50.3	45.4	14.4	13.7	13.0	24.3	22.9	21.6
Encavis	Neutral	22.1	20.0	3 022	42.7	39.9	35.7	19.2	17.9	16.7	31.7	30.4	28.2
ERG	Outperform	25.3	22.8	3 771	29.4	31.4	29.2	10.5	10.0	9.3	23.3	23.8	21.8
Neoen	Underperform	59.0	43.0	5 010	ns	76.8	52.5	25.4	20.9	18.0	40.4	32.9	27.4
Voltalia	Neutral	25.6	21.0	2 300	51.2	32.7	25.5	19.1	15.4	12.4	26.7	20.5	15.8
Grenergy	Outperform	**41.5**	**52.5**	1 009	**39.7**	**23.9**	**17.0**	**25.3**	**17.2**	**13.6**	**29.9**	**21.1**	**17.6**
Solaria	Underperform	**22.3**	**15.8**	2 789	**70.8**	**42.3**	**33.7**	**37.7**	**24.6**	**20.8**	**60.0**	**35.5**	**29.5**
Average					**48.3**	**42.5**	**34.1**	**21.7**	**17.1**	**14.8**	**33.8**	**26.7**	**23.1**
Median					**46.9**	**39.9**	**33.7**	**19.2**	**17.2**	**13.6**	**29.9**	**23.8**	**21.8**

Table 6 - Source: ODDO BHF Securities

In our view, the approach using enterprise value multiples is not the best suited, due to the impact of the speed of project development on the level of debt, leading to an upward distortion in the enterprise value without factoring in the denominator which, from this viewpoint, will only be supplied once the project has come into service.

In order to reduce this distortion, we have decided to capitalise the EV/EBITDA multiples of the 2022/2023/2025 guidance of each of the groups that we cover, i.e. EDPR, Encavis, ERG, Grenergy Neoen, Solaria and Voltalia. As such, the counterpart of the financing put in place will be the EBITDA generated by the projects financed.

To factor in the specific characteristics of each of the groups in their developments, our discount factor is the WACC applied to each of these companies.

On this basis, the average of 2022e, 2023e and 2025e EV/EBITDA multiple discounted for 2021e WACC stands at 16.0x. That said, restated for Encavis', Neoen's and Solaria's multiples included in the two largest US trackers designed for renewable energies, BlackRock's Ishare Global Clean Energy and Invesco Solar, the average 2021e EV/EBITDA is revealed at 13.7x.

Note that we have factored into our average EDPR, which whilst included in the two ETFs exhibits a discounted 2021e EV/EBITDA multiple that is close to the average.

At the same time, Grenergy exhibits a 2021e EV/EBITDA multiple of 15.4x based on our estimates, above the average fuelled by an extreme volatility but largely below the other stocks that benefit from this index effect.

Valuation of peers on discounted EV/EBITDA (at 02/02/2021)							
x	**Target year**	**MW**	**2022e**	**2023e**	**2025e**	**WACC**	**2021e**
EDPR	2022	14000	13.7			5.80%	14.5
Neoen	2022	5000	20.9			4.89%	21.9
Voltalia	2023	2600		12.4		8.07%	14.4
ERG	2022	3600	10.0			5.00%	10.5
Encavis	2025	3400			14.8	3.17%	16.8
Solaria	**2025**	**6200**			15.2	5.30%	18.7
Grenergy	**2023**	**2500**		13.6		6.10%	15.4
Average							**16.0**
Average excluding the tracker effect							**13.7**

Table 7 - Source: ODDO BHF Securities

RENEWABLES: STILL SET FOR GROWTH

Renewables (wind and photovoltaic) have experienced remarkable growth worldwide since the first installations were completed. They now account for around 25% of the world's installed electrical capacity (2,537 GW) and more than a third of the volumes produced (i.e. around 8,500 TWh out of the 26,000 TWh of electricity produced worldwide).

They have benefited from the trends linked to the decarbonisation of the production mix helped in their early stages by subsidised price mechanisms. The steady decline in production costs facilitating a fall below grid parity and the generalisation of auction mechanisms have largely contributed to the growth of installed capacity over the last decade.

The trajectories expected by the sector forecasting bodies make it reasonable to expect continued growth (2018-2030 CAGR of 3.9% pour onshore wind, +10.7% for solar and 20.7% for offshore), with, however, a slowdown in onshore wind to the benefit of offshore wind and solar PV.

European wind: production equivalent to 42% of the nuclear fleet in service

From 6.5 GW in 1998, European wind power reached nearly 193 GW of installed capacity by the end of 2019, including 28.7 GW of offshore wind power. This represents an average annual growth of 17.6%. This volume of installed capacity corresponds to an average production of 383 TWh on the basis of an average utilisation rate of 22%. This production is equivalent to that of 51 nuclear reactors with 1 GW of installed capacity and an average utilisation rate of 85%. In January 2021, 121 nuclear reactors were operational in Europe incl. 56 in France.

The development of wind power within the European Union has varied significantly between the "historic" countries (EU15) and the last 12 new members. The installed capacity of onshore and offshore wind energy in the historic countries grew by 17.7% per year on average between 1998 and 2018, while the development of onshore wind energy in the former "Eastern bloc" countries from 2002 onwards resulted in average growth of 36.0% per year over the same period.

CAGR for wind power installed capacity within the European Union

%	EU 28	EU 15	UE 13
Historic CAGR	17.6	17.2	36.0
1998-2005 CAGR	30.0	29.9	51.2
2005-2019 CAGR	11.8	11.3	33.0

Table 8 - Source: WindEurope

Trend in installed wind capacity (onshore and offshore) within the European Union

€ m/MW	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Austria	34	77	94	140	415	606	819	965	982	995	995	1 014	1 087	1 377	1 684	2 095	2 412	2 632	2 828	3 045	3 159
Belgium	6	13	32	35	68	96	167	194	287	415	563	886	1 078	1 375	1 651	1 959	2 229	2 386	2 843	3 360	3 937
Bulgaria	0	0	0	0	0	10	10	36	57	120	177	500	612	674	681	691	691	691	691	691	699
Croatia	0	0	0	0	0	0	0	0	0	0	0	0	0	180	302	347	423	422	613	583	606
Cyprus	0	0	0	2	0	0	0	0	0	0	0	82	134	147	147	147	158	158	158	158	158
Czech Republic	0	0	0	3	9	17	28	54	116	150	192	215	217	260	269	282	282	281	308	317	339
Denmark	1 771	2 417	2 489	2 889	3 116	3 118	3 128	3 136	3 125	3 163	3 465	3 749	3 927	4 162	4 772	4 845	5 064	5 227	5 476	5 758	6 160
Estonia	0	0	0	2	2	6	32	32	59	78	142	149	184	269	280	303	303	310	310	310	320
Finland	39	39	39	43	52	82	82	86	110	143	146	197	197	288	448	627	1 001	1 539	2 113	2 041	2 282
France	25	66	93	148	257	390	757	1 567	2 454	3 404	4 492	5 790	6 620	7 623	8 254	9 285	10 358	12 075	13 759	15 309	16 645
Germany	4 442	6 113	8 754	11 994	14 609	16 629	18 415	20 622	22 247	23 897	25 777	27 191	29 277	30 989	33 730	39 165	44 946	50 019	56 132	59 311	61 500
Greece	112	189	272	297	383	473	573	746	871	985	1 087	1 323	1 634	1 749	1 865	1 980	2 152	2 369	2 651	2 844	3 571
Hungary	0	0	0	3	3	3	17	61	65	127	201	295	329	329	329	329	329	329	329	329	329
Ireland	74	118	124	137	190	339	496	746	795	1 027	1 260	1 392	1 631	1 749	2 037	2 272	2 486	2 830	3 127	3 564	4 172
Italy	277	427	682	788	905	1 266	1 718	2 123	2 726	3 736	4 850	5 797	6 747	8 118	8 551	8 663	8 958	9 227	9 479	9 958	10 758
Latvia	0	0	0	24	27	27	27	27	27	27	28	30	31	68	62	62	62	70	66	66	78
Lithuania	0	0	0	0	0	6	6	48	51	54	91	163	179	263	279	279	424	493	493	439	546
Luxembourg	10	10	15	17	22	35	35	35	35	35	35	44	44	58	58	58	58	120	120	120	136
Malta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Netherlands	433	446	486	693	910	1 079	1 219	1 558	1 747	2 225	2 229	2 269	2 337	2 391	2 693	2 805	3 431	4 328	4 341	4 471	4 463
Poland	0	0	0	27	63	63	83	153	276	544	725	1 180	1 616	2 496	3 390	3 834	5 100	6 355	6 397	5 864	5 917
Portugal	61	100	131	195	296	522	1 022	1 716	2 150	2 862	3 535	3 706	4 083	4 529	4 724	4 914	5 079	5 316	5 316	5 380	5 223
Romania	0	0	0	0	1	1	2	3	8	11	14	462	982	1 905	2 599	2 954	2 976	3 024	3 029	3 029	3 040
Slovakia	0	0	0	0	3	5	5	5	5	3	3	3	3	3	3	3	3	3	3	3	3
Slovenia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	3	3	3	3	5
Spain	1 812	2 235	3 337	4 825	6 203	8 264	10 028	11 623	15 131	16 689	19 149	20 623	21 673	22 784	22 959	22 987	23 025	23 075	23 170	23 494	25 813
Sweden	220	231	293	345	399	442	509	571	788	1 048	1 560	2 163	2 926	3 582	4 470	5 425	6 025	6 494	6 691	7 407	8 995
UK	362	406	474	552	667	904	1 332	1 962	2 406	2 974	4 051	5 204	6 497	8 649	10 531	12 440	13 603	14 542	18 872	20 970	24 128
Total EU-28	**9 678**	**12 887**	**17 315**	**23 159**	**28 599**	**34 383**	**40 511**	**48 069**	**56 517**	**64 712**	**74 767**	**84 427**	**94 045**	**106 017**	**116 770**	**128 752**	**141 579**	**154 318**	**169 318**	**178 824**	**192 982**
Total EU-15	**9 678**	**12 887**	**17 315**	**23 098**	**28 491**	**34 244**	**40 301**	**47 651**	**55 854**	**63 598**	**73 194**	**81 348**	**89 758**	**99 423**	**108 427**	**119 520**	**130 826**	**142 179**	**156 918**	**167 032**	**180 942**
Total EU-13	**0**	**0**	**0**	**61**	**108**	**139**	**211**	**419**	**663**	**1 114**	**1 573**	**3 079**	**4 287**	**6 414**	**8 041**	**8 885**	**10 331**	**11 717**	**11 787**	**11 209**	**11 434**

Table 9 - Source: WindEurope

European solar PV: production equivalent to 20% of the European nuclear fleet

From 0 GW in 1999, the European and global solar PV segment stood at close to 580 GW of installed capacity at end-2018. This technology has benefited from the rapid and significant drop in its cost of production.

This technological component, coupled with the elimination of subsidised tariffs in favour of tenders, explains the significant double-digit average annual growth rates.

Over the 2009-2019 period, the CAGR of photovoltaic MW commissioned stood at 23% in Europe and 54% in the rest of the world.

Worldwide, this volume of installed capacity corresponds to an average production of 762 TWh on the basis of an average utilisation rate of 15%. This production is equivalent to that of 102 nuclear reactors with 1 GW of installed capacity and an average utilisation rate of 85%. In January 2021, some 442 nuclear reactors are in service worldwide. The contribution of PV corresponds to the equivalent of 23% of the world's installed base of nuclear reactors.

In Europe alone, this volume of installed capacity corresponds to an average production of 174 TWh on the basis of an average utilisation rate of 15%. This production is equivalent to that of 23 nuclear reactors of 1 GW of installed capacity with an average utilisation rate of 85%, which represents 19% of the European installed nuclear reactor base in reactor equivalent.

CAGR of PV installed capacity in the EU and worldwide

MW	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	CAGR	Weight
Germany	10 565	18 005	25 915	34 075	36 709	37 898	39 243	40 714	42 337	45 930	48 962	17%	37%
Spain	3 423	4 605	5 432	6 569	6 994	7 001	70 008	7 017	7 027	7 068	11 065	12%	8%
Italy	1 264	3 592	13 131	16 785	18 185	18 594	18 901	19 283	19 682	20 120	20 906	32%	16%
Czech Republic	465	1 727	1 913	2 022	2 064	2 068	2 075	2 068	2 070	2 078	2 070	16%	2%
France	277	1 044	3 004	4 359	5 277	6 034	7 138	7 702	8 610	9 483	10 571	44%	8%
Belgium	386	1 007	1 979	2 647	2 902	3 015	3 131	3 325	3 610	4 026	4 531	28%	3%
Rest of Europe	435	899	3 166	6 829	10 927	14 927	20 177	23 625	26 116	28 853	34 107	55%	26%
Subtotal Europe	**16 815**	**29 777**	**52 801**	**69 899**	**79 964**	**87 233**	**95 369**	**101 433**	**107 150**	**115 234**	**132 212**	**23%**	**100%**
Asia-Pacific	3 620	5 573	8 993	13 088	21 343	33 171	46 984	65 200	82 780	109 602	141 292	44%	32%
North America	1 734	3 159	5 708	8 963	13 051	17 943	24 374	36 008	44 944	55 346	68 276	44%	15%
China	415	1 022	3 108	6 718	17 748	28 388	43 538	77 788	130 801	175 018	205 072	86%	46%
Middle East/Africa	36	85	208	269	512	799	1 047	1 529	2 077	3 025	5 134	64%	1%
Rest of World	17 011	30 437	54 061	72 533	83 154	91 295	101 431	110 450	122 715	137 366	28 173	64%	6%
Subtotal excl. Europe	**6 001**	**10 485**	**18 177**	**32 113**	**57 370**	**84 364**	**122 004**	**189 542**	**276 167**	**365 123**	**447 947**	**54%**	**100%**
Total World	**22 816**	**10 485**	**18 177**	**32 113**	**57 370**	**171 597**	**217 373**	**290 975**	**383 317**	**480 357**	**580 159**	**38%**	

Table 10 - Source: Irena

Volumes still on an uptrend

A European vision driven by the "Green Pact"

Announced in January 2020 with the establishment of the executive committee of the new European Commission, the Green Pact for Europe provides additional support by strengthening measures to decarbonise the European energy mix.

This plan will mobilise an estimated € 1,000bn. The aim is to achieve carbon neutrality by 2050. This will require a 40% reduction in emissions by 2030 and, as a result, additional annual investment of € 260bn.

About half of the € 1,000bn will be allocated by the EU budget to various funds. This investment will make it possible to attract an additional € 114bn in the form of co-financing from EU countries.

€ 300bn will be mobilised from public and private investors through EU investments and ETS funds, and € 100bn through the Just Transition Mechanism (JTM). The latter has been set up to support the regions and communities most affected by the transition, as they are dependent on fossil resources.

This plan validates a significant effort in the energy transition and will support the development of renewable energies.

Note that in its report on the development out to 2030 of the wind segment in Europe, reported in September 2017, WindEurope was counting on three scenarios. The current European trajectory appears to migrate from the worst-case to the best-case scenario.

The baseline scenario counted on the installation of 323 GW of cumulated installed wind power capacity divided between onshore for 253 GW and 70 GW for offshore. This trajectory represents an 81% increase over the 2018-2030e period. With this capacity, wind power would produce around 888 TWh of electricity, i.e. 30% of EU electricity demand by this date.

The wind turbine industry would invest € 239bn out to 2030 and this assumes that the EU's supply chain remains competitive thanks to this robust market.

This baseline scenario assumes that the EU reaches its target of covering 27% of demand for electricity via renewables by 2030 and that grid infrastructure remains sufficient to meet the EU's 15% interconnection target.

Note that this trajectory is well below that of the January 2020 new targets for the Green Pact for Europe.

In the optimistic scenario, WindEurope expects to achieve a target of renewable energy accounting for 35% of total energy in the European Union. Installed capacity would reach 398 GW by 2030, with 299 GW of onshore wind and 99 GW of offshore, representing a 23% increase in capacity compared to the baseline scenario and more than doubling compared to end-2018. Production would reach 1,128 TWh, i.e. 38% of the EU's electricity demand. This scenario takes into account € 351bn in investments between now and 2030, i.e. 19% more than in the baseline scenario.

In the worst-case scenario, installed capacities would represent 253 GW in 2030, including 207 GW on land and 49 GW at sea, making it possible to cover 21.6% of the EU's electricity demand in 2030. This scenario implies a 20% drop in capacity compared to the baseline scenario and an investment of €147bn, down 39% compared to the baseline scenario.

Summary of the three WindEurope 2030 scenarios

Scenario	Installed capacity (GW)						Production (TWh)			Coverage level of demand (%)		
	Onshore	2018/30e CAGR	Offshore	2018/30e CAGR	Total	2018/30e CAGR	Onshore	Offshore	Total	Onshore	Offshore	Total
Baseline	253	3.9%	70	12.0%	323	5.0%	599	290	889	19.9%	9.9%	29.8%
Best-case	299	5.3%	99	15.3%	398	6.9%	706	422	1128	23.5%	13.9%	37.4%
Worst-case	207	2.2%	46	8.1%	253	2.9%	453	195	648	15.1%	6.5%	21.6%

Table 11 - Source: WindEurope ("Wind energy in Europe, Scenarios for 2030" published on 22 September 2017)

Regarding the photovoltaic segment, the expected increase in installed capacity is also remarkable, with a CAGR of 8% of installed capacity expected over the 2018-2030e period.

Relatively lacklustre growth compared with the wind segment is due to the volume of the resource which is penalised by the geographic area's latitude.

Solar resources in Europe

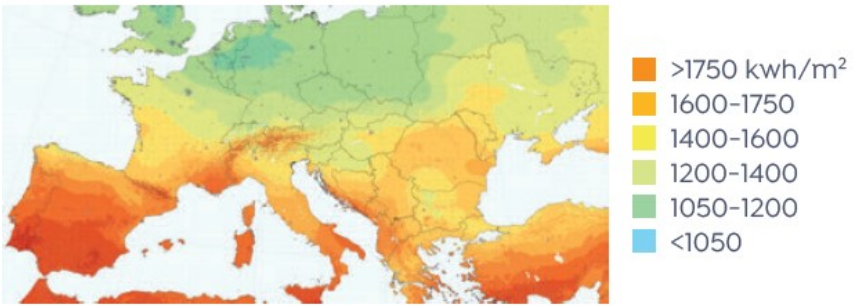


Chart 12 - Source: Irena

Note, however, that in terms of volume, Irena's estimate of 291 GW in 2030 lies between the baseline scenario and the pessimistic scenario of wind energy development.

2030e-2050e trajectory of solar PV in Europe

In GW	2018	2030e	2018-2030e CAGR	2050e	2030-2050e CAGR	2018-2050e CAGR
Europe	115	291	8.0%	891	5.8%	6.6%

Table 13 - Source: Irena

These trajectories are currently partly confirmed by the tender offers in preparation in Europe. More than 40 GW of renewable capacity is expected to be auctioned in 2021 in the ten largest renewable energy markets on the continent.

Scheduled bidding processes include the largest auction round ever held in the UK and some of the first tenders held in the very active Spanish renewable energy market for almost four years.

Within these ten countries, at least 13 GW of solar capacity and more than 30 GW of onshore and offshore wind capacity are likely to be auctioned over the next 12 months.

Main tender offers in 2021 in Europe

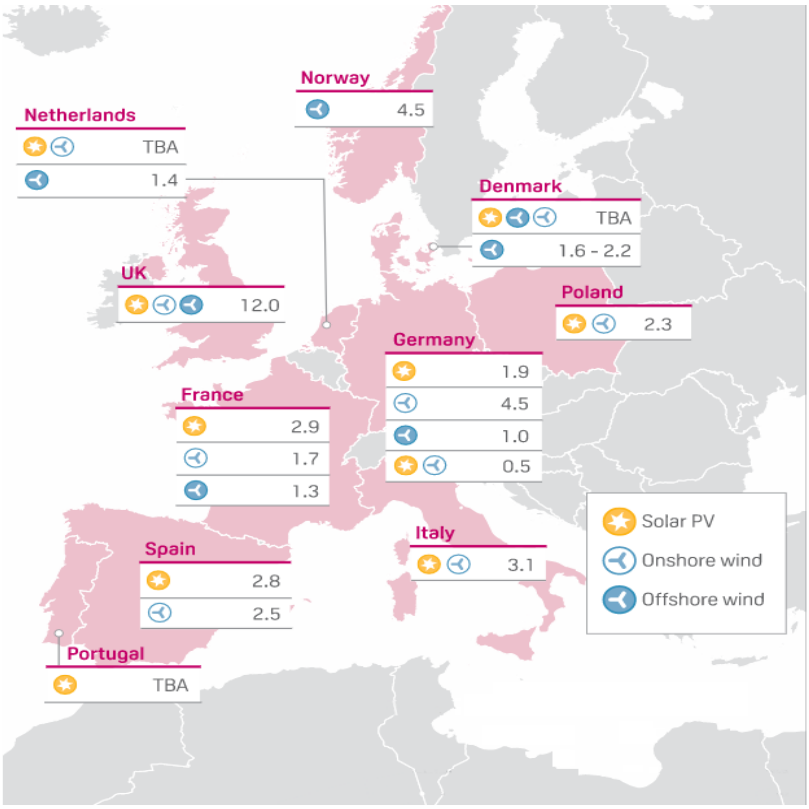


Chart 14 - Source: Platts

In total, the new volumes would be equivalent to 15% of the installed capacity in the three technologies for these countries, even if some of the projects will only be awarded after 2021, or even require more construction time.

Some countries are also expected to hold auctions for onshore renewable energy but have not yet published the expected volumes, including the Netherlands, Portugal, Denmark and Ireland.

This environment of increasing volumes comes within the framework of a national energy policy based on accelerating the deployment of renewable energies and the stated desire of players in the segment, regardless of their size, to continue to increase their installed capacity.

Outside Europe the continued greening of electricity generation

For the onshore wind segment outside Europe, the high availability of existing resources is expected to increase installed capacity in several regions over the next decade to 1,571 GW in 2030 out of a total of 1,824 GW in 2030 including Europe. This development suggests an implicit average annual growth rate 12.7% (vs 3.9% for Europe and 10.7% for the world).

The areas with the most sustained development rate will be the Middle East/Africa and Asia with growth rates of 24.6% and 13.6% respectively.

In the Middle East/Africa region, renewable energies, including onshore wind energy, are playing a key role in the sustainable energy transition. Regional policy initiatives such as the "Pan-Arab Strategy for the Development of Renewable Energy 2010/2030" adopted at the Third Arab Economic Development Summit by the Arab League in 2013 is the foundation of this trajectory.

As far as Asia is concerned, its main driving force is unsurprisingly China, where installed onshore wind power capacity is expected to increase tenfold to reach 2,150GW between 2018 and 2050.

Beyond 2030 and out to 2050, Irena is targeting CAGR of 7.3% for this technology, reaching a volume of installed capacity of 5,044GW, half of which will be located in China.

2030e-2050e global onshore wind trajectory

In GW	2018	2030e	18/30e CAGR	2050e	30/50e CAGR	18/50e CAGR
Europe	160	253	3.9%	483	3.3%	3.5%
North America	107	330	9.8%	1 146	6.4%	7.7%
South America	25	71	9.1%	182	4.8%	6.4%
Middle East/Africa	6	84	24.6%	525	9.6%	15.0%
Asia	231	1067	13.6%	2646	4.6%	7.9%
Oceania	7	19	8.7%	62	6.1%	7.1%
Total	**536**	**1824**	**10.7%**	**5 044**	**5.2%**	**7.3%**

Table n°15 - Source: Irena

Offshore wind allows countries to exploit generally higher wind conditions with utilisation rates above 50% (vs an average of 22% in mainland Europe) and to establish projects with a significantly larger unit size than those in onshore wind. Offshore wind farms exceed GW and are very often installed near densely populated and electricity-intensive coastal areas.

These factors explain the segment's expected growth, with essentially three geographic areas of development out to 2030, namely Europe on its northern seaboard, North America and more specifically the east coast of the US, and finally Asia.

Over the 2018-2030e period, the CAGR for the world's offshore wind segment (20.7%) should be double that of onshore wind (10.7%).

Note that in Asia, the development potential is less concentrated than for onshore wind energy with, in addition to China, which should represent 382GW - 50% of the zone's installed capacity - by 2050, significant potential in India, Taiwan, South Korea, Japan, Indonesia, the Philippines and Vietnam.

2030e-2050e global offshore wind trajectory

GW	2018	2030e	18/30e CAGR	2050e	30e/50e CAGR	18/50e CAGR
Europe	19	78	12.5%	215	5.2%	7.9%
North America	0	23	n.a.	164	10.3%	n.a.
South America	0	1	n.a.	5	8.4%	n.a.
Asia	5	126	30.9%	613	8.2%	16.2%
Oceania	0	1	n.a.	3	5.6%	n.a.
Total	**24**	**229**	**20.7%**	**1 000**	**7.6%**	**12.4%**

Table n°16 - Source: Irena

For solar energy, the global trajectory adopted by the International Renewable Energy Agency (Irena) is based on a projected sevenfold increase in installed photovoltaic capacity between 2018 and 2030 to reach 2,840GW in 2030, i.e. a 16% CAGR over the period.

Trajectory of photovoltaic installed capacity 2030 and 2050

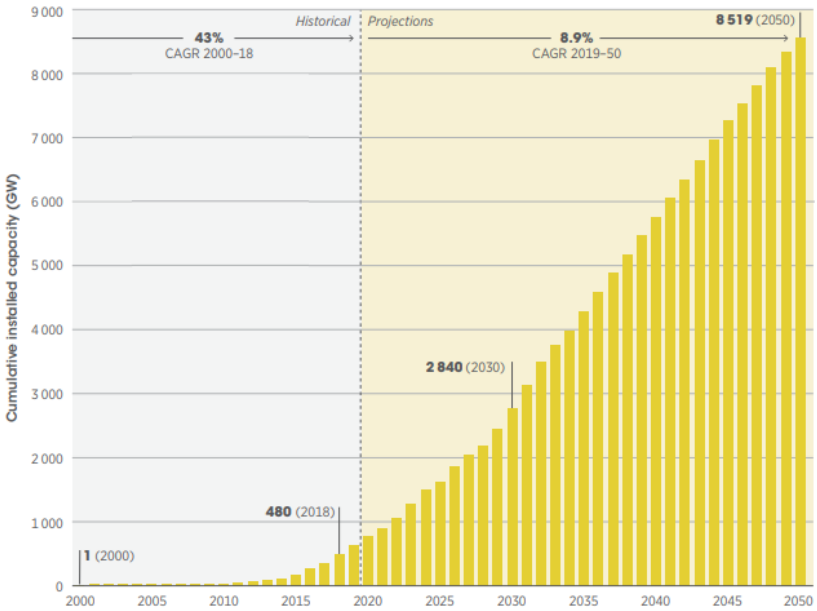


Chart n°17 - Source: WindEurope

This average annual growth comparable to that of offshore wind is based on:

- The wide availability of resources.
- The market potential.
- The cost competitiveness of photovoltaic solar energy.

This combination of factors should continue to boost growth in those regions most favoured by growth in the coming decade.

2030e-2050e global solar photovoltaic trajectory

GW	2018	2030e	18/30e CAGR	2050e	30/50e CAGR	18/50e CAGR
Europe	115	291	8.0%	891	5.8%	6.6%
North America	55	437	18.9%	1 728	7.1%	11.4%
South America	7	97	24.5%	281	5.5%	12.2%
Middle East/Africa	3	131	37.0%	673	8.5%	18.4%
Asia	290	1 860	16.8%	4 837	4.9%	9.2%
Oceania	10	25	7.9%	109	7.6%	7.8%
Total	**480**	**2 841**	**16.0%**	**8 519**	**5.6%**	**9.4%**

Table n°18 - Source: Irena

SOLARIA FOCUSED ON THE SPANISH SUN, GRENERGY BENEFITS FROM CHILE

Ahead of the studies on the initiation of coverage on Solaria and Grenergy, we wanted to provide a summary of the two groups. Although a large part of their history is shared i.e. their upstream positions on the renewable energy value chain (development and construction for third parties), the two companies recently embarked upon a strategic about-turn towards independent electricity production. They have differing strategies for this choice; Solaria's trajectory is based uniquely on the development of photovoltaic capacity in Iberia, while Grenergy is pursuing growth in wind and solar power for its production assets in a distinctly international and very South American environment with Chile, Colombia and Peru in addition to Spain.

Summary of Solaria and Grenergy

Grenergy Renovables (Grenergy) and Solaria Energia and Medio Ambiente (Solaria) are two Spanish players in renewable energies, with different industrial profiles.

Grenergy: a solar/wind IPP in Spain and Chile

Grenergy Renovables (Grenergy) is a Spanish company created in 2007 by its current CEO and main shareholder David Ruiz de Andrés, who owns 68% of the capital. It was first floated in 2015 on the Spanish alternative market (MAB) before being listed on the main Madrid market in 2019.

Grenergy is an independent renewable energy producer (IPP) expanding in solar photovoltaic and onshore wind energy technologies.

The group has an integrated business model which covers all the phases from development, construction and financial structuring to project sale and/or operation.

Up until 2019, the group operated an exclusively build to sell (B2S) model. Since 2020 the group has transitioned from a purely B2S approach to include a build to own (B2O) model, while continuing to operate on a B2S basis.

Solaria: 100% solar in Spain

Solaria is a Spanish company listed on the Madrid stock exchange since July 2007. Its main shareholder is the Diaz Tejeiro family, which owns 41.32% of the capital. Solaria is one of the very few pure players in the field of renewable energy production based on a single technology, solar.

It has an integrated business model that covers all the phases from development, construction and financial structuring to project sale operation.

From 2003 to 2007, the group was positioned on the development of solar projects, the supply of photovoltaic panels, the construction of solar projects for third parties and maintenance operations. From 2006 to 2014 it made a strategic about-turn with the gain of its first directly-owned generation assets, in addition to the sale of photovoltaic panel cells, its first directly-owned generation assets. Since 2015, Solaria has been repositioning on the entire value chain for the directly-owned development and production of solar electricity from photovoltaic capacity.

Today, all of its developments remain in its portfolio based on the exclusive application of a build to own (B2O) model. The group does not make partial or total disposals of its assets.

Its growth is based on mechanisms of government auctions of volumes, as well as on contracts for long-term electricity sales with private counterparties (corporate PPAs) mainly in Spain, which remains its only zone of development.

Summary of Solaria and Grenergy's industrial profile

MW	Solaria	Grenergy
Operating data		
Installed capacity (MW)	**440**	**163**
Of which wind (MW)		63
Of which photovoltaic (MW)	440	100
Current regions (MW)		
Spain	400.4	
Italy	16.7	
Greece	0.4	
Argentina		24
Chile		103
Colombia		
Peru		36
Uruguay	22.7	
Construction capacity (MW)	**935**	**300**
Of which wind		
Of which photovoltaic	935	300
Ongoing construction per region		
Spain	935	200
Chile		65
Mexico		35
Portfolio of projects in development	**10 118**	**4 726**
Of which secured capacity		322
Of which at an advanced phase	5 793	2 195
Of which at a preliminary phase	4 325	2 209
Of which wind		614
Of which photovoltaic	10 118	4 112
Development per region		
Spain	9 615	1 188
Italy		100
Portugal	503	
Chile		2 571
Colombia		524
Peru		343
Target year	**2025**	**2023**
Target (MW)	**6 200**	**2 500**

Table n°19 - Sources: Solaria, Grenergy

The two groups' main development regions

The two groups areas of development are currently relatively limited in terms of the number of countries. Solaria is focused exclusively on Spain and the Iberian Peninsula, while Grenergy is advancing its strategy not only in Spain but especially in Chile, Columbia and Peru.

Spain: confirmed relaunch of volumes

Installed capacity trend in Spain

MW	2019	2025e	Change
Wind	24,128	32,628	35%
Solar	11,085	21,085	90%
Total	35,213	53,713	53%
Total installed capacity	110,292		
Weight of wind and solar	*32%*		

Table n°20- Source: Irena, Spain's ministry for the ecological transition

Volume outlook

Spain currently has the strongest uptrend in renewable energy in Europe. Under the aegis of a subsidiary boosted by all segment players, the Spanish government is proving proactive in rolling out new capacity. Therefore, royal decree 960/2020 of 4 November 2020 made official a trajectory of 19.5GW of additional installed capacity by 2025, of which 10GW for photovoltaic, 8.5GW for onshore wind and the rest for various technologies.

Ramp-up of volumes auctioned

MW		2020	2021e	2022e	2023e	2024e	2025e
Wind	Full-year volume	1,000	1,500	1,500	1,500	1,500	1,500
	Total	1,000	2,500	4,000	5,500	7,000	8,500
Photovoltaic	Full-year volume	1,000	1,800	1,800	1,800	1,800	1,800
	Total	1,000	2,800	4,600	6,400	8,200	10,000
Thermoelectric solar	Full-year volume		200		200		200
	Total		200	200	400	400	600
Biomass	Full-year volume		140		120		120
	Total		140	140	260	260	380
Other technologies (biogas, hydraulic, tidal, etc.)	Full-year volume		20		20		20
	Total		20	20	40	40	60

Table n°21 – Sources: Watson, Fairley & WWillians

Besides volumes, the durations of the long-term electricity sales contracts are fixed at 12 years on average for the most common technologies, and up to 15 years for the others. This duration requires the winning stakeholders to anticipate a minimum period of 13 years of guaranteed sales after the contract expires, which will be remunerated based on market prices if no other contract is signed.

Duration of long-term contracts and latest date of commissioning

	Duration of electricity sales contract (year)	Latest date of commissioning
Onshore wind	12	29/02/2024
Offshore wind	12	28/02/2025
Photovoltaic	12	28/02/2023
Thermoelectric solar	12	29/02/2024
Hydroelectric	12	28/02/2025
Biomass	15	28/02/2025
Other technologies (biogas, tidal, etc.)	15	02/02/2025

Table n°22 – Sources: Watson, Fairley & WWillians

Pricing

The story of renewable energy pricing in Spain has not been plain sailing. Buoyed by demand in the 2000s, the country massively subsidised renewable energies, leading to a financial deficit of tens of billions of euros in its electricity system (difference between the revenues of all electricity groups and the sum of electricity system costs in Spain, including subsidies).

This imbalance was resolved through retroactive downward price revisions on the subsidised tariff mechanisms put in place from 2000 to 2018.

The publication of the royal decree of 22 November 2019 clarified the trajectory for renewable energy generation installations by categorising the pricing equations on the basis of commissioning dates (prior or not to the publication of the royal decree 9/2013 of 12 July 2013), setting the standard utilisation lifespan of 30 years and specific pricing that allows for a guaranteed return on the remaining utilisation period.

For example, Solaria, for which some assets (34.8 MW) have commissioning dates well before 2013, benefits from a tariff equation on this capacity in operation which gives an annual return on investment of 7.98%, or a KWh price of around € 450/MWh. This mechanism, which is subject to revision every six years, will last until the end of the operating life of these installations. In the case of Solaria, their remaining operating life is 18 years.

This particular pricing mechanism does not apply to the new installations commissioned from 2018. These come under the scope of the government auctions, with a long-term electricity sales agreement (25 years) based on a given price (subject to indexation).

We note that for the new capacity that comes under the scope of the royal decree 960/2020, the duration of the long-term agreement is 12 years.

The same is true for the corporate PPA founded on long-term electricity sales agreements, for which the contractual duration ranges from 7 to 10 years.

Chile: undeniable solar potential

Installed capacity trend in Chile

MW	2020	2025e	Change
Wind	2 484	13 258	434%
Solar	2 962	19 752	567%
Total	5 446	33 010	506%
Total installed capacity	25 624		
Weight of wind and solar	*21%*		

Table n°23 – Source: Climate change.org

Volume outlook

With close to 26.0GW, electricity production capacity in Chile should benefit from the current combination of the sources of renewable energy in the country which is set to gain in importance over the next few years.

The Chilean government has set itself a target of deriving 20% of the country's power from what it calls non-conventional renewable energy (NCRE) sources by 2025. The term encompasses wind, solar, geothermal and hydroelectric energy.

Chile is looking to generate 23% of its electricity from wind energy and 10% of its electricity from solar energy by 2050. The country is set, given its natural resources (the world's largest reserves of copper and non-metallic minerals in the world and one of the largest lithium reserves), to continue growing its installed capacity while also greatly reducing its carbon footprint.

The country boasts exceptional solar energy resources in the Atacama desert region (105,000 km^2). This area in the north of the country receives the highest levels of sunshine in the world.

Solar radiation (W/m^2) and cloud frequency from 10am to 4pm (%)

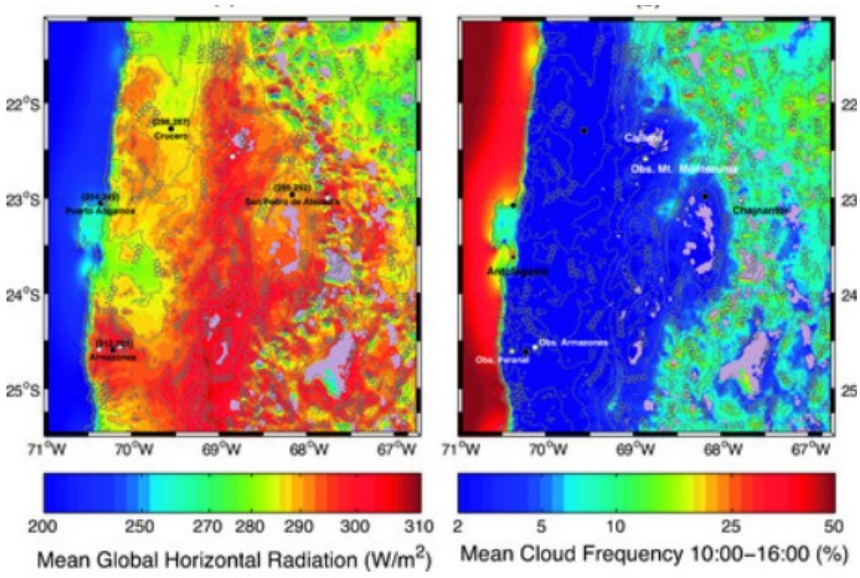


Chart 24 – Source: journals.ametsoc.org

As an illustration, covering 4% of the surface of this desert with photovoltaic panels would produce enough solar energy to supply the whole of Chile.

In November 2017, the government organised extremely competitive public auctions, where it obtained 2.2TWh per year for an average price of $ 32.5/MWh.

Volumes auctioned and average prices from 2006 to 2017

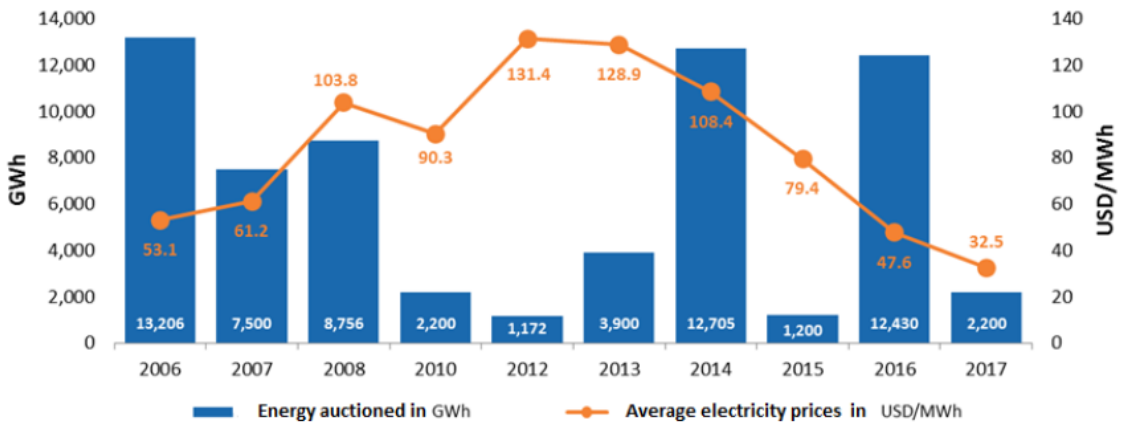


Chart 25 – Source: iaae.org

In July 2020, it allocated parcels of federal land for the development of 2614MW of photovoltaic capacity representing an investment of over $ 2.5bn. Eight groups were selected to develop 11 lots of land leased by the government for a period of 40 years.

To further support its energy transition, the Chilean government launched a call for tenders on 23 December 2020 relating to production of 2310GWh/year from 2026, with a long-term electricity sales agreement for 15 years.

Bids are to be submitted by 28 May 2021, while the awards and the results announcement will go ahead on 22 June 2021.

Pricing

For the initial renewable energy projects, the returns were on the base of market prices. However, as a result of high levels of volatility and sharp falls in KWh wholesale prices over time, the banks stopped financing this type of project.

Renewable energy producers therefore started to turn their attention towards projects covered by long-term electricity sales agreements, both through public calls for tender (over 15 years) and with private counterparties (corporate PPA).

To invigorate investment, the Chilean government put in place specific pricing mechanisms to secure investments while also continuing to develop the new capacity needed for the country's growth.

On this basis, the 101 government decree presents the concept for small generation assets (PMG, or Pequeños Medios de Generación) and small distributed generation assets (PMGD, or Pequeños Medios de Generación Distribuida) which both have specific characteristics.

PMG projects have an installed capacity of up to 9 MW. PMG projects of over 3 MW must obtain an environmental impact assessment. For projects of less than 3 MW, this administrative authorisation is not mandatory, which considerably reduces the development time and the capex investment.

In terms of returns, the price mechanism is designed to stabilise the payment of developments coming under the scope of PMG and PMGD projects. The stabilised price includes no subsidy of any kind.

The stabilised price is calculated on the basis of two tariff benchmarks:

- The basic price of the energy ("Precio Basico de la Energía" or PBE) founded on a projection of the marginal costs of the energy in the system. This projection is simulated using a 10-year scenario taking account of all possible variables (hydrology, variable fuel prices, future projects to be built, demand, decarbonation of the matrix, etc.).
- The average market price ("Precio Medio de Mercado, or PMM). This price takes future KWh price benchmarks, both for contracts on the electricity market and private contract prices.

On the basis of the PBE (which is an estimate of the marginal cost) and the PMM (which reflects all energy costs) the volatilities of which are different (gap of -30% and +5% between the two prices), the government establishes the stabilised prices through a method that involves determining a fluctuation range.

We can conclude that the stabilised price is a mixture between the spot price and long-term contracts. Although the stabilised price fluctuates between the benchmarks, it generally tends to be closer to the PMM price, which is less volatile than the spot price.

PNM trend in €/MWh

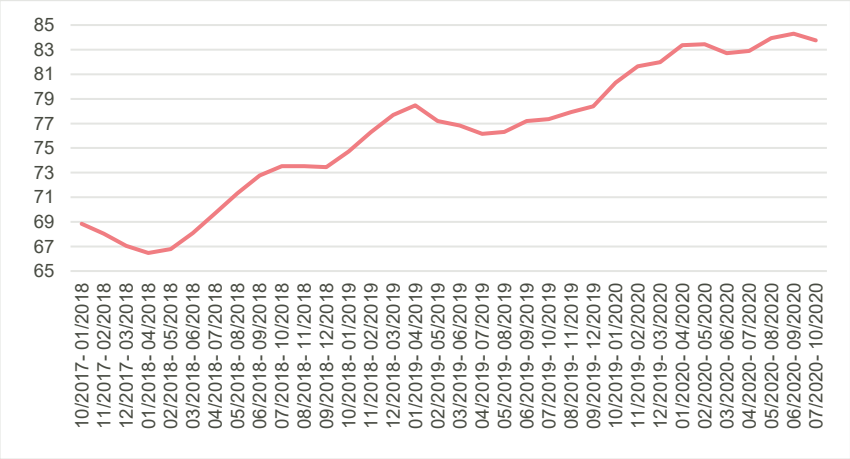


Chart 26 - Source: CNE

Colombia: already quite sustainable but looking to be greener

Installed capacity trend

MW	2019	2030e	Change
Wind	18	na	ns
Solar	90	na	ns
Total	108	4 000	ns
Total installed capacity	18 039	22 000	
Weight of wind and solar	*0.6%*	*18%*	

Table 27 – Source: Irena

Volume outlook

Colombia has a particular energy mix. The country benefits from hydroelectric resources which account for 66% of its installed capacity (11 927MW) and 79% of its annual electricity generation.

Colombia's successful auctions in renewable energies, which resulted in the acquisition of over 2GW, are an "inspiring example for other countries in the region". Colombia has a target of at least 4GW by 2030 from non-conventional renewable energies at the national level, with 74% of renewable energies in the electricity generation network nationally.

Colombia allocated 1.374GW of renewable energy production capacity, including 297MW in solar and 1077MW in wind in the first renewable energy auction that was finalised in October 2019. The final average price was COP 95/kWh (or around € 20/MWh), and the highest bid was COP 110/KWh (or around € 24/MWh).

The Colombian government plans to allocate around 5GW of renewable energy capacity. The projects selected in this new round of auctions are to be connected to the grid by the end of 2022. The terms of the auction are to be defined by the mining and energy ministry over the next few months.

The projects selected in the framework of the auction will be subject to a long-term electricity sales agreement for 15 years and are due to enter into force by 1 January 2022 at the latest. The contracts will be pegged to the Colombian peso and updated based on a producer price index certified by the Colombian national statistics administration.

The country aims to achieve 4GW of installed renewable capacity by 2030.

Pricing

The projects selected in the framework of the auction mechanism will be subject to a long-term electricity sales agreement for 15 years. The contracts are pegged to the Colombian peso and updated based on a producer price index certified by the Colombian national statistics administration.

Peru: a Colombia-style profile

Installed capacity trend

MW	2019	2030e	Change
Eolien	372	na	ns
Solar	326	na	ns
Total	698	2800	x4
Total installed capacity	15 011	17011	
Weight of wind and solar	*4.7%*	*16%*	

Table 28 – Source: Irena

Volume outlook and pricing

Like Colombia, Peru's profile is characterised by a particular energy mix. The country benefits, like its neighbour to the north, from hydroelectric resources which account for 38% of its installed capacity (5 715MW) and 56% of its annual electricity generation.

Peru is among the Latin American countries (like Brazil, Colombia, Panama and Chile) that have played a pioneering role in the use of auctions to acquire new electricity generation capacity.

The country has since 2009 used tenders as part of a strategy of reducing its energy supply costs. These fall into three categories:

- Sealed bid first price auctions - bidders submit sealed offers without having previously been informed of the other bids,
- The descending price auction - the descending price auction mechanism is one of the ways of discovering the price that the market is willing to pay. With this approach, a high initial price and a fixed quantity are set. The quantities that the bidders are willing to sell at this price are collected. If the quantity of the offers exceeds the total required, the price is reduced, and the process is repeated until the offers correspond to the total quantity desired. All the bidders are paid at the equilibrium price.
- Discriminatory-price auction - this method is often used when the auction is comprised of several electricity supply agreements. The offers are totalled up beginning with the lowest until the supply is equal to the volumes offered. The equilibrium is decided at this point. All the offers below the equilibrium price are confirmed.

In terms of the duration of long-term electricity sale agreements, the recent examples of installed capacity awards indicate that 20 years is fairly standard.

Peru’s energy development strategy aims to triple the share of renewable energies by 2030 to account for around one-sixth of overall installed production capacity.

Initiating coverage
Renewable Energies | Spain

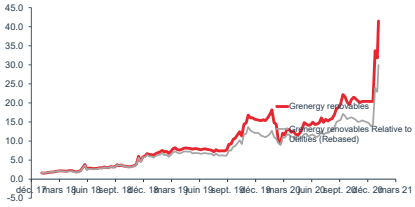
Grenergy renovables

Outperform ➔ | Target 52.5 €
Price (02/02/2021) : 41.50 € | Upside : 27 %

Revision	2020e	2021e
EPS	ns	ns

Poised for growth!

Wednesday 03 February 2021



Capital			
GRE SM | GREG.MC			
Market Cap (€m)			1 009
Enterprise value (€m)			1 363
Extrema 12 months (€)		9.12	41.50
Free Float (%)			32.0
Performance (%)	**1m**	**3m**	**12m**
Absolute	103.4	118.4	170.4
Perf. rel. Country Index	100.0	87.2	179.3
Perf. rel. Utilities	102.9	94.9	172.3
P&L	**12/21e**	**12/22e**	**12/23e**
Sales (€m)	134	203	294
EBITDA (€m)	53.8	97.8	147
Current EBIT (€m)	45.6	79.7	114
Attr. net profit (€m)	24.9	41.2	58.0
Adjusted EPS (€)	1.05	1.73	2.44
Dividend (€)	0.00	0.00	0.00
P/E (x)	39.7	23.9	17.0
P/B (x)	16.1	11.4	7.7
Dividend Yield (%)	0.0	0.0	0.0
FCF yield (%)	ns	ns	ns
EV/Sales (x)	10.19	8.27	6.83
EV/EBITDA (x)	25.3	17.2	13.6
EV/Current EBIT (x)	29.9	21.1	17.6
Gearing (%)	ns	ns	ns
Net Debt/EBITDA (x)	6.7	6.9	6.8

From a B2S model to a combined B2O/B2S model

Grenergy Renovables (Grenergy), a Spanish company, was created in 2007 by its current CEO and main shareholder David Ruiz de Andrés, who owns 68% of the capital. It first floated in 2015 on the Spanish alternative market (MAB) before being listed on the main Madrid market in 2019. Its market capitalisation is ~€ 1.0bn. Grenergy is an independent renewable power producer (IPP), mainly of solar energy. It has an integrated business model which covers all the phases from development, construction and financial structuring to project sale and/or operation. Up until 2019, the group operated an exclusively "build to sell" (B2S) model. Since 2020 the group has also committed to a "build to own" (B2O) model, while continuing its B2S business. This shift to a combined model has been well received by the market, with Grenergy's share price expanding more than four-fold, from ~€ 10 to over € 40 currently, making it the best-performing IPP over the last 15 months.

A pipeline of over 5GW, mainly in Chile and Spain

At end-2020, Grenergy had a project pipeline of over 5.0 GW at various stages of development, with ~4GW to be owned directly and ~1GW to be sold. Of this pipeline, Chile accounts for 2.6GW (52%), Spain 1.4GW (28%) and Colombia 524MW (10%). The remaining 10% is split between Italy and Peru. But the group's pipeline in Italy is set to see strong growth over the next few years, given the appeal of this market and the specific emphasis that Grenergy wants to place on the country.

Strong growth expected for directly-owned B2O capacity

For the B2O segment, the group aims to achieve installed capacity of 2.5GW in 2023, with strong growth in Spain (+200MW in 2021, +400MW in 2022 and +500MW in 2023) and further growth in Chile, at a rate of around 200MW per year, where the group boasts a project portfolio of over 2.5GW, comprised mainly of PMGD (small regulated price) projects. Beyond 2023, Grenergy is targeting a project development pace of between 1GW and 2GW per year which should continue to fuel a project construction rate of close to 1GW per year (80% B2O and 20% B2S). In our assumptions, we expect a B2O growth rate in 2024-2031 of 800MW per year on average, spread evenly between Latam (mainly Chile and Colombia) and Europe (Spain and Italy).

Cruising speed of 200MW/year for B2S

Over 2015-2020, the group built and sold close to 300MW in the B2S business (including our estimate of 100MW in 2020). This business is for now the group's main earnings contributor. From 2020 to 2023, we expect a gradual increase in the volume of sold projects from 100MW per year to 200MW per year and beyond 2023 we see a cruising speed of 200MW per year.

Initiating coverage at Outperform with a target price of € 52.5

We are initiating coverage of Grenergy at Outperform with a target price of € 52.5. Our target price is derived from a DCF model (€ 55.5 per share) at 80% and a sum-of-the-parts model (€ 40.4 per share) at 20%. Our valuation is based on a €/$ exchange rate of 1.2, bearing in mind that a 1% fluctuation in the dollar against the euro has an impact of +/-0.6% on the valuation. Despite Grenergy's outperformance over the last year or so, the stock is still relatively inexpensive. The stock is trading at a discount of 10% on an EV/EBITDA 2023e multiple vs independent renewable power producers. Our estimates are on average +8.7% above the consensus for EBITDA and ~+5% for EPS over the period 2021-2023. Over the period 2020-2030 we expect a EBITDA and EPS CAGR of around 30%.

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Grenergy in a nutshell

Grenergy Renovables (Grenergy), a Spanish company, was created in 2007 by its current CEO and main shareholder David Ruiz de Andrés, who owns 68% of the capital. It first floated in 2015 on the Spanish alternative market (MAB) before being listed on the main Madrid market in 2019. Its market capitalisation is ~€ 1.0Bn. Grenergy is an independent renewable power producer (IPP), mainly of solar energy. It has an integrated business model which covers all the phases from development, construction and financial structuring to project sale and/or operation. Up until 2019, the group operated an exclusively "build to sell" (B2S) model. Since 2020 the group has also committed to a "build to own" (B2O) model, while continuing its B2S business. This shift to a combined model has been well received by the market, with Grenergy's share price expanding more than four-fold, from ~€ 10 to over € 40 currently, making Grenergy the top-performing IPP over the last 15 months

Stock market performance of Grenergy since its IPO in 2015

Chart 29 - Sources: FactSet, ODDO BHF Securities

IPP performance over the last two years (base 100 since 2019)

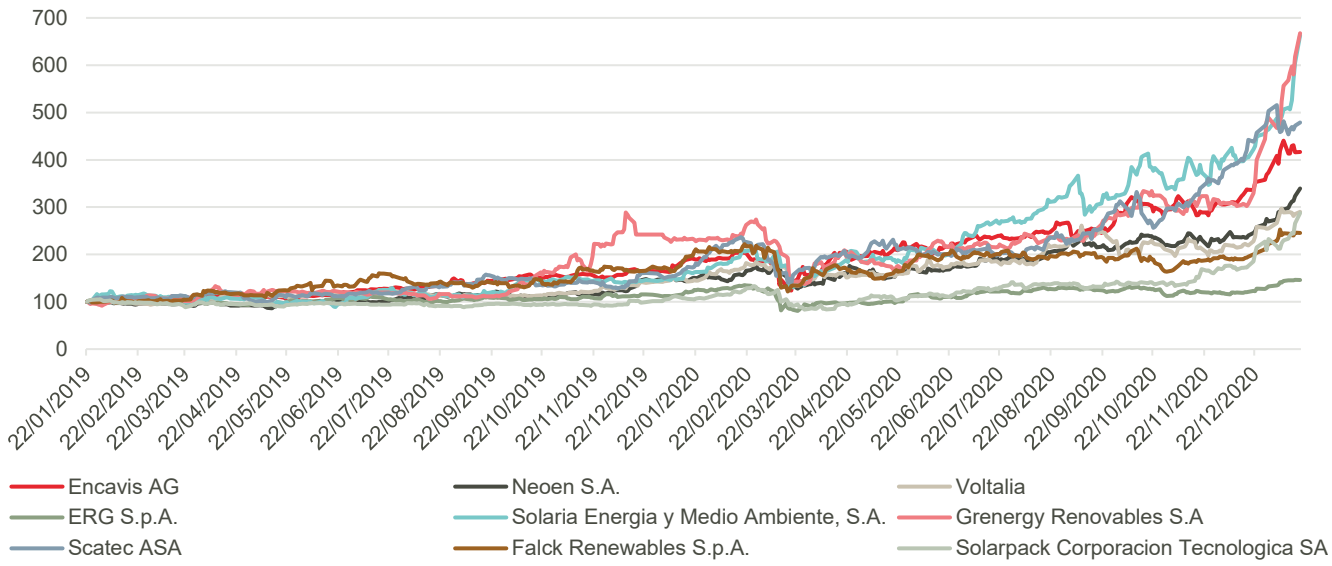


Chart 2 – Sources: FactSet, ODDO BHF Securities

10% relative-to-peer discount on EV/EBITDA 2023e

Despite Grenergy's outperformance for more than a year, it remains a relatively inexpensive stock if we look at its 2023 multiples (on the horizon of its plan). The group is currently trading with a 10% discount on VE/EBITDA 2023 and 54% discount on PE 2023.

Grenergy multiples vs peers in our coverage for 2021-2023 (as of February 2, 2021)

x	EV / sales			EV / EBITDA			PE		
	2021e	2022e	2023e	2021e	2022e	2023e	2021e	2022e	2023e
Voltalia	9.3	8.4	7.0	19.1	15.4	12.4	51.2	32.7	25.5
Solaria	29.7	19.9	16.7	37.7	24.6	20.8	70.8	42.3	33.7
Neoen	19.5	16.0	13.9	25.4	20.9	18.0	ns	76.8	52.5
Encavis	14.7	13.6	12.7	19.2	17.9	16.7	42.7	39.9	35.7
ERG	5.5	5.3	5.1	10.5	10.0	9.3	29.4	31.4	29.2
EDPR	11.3	10.8	10.3	14.4	13.7	13.0	56.3	50.3	45.4
Average	**15.0**	**12.3**	**11.0**	**21.0**	**17.1**	**15.0**	**50.1**	**45.6**	**37.0**
Grenergy	**10.2x**	**8.3x**	**6.8x**	**25.3x**	**17.2x**	**13.6x**	**39.7x**	**23.9x**	**17.0x**
(Discount) / Premium	**-32.1%**	**-33.0%**	**-37.6%**	**20.4%**	**0.5%**	**-9.5%**	**-20.8%**	**-47.5%**	**-54.0%**

Table 3 - Sources: ODDO BHF Securities, FactSet

From a B2S model to a combined B2O/B2S model

From 2007 to 2012 Grenergy developed and sold small-scale projects in Spain.

In 2012, the firm moved into the Chilean market, taking advantage of the boom in PMGD projects, which operate in the framework of Chile's special decentralised system for renewable energy generation initiatives. PMGD projects are entitled to receive remuneration for their production at a stable regulated price which is re-defined every six months based on the H24 price of the last 6 months. The current price is between $ 50/MWh and $ 55/MWh, above the market price which is around $ 35/MWh. From 2015 to 2019, the group built and sold close to 200MW of these projects.

At end-2019, the group decided it would also build directly-owned capacity (build to own, B2O), to become an independent power producer with a target, updated in Q3 2020, of 2.5GW out to 2023, while continuing its B2S business at a rate of 100-200MW per year.

In 2020, Grenergy built 163MW on a proprietary basis, with a 103MW solar park in Chile and 60MW of wind capacity in Peru and Argentina.

Key operating indicators for Grenergy in Q3 2020

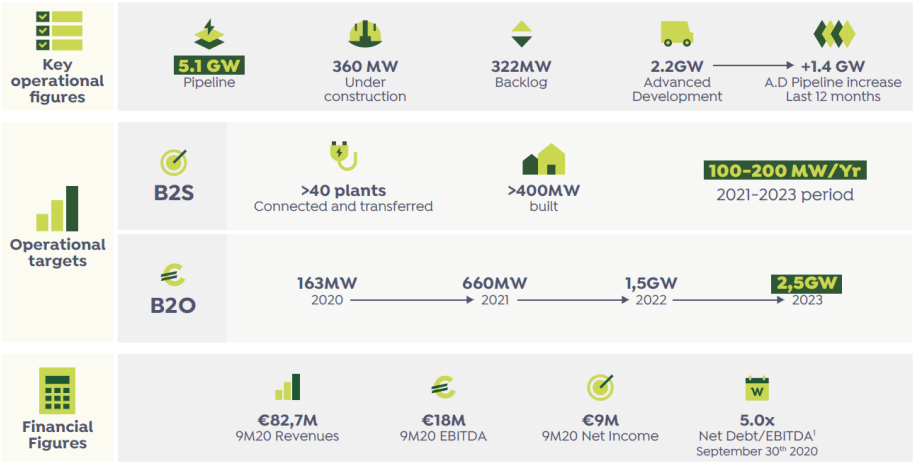


Chart 4 - Sources: Grenergy, ODDO BHF Securities

A pipeline of over 5GW, mainly in Chile and Spain

At end-2020, Grenergy had a project pipeline of over 5.0 GW at various stages of development, with ~4GW to be owned directly and ~1GW to be sold on. Of this pipeline, Chile accounts for 2.6GW (52%), Spain 1.4GW (28%) and Colombia 524MW (10%). The remaining 10% is split between Italy and Peru. But the group's pipeline in Italy is set to see strong growth over the next few years, given the appeal of this market and the specific emphasis that Grenergy wants to place on the country.

Grenergy's assets in operation and total pipeline

MW	In operation	Under construction	Backlog	Advanced development	Early stage	Total Pipeline
Probability of execution	100%	100%	80%	>50%	<50%	
Solar PV						
Chile	103	65	322	1 088	660	**2 135**
Spain		200		660	528	**1 388**
Colombia				104	420	**524**
Mexico		35				**35**
Italy					100	**100**
Peru				230		**230**
Total Solar	**103**	**300**	**322**	**2 082**	**1 708**	**4 412**
Wind						
Argentina	24					**0**
Peru	36			113		**113**
Chile					501	**501**
Total wind	**60**	**0**	**0**	**113**	**0**	**614**
Total	**163**	**300**	**322**	**2 195**	**2 209**	**5 026**

Table 5 - Sources: Grenergy, ODDO BHF Securities

Our target price stands at € 52.5

Our target price works out at € 52.5, based on a discounted cash flow model (€ 55.5 per share) at 80% and a sum-of-the-parts model (€ 40.4 per share) at 20%. We overweight the DCF method in our valuation because it incorporates the Group's future growth, whereas the SOP method is more of a static method that only incorporates the valuation of the Group's pipeline.

Summary of our valuations

€	Weigh	Valuation per share
DCF	80%	55.5
Sum-of-the-parts	20%	40.4
Target price (average)	**100%**	**52.5**

Table 6 - Source: ODDO BHF Securities

DCF: € 55.5 per share

Our forecasts are based on the strategic trajectory outlined by the group last September, to achieve 2.5 GW of installed capacity by 2023.

The weighted average cost of capital (WACC) of 6.1% that we use is based on:

- The geographic focus of investment, bearing in mind that Grenergy will make around 60% of its investments in Latam countries.
- The investment risk, with an estimated asset beta of 0.70 derived from the average between projects under PPA (over 80% of prodruction) with an asset beta of 0.55 and projects without PPA or with a PPA covering only 60% of production (Chile) with an asset beta of 0.85.
- The risk-free rate used is that of the zone in question.

- The country risk premium is that of the country in question (CDS at 5 years based on Bloomberg data).
- The credit risk (high-yield premium) is estimated at 351bp: equivalent to the level of the spread identified on the high-yield issuers of the S&P 500 (the only market that is sufficiently liquid to be a benchmark in the area of credit spreads).
- The cost of debt in Argentina of 5% does not reflect the country risk premium as Grenergy's wind project there benefits from a World Bank guarantee.
- The market risk premium used is 7.8%.

Taking account of all the assumptions and variables, the model gives a country-specific WACC which we weight using the installed capacity in the context of the group's 2023 plan.

Calculation of weighted average cost of capital at 25 January 2021

Country	EBITDA 23e (MW)	%	Risk-free rate	Country risk prem (bp)	HY prem (bp)	Tax	Asset beta	D/EV	Equity beta	Cost of equity	Cost of debt	CMPC
Chile	934	39%	2.89%	53	351	27.0%	0.70	80%	0.94	7.5%	6.9%	7.0%
Spain	1 100	45%	0.07%	42	351	25.0%	0.70	80%	0.93	7.3%	4.0%	4.7%
Colombia	226	9%	4.80%	106	351	30.0%	0.70	80%	0.95	7.6%	9.4%	9.0%
Peru	36	2%	3.66%	61	351	29.5%	0.70	80%	0.95	7.6%	7.8%	7.7%
Argentina	24	1%	57.0%	603	351	30.0%	0.70	80%	0.95	10.3%	5.0%	6.1%
Italy	100	4%	0.59%	101	351	24.0%	0.70	80%	0.93	7.3%	5.1%	5.5%
Weighted average	**2 420**	**100%**	**2.2%**	**60.4**	**351.0**	**26.3%**	**0.70**	**80%**	**0.94**	**7.4%**	**5.7%**	**6.1%**

Table 7 - Sources: Bloomberg, FactSet, ODDO BHF Securities

Beyond 2023e, we have used a rate of new capacity of 800 MW/year out to 2031 based on a ratio of development like that put forward by the group and which is based on recourse to debt (our leverage assumption is 80%). In 2032, Grenergy's installed capacity should amount to 8.9GWe in service, i.e. an average annual rate of growth of 15.0% between 2023 and 2031. Thanks to its integrated model and the in-sourcing of O&M services, the EBITDA margin of this activity should be among the best-performing IPPs, i.e. close to 80%. We have estimated a 79% margin.

We have also factored in the development and construction activity to third parties "B2S" with a cruising speed of 200MW per year. This farm-down activity should continue to contribute to financing the group's growth. In our estimates, we use an EBITDA margin of 30% on average out to 2023, then a gradual decline to ~20% in the medium term and 15% in the longer term. The high EBITDA margin level currently is justified by the PMGD projects in Chile where the group realises a margin of over 30%. We estimate that the normative margin level of a farm-down activity is generally between 15 and 20%.

We have also factored in the third-party service business, which should generate around € 4m in revenues in 2023 vs € 2m est. in 2020 with an EBITDA margin of around 15%.

Our model is based on a €/$ rate of 1.20. The table on page 6 gives the sensitivity of the valuation to the fluctuation in the dollar (the group's main currency aside from the euro).

Our DCF model is based on discounted future flows out to 2060, i.e. 30 years after the last projects that we include in our estimates, and we do not therefore calculate an exit value.

DCF model

€ m	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e	2031e	…2060e
EBITDA	97.8	147.4	191.9	228.6	272.2	316.8	361.4	439.7	450.3	492.1	64.4
- Tax	-20.9	-30.1	-37.3	-43.2	-51.0	-59.0	-67.0	-83.8	-82.9	-90.2	-16.7
- WCR	-0.5	-0.6	-0.4	-0.3	-0.4	-0.4	-0.4	-0.7	-0.1	-0.4	0.3
- Capex	-374.2	-422.5	-354.1	-354.1	-354.1	-354.1	-354.1	-354.1	-354.1	-273.6	0.0
Operating cash flow	-297.7	-305.7	-199.9	-169.0	-133.2	-96.6	-60.0	1.1	13.3	127.9	48.1
Discount factor	1	2	3	4	5	6	7	8	9	10	39
DCF	-280.7	-271.6	-167.4	-133.5	-99.1	-67.8	-39.7	0.7	7.8	70.9	4.8
EV (Σ of discounted CF)	1 673										
Financial assets	7.9										
Provisions to be paid out	-2.7										
Net debt at end-2021e	-359										
= Value of shareholders' equity	1 318										
No. of shares outstanding (m)	23.7										
Per-share valuation (€)	55.5										

Table 8 - Source: ODDO BHF Securities

We analysed the sensitivity of the stock to changes in the cost of capital, net debt and the breakdown between the market capitalisation and net debt.

Sensitivity to the cost of capital (K) and net debt (D)

€	Valuation	Diff. (%)	Terms	Valuation	Diff. (%)
+50bp chg. in cost of capital	53.7	-3.3%	-50bp chg. in cost of capital	57.4	3.3%
+100bp chg. in cost of capital	51.9	-6.5%	-100bp chg. in cost of capital	59.3	6.7%
+150bp chg. in cost of capital	50.2	-9.6%	-150bp chg. in cost of capital	61.2	10.2%
+200bp chg. in cost of capital	48.5	-12.7%	-200bp chg. in cost of capital	63.1	13.8%
+50bp chg. in cost of debt	48.1	-13.3%	-50bp chg. in cost of debt	63.6	14.6%
+100bp chg. in cost of debt	41.3	-25.6%	-100bp chg. in cost of debt	72.4	30.5%
+150bp chg. in cost of debt	35.1	-36.8%	-150bp chg. in cost of debt	82.1	47.9%
+200bp chg. in cost of debt	29.4	-47.0%	-200bp chg. in cost of debt	92.7	66.9%

Table 9 - Source: ODDO BHF Securities

Our valuation is based on a €/$ exchange rate of 1.2. The following table presents the sensitivity of the value of shareholders' equity per share to the dollar, the group's main currency aside from the euro. On this basis, a 1% fluctuation in the dollar against the euro has an impact of +/-0.6% on the valuation

Sensitivity of per-share value to fluctuations in the dollar

Change in dollar	+3%	+2%	+1%	Spot	-1.0%	-2.0%	-3.0%
€/$ rate	1.16	1.18	1.19	**1.20**	1.21	1.22	1.24
Value per share (€)	56.5	56.2	55.8	55.5	55.2	54.9	54.5
Diff.	*+1.9%*	*+1.3%*	*+0.6%*		*-0.6%*	*-1.2%*	*-1.7%*

Table 10 – Source: ODDO BHF Securities

Sum-of-the-parts: a valuation of € 40.4 per share

To value the group's different activities, we have used methods specific to each asset category, mainly:

- An approach on an installed capacity basis for production assets and those undergoing construction. As Grenergy did not directly own any capacity before 2020, we have retained the latest MW multiples: € 1.1m/MW for solar power that corresponds to the current sale price observed by the group for the projects in Chile and Spain, and € 1.2m/MW for wind power, derived from an average of two recent transactions (EDF in Brazil and Engie in Australia).
- We have valued the backlog (pre-construction) at 322MW in photovoltaic, based on the average selling price per MW (€ 1.0m/MW) minus the construction costs currently observed (€ 0.45m/MW).
- As for the projects at an advanced stage of development, i.e. 2.2GW, we have retained the latest transaction multiples observed for similar portfolios, namely € 0.1m/MW for solar power and € 0.15m/MW for wind power. For solar power, we have taken as a reference Endsea's early-2020 acquisition of a 1GW solar power portfolio in Spain from Prodiel for € 101m. For wind power, we have factored in RWE's acquisition of a 2.7GW wind power portfolio in Europe from Nordex for € 430m in Q3 2020.
- Regarding the projects at an early stage of development, also 2.2GW, we have retained a valuation multiple of 50% of that of the projects at an advanced stage of development, giving a valuation of € 0.06m/MW.

Sum-of-the-parts valuation of Grenergy

Production	MW	Unit VE (€ m/MW)	€ m	
MW in service or under construction				
Solar	403	1.1	443	Valuation based on the average selling price of solar projects in Chile and Spain in 2020.
Wind	60	1.2	72	Valuation based on an average of recent transaction in 2020
Backlog (pre-construction) PPA signed				
Solar	322	0.65	209	Valuation based on the average selling price by MW minus the current construction cost (€ 0.45m/MW).
Advanced development (success rate > 50%)				
Solar	2082	0.10	210	Selling price of solar portfolios under development (i.e. Endsea's acquisition from Prodiel)
Wind	113	0.15	17	Selling price of wind portfolios under development (i.e. RWE's acquisition from Nordex)
Early stage projects (success rate < 50%)				
Solar	2209	0.06	139	Valuation at 50% of the price of a portfolio at an advanced stage of development
Total SOP			**1018**	
Net debt 2020e			-142	Net debt at 31/12/2020 (ODDO BHF estimates) including debt for the projects in service and under construction
Long-term provisions			-2.7	
Financial assets			7.9	
Value of shareholders' equity			**887**	
Per share (€)			**40.4**	

Table 11- Source: ODDO BHF Securities

Strong growth expected for the directly-owned B2O capacity

The group is targeting an installed capacity of 2.5GW in 2023 with strong growth expected in Spain (+200MW in 2021, +400MW in 2022 and +500MW in 2023) and continuing growth at a pace of approximately 200MW per year in Chile, where the group has a portfolio of projects of over 2.5GW that is mainly made up of PMGD projects. Beyond 2021, Grenergy is aiming for a project development pace of between 1GW and 2GW per year, which should continue to fuel a project construction pace of almost 1GW per year (80% B2O and 20% B2S). For our assumptions we have retained a pace of growth for the B2O activity for 2023-2030 of +800MW per year on average out to 2031, spread equally between Latin America (mainly in Chile and Colombia) and Europe (Spain and Italy).

Growth forecast for Grenergy's B2O capacities from 2020e to 2031e

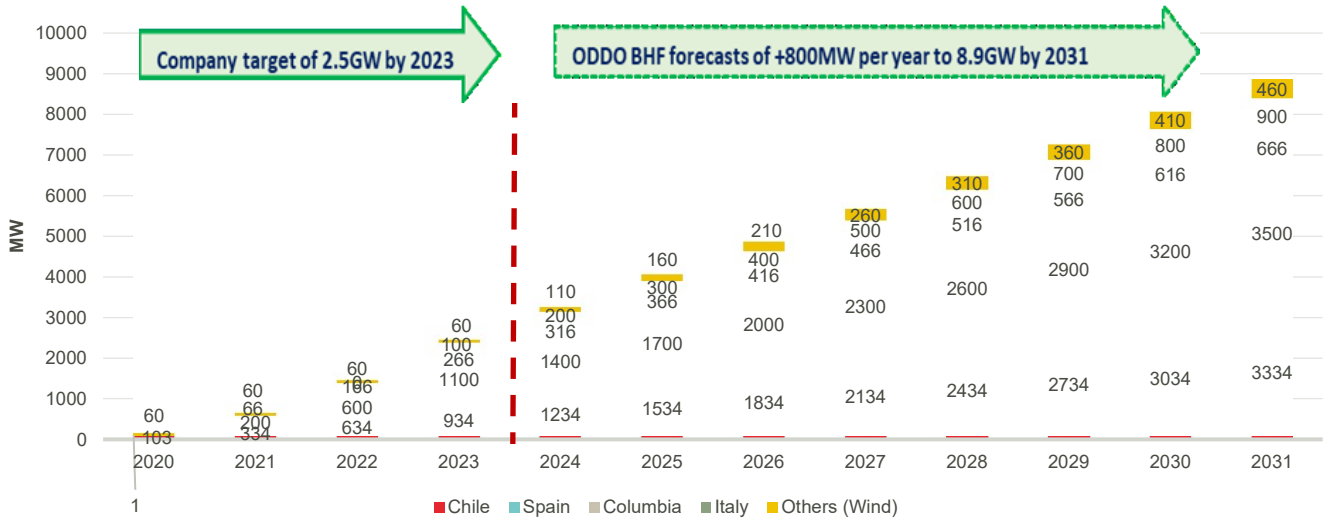


Chart 12 - Sources: Grenergy, ODDO BHF Securities

Our price assumptions and hourly rates per region

For our price forecasts per region, we have retained an average price for Chile of $ 45 per MWh derived from an average between the spot market price at $ 35/MWh and the regulated PMGD price at $ 55/MWh, given that the Purchase Price Agreement (PPA) in Chile generally covers only 50-60% of production. For Spain we have retained a price of € 35/MWh that corresponds to the latest prices observed on Spain's PPA market. For caution's sake, we have not taken indexation on prices in Spain as PPA contracts generally only cover 80% of production, which gives exposure to the market price. On the other markets, we have used the prices for the current PPA signed by the group as an assumption. Post-PPA, we have used a decline of 1% per year on average for prices over 2030-2060.

Regarding hourly rates (meaning the plant operating hours), our estimates are relatively cautious and correspond more to the averages observed in each country than to the average of the projects announced by the group, some of which exceed these figures.

Our price estimates per MWh and hourly rate per region

ODDO BHF estimates	Average price (2021e)	Average hours
Solar		
Chile ($)	45	2200
Spain (€)	35	2000
Columbia ($)	45	1936
Italy (€)	40	1900
Wind		
Peru ($)	40	4900
Argentina ($)	70	5000

Table 13 – Source: ODDO BHF Securities

Cruising speed of 200MW/year for B2S

B2S is the group's original business model. Over 2015-2020, the group built and sold close to 280MW (including our estimate of 100MW in 2020). This business is for now the main contributor to the group's earnings. From 2020 to 2023, we expect a gradual increase in the volume of sold projects from 100MW per year to 200MW per year and beyond 2023 we see a cruising speed of 200MW per year. Regarding our estimates, we retain an EBITDA margin of 30% on average out to 2023, then a gradual decline to 20% in the medium term and 15% in the long term. Our caution on the long-term margin level for this activity vs the current level is justified by the current high EBITDA margin level, which in turn is justified by the PMGD projects in Chile from which the group generates a margin of over 30%. We estimate that the normative margin level of a farm-down activity is generally between 15% and 20%.

Our estimates for the B2S activity per MW for 2020-2030

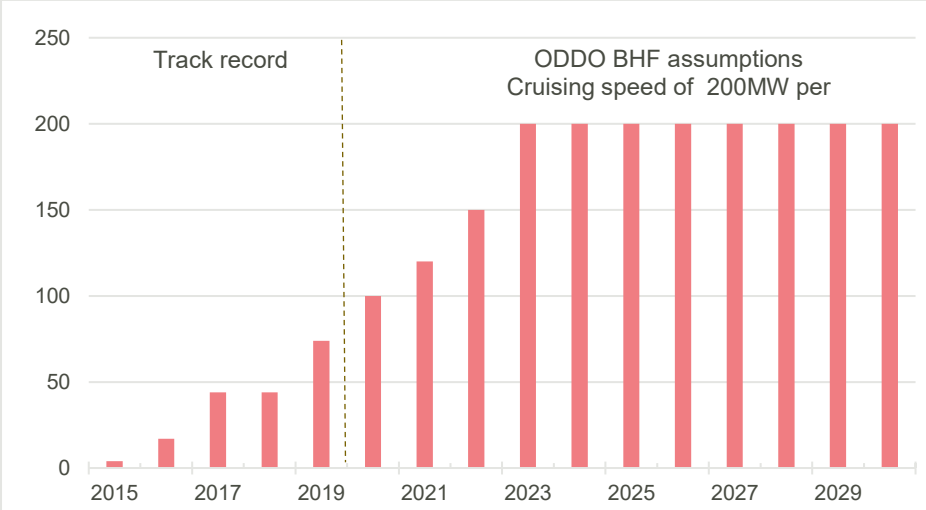


Chart 14 - Sources: Grenergy, ODDO BHF Securities

Our forecasts for each activity over 2020e-2030e

Our forecasts are based on a euro-dollar exchange rate of **1.20.**

We set out below a summary of our estimates for 2020-2030:

Summary of our estimates by division over 2020e-2030e

€ m	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e
External Sales	**75.7**	**133.7**	**203.0**	**294.2**	**354.7**	**404.6**	**461.5**	**519.5**	**577.4**	**678.1**	**693.3**
B2O	0.0	29.1	74.1	137.7	207.8	264.8	321.8	378.8	435.8	535.6	549.8
B2S	73.3	102	126	153	142	134	133	133	133	133	133
Services to third parties	2.3	2.3	2.9	3.6	4.5	5.5	6.4	7.3	8.3	9.2	10.1
EBITDA	**24.6**	**53.8**	**97.8**	**147.4**	**191.9**	**228.6**	**272.2**	**316.8**	**361.4**	**439.7**	**450.3**
B2O	0.0	23.0	58.5	108.8	164.2	209.2	254.2	299.3	344.3	423.1	434.4
B2S	28.8	35.3	44.1	43.8	33.2	25.2	24.2	24.2	24.2	24.2	24.2
Services	0.4	0.4	0.4	0.5	0.7	0.8	1.0	1.1	1.2	1.4	1.5
Corporate	-4.5	-4.9	-5.2	-5.7	-6.1	-6.6	-7.1	-7.7	-8.3	-9.0	-9.7
D&A	-0.4	-8.2	-18.2	-33.2	-50.1	-64.2	-78.4	-92.5	-106.7	-120.9	-135.0
EBIT	**24.2**	**45.6**	**79.7**	**114.3**	**141.9**	**164.4**	**193.8**	**224.3**	**254.7**	**318.8**	**315.3**
Financial results	-7.2	-12.5	-24.7	-37.0	-53.1	-64.4	-74.6	-83.7	-91.8	-98.8	-104.7
Taxes	-4.3	-8.3	-13.7	-19.3	-22.2	-25.0	-29.8	-35.1	-40.7	-55.0	-52.7
Net income	**12.8**	**24.9**	**41.2**	**58.0**	**66.6**	**75.0**	**89.5**	**105.4**	**122.2**	**165.0**	**158.0**
EPS (€)	0.54	1.05	1.73	2.44	2.80	3.16	3.76	4.44	5.14	6.95	6.65
Net debt/EBITDA (x)	5.7	6.7	6.9	6.8	6.5	6.4	6.0	5.8	5.5	4.8	4.9
EBITDA/Fin. results (x)	3.3	4.3	4.0	4.0	3.6	3.6	3.7	3.8	3.9	4.5	4.3

Table 15 - Source: ODDO BHF Securities

Our estimates are higher than the consensus

Analysts' coverage on the stock is not very extensive. Grenergy's FactSet consensus is only based on three contributions. Our estimates are on average +8.7% above the consensus for EBITDA and ~+5% for EPS over the period 2021-2023.

ODDO BHF vs consensus FactSet for 2020-2023

€ m	2020e	2021e	2022e	2023e
EBITDA consensus	24.6	50.9	88.8	133.7
EBITDA ODDO BHF	24.6	53.8	97.8	147.4
Gap	0.3%	5.7%	10.2%	10.3%
EBIT consensus	24.0	43.3	74.2	107.0
EBIT ODDO BHF	24.2	45.6	79.7	114.3
Gap	1.1%	5.4%	7%	7%
NI consensus	12.6	23.5	39.4	56.0
NI ODDO BHF	12.8	24.9	41.2	58.0
Gap	1.5%	5.8%	4.5%	3.5%

Table 16 - Sources: FactSet, ODDO BHF Securities

Net debt ratio/EBITDA high but normal for IPP companies

According to our estimates, the development of the group's directly-owned capacity based on debt (80% of investment costs in our assumptions) and its own cash-flow generation should drive up Grenergy's net debt/EBITDA ratio from 5.7x at end-2020 to almost 7.0x for the period 2021-2023. This level is high in absolute terms, but relatively normal compared to other companies in a growth phase in the independent power producer (IPP) sector. This is due to the nature of the activity of such companies, based on financial structuring like that of projects, with debt of up to 90% of investments. The group has a structured financing team that has already structured over $ 400m of project debt for the group's two activities (B2O and B2S), and which is currently in talks for over $ 400m for the group's upcoming projects (660MW in Spain, 111MW in Chile and 90MW in Columbia).

Net debt/EBITDA ratio trend forecasts for 2020e-2030e

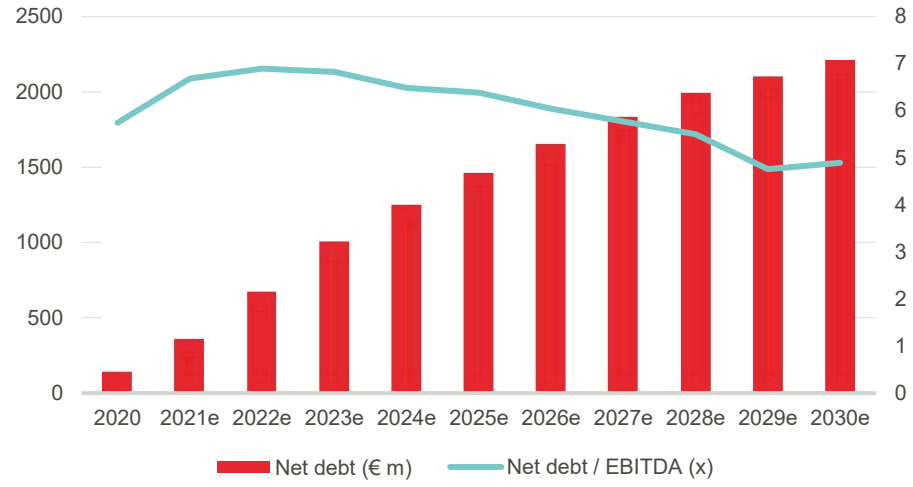


Chart 17 – Source: ODDO BHF Securities

A company conscious of ESG matters

In Q1 2020, Grenergy carried out an in-depth analysis of its ESG performances, involving the consultation of a large range of external sources and over 40 in-house appraisals. The results of this procedure enabled the group to highlight 21 topics of critical importance for the company and stakeholders due to their potential impact, including key performance indicators in four areas: governance, social, environmental and economic. This information served as a basis for the company's 2021-2023 ESG action plan, the rollout of which has already begun. This roadmap is a plan that sets out 70 concrete actions in the areas of good governance, risk and impact management and communication with stakeholders.

The group's ESG action plan - 2023 roadmap

ESG Policy	Action areas	Number of actions	Aim
ESG Governance structure	Governance	10	✓ Create a solid ESG Governance structure
Prevention and mitigation of negative impacts	Strategy	5	✓ Integrate ESG objectives within Corporate strategy
	Risk management	9	✓ Integrate ESG risks
Promotion of positive impacts	ESG Impacts	23	✓ Boost positive impacts and mitigate negative
Stakeholder's relations	Communication	9	✓ Implement the necessary tools to quantify Grenergy's ESG footprint in the community

Chart 18 - Source: Grenergy

Another key ESG step in 2020 was the board of directors' approval of the sustainable development policy, as well as the creation of a sustainability committee that regularly reports directly to the board of directors on the progress of the ESG action plan. The sustainable development policy defines sustainable development priorities and sets the rules for monitoring this policy. The aim is to improve and structure governance in this area to integrate it throughout the organisation with a top-down approach. Furthermore, Grenergy has implemented an additional range of procedures to regulate in-house governance, such as a protocol for corporate crime prevention and a code of conduct for its supply chain.

The group's main ESG indicators at end-2019

50% of the members of Grenergy's board of directors are independent and one-third are women. The company's two independent committees, namely the audit committee and the appointments and remuneration committee, have 50% female representation. The company has indicated a 2% gender pay gap.

In 2019, the company provided 406 hours of training to 146 employees as at end-2019 and did not declare any accidents. Almost 89% of employees and 31% of suppliers are local.

Grenergy publicly and transparently reports its carbon footprint as well as its waste generation and water consumption. It also has a well-defined risk management approach.

ESG indicators at end-2019

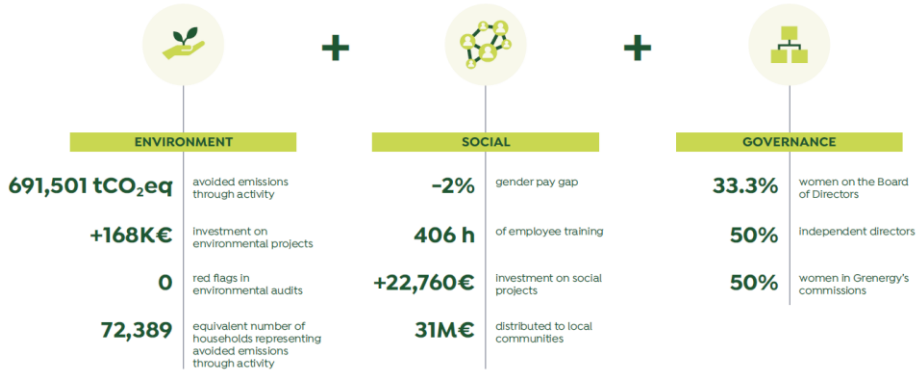


Chart 19 - Source: Grenergy

SWOT analysis

SWOT analysis	
Strengths	**Weaknesses**
- Integrated business model - Pipeline of over 5GW, mainly in solar - Ramp-up of the development pace (+1.4GW in 12 months) - Presence on markets with strong growth (i.e. PMGD in Chile and Spain - Young and ambitious management - High sensitivity to ESG criteria	- Weak level of installed capacity as it stands - Like IPPs with strong growth, a significant increase in the group's net debt is expected - Exposure to the market price (in Chile PPA cover just 60% in production)
Opportunities	**Threats**
- Increase in tenders in most of the countries where the group is present - Increase in the dollar (+1%$ = +0.6% in the per share valuation) - Stability or increase in market prices in the long term - Increase in PPA prices - Storage and green hydrogen	- Decline in the market prices (in Chile and Spain) - Decline in PPA in Chile and Spain - Fall in the dollar - Risk of execution of the 2023 growth plan

Table 20 - Source: ODDO BHF Securities

Annexes: list of the group's advanced projects (2.9GW)

Projects in construction (at end-September 2020)

Country	Project	Type	MW	Resources (hrs)	Build & Own	COD
Argentina	Kosten	Wind	24	5,033	Yes	4Q20
Peru	Duna	Wind	18	4,900	Yes	4Q20
Peru	Huambos	Wind	18	4,900	Yes	4Q20
España	Escuderos	Solar	200	2.128	Yes	2Q21
Chile	PMGD (7 projects)	Solar	65	1,924-2,442	No	3Q20-1Q21
Mexico	S. Miguel de Allende	Solar	35	2,300	No	1Q21
Total UC			**360**			

Table 21 - Source: Grenergy

Porjects with a backlog (at end-September 2020)

Country	Project	Type	MW	Resources (hrs)	Build & Own	COD
Chile	Quillagua2	Solar	111	2,950	Yes	4Q21
Chile	PMGD (11 projects)	Solar	118	2,000-2,734	Yes	2Q21-2Q22
Chile	PMGD (9 projects)	Solar	93	2,000-2,734	No	2Q22
Total Backlog			**322**			

Table 22 – Source: Grenergy

Advanced developments in MW

Country	Project	Type	MW	Resources (hrs)	COD
España	Belinchon	Solar	150	2,150	3Q22
España	Jose Cabrera	Solar	50	2,156	4Q22
España	Ayora	Solar	160	2,212	4Q22
España	Tabernas	Solar	300	2,358	4Q22
Colombia	Distribution (9 projects)	Solar	104	1,915-1,957	2Q21-4Q21
Peru	Emma_Bayovar	Wind	72	4,000	4Q22
Peru	Matarani	Solar	80	2,750	4Q22
Peru	Lupi	Solar	150	2,900	4Q22
Peru	Naira (1 y 2)	Wind	40	5.100	4Q22
Chile	PMGD (10 Projects)	Solar	104	2,200-2,700	2Q22-3Q22
Chile	Victor Jara	Solar	240	2,800	2Q23
Chile	Algarrobal	Solar	240	2,800	3Q23
Chile	Teno	Solar	240	2,186	2Q22
Chile	Gabriela	Solar	264	2,800	1Q23
Total			**2,195**		

Table 23 - Source: Grenergy

GREG.MC | GRE SM **Outperform** **Price 41.50 €**

Renewable Energies | Spain **Upside 26.51%** **TP 52.5 €**

PER SHARE DATA (€)	12/18	12/19	12/20e	12/21e	12/22e	12/23e
Adjusted EPS	0.40	0.48	0.54	1.05	1.73	2.44
Reported EPS	**0.41**	**0.48**	**0.54**	**1.05**	**1.73**	**2.44**
Growth in adjusted EPS	-	20.7%	11.6%	94.7%	65.7%	40.7%
Net dividend per share	0.00	0.00	0.00	0.00	0.00	0.00
FCF to equity per share	0.75	-1.69	-3.94	-9.17	-13.27	-13.98
Book value per share	1.08	1.56	2.04	2.58	3.63	5.36
Number of shares market cap (m)	24.31	24.31	24.31	24.31	24.31	24.31
Number of diluted shares (m)	23.42	23.75	23.75	23.75	23.75	23.75
VALUATION (€m)	**12/18**	**12/19**	**12/20e**	**12/21e**	**12/22e**	**12/23e**
12m highest price (€)	6.00	19.20	22.20	41.50		
12m lowest price (€)	1.55	5.90	9.12	30.10		
(*) Reference price (€)	2.75	8.93	15.71	41.50	41.50	41.50
Capitalization	66.8	217	382	1 009	1 009	1 009
Restated Net debt	4.3	48.1	142	359	675	1 007
Minorities (fair value)	0.0	0.0	0.0	0.0	0.0	0.0
Financial fixed assets (fair value)	2.5	7.2	7.9	7.9	7.9	7.9
Provisions	0.0	2.7	2.7	2.7	2.7	2.7
Enterprise Value	**68.6**	**261**	**518**	**1 363**	**1 678**	**2 010**
P/E (x)	6.9	18.5	29.2	39.7	23.9	17.0
P/CF (x)	20.9	31.6	28.3	29.8	16.6	10.8
Net Yield	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FCF yield	27.2%	ns	ns	ns	ns	ns
P/B incl. GW (x)	2.54	5.72	7.69	16.08	11.44	7.74
P/B excl. GW (x)	2.54	5.72	7.69	16.08	11.44	7.74
EV/Sales (x)	1.48	3.61	6.85	10.19	8.27	6.83
EV/EBITDA (x)	3.7	14.1	21.1	25.3	17.2	13.6
EV/Current EBIT (x)	**4.4**	**14.9**	**21.4**	**29.9**	**21.1**	**17.6**
(*) historical average price						
PROFIT AND LOSS (€m)	**12/18**	**12/19**	**12/20e**	**12/21e**	**12/22e**	**12/23e**
Sales	46.3	72	76	134	203	294
EBITDA	18.5	18.5	24.6	54	98	147
Depreciations	-3.1	-1.0	-0.4	-8.2	-18.2	-33.2
Current EBIT	**15.4**	**17.5**	**24.2**	**45.6**	**80**	**114**
Published EBIT	15.4	17.5	24.2	45.6	80	114
Net financial income	-4.5	-3.4	-7.2	-12.5	-24.7	-37.0
Corporate Tax	-1.4	-2.7	-4.3	-8.3	-13.7	-19.3
Net income of equity-accounted companies	0.0	0.0	0.0	0.0	0.0	0.0
Profit/loss of discontinued activities (after tax)	0.0	0.0	0.0	0.0	0.0	0.0
Minority interests	0.0	0.0	0.0	0.0	0.0	0.0
Attributable net profit	9.5	11.4	12.8	24.9	41.2	58
Adjusted attributable net profit	**9.3**	**11.4**	**12.8**	**24.9**	**41.2**	**58**
BALANCE SHEET (€m)	**12/18**	**12/19**	**12/20e**	**12/21e**	**12/22e**	**12/23e**
Goodwill	0.0	0.0	0.0	0.0	0.0	0.0
Other intangible assets	2.7	9.4	9.4	9.4	9.4	9.4
Tangible fixed assets	15.1	75.1	178	410	751	1 126
WCR	8.4	-3.0	-0.5	-0.9	-1.3	-1.9
Financial assets	3.5	10.7	11.7	11.7	11.7	11.7
Ordinary shareholders equity	25.3	37.1	48.5	61.3	86.1	127
Minority interests	0.0	0.0	0.0	0.0	0.0	0.0
Shareholders equity	25.3	37.1	48.5	61.3	86.1	127
Non-current provisions	0.1	7.0	8.4	9.4	10.4	11.4
Net debt	**4.3**	**48.1**	**142**	**359**	**675**	**1 007**
CASH FLOW STATEMENT (€m)	**12/18**	**12/19**	**12/20e**	**12/21e**	**12/22e**	**12/23e**
EBITDA	**18.5**	**18.5**	**24.6**	**53.8**	**97.8**	**147.4**
Change in WCR	6.6	9.2	2.5	-0.4	-0.5	-0.6
Interests & taxes	-4.1	-3.7	-11.4	-20.8	-38.5	-56.3
Others	-11.3	-8.0	0.0	0.0	0.0	0.0
Operating Cash flow	9.7	15.9	15.7	32.6	58.9	90.5
CAPEX	7.8	-56.1	-109.2	-250.4	-374.2	-422.5
Free cash-flow	**17.5**	**-40.2**	**-93.5**	**-217.8**	**-315.3**	**-331.9**
Acquisitions / disposals	0.0	0.0	0.0	0.0	0.0	0.0
Dividends	0.0	0.0	0.0	0.0	0.0	0.0
Net capital increase	0.1	0.8	0.0	0.0	0.0	0.0
Others	0.0	0.0	0.0	0.0	0.0	0.0
Change in net cash	17.4	-39.4	-93.5	-217.8	-315.3	-331.9
GROWTH MARGINS PRODUCTIVITY	**12/18**	**12/19**	**12/20e**	**12/21e**	**12/22e**	**12/23e**
Sales growth	-	56.1%	4.7%	76.7%	51.8%	45.0%
Lfl sales growth	**-**	**-**	**-**	**-**	**-**	**-**
Current EBIT growth	-	13.7%	38.1%	88.5%	74.6%	43.4%
Growth in adjusted EPS	-	20.7%	11.6%	94.7%	65.7%	40.7%
Net margin	20.2%	15.8%	16.9%	18.6%	20.3%	19.7%
EBITDA margin	**39.9%**	**25.5%**	**32.5%**	**40.2%**	**48.2%**	**50.1%**
Current EBIT margin	**33.3%**	**24.2%**	**32.0%**	**34.1%**	**39.2%**	**38.8%**
CAPEX / Sales	-63.4%	-77.6%	ns	ns	ns	ns
WCR / Sales	18.2%	-4.2%	-0.7%	-0.7%	-0.7%	-0.7%
Tax Rate	12.8%	18.9%	25.0%	25.0%	25.0%	25.0%
Normative tax rate	26.3%	70.0%	80.0%	93.8%	7.4%	5.7%
Asset Turnover	-	1.3	0.6	0.4	0.3	0.3
ROCE post-tax (normative tax rate)	**-**	**9.8%**	**3.6%**	**0.9%**	**12.5%**	**11.4%**
ROCE post-tax hors GW (normative tax rate)	-	9.8%	3.6%	0.9%	12.5%	11.4%
ROE	-	36.6%	29.8%	45.3%	55.9%	54.3%
DEBT RATIOS	**12/18**	**12/19**	**12/20e**	**12/21e**	**12/22e**	**12/23e**
Gearing	17%	ns	ns	ns	ns	ns
Net Debt / Market Cap	0.06	0.22	0.37	0.36	0.67	1.00
Net debt / EBITDA	**0.23**	**2.60**	**5.76**	**6.68**	**6.90**	**6.83**
EBITDA / net financial charges	11.0	16.6	3.4	4.3	4.0	4.0

Sources: ODDO BHF Securities, SIX

Initiating coverage
Renewable Energies | Spain

Solaria

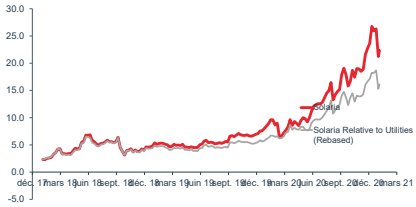
Underperform ➔ | Target 15.8 €

Price (02/02/2021) : 22.32 € | Upside : -29 %

Revision	2020e	2021e
EPS	ns	ns

Solar traction

Wednesday 03 February 2021



Capital			
SLR SM | SLRS.MC			
Market Cap (€m)			2 789
Enterprise value (€m)			3 732
Extrema 12 months (€)		6.10 -	30.94
Free Float (%)			58.7
Performance (%)	**1m**	**3m**	**12m**
Absolute	-5.6	33.1	164.1
Perf. rel. Country Index	-7.2	14.1	172.9
Perf. rel. Utilities	-5.8	18.8	166.1
P&L	**12/21e**	**12/22e**	**12/23e**
Sales (€m)	126	196	243
EBITDA (€m)	99.1	158	194
Current EBIT (€m)	62.2	109	137
Attr. net profit (€m)	39.4	65.9	82.8
Adjusted EPS (€)	0.32	0.53	0.66
Dividend (€)	0.00	0.00	0.00
P/E (x)	70.8	42.3	33.7
P/B (x)	10.9	8.7	6.9
Dividend Yield (%)	0.0	0.0	0.0
FCF yield (%)	ns	ns	ns
EV/Sales (x)	29.71	19.90	16.68
EV/EBITDA (x)	37.7	24.6	20.8
EV/Current EBIT (x)	60.0	35.5	29.5
Gearing (%)	ns	ns	ns
Net Debt/EBITDA (x)	ns	7.0	6.5

A leader in photovoltaic energy buoyed by enthusiasm for this sector

With its positioning as a pure player in renewable energy dedicated to solar energy and its Iberian focus, Solaria stands out from most other groups. From a stock-market perspective, its performance has been driven by: 1/ its excellent control of the value chain (knowledge of the field, technical and administrative expertise) which has enabled it to grow its project portfolio (4.3x between 2018 and 2020 to over 10 GW) and 2/ the financial markets' enthusiasm for green stocks through the development of thematic funds. In addition to these elements, a technical factor has been added, namely the integration of Solaria into the portfolios of the two largest ETFs in the US, whose outstandings increased significantly in 2020. Our price target of € 15.8 per share, based on a fundamental approach through a discounting of free cash flows (€ 17.4 per share) and a sum of the parts based on transaction values (€ 14.2 per share), prompts us to adopt an Underperform recommendation.

A specialist in solar energy in Spain

Solaria is one of the very few pure players in the field of renewable energy based on a single (solar) technology. To this technical positioning, the group also adds a very Spanish focus (400 MW out of the 440 MW at end-2020). The balance of the installed capacity is located in Italy (16.7 MW), Uruguay (22.7 MW) and Greece (0.4 MW). At this stage, the structure of the group's contracts is essentially based on long-term contracts (PPA). Within the framework of PPA corporates, Solaria contracts out 75% of the volumes, the balance (25%) being sold at market price. This "merchant" profile should remain relatively stable over time with, depending on the type of long-term contract, a maximum of 25% of the installed capacity sold at market price. Finally, in view of recent developments, 12% of the sales structure is still composed of contracts benefiting from subsidised tariffs (average remaining duration 15 years). However, this share will represent just 2.5% of assets at the end of 2021.

2025 targets of 6.2 GW with no financial guidance

Solaria only provides an installed capacity target of 6.2 GW for 2025 with intermediate stages from 2021 to 2024. Given that it is a relatively recently established company, Solaria has seen a rapid expansion of its project portfolio in the last few years, driven by the revival of the solar segment in southern Europe, both through government tenders and PPA corporates ((1.5 GW in the portfolio). To date, it has 360 MW under construction exclusively in Spain and 575 MW that should be operational by the end of Q1 2021 to reach the 1,375 GW installed capacity guidance affirmed at the beginning of 2020. Of the 10 GW project portfolio, 5.7 GW, located in Spain, are in an advanced stage of development with secure connections and land and partial financing in place, which makes the target of 2.15 GW by the end of 2021 and 6.2 GW by 2025 appear realistic.

Double-digit growth at every level of the P&L

Over the 2019-2025e period, we anticipate a sales CAGR rate of 28% per annum driven by Spain, 44% for EBITDA and 31% for attributable net profit, in light of a choice of financing new projects essentially by debt from 2020 and a tax system that is gradually losing the benefit of tax-loss carryforwards. Our 2020e-2025e estimates are within the ranges of the FactSet consensus.

A balance sheet structure dedicated to projects

From a balance sheet perspective, the group should see a peak in terms of leverage in 2020 with a net debt/EBITDA ratio of 12.1x, before benefiting from the effect of the size of its fleet in terms of cash flow generation combined with the reduction of its investments. This will bring the leverage ratio down to around 5.4x by 2025, in line with the cruising speed of some competitors.

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A stock-market valuation buoyed by the sector

With 800 MW, including 360 MW under construction, and a target of 6.2 GW in 2025, Solaria has a market capitalisation of € 2.7bn. We consider that the stock's performance has been driven by three factors:

- The fundamentals of the development of renewable markets and more particularly solar energy in the Iberian Peninsula. The renewal of this technology with the significant drop in production costs and the shift from subsidised tariffs to auction mechanisms that provide visibility and eliminate any political risk have been the main supporting factors.
- The group's proactive development strategy, with a successful strategic transformation from solar farm installer to independent solar electricity generator, a capacity to expand its project portfolio (over 10 GW, of which 5.9 GW secured at end-September 2020 compared with 2.3 GW in June 2018) and an industrial profile based on optimising operating costs.
- The integration of Solaria into the portfolios of the two largest ETFs in the US, Ishare Global Clean Energy ($ 6.65bn of assets under management) and Invesco Solar ($ 4.73bn of assets under management). The significant increase in these two funds' outstandings over 2020 (Ishare Global Clean Energy had $ 471m in assets under management at the start of 2020, and $ 1.1bn at 31 August 2020) explains from a technical standpoint, the share price gains. Solaria's weighting within these two ETFs is 1.73% and 2.48% respectively. This represents a position of € 272m, i.e. almost 10% of Solaria's market capitalisation. Note that the new US government, which is much more favourable to the development of renewable energies, should sustainably boost investor appetite for this segment.

Trend in assets under management for Ishare Global Clean Energy ($ m)

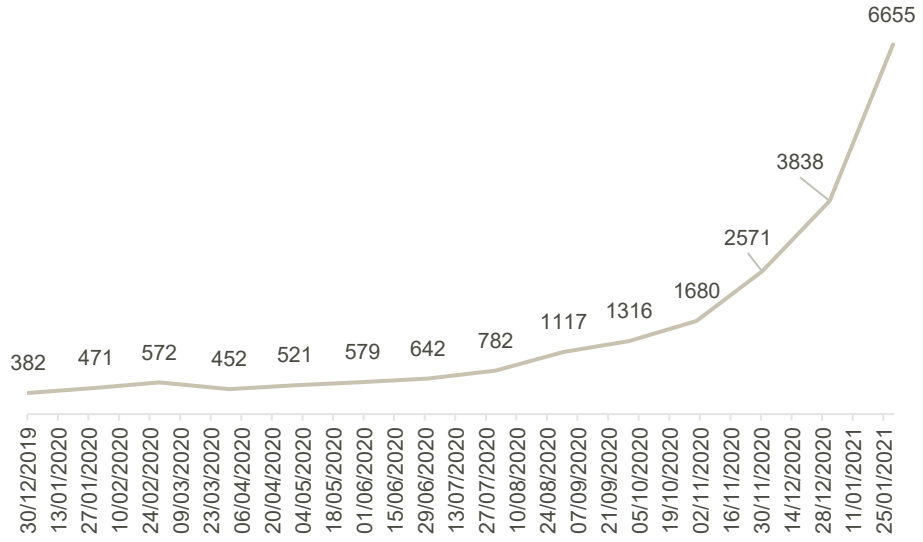

Chart 30 - Source: Trackinsight

Our target price works out at € 15.8, based on a discounted cash flow (€ 17.4 per share) and a sum-of-the-parts (€ 14.2 per share).

Summary of our valuations

€ m	Valuation per share
DCF	17.4
Sum-of-the-parts	14.2
Target price (average)	**15.8**

Table 31 - Source: ODDO BHF Securities

DCF: € 17.4 per share

Our forecasts are based on the strategic trajectory delivered by the group last September, namely attaining 6.2 GW of installed capacity by 2025.

Our weighted average cost of capital (WACC) is 5.3%. This is an average between the calculation methodology that we use in a park/park approach (4.0%) and the discount rate that the group uses for its asset value tests at the level of its cash generating units (CGUs), i.e. 6.50%.

The WACC calculation in a park/park approach is sensitive to two parameters in our opinion,

- The geographic location of the investment, bearing in mind that Solaria has around 95% of its investments in EU member states.
- The risk attached to the investment, with, during the long-term contractual PPA phase, the existence of a fixed rate hence our estimated asset beta of 0.40, which is unchanged. Beyond this period, we retain an asset beta of 0.85.
- Note that all of the group's assets are part of a long-term contract framework. Regarding those with private counterparties, corporate PPAs cover only 75% of volumes, the remaining 25% is sold on the market.

The risk-free rate used is that of the area under review when PPP contracts are signed in local currency.

But the country risk premium is systematically that of the country in question (CDS at 5 years derived from Bloomberg database).

The credit risk (high-yield premium) is estimated at 351bp: equivalent to the level of the spread identified on the high-yield issuers of the S&P 500 (the only market that is sufficiently liquid to be a benchmark in the area of credit spreads).

Once all of these assumptions and variables are factored in, the model enables us to obtain a valuation multiple per "uniform base", to be applied to the installed capacity.

/park approach

Country	Risk-free rate	Sovereign risk premium (bp)	High yield premium()	Tax	PPA period		Post PPA period		MW EBITDA	PPA WACC	Post PPA WACC	Weighted WACC
					Beta	WACC	Beta	WACC	End-2020	Synthetic	Synthetic	Synthetic
Spain	0.99%	42.7	253	25.00%	40%	3.6%	85%	4.6%	400.3	3.3%	4.2%	3.5%
Portugal	0.76%	37	253	25.00%	40%	4.5%	85%	4.4%	0	0.0%	0.0%	0.0%
Italy	1.53%	101	253	24.00%	40%	4.2%	85%	5.6%	16.7	0.2%	0.2%	0.2%
Greece	1.14%	98	253	24.00%	40%	6.1%	85%	5.2%	0.4	0.0%	0.0%	0.0%
Uruguay	2.82%	171	253	25.00%	40%	6.2%	85%	7.1%	22.7	0.3%	0.4%	0.3%
Total									**440.1**	**3.7%**	**4.8%**	**4.0%**

Table 32 - Source: ODDO BHF Securities estimates

Beyond 2025e, we have used a rate of new capacity of 800 MW/year out to 2034 based on a development ratio like that put forward by the group and which is based on massive recourse to debt (our leverage assumption is 90% where the group targets a zero level of shareholders' equity for its future projects. In 2034, Solaria's installed capacity should amount to a 12.9 GWe in service, i.e. an average annual rate of growth of 27.0%.

Like many other groups in this segment, we have not factored in a development-construction business for third parties. Solaria's philosophy is currently concentrated on its proprietary activity.

Likewise, it does not expect to develop a maintenance business for third parties.

The data for 2034e reflect a normative earnings structure for the company, with a level of free cash flow equivalent to what the group is expected to generate at cruising speed.

DCF model

€ m	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e	2031e	2032e	2033e	2034e
Underlying operating profit	**109**	**137**	**162**	**201**	**240**	**271**	**302**	**334**	**365**	**391**	**410**	**423**	**431**
Growth rate		*25.2%*	*18.3%*	*24.0%*	*19.1%*	*13.1%*	*11.6%*	*10.4%*	*9.4%*	*7.0%*	*5.0%*	*3.0%*	*2.0%*
Tax rate	*25%*	*25%*	*25%*	*25%*	*25%*	*25%*	*25%*	*25%*	*25%*	*25%*	*25%*	*25%*	*25%*
NOPAT	**82**	**103**	**122**	**151**	**180**	**203**	**227**	**250**	**274**	**293**	**308**	**317**	**323**
+ depreciation and amortisation	49	57	71	85	95	106	117	127	138	130	122	114	106
Cash flow	**131**	**160**	**193**	**235**	**275**	**309**	**343**	**378**	**412**	**423**	**429**	**431**	**429**
- Change in WCR	-7	-7	-7	-7	-7	-7	-7	-7	-7	-5	-3	-1	0
- Investment	-244	-268	-328	-292	-256	-256	-256	-256	-248	-240	-240	-240	-240
Operating cash flow	**-120**	**-115**	**-142**	**-64**	**12**	**46**	**80**	**115**	**157**	**178**	**186**	**190**	**189**
Discounted value of free cash flow	-113	-102	-118	-50	9	32	52	69	89	95	94	89	97
Sum of discounted cash flows	293												
Terminal value	2,815												
Operational value of the business	**3,108**												
+ Financial assets	0.6												
- Provisions to be paid out	0.0												
Net debt end-2021	-941												
- Minority interests	0.0												
= Value of shareholders' equity	**2,168**												
Per share (€)	**17.4**												

Table 33 - Source: ODDO BHF Securities

We conducted several sensitivity analyses. Aside from the sensitivity of the WACC and the perpetual growth rate, we analysed the sensitivity to changes in the cost of capital, net debt and the breakdown between the market capitalisation and net debt.

Sensitivity to WACC and perpetual growth rate

€	WACC (%)				
Perpetual growth (%)	**3.30**	**4.30**	**5.30**	**6.30**	**7.30**
1.60	55.1	28.3	16.1	9.2	4.8
1.70	58.9	29.6	16.7	9.6	5.0
1.80	63.1	31.0	**17.4**	9.9	5.3
1.90	68.0	32.5	18.0	10.3	5.5
2.00	44.9	39.1	34.0	29.5	25.6

Table 34: Source: ODDO BHF Securities

Sensitivity to the cost of capital and (K) and net debt (D)

€	Valuation	Diff. (%)	Terms	Valuation	Diff. (%)
+50bp change in cost of capital	14.1	-19	-50bp change in cost of capital	21.4	23
+100bp change in cost of capital	11.5	-34	-100bp change in cost of capital	26.5	52
+150bp change in cost of capital	9.3	-47	-150bp change in cost of capital	33.2	91
+200bp change in cost of capital	7.4	-57	-200bp change in cost of capital	42.4	144
+50bp change in cost of debt	16.4	-6	-50bp change in cost of debt	18.3	5
+100bp change in cost of debt	15.6	-10	-100bp change in cost of debt	19.3	11
+150bp change in cost of debt	14.8	-15	-150bp change in cost of debt	20.4	17
+200bp change in cost of debt	14.0	-20	-200bp change in cost of debt	21.6	24

Table 35 - Source: ODDO BHF Securities

Sum of the parts: a valuation of € 14.2 per share

To value the group's different activities, we have used methods specific to each asset category, i.e. mainly:

- An approach on an installed capacity basis for production assets. We have retained MW multiples depending on the technology, i.e. € 1.29m/MW for solar. This multiple corresponds to the valuations resulting from transactions since 2017 (39 solar transactions involving 11.9 GW).
- Construction in progress, i.e. 360 MW in photovoltaic, has been valued on the basis of the present value of transaction costs.

As regards future development projects (2025e), we have valued, on the one hand, the secured MW (i.e. 575 MW) that we value at transaction cost and, on the other, unidentified projects enabling us to reach the 2025 target of 6 installed capacity. 2 GW in operation (i.e. 4,825 MW), for which we have retained a standard average future value of construction costs of € 0.32m/MW, in line with the trajectory envisaged by the group. Along with this, we have factored in the average value creation resulting from the projects, i.e. a premium of 13.5%, which yields a valuation of € 0.36m /MW.

Moreover, we have factored in the corresponding portion of financial debt on a discounted basis, also over two years.

Lastly, aside from factoring in financial assets and provisions, we have also integrated the amount of tax credits on the balance sheet at 30 September 2020 (€ 63m) given the reasonable probability of them being recuperated within five years.

Sum-of-the-parts valuation of Solaria

Production	€ m/MW	Unit EV (€ m/MW)	€ m	
MW in service				
Solar	440	1.29	567	Valuation based on average transactions and construction costs over 2017-2020
MW under construction				
Solar	360	1.29	464	Valuation based on average transactions and construction costs over 2017-2020
Future projects				
Solar	575	1.29	742	Valuation based on average transactions and construction costs over 2017-2020
New unidentified	4 825	0.36	1,425	Valuation based on future construction costs with value creation and discounted to 2021
Operational value			**3,199**	
Financial stakes			1	
Tax credits			51	Net value on the balance sheet discounted over five years
Provisions			n.a.	
Net debt on the balance sheet			-543	Net debt (at 31/12/2020)
Additional net debt for construction under way and to come			-939	Additional debt by 2025 discounted at 2021 at Solaria's WACC
Minority interests			n.a.	
Value of shareholders' equity			**1,769**	
Per share (€)			**14.2**	

Table 7 - Source: ODDO BHF Securities

A specialist in solar energy in Spain

Solaria is one of the very few pure players in the field of renewable energy production based on a single (solar) technology. To this technical positioning, the group also adds a very Spanish focus (400 MW out of the 440 MW at end-2020). The balance of the installed capacity is located in Italy (16.7 MW), Uruguay (22.7 MW) and Greece (0.4 MW).

At this stage, the structure of the Group's contracts is essentially based on long-term contracts (PPA). However, in view of the recent development of own-account capacity, 12% of the revenue structure is composed of contracts benefiting from subsidised tariffs.

Breakdown of installed capacity by type of tariff (MW)

Country	MW at subsidised tariffs	Duration (years)	Remaining duration (years)	MW at PPA price	Duration (years)	Remaining duration (years)	Total
Spain	34.8	30	18	365.5	25	23	**400.3**
Italy	16.7	20	11				**16.7**
Greece	0.4	20	10				**0.4**
Uruguay				22.7	30	27	**22.7**
Total	**51.9**			**388.2**			**440.1**
Weight	**12%**			**88%**			

Table 36 - Source: Solaria

The rates for these subsidised contracts are extremely high because they take into account investment levels that are much higher than today's levels.

Note that Spain's 34.8 MW are included in a tariff scheme that guarantees a return on investment of 7.93%. The application of the tariff formula (which takes into account investment, operating costs and wholesale prices) shows for 2021 an average price of € 423/MWh for an initial investment of € 6.67M/MW (vs € 0.35M/MW at present) vs a wholesale price in Spain of around € 40/MWh.

Looking ahead to 2030, the switch of this 51.9 MW of installed capacity to a wholesale price regime (simulation made at € 40/MWh) represents an impact on EBITDA of € 14.6m, i.e. 2.9% of EBITDA 2030e and 2% of 2030e attributable net profit, which is a manageable impact for this horizon and not very significant in view of the group's development ambitions.

In view of the widespread use of government auctions and long-term electricity sales contracts with private counterparties, the group favours long-term contracts that fully secure its cash flow generation over 25 years for government auctions in Spain and between 7 and 10 years for private counterparties. Under the latter type of contract, the group secures 75% of the volumes produced, with the remaining 25% being sold at market price.

This "merchant" profile should remain relatively stable in the tempos with, depending on the type of long-term contract, a maximum of 25% of the installed capacity sold at market price.

The group has seen a rapid expansion of its project portfolio in recent years, driven by the revival of the solar segment in southern Europe.

With a 4.3-fold increase in the volume of projects to more than 10 GW by the end of 2020, Solaria has built up growth potential that the group is currently deploying.

To date, it has 360 MW under construction exclusively in Spain and 575 MW that should be operational by the end of Q1 2021 to reach the 1,375 GW installed capacity guidance affirmed in Q1 2020 and confirmed after 9M 2020.

Trend in new installed capacity - 2017-Q1 2021

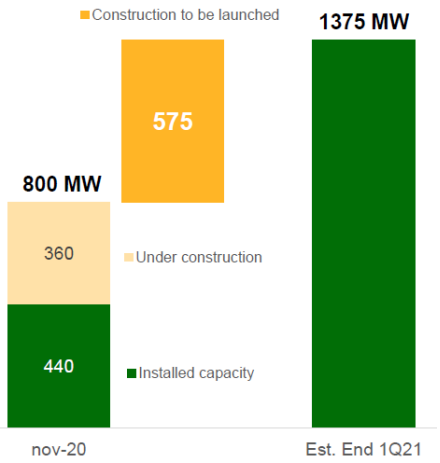

Chart 937 - Source: Solaria

The structure of the project portfolio remains 100% Iberian. Of the 10 GW project portfolio, 5.7 GW, located in Spain, are in an advanced stage of development with secure connections and land and partial financing in place.

Trend in the project portfolio

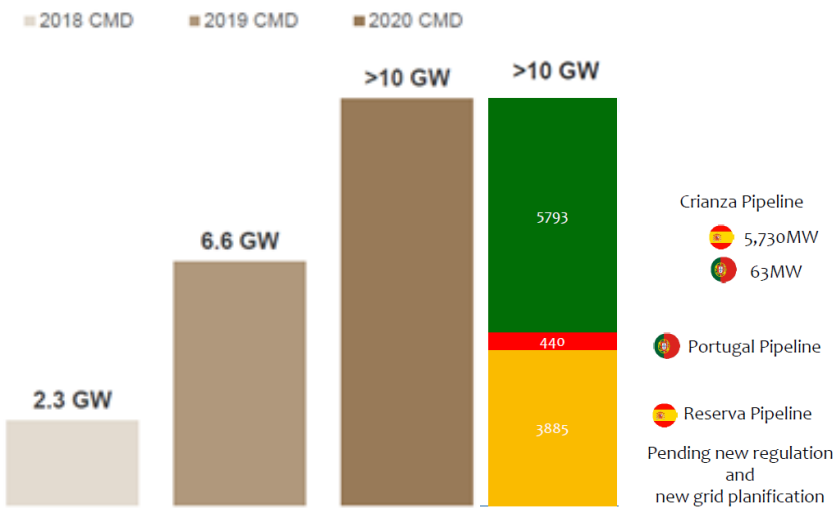

Chart 10 - Sources: Solaria

Thanks to its in-depth knowledge of the field and the administrative machinery, the group should benefit from the Spanish government's commitment to revise upwards its ambitions in solar energy through the adoption of a Royal Decree of 4 November 2020 (RD 960/2020). The latter provides for the organisation of auctions of up to 10 GW out to 2025, with the result of a first tranche of 2 GW of photovoltaic power having been awarded on 27 January this year. This first tranche will be followed by 1.8 GW per year over 2021-2025.

Note that during this first call for tenders, Solaria was awarded 180 MW at an average price of € 27.98/MW. The weighted average price of photovoltaic solar energy reached € 24.47/MWh. The lowest price for solar energy, € 14.89/MWh, was offered by the Spanish energy group Ignis for a 30 MW project. Enel Green Power España offered the highest price for solar energy € 28.9 €/MWh for its 50 MW project. All told Solaria obtained the third highest price in the auction.

In addition to government tenders, the development of long-term electricity sales contracts with private counterparties, also known as corporate PPAs, is also underway.

In addition to government tenders, the development of long-term electricity sales contracts with private counterparties, also known as corporate PPAs, is also taking place.

To date, the group has signed more than 1.5 GW of government and corporate PPAs, exceeding its target of 1.5 GW by 2021. To date, more than 1.08 GW have been signed with counterparties operating in the electricity or energy sectors.

With the announcement of its last two contracts, i.e. on 14 January 300 MW over 10 years with the oil company RD Shell and on 26 January 80 MW over 10 years with a Spanish energy company, Solaria has secured 997 MW of corporate PPAs to which must be added the long-term contracts resulting from the government auctions, i.e., a total of 1,567 GW already secured.

Trend in MW under PPA

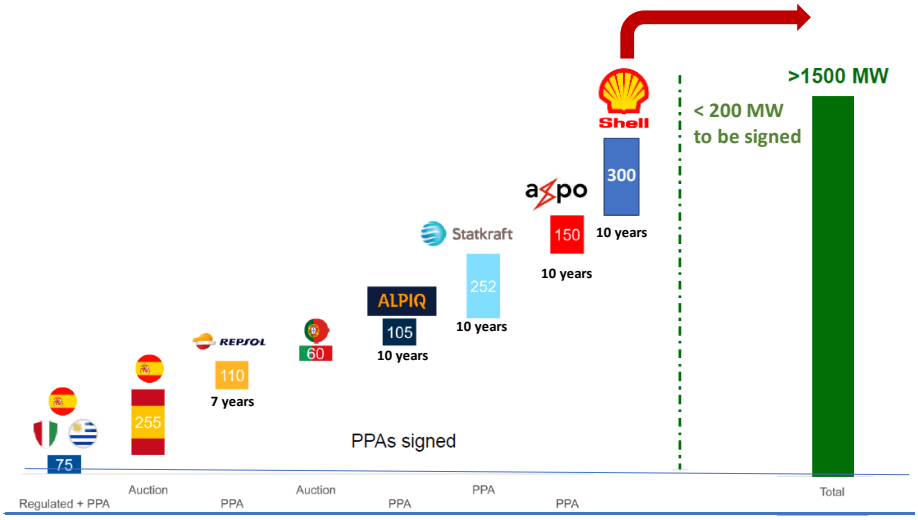

Chart 11 - Source: Solaria

Like many of its competitors in Europe, Solaria benefits from an impressive level of demand from electricians or oil companies wishing to contract renewable electricity.

To date, the group remains optimistic about conditions in this market. The project IRRs it obtains remain relatively stable and MWh prices are in an average range of € 33-36/MWh, as reflected in the last two contracts signed in January 2021.

Trend in IRR and MWh prices of corporate PPAs

	REPSOL	ALPIQ	Statkraft
PAST	12.05%	14.60%	14.10%
	Worst case	PPA price range	Best case
TODAY	12.65%	€33-36	14.18%

Chart 38 - Source: Solaria

It should be noted that the group bases its project IRR calculations on a depreciation period of 30 years, a useful life of 25 years, an average load factor of 22.7% (i.e. 1988 hours of use per year), a post-PPP wholesale price equivalent to the PPP price without inflation, i.e. an average of 15 years, and the full use of tax losses generated at the start of operations.

Solaria remains on the lookout for counterparties. After taking into account the RD Shell contract of January 2021, the group has a portfolio of contracts under negotiation of 1.7 GW which will fuel its growth in 2021 and 2022.

PPA portfolio in negotiation

Offtaker	Power	Sector	Offtaker rating	Term	Type	Supply	Status
Confidential	50	Utility	Investment grade	10	Physical	Solar profile	TS signed
Confidential	300	Utility	Investment grade	10	Financial	Solar profile	TS under negociation
Confidential	475	Utility	Investment grade	10	Financial	Solar profile	TS under negociation
Confidential	100	Oil & gas	Investment grade	10	Financial	Solar profile	Price under negociation
Confidential	90	Industrial	Investment grade	10	Physical	Solar profile	Tender process
Confidential	335	Utility	Investment grade	10	Financial	Solar profile	Price under negociation
Confidential	100	Utility	Investment grade	8	Physical	Solar profile	Price under negociation
Confidential	150	Oil & gas	Investment grade	10	Physical	Solar profile	Price under negociation
Confidential	50	Utility	Investment grade	10	Financial	Solar profile	Price under negociation
Confidential	100	Industrial	Investment grade	10	Physical	Solar profile	On hold by the offtaker

Chart 39 - Source: Solaria

2025 MW targets without financial guidance

In terms of trajectory, Solaria only provides guidance in terms of volumes, with an installed capacity target of 6.2 GW in 2025 and intermediate targets from 2021 to 2025.

Trajectory of installed capacity out to 2025

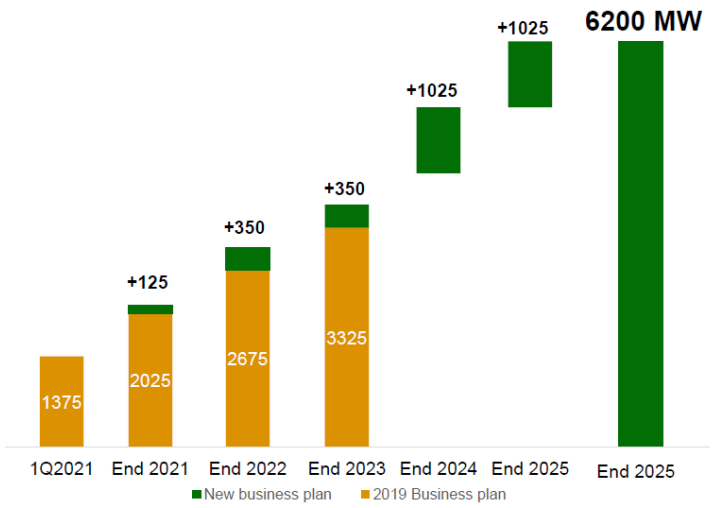

Chart 40 - Source: Solaria

On the other hand, the group does not provide any financial guidance either in terms of operating targets (EBITDA, EBIT, EBITDA or EBIT margin, attributable net profit, etc.) or financial framework (net debt, leverage, etc.).

On these bases, we have built a model that factors in the strategic capacity development plan out to 2025. Beyond that, we have conservatively retained an average annual growth of 800 MW/year out to 2030.

As far as prices are concerned, we have taken the trend in prices for subsidised contracts (Spain, Italy and Greece) on the basis of tariff formulas, PPA prices in Spain around € 34/MWh, in line with the indicative range given by the group in November 2020, a price in Uruguay of $ 91.5/MWh which benefits from a US inflation rate of 1. 5%/year and finally wholesale prices in Spain in line with the long-term estimates provided by the group in November 2020 based on data from the Iberian nominated electricity market operator (OMIE), i.e. an average of € 41.5/MWh.

With regard to utilisation rates, we have applied the rates as announced by the group to the existing solar farms up to our forecast horizon. For the new Spanish assets, we have opted on the side of caution and retained a standard rate of 21%, slightly lower than the rate used to calculate the project IRR of the PPA corporates (22.7%).

On this basis, we expect sales CAGR of 28% per annum, driven by Spain, for identified and secured projects that the group needs to bring into service by 2025 and future projects not identified at this stage that will fuel growth to reach the 2025 target and beyond.

2020-2030e sales trajectory

€ m	2020	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e
Spain	41.3	72.	104.9	165.9	213.8	232.6	232.6	232.6	232.6	232.6	232.6
Italy	7.2	7.4	7.6	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
Greece	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Uruguay	2.6	2.7	2.7	2.8	2.8	2.9	2.9	2.9	3.0	3.0	3.1
Unidentified projects	1.0	43.2	80.4	66.5	71.0	116.3	173.4	223.4	273.5	323.5	373.5
Total	**52.2**	**125.6**	**195.6**	**242.7**	**295.1**	**359.3**	**416.4**	**466.5**	**516.5**	**566.6**	**616.7**

Table 15 - Source: ODDO BHF Securities

In light of the group's cost structure, we have retained an average EBITDA margin that is 80% stable over time. Compared with the two other players in the solar-centric renewable energy segment, Scatec and Neoen, the EBITDA margin level used appears slightly higher, but is a reflection of the group's relatively low operating cost structure.

2018-2020e EBITDA margins of peer groups

%	2018	2019	2020e	2021e	2022e	2023e
Scatec Solar (1)	75	78	73	73	77	78
Neoen	79	85	84	77	77	77
Average	77	82	79	75	77	77

Table 16 - Source: ODDO BHF Securities (1) FactSet consensus estimates

Solaria advances a normative level of operating costs of € 10 K/MW installed in 2020 which will reach € 8 K/MW installed from 2021 thanks to the continued fall in panel prices to an average of € 0.34m/MW in 2021 vs € 0.407m/MW in 2020, € 0.49m/MW in 2019 and € 0.52m/MW in 2018, i.e. a drop of 35% between 2018 and 2021.

To this must be added a lowering of the investment cost by reducing panel prices (40% of the cost), construction costs (30% of the cost) and other components such as trackers, inverters and transformers (30% of the cost). The group expects an average investment cost of € 0.34 M/MW in 2021, vs € 0.407 M/MW in 2020, €0.49 M/MW in 2019 and € 0.52 M/MW in 2018, i.e. a reduction of 35% between 2018 and 2021.

Below EBITDA, we have adopted a depreciation period for operating assets of 30 years, in line with the group's accounting policy.

For caution's sake, we have retained a group financing cost of 3% before tax that is stable over the 2020-2030e period, even though for the latest refinancing operations carried out by Solaria, the group mentions much lower levels.

The group benefits at end-2020 from around € 63m of a tax-loss carryforward. We consider that it will be able to consume € 10m per annum over the 2020-2025 period, compared to a standard tax rate of 25% in our model.

Over the 2019-2025e period, we anticipate an EBITDA CAGR rate of 44% per annum and an average annual rate of 31% for attributable net profit, in light of a choice of financing new projects essentially by debt from 2020 and a tax system that is gradually losing the benefit of tax-loss carryforwards.

Breakdown of attributable net profit over 2017- 2025e

€ m	2017	2018	2019	2020e	2021e	2022e	2023e	2024e	2025e
EBITDA	28.6	31.1	31.5	44.9	99.1	158.0	194.3	233.1	285.7
EBITDA margin	92%	92%	91%	86%	79%	81%	80%	79%	80%
Depreciation and amortisation	-10.3	-12.6	-15.2	-14.1	-36.9	-48.6	-57.2	-70.9	-84.6
EBIT	18.3	18.5	16.2	30.8	62.2	109.5	137.1	162.2	201.2
EBIT margin	59%	55%	47%	60%	50%	56%	57%	55%	56%
Financial result	-10.3	-11.1	-10.4	-13.0	-23.0	-35.0	-40.0	-46.0	-52.0
Corporate tax	7.3	13.9	18.0	5.6	0.2	-8.6	-14.3	-19.1	-27.3
Equity accounted	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non-recurring items	0	1	0	0	0	0	0	0	0
Minority interests	0	0	0	0	0	0	0	0	0
Reported attr. net profit	**15.0**	**22.3**	**23.9**	**23.3**	**39.4**	**65.9**	**82.8**	**97.2**	**121.9**
Underlying attributable net profit	**15.0**	**21.6**	**23.9**	**23.3**	**39.4**	**65.9**	**82.8**	**97.2**	**121.9**

Table 17 - Source: ODDO BHF Securities estimates

Our net debt forecasts are based on a capex plan in accordance with the phasing of new capacity set out by the group out to 2025 (6.2 GW of installed capacity in operation).

Industrial investments correspond to investment costs in line with the group's forecasts, i.e. an average of € 0.34M/MW over 2021, then from 2021 onwards, we maintain a stable level of € 0.32M/MW until 2025. We have also opted for an average construction period of 12 months for solar energy. The sequence of outflows is based on 50% in n-1, and 50% in n.

Note that for the group, the need to inject equity capital into projects is being sharply reduced. Solaria has moreover repeatedly revised its equity allocation from 30% equity and 70% project debt in 2018 to a financing structure of 20% and 80% respectively, before now considering recourse to almost 100% debt.

For caution's sake, we consider that the change in WCR is stable on the basis of the consumption of € 7m, comparable to the 2019 level.

On this basis, the group should record a peak in debt leverage in 2020 with a net debt/EBITDA ratio of 12.1x, before benefiting from the effect of the size of its customer base in terms of cash flow generation combined with a reduction in its investments. This will bring the leverage ratio down to around 5.4x by 2025, in line with the cruising speed of some competitors.

Cash flow statement

€ m	2017	2018	2019	2020e	2021e	2022e	2023e	2024e	2025e
Cash flow capacity	16.3	18.3	21.3	30.0	70.0	121.0	150.0	180.0	224.0
EBITDA-FCF conversion rate	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8
Chg. in WCR	-0.2	-2.4	-6.5	-6.5	-7.0	-7.0	-7.0	-7.0	-7.0
Cash flow	16.1	15.9	14.8	23.5	63.0	114.0	143.0	173.0	217.0
Industrial investment	-45.6	-28.4	-99.7	-306.8	-430.7	-244.0	-268.0	-328.0	-292.0
Free cash flow	-29.6	-12.4	-84.9	-283.3	-367.7	-130.0	-125.0	-155.0	-75.0
Development investment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dividends	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capital increase	0.0	94.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Disposals	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	-14.9	-28.4	-33.9	-30.0	-30.0	-30.0	-30.0	-30.0	-30.0
Chg in net debt	-40.6	54.1	-118.9	-313.3	-397.7	-160.0	-155.0	-185.0	-105.0
Net debt	165.0	110.9	229.7	543.0	940.7	1 100.7	1 255.7	1 440.7	1 545.7
Net debt/EBITDA gross ratio (x)	5.8	3.6	7.3	12.1	9.5	7.0	6.5	6.2	5.4

Table 18 - Source: ODDO BHF Securities estimates

A consensus which reflects the absence of financial guidance

In light of the guidance delivered by the group which covers just the trajectory of installed capacity out to 2025, on a yearly basis, our current estimates show a substantial difference, essentially at the level of attributable net profit, vs the average consensus for 2020-2022.

In our view, these differences primarily stem from anticipations for financing costs and the annual consumption of tax-loss carry forwards.

ODDO BHF vs FactSet consensus for 2020-2025e

€ m	2020			2021e			2022e			2023e			2024e			2025e		
	Est	Cons.	Diff.	Est	Cons	Diff.	Est	Cons	Diff.	Est	Cons	Diff.	Est	Cons	Diff.	Est	Cons	Diff.
Revenue	52.2	62.9	-17.1%	125.6	111.1	13.1%	195.6	175.7	11.3%	242.7	244.5	-0.7%	295.1	299.8	-1.6%	359.3	346.2	3.8%
EBITDA	44.9	49.1	-8.69%	99.1	85.4	16.04%	158.0	138.0	14.51%	194.3	191.7	1.35%	233.1	233.9	-0.33%	285.7	270.9	5.47%
EBITDA margin	*86.0%*	*78.1%*		*78.9%*	*76.9%*		*80.8%*	*78.5%*		*80.1%*	*78.4%*		*79.0%*	*78.0%*		*79.5%*	*78.3%*	
EBIT	30.8	31.4	-1.89%	62.2	56.7	9.65%	109.5	99.7	9.77%	137.1	145.0	-5.43%	162.2	177.2	-8.44%	201.2	204.4	-1.57%
EBIT margin	*59.0%*	*49.9%*		*49.5%*	*51.1%*		*56.0%*	*56.8%*		*56.5%*	*59.3%*		*55.0%*	*59.1%*		*56.0%*	*59.0%*	
Attr. net profit	23.3	24	-3.25%	39.4	30.4	29.72%	65.9	55.0	19.75%	82.8	79.5	4.18%	97.2	98.8	-1.59%	121.9	115.1	5.93%
Net margin	*44.7%*	*38.3%*		*31.4%*	*27.3%*		*33.7%*	*31.3%*		*34.1%*	*32.5%*		*32.9%*	*32.9%*		*33.9%*	*33.2%*	
EPS (€)	0.19	0.16	16.02%	0.32	0.24	30.77%	0.53	0.49	7.27%	0.66	0.65	1.97%	0.78	0.84	-7.41%	0.98	1.04	-6.21%
Net debt	543.0	397.2	*36.7%*	940.7	771.4	*22.0%*	1,100.7	971.6	*13.3%*	1,255.7	1,185.8	*5.9%*	1,440.7	1,297.0	*11.1%*	1,545.7	1,403.0	*10.2%*

Table 19 - Sources: company, ODDO BHF Securities, FactSet

Note that above the average, the standard deviations per annum are very significant. The analysis of the consensus between its highest and lowest points, shows a position that is often median on our estimates.

ODDO BHF vs min/max FactSet consensus for 2020-2025e

€ m	2020e	2021e	2022e	2023e	2024e	2025e
Revenue						
Highest	72	143	232	305	377	451
Lowest	54	79	137	170	204	243
ODDO BHF	52	126	196	243	295	359
EBITDA						
Highest	55	118	189	248	307	367
Lowest	44	64	109	147	181	189
ODDO BHF	45	99	158	194	233	286
EBIT						
Highest	39	89	158	211	259	310
Lowest	24	42	67	98	120	127
ODDO BHF	31	62	109	137	162	201
Attrib. net profit						
Highest	34	57	87	122	154	190
Lowest	6	11	18	46	57	55
ODDO BHF	23	39	66	83	97	122
Net debt						
Highest	560	922	1,122	1,360	1,381	1,497
Lowest	321	558	791	1,055	1,231	1,277
ODDO BHF	543	941	1,101	1,256	1,441	1,546

Table 20 - Sources: company, ODDO BHF Securities, FactSet

What are the areas of risk for Solaria?

Project development capacity

In view of the targets provided by the group, at this stage we think that there is very little chance of a break in trend in terms of its capacity to continue its development.

Projects already in operation or in the construction phase and those that have already been attributed whether as a result of government auction or corporate PPA should enable Solaria to achieve 2.1 GW of installed capacity on a reported basis at end-2021e. The remainder, which should enable the group to achieve the 6.2 GW in operation targeted for 2025, appears more than reasonably identified (5.7 GW) in the portfolio of 10 GW.

More broadly, we do not expect the expansion of the renewable energies market to be interrupted in the short and medium term given the stimulus plans in Europe and continued enthusiasm on the American continent.

Technological breakthroughs appear to be fairly smooth and today mainly concern production and storage capacities of controlled technologies (wind, solar, battery).

Only a revolution facilitating the large-scale storage of extremely substantial volumes at costs in line with grid parity would constitute a real breakthrough.

The anticipated return on investment remains relatively stable over coming two to three years judging by the mechanism of secured projects. That said, given the growth ambitions of the group's competitors (integrated electricity producers, pure players in renewables, infrastructure and investment funds, etc.) which leads to significant competition on government bid tenders, we consider it worthwhile to analyse in detail the parameters of the new long-term contracts which should be signed as of 2022-2023 and come on stream in 2024-2025.

Country risk

The international expansion of the renewables market and penetration of new countries is an inherent risk of the business. The integration of political, economic, technical, legal and tax factors specific to each state is part of the full array of elements to be considered before any investment decision is taken.

In this context, Solaria's positioning, with its singular focus on development on the Iberian Peninsula, helps to eliminate this risk. The shift to subsidised tariffs for bid tenders also constitutes an additional parameter of security.

At this stage, we think that the only regulatory risk for Solaria would be the retroactive calling into question of integrated tariffs which remunerate the oldest assets, a risk which we consider highly unlikely and therefore its weight should be swiftly reduced given the extremely rapid development of new capacity installed by the group.

A new credit crunch

Given the importance of project finance in the financial structuring of renewable energy projects, access to credit is a crucial element in achieving operating targets.

On this point, the state of the world economy and access to capital do not appear to be at risk in the short to medium term. Liquidity in the financial markets and still low interest rates in the main OECD countries are favourable parameters.

Beyond that, the development of more specialised financing, such as green bonds, offers new opportunities.

The risk to supply

In the past, access to production tools has been a focal point of attention in the project implementation chain.

In the case of Solaria, which is solely positioned in the solar market, we think that at this stage growth of production capacity at Asian solar panel manufacturers, besides a strong decline in purchasing costs, a significant broadening in the offering.

The recent withdrawal of trade tariffs in Europe should, in this respect, ease a degree of pressure on supplies and result in a continued decline in prices, which the group also anticipates.

Also note that at following the lockdown in China linked to the health crisis, a number of industrial voices made themselves heard on the need to relocate photovoltaic manufacturing units in Europe in order to guarantee a degree of independence.

By way of illustration, in May 2020, the Swiss photovoltaic panel manufacturer Meyer Burger was planning to build a factory in western Germany. At the same time, the Norwegian group REC has examined a number of possibilities for the establishment of a new factory, namely in Sarreguemines, in the east of France.

In contrast, if the tougher trade policies from the US with respect to China were to hamper relations between the two countries, the development of solar capacity in the US is likely to slow. But this is merely a hypothetical risk at this stage as Solaria has no solar projects in development there.

ESG governance and reporting in the process of being set up

Solaria structured its ESG governance in 2020, notably via the creation of an ethics and ESG conformity committee in February 2020, made up of members of the board of directors. The group is looking to enhance its ESG reporting, being aware of the growing interest from investors and regulatory requirements for these issues.

As a solar energy producer, the group emphasises the positive impact on the decarbonisation of electric energy, an essential pillar in the fight against climate change. According to the group's calculations, each MW of installed energy enables the avoidance some 400 tonnes of CO_2 per annum. On its own scope of consolidation (scopes 1 and 2), the company has set a target to reduce CO_2 emissions by 14% by 2021, in order to achieve carbon neutrality.

The installation of solar panels can have negative impacts on biodiversity, when solar parks are built in natural and/or forest regions, which help to store CO_2. Solaria published an environmental policy applicable as of July 2020, emphasising the putting in place of "compensatory measures" to limit the impact of the damage to the flora and fauna.

Also note that this issue is not as crucial in Spain as in other European countries like France, due to geographic considerations (areas of desert).

The group has issued no information on the origin of its solar panels (essentially manufactured in China on a worldwide scale) or the ESG risk linked to their production (presence of critical metals and recyclability).

From a social and societal viewpoint, the group has set itself a target of raising female representation in its workforce to 25%. Moreover, Solaria stressed sustainable job creation (six direct and fifteen indirect at 15 November 2020) and the tax contributions permitted by its activity.

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SLR SM | SLRS.MC **Underperform** **Price 22.32EUR**
Renewable Energies | Spain **Upside -29.21%** **TP 15.80EUR**

PER SHARE DATA (€)	12/17	12/18	12/19	12/20e	12/21e	12/22e	12/23e
Adjusted EPS	0.12	0.17	0.19	0.19	0.32	0.53	0.66
Reported EPS	**0.12**	**0.18**	**0.19**	**0.19**	**0.32**	**0.53**	**0.66**
Growth in adjusted EPS	-	43.9%	10.5%	-2.3%	68.8%	67.2%	25.7%
Net dividend per share	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FCF to equity per share	-0.24	-0.10	-0.68	-2.27	-2.94	-1.04	-1.00
Book value per share	0.45	1.37	1.55	1.73	2.05	2.58	3.24
Number of shares market cap (m)	124.95	124.95	124.95	124.95	124.95	124.95	124.95
Number of diluted shares (m)	124.95	124.95	124.95	124.95	124.95	124.95	124.95
VALUATION (€m)	**12/17**	**12/18**	**12/19**	**12/20e**	**12/21e**	**12/22e**	**12/23e**
12m highest price (€)	1.78	6.91	7.11	23.80	30.94		
12m lowest price (€)	0.80	1.66	4.15	6.10	20.78		
(*) Reference price (€)	1.28	4.26	5.50	12.55	22.32	22.32	22.32
Capitalization	160	532	687	1 568	2 789	2 789	2 789
Restated Net debt	165	111	230	543	941	1 101	1 256
Minorities (fair value)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial fixed assets (fair value)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Provisions	2.8	2.0	2.2	2.2	2.2	2.2	2.2
Enterprise Value	**328**	**645**	**919**	**2 114**	**3 732**	**3 892**	**4 047**
P/E (x)	10.7	24.6	28.8	67.2	70.8	42.3	33.7
P/CF (x)	9.8	29.0	32.2	52.3	39.8	23.0	18.6
Net Yield	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FCF yield	ns	ns	ns	ns	ns	ns	ns
P/B incl. GW (x)	2.87	3.11	3.55	7.24	10.89	8.67	6.89
P/B excl. GW (x)	2.87	3.11	3.55	7.24	10.89	8.67	6.89
EV/Sales (x)	10.54	19.09	26.62	40.52	29.71	19.90	16.68
EV/EBITDA (x)	11.5	20.7	29.2	47.1	37.7	24.6	20.8
EV/Current EBIT (x)	**18.0**	**34.8**	**56.7**	**68.7**	**60.0**	**35.5**	**29.5**
(*) historical average price							
PROFIT AND LOSS (€m)	**12/17**	**12/18**	**12/19**	**12/20e**	**12/21e**	**12/22e**	**12/23e**
Sales	31.1	33.8	34.5	52	126	196	243
EBITDA	28.6	31.1	31.5	44.9	99	158	194
Depreciations	-10.3	-12.6	-15.2	-14.1	-36.9	-48.6	-57.2
Current EBIT	**18.3**	**18.5**	**16.2**	**30.8**	**62**	**109**	**137**
Published EBIT	18.3	18.5	16.2	30.8	62	109	137
Net financial income	-10.3	-11.1	-10.4	-13.0	-23.0	-35.0	-40.0
Corporate Tax	7.3	13.9	18.0	5.6	0.2	-8.6	-14.3
Net income of equity-accounted companies	-0.2	0.0	0.0	0.0	0.0	0.0	0.0
Profit/loss of discontinued activities (after tax)	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Minority interests	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Attributable net profit	15.0	22.3	23.9	23.3	39.4	66	83
Adjusted attributable net profit	**15.0**	**21.6**	**23.9**	**23.3**	**39.4**	**66**	**83**
BALANCE SHEET (€m)	**12/17**	**12/18**	**12/19**	**12/20e**	**12/21e**	**12/22e**	**12/23e**
Goodwill	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other intangible assets	0.1	12.1	24.3	24.3	24.3	24.3	24.3
Tangible fixed assets	194	242	392	714	1 151	1 377	1 615
WCR	10.7	-4.2	-45.7	-31.7	-31.7	-31.7	-31.7
Financial assets	19.4	34.4	55.5	55.5	55.5	55.5	55.5
Ordinary shareholders equity	55.7	171	193	217	256	322	405
Minority interests	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shareholders equity	55.7	171	193	217	256	322	405
Non-current provisions	2.8	2.0	2.2	2.2	2.2	2.2	2.2
Net debt	**165**	**111**	**230**	**543**	**941**	**1 101**	**1 256**
CASH FLOW STATEMENT (€m)	**12/17**	**12/18**	**12/19**	**12/20e**	**12/21e**	**12/22e**	**12/23e**
EBITDA	**28.6**	**31.1**	**31.5**	**44.9**	**99.1**	**158.0**	**194.3**
Change in WCR	-0.2	-2.4	-6.5	-6.5	-7.0	-7.0	-7.0
Interests & taxes	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Others	-12.2	-12.8	-10.1	-14.9	-29.1	-37.0	-44.3
Operating Cash flow	16.1	15.9	14.8	23.5	63.0	114.0	143.0
CAPEX	-45.6	-28.4	-99.7	-306.8	-430.7	-244.0	-268.0
Free cash-flow	**-29.6**	**-12.4**	**-84.9**	**-283.3**	**-367.7**	**-130.0**	**-125.0**
Acquisitions / disposals	3.8	0.0	0.0	0.0	0.0	0.0	0.0
Dividends	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net capital increase	0.0	94.9	0.0	0.0	0.0	0.0	0.0
Others	-14.9	-28.4	-33.9	-30.0	-30.0	-30.0	-30.0
Change in net cash		53.6	-119.5	-313.0	-397.6	-160.3	-155.1
GROWTH MARGINS PRODUCTIVITY	**12/17**	**12/18**	**12/19**	**12/20e**	**12/21e**	**12/22e**	**12/23e**
Sales growth	-	8.6%	2.2%	51.0%	ns	55.7%	24.0%
Lfl sales growth	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Current EBIT growth	-	1.5%	-12.4%	89.8%	ns	76.1%	25.2%
Growth in adjusted EPS	-	43.9%	10.5%	-2.3%	68.8%	67.2%	25.7%
Net margin	48.2%	63.9%	69.1%	44.7%	31.4%	33.7%	34.1%
EBITDA margin	**91.8%**	**92.2%**	**91.1%**	**86.0%**	**78.9%**	**80.8%**	**80.1%**
Current EBIT margin	**58.6%**	**54.8%**	**47.0%**	**59.0%**	**49.5%**	**56.0%**	**56.5%**
CAPEX / Sales	ns	-83.9%	ns	ns	ns	ns	ns
WCR / Sales	34.5%	-12.3%	ns	-60.7%	-25.2%	-16.2%	-13.0%
Tax Rate	-92.2%	ns	ns	-31.2%	-0.5%	11.6%	14.7%
Normative tax rate	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Asset Turnover	-	0.1	0.1	0.1	0.1	0.2	0.2
ROCE post-tax (normative tax rate)	**-**	**6.1%**	**3.9%**	**4.3%**	**5.0%**	**6.5%**	**6.9%**
ROCE post-tax hors GW (normative tax rate)	-	6.1%	3.9%	4.3%	5.0%	6.5%	6.9%
ROE	-	19.1%	13.1%	11.4%	16.7%	22.8%	22.8%
DEBT RATIOS	**12/17**	**12/18**	**12/19**	**12/20e**	**12/21e**	**12/22e**	**12/23e**
Gearing	ns	65%	ns	ns	ns	ns	ns
Net Debt / Market Cap	1.03	0.21	0.34	0.35	0.34	0.39	0.45
Net debt / EBITDA	**5.79**	**3.55**	**7.32**	**ns**	**ns**	**6.97**	**6.46**
EBITDA / net financial charges	2.8	2.8	2.8	3.5	4.3	4.5	4.9

Sources: ODDO BHF Securities, SIX

- **Valuation method**

Our target prices are established on a 12-month timeframe and we use three valuation methods to determine them. First, the discounting of available cash flows using the discounting parameters set by the Group and indicated on ODDO BHF' website. Second, the sum-of-the-parts method based on the most pertinent financial aggregate depending on the sector of activity. Third, we also use the peer comparison method which facilitates an evaluation of the company relative to similar businesses, either because they operate in identical sectors (and are therefore in competition with one another) or because they benefit from comparable financial dynamics. A mixture of these valuation methods may be used in specific instances to more accurately reflect the specific characteristics of each company covered, thereby fine-tuning its evaluation.

- **Sensitivity of the result of the analysis/ risk classification:**

The opinions expressed in the financial analysis are opinions as per a particular date, i.e. the date indicated in the financial analysis. The recommendation (cf. explanation of the recommendation systematic) can change owing to unforeseeable events which may, for instance, have repercussions on both the company and on the whole industry.

- **Our stock market recommendations**

Our stock market recommendations reflect the RELATIVE performance expected for each stock on a 12-month timeframe.

Outperform: performance expected to exceed that of the benchmark index, sectoral (large caps) or other (small and mid caps).

Neutral: performance expected to be comparable to that of the benchmark index, sectoral (large caps) or other (small and mid caps).

Underperform: performance expected to fall short of that of the benchmark index, sectoral (large caps) or other (small and mid caps).

- **The prices of the financial instruments used and mentioned in this document are the closing prices.**
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Recommendation split				
		Outperform	Neutral	Underperform
Our whole coverage	(451)	52%	34%	14%
Liquidity providers coverage	(82)	55%	43%	2%
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Investment banking services	(16)	56%	38%	6%

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