

**EDP Renováveis Valuation Case**

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## Resumo

Este trabalho visa proceder à valorização da EDP Renováveis, uma empresa portuguesa cotada na bolsa de valores de Lisboa (NYSE Euronext Lisbon) com sede em Madrid e que actua no sector das energias renováveis. Possui subsidiárias em vários países da Europa, Estados Unidos da América, Canadá e Brasil.

A análise financeira apresentada baseia-se em informação pública divulgada pela empresa. Primeiro procedemos a uma análise da indústria em que se insere, ao que se segue uma análise mais detalhada do negócio da EDPR. Com vista à valorização final da empresa procedemos a uma análise das demonstrações financeiras da mesma e avaliando o contexto económico em que se insere, assim como os seus indicadores chave de desempenho fizemos uma estimativa dos montantes quer de balanço quer de demonstração de resultados para um período futuro de cinco anos (2013-2017), no qual se apoia o modelo dos cash-flow descontados utilizado na valorização. Em termos de indicadores financeiros de performance efectuamos uma comparação com empresas que a EDPR considera como os seus *peers* directos.

O resultado final da valorização ascendeu a um equity value de €3.3 biliões, traduzindo-se num montante por acção de €3.79. A 6 de Setembro de 2013, a cotação por acção da empresa encontrava-se nos €3.88.

**JEL classification system:** G30; G17

**Palavras-chave:** Avaliação; EDPR; Energias Renováveis; Análise de demonstrações financeiras.

## **Abstract**

This work aims to reach EDP Renováveis valuation, a Portuguese enterprise listed in Lisbon stock exchange (NYSE Euronext Lisbon) headquartered in Madrid acting in the renewable energies sector. It has subsidiaries spread across Europe, United States of America, Canada and Brazil.

The financial analysis presented is based on public information released by the company. First we perform an industry analysis where the company operates followed by a detailed analysis of EDPR business. To reach a final valuation value we analyze company's financials assessing the economic context and its key performance indicators forecasting both profit and loss and balance sheet for a period of five years (2013-2017) on which the DCF model is based. In terms of financial performance indicators we make a comparison with the enterprises considered by EDPR as its direct competitors.

The final valuation amount points to an equity value of €3.3 billion meaning a share price of €3.79. As of September 6<sup>th</sup> 2013 EDPR share price was €3.88.

**JEL classification system:** G30; G17

**Key words:** Valuation; EDPR; Renewable energy; Financial Statement Analysis.

## Table of contents

1. Introduction .....	1
2. Literature and Concept Review .....	3
3. Industry overview .....	6
4. Company Overview .....	9
5. Financial Statement Analysis .....	17
6. Share performance.....	22
7. Valuation .....	24
8. Conclusion.....	31
9. Bibliography .....	33
10. Appendix .....	35

## Table of figures

Figure 1: Global cumulative installed capacity 2007-2030.....	11
Figure 2: Global installed capacity 2012.....	12
Figure 3: Percentage of renewable energy in gross final consumption.....	12
Figure 4: EDPR subsidiaries location 2012.....	14
Figure 5: EDPR EBITDA 2009-2012.....	16
Figure 6: EDPR Capex 2009-2012.....	17
Figure 7: EDPR installed capacity 2008-2012.....	18
Figure 8: Average selling price (tariff/GWh) 2008-2012.....	19
Figure 9: Wind farm lifecycle.....	21
Figure 10: EDPR Income Statement 2009-2012.....	22
Figure 11: EDPR Balance Sheet 2009-2012.....	23
Figure 12: Profitability ratios.....	24
Figure 13: DuPont analysis.....	25
Figure 14: Liquidity ratios.....	25
Figure 15: EDPR share performance 2012.....	27
Figure 16: EDPR share price and volume 2009-2012.....	28
Figure 17: EDPR valuation.....	31
Figure 18: EDPR WACC components.....	31
Figure 19: Company and peer group multiples.....	32
Figure 20: EDPR enterprise value based on multiples.....	33
Figure 21: EDPR sensitivity analysis to WACC and revenues.....	34
Figure 22: EDPR sensitivity analysis to WACC and growth rate in perpetuity.....	35
Figure 23: EBIT by geography 2011-2017.....	36

## Abbreviations

\$...k	United States thousand dollars
\$...m	United States million dollars
€...k	Thousand Euros
€...m	Million Euros
BS	Balance Sheet
CAPM	Capital asset pricing model
CPI	Consumer price index
CTG	China Three Gorges
DCF	Discounted cash-flow
DecXXA	Year ended in December XX
EDPR	Energias de Portugal Renováveis
EDPR EU	EDPR Europe
EDPR NA	EDPR North America
EU	European Union
FYxxA	Financial year XX
GW	Giga watts
GWEC	Global Wind Energy Council
IEA	International Energy Agency
IPO	Initial Public Offering
MW	Mega watts
PL	Profit and loss
PP&E	Property, plant and equipment
UK	United Kingdom
USA	United States of America
WACC	Weighted average cost of capital

## 1. Introduction

Global annual installed capacity has been continuously increasing to face the growing energy demand. As the world became more socially conscious about our sustainable growth renewable energy has become a huge focus of interest, highlighting the development of offshore wind farm projects that according to GWEC sum up to about 6 GW of installed capacity worldwide “with an equal amount in development or under construction”.

Nevertheless economic crisis brought uncertainty worldwide. Despite world economic activity has increased by 3.2% in 2012, according to IMF statistics, the Euro area figures showed a recession scenario with a decrease in the economy of 0.6% contrasting with the economic recovery of the United States which reflects an increase of 2.2% in its gross domestic product. Forecasts for the upcoming years reveal a gradual stabilization of the economy worldwide showing an increase of 3.3% worldwide and 1.9% for the USA in 2013. The Euro area activity is expected to decrease in that year by 0.3% increasing in 2014 to 1.1%.

European inflation increase in 2012 was 2.5% a little higher than the 2.1% of USA and 2.0% of the more developed economies. For 2013 IMF expects a moving back on these amounts in order to reflect the current financial assistance and the austerity measures for some European countries. The bailout should help investors and shareholders to regain confidence in the markets.

Unemployment rate for advanced economies was 8% in 2012, 11.4% for the Euro area and 8% for the USA. IMF forecasts for 2013 are optimistic for the USA stating an unemployment rate of 7.7% but not so good for others, since they expect a 12.3% rate in Europe and 8.2% in the advanced economies.

Even with this economic environment EDPR managed to increase their revenues by 20% in 2012 with a net income of €136 millions. However new regulation schemes could arise from the current policies stated above with impact in the renewable energy business. Ahead we present EDPR valuation which follows a standard valuation procedure commonly used. First an industry and company overview giving the foundations for the figures analyzed after where we present and compare EDPR with

some of its direct competitors in terms of profitability and liquidity. Analyzing EDPR financials is essential to forecast its figures both for PL and BS which are used later in a DCF model as part of the valuation process. What follows is a multiple valuation to support the enterprise value reached through the DCF to see if it is or not between an acceptable range of values. To conclude a sensitivity analysis to WACC, revenues and growth rate in perpetuity is performed.

The data used as input for EDPR was found in the annual accounts of the company with exception for 2012 since it was only available a management report. As what concerns the analysis of its competitors, data was found in the respective annual accounts. The last chapter is a conclusion about our findings.



## 2. Literature and Concept Review

Discounted cash-flow model is one of the different approaches to value a company. “Enterprise DCF remains a favorite of practitioners and academics because it relies solely on the flow of cash in and out of the company” (Koller et al, 2010:103) and so we use it to value EDPR.

The foundation of this method is based in the present value of expected future cash flows that the company will generate. The discount rate used is the weighted average cost of capital that combines the different sources of financing used by the firm.

$$\text{Value of the firm} = \sum_{t=1}^{t=n} \frac{FCFF_t}{(1 + WACC)^t} \quad (1)$$

Where,

$FCFF_t$  = Expected cash flow of the firm in year t

$WACC$  = Weighted average cost of capital

Free cash flow to the firm can be obtained after meeting taxes, operating expenses and capital expenditure needs. To compute WACC besides the cost of equity (given by the CAPM model) and debt we also need their market proportions. For estimating the cost of equity we used the well known Capital Asset Pricing Model that yields the company and the market risks.

$$WACC = r_e \frac{E}{D + E} + r_d \frac{D}{D + E} (1 - t) \quad (2)$$

Where,

$r_e$  = Cost of equity

$r_d$  = Cost of debt

$E$  = Market value of equity

$D$  = Market value of debt

$t$  = Corporate income tax rate

*“In the Capital Asset Pricing Model, all the market risk is captured in the beta, measured relative to a market portfolio, which at least in theory should include all traded assets in the market place held in proportion to their market value”* (Damodaran, 2002:98) and so this model captures the relation between risk and the expected return of an asset given the return of a risk free one and the market risk premium.

$$E(r_e) = r_f + \beta[E(R_M) - r_f] \quad (3)$$

Where;

$E(r_e)$  = Expected market return of an asset

$r_f$  = Risk free rate

$\beta$  = Asset sensitivity to the market

$E(R_M)$  = Expected market return

According to Damodaran since we cannot estimate cash flows forever we need to consider a terminal value in the DCF for which we assume the cash flows will grow at a constant rate in perpetuity. Considering that this rate could not exceed the growth rate of the economy. The perpetuity model to use is the following:

$$Terminal\ value_t = \frac{FCFF_{t+1}}{WACC_{t+1} - g} \quad (4)$$

Where,

$FCFF_{n+1}$  = Expected cash flow of the firm in year t+1

$WACC_{t+1}$  = Weighted average cost of capital in year t+1

$g$  = Growth rate in perpetuity

An alternative valuation method is based on multiples, meaning that the value of a company is reached through the comparison with other similar companies using variables such as revenues, cash flows or earnings. This kind of relative valuation is based on the current market price of those companies. Despite less reliable according to Damodaran most valuations are relative since they can be done *“with far fewer*

*assumptions and far more quickly than a discounted cash flow valuation” (Damodaran, 2002:637).*

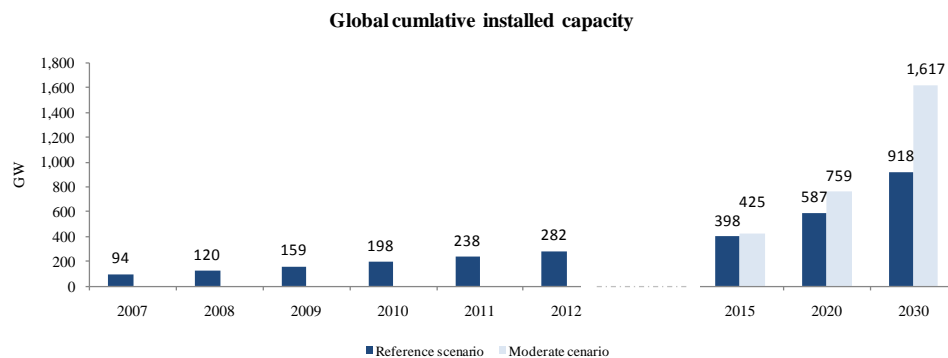
### 3. Industry overview

Annual installed capacity has been continuously growing since 2004 according to statistics from GWEC, especially in Europe and Asia. In 2010 there was a generalized dropdown (other than Asia) due to the economic recession but also arising from the uncertainty about future energy policies and regulations and a decrease in demand on the United States and some European countries.

According to GWEC data global cumulative installed capacity should be almost three times more and five times more the capacity of 2012 in 2020 and 2030, respectively, considering a moderate scenario.

Figure 1: Global cumulative installed capacity 2007-2030

Source: GWEC



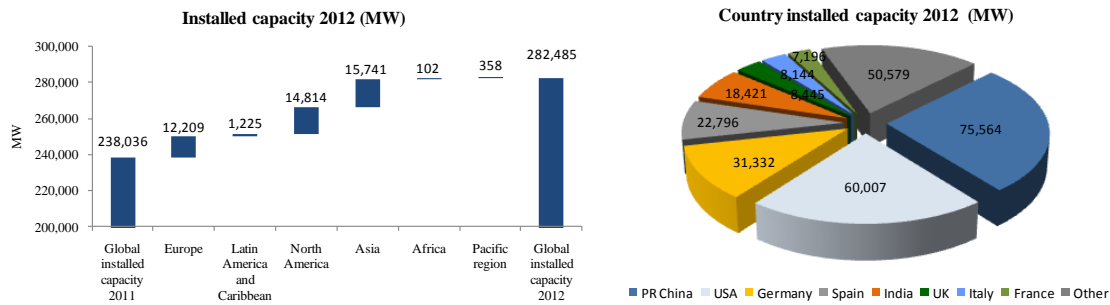
Renewable energy country attractiveness indices published by Ernst&Young on February 2013 showed that China is the leading country for 2013 renewable energy market. In fact, looking back this country has played a major role in terms of annual installed capacity. On year end 2012 it represented 27% of global installed capacity, followed by USA with 21% and Germany with 11%. In 2011 it represented 26%, 20% and 12%, respectively.

From 2009 onwards central growth moved from European and North American countries to Asia, being China the driving force.

The study also stated that cheap gas on the US could divert attentions from renewable and greener energy solutions.

Figure 2: Global installed capacity 2012

Source: GWEC



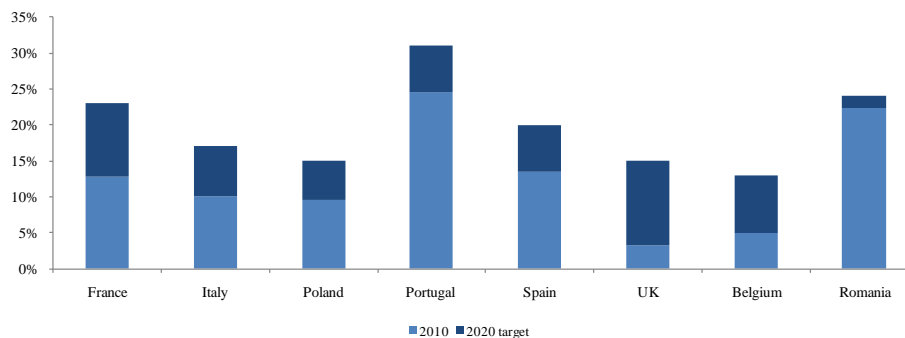
### Regulation

Energy demand is increasing faster than initially predicted. According to the International Energy Agency energy demand will increase more than 33% until 2035 with China, India and Middle East countries representing more than 60% of that increase. Despite the efforts to increase low carbon sources, fossil fuels remain dominant and IEA stated that the subsidies granted in 2011 are six times higher than ones for renewables.

Specifically for European countries European Union has published in 2009 the RES Directive 2009/28/EC which implements for each state member individual targets such that EU could reach by 2020 a 20% share of energy produced by renewable sources.

Figure 3: Percentage of renewable energy in gross final consumption

Source: European Commission



Portugal is one of the leading countries in terms of Government commitment with the 2009/28/EC RES Directive with 25% of its energy demand covered by

renewable energy in 2010. Part of it is covered by its wind installed capacity of 4GW in 2010 which grew to 5GW in 2012.

Regulatory framework in Portugal is based on a feed-in tariff. Decree-law 33-A/2005 defines the remuneration scheme applicable which depends, for example, on the type of wind farm facilities and the number of operating hours updated according to CPI.

For all other countries regulatory framework is defined under decree-laws.

## 4. Company Overview

### Company overview and key events

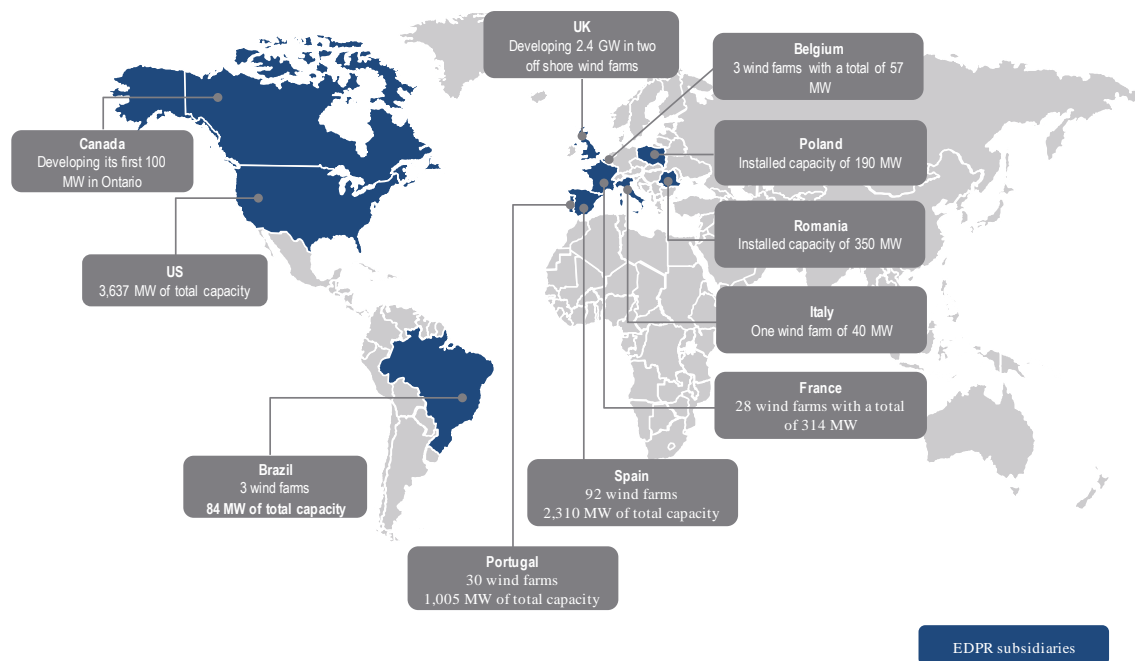
EDPR was incorporated in 2007 its corporate objective is to engage activities related with the electricity sector, planning, construction, operation and maintenance of electricity generating power stations consuming renewable sources like wind.

Its share capital is held by EDP group in 77,5%: EDP S.A. – Spanish branch (62%) and Hidroeléctrica del Cantábrico S.A. (15,5%). The remaining 22,5% are free-float in the NYSE Euronext Lisbon. This structure is maintained since company's IPO on June 4<sup>th</sup>, 2008.

The company operates through its subsidiaries located around the world as follows:

Figure 4: EDPR subsidiaries location 2012

Source: EDPR



EDPR EU subsidiaries are located in Europe in which all countries have wind farms with the exception of UK where they developed offshore projects. EDP NA runs all operations of the wind farms in the United States. EDPR Brazil purpose is to set up a

new business unit which aggregates all the investments in the renewable energy market of that country.

Despite the incorporation of EDPR has only occurred in 2007, its history dates back to 1993 with the installation of the first wind farm of Genesa. In 2005 the company acquired Nuon/Desa (Spain), Agrupacion Eolica (Spain/France) in 2006 and Horizon Wind Energy (USA) in 2007. In the year after presented its first IPO and was listed on the NYSE Euronext Lisbon. EDPR acquired 85% of the share capital of Renovatio Power and Cernavoda Power, Romanian companies that hold wind power projects with total capacity of 736 MW. Later on this year EDPR Brazil acquired 100% of CENAEEL – Central Nacional da Energia Eólica which owns projects and wind farms in Brazil.

In 2009 the company opened a new office in Paris with the objective of managing projects and wind farms in France and Belgium. Also in this year EDPR entered into a 20 year purchase power agreement with the Public Service Company of Oklahoma for the wind energy produced by its wind farm. In March, EDPR Brazil signed an agreement with Innovent in order to acquire total share capital of its subsidiary Elebras Projects.

On the year after EDPR and Energa signed a 15 year agreement to sell green certificates generated by its 120 MW wind farm in Poland. Also in January and in order to expand the operations in Italy the company acquired 85% of Italian Wind Srl. The joint venture with Moray Offshore Renewables Limited granted the company and SeaEnergy Renewable Limited the rights to develop offshore wind farm sites with an approximate capacity of 1.3 GW. In February 2010, Tennessee Valley Authority agreed to purchase 115 MW of renewable wind energy from Pioneer Prairie wind farm located in Iowa, US, for 20 years. On June EDPR through its subsidiary Horizon Wind Energy LLC secured a \$141m of equity financing from Wells Fargo Wind Holdings LLC in exchange for an interest on a wind farms portfolio including Rattlesnack Road (103 MW), Pioneer Prairie (300 MW) and Meridien Way (201 MW). In July the company assured from the Spanish Regional Government of Cantabria 220 MW of electricity production licenses.



In the first quarter of 2011 EDPR has taken full control over Genesa with impact on the Spanish market and in April has sold its stake to SEASA a company with 74 MW also in Spain. On June that year the company established a partnership with Repsol for the development of 2.4 GW offshore wind capacity in the UK. The Spanish regional Government of Aragón, Spain awarded 127 MW of electricity production licenses. By the end of the year at the Brazilian energy auction EDPR was awarded with a 20 year purchasing power agreement for 120 MW in Brazil beginning in January 2016. The company executed a project finance of \$260m through ENEOP – Eólicas de Portugal with the European Investment Bank for its second group of wind farms to develop in Portugal with 376 MW.

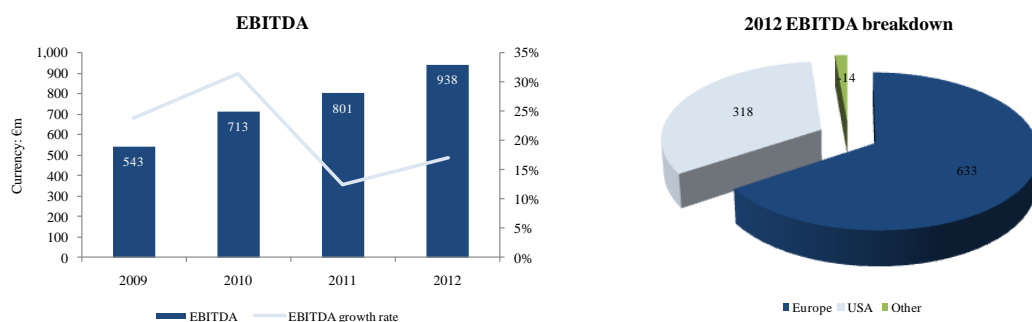
In March 2012 the company executed project finance for 125MW in Spain with a consortium of five European banks. It was a 17 year debt facility amounting to €177 million. Also in Belgium executed project finance amounting to €46 million comprising three wind farms in operation which capacity has a long term power purchasing agreement in place according the company. In September of same year EDPR started to build its first solar photovoltaic project in Romania with 39MW, expected to be completed in the first quarter of 2013. According to the company the first asset rotation transaction was made in November 2012 by an agreement reached with Borealis Infrastructure selling 49% equity shareholding in a portfolio of wind farms in US totaling 599MW of installed capacity.

### Strategy

Company strategy has three main drivers representing a balance between growth, profitability and controlled risk.

Figure 5: EDPR EBITDA 2009-2012

Source: EDPR

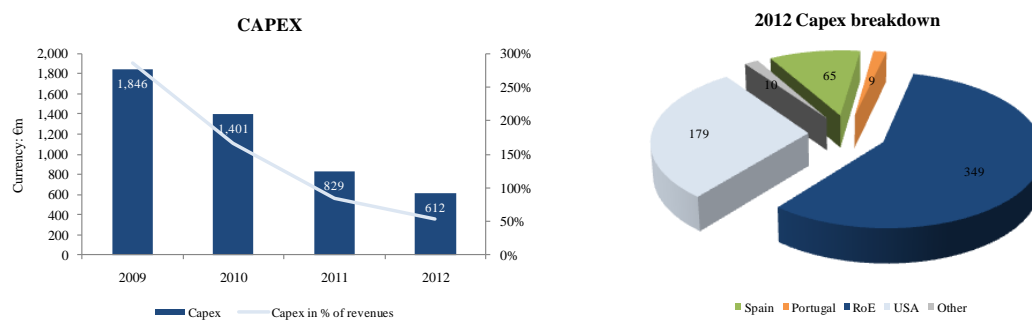


EDPR aims to achieve a long-term profitability growth based on consolidating its position on the existing markets and seeking for new stable and high potential ones. Currently the presence of the company includes eleven geographies same as in 2010, eight in 2009 and 2008 and six in 2007. Its leading position was achieved throughout the years by the acquisition and partnership with some reference companies and the award of significant client agreements has described above (Subsection: *Company overview and key events*).

EBITDA has been increasing since 2008 although its growth rate decreased between 2010 and 2011 due to the negative impact of a weaker US Dollar and Zloty throughout the year, which according to the company resulted on less €16m at EBITDA level. In 2012 EBITDA increased by 17% to €938m due to a stronger US dollar and an increase in revenues given the higher average selling price. EBITDA margin remained stable at 75% since 2009 decreasing to 73% in 2012.

Figure 6: EDPR Capex 2009-2012

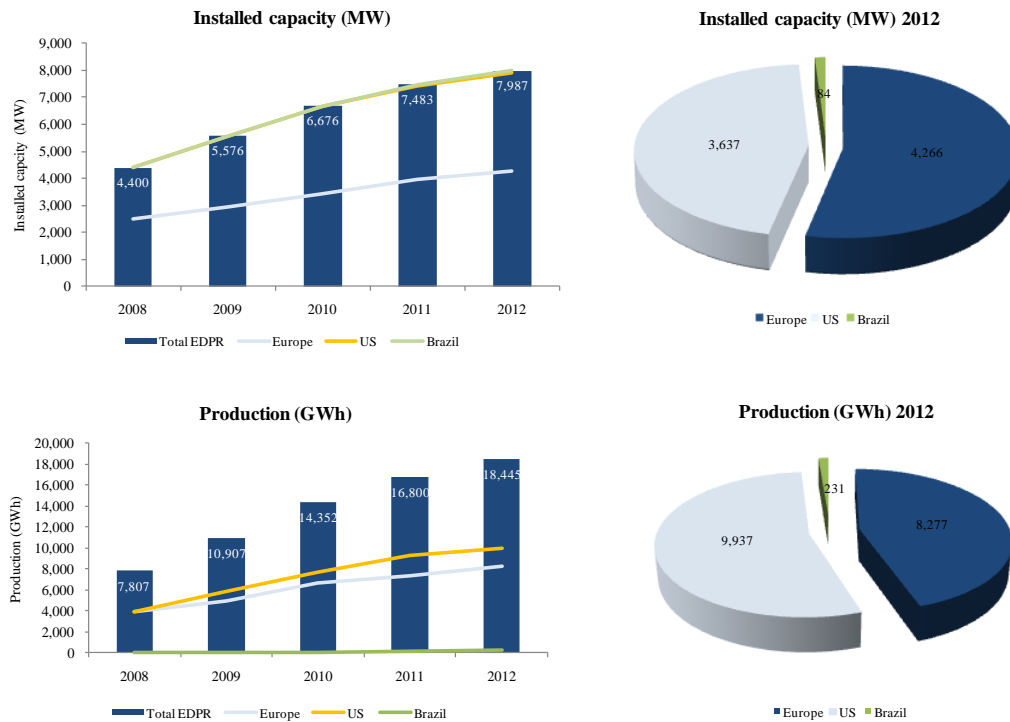
Source: EDPR



According to the company the decrease of 26% in the level of capex in 2012 comparing with 2011 was related with the lower rate of MW growth. Considering the total amount of €612m in 2012 69% were in Europe and 29% in the United States.

The constant increase of installed capacity comes from the projects undertaken in the different locations, namely Eastern Europe that in 2011 had 265 MW of new installations. In North America growth was driven by two projects built namely Timber Road, Ohio and Blue Canyon VI, Oklahoma. EDPR Brazil concluded its first fully developed wind farm that reached a total capacity of 84 MW.

Figure 7: EDPR installed capacity 2008-2012  
Source: EDPR



In 2012 the company showed a total installed capacity of around 8 GW entering on its first solar photovoltaic technology project by commissioning in Romania 39MW and completed its first wind farm in Italy with 40MW. In the US EDPR added to its portfolio the Marble River wind farm in New York State with 215MW.

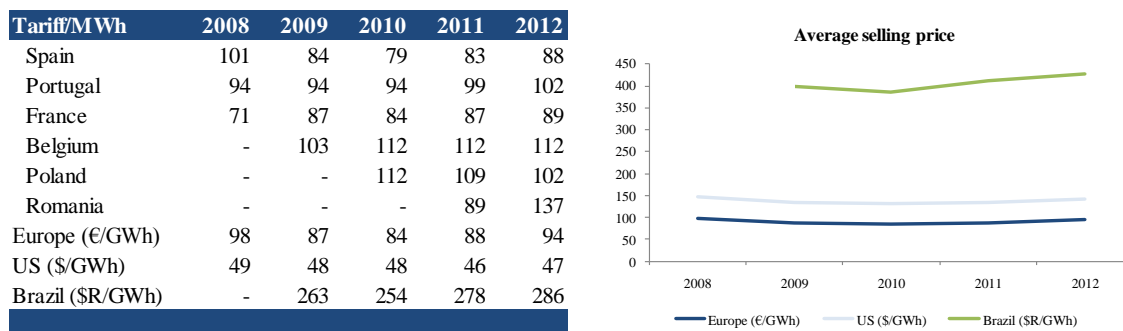
In 2012 as well as 2011 and 2010 net capacity factor was 29% consequence of a diversified portfolio of wind farms.

This diversified portfolio also helps to manage seasonality and market regulation risks.

In 2012 according to the company, 86% of the capacity breakdown by remuneration refers to regulated tariffs and long term power purchasing agreements (PPA) that together help managing the exposure to changes in energy prices.

Figure 8: Average selling price (tariff/GWh) 2008-2012

Source: EDPR



The constant increase on the installed capacity and the average selling price that in 2012 reached €64/MWh, more 10% than 2011, led to an increase in revenues of 21% amounting to €1.2b. Main drivers were higher selling prices in Europe, US and Brazil, a positive evolution on the €/€ exchange rate and a higher production in Europe. The average selling price referred excludes the income related with electricity production tax credits in the US. Revenues per MW increased in 2012 by 13% improving EDPR's performance.

EDPR is mainly financed by EDP group having 92% of fixed rate debt considering this as a way to minimize the risk exposure. With a new strategic partner, China Three Gorges the financial stability can be considered higher. Its proposal to acquire 21,35% of EDPR's share capital from December 2011 included €2,000 million to finance the operational activities of the company. The transaction was concluded in 2012.

### Main areas of exposure

**Pipeline development:** Delays and/or anticipations on the installation of the pipeline which may lead to a different installed capacity than expected. To manage this the company establishes partnerships with the local teams.

**Suppliers:** Changes in turbine's performance and prices affect the projects profitability. The establishment of long term contracts ensures the predictability of turbine prices and the diversification of suppliers gives the company a larger range of choice.

**Revenues:** Changes in regulatory frameworks represent a major risk. Currently remuneration schemes are regulated and stable in the majority markets in which the company operates. The exposure to market prices is hedged by long term bilateral sales energy contracts and when needed short term financial hedges.

**Regulation:** As changes in regulation impacts EDPR's business the company made a careful analysis of country selection considering market remuneration schemes diversification.

**Operations:** Projects can deliver a lower volume than expected so the company contracts medium term technical support with its suppliers and also technical warranties. A preventive and scheduled maintenance helps to minimize the risk exposure.

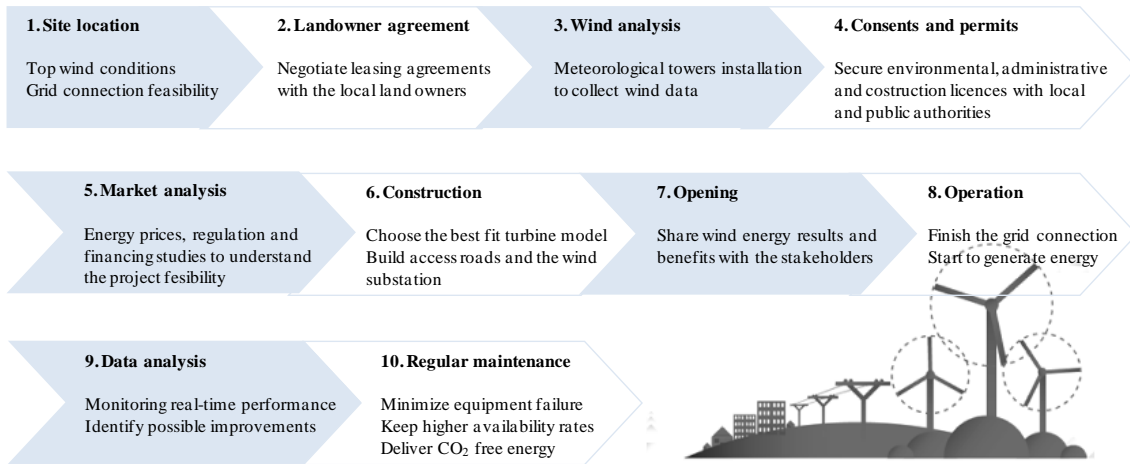
**Financing:** Increase in financial costs and volatility of exchange rates impacts EDPR's financial accounts. Fixed interest rates ensure a predictable cost of debt, 92% of company's debt carries a fixed rate. Alternative funding sources as tax equity structures and project finance agreements minimizes the risk. In 2011 the company raised €500 million through multilateral and tax equity agreements. Also, holding revenues and debt in the same currency reduces the impact of exchange rates volatility. At December 2011 debt structure was 53% in Euro, 40% US Dollar and the remaining in other currencies. Non audited accounts for 2012 show this structure as 57% Euro, 39% US Dollar and 5% in other currencies.

### **Wind farm lifecycle**

Summarized below is a wind farm lifecycle. Wind turbines investment represent on average between 70% and 80% of the total capital expenditure of a wind farm. In 2011 EDPR asked for an independent study to assess the useful life of a wind farm considering its industry improvements and decided to increase it from 20 to 25 years.

Figure 9: Wind farm lifecycle

Source: EDPR



## 5. Financial Statement Analysis

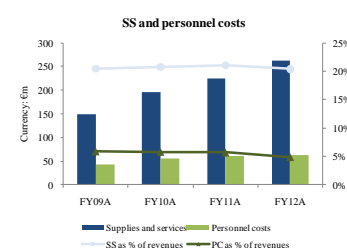
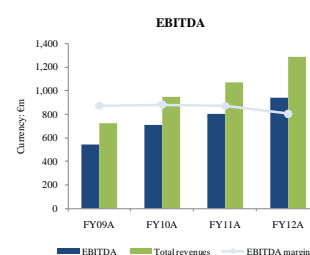
To correctly evaluate a company first we need to look at historical figures to analyze its performance and understand how it operates. Next we present company's financials stressing the fact that FY12 figures came from EDPR's management report and not from annual accounts report which had been the source for the remaining years. However we believe that these figures will not be far from the actual ones to be published in 2012 annual report and so will be part of the historical period. Financial statement analysis focus on important aspects like liquidity, solvency and profitability which are measured recurring to financial ratios commonly used for that purpose.

Additionally to EDPR's analysis we present some peer ratios in order to compare company's performance with its competitors. The choice of that peer group is in line with EDPR's view of its direct competitors in the geographies of operation. Peer group: Acciona and Iberdrola from Spain, Nextera from the US and Longyuan from China.

Figure 10: EDPR Income Statement 2009-2012

Source: EDPR

Currency: €m	FY09A	FY10A	FY11A	FY12A
<b>Revenues</b>	<b>647</b>	<b>842</b>	<b>979</b>	<b>1,165</b>
Cost of consumables used	-3	-13	-15	0
Other changes in inventories	-2	11	-7	-7
<b>Gross profit</b>	<b>642</b>	<b>841</b>	<b>957</b>	<b>1,158</b>
Income from institutional partnerships	83	107	112	127
Other operating income	43	73	85	63
Supplies and services	-148	-196	-225	-262
Personnel costs	-43	-55	-61	-63
Other operating expenses	-34	-57	-67	-86
<b>EBITDA</b>	<b>543</b>	<b>713</b>	<b>801</b>	<b>938</b>
Provisions for risks and contingencies	0	0	0	0
Depreciation and amortization	-314	-434	-468	-503
Amortization of deferred income	2	11	15	15
<b>EBIT</b>	<b>231</b>	<b>290</b>	<b>347</b>	<b>450</b>
Gains/losses from the sale of financial assets	0	-	10	3
Financial income	36	44	62	74
Financial expenses	-108	-218	-306	-352
Share of profit of associates	4	5	5	7
<b>Profit before tax</b>	<b>163</b>	<b>121</b>	<b>119</b>	<b>182</b>
Income taxes	-45	-38	-28	-46
<b>Net income</b>	<b>118</b>	<b>83</b>	<b>91</b>	<b>136</b>
Equity holders of the EDPR	114	80	89	126
Non-controlling interests	3	3	2	10
Number of shares	872,308,162	872,308,162	872,308,162	872,308,162
Earnings per share (€)	0.13	0.09	0.10	0.14
<i>EBITDA margin</i>	<i>75%</i>	<i>75%</i>	<i>75%</i>	<i>73%</i>
<i>Gross margin</i>	<i>89%</i>	<i>89%</i>	<i>90%</i>	<i>90%</i>
<i>EBITDA growth rate</i>	<i>n.a</i>	<i>31%</i>	<i>12%</i>	<i>17%</i>
<i>Revenues growth rate</i>	<i>n.a</i>	<i>31%</i>	<i>13%</i>	<i>20%</i>
<i>As % of revenues</i>				
<i>Supplies and services</i>	<i>20%</i>	<i>21%</i>	<i>21%</i>	<i>20%</i>
<i>Personnel costs</i>	<i>6%</i>	<i>6%</i>	<i>6%</i>	<i>5%</i>



Growth in 2012 revenues is due to higher

electricity prices which had offset the increase in opex impacted by a stronger US dollar. From the total amount of €1,158m revenues 67% came from Europe and 31% of USA.

EBITDA increased 17% between 2011 and 2012 which led to an increase on EBITDA per MW in operation from €107k in 2011 to €117k in 2012 showing an improvement on assets profitability. The constant increase year on year of D&A is representative of the new installed capacity brought to operation.

Figure 11: EDPR Balance Sheet 2009-2012

Source: EDPR

Currency: €m	Dec09A	Dec10A	Dec11A	Dec12A
<b>Assets</b>				
Property, plant and equipment	8,635	9,982	10,455	10,537
Intangible assets	17	23	22	25
Goodwill	1,318	1,344	1,312	1,302
Investment in associates	48	46	51	47
Available for sale financial assets	13	18	10	9
Deferred tax assets	28	39	56	89
Debtors and other assets from commercial activities	65	63	64	55
Other debtors and other assets	65	61	198	300
<b>Total non-current assets</b>	<b>10,188</b>	<b>11,575</b>	<b>12,167</b>	<b>12,365</b>
Inventories	11	24	24	16
Trade receivables	106	144	146	180
Debtors and other assets from commercial activities	-	91	80	104
Other debtors and other assets	247	384	379	335
Current tax assets	170	81	41	55
Financial assets at fair value through profit or loss	37	36	0	0
Cash and cash equivalents	534	501	220	246
<b>Total current assets</b>	<b>1,105</b>	<b>1,261</b>	<b>891</b>	<b>937</b>
<b>Total assets</b>	<b>11,294</b>	<b>12,835</b>	<b>13,058</b>	<b>13,302</b>
<b>Equity</b>				
Share capital	4,362	4,362	4,362	4,362
Share premium	552	552	552	552
Reserves	26	-9	-41	-74
Other reserves and retained earnings	166	283	366	458
Consolidated net profit attributable to equity holders of parent	114	80	89	126
<b>Total equity attributable to equity holders of the parent</b>	<b>5,220</b>	<b>5,268</b>	<b>5,327</b>	<b>5,424</b>
Non-controlling interests	107	126	127	325
<b>Total equity</b>	<b>5,328</b>	<b>5,394</b>	<b>5,454</b>	<b>5,749</b>
<b>Liabilities</b>				
Medium/long term financial debt	2,563	3,326	3,691	3,657
Employee benefits	0	0	0	0
Provisions	67	54	58	64
Deferred tax liabilities	343	372	381	381
Institutional partnerships in US wind farms	1,354	1,644	1,797	1,680
Trade and other payables from commercial activities	-	417	404	377
Other liabilities and other payables	394	337	189	259
<b>Total non-current liabilities</b>	<b>4,721</b>	<b>6,149</b>	<b>6,521</b>	<b>6,417</b>
Short term financial debt	110	208	135	217
Trade and other payables from commercial activities	-	734	708	705
Other liabilities and other payables	1,098	301	189	158
Current tax liabilities	37	49	51	57
<b>Total current liabilities</b>	<b>1,246</b>	<b>1,292</b>	<b>1,083</b>	<b>1,137</b>
<b>Total liabilities</b>	<b>5,966</b>	<b>7,442</b>	<b>7,604</b>	<b>7,553</b>
<b>Total equity and liabilities</b>	<b>11,294</b>	<b>12,835</b>	<b>13,058</b>	<b>13,302</b>



Total assets increase in historical period is mainly driven by the additions to PP&E as a way to increase installed capacity in operation. Between 2009 and 2012 this item represented close to 80% of total assets reflecting according EDPR the *cumulative net invested capital in renewable energy generation*. Goodwill also represents a significant share of total assets including in 2012 the acquisitions in the US of €588m and the acquisitions in Spain of €535m.

From 2011 to 2012 total liabilities have decreased essentially as a result of the decrease in institutional partnerships in US wind farms due to tax benefits monetized. Trade payables significant amounts of 2012 refer to PP&E suppliers (€580m), deferred income related to investment grants received (€324m) and liabilities from the fair value of financial instruments (€245m).

### Profitability

The table below presents some profitability ratios of EDPR and its peer group to compare its performance in 2012. The figures have been computed based on each company annual accounts.

Figure 12: Profitability ratios

Source: Author based on data from each company annual accounts

Profitability ratios	EDPR	Acciona	Iberdrola	Nextera	Longyuan
EBITDA margin	0.73	0.20	0.23	0.34	0.56
Net profit margin	0.11	0.03	0.08	0.13	0.19
Return on assets	0.01	0.01	0.03	0.03	0.03
Return on equity	0.02	0.03	0.08	0.12	0.09
ROIC	0.04	0.05	0.07	0.06	0.08

EDPR's EBITDA margin is extremely high when compared to its peers, since the company is a pure wind energy generation player and is a smaller and newer company. Its peers have other types of energy generation as solar, biomass and geothermal but also besides generation they have distribution, transmission and commercialization businesses. Their gross profit margin is lower than EDPR given the cost of goods sold which in EDPR represent a residual amount.

However net profit margin is much more similar across them once the level of D&A is nearly the same. Meaning that peers return on assets is higher when compared

to EDPR since for this last company revenues depend directly on its assets and are not generated by services provision.

Return on invested capital of EDPR is the lowest when compared to its peers, since the ability of the company to create value is low. *When ROIC is lower than company's cost of capital, faster growth necessarily destroys value* (Koller, T. et al, 2010) which is the case since EDPR WACC is 10%. This does not mean that the company should not attempt to grow because according to the same source it does not necessarily apply to young companies.

Figure 13: DuPont analysis

Source: Author based on data from each company annual accounts

DuPont analysis	EDPR	Acciona	Iberdrola	Nextera	Longyuan
Operating profit margin	0.35	0.10	0.13	0.23	0.35
Effect of non operating items	0.40	0.36	0.70	0.79	0.61
Tax affect	0.75	0.75	0.93	0.73	0.91
Asset turnover	0.10	0.35	0.35	0.22	0.16
Financial leverage	2.31	3.60	2.84	4.01	2.96
ROE	0.02	0.03	0.08	0.12	0.09

Return on equity for 2012 was computed based on the DuPont analysis. EDPR had a ROE of 2% also in 2010 and 2011 with a slightly increase in 2012 attributable to the increase in the operating profit margin and the asset turnover.

## Liquidity

Below we present current and cash ratios for 2012, a measure of company's liquidity.

Figure 14: Liquidity ratios

Source: Author based on data from each company annual accounts

Liquidity ratios	EDPR	Acciona	Iberdrola	Nextera	Longyuan
Current ratio	0.82	1.08	1.12	0.60	0.49
Cash ratio	0.22	0.22	0.21	0.01	0.15

Looking at current ratios, Acciona and Iberdrola are the ones where current assets cover entirely current liabilities and also the ones that have higher cash coverage of current liabilities. *“Traditional analysis suggests that firms maintain a current ratio of 2 or greater”* (Damodaran, 2002:65) but neither of them is close to it. Nextera and Longyuan are not European companies and comparing their balance sheets with the

other peers we see that almost only financial debt is considered a non current liability with all other liabilities included on the current side. This makes this ratio difficult to compare between them once the arrangement of the balance sheet is not similar.

While European peers have improved their current ratio over time EDPR is lagging behind as a consequence of the decrease of current assets from 2010 to the following years since in 2010 EDPR had a deposit in USD of €183m made in EDP Finance.

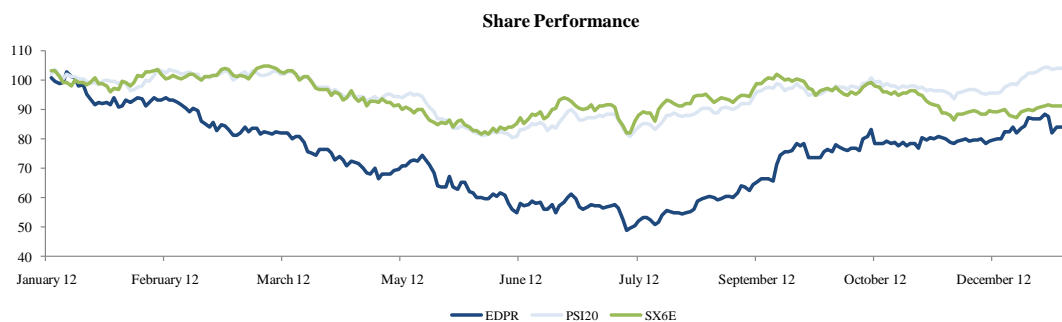
## 6. Share performance

EDPR shares are traded in NYSE Euronext Lisbon since June 2008. The company has 872.3 million shares outstanding with a nominal value of €5 and a share capital of €4,361 million.

Market capitalization of the company as of December 31<sup>st</sup> 2012 was €3.5 billion with a share price of €3.99, 16% below the value of €4.1 billion observed in December 31<sup>st</sup> 2011. EDPR share price underperformed in 2012 both NYSE Euronext Lisbon index (PSI20) and Dow Jones Eurostoxx Utilities index (SX6E) which includes 19 european companies from utilities sector such as EDP, Iberdrola and Endesa.

Figure 15: EDPR share Performance 2012

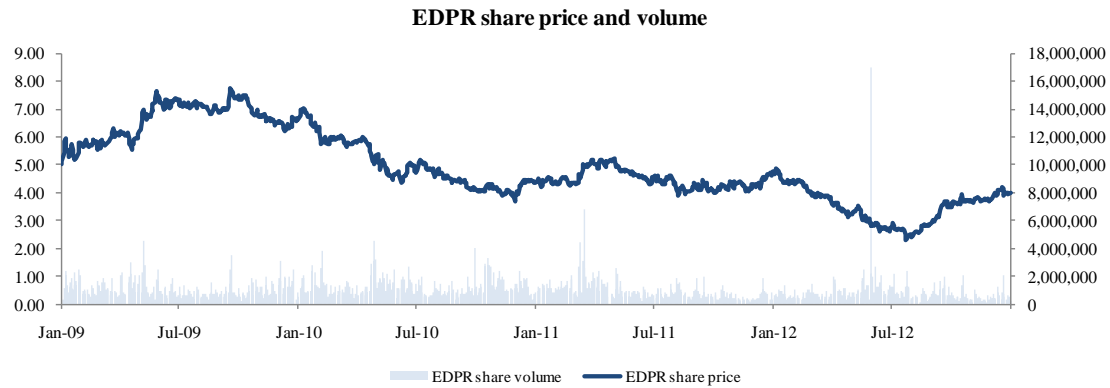
Source: Author based on data from Yahoo finance and Euroinvestor



Since 2009 EDPR share price has been decreasing as a consequence of the generalized crisis. Last year's share price has decreased until July, increasing until December with a closing price of €3.99. On the second half of 2012 EDPR announced the execution of project finance for 57MW in Belgium, the beginning of the construction of its first solar photovoltaic project in September, the agreement to sell 49% equity shareholding in a portfolio of wind farm assets in US to Borealis for \$230 million in November, and the agreement with CTG to sell 49% equity shareholding and 25% of the outstanding loans in EDP for €359 million in December.

Figure 16: EDPR share price and volume 2009-2012

Source: Author based on data from Yahoo finance



There were 207 million shares traded in 2012, less 12% than year before. That represented 24% of the total shares outstanding of the company and 105% of the company's free float.

Year's low of €2.31 was record on July 24<sup>th</sup> and a share price of €4.86 was the year's highest value observed in January 6<sup>th</sup>.

## 7. Valuation

Following the mechanics of forecasting by Koller et al (2010: 187) first we analyze historical financials, as we did in *Financial Statement Analysis* section, needing after a forward outlook about the business. It should be consistent with the economical theory and the historical reported milestones and performance achieved so far. Since EDPR has a growing business in a capital intensive industry we choose a forecasting period of five years (2013-2017).

Both BS and PL forecasts followed mainly a ratio methodology for each line item, building historical and forecast ratios. Year end totals are a sum of individual amounts for European countries, USA and the called other which include Brazil, Canada and consolidation adjustments. Since this is the way EDPR presents its financials we have decided to leave them as they were.

Historical revenue growth rates showed an annual average of 22% until 2012. Since 2012 additions to installed capacity were below expectations and the earning of a new stakeholder will made EDPR review its business plan for 2013-2015 we thought more appropriate a growth in line with 2012 additions (installed capacity increased 7% from 2011 to 2012) added to International Monetary Fund expected increase in inflation. It will lead us to an average growth of nearly 10% per year which is supported by consensus.

The remaining PL items forecasts were based on appropriate economic drivers mainly based on revenues, the case of operational revenues and expenses which were computed as percentage of year's turnover. Depreciation amounts were obtained as percentage of fixed assets, meaning that the proportion of 2012 was remained constant for all years. Fixed assets were assumed to grow at a CAGR of 2% on the forecasting period since EDPR intends to reduce its investment until the release of the new business plan for 2013-2015. Financial result in 2012 as percentage of debt and cash, respectively for financial expenses and income, were the basis to forecast the amounts presented for 2013-2017. Same method was followed for profit in associates but considering the investments showed in the balance sheet.

As what concerns income tax rates for the countries of operation looking at historical effective income tax rates thought suitable to rely on them to forecast 2013

amounts considering a 25% tax rate for Europe, 22% for USA and 15% for other. The reason was that since it was the first year of forecast the amounts tend to be similar to the past ones and was not realistic to increase the income tax rate suddenly. On the other hand until 2017 we have considered a tax rate of 30% which according IMF is the one for Spain location where the company is headquartered.

Non-current assets are mostly forecasted using 2012 percentage of sales. The exceptions relate to fixed assets, property, plant and equipment are assumed to grow at a CAGR of 2%, with the new stakeholder the company made public the intention to reduce its dependence on bank borrowing. EDPR's investment will rely on the €2billion credit available by China Three Gorges which will be invested in wind farm assets. Historical figures reflect a growth of 5% and 1% in 2011 and 2012, respectively. Intangible assets and goodwill are considered to remain stable.

As above also current assets are mostly forecasted in percentage of sales. Cash and equivalents are considered not to be subject of changes until 2017 preserving 2012 amount.

Total equity regards to previous year amount added by each current year retained earnings assuming no cash dividend distribution.

Non-current liabilities were forecasted as percentage of fixed assets, considering the proportion observed in 2012, deferred tax liabilities item used sales instead. Short and long term debt computations followed the company's scheduled repayments published in 2012 management report without considering any other borrowing increase given the facts referred before.

Capital expenditures for 2013-2017 were computed based on the change of fixed assets plus depreciation of the period. The forecasts are in line with the historical investment made directly reflecting the increase of fixed assets.

Figure 17: EDPR valuation

Source: Author based on EDPR data

Currency: €m	2012	2013	2014	2015	2016	2017
EBIT		504	574	652	738	833
Operating taxes		-46	-80	-105	-133	-165
NOPLAT		458	494	547	604	668
Depreciation		274	279	285	290	296
Capital expenditures		-380	-388	-396	-404	-470
Change NWC		-83	-35	-40	-46	-42
<b>Free cash flow to firm Europe</b>		<b>269</b>	<b>350</b>	<b>395</b>	<b>445</b>	<b>452</b>
Perpetuity	5,483					
<b>Enterprise value Europe</b>	<b>6,946</b>					
EBIT		164	197	234	276	321
Operating taxes		-13	-35	-47	-58	-74
NOPLAT		151	162	187	217	247
Depreciation		226	230	235	240	244
Capital expenditures		-326	-332	-339	-346	-406
Change NWC		-10	-5	-6	-7	-6
<b>Free cash flow to firm USA</b>		<b>41</b>	<b>55</b>	<b>78</b>	<b>105</b>	<b>79</b>
Perpetuity	1,025					
<b>Enterprise value USA</b>	<b>1,296</b>					
EBIT		-26	-28	-30	-32	-34
Operating taxes		-27	-24	-23	-22	-21
NOPLAT		-53	-52	-53	-54	-55
Depreciation		9	9	9	9	9
Capital expenditures		-13	-13	-13	-14	-16
Change NWC		-33	-18	-19	-21	-25
<b>Free cash flow to firm Other</b>		<b>-90</b>	<b>-74</b>	<b>-77</b>	<b>-80</b>	<b>-87</b>
Perpetuity	-774					
<b>Enterprise value Other</b>	<b>-1,066</b>					
<b>Enterprise value EDPR</b>	<b>7,176</b>					
<b>Share price (€)</b>	<b>3.79</b>					

The valuation method followed was the discounted cash flow but as a sum of the parts. Meaning that EDPR was not valued as a whole but as a sum of its different segments reaching the respective enterprise value for the European business, the USA business and the so called other which includes Brazil. This segmented model was followed as a way to catch each business features not only inside the industry sector but also economical and institutional that could be lost with a consolidated analysis.

The debt to equity ratio considered for each segment was the one computed for EDPR as a whole since the market capitalization computed with Bloomberg data does not allow a differentiation by division. The same with beta which is the one given by Bloomberg as reported at December 31<sup>st</sup> 2012.



Figure 18: EDPR WACC components

Source: Author based on Bloomberg data

	Europe	USA	Other
Growth in perpetuity	1.83%	1.83%	1.83%
Debt to equity ratio	1.11	1.11	1.11
Beta	1.03	1.03	1.03
Risk free rate	5.27%	5.27%	9.17%
Expected market return	10.51%	10.51%	12.29%
Market equity risk premium	5.24%	5.24%	3.12%
Shareholders required rate of return	10.65%	10.65%	12.37%
Average interest rate on debt	5.50%	5.50%	9.50%
Equity weight	47.32%	47.32%	47.32%
Debt weight	52.68%	52.68%	52.68%
Income tax rate	30.00%	30.00%	30.00%
<b>WACC</b>	<b>8.81%</b>	<b>8.81%</b>	<b>12.36%</b>

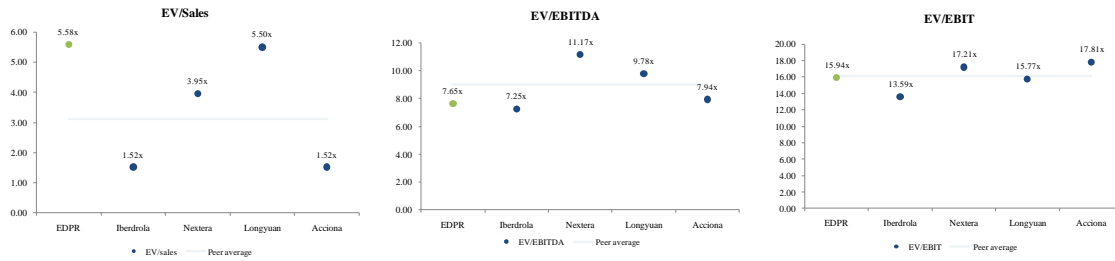
Shareholders required rate of return was considered the same both for Europe and USA since the markets have similar characteristics and were considered to represent the same risk for equity holders. As an emergent market Brazil has a higher risk for investors and therefore they require a higher return for their investments. The risk free rate considered and stated on Bloomberg considers each country 10-year bond rates. The interest rate on debt of 5.5% given by Bloomberg considered for these two business segments suffers an increase for Brazil of 4% in line with the difference of the country risk free rate. Applying WACC computations we reach a share value of €3.79, corresponding to an EDPR enterprise value of €7,176m and an equity value of €3,302m. At December, 21<sup>st</sup> 2012 the market capitalization of the company amounted to €3,481m.

### Multiple valuation

To support the conclusions reached based on the DCF approach we discuss a valuation based on peer group multiples. The group considered is the one referred in the section *Financial Statement Analysis*. First we compare each company 2012 multiple, to spot the differences between them, computing also an average that is used to estimate EDPR's enterprise value to see how close it is from the one reached with DCF.

Figure 19: Company and peer group multiples

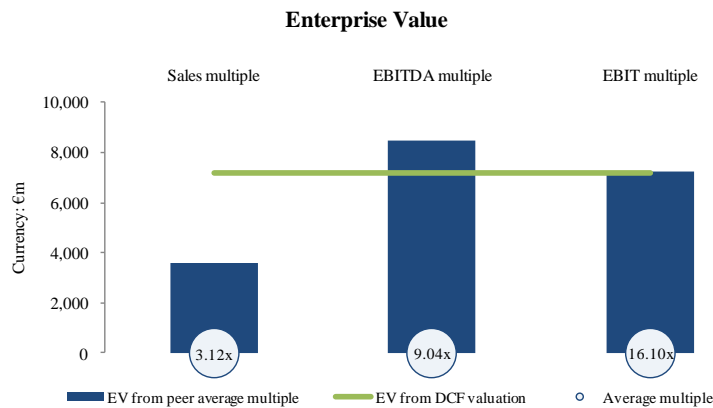
Source: Author based on data from EDPR and Bloomberg



As we can see EV/Sales is the multiple which has a bigger dispersion since operating margins from the different companies are not the same, first because they do not operate all in the same markets and second because they have similar activities but also different business segments which explain this discrepancy. Given the peer average EDPR multiple which has a low deviation from that value is EV/EBIT, consequently this is the multiple which leads to an enterprise value closest to the one obtained with DCF. Since in this kind of capital intensive industry depreciations represent future capital expenditure to replace fixed assets EV/EBIT multiple shows a lower dispersion around the average, despite a non-cash expense it should be considered. The chart below presents the enterprise value of EDPR considering peer average showed above of the three different multiples comparing with the value of €7.2 billion from DCF valuation.

Figure 20: EDPR enterprise value based on multiples

Source: Author based on data from EDPR and Bloomberg



EBITDA multiple gives us an enterprise value of €8.5 billion and EBIT €7.2 billion. Both deviations from DCF value is 18% and 1%, respectively, which we consider acceptable and therefore support the conclusions reached with discounted cash flow model.

### Sensitivity analysis

Below we present a sensitivity analysis to the equity value of the firm, considering a change in WACC, revenues and the growth rate in perpetuity.

Since in our valuation we considered a different WACC depending on the geography of the parent company, consequence of using a sum of the parts approach, when performing a sensitivity analysis this discount factor was considered to change in percentage as a way to comprise all WACC and reach a reliable total equity value of the company. Both for revenues and growth rate in perpetuity the change is in absolute terms, i.e. considering the percentage increase on the table.

Figure 21: EDPR sensitivity analysis to WACC and revenues

Source: Author

		Revenues				
		7.0%	7.5%	8.0%	8.5%	9.0%
WACC	1.0%	2,327	2,419	2,511	2,604	2,698
	0.5%	2,686	2,783	2,880	2,979	3,078
	0.0%	3,095	3,198	<b>3,302</b>	3,406	3,512
	-0.5%	3,566	3,676	3,787	3,899	4,011
	-1.0%	4,116	4,234	4,353	4,473	4,594

The equity value is extremely sensible to a WACC variation, especially a decrease, since a decrease of 1% in WACC, *ceteris paribus*, enhances the fair value of the company in €1,052 million while an increase in the same proportion make the equity fair value decrease by €791m amounting to €2,511m.

Valuation base case considered an increase in revenues of 8% and no variation of WACC consistent with an equity value of €3,302m.

Figure 22: EDPR sensitivity analysis to WACC and growth rate in perpetuity

Source: Author

		Growth rate in perpetuity				
		1.6%	1.7%	1.8%	1.9%	2.0%
WACC	1.0%	2,363	2,425	2,511	2,554	2,621
	0.5%	2,711	2,782	2,880	2,930	3,007
	0.0%	3,107	3,188	<b>3,302</b>	3,358	3,447
	-0.5%	3,561	3,655	3,787	3,853	3,957
	-1.0%	4,087	4,198	4,353	4,432	4,555

Growth rate in perpetuity considers an average of the countries where the company has its subsidiaries based in inflation estimates of IMF. An increase in the growth rate in perpetuity generates lower variations in the equity value than decreases, equal to what happens with WACC.

Valuation base case considered a growth rate in perpetuity of 1.8% and no variation of WACC.

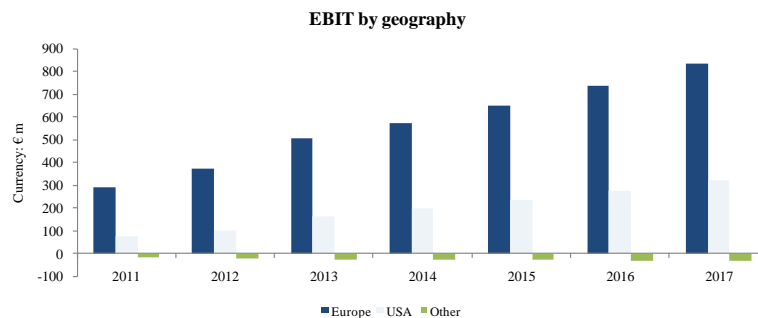
## 8. Conclusion

Cumulative installed capacity worldwide has grown year after year reaching 282,484 MW of which 5,410 MW offshore at the end of 2012. This business segment is currently having a large expansion in South American countries that according to GWEC are developing new projects and increasing their wind installed capacity at a high growth rate as a way to decrease their dependence on hydro generation.

With a key role in the renewable sector EDPR is a reference wind energy producer. Company press release regarding the first half of 2013 results presented an EBITDA increase of around 11% to €560m compared with the same previous period. The valuation presented considered an EBITDA forecast for FY13 of €1,131m which seems pretty realistic considering the actual amount for the first half of the year. The chart below summarizes the forecasted EBIT by subsidiary location, despite Brazil is included in Other it also includes the adjustments made to reach a company consolidated EBIT giving a negative contribution to the final amount.

Figure 23: EBIT by geography 2011-2017

Source: EDPR for historical data and author for forecasts



EDPR enterprise value is estimated to be around €7,176m corresponding to an equity value of €3,302m and therefore €3.79 per share. A multiple analysis supports this conclusion, as referred earlier the enterprise value obtained with an EV/EBITDA multiple was €8.5 billion representing a deviation of 18% from the amount came from the DCF valuation. With an EV/EBIT multiple the enterprise value reached €7.2 billion, 1% less than the one from DCF. Considering this multiple analysis we think fair to assume that the enterprise value from the DCF valuation is reliable and fairly price the company.

Looking at market quotes a conservative recommendation of hold is given since the share price as at 6 September 2013 is according to Reuters €3.88.

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## 10. Appendix

### Appendix A: Forecasting ratios for profit and loss

	Line item	Typical forecast driver	Typical forecast ratio
Operating	Cost of goods sold (COGS)	Revenue	COGS/revenue
	Selling, general, and administrative (SG&A)	Revenue	SG&A/revenue
	Depreciation	Prior-year net PP&E	Depreciation <sub>t</sub> /net PP&E <sub>t-1</sub>
Nonoperating	Nonoperating income	Appropriate nonoperating asset, if any	Nonoperating income/nonoperating asset or growth in nonoperating income
	Interest expense	Prior-year total debt	Interest expense <sub>t</sub> /total debt <sub>t-1</sub>
	Interest income	Prior-year excess cash	Interest income <sub>t</sub> /excess cash <sub>t-1</sub>

### Appendix B: Forecasting ratios for balance sheet

	Line item	Typical forecast driver	Typical forecast ratio
Operating line items	Accounts receivable	Revenues	Accounts receivable/revenues
	Inventories	Cost of goods sold	Inventories/COGS
	Accounts payable	Cost of goods sold	Accounts payable/COGS
	Accrued expenses	Revenues	Accrued expenses/revenue
	Net PP&E	Revenues	Net PP&E/revenue
	Goodwill and acquired intangibles	Acquired revenues	Goodwill and acquired intangibles/acquired revenue
Nonoperating line items	Nonoperating assets	None	Growth in nonoperating assets
	Pension assets or liabilities	None	Trend toward zero
	Deferred taxes	Operating taxes or corresponding balance sheet item	Change in operating deferred taxes/operating taxes, or deferred taxes/corresponding balance sheet item

## Appendix C: Competitors profit and loss

Currency: *m	Acciona (€)			Iberdrola (€)			Nextera (\$)			FY10A
	FY10A	FY11A	FY12A	FY10A	FY11A	FY12A	FY10A	FY11A	FY12A	
<b>Revenues</b>	<b>6,263</b>	<b>6,646</b>	<b>7,016</b>	<b>30,431</b>	<b>31,648</b>	<b>34,201</b>	<b>15,317</b>	<b>15,341</b>	<b>14,256</b>	<b>14,218</b>
Cost of consumables used	-1,581	-1,677	-1,656	-18,786	-19,622	-21,623	-6,242	-6,256	-5,121	-5,783
Other changes in inventories	-82	-33	-7	0	0	0	0	0	0	0
<b>Gross profit</b>	<b>4,600</b>	<b>4,936</b>	<b>5,353</b>	<b>11,645</b>	<b>12,026</b>	<b>12,578</b>	<b>9,075</b>	<b>9,085</b>	<b>9,135</b>	<b>8,435</b>
Other operating income	728	752	500	670	650	549	0	0	0	986
Supplies and services	0	0	0	-2,174	-2,275	-2,378	-2,877	-3,002	-3,155	-688
Personnel costs	-1,258	-1,274	-1,325	-1,705	-1,643	-1,838	0	0	0	-666
Other operating expenses	-2,858	-3,102	-3,097	-908	-1,107	-1,185	-1,183	-1,255	-1,186	-1,757
<b>EBITDA</b>	<b>1,211</b>	<b>1,312</b>	<b>1,431</b>	<b>7,528</b>	<b>7,650</b>	<b>7,727</b>	<b>5,015</b>	<b>4,828</b>	<b>4,794</b>	<b>6,310</b>
Provisions for risks and contingencies	0	0	-25	0	0	0	0	0	0	0
Depreciation and amortization	-683	-717	-716	-2,698	-3,145	-3,350	-1,788	-1,567	-1,518	-2,237
Amortization of deferred income	0	0	0	0	0	0	0	0	0	0
<b>EBIT (NOI)</b>	<b>528</b>	<b>595</b>	<b>690</b>	<b>4,830</b>	<b>4,505</b>	<b>4,377</b>	<b>3,227</b>	<b>3,261</b>	<b>3,276</b>	<b>4,073</b>
Gains/losses from the sale of financial assets	-1	37	-45	0	0	0	67	-66	157	0
Financial income	83	57	75	1,626	1,469	1,337	91	79	86	79
Financial expenses	-416	-467	-517	-2,914	-2,531	-2,437	-979	-1,035	-1,038	-1,179
Losses in financial instruments	-4	-5	12	0	0	0	0	0	0	0
Other	2	5	1	27	-35	-201	83	213	122	228
Exchange differences	49	2	29	272	46	0	0	0	0	0
<b>Profit before tax</b>	<b>240</b>	<b>224</b>	<b>245</b>	<b>3,841</b>	<b>3,454</b>	<b>3,075</b>	<b>2,489</b>	<b>2,452</b>	<b>2,603</b>	<b>3,200</b>
Income taxes	-56	-53	-61	-899	-549	-207	-532	-529	-692	-439
<b>Net income</b>	<b>184</b>	<b>170</b>	<b>184</b>	<b>2,942</b>	<b>2,905</b>	<b>2,869</b>	<b>1,957</b>	<b>1,923</b>	<b>1,911</b>	<b>2,761</b>
Equity holders	167	202	189	2,871	2,805	2,841	0	0	0	0
Non-controlling interests	-17	32	5	71	101	-28	0	0	0	0
Number of shares	61,221,464	59,447,596	57,259,550	5,595,413,282	5,815,889,432	6,186,924,665	410,300,000	416,600,000	416,700,000	7,464,289,000
Earnings per share (€)	2.73	3.40	3.30	0.51	0.48	0.46	4.77	4.62	4.59	0.37
<i>EBITDA margin</i>	<i>26%</i>	<i>27%</i>	<i>27%</i>	<i>65%</i>	<i>64%</i>	<i>61%</i>	<i>55%</i>	<i>53%</i>	<i>52%</i>	<i>75%</i>
<i>Gross margin</i>	<i>73%</i>	<i>74%</i>	<i>76%</i>	<i>38%</i>	<i>38%</i>	<i>37%</i>	<i>59%</i>	<i>59%</i>	<i>64%</i>	<i>59%</i>
<i>EBITDA growth rate</i>	<i>n.a</i>	<i>8%</i>	<i>9%</i>	<i>n.a</i>	<i>2%</i>	<i>1%</i>	<i>n.a</i>	<i>-4%</i>	<i>-1%</i>	<i>n.a</i>
<i>Revenues growth rate</i>	<i>n.a</i>	<i>7%</i>	<i>8%</i>	<i>n.a</i>	<i>3%</i>	<i>5%</i>	<i>n.a</i>	<i>0%</i>	<i>1%</i>	<i>n.a</i>
<i>As % of revenues</i>										
<i>Supplies and services</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>35%</i>	<i>36%</i>	<i>38%</i>	<i>46%</i>	<i>48%</i>	<i>50%</i>	<i>11%</i>
<i>Personnel costs</i>	<i>20%</i>	<i>20%</i>	<i>21%</i>	<i>27%</i>	<i>26%</i>	<i>29%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>11%</i>

Source: Company reports

## Appendix D: Competitors balance sheet

Currency: *m	Acciona (€)		Iberdrola (€)		Nextera (\$)		Longyuan (RMB)	
	Dez11A	Dez12A	Dez11A	Dez12A	Dez11A	Dez12A	Dez11A	Dez12A
<b>Assets</b>								
Property, plant and equipment	10,420	11,285	52,406	53,423	42,490	49,413	61,337	73,352
Intangible assets	1,086	0	12,000	11,094	0	0	8,162	8,322
Goodwill	1,049	1,048	8,273	8,309	0	0	12	12
Investments	82	0	0	0	0	0	1,653	3,621
Financial assets	140	279	2,858	2,548	0	0	0	0
Deferred tax assets	859	0	4,545	4,515	0	0	181	194
Debtors and other assets from commercial activities	0	0	0	0	0	0	0	0
Other debtors and other assets	385	1,359	1,062	988	0	0	5,788	4,553
<b>Total non-current assets</b>	<b>14,020</b>	<b>13,971</b>	<b>81,144</b>	<b>80,877</b>	<b>42,490</b>	<b>49,413</b>	<b>77,133</b>	<b>90,054</b>
Inventories	1,211	1,183	2,440	2,206	1,074	1,073	890	816
Trade receivables	2,474	2,371	5,365	6,426	1,372	1,487	5,157	7,998
Financial assets	0	0	4,876	4,047	1,113	16	0	0
Other debtors and other assets	672	670	0	0	10,752	11,389	3,178	3,457
Current tax assets	16	0	857	0	10	397	72	146
Assets held for sale	392	428	132	216	0	335	0	0
Cash and cash equivalents	1,542	1,196	2,091	3,044	377	329	3,677	5,369
<b>Total current assets</b>	<b>6,307</b>	<b>5,848</b>	<b>15,761</b>	<b>15,939</b>	<b>14,698</b>	<b>15,026</b>	<b>12,974</b>	<b>17,786</b>
<b>Total assets</b>	<b>20,327</b>	<b>19,819</b>	<b>96,905</b>	<b>96,816</b>	<b>57,188</b>	<b>64,439</b>	<b>90,107</b>	<b>107,840</b>
<b>Equity</b>	0	0	0	0	0	0	0	0
Share capital	64	57	4,412	4,604	5,217	5,536	7,464	8,036
Share premium	-411	-4	-1,591	-1,864	-154	-255	0	0
Reserves	5,914	4,987	-386	-493	4	4	18,026	21,393
Other reserves and retained earnings	-424	0	27,648	28,672	9,876	10,783	0	0
Consolidated net profit attributable to equity holders of parent	202	189	2,805	2,841	0	0	0	0
<b>Total equity attributable to equity holders</b>	<b>5,344</b>	<b>5,229</b>	<b>32,888</b>	<b>33,760</b>	<b>14,943</b>	<b>16,068</b>	<b>25,490</b>	<b>29,429</b>
Non-controlling interests	301	279	320	325	0	0	4,375	6,992
<b>Total equity</b>	<b>5,645</b>	<b>5,508</b>	<b>33,208</b>	<b>34,085</b>	<b>14,943</b>	<b>16,068</b>	<b>29,866</b>	<b>36,422</b>
<b>Liabilities</b>	0	0	0	0	0	0	0	0
Medium/long term financial debt	6,681	6,939	30,454	28,851	20,810	23,177	31,308	32,482
Deferred income	0	0	5,230	5,786	0	0	1,993	1,903
Provisions	610	0	3,427	3,928	0	0	0	0
Deferred tax liabilities	897	0	9,742	9,093	0	0	101	98
Equity instruments	0	0	582	370	0	0	0	0
Trade and other payables from commercial activities	0	0	0	0	0	0	0	0
Other liabilities and other payables	598	1,932	395	516	0	0	494	860
<b>Total non-current liabilities</b>	<b>8,785</b>	<b>8,871</b>	<b>49,829</b>	<b>48,545</b>	<b>20,810</b>	<b>23,177</b>	<b>33,896</b>	<b>35,343</b>
Short term financial debt	2,217	2,109	4,174	5,101	2,157	4,182	16,369	26,170
Trade and other payables from commercial activities	2,493	2,335	6,044	6,113	1,191	1,281	1,597	1,261
Provisions	181	0	573	435	0	0	0	0
Other liabilities and other payables	700	689	1,796	1,336	16,533	18,154	8,222	8,525
Equity instruments	0	0	0	107	1,090	430	0	0
Assets held for sale	218	307	0	84	0	733	0	0
Current tax liabilities	88	0	1,280	1,012	464	414	158	119
<b>Total current liabilities</b>	<b>5,897</b>	<b>5,440</b>	<b>13,867</b>	<b>14,186</b>	<b>21,435</b>	<b>25,194</b>	<b>26,345</b>	<b>36,075</b>
<b>Total liabilities</b>	<b>14,682</b>	<b>14,311</b>	<b>63,697</b>	<b>62,732</b>	<b>42,245</b>	<b>48,371</b>	<b>60,241</b>	<b>71,418</b>
<b>Total equity and liabilities</b>	<b>20,327</b>	<b>19,819</b>	<b>96,905</b>	<b>96,816</b>	<b>57,188</b>	<b>64,439</b>	<b>90,107</b>	<b>107,840</b>

Source: Company reports