

# 03

## 03 EXECUTION

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INNOVATIVE  
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# 03

## EXECUTION

### 3.1. FINANCIAL CAPITAL

#### 3.1.1 OPERATIONAL PERFORMANCE

INSTALLED CAPACITY (MW) <sup>1</sup>	VS. 2018					NCF			GWh		
	Dec-19	Built	Sold	Decom.	Var. YoY	Dec-19	Dec-18	Var.	Dec-19	Dec-18	Var.
Spain	1,974	+53	(348)	(42)	(337)	28%	26%	+2.2pp	5,298	5,164	+3%
Portugal	1,164	+47	(191)	-	(144)	29%	27%	+2.1pp	3,160	2,995	+5%
Rest of Europe	1,263	+69	(458)	-	(389)	26%	24%	+2.4pp	3,333	3,321	+0%
France	53	+19	(388)	-	(368)	22%	23%	-1.0pp	465	829	(44%)
Belgium	-	-	(71)	-	(71)	22%	21%	+1.3pp	68	129	(47%)
Italy	271	+50	-	-	+50	27%	27%	+0.2pp	551	385	+43%
Poland	418	-	-	-	-	30%	25%	+4.9pp	1,098	919	+19%
Romania	521	-	-	-	-	25%	23%	+2.0pp	1,151	1,059	+9%
<b>Europe</b>	<b>4,401</b>	<b>+169</b>	<b>(997)</b>	<b>(42)</b>	<b>(871)</b>	<b>28%</b>	<b>26%</b>	<b>+2.3pp</b>	<b>11,791</b>	<b>11,480</b>	<b>+3%</b>
US	5,714	+581	(199)	-	+382	34%	34%	+0.0pp	15,696	14,873	+6%
Canada	30	-	-	-	-	27%	27%	-0.5pp	70	71	(2%)
Mexico	200	-	-	-	-	42%	40%	+1.5pp	726	700	+4%
<b>North America</b>	<b>5,944</b>	<b>+581</b>	<b>(199)</b>	-	<b>+382</b>	<b>34%</b>	<b>34%</b>	<b>+0.1pp</b>	<b>16,492</b>	<b>15,644</b>	<b>+5%</b>
<b>Brazil</b>	<b>467</b>	-	-	-	-	<b>43%</b>	<b>40%</b>	<b>+2.2pp</b>	<b>1,757</b>	<b>1,235</b>	<b>+42%</b>
<b>TOTAL</b>	<b>10,812</b>	<b>+749</b>	<b>(1,196)</b>	<b>(42)</b>	<b>(489)</b>	<b>32%</b>	<b>30%</b>	<b>+1.5pp</b>	<b>30,041</b>	<b>28,359</b>	<b>+6%</b>
<b>Equity Consolidated</b>	<b>550</b>	<b>+139</b>	<b>+40</b>	-	<b>+179</b>						
Wind Onshore (Spain)	152	-	-	-	-						
Wind/ Solar Onshore (US)	398	+139	+40	-	+179						
Wind Offshore	-	-	-	-	-						
<b>EBITDA MW + EQUITY CONSOL.</b>	<b>11,362</b>	<b>+888</b>	<b>(1,156)</b>	<b>(42)</b>	<b>(310)</b>						

<sup>(1)</sup> Includes 137 MW from Babilonia wind farm in Brazil, corresponding to the sell-down announced in July 2019 and which financial closing occurred in February 2020.

## EDPR CONTINUES TO DELIVER SOLID SELECTIVE GROWTH

With a top-quality portfolio, EDPR has a strong track record and proven capability to execute superior projects and deliver on targets. The installed asset base of 11.4 GW is not only young, on average 8 years, it is also mostly certified in terms of environmental and health and safety standards. Since 2008, EDPR has more than doubled its installed capacity, resulting in a total installed capacity of 11,362 MW (EBITDA + Equity Consolidated). As of December 2019, EDPR had installed 4,553 MW in Europe, 6,342 MW in North America and 467 MW in Brazil.

## 2019 INSTALLATIONS CONCENTRATED IN EUROPE

In 2019 EDPR built 888 MW of wind and solar technology, of which 169 MW in Europe, namely 53 MW in Spain, 47 MW in Portugal, 19 MW in France and 50 MW in Italy. In the United States 720 MW were built, of which 581 MW related to wind onshore projects and 139 MW from a solar PV portfolio.

In the year, pursuing its sell-down strategy, EDPR concluded the sale of its entire ownership in a 997 MW portfolio in Europe (348 MW in Spain, 191 MW in Portugal, 388 MW in France and 71 MW in Belgium; 491 MW net for EDPR). In the US, following the 80% sell-down transaction announced in December 2018, EDPR concluded the construction and deconsolidation of Prairie Queen wind farm, accounting +40 MW at equity level (20% stake in 199 MW). EDPR also concluded the 50% acquisition of a 278 MW solar portfolio, which construction was finalized in the 4Q19 and so accounting +139 MW at equity level. On the other hand, in Spain, EDPR completed the 24 MW repowering from the decommissioning of old turbines and started to repower 18 MW. All in all, as of December 2019, EDPR YTD consolidated portfolio net variation was negative by 310 MW. United States 720 MW were built, of which 581 MW related to wind onshore projects and 139 MW from a solar PV portfolio.

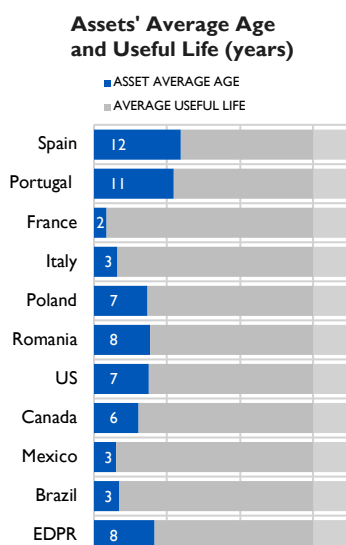
## 6% INCREASE IN YEAR ON YEAR GENERATION

EDPR produced 30 TWh of clean energy in 2019, +6% YoY. The YoY evolution benefits from the capacity additions over the last 12 months along with a higher wind resource, offsetting the deconsolidation of 997 MW from a sell-down transaction in Europe in July 2019.

In 2019, EDPR achieved a 32% load factor (vs 30% in 2018) reflecting 97% of P50 (long term average for 12M). In the 4Q19, EDPR reached a 35% load factor (vs 31% in 2018), with QoQ comparison benefitting from higher wind resource.

EDPR achieved a 96.8% availability in 2019, vs 97.0% in 2018. The company continues to leverage on its competitive advantages to maximize wind farm output and on its diversified portfolio across different geographies to minimize the wind volatility risk.

## SOLID GROWTH AND DIVERSIFIED PORTFOLIO DELIVERS BALANCED OUTPUT



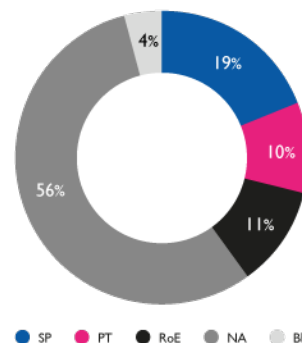
EDPR's operations in North America were a major driver for the electricity production growth in 2019, increasing +5% YoY to 16.5 TWh and representing 55% of the total output. This performance was driven by EDPR's strategy which is based on the development of competitive projects with PPAs or long-term contracts secured in advance. In North America, EDPR achieved a 34% load factor (vs 34% in 2018).

EDPR's production in Brazil increased to 1.8 TWh vs 1.2 TWh in 2018, representing 6% of total generation, driven by a higher wind resource, specially in the last quarter of the year (48% vs 44% in the 4Q18). In Brazil, EDPR reached a 43% load factor (vs 40% in 2018).

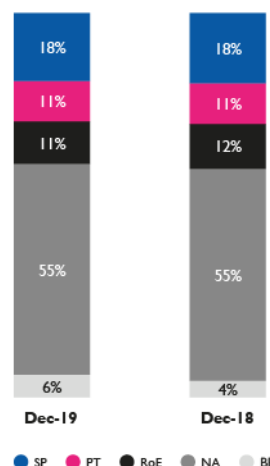
In Europe, despite the de-consolidation of 997 MW in July 2019 from a sell-down transaction, EDPR generation increased to 11.8 TWh (3% YoY) mainly impacted by higher wind resource, representing 39% of the total output.

In Europe, EDPR reached a 28% load factor (+2pp YoY). EDPR accomplished a load factor of 28% in Spain, +2pp YoY and +3pp above market average. Portugal reached a load factor of 29% (+2pp YoY). In Rest of Europe, EDPR delivered a 26% load factor (+2pp YoY).

## 11.4 GW of EBITDA MW + EQUITY CONSOL. (%)



## Generation Breakdown



## PROPELLED BY CAPACITY ADDITIONS IN 2019, EDPR MANAGES A PORTFOLIO OF 11.4 GW

As of December 2019, EDPR had 1 GW of new capacity under construction, of which 664 MW related to wind onshore and 330 MW from equity participations in offshore projects. In terms of wind onshore, in Europe were 154 MW under construction, with 18 MW in Spain (from repower), 6 MW in Portugal, 63 MW in France, 58 MW in Poland and 10 MW in Belgium. In North America 509 MW were under construction, corresponding to 3 wind onshore projects. In terms of wind offshore, in the UK, EDPR had 316 MW under construction from Moray East and 14 MW from Windplus floating in Portugal. Windplus comprises 3 turbines, of which one was connected to the grid in December 2019. As a result of continuous growth effort, EDPR also has a young portfolio with an average operating age of 8 years, with an estimate of over 22 years of useful life remaining to be captured.

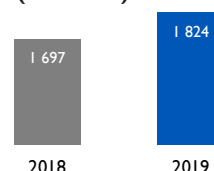
### 3.1.2 FINANCIAL PERFORMANCE

#### INCOME STATEMENT

##### Revenues reached over €1.8 billion and EBITDA summed €1.6 Billion.

As a result of higher wind resource (+€50 million versus 2018), higher capacity (+1% average MW; +€10 million year on year), higher average selling price (+3% year on year; +€47 million versus 2018), positive impact from forex translation (+€39 million year on year) and the 10-year life PTCs scheduled expiration of specific tax equity structures (-€33 million versus 2018), revenues totalled €1,824 million (+7% increase year on year).

Revenues Evolution  
(€ Millions)



Other operating income amounted to €400 million (+€208 million versus 2018), reflecting on the one hand €109 million of capital gains accounted in 2018, and on the other hand €313 million in 2019, with the latest related to the Sell-down of a 997 MW portfolio (491 MW net for EDPR) in Europe and 137 MW in Brazil. While the European portfolio achieved financial close in 2019, the financial close of the Brazilian assets occurred in February 2020.

Operating Costs (Opex) totalled €575 million (-2% year on year) and excludes €45 million from IFRS16 implementation (leases and rents). In comparable terms, adjusted by IFRS16, offshore costs (mainly cross charged to projects' SPV), one-offs and forex, Core Opex (defined as Supplies and Services and Personnel Costs) per average MW was flat year on year and adjusted Core Opex per MWh decreased 4% year on year.

As a consequence, EBITDA summed €1,648 million (+27% versus 2018) and EBIT increased to €1,055 million (versus €754 million in 2018), with IFRS16 increasing depreciations by €33 million in the period. Net Financial Expenses increased to €346 million (+€128 million versus 2018) with year on year comparison impacted by €87 million of gains accounted in 2018 from the Sale-down of stakes in UK and French offshore projects and by €28 million from new leases treatment under IFRS16 in 2019, along with higher average cost of debt in the period. At the bottom line, Net Profit summed €475 million (versus €313 million in 2018). Non-controlling interests in the period totalled €148 million, decreasing by €11 million year on year, as a result of top-line performance of such wind farms and from the deconsolidation of the European portfolio Sold-down.

CONSOLIDATED INCOME STATEMENT (€ MILLIONS)		2019	2018	Δ %
<b>Revenues</b>		<b>1,824</b>	<b>1,697</b>	<b>+7%</b>
Other Operating Income		400	192	+108%
Operating Costs		(575)	(589)	-2%
Supplies and Services		(309)	(345)	-11%
Personnel Costs		(131)	(115)	+14%
Other Operating Costs		(136)	(128)	+6%
<b>EBITDA</b>		<b>1,648</b>	<b>1,300</b>	<b>+27%</b>
EBITDA/Revenues		90%	77%	+14pp
Provisions		(1.2)	(0.3)	+272%
Depreciation and Amortisation		(609)	(562)	+8%
Amortisation Government Grants		17	16	+7%
<b>EBIT</b>		<b>1,055</b>	<b>754</b>	<b>+40%</b>
Financial Income/ (Expense)		(349)	(307)	+14%
Share of Profit of Associates		3	2	+106%
<b>Pre-Tax Profit</b>		<b>709</b>	<b>536</b>	<b>+32%</b>
Income Taxes & CESE		(86)	(63)	+36%
Profit of the Period		623	472	+32%
<b>Net Profit (Equity Holders of EDPR)</b>		<b>475</b>	<b>313</b>	<b>+52%</b>
Non-controlling Interests		148	159	-7%

## BALANCE SHEET

### In 2019 total equity increased by €212 million.

Total Equity of €8.3 billion increased by €212 million in 2019, of which €1,584 million are attributable to reserves and retained earnings. Equity attributable to EDPR shareholders increased €464 million year on year, mainly explained by +€475 million from Net profit in the period, +€59 million from variation in fair value cash flow hedges, +€22 million from minority interest acquired in Europe, along with -€10 million of the exchange rate effects, and -€61 million from dividend payments.

Total Liabilities decreased €59 million year on year to €9.4 billion, mainly due to a decrease in financial debt (-€233 million), the decrease in provisions (-€108 million), the increase of rents due from lease contracts on the back of IFRS new accounting rule (+€618 million) and other liabilities (-€336 million).

Debt-to-equity ratio stood at 112% by the end of 2019. Liabilities were mainly composed of financial debt (37%; versus 39% in 2018), liabilities related to institutional partnerships in the United States (14%; increasing versus 13% in 2018) and accounts payable (26% versus 29% in 2018).

Liabilities to tax equity partnerships in the United States increased by €17 million to €1,287 million. Deferred revenues related to institutional partnerships primarily represent the non-economic liability associated to the tax credits already realized by the institutional investor, arising from accelerated tax depreciation, and yet to be recognized as income by EDPR throughout the remaining useful lifetime of the respective assets.

Deferred tax liabilities reflect the liabilities arising from temporary differences between the accounting and the tax basis of assets and liabilities. Accounts payables include trade suppliers, PP&E suppliers, deferred income related to investment grants received and derivative financial instruments.

As total assets summed €17.7 billion in December 2019, the equity ratio of EDPR reached 47%. Assets were 75% composed of net PP&E - property, plant and equipment representing €13.3 billion (-€658 million versus 2018). In detail -€1.0 billion corresponded to the sale of assets announced in April 23<sup>rd</sup> from a 997 MW portfolio in Europe, -€0.2 billion to assets classification to held for sale (related to the Brazilian Sell-down) and -€0.6 billion to depreciation charges. PP&E also involved +€1.2 billion of capex investments along with positive exchange differences of +€0.1 billion.

Net intangible assets of €1.5 billion mainly include €1.2 billion from goodwill registered in the books, for the most part related to acquisitions in the United States and Spain, while accounts receivable is mainly related to loans to related parties, trade receivables, guarantees and tax receivables.

### Statement of Financial Position (€ million)

	2019	2018	Δ €		2019	2018	Δ €
<b>ASSETS</b>				<b>EQUITY</b>			
PPE, net	13,264	13,922	(658)	Share Capital + Share Premium	4,914	4,914	+0
Right-of-use asset	616	-	+616	Reserves and Retained Earnings	1,584	1,282	+302
Intangible Assets & Goodwill, net	1,490	1,577	(88)	Net Profit (Equity Holders of EDPR)	475	313	+161
Financial Investments, net	476	357	+119	Non-controlling Interests	1,362	1,613	(252)
Deferred Tax Assets	126	174	(48)	<b>TOTAL EQUITY</b>	<b>8,335</b>	<b>8,122</b>	<b>+212</b>
Inventories	34	36	(2)	<b>LIABILITIES</b>			
Accounts Receivable - Trade, net	303	334	(31)	Financial Debt	3,417	3,650	(233)
Accounts Receivable - Other, net	556	540	+16	Institutional Partnerships	1,287	1,269	+17
Assets Held for Sale	214	8	+207	Rents due from lease contracts	278	295	(17)
Collateral Deposits	32	39	(7)	Provisions	355	463	(108)
Cash and Cash Equivalents	582	552	+30	Deferred Tax Liabilities	1,003	962	+41
<b>TOTAL ASSETS</b>	<b>17,693</b>	<b>17,539</b>	<b>+154</b>	Deferred Revenues from Inst. Partnerships	618	-	+618
				Other Liabilities	2,400	2,777	(377)
				<b>TOTAL LIABILITIES</b>	<b>9,358</b>	<b>9,416</b>	<b>(59)</b>
				<b>TOTAL EQUITY AND LIABILITIES</b>	<b>17,693</b>	<b>17,539</b>	<b>+154</b>



## CASH FLOW STATEMENT AND NET DEBT

### STRONG AND STEADY OPERATING CASH-FLOW

In the 2019, EDPR generated Operating Cash-flow of €1,089 million (+11% year on year), with year on year evolution benefiting from top line performance.

The key items that explain 2019 cash-flow evolution are the following:

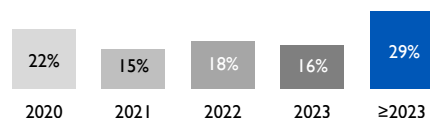
- Funds from operations, resulting from EBITDA after net interest's expenses, share of profits of associates and current taxes, were €1,441 million (versus €1,085 million in 2018);
- Operating Cash-flow, which is the EBITDA net of income tax and adjusted by non-cash items (namely income from United States institutional partnerships) and net of changes in working capital, was €1,089 million (+11% year on year). Non-cash items include €226 million from Sell-down transaction of a 997 MW portfolio in Europe, and €87 million from the Sell-down of 137 MW in Brazil;
- Capital expenditures with capacity additions, ongoing construction and development works totalled €1,109 million (-13% year on year mainly from lower capex in Brazil and projects timing;
- Payments to institutional partnerships totalled €81 million, contributing to the reduction of Institutional Partnership liabilities. Total net dividends and other capital distributions paid to minorities totalled €151 million (including €61 million to EDPR shareholders). In the period, forex & others had a negative impact increasing Net Debt by €138 million.

CASH-FLOW (€ MILLIONS)	2019	2018	Δ %
<b>EBITDA</b>	<b>1,648</b>	<b>1,300</b>	<b>+27%</b>
Current Income Tax	(55)	(77)	-29%
Net Interest Costs	(156)	(139)	+12%
Share of Profit of Associates	3	2	+106%
<b>FFO (Funds From Operations)</b>	<b>1,441</b>	<b>1,085</b>	<b>+33%</b>
Net Interest Costs	156	139	+12%
Share of Profit of Associates	(3)	(2)	+106%
Income from Institutional Partnerships	(173)	(178)	-3%
Non-cash Items Adjustments	(290)	(63)	+363%
Changes in Working Capital	(41)	2	-
<b>Operating Cash-Flow</b>	<b>1,089</b>	<b>985</b>	<b>+11%</b>
Capex	(1,109)	(1,275)	-13%
Financial Desinvestments/ (Investments)	(291)	(102)	+185%
Changes in Working Capital related to PP&E Suppliers	(100)	371	-127%
Government Grants	-	-	n/a
<b>Net Operating Cash-Flow</b>	<b>(412)</b>	<b>(21)</b>	<b>-</b>
Sale of Non-controlling Interests and Sell-down Strategy	989	420	+135%
Proceeds from Institutional Partnerships	186	399	-53%
Payments to Institutional Partnerships	(81)	(174)	-53%
Net Interest Costs (Post Capitalisation)	(138)	(115)	20%
Dividends Net and Other Capital Distributions	(151)	(176)	-14%
Forex & Others	(138)	(587)	-77%
<b>Decrease/ (Increase) in Net Debt</b>	<b>257</b>	<b>(254)</b>	<b>-201%</b>

As of December 2019, Net Debt totalled €2,803m (-€257m vs December 2018) reflecting assets' cash generated and the execution of EDPR's Sell-down strategy, along with forex translation. Institutional Partnership Liabilities summed €1,287m (+€17m vs December 2018), with the benefits captured by the projects and tax equity partners offset by forex translation (+€7m vs December 2018) and a new institutional tax equity financing in the period.

FINANCIAL DEBT & TAX EQUITY (€ MILLIONS)	2019	2018	Δ €
<b>Total Financial Debt</b>	<b>3,385</b>	<b>3,611</b>	<b>(227)</b>
<b>Net Debt</b>	<b>2,803</b>	<b>3,060</b>	<b>(257)</b>
<b>Institutional Partnerships</b>	<b>1,287</b>	<b>1,269</b>	<b>+17</b>

### DEBT Maturity Profile (%)



## EUROPE

In 2019, Europe increased its revenues to €925 million (+4% versus 2018) backed by higher production at 11.8 TWh (+3% year on year) and a stable average selling price during the year.

Net Operating costs (Operating costs net of other operating income), decreased to €11 million, primarily explained by the increase in other operating income explained by the capital gains received from the European portfolio Sell-down in 2019 (€226 million). Operating costs also decreased €10 million in 2019.

All in all, EBITDA in Europe totalled €914 million, a 40% increased versus 2018, reflecting an EBITDA margin of 82% (versus 73% in 2018).

## NORTH AMERICA

In North America, revenues increased to €832 million in 2019 (+9% year on year) on the back of higher capacity in operation (+382 MW versus 2018).

Net Operating costs decreased €89 million to €218 million, reflecting mainly the €109 million capital gain accounted in 2018 subsequent to the Sale-down transaction of 80% stake in a 499 MW portfolio. Operating costs also decreased €10 million in 2019.

As a consequence, North America EBITDA totalled €615 million (versus €634 million in 2018), reflecting an EBITDA margin of 74%.

## BRAZIL

In Brazil, revenues increased to €74 million (versus €50 million in 2018) on the back of higher wind resource that boosted production +42% year on year and higher average selling price during the year (+5% versus 2018).

Net Operating costs decreased to €65 million, due to the increase in other operating income explained by €87 million capital gain received from the Sell-down of Babilonia wind farm, which closing is expected at the beginning of 2020.

All in all, EBITDA in Brazil totalled €139 million, versus €33 million in 2018.

	EUROPE			NORTH AMERICA			BRAZIL		
STATEMENT (€ MILLIONS)	2019	2018	Δ %	2019	2018	Δ %	2019	2018	Δ %
<b>REVENUES</b>	<b>925</b>	<b>891</b>	<b>+4%</b>	<b>832</b>	<b>763</b>	<b>+9%</b>	<b>74</b>	<b>50</b>	<b>+48%</b>
Other Operating Income	246	30	+733%	50	148	-66%	88	2	-
Operating Costs	(258)	(268)	-4%	(268)	(277)	-3%	(24)	(19)	+22%
Supplies and Services	(158)	(174)	-9%	(148)	(160)	-8%	(15)	(13)	+19%
Personnel Costs	(29)	(29)	+2%	(63)	(58)	9%	(3)	(2)	+55%
Other Operating Costs	(71)	(65)	+9%	(57)	(58)	-3%	(5)	(5)	+20%
<b>EBITDA</b>	<b>914</b>	<b>653</b>	<b>+40%</b>	<b>615</b>	<b>634</b>	<b>(3%)</b>	<b>139</b>	<b>33</b>	<b>+327%</b>
EBITDA/Revenues	99%	73%	+35%	74%	83%	-11%	187%	65%	+188%
Provisions	(1.2)	(0.6)	+100%	-	0.3	-100%	(0.0)	0.0	-
Depreciation and Amortisation	(255)	(253)	+1%	(333)	(289)	+15%	(16)	(14)	+17%
Amortisation of Government Grants	1.0	1	+45%	16.3	15.4	+5%	0.1	0.1	+43%
<b>EBIT</b>	<b>658</b>	<b>399</b>	<b>+65%</b>	<b>298</b>	<b>361</b>	<b>(18%)</b>	<b>123</b>	<b>19</b>	<b>+546%</b>

## OTHER REPORTING TOPICS

### SUBSEQUENT EVENTS

The following are the most relevant events from the first half of 2019:

#### EDPR secures a PPA for a new solar project in Brazil

Madrid, January 13<sup>th</sup> 2020: EDP Renováveis, S.A. ("EDPR"), through its subsidiary EDP Renováveis Brasil, S.A. ("EDPR Brasil"), secured a 19-year private Power Purchase Agreement ("PPA") to sell the energy to be produced by Lagoa solar power plant. Lagoa solar power plant, located in the Brazilian State of Paraíba, has a total capacity of 66 MW and start of operations expected for 2022.

With this new contract EDPR reinforces its presence in a market with a low risk profile, through the establishment of long term contracts, attractive renewable resources and solid prospects in the medium and long-term.

This new solar project increases EDPR's portfolio technological diversification on which solar capacity total build-out is expected to reach 1.3 GW by 2022, after this new arrangement, EDPR has now secured 5.3 GW of the ~7.0 GW targeted global capacity build-out for 2019-2022 period, as part of its Strategic update announced in March 12<sup>th</sup> 2019.

#### **EDPR reached an agreement with ENGIE to create a 50:50 joint-venture for offshore wind**

Madrid, January 23<sup>rd</sup> 2020: EDP Renováveis, S.A. ("EDPR") announces the signing of an agreement with ENGIE to create a co-controlled 50/50 joint-venture (JV) in fixed and floating offshore wind.

The agreement signed today follows the announcement, on May 21<sup>st</sup> 2019, of a strategic Memorandum of Understanding (MoU) to form a new entity as exclusive vehicle of investment of EDPR and ENGIE for offshore wind opportunities worldwide, bringing together the industrial expertise and development capacity of both companies.

As agreed, EDPR and ENGIE are combining their offshore business in this new entity, starting with a total of 1.5 GW under construction and 3.7 GW under development, and working together to become a global top leader in the sector.

The agreement announced today is subject to certain conditions precedent such as European Commission regulatory approval process.

#### **EDP Renováveis was awarded long term CfD for 109 MW at the Italian wind energy auction**

Madrid, January 29<sup>th</sup> 2020: EDP Renováveis, S.A. ("EDPR") was awarded 20-year Contract-for-Difference ("CfD") at the Italian wind auction to sell electricity to be produced by 3 wind farms with total capacity of 109 MW. The wind farm projects are expected to be installed in 2021.

The capacity awarded represents 20% of the total capacity auctioned and has an average awarded price of €62/MWh.

With these new contracts EDPR has already secured ~1.1 GW of projects to be installed in Europe under the Business Plan for 2019-2022.

Wind energy is an essential part of the global energy transition, allowing market's rapid growth and increase competitiveness. As of today, EDPR has secured 76% of the ~7.0 GW targeted wind and solar global capacity build-out for the 2019-2022 period, as communicated in the Strategic Update on March 2019, and will continue to develop worldwide profitable projects.

#### **EDPR receives €0.3 billion from asset rotation deal for Brazilian wind farms**

Madrid, February 12<sup>th</sup> 2019: Following the information released to the market on July 29<sup>th</sup> 2019, EDP Renováveis, S.A. ("EDPR") announces the cash-in of the sale of its full equity shareholding in an operating onshore wind project with 137 MW of installed capacity, to an affiliate of Actis. The transaction has a total consideration of R\$598 million (equity value; corresponding to an enterprise value of R\$1.2 billion or €0.3 billion).

In detail, Babilonia 137 MW wind farm is located in the state of Bahia, Brazil, and has been in operation since 4Q 2018. The project, which was fully owned by EDPR, was awarded a 20-year PPA in the LER 2015 auction.

The deal part of the asset rotation program for 2019-22 period contemplated in the Strategic update announced in March 12<sup>th</sup> 2019.

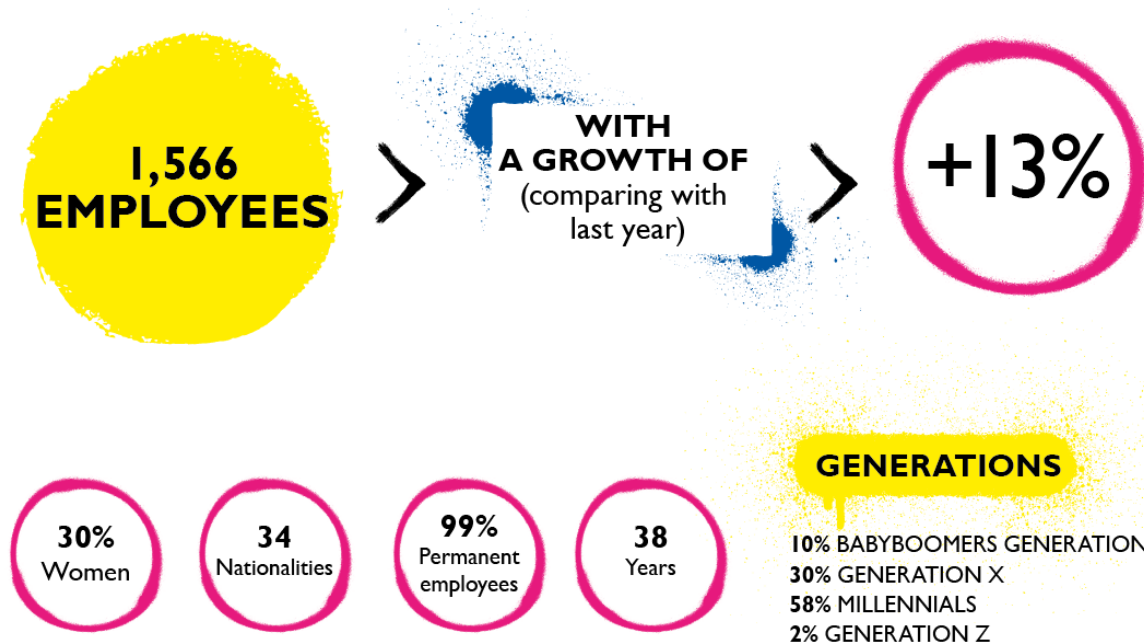
#### **INFORMATION ON AVERAGE PAYMENT TERMS TO SUPPLIERS**

In 2019 total payments made from Spanish companies to suppliers, amounted to €152,192 thousand with an average payment period of 50 days, below the payment period stipulated by law of 60 days.

#### **OWN SHARES**

As of December 2019, EDPR did not hold own shares and no transactions were made during the year.

### 3.2 HUMAN CAPITAL



EDPR, which is home to four different generations, bases its Human Resources policies on the Business Plan Achievements and implements its actions considering an active listening of the employees.

2019 was the continuation of the plan established in 2018 and all the measures projected. In 2019, the Pulse survey was launched to measure the Action Plan from the previous year. In 2020, the Climate Survey will be launched once again, as every two years.

#### EMPLOYEE JOURNEY

A customised value proposition is offered to employees throughout their journey in EDPR, which allows them to join a multinational team and grow along with it. EDPR believes that motivated workforce aligned with the company's strategy is one of the key drivers behind the ability to deliver positive results. In this sense, EDPR continuously works to provide excellent conditions for its employees, grow and develop talent at all levels and optimise its employment policies and labour practices.

As a result, EDPR has been recognised by the Top Employers Institute as one of the best companies to work for in Europe in 2019. At a local level, the Company has been named a Top Employer 2019 in Spain, France, Italy, Portugal and the UK. This certification endorses EDPR as one of the best companies to work at, thanks to the journey it offers its employees. The main actions implemented by EDPR in 2019 in this regard can be found on the following pages.





## JOINING & INTEGRATING

### ATTRACTING TALENT

EDPR is continuously striving to attract talent, bringing in the right skills and profiles to address current and future business challenges, and retain professionals who seek to excel in their work in order to position the company as the "the first choice for employees" in the labour market.

As a result, during 2019, EDPR implemented different talent & attraction initiatives with the goal of strengthening its image as a leading employer:

- **EDP Trainee Program:** 30 exceptional trainees for Business and Tech profiles, different nationalities and academic backgrounds were selected to join EDP Group, and be an active part of one of the most compelling Trainee Programs in the market. Through the program, the Group gives new talents the tools to develop themselves professionally and personally, having the chance to get to know and influence different business areas, such as EDPR, and, in most cases, have an international mobility experience. During this fifteen month program, thirteen EDP Trainees performed some of their rotations in EDPR.
- **Job Fairs:** EDPR attended 8 job fairs from the most relevant Universities and Business Schools from Spain and Portugal with an assistance of almost 4,000 students. EDPR also held 2 Open Days at our offices focused on both business and technical areas.
- **LinkedIn:** It is used as the main source of Recruitment, covering up to 50% of the Corporate positions hired in 2019.

In EDPR, non-discrimination and equal opportunities are guaranteed during all the selection processes. This is reflected in the Code of Ethics, which contains specific clauses on non-discrimination and equal opportunities, in line with the company's culture of diversity regarding the respect for human and labour rights.

### INTEGRATING NEW EMPLOYEES

By the end of 2019, EDPR welcomed 368 new employees, of whom 30% are women. The average age of new hires was 33 years old. 98% of the total hires correspond to levels of Specialists and Technicians, of which 74% have University degree and above. 95% of the hires in 2019 were allocated in permanent positions and EDPR counted with more than 19 different nationalities among that group. Furthermore, 138 internships were offered, of which 13% were translated into new hires.

Moreover, since giving opportunities to young students to acquire professional experience is key for EDPR, the 2<sup>nd</sup> edition of the Internship Forum was developed at the end of December. This event, exclusively dedicated to the 28 current interns at EDPR from Madrid, Oviedo and Sevilla, aims at giving advice and tools for their successful entry into the labour market.



Among the initiatives to integrate new employees, EDPR implemented a new On boarding manual in 2019 for new hires in Spain. This new manual will be extended to EDPR's European countries in 2020.



## BEING EDPR

### INDIVIDUALISATION

Part of EDPR value proposition is a competitive remuneration package, aligned with the best practices in the market. EDPR Compensation Package includes (i) an Annual Base Salary and (ii) a Variable Pay depending on the achievements of Area, company KPIs and an Individual Global Assessment of the employee, and also an (iii) above market practice benefits package such as Health Insurance or Pension Plan. The remuneration package is not static, which means that it evolves at the same pace of employees' needs and concerns as well as the business.

In 2019, EDPR focused on analysing the life-cycle status of EDPR employees (by generation, personal situation - with or without children) in order to offer a tailor-made Benefits Package, with an individualised approach from a communication perspective, so that it is adapted to the employees' needs.

### WORK LIFE BALANCE

EDPR believes that Work Life Balance (WLB) must be a shared responsibility and its practices have been awarded for eight years through the Responsible Family Employer Certification (EFR – Empresa Familiarmente Responsable) by Spain's Fundación MásFamilia. To achieve this continuously, it is important to have a constant improvement on the practices in place, in order to provide the most suitable and updated benefits to employees.

EDPR is a flexible company that fosters time efficiency of the employees' daily tasks in order to deliver excellent results and to balance their personal and professional life. In this regard, EDPR implements different initiatives focused mainly on family, time and health.

In addition, EDPR has a volunteer program addressed to its employees in order to promote social responsibility, giving them the opportunity to grow not only at work but also personally while also contributing to the society.



## GROWING WITH THE COMPANY

EDPR is committed to the development of its employees, offering them an attractive professional career and aligning their capabilities and skills with the current and future needs of the company. The growth and development of the company's business has led EDPR to invest in the employees by discovering, improving and emphasising the potential of each, through internal mobility and development actions.

In 2019, EDPR implemented a new career model, a dual career path, providing two equivalent career progressions, one to recognize managerial contributions and one to recognize technical contributions. Employees in the Management Career contribute by getting their teams to deliver services and products on time and with quality levels required. Employees in the Technical Career contribute by designing, developing and improving products and services through specialized technical knowledge. Employees could move from path to path as their goals and interests change over their careers.

## MOBILITY

EDPR considers both functional and geographical mobility as a tool that contributes to the organisational development by stimulating employees' motivation, skills, productivity and personal fulfilment. The mobility processes within EDPR aim to respond to the different challenges and needs of the Company, considering the characteristics of the different geographies. In 2019, there were 83 mobility processes (23 more than in 2018), 77 functional, 15 geographical and 14 both functional and geographical mobility processes.

## TRAINING

EDPR sees employees development as a strategic target, offering from the Renewable Energy School - EDP University job-specific ongoing training opportunities to contribute to the improvement of knowledge and skills, as well as specific development programs aligned with the company's strategy.

The 360 potential appraisal process is created for all employees with the goal of defining each person's training needs along with their manager, which is then used to define a customised Training Plan. The annual Training Plan is based on a catalogue of programs that is constantly evolving and is aligned with the company's challenges and new markets. It consists of up to two courses from the EDPR Value Chain, one Technical, Management or Behavioural training course, optional languages courses and others from free selection seen as important for the development of the employee.

The key aspect about EDP University's courses is that they usually contain subjects to promote the development of skills needed to ensure the sustainability of EDPR's business. Moreover, the networking and the share of best practices are unreplaceable experiences. This year, EDPR boosted the Inspiring Seminar concept, a new format of short-focused sessions addressed to employees interested in the topics covered.

During 2019, a new training area has emerged as part of the current trends of our business: digitalisation. EDPR has reinforced not only the training courses delivered in subjects related to digitalisation but also in terms of methodologies, the number of sessions delivered by live Webinars has increased significantly allowing employees access digital training platforms from wherever they are without having to commit to attending a face to face course taking advantage from these cost effective initiative.

In 2019:



## DEVELOPMENT

In order to support the company's growth, aligning current and future organisational demands with employees' capabilities, as well as to enhance their professional development, EDPR has designed development programs for middle management, providing them with proper tools to take on new responsibilities. In 2019, one of the most important development programs was the Lead Now Program, which aims to support middle managers in the role they are assuming as team leaders. Participants have the possibility to self-assess their management style, go deeper into the skills needed and get to know the role they are performing in the different HR processes of EDPR. In 2019, 30 employees participated.

As a result of EDPR's trust in its employees aligned with the development programs' success, 86% of new Directors were hired internally in 2019.

## KNOWLEDGE MANAGEMENT

EDPR is aware of the importance of Knowledge as a valuable asset not only within the business, but also in the employees' development. In 2019, EDPR strengthened LINK as a knowledge platform increasing the number of areas, domains and documents with valuable content captured and shared across the organisation to help its employees learn from the past to face future challenges and move the company forward. Becoming a Learning Organisation implies a strong knowledge sharing mindset and that is why EDPR strives to improve the use of knowledge by regularly distributing customised interesting documents or relevant events.



### 3.3 SUPPLY CHAIN CAPITAL

EDPR's market leadership, based in value creation capacity, innovation and relationship with its stakeholders, is much influenced by the performance of its suppliers.

Technical excellence together with sustainability is the basis of EDPR relationship with suppliers. This results in close collaboration, joint capacity to innovate, strengthen the sustainability practices and improve the quality of the Company's operations.

#### KEY DATA

**+6,000**  
suppliers contribute  
to EDPR success

Suppliers in EU&BR represent  
**69%<sup>1</sup>** of the total  
invoiced volume and  
**31%<sup>1</sup>** in NA

**94%<sup>2</sup>** of local  
purchases at a  
country level and  
**36%<sup>3</sup>** of local  
purchases at a  
regional level

#### EDPR SUPPLY CHAIN

EDPR has a strong and permanent interaction with the supply chain, in particular with the strategic suppliers understood as WTG (Wind Turbine Generator) manufacturers, Balance of Plant (BOP) and Operation and Maintenance (O&M) contractors. Those suppliers contribute in a meaningful and visible way to the value of EDPR core activities – construction and operation of wind farms and solar plants. This close relationship allows EDPR to benefit from all the new technical solutions and innovations available on the market to maximise the value creation in the projects worldwide.

#### HIGH QUALITY AND SUSTAINABLE PROCUREMENT

EDPR's procurement process is developed within the framework of the Procurement Policy, from which the most relevant aspects for EDPR regarding the supply chain's high quality and sustainability are established: development of activities that promote the sharing of the best sustainability practices in EDPR purchases; contribution to the growth and profitability of the business through the promotion of initiatives for the development and continuous improvement of the supply chain; systematic monitoring of suppliers' performance and risk profile; dissemination and implementation of the EDPR's sustainability policies (Environmental and H&S policies and Code of Ethics) in the acquisition of goods and services and involvement and empowerment of all actors in the supply chain.

Implementation of the Procurement Policy led to a better control in the suppliers' management process, assuring EDPR values are respected, product quality is high and risks are minimised.

EDPR has in place requirements related to Sustainability, Quality and Risk management that have to be met by its suppliers throughout the main procurement phases: registration process, contracting and, lastly, the monitoring and evaluation of the suppliers.

<sup>1</sup> BASED ON THE TOTAL INVOICED VOLUME IN 2019.

<sup>2</sup> EDPR DEFINES SPENDING IN LOCAL SUPPLIERS AT A COUNTRY LEVEL AS PURCHASES TO SUPPLIERS IN COUNTRIES WHERE EDPR IS PRESENT DIVIDED BY THE TOTAL INVOICED VOLUME IN 2019.

<sup>3</sup> EDPR DEFINES SPENDING IN LOCAL SUPPLIERS AT A REGIONAL LEVEL AS PURCHASES TO SUPPLIERS IN REGIONS WHERE EDPR IS PRESENT DIVIDED BY THE LOCAL PURCHASES AT A COUNTRY LEVEL (EXCLUDING PURCHASES FROM COUNTRIES WHERE EDPR IS NOT PRESENT).



## REGISTRATION



The registration process is an indispensable requirement for any company who intends to become a supplier or apply for a qualification process issued by EDPR. The Corporate System of Supplier Registration of the Company works as the support to search and select suppliers by providing detailed information, validated and updated by credible sources in order to guarantee their accreditation through financial, technical quality and sustainability criteria.

In 2019, in addition to implementing the new registry system, EDPR worked on the design and implementation of a specific Supplier Qualification Process. The main goal of this process is to provide a more thorough analysis on critical topics such as technical capabilities, health and safety, environment and ethics, and to establish highly standardised minimum requirements to ensure that the suppliers with whom EDPR conducts business are qualified. The qualified suppliers are included in a Suppliers Qualification List and are able to participate in the EDPR bidding and contracting processes.

## CONTRACTING



The incorporation of adequate criteria in the bidding and contracting processes of the company is essential to ensure the management and mitigation of operational risks in the supply chain.

In 2019, EDPR implemented the Suppliers Sustainability Guide in Europe and Brazil for both construction and O&M operations, providing an overview of the sustainability requirements EDPR expects its suppliers to meet. The guide includes H&S, environmental and ethical requirements such as compliance with applicable regulations, policies, internal norms, procedures and systems in place.

In addition, EDPR implemented a process that classifies suppliers according to their H&S and environmental risks. This process is applicable to all suppliers providing a service at EDPR EU&BR facilities and the classification serves as an input in the selection of suppliers during the bidding phase. Based on the individual values obtained in this classification, suppliers may be excluded from the bidding process. If the supplier wants to be re-considered or participate in new processes, an action plan to solve the identified issues has to be presented and EDPR shall approve the action plan proposal.

Adequate compliance by all EDPR suppliers with applicable H&S and environmental requirement is essential to guarantee the correct performance of the contracted services and works. Aiming to ensure that suppliers comply with these requirements, the Company has established a disciplinary and sanctioning regime, which is included in all requests for proposal, contracts and purchase orders so any provider will be always informed about the consequences of not complying with EDPR H&S and environmental requirements.

In parallel, financial capacity of the suppliers and their insurance policy are evaluated according to the EDPR's Credit-in procedure that defines the steps to be followed to ensure the compliance with EDPR's counterparty risk policy and the proper follow-up of active guarantees. EDPR Counterparty Risk Policy sets the methodology and process to measure counterparty risk of new contracts, monitor counterparty risk of existing contracts, define in which moments and situations it should be used and establish guidelines and mitigation instruments to reduce counterparty risk when they exceed established limits.

## MONITORING AND EVALUATION



In order to guarantee that the suppliers comply with the previously mentioned requirements, EDPR monitors strategic suppliers during their services delivery.

During the construction phase, the construction manager works closely with health & safety and environmental supervisors, and holds weekly meetings with suppliers. Contractors receive feedback for continuous improvement in the areas of H&S and environment. EDPR also has external supervision in these areas. During the operation phase, the manager of the facility is responsible for compliance with H&S and environmental procedures. These processes are reinforced by the management systems according to OHSAS 18001:2007 and to ISO 14001:2015.

All parameters of the Qualification system are periodically reviewed and reassessed by EDPR to guarantee that supply chain performance remains on the high quality level required.

### 3.4 SOCIAL CAPITAL

EDPR believes it is indispensable to contribute to the development of the society both respecting human and labour rights and creating value in different ways, for different people. The Company is guided by three key social responsibility principles: respect human and labour rights in the whole value chain, contribute to the society and promote access to energy for all.



#### 3.4.1 RESPECT HUMAN AND LABOUR RIGHTS

At EDPR, it is top priority to promote human rights and fair labour practices across the entire value chain. The Company is committed to integrate the social aspects in planning and decision-making and to guarantee responsible operations throughout the whole lifecycle of its business. Moreover, the health and safety of those who contribute to EDPR's activities is a key value and a priority for its success. Therefore, the Group aims to promote and build on a positive safety culture in which every employee, service provider and supplier is engaged.

##### HEALTH & SAFETY

According to its Code of Ethics, EDPR undertakes to give priority to the employees and suppliers' safety, health and wellbeing and to ensure the development of appropriate occupational health and safety management systems. This commitment to guarantee the welfare of employees and contractors is supported by EDPR's Occupational Health and Safety Policy.

EDPR has implemented Health & Safety Management Systems based on the OHSAS 18001:2007 specifications. The standards and procedures of these systems are adapted to the specific geography of the sites where they are used and are developed based on each country's regulations and industry best practices. EDPR takes a data-driven approach to identify and react to leading causes of injury.

The implementation of these systems allows for better management and prevention of future accidents, with the objective of zero accidents overall. The commitment to health & safety is further supported through the OHSAS 18001 certification. By the end of 2019, this certification covers 100%<sup>1</sup> of EDPR's installed capacity.

The OHSAS 18001:2007 standard was replaced with ISO 45001:2018, which will help organisations develop and provide a safe and healthy workplace for everyone within the company and across its supply chain. Even though companies have a 3 year transition period to implement and comply with the new standard, EDPR has already been working on the integrated Health & Safety and Environment Management System in order to implement it and carry out the its certification in 2020.

During 2019, EDPR registered 10 work-related accidents for employees and contractors, -50% vs 2018. The injury and the lost day rate were 1.2 work accidents per million hours worked and 46 days lost due to work accident per million hours worked, respectively.

EDPR registered a significant improvement in its H&S ratios when comparing to 2018. Nevertheless, EDPR continuously works to improve these ratios and to bring awareness to the best H&S practices. In 2019, the Company worked on several initiatives such as the development and implementation of an internal procedure for evaluating suppliers on health & safety topics; the organisation of a H&S workshop for O&M and Construction suppliers that aimed to foster the "Safety first" culture; the development and implementation of a tool that monitors the communication of safety alerts, both EDPR's and those received from maintenance companies, to the different applicable suppliers working at EDPR facilities; the implementation of a telephonic nurse/triage service by using a telephonic system to engage medical care professionals as first responders to incidents on site in order to provide appropriate care and medical advice and assist with medical case management requirements; and the definition of a daily KPI metric to delineate performance based on leading and lagging safety indicators, among others.

<sup>1</sup> CALCULATION BASED ON 2018YE INSTALLED CAPACITY. EDPR CERTIFIES THE FACILITIES THE YEAR AFTER THE COD (COMMERCIAL OPERATING DATE). THUS, THE FACILITIES THAT HAVE ENTERED INTO OPERATION IN 2019 WILL BE CERTIFIED IN 2020.

## HUMAN RIGHTS & LABOUR PRACTICES

EDPR undertakes to respect and foster due respect within the Company and in its supply chain, as well as to provide dignified working conditions for all. This practice is reflected in the Code of Ethics, which contains specific clauses regarding non-discrimination and equal opportunities, in line with the Company's culture of diversity and respect for human and labour rights. The Code is not an isolated feature – it belongs to an Ethics Framework that includes functional units, specific regulations, monitoring and accountability for our ethical performance, along with training, awareness-raising and capacity building for employees, service providers and suppliers.

EDPR requires its suppliers and service providers to comply with their ethical standards. In this way, the alignment with the spirit of EDPR's Code of Ethics is required. Moreover, the Sustainable Procurement Policy references the promotion of respect for dignity and human rights, and the rejection of any form of forced labour or child labour, harassment, discrimination, abuse or other types of physical or psychological violence.

A Code of Ethics channel is available for the communication of any breach of the Code related to the matters of human rights or labour practices, including those in the context of the supply chain. The Ethics Ombudsman receives ethical-related complaints, investigates and documents the procedure for each of them. A preliminary report is then submitted to the Ethics Committee, whose main goal is to ensure compliance with the Code of Ethics within EDPR.

### 3.4.2 CONTRIBUTE TO THE SOCIETY

The Company believes that besides excelling in the way it performs, there must be a main factor weighing in every action or activity EDPR does – people. The Company considers that in order to have a positive impact on society, it is vital to work for the common good by promoting and supporting social activities.

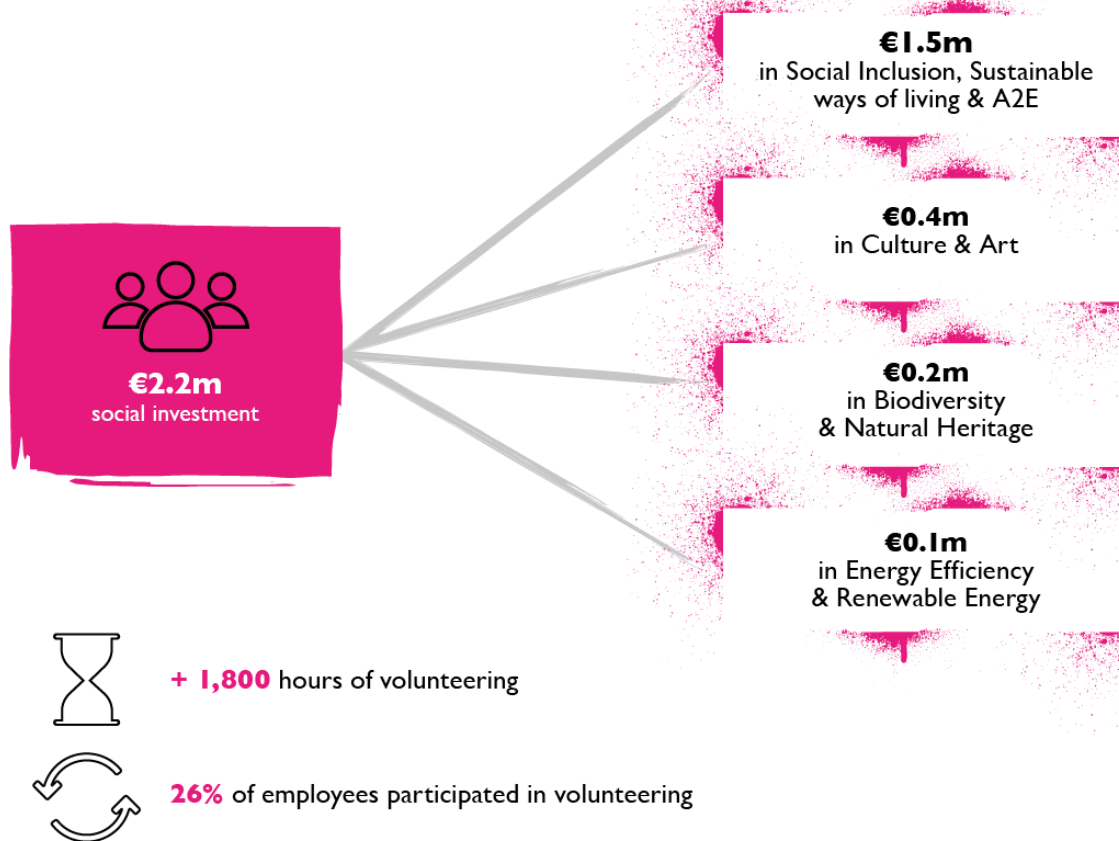
EDPR's Social Investment is developed within the framework of its Social Investment Policy, which establishes the corporate objectives and strategies related to this area. As stated in the Policy, EDPR invests in activities that will positively impact the promotion and development of the following four main areas: Culture & Art; Social inclusion, Sustainable ways of living & Access to energy; Natural heritage & Biodiversity; and Energy Efficiency & Renewable Energy.

As an integral part of the communities where it operates and as stated in its Code of Ethics, EDPR undertakes to maintain a relationship of proximity with the local communities engaging in regular and open dialogue, seeking to know their needs, respecting their cultural integrity and looking to contribute to improve the living conditions of local population, taking measures to consider and respect the community interests. Therefore, in line with its Social Investment Policy and the communities' needs and expectations, EDPR has defined a Catalogue of Activities that works as a tool for defining the social investment made in local communities. In addition to the development of social activities, EDPR provides long-lasting economic benefits to the surrounding areas that include, but are not limited to, infrastructure investments, tax payments, landowners' royalty payments and job creation.

However, as a responsible company, EDPR works to promote the well-being and development of not only the communities where it operates but also of society in general, focusing on the people who contribute to the success of the Group's business and how society may benefit from it. In addition, EDPR has a volunteer program addressed to its employees in order to promote social responsibility, giving them the opportunity to grow not only at work but personally as well, while also contributing to the society.

In 2019, EDPR invested in the development of the society mainly through internally developed and collaborative initiatives, donations to charitable organisations and volunteering activities. These were the key figures of the initiatives implemented throughout EDPR's geographies:

## KEY DATA



### 3.4.3 PROMOTE ACCESS TO ENERGY FOR ALL

As a global leader in the renewable energy sector, EDPR defined a clear strategy for promoting Access to Energy (A2E): to provide clean energy in developing countries based on energy efficiency and decentralised renewable energy solutions, that promote the sustainable development of the communities involved.

Access to renewable energy makes the difference for people not connected to the electricity grid not only by providing sustainable energy services but also by enabling improvement on health and education conditions, job creation and new economic activities. Moreover, the use of clean energies and the promotion of energy efficiency has a positive impact on the environment.

Last year, in 2018, EDPR purchased a stake in SolarWorks!, a company engaged in the marketing of decentralised solar energy solutions for off-grid domestic and business customers in Mozambique. The acquisition of the €2.2 million minority stake was an important step in the group's strategy for universal access to sustainable energy.

In 2019, EDPR reinforced its strategy to promote universal access to sustainable energy by investing c. €2.6 million in Rensource, a company that develops and manages decentralized solar energy systems, to support its expansion in Nigeria. The investment, which was the result of a financing initiative completed by EDPR and other international investors, will allow EDPR to participate in Africa's largest market and to bring sustainable, low-cost energy solutions to more communities.

**These investments confirm the progress of the A2E strategy, which includes the commitment to invest €20 million until 2022 with the goal of impacting 550,000 people in developing countries.**

The A2E initiative powerfully contributes to make EDPR's vision of a sustainable, safe and healthy world a reality.

## 3.5

# Natural Capital

Wind and solar power are two of the most environmentally friendly ways of producing energy. Even though EDPR's business inherently implies a positive impact on the environment, the company continues to work on a daily basis to hold itself to a higher standard.



## DEVELOPMENT

The Company's sustainable future depends on solid development efforts. EDPR implements relevant measures during this phase to identify and prevent the impacts of its activities on the environment.

After identifying sites with top-class resource conditions, EDPR analyses the environmental viability of those sites by detecting the constraints to take into consideration throughout the remaining phases of the value chain.

The potential environmental impacts are analysed in detail in the environmental impact studies of the projects and other specific environmental studies, always performed by professional external experts.

This process ensures the location of projects in the best sites, guaranteeing respect for the environment.

**During 2019, EDPR invested more than 3 million euros in environmental impact studies of its projects.**



## CONSTRUCTION

The construction process is closely followed by EDPR teams, who work to minimise potential impacts or disturbances and to ensure proper restoration of the land once the works finish.

Even so, since the success of the construction phase highly depends on suppliers, EDPR requires that they adopt all necessary measures to ensure strict compliance with all applicable environmental regulations as well as EDPR's Environment Policy and internal norms, procedures and systems in place as regards to environmental management.

In order to guarantee that the suppliers comply with the environmental requirements during constructions, EDPR has established an environmental monitoring plan in coordination with the Construction Manager and the suppliers.

**In 2019, for the construction of the Hidalgo II WF in the US, EDPR designed and implemented a unique program that employs biologists to monitor aspects of the wind farm construction.**

Beyond the emissions related to the operation phase, from a life cycle point of view, others shall be considered (manufacture of components, transport, construction...).

EDPR's Environmental Policy assumes specific commitments with the protection of the climate, the engagement with biodiversity and the preservation of natural resources. This policy allows EDPR to control, manage, communicate and to ensure the continuous improvement of its environmental performance along the entire value chain.



## OPERATION

EDPR produces energy based on renewable sources, which inherently implies the reduction of GHG emissions. Wind and solar energy have zero carbon emissions and do not produce harmful SO<sub>x</sub>, NO<sub>x</sub> or mercury emissions, protecting valuable air and water resources and contributing to the world's fight against climate change. Also, generation from wind and solar energy does not consume water in its operational processes.

Even so, as stated in its Environmental Policy, EDPR seeks to reduce the potential impact of its activities on the environment through a set of commitments that ensure the implementation and maintenance of an effective Environmental Management System (EMS).

The EMS is developed in accordance with the ISO 14001:2015 international standard and certified by an independent certifying organization. EDPR has defined general procedures in its EMS to prevent, correct or compensate impacts in the environment.

**In 2019, EDPR's operations avoided the emission of 19 million tons of CO<sub>2</sub>. The CO<sub>2</sub> emissions related to EDPR's activities represent 0.2% of the total amount of emissions avoided.**



## DISMANTLEMENT

As a responsible company, EDPR has two main aspects in consideration when dismantling a wind farm at the end of its useful life: land restoration and proper treatment of the wastes generated.

Even though EDPR works to minimise any impact on the land surrounding its facilities, the Company commits to cleaning up and rehabilitating the sites to return the area to its initial state.

The main waste generated during this phase are dismantled turbines. EDPR manages them by keeping some pieces for future repairs, selling some of the material or recovering it. The wind turbine is around 80%-90%<sup>(1)</sup> made of recyclable material, as the missing percentage is related to the turbine's blades that are composed and manufactured by complex materials that make it hard to recycle. In this regard, EDPR is working to support processes to recover the turbines and encourage circular economy.

**In 2019, Zas, a wind farm in Spain with 80 wind turbines was dismantled. 22 of them were sold and 58 were recovered, none of them being disposed.**

EDPR wind farms with a projected life span of 30 years will pay back its life cycle energy consumption in less than a year<sup>(1)</sup>, meaning, more than 29 years of a wind farm's life will be producing clean energy.

<sup>1</sup> ACCORDING TO THE LIFE CYCLE ASSESSMENTS OF OUR MAIN TURBINE SUPPLIERS.

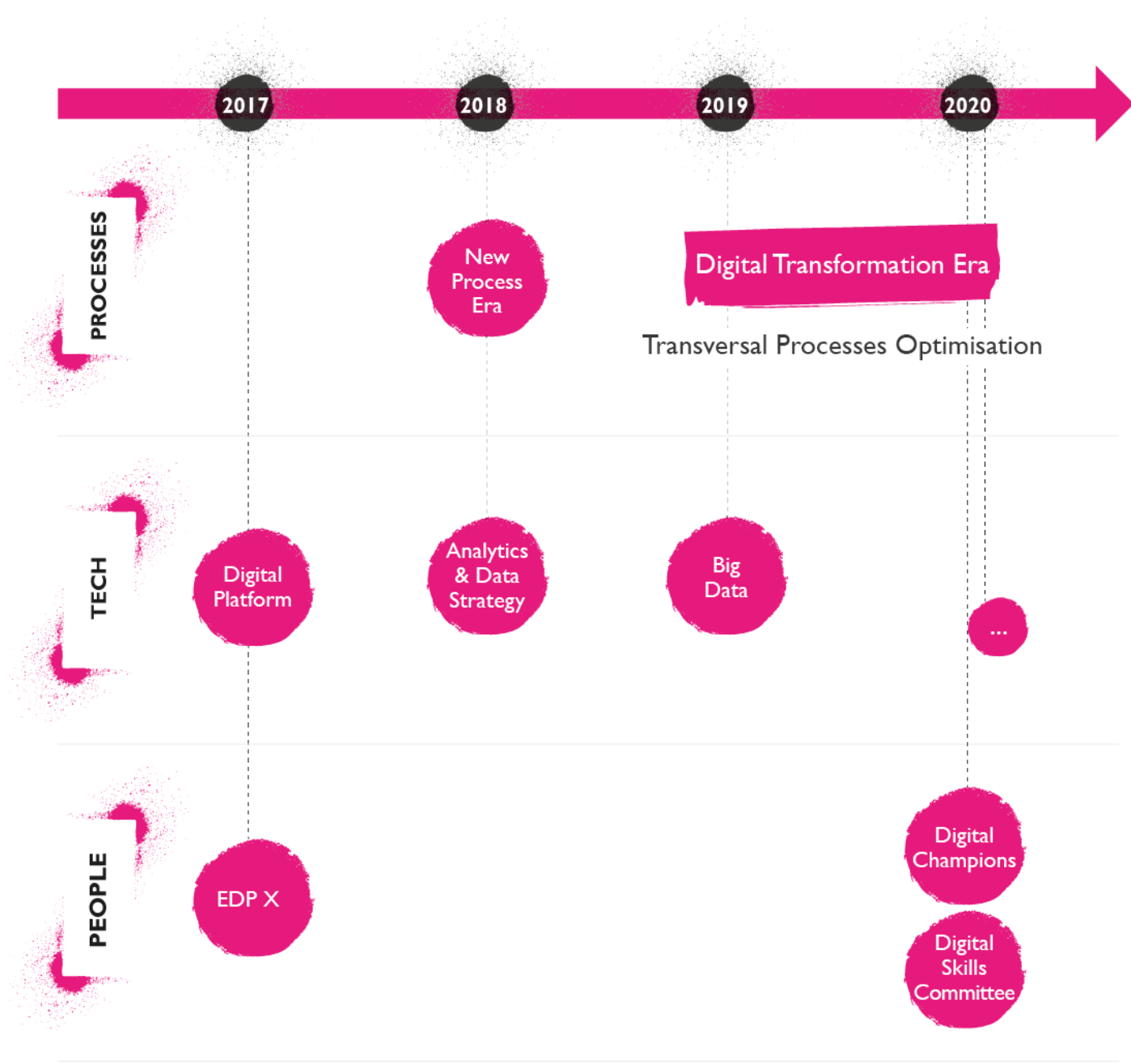


3.6 DIGITAL CAPITAL

The digital journey is a never-ending transformation given the rapid evolution of Technology and its big impact on the Business and the People.

The rhythm and speed in which digital initiatives have evolved in EDPR have increased constantly over the time. Since 2007, date in which EDPR is formally constituted, there have been different milestones that the Company has achieved and that have had a big impact in the way people work.

In 2017, EDP Group began its journey of digital transformation, with the EDP X project, which challenged the organisation to adapt and respond to this new context being Top Management an essential driver, deeply committed with the digital initiatives that are being carried out in EDPR.

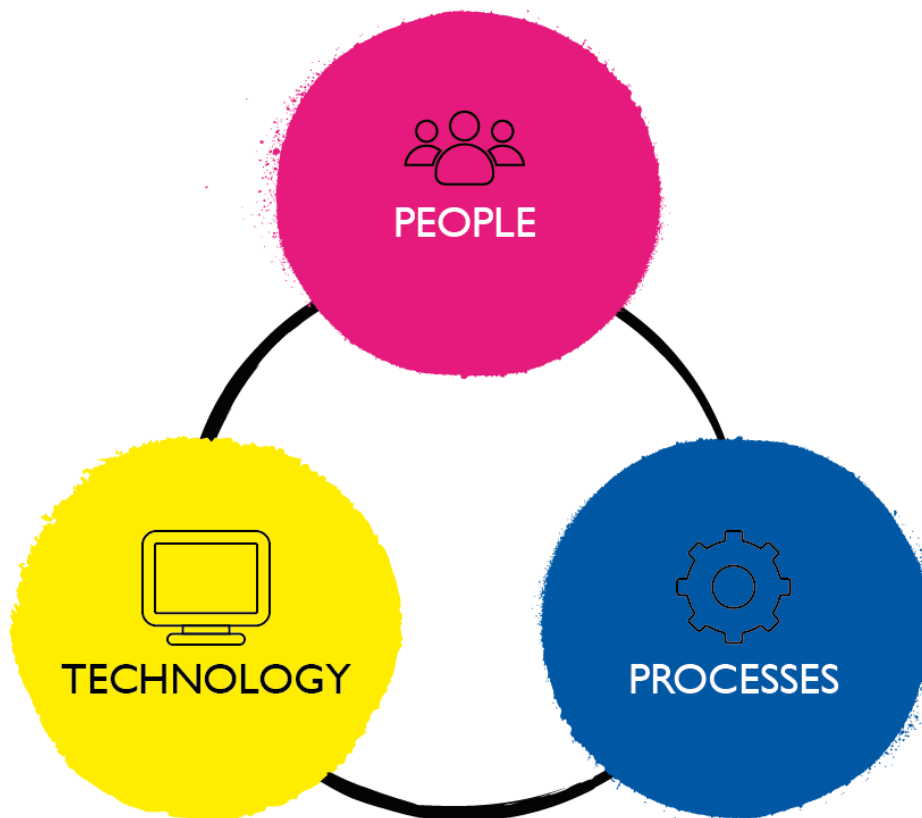


**“At EDPR we believe that small changes can cause a big disruption”**

*JOÃO MANSO NETO (CEO)*

In EDPR, Digital Transformation is the combination of three indissoluble perspectives: The strategic adoption of digital technologies, the definition, improvement and optimisation of Business processes and the impact on how people work and add value in their day to day activities. These three dimensions foster new ways of working and impact directly on the results of the Organisation.

EDPR conceives digital transformation initiatives expanding technology but far beyond technology: it is a business-wide culture change. To follow this transformation journey, three steps should be considered: people, processes and technology, and to succeed, businesses need to address all three.





## PEOPLE



A culture change must start with people. In 2019 different initiatives have been launched towards empowering people in this Digital Transformation Process.

Digital transformation will only happen if the people with the necessary skills are involved in the process. EDPR has created the first Digital Skills Committee composed by the main stakeholders in this field and lead by the CEO whose main objective is to foster digital skills as part of the Digital culture and promote collaborative skills to work more efficiently as part of the digital transformation process.

Employee involvement is considered key in this process and therefore the initiative Digital Champions has been created. Employees with special digital capabilities, ability to work with collaborative tools and specific knowledge and concerns on digital technologies will become part of this Program to extend the Digital Culture throughout the Organisation.

New initiatives are expected to be launched regularly in order to reinforce and ensure that a digital culture is spreading all over the Company and that everyone is on board with the changes that will happen across the business.

## PROCESSES



Business Processes is the channel through which EDPR delivers value to the different stakeholders and helps achieving its business results. Business process definition has been gaining importance and relevance along the time in EDPR:

- From a pure process definition in 2009 based on the description of the core activities carried out by the Departments to an integrated process business perspective in 2018 when EDPR defined a Process Map aligned with its Value Chain. At this moment, more than 100 critical processes were identified according to the impact on EDPR Business, representing one of the starting points to reach process excellence in EDPR.
- 2019 has represented a step further and a key milestone in the Digital Transformation journey, considering Process Automation and Robotisation as an essential driver in Process definition. A new approach identifying what can be improved and what processes can be automated, is now the basis for process definition.

This new mindset is truly about getting people to think and work more effectively, align their day to day activities with the business objectives and reinforce the use of the right tools for their job. Once the process has been defined, it is analyzed how it can turn to be optimized by seeking efficiencies with the development of Business Process Management tools (BPM), Robotic Process Automation technology (RPA) or any other tool that can have an impact in the way of working. In 2019, more than 70 BPM Tools were implemented to optimize business processes and about 150 RPA's were running in productive, saving around 40.000 hours/year. The objective is to maximize added value work and see the greatest gains in the long term for EDPR.

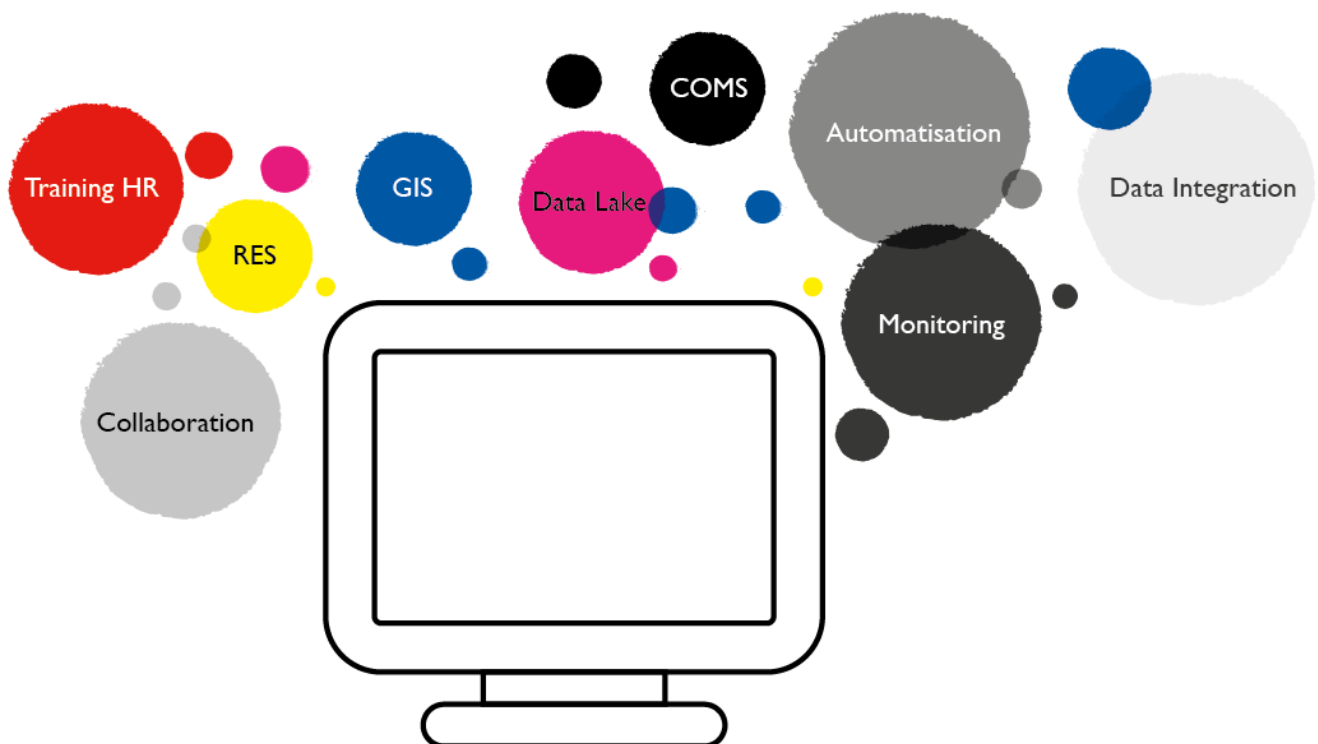
## TECHNOLOGY



Finally, technology comes in. Technology is the enabler of process transformation. The most relevant initiatives carried out in 2019 that will support growth and success of EDPR are:

- **Data lake:** EDPR has introduced a corporate Big Data and analytics system based on cloud technology, with a data lake on European and North America business units. So far, we have introduced an analytical model to simulate the behaviour of different energy market strategies and their technical and economic impacts in terms of budget, risk models of energy markets and weather forecasters key performance indicators.
- **Data integration:** We use a new cloud service to make big data and artificial intelligence easy. It provides data science and data engineering teams with a fast, easy and collaborative platform. It gives users a single platform for big data processing and machine learning.

- **Geographic information system (GIS) Europe:** It is a based-on cloud services platform with a web portal and mobile app that allows to create and share maps, scenes, apps, and other geographic information. It was first introduced in Spain and France and is now ready to roll out to other European countries.
- **Automatisation:** EDPR uses a new tool that makes it easy to automate repetitive tasks. You can add users or groups as owners, and then collaborate with them to design and manage flows.
- **Commercial Management System (COMS) – strategies to sell energy:** A new feature that allows to the market operator through a dashboard and dynamical interface the comparison of existing market strategies in order to choose the more advantageous to the business.
- **RES – Renewable Energy Source:** This is a EDP Group renewable product, based on block chain technology and the idea behind it is to improve the traceability of Renewable Energy. The product tells you how much renewable energy you are using in real time, as well as the source of this renewable energy.
- **Collaboration:** At EDPR we have started to use a new web application and mobile app “Edge” based on cloud services, that allows the collaboration between different teams to manage, share and distribute information and review through a web and mobile platform.
- **Monitoring:** We are working on an implementation of a web base platform that will let EDPR monitor the performance of construction projects, economical and progress. It is intended to be used by Operation support, Engineering and Construction and contractors who need to among other things, schedule the project, enter construction milestones, check deviations and produce reports.
- **Training Human Resources:** All employees make us of this new digital application for employees to consult and choose their training courses.



### In summary...

Business is changing, and digital transformation is vital to staying ahead. It is required a company-wide shift in the way people think, work, and provide services.

It is crucial to involve all the people and empower people to be part of this change, map out all processes from an optimisation perspective and support all of this with the right technology to enable EDPR to achieve its strategic goals.

## 3.7

# Innovation Capital

## DEVELOPMENT



### SITE IDENTIFICATION

- Greenfield development fostering local employment



### RENEWABLE RESOURCES ANALYSIS

- Offshore fixed
- Offshore floating



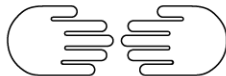
### OBTAIN PERMITS

## CONSTRUCTION



### PROJECT FUNDING

- Sell-down



### LONG TERM CONTRACT FOR THE SELL OF ENERGY

- PPA structures to help clients to meet their sustainable goals



### DESIGN LAYOUT & EQUIPMENT CHOICE

- New technical solutions to increase assets quality
- New battery storage

## OPERATION



### CONSTRUCTION

- Blade lifter transport system



### START OF OPERATIONS & DELIVER CLEAN ENERGY

- Blockchain
- Making difference in developing countries with solutions for off-grid domestic business (i.e. Mozambique)



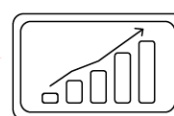
### ONGOING MAINTENANCE SERVICE

- M3 and self-perform
- Innovate to reduce environmental & compliance impacts

## DISMANTLING



### DISMANTLING

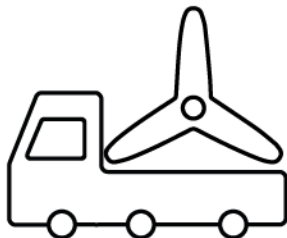
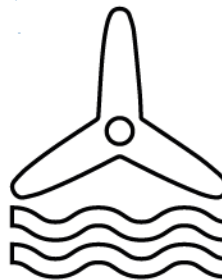


### DATA ANALYSIS

- Big data on predict maintenance & power improvement

## OFFSHORE FLOATING

- WindFloat Atlantic, the first worldwide full scale floating wind power plant with a total capacity of 25 MW in a 100 meters depth area in the Portuguese coast. COD is expected in 2020.
- The project will speed up the commercial deployment of innovative WindFloat® technology that harnesses the wealth of wind resources in transitional and deep waters, which were previously inaccessible. WindFloat Atlantic project marks an important milestone for the industry as this is the first semi-submersible floating wind farm in the world.
- Because it can be placed in very deep waters, WindFloat® can unlock energy resources in vast areas of the sea, addressing major societal challenges, such as the clean energy transition, energy security and climate change, whilst bringing jobs, economic growth and opportunities for sustainable investment.
- For further information:  
<https://www.youtube.com/watch?v=PiKa6steniw>



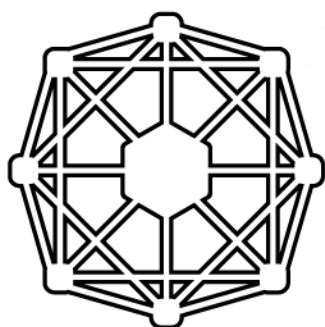
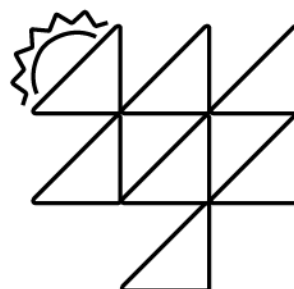
## BLADE LIFTER TRANSPORT SYSTEM

- The journey to reach the Carondio wind farm in Spain involves passing through an urban center before taking a mountain road for 23 kilometers. The wind farm's location prevents quick and efficient transport, increasing the need to have a high stock of blades available at Carondio in order to optimise management. With these obstacles in mind, EDPR began to consider different options for blade transportation, including the Blade Lifter technique.
- This method consists of transporting each blade on a special vehicle which can incline up to 60 degrees. By being able to scale the steepest sections of the road up the mountain, this uniquely designed machinery allows the blade's angle to be increased and decreased accordingly, which consequently reduces its turn radius.
- Implementing this innovative blade transportation system to reach one of its more isolated wind farms was a decision aligned with EDPR's commitment to constant technological innovation – its benefits include its minimal environmental impact, reduced need for civil engineering interventions and cost optimisation.



## NEW BATTERY STORAGE

- EDPR closed its first PPA with operative storage system. The Sonrisa Solar Park has secured a PPA for 200 MW of solar energy and 40 MW of energy storage, with the combination of solar and storage designed to increase efficiency and provide greater balance in energy supply. The project is located in the US and is expected to start operations in 2022. This new development is increasing further appetite for solar PPA (no storage no PPA) and allowing EDPR to experience and forefront the benefits of this new technology which will be crucial in coming years.
- EDPR also installed a new energy storage system connected to a PV plant in Romania. When there is excess production, the system will charge the batteries, and when production is lower than expected, the energy stored in the batteries will be provided to consumers. To this end, EDPR has installed an innovative energy conversion system that connects photovoltaic panels and DC batteries with an AC transformer and a lithium-ion battery, as well as a system that monitors the whole process.



## BLOCKCHAIN

- Electricity consumed by El Corte Inglés in Seville and Malaga will be provided by five of EDPR's wind farms with a total installed capacity of 169 MW.
- The pilot program uses the "Blockchain Energy Tracking" system, which guarantees that the origin of the energy supply is renewable, while certifying that the information contained in the chain is accurate. Thanks to this data structure, the authenticity and integrity of the data collected is preserved, as it will not be possible to amend any information. With this system, both energy producers and consumers will be able to certify the green origin of the energy source; and they will also have access to firsthand knowledge regarding the methods used in its generation.
- As a result, it demonstrates the company's commitment to integrate innovative technological solutions to disrupt the current energy landscape. Thanks to this new system, it's possible to ensure that large, leading companies, such as El Corte Inglés, meet their environmental objectives.



## 3.8

# Sustainable Development Goals

## EDPR SUPPLIES AFFORDABLE & CLEAN ENERGY WHILE MITIGATING THE CLIMATE CHANGE...

7 AFFORDABLE AND CLEAN ENERGY



EDPR is a global leader in the sector of renewable energy and one of the world's largest wind energy producer, ending the year with 11.4 GW of installed capacity. In 2019, the Company generated 30.0 TWh of clean energy, a cost-effective way to fight climate change.

13 CLIMATE ACTION



Wind and solar power are two of the most environmentally friendly ways of producing energy. EDPR's business inherently implies the reduction of GHG emissions and therefore has a positive impact on the environment. In 2019, EDPR's activities avoided the emission of 19 million tons of CO<sub>2</sub>.

## ...IMPACTING POSITIVELY ON COMMUNITIES & FOSTERING INNOVATIVE INFRASTRUCTURES & CIRCULAR ECONOMY...

11 SUSTAINABLE CITIES AND COMMUNITIES



EDPR works to promote the well-being and development of the communities where it operates and of society in general. In 2019, EDPR contributed to society by investing €2.2 million in the development of social activities and by contributing with more than 1,800 employees volunteering hours.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



Innovation is part of EDPR's day-to-day reality. The Company is focused on the more disruptive technologies of the industry and is committed to foster innovative solutions throughout its entire value chain. In 2019, EDPR centred on promoting digital skills and 51% of its employees participated in digitalisation trainings.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



Even though EDPR is in the renewable energy business, it goes beyond its commitment with sustainability by fostering a culture of responsible operations and circular economy. In 2019, Zas, a wind farm in Spain with 80 wind turbines was dismantled; 22 of them were sold and 58 were recovered, none of them being disposed.

## ...ENSURING DECENT WORK, GENDER EQUALITY & PRESERVATION OF THE ENVIRONMENT.

8 DECENT WORK AND ECONOMIC GROWTH



EDPR continuously works to provide excellent conditions for its employees, grow and develop talent at all levels and optimise its employment policies and labour practices. As a result, EDPR has been recognised by the Top Employers Institute as one of the best companies to work for in Europe in 2019.

5 GENDER EQUALITY



EDPR's Code of Ethics contains specific clauses of non-discrimination and equal opportunities, fostering respect for all employees. In 2019, as in previous years, EDPR participated in *Mujer e Ingeniería*, a project by the Real Academia de Ingeniería de España aiming to overcome the gender gap in technical degrees.

15 LIFE ON LAND



EDPR's business is its best contribution to reduce biodiversity loss. Nevertheless, the Company's commitment to contribute to the protection of biodiversity leads to an active role in the conservation of wildlife surrounding its facilities. In 2019, for the construction of the Hidalgo II WF in the US, EDPR designed and implemented a unique program that employs biologists to monitor aspects of the wind farm construction.