

INNOGY SE

BUY

Innovation, Growth and Yield

CURRENT PRICE: €31.95
TARGET PRICE: €38.40

We are initiating coverage of innogy with a Buy rating and a TP of €38.40/share (23% upside potential).

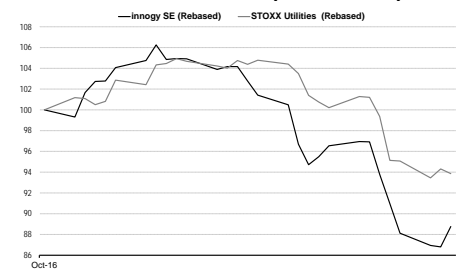
Unique asset base. We think that its pure exposure to grids, renewables and supply (more than 23mn customers), and with over 60% of its EBITDA coming from regulated business, makes innogy a unique company. The sector is moving towards this structure and aims to be less exposed to merchant activities, and innogy has taken advantage of this situation. This structure should help innogy benefit from the technological disruption we see in the sector in the form of: (1) smart grid developments, not only in Germany but also in Eastern Europe; (2) growth in renewables – it is a leader in offshore capacity worldwide (c1.3GW in 2020E); and (3) providing more and better services to the *prosumers* (produce-consumers). Innogy's independence from RWE and its financial constraints, plus its strong balance sheet (3.9x 2016E END/EBITDA, going down to 3.6x by 2020E), should benefit its standalone strategy, allocation of capex and use of cash.

What makes innogy different? We think the company, as a whole (not just on isolated issues), is different from its peers. Although its closest peer is E.ON (U/R, TP: U/R), the main difference between the two is significant: innogy does not have any nuclear liability. In terms of growth, the **2016E-20E adjusted net income CAGR is 7.2% vs 4.3% for the sector**, thanks to the stability at operating level and the lower financial expenses (the cost of 2016 bonds is 5.4% and 4.7% in 2020E). Innogy is one of the companies with the highest growth in terms of dividends (6.7% CAGR in 2016-20E) with an implicit yield of 5.5% vs 6.0% for the sector.

TP €38.40/share. The stock's performance since the IPO has been weak, mainly due to the interest rate hikes. Our valuation is based on a DCF with an average WACC of 6.6%. If WACC increases by 50bp (in our opinion, beyond that level would be excessive for this kind of company), our TP would be €32.62/share, still implying 4% upside potential. We think RWE (Buy, TP: €13.70) will reduce its 76.8% stake to a minimum of 51% at some point.

INITIATION OF COVERAGE

Relative Performance (12 Months)



Source: FactSet.

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Company Data, November 16, 2016. (closing price)

Reuters/Bloomberg code	IGY.DE / IGY GR	(€mn)	2015	2016E	2017E	2018E	2019E
Market cap (€mn)	17,361	EBITDA	4,521	4,189	4,346	4,502	4,591
Outst shares (mn)	556	EBIT	3,050	2,742	2,884	3,008	3,054
Free float (%)	23.2	Net income	1,613	1,506	1,356	1,424	1,419
Avg daily vol (€mn)	82.3	EPS (€)	0	2.71	2.09	2.26	2.39
12-month range (€)	31.25 - 38.25	Net debt	13,765	12,384	12,433	12,438	12,218
Historical volatility (%)	25.2	FCF	759	531	785	916	1,313
Performance (%)	-1M -3M -12M	EV/EBITDA (x)	–	9.2	9.0	8.7	8.6
Absolute	-16.6	Net debt/EBITDA (x)	3.0	3.0	2.9	2.8	2.7
Relative to STOXX Utilities	-9.0	P/E (x)	–	11.8	13.1	12.5	12.5
		GDY (%)	–	4.7	5.0	5.5	5.8
		FCF yield (%)	–	3.0	4.4	5.2	7.4

Source: FactSet.

Source: Company data and Santander Investment Bolsa estimates.

INNOGY SE AT A GLANCE

Key Company Data

(€mn)	2015	2016E	2017E	2018E	2019E
P&L ACCOUNT (€mn)					
EBITDA – liberalised Europe	1,808	1,676	1,738	1,801	1,836
EBITDA – regulated Europe	2,713	2,513	2,607	2,701	2,755
Other	0	0	0	0	0
Consolidated EBITDA	4,521	4,189	4,346	4,502	4,591
EBIT	3,050	2,742	2,884	3,008	3,054
Non-recurrent items	0	0	0	0	0
Net income	1,613	1,506	1,356	1,424	1,419
CASH FLOW STATEMENT (€mn)					
Funds from operations (FFO)	2,545	2,667	2,910	3,035	3,155
Working capital	210	-335	-170	-126	-31
Operating Cash Flow	2,755	2,332	2,741	2,909	3,125
Capex	-1,996	-1,802	-1,956	-1,994	-1,812
Other	0	0	0	0	0
FCF	759	531	785	916	1,313
Dividends	-225	-213	-1,056	-1,124	-1,218
Others	–	–	–	–	–
Change in debt	1,648	-1,381	49	5	-220
BALANCE SHEET (€mn)					
Assets	57,972	45,940	46,226	46,664	47,031
Fixed assets	38,235	35,722	36,217	36,716	36,991
Other	0	0	0	0	0
Current assets	19,737	10,218	10,009	9,948	10,041
Liabilities	57,972	45,940	46,226	46,664	47,031
Shareholders' equity	16,649	8,121	8,420	8,721	8,922
Minority interests	1,811	1,709	2,010	2,312	2,615
Provisions	4,161	3,919	3,939	3,958	3,978
Other	6,793	7,349	7,445	7,543	7,642
Debt	18,975	17,165	17,078	16,979	16,807
Current liabilities	9,583	7,677	7,335	7,151	7,066
NET DEBT & LEVERAGE RATIOS					
Net debt (Curr mn)	13,765	12,384	12,433	12,438	12,218
Adj net debt (Curr mn)	17,563	16,460	16,828	17,134	17,138
Net debt/EBITDA (x)	3.0	3.0	2.9	2.8	2.7
Adj net debt /EBITDA (x)	3.9	3.9	3.9	3.8	3.7
CAPITAL EMPLOYED (€mn)					
Year-end	38,909	26,236	26,905	27,532	27,837
Adjusted	38,909	26,236	26,905	27,532	27,837
Adjusted Average	37,713	32,573	26,570	27,218	27,685
RETURNS (%)					
ROCE (average)	10.2	10.5	12.0	13.8	14.0
RoE (average)	13.1	13.1	13.8	14.4	14.9
VALUATION MULTIPLES (x)					
Market cap-based multiples					
P/E	–	11.8	13.1	12.5	12.5
Cash P/E (*)	–	16.7	15.3	14.2	13.4
P/CF	–	6.7	6.1	5.8	5.6
P/BV	–	2.2	2.1	2.0	2.0
FCF yield (%)	–	3.0	4.4	5.2	7.4
GDY (%)	–	4.7	5.0	5.5	5.8
Pay-out (%)	NM	55.3	76.5	77.5	77.5
EV-based multiples					
EV/sales	–	1.0	1.0	1.0	1.0
EV/EBITDA*	–	9.2	9.0	8.7	8.6
EV/Invested capital	–	1.2	1.5	1.4	1.4

Source: Company data and Santander Investment Bolsa estimates.

Investment Case

- EBITDA is more than 60% regulated, which provides stability and visibility on earnings.
- innogy boasts more than a 7.5% CAGR in recurrent net income.
- The technological disruption should benefit companies that have exposure to distribution and renewables and that are closer to the end client.

Key Value Drivers

- DPS yield of 5.3%, on average, in 2017E-20E.
- Recurrent EPS growth thanks to stability in EBITDA and lower financial expenses.
- Renewables focused on profitability.

Investment Risks

- Rising interest rates.
- Weak performance in the Supply business.
- Negative updates in the regulatory regimes.

Catalysts

- Stabilization in interest rates.
- Improvement in the UK supply business.
- Higher EPS growth, which would imply higher growth in DPS.

Company Description

innogy is a company focused on three main businesses: Grids (c61% of EBITDA), Supply (c21%) and Renewables (c18%). Today the company is focused on Europe, and c60% of its EBITDA is regulated.



CONTENTS

innogy SE at a Glance	2
Executive Summary.....	4
The Creation of innogy.....	7
Deal Structure	7
Important Messages to Be Taken into Account.....	8
Valuation	9
Target Price of €38.40/Share	9
DCFs by Division	10
What Is innogy?.....	13
A Unique Asset Base.....	13
Grid & Infrastructure	15
Retail.....	18
Renewables.....	20
Future of Renewables in Generation Mix.....	24
Innogy vs Peers.....	31
Growth, Attractive Dividend with Leverage in Line with Peers.....	31
UK Exposure	34
Number Two Country in Terms of EBITDA.....	34
Financials.....	37
Adjusted Net Income Should Post CAGR of 7.3% 2016E-20E	37
Consolidated EBITDA.....	38
G&I.....	39
Retail.....	44
Renewables.....	47
P&L	49
Cash Flow & Balance Sheet	50
Appendix I. Grid & Infrastructure	51
Appendix II. Retail	62
Appendix III. Renewables	65
Appendix IV. Corporate Governance	70

EXECUTIVE SUMMARY

WHAT YOU NEED TO KNOW ABOUT INNOGY

What is innogy?	<p>In December 2015, RWE announced the placement of innogy, a new company that would group together RWE's distribution, renewables and retail businesses. Nearly a year later, the transaction is a reality.</p> <p>Innogy's posted €4,521mn of EBITDA in 2015 (including €336mn of one-offs), of which 60% came from regulated activities. It is focused on three divisions: Grid & Infrastructure (G&I: c61% of EBITDA, more than 80% regulated, with a RAB of €13.3bn in 2015, of which c70% is in Germany), Retail (c21% of EBITDA, 23mn customers in 11 countries and four number one positions in gas & electricity markets); and Renewables (17% of EBITDA, 3.1GW of pro rata capacity, of which c1GW is offshore, with 60% of its EBITDA being 'quasi-regulated').</p>
The transaction and the future RWE's stake	<p>The transaction involved a €2.0bn capital increase at innogy and a cash-in of c€2.6bn for RWE at €36/share. The parent company now holds a 76.8% stake after selling 13.2%. RWE's intention is to keep at least a 51% stake in innogy. RWE has a 6-month lock-up period. We think RWE will progressively reduce its stake in innogy. We believe the timing will depend on: (1) the payment of the €6.8bn nuclear storage provisions (RWE currently has €5.6bn of available liquidity); and (2) the use of other provisions in the following years, mainly for nuclear decommissioning (c€5.7bn at 9M16) and lignite mines (€2,452mn at 9M16).</p>
Who are its peers?	<p>Innogy has a unique asset base, with almost no exposure to conventional generation assets (less than 1% of EBITDA), and 78% of its EBITDA is linked to the Grids and Renewables businesses. This is why we see no real peers, as the other main companies in the sector have significant exposure to conventional generation. Perhaps the closest comparables are New E.ON and Iberdrola. In the case of New E.ON, it should be noted that it differs in two major aspects: (1) E.ON will still have German nuclear provisions, while innogy has sought to ensure that it will not be held liable for RWE's historic liabilities and assets (in particular, nuclear liabilities) under existing law; and (2) New E.ON will hold a 46.6% stake in Uniper after that unit is spun off on September 12 and can only sell this stake from 2018 onwards.</p>
Relationship with RWE AG	<p>Innogy says it has a high degree of independence from RWE AG, which is reflected in its supervisory board structure: only one of the 20 members represents RWE AG. Innogy is independent in its investment and dividend policy decisions. This is very important taking into account the financial constraints at RWE AG level.</p>
What makes innogy unique?	<p>From a financial point of view, we think innogy has an attractive balance between growth, dividends and a sound balance sheet. In terms of growth, we estimate an adjusted EBITDA CAGR of 2.4% in 2015E-20E vs 1.3% for the sector and an adjusted net income CAGR of 7.2% in 2016E-20E vs 4.3% for the sector. The reasons for this growth are: (1) new capacity in renewables; (2) an improvement in the UK retail business (and growth in Eastern Europe); and (3) lower financial expenses (the cost of its bonds should fall from the current 5.4% to 4.7% by 2020E). This performance, plus the cash-in from the capital increase, should strengthen the balance sheet. We estimate its 2016E END/EBITDA (post capital increase) at 3.9x, falling to 3.6x by the end of the decade (although we are €0.4bn lower than the company's indication in terms of planned capex for 2016E-18E, at €6.1bn).</p>



In terms of dividends, we are applying a 77% pay-out ratio (the policy is a 70%-80% pay-out on adjusted net income). The company has stated that it will be at the upper end of the range in 2016 to smooth out the expected growth in dividends. The implicit average **dividend yield for 2016E-20E** would be **5.3% vs 6.0% for the sector**. The growth in dividends would imply a **2016E-20E CAGR of 7.3%E, one of the highest expected in the sector**.

From a strategic point of view, thanks to its asset base and unique position, we think innogy could benefit, in certain areas, from a technological disruption in the sector. The expected worldwide growth in renewables should bring investment and growth not only in this business but in others, like distribution grids, supply services and big data management. We think innogy has a clear advantage in implementing smart grids and providing new services to *prosumers* (producer-consumers) in its main distribution areas. In Eastern Europe, the opportunity is very clear for innogy, as it is one of the main utility companies in the region for gas and electricity supply and distribution. In the renewable sector, innogy should benefit from the expected growth in wind, mainly offshore, in Europe (offshore in Europe is expected to expand from 11GW in 2015 to 50GW by 2025). So far, solar PV has not been a niche for innogy. However, it is thinking about: (1) expanding to North Africa and the Middle East; (2) offering *prosumers* services to manage their own output and selling them equipment and efficiency measures (at the end of August, innogy acquired Belectric Solar & Battery to improve this business area in Europe).

Technological disruption

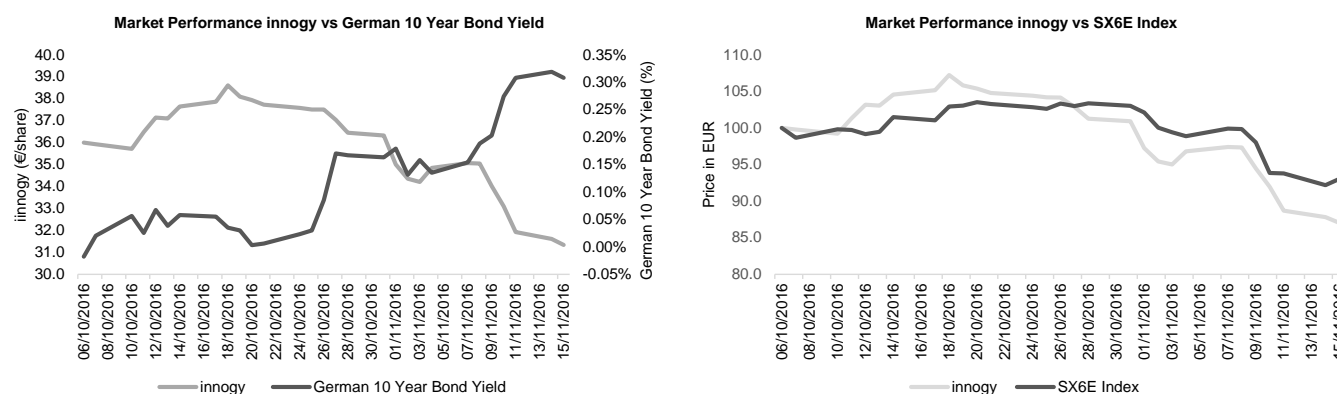
There is a clear move to increase investment in renewables to cover demand and substitute conventional generation plants when their useful lives end. According to several sources (see page 27), renewables (on/offshore wind and solar PV mainly) have an attractive growth profile in the next decade, as the levelised cost of electricity (LCoE) declines and allows them to compete with conventional generation. This should reduce CO₂ emissions and reduce countries' exposure to commodity imports. Growth in electric vehicles in the coming decades is another factor to take into account as part of the measures to reduce urban pollution and CO₂ emissions. The influence of *prosumers* looks set to grow, and this should imply more investment in grids to make them 'smarter' and more reliable, plus a need for utilities to have efficient databases available. So, all in all, **we think there are many opportunities for the sector and particularly for companies that are preparing themselves for these changes**.

What are the main risks?

As a highly regulated company, the main risks are regulation and interest rates. Innogy is exposed to regulatory changes in all three of its business areas: (1) new regulation due in Germany in 2018/19, covering the following five years, as well as in Hungary and Slovakia; (2) updates of different renewable regulatory regimes, which could limit investment growth; and (3) regulation of the retail sector, as happened in the UK supply business. We also see **increasing competition in the supply and renewable areas** as another threat for innogy.

Interest rate hike negatively affecting innogy and the sector. Since October 6, 2016, 10-year German Bund yields have increased by 31 basis points, from -0.02% to 0.29%. In the same period, innogy has gone from €36/share to €38.60/share and down to c€31/share today. Therefore, the stock has gone down 13% vs -8% for the SX6E Utilities Index. We think the trend is clear so far: when interest rates go up, the sector underperforms. Having said that, **we should differentiate between the companies in the sector and take into account that we are not using a MtM bond proxy for our DCF**. In our case, we are using an average 6.6% WACC, and each business has its own cost of debt (Kd) and cost of equity (Ke).

Figure 1. innogy vs German 10Y Bund and vs SX6E Index (rebased to 100); since October 6 2016



Source: Bloomberg and Santander Investment Bolsa.

Valuation

Our TP is €38.40/share, which implies c23% upside potential. This is based on a DCF for all the divisions, each of them with different WACCs (6.6% on average). The EV would be c€43.7bn and imply a 2017E-20E EV/EBITDA of 9.3x. To calculate our equity, we are assuming: (1) an END of €16.5bn after the €1.0bn adjustment for the step-up in bonds, €4.7bn of pension provisions and €337mn of windfarm decommissioning provisions; (2) €3.9bn of minority interests after applying a 13x 2017E P/E multiple; and (3) €1.9bn of other provisions.

As the interest rate hike has had a significant impact on the company, we have made a sensitivity analysis. In fact, we have made two different analyses: (1) increasing the WACC by 50bp and 100bp; and (2) increasing the Ke by the same amounts. In the case of the 100bp increase: (1) the WACC would rise to 7.7% and the TP would go down by c28% to €27.76/share; (2) the Ke would go up to 8%, the WACC to 7.1%, and the TP would decrease c14% to €33.10/share, which would still imply c6% upside. **In conclusion, if we increase the WACC by 100bp, it would take the total WACC up to 7.7%, which, in our opinion, seems excessive for a German company whose EBITDA is 60% exposed to regulated business. In this case, there would not be any upside.**

Figure 2. innogy – Sensitivity Analysis to Changes in WACC and Ke

(€share)			
If WACC goes up by	0%	0.5%	1.0%
TP	38.40	32.62	27.76
Change vs TP	0.0%	-15.1%	-27.7%
Upside	22.7%	4.2%	-11.3%
If Ke goes up by	0%	0.5%	1.0%
TP	38.40	35.64	33.10
Chg vs TP	0.0%	-7.2%	-13.8%
Upside	22.7%	13.9%	5.8%

Source: Santander Investment Bolsa estimates.



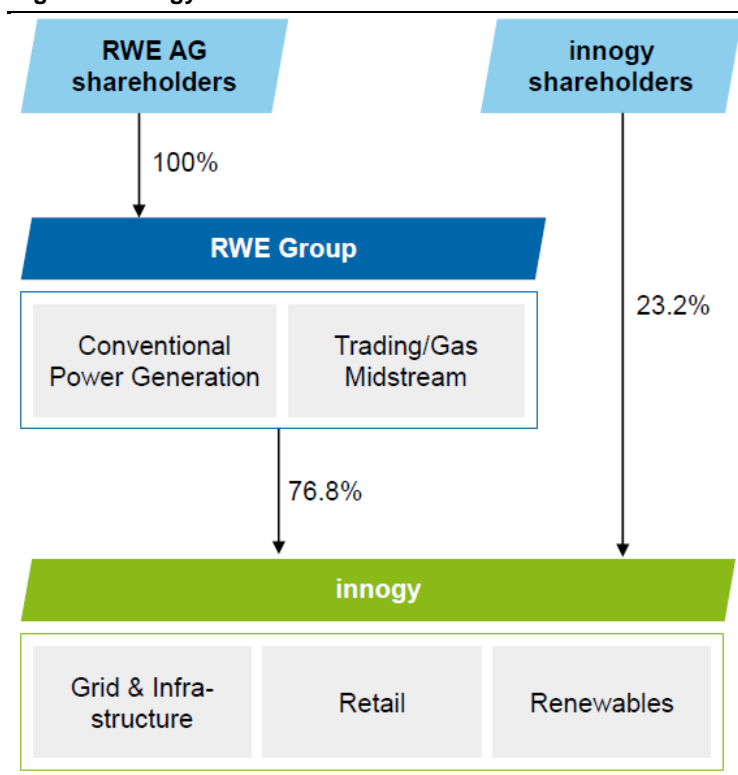
THE CREATION OF INNOGY

DEAL STRUCTURE

In December 2015, RWE announced the placement of 10% of innogy, a brand-new company that would group together RWE's distribution, renewables and retail businesses. Nearly a year later, the transaction is a reality.

The transaction was effectively an 11% capital increase at innogy that implied a 10% free float and a cash-in of c€2.0bn, placing the stock at €36.00/share. At the same time, RWE placed a 13.2% stake at the same price and raised c€2.6bn in cash. RWE now holds a 76.8% stake in Innogy while retaining full control of its own Conventional Power Generation and Supply & Trading divisions (see Figure 3). The cash retain by innogy could be used in part to finance the growth the company is targeting, mainly in Grid & Infrastructure (G&I) and Renewables (these two divisions represent c83% of the €6.5bn capex targeted by innogy for 2016-18). Retail capex is guided at c€0.8bn, which might seem a bit high by sector standards, as innogy is in the middle of an improvement plan.

Figure 3. innogy – Structure after the Deal



Source: RWE.

Will RWE AG place more shares, in addition to the 13.2% placement? We think there is a good possibility of this happening. RWE's intention is to keep at least 51%. As of today, the value of the 'extra' stake (ie, 76.8%-51%=25.7%) is c€4.5bn. The German government has already announced the final amount for the nuclear storage provisions to be placed in the fund. In the case of RWE, the company should face a cash payment of c€6.8bn, including the €1.9bn premium. According to the company, following the deal it has €5-6bn of liquidity. To pay 100%, it could use its available liquidity, debt financing or place more innogy shares (after the 6-month lock-up period).

Furthermore, the future of lignite is not 100% clear. We think that, at some point, RWE will have to close some of its older plants and, therefore, close at least one of its lignite mines. In that case, RWE would need further cash for the mining liabilities that would arise (c€2.5bn in total). Additionally, it would have a yearly cash-out for nuclear dismantling, which would currently be less than €0.2bn/year. This amount is quite likely to increase once the nuclear plants are shut down. RWE has nuclear decommissioning provisions of c€5.7bn. **So, we would conclude that we definitely think RWE will decrease its stake in innogy in the coming years.**

IMPORTANT MESSAGES TO BE TAKEN INTO ACCOUNT

We see three significant issues that should be borne in mind:

- (1) **Innogy sought to ensure that it will not be held liable for RWE's historic liabilities (in particular nuclear liabilities) under existing law. This is, in our opinion, one of the most important and differential strengths of the company vs its peers.** Therefore, innogy is independent in terms of its investments and dividend policy decisions (see *Appendix IV. Corporate Governance*).
- (2) **In the future, investors will have to choose between:** (1) innogy, which is more regulated, with higher earnings visibility and stable growth; and (2) RWE AG, with an improved balance sheet and the optionality linked to the trend in power prices, for those who believe there will be a recovery in commodities.
- (3) **Unlocking value.** The decrease in power prices has meant the market has been mainly focused on this part of the business in recent years, and investors may have ‘forgotten’ that RWE is something more than just a power generator. In the future, with the innogy stake marked to market, the RWE group should increase its transparency.



VALUATION

TARGET PRICE OF €38.40/SHARE

Our TP implies upside potential of c23%. It is based on a DCF per division (excluding the equity method of the grid assets, which are calculated with multiples). The implicit EV is €43.7bn and implies an average 2017E-20E EV/EBITDA ratio of 9.3x. Our main assumptions are as follows:

- We assume different WACCs for each of the divisions: for example, 4.4% for the Grids in Germany and 10.8% for the Retail business in the East region. The average WACC for the group is 6.6%.
- For the equity method in distribution, we apply a 13.5x P/E multiple for the German and East assets. These multiples are in line with peers' (REE and Enagás in Spain, Terna and Snam in Italy and the UK's National Grid).
- In terms of minorities, we apply a 13x P/E ratio. These minorities are mainly related to the Grid business.
- We use the 2016E FY balance sheet and estimate economic net debt (END) at €16.5bn. This figure is already adjusted for the €1.0bn value of the step-up and includes €337mn of windfarm decommissioning provisions.
- **In terms of pension provisions, we decrease the 9M16 figure of €5.0bn to €4.7bn.** The sensitivity of the provisions to interest rates is high, and after the recent hike we prefer to adjust them downwards a bit. According to innogy's CFO, Bernard Günther, every 10bp change in long-term interest rates would imply a gross change of c€0.2bn. We prefer to be cautious, so bear in mind that the update will be made using the interest rates at the end of the year (see page 131 of RWE's 2015 Annual Report for further details). Changes in interest rates also have an impact on the fair value of the plans' assets. This reduces the net effect that changes in interest rates have on pension provisions. This is an extract: *"In Germany, an increase or decrease of one half of a percentage point in the discount factor would result in a reduction of €1,260 million (previous year: €1,175 million) or an increase of €1,617 million (previous year: €1,518 million), respectively, in the present value of the obligations of the corporate pension plans"*.
- We are accounting for €1.9bn of other provisions vs a total figure of €4.1bn of other provisions, so 48% of the total (excluding the €337mn for windfarm decommissioning). For the €1.9bn we are considering: (1) 100% of the non-current provisions at book value, or €1,279mn; and (2) €0.67bn for the current ones (50% of the miscellaneous provisions of €1.3bn), as we do not have sufficient information to determine whether 100% of these provisions are necessary for the business and could be considered as working capital.

Figure 4. innogy – Sum-of-the-Parts Valuation

Division	Valuation	Weight EV	Valuation Method	WACC	EV/EBITDA (x)				
					2016E	2017E	2018E	2019E	2020E
G&I Germany	16,529	38%	DCF	4.4%	10.5	10.0	10.0	10.1	9.8
G&I Germany eq meth assets	3,142	7%	P/E: 15x 2017E		0.0	0.0	0.0	0.0	0.0
G&I East	8,107	19%	DCF	5.6%	11.7	11.2	10.8	10.5	10.3
G&I East eq method assets	680	2%	P/E: 14x 2017E		0.0	0.0	0.0	0.0	0.0
Retail Germany	3,890	9%	DCF	8.6%	6.7	6.7	6.9	7.1	7.2
Retail Netherlands/Belgium	1,526	3%	DCF	8.6%	6.3	6.4	6.7	7.1	7.3
Retail UK	1,475	3%	DCF	8.6%	29.1	15.3	7.5	7.0	6.9
Retail East	2,079	5%	DCF	10.8%	9.2	8.6	8.0	7.5	7.1
Renewables	7,212	17%	DCF	4.9%	10.0	10.4	9.7	8.8	8.1
o/w onshore wind	2,360	0%	DCF	4.8%	11.4	11.1	10.4	9.8	9.2
o/w offshore wind	3,952	0%	DCF	4.9%	9.5	10.4	10.2	8.8	7.8
o/w hydro	634	0%	DCF	6.2%	7.5	7.9	8.2	8.5	8.4
o/w other	266	0%	EBITDA: 9.0x 2017E	–	9.2	9.1	9.0	8.9	8.8
Other	-1,070	-2%	EBITDA: 6.5x 2017E	–	6.4	6.5	6.6	6.6	6.7
Total EV	43,569	–	–	6.6%	10.2	9.8	9.4	9.2	8.9
Cash and cash equivalents	4,781								
Gross financial debt	-17,165								
Step-up adjustment	956								
Minorities	-3,911								
Provisions	-6,897								
of which pensions	-4,695								
of which windfarm decom	-337								
of which other provisions	-1,865								
Equity	21,332								
Number of shares	555.6								
Target Price (€)	38.40								
Current price (€)	31.30								
Upside	23%								

Source: Company data and Santander Investment Bolsa estimates.

DCF BY DIVISION

G&I: €28.5bn

This is the most important division, representing 65% of the total EV. The main assumptions for each DCF are the following:

Figure 5. innogy – G&I Valuation

(€mn)	EV	RAB 2017E	WACC Remuneration 2020E	WACC for DCF	EV/EBITDA 2017E	EV/EBITDA 2017E-20E
Germany	16,529	10,573	5.2%	4.4%	10.0	10.0
East	8,107	3,786	6.5%	6.2%	11.2	10.7

Source: Santander Investment Bolsa estimates.

- **Germany.** We assume the RAB grows to c€1.7bn by 2020E from the updated €10.6bn in 2016E. We assume the terminal value of these assets would represent c40% of the valuation. Our approach is to maintain the asset base from around 2025 until 2040, which is our terminal value. We assume that all the old assets, pre-2006, would be almost fully amortised that year. In line with German regulations, we are taking a 60%/40% debt/equity approach to calculate the WACC. Due to the low recognised cost of debt (4% pre-tax) and cost of equity (6.5%), the implicit WACC could seem low (4.4%). However, they are in line with our valuation of these kinds of businesses in other companies. We are assuming a 5.2% regulatory return.

In Germany, the implicit 2017E EV/EBITDA is 10x, which is fairly stable until the end of the decade. This is because we are assuming little growth at the EBITDA level due to the decrease in returns, which is offset by the increase in RAB and cost cutting.

We apply a 15% premium to the German RAB for 2017E-20E to calculate the implicit valuation of the rest of the businesses not included in the RAB. This gives us a valuation of €12.7bn. The implicit valuation for the rest of the assets would be c€3.7bn. The implicit EV/EBITDA multiple for the rest of the businesses would be 7.8x on average for the period.



- **East.** We assume the RAB grows to c€4.2bn by 2020E from €3.6bn in 2015. We are assuming the same debt/equity ratio as in Germany. However, in this case the risk premium is higher, which implies a higher WACC: 6.2%. In this division, we are expecting higher growth than in Germany, with an EBITDA CAGR of 3.2% in 2015-20E vs 0.2%. We are assuming a flat regulatory return of 6.5% in the region.
- **Equity method.** We have applied a 13.5x P/E multiple to the equity method in both cases. This multiple is in line the multiple for what we consider to be a group of peers (Red Eléctrica, Enagás, Terna, Snam and National Grid).

Figure 6. innogy – Equity Method Grid Asset Valuation

(€mn)	Equity	Multiple	Equity Method 2017E
Germany	3,142	13.5	230
East	680	13.5	51

Source: Santander Investment Bolsa estimates.

Retail: €8,970mn

This is the second-largest division in size, representing c21% of total EV. Our valuation implies a 2017E-20E EV/EBITDA ratio of 7.5x, or 7.1x excluding the UK business, which is under restructuring.

Figure 7. innogy – Retail Valuation

(€mn)	EV	WACC	EV/EBITDA 2017E-20E	EBITDA Margins 2017E-20E	EBITDA Mg Terminal Value
Germany	3,890	8.6%	7.0	3.4%	2.4%
Netherlands/Belgium	1,526	8.6%	6.9	5.9%	3.1%
UK	1,475	8.6%	9.2	2.4%	2.4%
East	2,079	10.8%	7.8	5.7%	3.5%

Source: Company data and Santander Investment Bolsa estimates.

Our main assumptions and conclusions are as follows:

- **We use our own estimates for each of the markets** (for more details, see the *Financials* section). We are expecting competition to increase in this business, which is why we are assuming a decrease in margins in the coming years. The only case where we should see margins increase is in the UK, due to its special situation and the recovery plan.
- **In addition, in our terminal value we cut the expected margins.** We think that in the long run, margins should converge in the mature markets. The exception is The Netherlands, where margins are substantially higher, even though the retail churn rate is considerable at c21%.
- **One of our conclusions is that, despite the volatility in parts of the retail business** (such as the UK), once a market is mature, the business **should be quite stable**. In the future, competition is likely to increase, but players who have grids should be able to post high customer retention rates. Furthermore, utilities, including innogy, are trying to sell not only gas and electricity to their clients, but also other products and services. This should offset the financial impact of the increase in competition. We expect a slight decrease in earnings in Germany and The Netherlands by 2020E vs 2016E, to be more than offset by the good performance in the East region (2015-20E CAGR of 8.7% for adjusted EBITDA) and the recovery in the UK (EBITDA from €65mn in 2015 to €215mn by 2020E).
- **The 23.2mn client base should provide stability to the division.** In terms of clients, just 110,000 are B2B, while the other 23.1mn are B2C. However, in terms of volumes, BTC represents just 25% of electricity and 42% of gas. We think the company makes higher margins in BTC than in BTB.

Renewable: €7.2bn

The weight of the division is c17% of the total EV.

Figure 8. innogy – Renewable Valuation Range

(€mn)	EV	WACC	Age End-2017 (Yrs)	EV/MW	EV/MW Adjusted	Pending Reg Life End-2017 (Yrs)	Achieved Price 2016E(€/MWh)	Load Factor
EV total DCF	7,212	4.9%	NA	NA	NA	NA	111.1	33.4%
DCF onshore	2,360	4.8%	10	1.2	2.0	9	78.3	24.1%
DCF offshore	3,952	4.9%	4	4.3	5.1	12	169.6	45.0%
DCF hydro	634	6.2%	NA	NA	NA	NA	57.3	46.0%
Other/eq method implicit	266	4.9%	NA	NA	NA	NA	NA	NA

Source: Company data and Santander Investment Bolsa estimates.

Our main assumptions and conclusions are:

- We are assuming a useful life of 25 years. We apply the regulatory life for each of the assets. After the regulatory period, we apply market prices until year 25. We assume the useful life could be longer, but we prefer to be cautious.
- Our model runs until the end of the lifetime of all the new and existing assets, excluding hydro, which has a terminal value.
- Capex and new assets. On top of the assets that innogy is already building (298MW), we are adding another 740MW up to 2020, split 50:50 between onshore and offshore wind. We are applying average conditions for these assets.
- We have not assumed any change in market prices, regulatory regimes or remuneration. Obviously, the trend in power prices has a major impact. That is why we are taking MtM of the forwards in each of the markets for those assets that are exposed to merchant activities.

Figure 9. innogy – Market Power Price Assumptions, 2013-20E

(€/MWh)	2013	2014	2015	2016E	2017E	2018E	2019E	2020E
Germany	53.8	48.0	40.4	35.1	31.4	28.2	26.0	27.4
UK	61.2	60.2	59.0	52.8	42.2	41.0	40.9	41.1
Spain	44.2	42.2	50.3	41.0	44.0	43.0	43.0	43.0
Netherlands	39.3	37.6	44.7	36.5	39.2	38.3	38.3	38.3
Poland	51.9	47.5	43.5	37.7	28.7	31.0	32.0	33.0
Italy	53.8	48.0	40.4	35.1	31.4	28.2	26.0	27.4
Portugal	73.3	62.7	53.7	47.1	39.7	41.5	41.5	42.5
Belgium	44.2	42.2	50.3	41.0	44.0	43.0	43.0	43.0
France	50.5	44.6	43.9	46.8	43.7	32.5	33.5	34.5

Source: Bloomberg and Santander Investment Bolsa estimates.

Figure 10. innogy – Regulated Power Price Assumptions for Offshore Wind, 2013-20E

(€/MWh)	2013	2014	2015	2016E	2017E	2018E	2019E	2020E
Germany, pre-2017	0	0	192	194	194	194	194	194
Germany, 2018-19	–	–	–	–	–	184	184	184
UK	163	160	183	157.4	133.6	133.4	134.1	135.2

Source: Company data and Santander Investment Bolsa estimates.

Figure 11. innogy – Regulated Power Price Assumptions for Onshore Wind, 2013-20E

(€/MWh)	2013	2014	2015	2016E	2017E	2018E	2019E	2020E
Germany	95.0	98.0	95.0	89.7	86.0	82.8	80.6	82.0
UK	140.0	124.0	135.0	123.6	103.4	102.6	103.0	103.7
Spain	73.0	33.0	48.0	48.0	48.0	48.0	48.0	48.0
Netherlands	123.0	122.0	110.0	110.0	110.0	110.0	110.0	110.0
Poland	87.0	82.0	70.0	70.0	70.0	70.0	70.0	70.0
Italy	142.0	142.0	145.0	145.0	145.0	145.0	145.0	145.0

Source: Company data and Santander Investment Bolsa estimates.



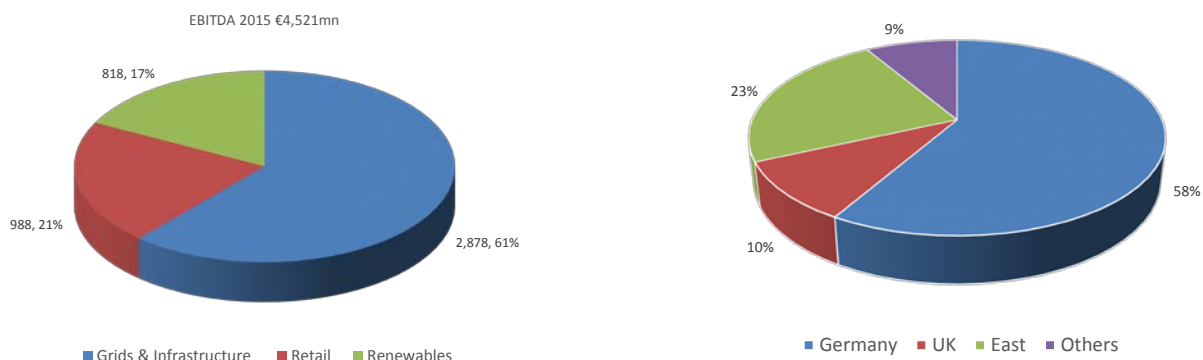
WHAT IS INNOGY?

A UNIQUE ASSET BASE

The company is focused on three divisions, **Grid and Infrastructure** (G&I; with a RAB of €13.3bn in 2015, of which c70% is in Germany), **Retail** (with 23mn customers in 11 countries and four number one positions in gas & electricity markets) and **Renewables** (3.1GW capacity, of which c1GW is offshore and 60% of its EBITDA is quasi-regulated). **Innogy sought to ensure that it will not be held liable for RWE's historic liabilities (in particular nuclear liabilities) under existing law.** This is important to maintain its independence from RWE AG and gives it a unique asset base among the integrated European utilities.

In terms of financials, 2015 EBITDA was €4,521mn (of which €336mn were one offs) and operating profit €3,050mn. The main division is G&I, which represents c61% of total EBITDA while the other two are c20% each. According to the company, its EBITDA is c60% regulated or quasi-regulated. This should provide stability and visibility to earnings. Innogy says EBITDA **cash conversion** in 2013-15 was **70% on average** (declining from 88% in 2013 to 62% in 2015). This could allow a **70%-80% dividend payout** ratio on adjusted net income and, at the same time, an **END/EBITDA 16E of 3.9x after the transaction.**

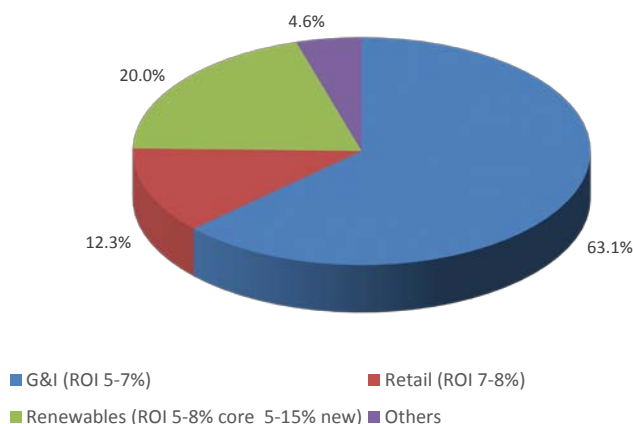
Figure 12. innogy – 2015 EBITDA by Division (LHS) and by Country (RHS)



Note: The sum of the divisions does not match the total EBITDA published as we are not considering €163mn from Others.
Source: Company data the EBITDA by division and Santander Investment Bolsa estimates EBITDA by country.

Innogy is expecting to invest €6.5bn in the period 2016-18 (vs €6.4bn 2013-15). The bulk will be deployed in the G&I assets (€4.1bn or 63%) with a return of a minimum 5%-7%.

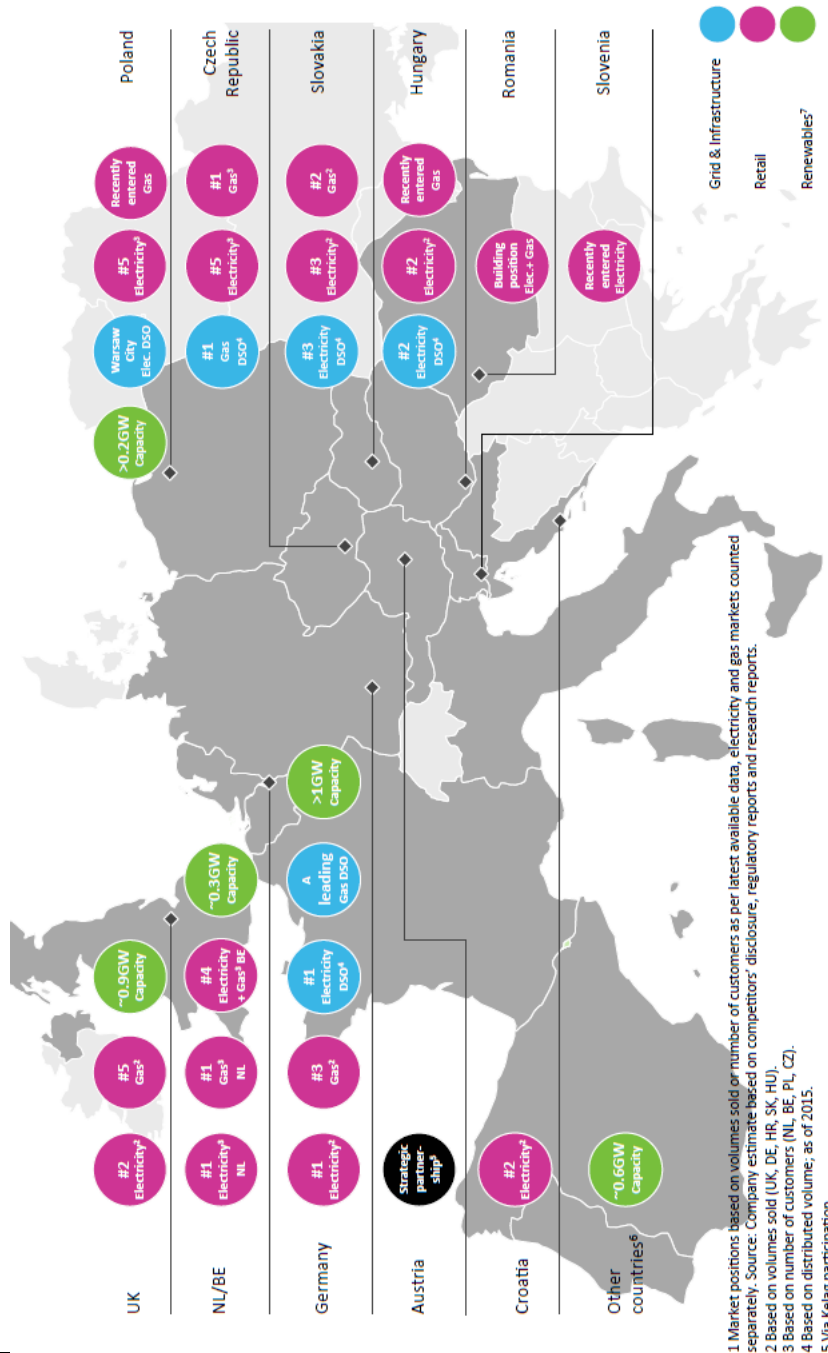
Figure 13. innogy – 2016-18 Capex Plan by Division



Source: Company data and Santander Investment Bolsa estimates for calculation of the percentage split.

Innogy is mainly an European company with very few assets in other continents so far. That said, it is considering renewable investments in the US (mainly wind) and the Middle East and North Africa (solar). Innogy's main markets are Germany, the UK and Eastern Europe (particularly the Czech Republic, where innogy owns the country's biggest gas distributor (Macquarie has a 49.96% stake in this company)). In Renewables, innogy is present in Southern Europe, where Spain is now its third country by installed capacity, although its core assets and area of growth in Europe are in Germany and UK, mainly in offshore wind.

Figure 14. innogy – Presence by Division and Position in Each of its Main Markets



Source: Company data as of December 2015.



GRID & INFRASTRUCTURE

This division is focused on **electricity and gas distribution in Europe (88% of its total EBITDA in 2015)**. Its main market is Germany, where it distributes gas and electricity and is the number one Distribution System Operator (DSO) in electricity, based on volume distributed. It is one of the main players in Eastern Europe. In the Czech Republic it is the number one gas distributor by volume distributed and its three electricity distribution markets are Hungary, Poland and Slovakia (last year innogy changed the consolidation of VSE, its main Slovak company, from equity method accounting to global). **The other 12% of EBITDA** is gas storage, telco services, water supply and generation (for more details please see Appendix I).

Figure 15. innogy – G&I P&L, RAB and WACC for Germany and East, 2013-20E

(€mn)	2015	2016E	2017E	2018E	2019E	2020E
Germany	2,016	1,799	1,888	1,873	1,859	1,927
East	862	740	775	802	827	840
EBITDA	2,878	2,540	2,663	2,676	2,686	2,768
o/w operating income from investments	294	270	283	279	275	289
Adjusted EBITDA, ex disposals/cap gains	2,582	2,444	2,617	2,629	2,640	2,721
D&A	-948	-941	-955	-970	-985	-997
Operating profit	1,930	1,648	1,758	1,757	1,754	1,824
RAB ⁽²⁾	13,581	14,359	14,780	15,191	15,559	15,917
o/w Germany	9,941	10,573	10,854	11,130	11,403	11,671
o/w East	3,640	3,786	3,926	4,061	4,156	4,246
RAB for retribution	13,340	13,486	13,626	14,155	15,559	15,917
o/w Germany	9,700	9,700	9,700	10,094	11,403	11,671
o/w East	3,640	3,786	3,926	4,061	4,156	4,246
Average return on WACC						
o/w Germany ⁽¹⁾	6.1%	6.1%	6.1%	6.1%/5.2%	5.2%	5.2%
o/w East	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%

(1) 6.1% for electricity, as its regulatory period begins in 2019 and 5.2%E for gas, as its regulatory period begins in 2018

(2) the RAB figures are SAN assumptions as RAB in Germany will remain flat in the RP II until the 2018/19 when the new RP begins.

Source: Company data and Santander Investment Bolsa estimates.

Germany: innogy's main business

German distribution assets are innogy's main asset. In electricity, it is number one while in gas it is second (E.ON is number two and one, respectively) out of a total 900 and 700 DSOs for electricity and gas, respectively.

Figure 16. innogy – Main Data for Electricity and Gas DSOs

	Volumes (TWh)	Network Load (GW)	Grid Length ('000 km)
Electricity distribution grid			
Innogy	142	22	356
E.ON	116	16	347
EnBW	60	10	137
Gas distribution grid			
Innogy	73	22	47
E.ON	73	20	56
EWE	41	11	55

Source: Company data.

Regulations in Germany are incentive based (more details in Appendix I). The implicit RAB for innogy's assets is €9.7bn calculated in 2010/11. This will be updated for the third regulatory period in years 2015/16 and, according to the company, should increase by 9% compared with 2010/11. This RAB does not included all the participations innogy has as for example the assets accounted as equity method, which provide c€230mn in 2015 to the P&L, according to innogy.

This is how the regulations work in Germany, in three simple steps.

- (1) **What are the regulatory periods?** We are in regulatory period (RP) II, which goes from 2013 to 2017 for gas networks and from 2014 to 2018 for electricity networks. The regulator takes a base year from the previous RP to calculate the controllable cost (these are 2015 for gas and 2016 for electricity for the next RP) and establishes the new RABs and the allowed returns on equity for old and new assets (old are those built before 2006). The next regulatory period will begin in 2018/2019 and will last for another five years. The base years for the following RP will be 2020 for gas and 2021 for electricity.
- (2) **Incentive regulation:** This is based on a formula that takes into account how efficient the company is, the return on RAB and the cost of debt. These parameters are set and the formula to calculate the revenue cap is:

$$\text{Revenue cap} = \text{non-controllable cost} + (\text{controllable cost} \times \text{efficiency} \times (\text{inflation} - \text{productivity}))$$

In RP III companies will be eligible for a bonus if they are the most efficient. Innogy is one of the most efficient companies in terms of cost/grid length, cost per substation (four of the 10 substations with the lowest costs, including the lowest one, are innogy's) and cost per connection point. The productivity factor is 1.5% in the current RP and in the proposal for RP III.

- (3) **Returns:** The return in RP II would be €9.7bn multiplied by the 6.1% pro-forma allowed return, so c€0.6bn. This 6.1% allowed return is calculated using the formula:

$$\text{Allowed return} = \text{Weight of equity} \times \text{return on equity} + \text{Weight of debt} \times \text{cost of debt}$$

According to the regulations, the return on equity, which is a maximum of 40% of the RAB, is 9.05% nominal for new assets and 7.14% real for old assets, both pre corporate and post trade tax (15%) (the proposal for the RP III is 6.91% nominal for new ones and 5.12% real for the old ones). The debt part is a pass through and the cost of debt taken is c4% pre-tax. Innogy indicated as an assumption that the split between new and old assets is 50/50.

In the III RP, capex will be recognize every year instead of every five years as before. On our assumptions, we assume that the capex 2017/18 should increase the RAB for electricity and begin to be remunerated in 2019E.

So in conclusion, for the current RAB of €9.7bn, the allowed return would be 6.1% and the return c€0.6bn during RP II. **In RP III, we are expecting RAB 2019E to increase to €11.4bn** (due to the 9% updated RAB 2015/16 and the additional capex 2017/18) and a **new allowed return of 5.2%**, so the return on RAB would be c€560mn, slightly less than in the previous period.

Innogy is planning to invest €3.1bn in 2016E-18E to improve and expand its distribution grid in Germany. In future there will be two key areas to make the grid grow:

- **Concessions:** Innogy holds 3,800 concessions (electricity, gas, water and concessions held by the grid participations). In the last five years, c65% of the gas & electricity concessions came up for renewal and innogy successfully renewed or transferred to grid participations 90% of them. In the next five years, a further c25% of the concessions are up for renewal. We think innogy will try to increase the percentage it retains thanks to its good relationships and technical skills, and to gain some new concessions. According to the company, out of the total RAB, one-third is not concession-related, which provides further earnings stability.



- **Energiewende** (energy transition): 90% of renewables are connected to the grid. Renewables will continue growing in Germany: in 2050, 80% of the electricity needs have to be covered by renewables. The Economy Ministry says €23-49bn of investment is needed for the expansion and modernisation of distribution grids by 2032. The concept of the “prosumer” (producer and consumer) is already in the market and will become more important in the coming years. A continuing communication will be needed to cover the prosumer’s necessities as well as smart grids and big data to manage the system properly.

G&I East: Value Creation via Know-How

Innogy has distribution assets in four other countries:

- (1) **Czech Republic.** This is innogy’s main market in the East division, with a €1.6bn RAB. Innogy is the main DSO in gas through the subsidiary RWE GasNet. Innogy shares ownership with Macquarie, which has a 49.96% stake after buying 14.96% in 2015 (the price was not disclosed). In 2002, RWE had six regional integrated companies that merged to form RWE GasNet. This consolidation has simplified the governance structures and increased the synergies.
- (2) **Hungary.** Innogy is the second biggest electricity DSO in the country with a market share of c40%. The RAB, as of 2015, is €0.9bn and decreased in the last regulatory period, mainly due to the EUR/HUF rate. The company has a c54% stake in ÉMÁSZ and c55% in ELMŰ. Innogy has increased capex again and improved operational performance to compensate for the decrease in remuneration caused by politically-driven energy price cuts and sector-specific taxes.
- (3) **Poland.** Innogy is the DSO in Warsaw, where it acts as front runner with a smart metering pilot project for 100,000 meters. It has a €0.7bn RAB and a market share of 6%.
- (4) **Slovakia.** With a €0.5bn RAB and a 20% market share, this is the smallest business for the G&I East division. In 2015, innogy started to globally consolidate VSE Holding (the company that owns VSD, the DSO) for the first time. This implied a book gain of €143mn in the division due to its revaluation.

Figure 17. innogy – G&I, East, Summary of Main Assets in the Region

	DSO	RAB (€bn)	WACC	Distributed Volume (GWh)	Customers (mn)	Grid Length (km) ⁽¹⁾	Current RP ⁽²⁾	RAB vs last RP ⁽³⁾
Czech Republic	Gas	1.6	7.94% nominal	66,500	2.3	65,000	2016-18	Up
Hungary	Electricity	0.9	6.23% real	16,800	2.3	67,000	2013-16	down (forex)
Poland	Electricity	0.7	5.675% nominal	7,200	1	17,000	2016-20	Up
Slovakia	Electricity	0.5	6.12% real	3,700	0.6	22,000	2012-16	Constant

(1) Rounded figures; (2) The next regulatory period in Hungary is expected to be 2017-20 and in Slovakia 2017-21 (3) In Hungary the main reason for the decrease was the impact of the forex, but not the only one and in Slovakia, the concept of RAB was introduced in 2012. Source: Company data.

In terms of remuneration and regulation, The EBITDA of this division is now as big as Renewables, c€740mn in 2016E. The equity return is c€0.2bn while the rest is D&A (€0.2bn), other grid earnings (€0.2bn) and income from participations plus other non-grid business (€0.1bn). The total RAB for these assets is €3.6bn and has a blended WACC of 6.5% (which includes just four months of VSE, consolidated for the first time in 2015). It is difficult to compare RABs and WACCs fully, due to the differences in the regulatory regimes of each country. It is easier to calculate the return on equity, which represents 33% of the division’s EBITDA, less than 10% of the total G&I and 5% of the total EBITDA. For more details on regulations, please see Appendix I.

RETAIL

Retail is the supply division that sells gas and/or electricity to 23mn customers in 11 countries. It is the second biggest division with EBITDA of c€1bn in 2015. Innogy is active in Europe, mainly in four areas: Germany, Netherlands/Belgium, UK and Eastern Europe, where it is present in several countries, including the Czech Republic and Hungary (please see Appendix II for more details). By area, we would highlight:

- **Germany:** Obviously the main division with an adjusted EBITDA of c€500mn, excluding one-offs, in 2015. The EBITDA margin is below 3% due to increased competition in recent years. The numbers of customers remains stable at around 8mn. Innogy is the number one supplier of electricity and number three in gas.
- **Netherlands / Belgium:** In the last two years, innogy has cut costs, reducing opex by €40mn. These markets are characterized by high churn rates (the B2C churn rate for innogy in 2015 was c21%) but the partnerships (for example, with MediaMarkt) and second brands (energielink.nl) are working well.
- **East:** This is going to be the main area for growth. Innogy is present in seven countries and is expecting demand to increase c16% in electricity and c11% in gas from 2015 to 2030. Entry into new markets and cross selling will be key.
- **UK:** This has been a very volatile market in the past in terms of results that the company is trying to improve. The main target for 2018 is to improve profitability and customer satisfaction and position the company for growth. Innogy plans to reduce costs by cGBP200mn by 2018, with 11% of the measures already producing results, 25% completed with impact accruing and 64% approved for implementation.

Figure 18. innogy – Retail, Main Data by Sub-Division, 2015

(€mn)	EBITDA 2015	EBITDA Mg	Electricity Vol (TWh)	Gas Vol (TWh)	Clients (mn)	BTB (‘000)	BTC (‘000)	B2C Volume Share	Churn Rate B2C	Customer Satisfaction
Germany	583	3.3%	128	94	8.1	60	8,060	20%	12%	78 (1)
Netherlands/Belgium	236	5.6%	19	62	4.7	10	4,700	54%	21%	78%
UK	-65	-0.7%	45	40	5.0	20	4,980	50%	14%	69%
East (2)	234	5.3%	20	47	5.4	10	5,400	36%	4%	83%
Total	988	2.8%	212	243	23.2	110.0	23,140	–	–	–

(1) Customer satisfaction index, measuring % of customers who are 'very satisfied' or 'satisfied' with the service provided; data collected by multiple external service providers. Score is defined as index value where 0 is the lowest and 100 is the highest score. (2) The EBITDA margin excludes €42mn from revaluation of VSE.
Source: Company data.

The EBITDA margin in 2015 was negatively affected by the performance in the UK. (Please see section on UK exposure). In general terms, we see the supply business as very competitive. The top line may be increasing (new offers for the clients, services and products), but margins are stable or decreasing in mature markets. This would imply a stabilisation of EBITDA after a recuperation in the UK business.

Figure 19. innogy – Retail, EBITDA and EBITDA Margin by Country, 2013-20E

(€mn)	2013	2014	2015	2016E	2017E	2018E	2019E	2020E
Germany	279	394	583	580	578	563	549	543
Netherlands & Belgium	257	191	236	242	238	228	215	210
UK	366	294	-65	51	96	197	211	215
East	211	190	234	225	243	260	276	292
EBITDA	1,113	1,069	988	1,097	1,156	1,248	1,250	1,260
Germany	2.2%	2.1%	2.8%	3.2%	3.4%	3.4%	3.4%	3.4%
Netherlands & Belgium	4.1%	4.2%	5.6%	6.6%	6.4%	6.0%	5.6%	5.5%
UK	3.9%	3.1%	-0.7%	0.6%	1.3%	2.6%	2.8%	2.8%
East	5.3%	5.6%	5.3%	5.6%	5.7%	5.7%	5.7%	5.6%
Adjusted EBITDA Mg	2.8%	3.0%	2.8%	3.3%	3.6%	3.9%	3.9%	3.9%

Source: Company data and Santander Investment Bolsa estimates, which include the 2013-15 adjusted EBITDA margins.



Innogy wants to be one of the leading players in each of the markets in which it operates. Its experience in both Western and Eastern European markets should help it here. It has learnt to react quickly and effectively when there are regulatory changes (from fully regulated to fully deregulated), as has happened in Eastern Europe, where the company is growing with new products and entering new markets.

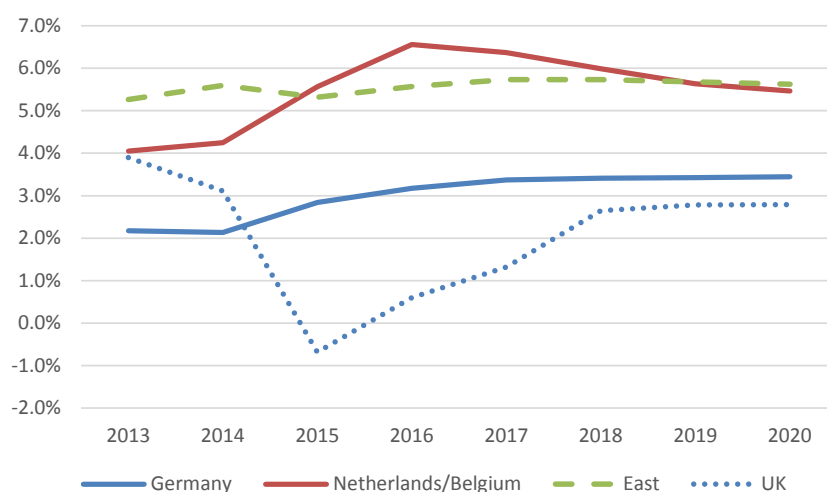
In terms of new products, innogy is offering both gas and electricity to its customers. For example, in the Czech Republic, where it has 1.35mn gas customers, it has achieved 300,000 electricity clients in five years (from 10,000). Another example is Slovakia, where it is now selling gas to 130,000 clients, amount equivalent to a third of its existing electricity customers.

In terms of new markets, Belgium is the clearest example. Innogy had no exposure in 2001, 210,000 clients in 2010 and 590,000 clients in 2015. As the supply business is a capital light model, this has allowed the company to approach new markets. Sometimes innogy enters a new market by buying a small player and making it grow, as it did in Croatia.

The **energy+** platform is another way to continue growing. It is already an important part of the business, accounting for c11% (€10mn) of total EBITDA. By 2018, innogy is expecting it to earn more than €150mn EBITDA, after investing c40%-50% of the total €0.8bn capex for the next three years in this platform. The company sees this as an investment for the future, not just for the short term. Clients and producers (future ‘prosumers’) are demanding more services from utility companies. Energy+ comprises heating (including Combined Heat and Power, or CHP) and O&M services, insulation, lighting (LED) or insurance services. Innogy also offers batteries, photovoltaic solar power, smart home services and more.

This leads us to think that innogy (and the power supply sector as a whole) will tend to expand its top line, but will find it more difficult to increase margins as competition will be tough.

Figure 20. innogy – Retail Adjusted EBITDA Margins, 2013-20E

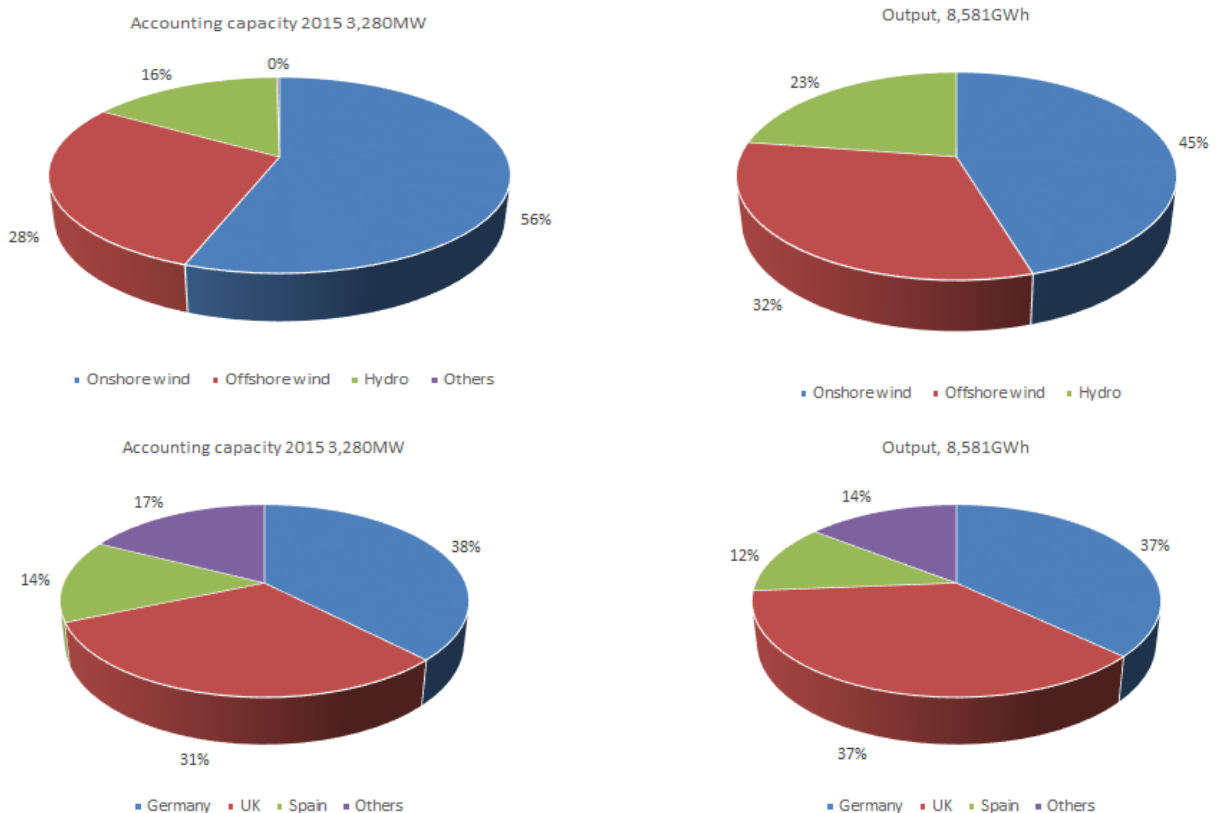


Source: Santander Investment Bolsa estimates.

RENEWABLES

This is the third division by size and accounts for c17% of EBITDA. It is focused on Europe, with an installed capacity of 3.1GW in 2015 and total output of c8.3TWh, both on a pro rata basis (Figure 21 below shows accounting view to show the differences). Out of the total accounting capacity, 56% is onshore wind (with an average age of nine years and ten years of pending regulatory life), 28% is offshore wind (pending life of 14 years and just two years old on average) and the rest (500MW) is hydro capacity plus, to a smaller extent, solar, biogas and biomass. The wind portfolio's average pending regulatory life is 12 years. Innogy is not new in the renewable business: for example, 50% of its onshore capacity has an average life of ten years. However, **balance sheet constraints at RWE AG group level have limited its growth**. Given the momentum in the sector, we think this is one of the businesses that should benefit most from innogy becoming independent.

Figure 21. innogy – Installed Accounting Capacity (LHS) and Accounting Output by Technology and Country (RHS), 2015



(1) Including 5MW of Biomass, 1MW Biomass and 1MW solar PV.
Source: Company data and Santander Investment Bolsa estimates.



Figure 22. innogy – Capacity by Country and Technology, 2015-20E

(MW)	Onshore		Offshore		Hydro		Total (2)	
	2015	2020E	2015	2020E	2015	2020E	2015	2020E
Germany	567	573	295	345	375	375	1,244	1,294
UK	304	339	630	714	77	82	1,011	1,135
Spain	447	447	–	–	12	12	459	459
Netherlands	197	297	–	–	–	–	197	297
Poland	242	242	–	–	–	–	242	242
Italy	67	67	–	–	–	–	67	67
France	–	–	–	–	44	44	44	44
Portugal	–	–	–	–	16	16	16	16
Others (1)	–	270	–	270	–	–	0	540
Total	1,823	2,235	925	1,329	525	530	3,280	4,094

Note: (1) Includes the new MW not allocated to a specific country yet. (2) Total includes in Germany 6MW of Biomass, Biogas and Solar PV for simplification.

Source: Company data and Santander Investment Bolsa estimates.

According to innogy, 60% of its EBITDA is already quasi-regulated and this should be 65% by 2016 after the commissioning of new capacity. In 2015, the company sold several stakes in assets, mainly offshore, and had capital gains of more than €120mn. This is the main reason why innogy is expecting a decrease in the Renewable division's EBITDA. However, on a LfL basis, excluding one-offs, we expect some growth. So far, our estimates include assets under construction, 298MW, including minority stakes in two offshore windfarms, Galloper in the UK (25% stake in a 336MW project) and Nordsee One in Germany (15% stake in a 332MW project).

Figure 23. innogy – EBITDA by Technology and Main Capacity Data, 2013-20E

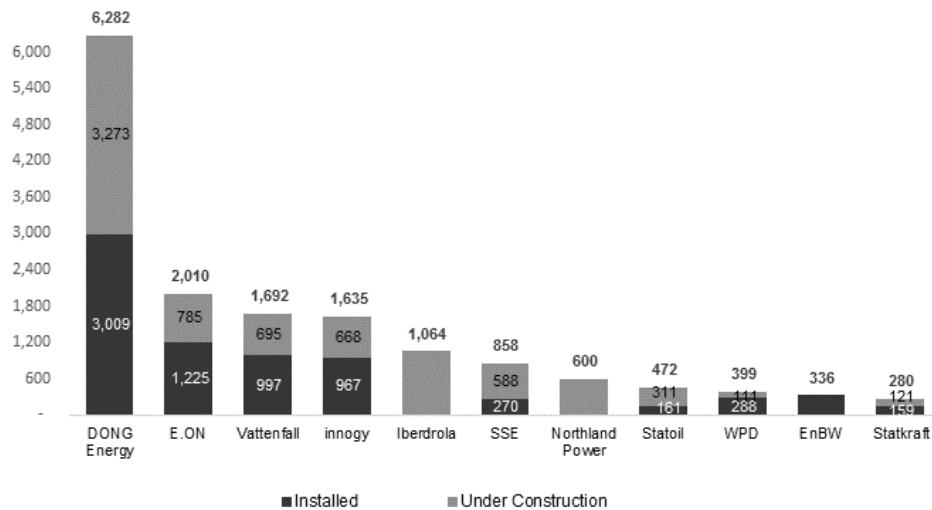
(€mn)	2013	2014	2015	2016E	2017E	2018E	2019E	2020E
EBITDA (1)	448	524	818	721	695	746	821	894
o/w Onshore wind	155	225	248	210	216	232	246	260
o/w Offshore wind	96	170	351	414	381	386	447	503
o/w Hydro	67	104	88	88	84	81	78	75
o/w Others	174	28	29	29	29	30	30	30
o/w op income from investments	-44	-3	102	-20	-15	18	20	26
Adjusted EBITDA ex one-offs	512	428	692	741	710	729	801	868
EBIT	200	253	488	384	348	387	435	482
Inst. capacity (MW - accounting) (2)	2,538	2,806	3,280	3,291	3,382	3,495	3,738	3,967
Output (GWh - accounting)	6,833	7,048	8,581	9,624	9,834	10,092	10,821	11,497
Installed capacity (MW - pro rata)	2,550	2,691	3,129	3,140	3,231	3,477	3,720	3,950

Note 1: The subdivisions are our estimates as the company does not provide this information. (2) 2020E capacity excludes two equity method holdings: the offshore plants Galloper and Nordsee One. Adding their respective capacity, adjusted for innogy's stake (€84MW and 50MW respectively), would increase the total capacity to 4,084MW by 2020E.

Source: Company data and Santander Investment Bolsa estimates.

According to the company, based on information from Bloomberg New Energy Finance, it is number three in the world in offshore wind capacity. Excluding the Zephyr windfarm, in line with the company's accounts, it would be fourth. If we include only the actual stakes in assets under construction, Iberdrola is not far behind.

Figure 24. Largest Offshore Wind Players Globally, 2015 (MW)

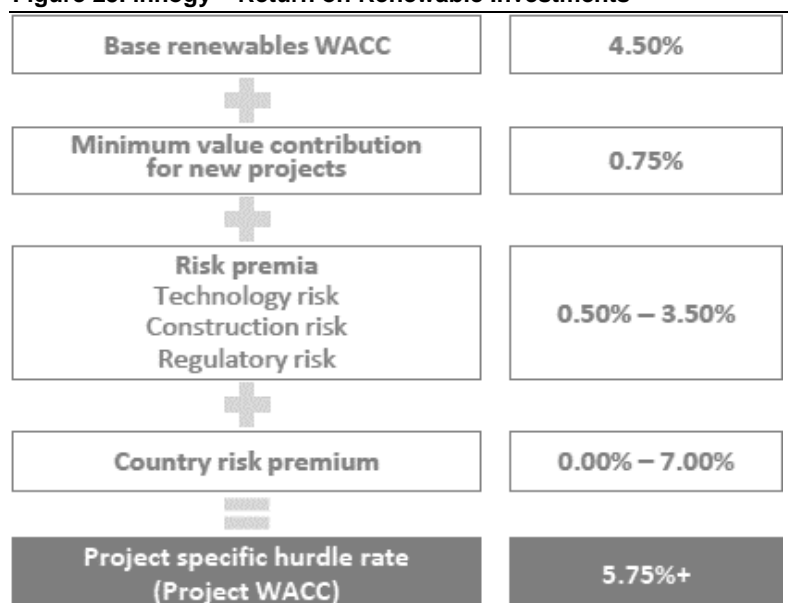


Source: Company data and Santander Investment Bolsa estimates.

Innogy's internal rate of return at FID in recent projects is c9% post tax. While its offshore IRRs are fairly similar in Germany and the UK, at 9%, there is more divergence in onshore returns, which are c7.5% in Germany and The Netherlands and 11% in the UK and Poland.

Innogy's investment criterion is based on a project WACC of 5.75%-15.75%, depending on the country (country risk ranges from 0% to 7% and the risk premium from 0.5% to 3.5%). According to innogy, in its **core business, hurdle rates are 5%-8%**, while for **new markets and technologies** it is expecting a much wider range: **5%-15%**.

Figure 25. innogy – Return on Renewable Investments



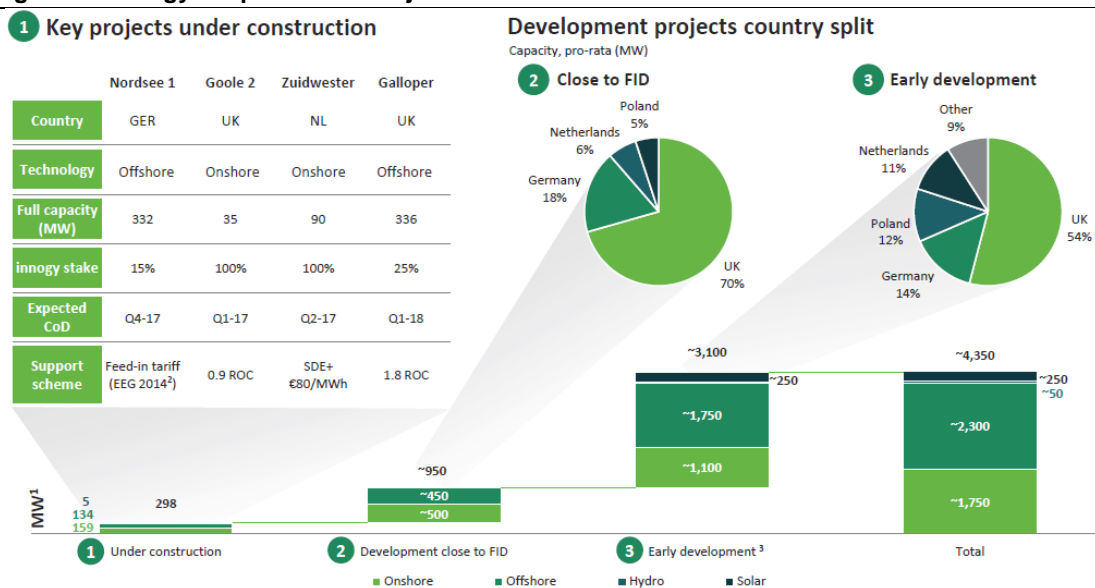
Source: Company data



Innogy aims to continue growing in renewables. Its planned **renewables capex is €1.3bn for 2016-18**. How and where it wants to grow is summarised in Figure 26 below:

- **Pipeline:** On top of the 298MW under construction, innogy has c950MW that are in the final investment decision (FID) phase, plus another 3.1GW in an early development stage. The **pipeline is focused on onshore and offshore windfarms**. Out of the 950MW close to the final investment decision FiD, c450MW is offshore and, by geography, 70% is the UK. This means that the UK would become its main country in the coming years.
- **Solar PV:** So far, innogy has no exposure to this market except for 250MW in early development. It sees the advantages of this technology as its short construction period, low technological complexity and a cost that is set to decrease considerably in the coming years, from USD130/MWh now to USD55/MWh by 2025 (IRENA The Power to Change: Solar and Wind Cost Reduction Potential to 2025). Projections in the 2015/16 Fraunhofer ISE annual solar PV report are as follows: the global capacity of solar PV should increase from 242GW in 2015 to 540GW by 2019, which would be more than double in just four years. We think growth in solar PV is one of the main drivers in the utility sector but we think this is a game that small companies play better than big ones. That said, innogy could benefit from the sector's growth by helping clients to operate and maintain their installations with integration systems and offer them storage facilities/cells and installation services. This is the first step to winning the confidence of 'prosumers' and turning them into clients for the Retail division as well.
- **New markets:** Innogy is considering expanding to Turkey, Ireland and the US. We think competition is going to be tough in these markets and returns likely to be lower. In the US there are a large number of more experienced competitors that are already in the market and have plans to expand.
- **National targets in Europe: a positive for innogy:** European countries are still far from their targets in terms of the weight of renewables in total energy consumption for 2020. In 2014, the ratio was 15.3% vs the 20% targeted for 2020 and the EU has set a new target for 2030 of 27%.

Figure 26. innogy – Pipeline and Projects



Note: (1) Pro-rata capacity. (2) EEG compression model: €194/MWh; €154/MWh; €39/MWh. (3) Includes <25MW hydro.
Source: Company data.

FUTURE OF RENEWABLES IN GENERATION MIX

There is clearly a move to increase investment in renewables to cover demand and substitute conventional generation plants when their useful lives end. According to several different sources, renewables (on/offshore wind and solar PV mainly) have an attractive growth profile in the next decade, with a decreasing LCoE (levelised cost of electricity) that will allow them to compete with conventional generation. As well as reducing CO₂ emissions, renewables reduce countries' exposure to commodity imports. With the information available to date, it looks as if energy demand should decline in Western European countries as buildings and appliances become more efficient.

However, the big change could be electric vehicles. German government support means the number of electric vehicles there is expected to multiply by 10x, to 500,000 vehicles in 2019 vs 50,000 in 2015. According to the International Energy Agency (IEA), by 2020 c3% of all vehicles worldwide will be electric. This is certain to have an impact on electricity demand: more infrastructure and reliable, predictable capacity will be needed (security of supply should be provided by conventional generation until batteries are sufficiently developed). **This is where a better grid and reliable renewable assets are needed.**

Figure 27. IEA – Electric Vehicle Projections for 2020

Countries with announced targets to 2020 or later	2015 EV stock (thousand vehicles)	2020 EV stock target (million vehicles)	EV share of all cars sold between 2016 and 2020	EV share in the total 2020 stock
Austria	5.3	0.2	13%	4%
China*	312.3	4.6	6%	3%
Denmark	8.1	0.2	23%	9%
France	54.3	2.0	20%	6%
Germany	49.2	1.0	6%	2%
India	6.0	0.3	2%	1%
Ireland	2.0	0.1	8%	3%
Japan	126.4	1.0	4%	2%
Netherlands**	87.5	0.3	10%	4%
Portugal	2.0	0.2	22%	5%
South Korea	4.3	0.2	4%	1%
Spain	6.0	0.2	3%	1%
United Kingdom	49.7	1.6	14%	5%
United States***	101.0	1.2	6%	2%
Total of all markets listed above	814.1	12.9	7%	3%

Source: IEA Global Electric Vehicle Outlook 2016 report.

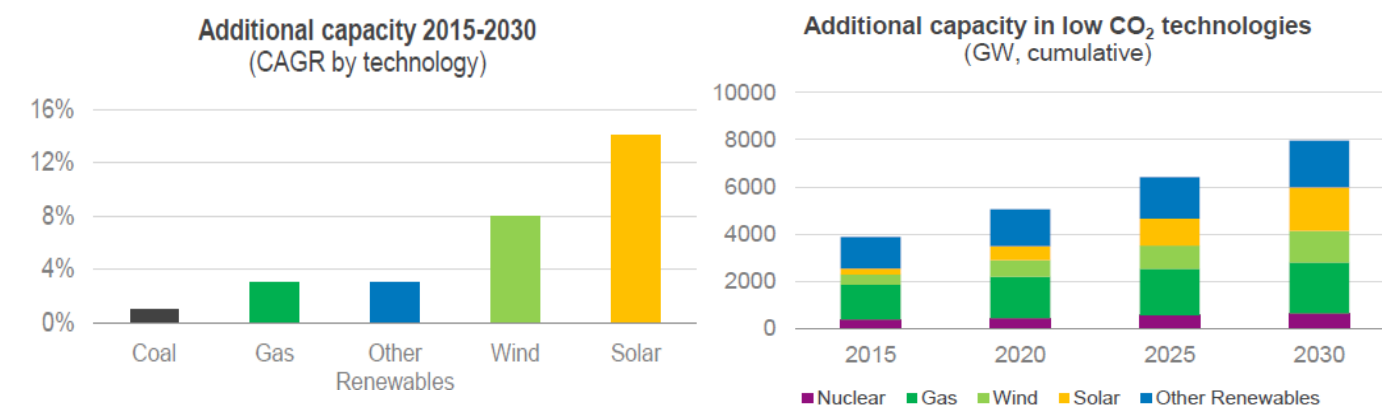
We think innogy has a unique asset portfolio, well focused on society's needs in the coming years. Its experience and knowledge of the grid and retail businesses should help it understand the prosumer's needs. Furthermore, with an independent balance sheet, free of RWE AG's financial constraints, innogy could focus on growth in renewables. We will look briefly at four main ideas: (1) growth in the renewable sector; (2) the trend in the LCoE (levelised cost of electricity) by technology; (3) the 'farm down' model (see page 27) and (4) the implications of technological disruption in the utility sector.



Growth in Renewables: Offshore Should Be Key for Innogy

Renewables are growing worldwide for political, environmental and economic reasons and this is likely to continue. **At Engie's recent workshop**, we saw several very interesting forecasts. According to Engie, and the IEA, the capacity of low CO₂ technologies will double in the next 15 years, led by solar PV and wind the main drivers, with CAGRs 2015-20 of c14% and 8%, respectively. This includes 100GW of solar PV in China by 2020, and 100GW of solar PV and 60GW of wind in India by 2022.

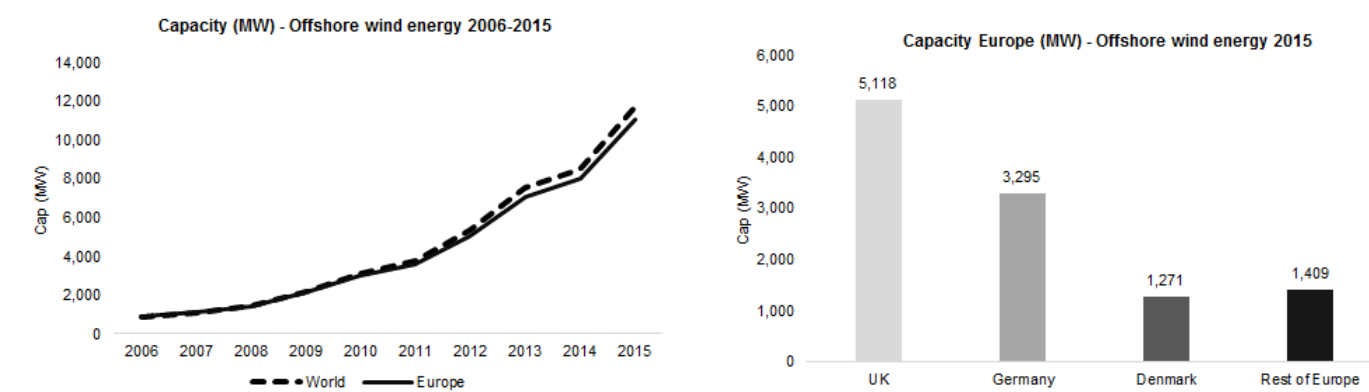
Figure 28. Expected Growth in Low CO₂ Technologies, 2015-30



Source: Engie, IEA and Bloomberg New Energy Finance.

Innogy should benefit most from this in wind, as its presence in solar is relatively small (on August 29 innogy announced the acquisition of Belectric, Solar & Battery, which will increase its presence in this business). Offshore wind has developed mainly in Europe in the last decade. In 2015, total offshore wind capacity worldwide was 11.7GW, of which 11.1GW was in Europe. Germany, the UK and Denmark are the countries where most capacity has been installed (in part due to their geographic characteristics).

Figure 29. Offshore Wind Capacity – Installed Capacity, 2006-15 (LHS), Capacity by Country in Europe, 2015 (RHS)

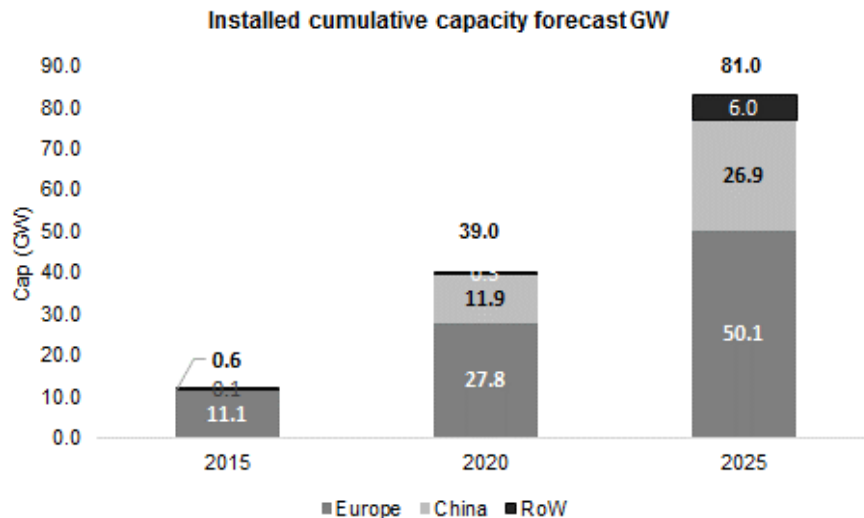


Source: IRENA.

Innogy should benefit from its experience in building and operating offshore wind assets According to The International Renewable Energy Agency (IRENA), capacity in Europe alone will multiply by almost five times in the next ten years. Assuming it maintains its market share, **innogy should increase its capacity by c4GW in the next decade.**

Growth in China is going to be impressive as well, but we do not see many opportunities there for innogy.

Figure 30. Global Offshore Wind Capacity – Growth Estimates, 2015-25

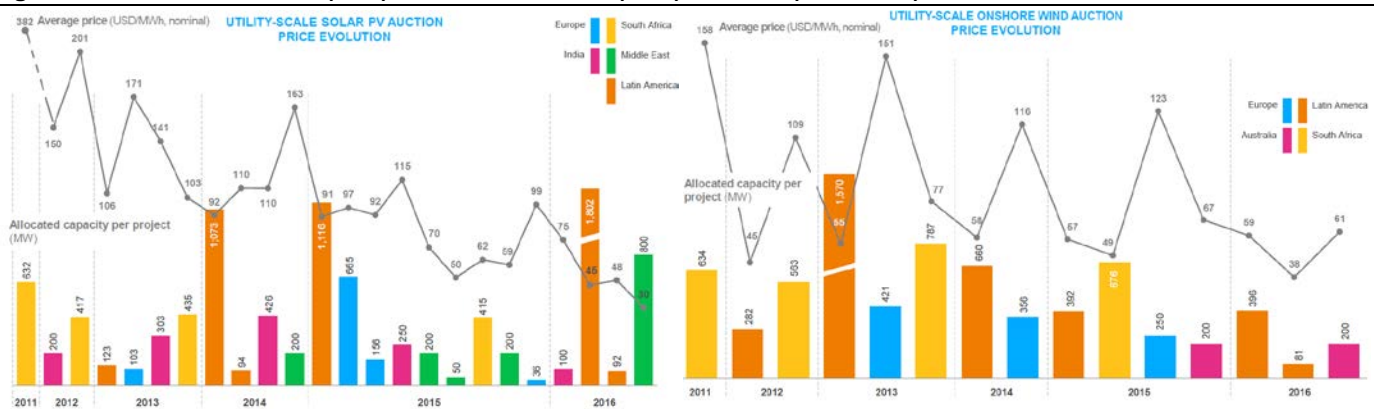


Source: IRENA, Bloomberg Energy and Bloomberg New Energy Finance.

Renewable LCoE Falls Sharply, Thanks to Construction Costs and WACC

The LCoE reflects not only the marginal cost of a plant but the total cost of the project. In recent years we have seen a huge reduction in the LCoE of solar PV and onshore wind. The latest contracts show prices that could even compete today with a conventional plant at a marginal price: a recent contract to build a solar PV plant in the Middle East closed at USD30/MWh. However, we also have the reference of the Mohammed bin Rashid Al Maktoum project in Dubai, a 200MW solar PV plant that will receive a price of USD58.4/MWh (c/€53/MWh) under a 25-year PPA. We prefer to take as a reference this last one and two other recent solar PV contracts in Latin America, done at cUSD46/MWh. Recently, there was an onshore wind auction in Chile priced at cUSD54/MWh.

Figure 31. LCoE for Solar PV (LHS) and Onshore Wind (RHS), 2011-16 (USD/MWh)



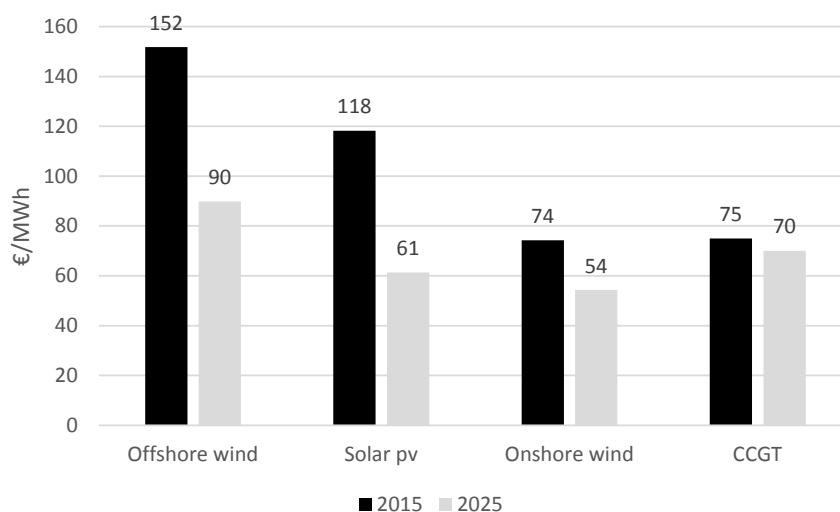
Source: Bloomberg New Energy Finance, ENGIE Low CO2 Power Generation Market Intelligence.



So what are the expectations for the coming years? All the studies we have analysed show that the LCoE of these technologies is higher than the prices obtained in contracts. That is why this trend in achieved power prices is so surprising and the market is questioning the returns of these projects. **We think the best way to see the trend is to compare different studies.** We have analysed recent research by IRENA, Bloomberg New Energy Finance, MAKE, EY and the resume data in several companies' presentations. Based on this, we have calculated an average for the LCoE today and what these sources expect for 2025.

We conclude that, in a decade, solar PV and onshore wind should have a lower LCoE than CCGTs, which should not change much. In the case of onshore wind, we have seen that these sources consider today's renewable LCoE is slightly above that of CCGTs. IRENA expects a decrease in the LCoE for onshore windfarms of 26% to c€45/MWh, but in the example the load factor is c29% (19% in the case of solar PV). **In the case of offshore wind,** the LCoE should be still above the CCGT, but the gap will have narrowed.

Figure 32. LCoE – Forecast LCoE of Different Technologies, 2015-25E

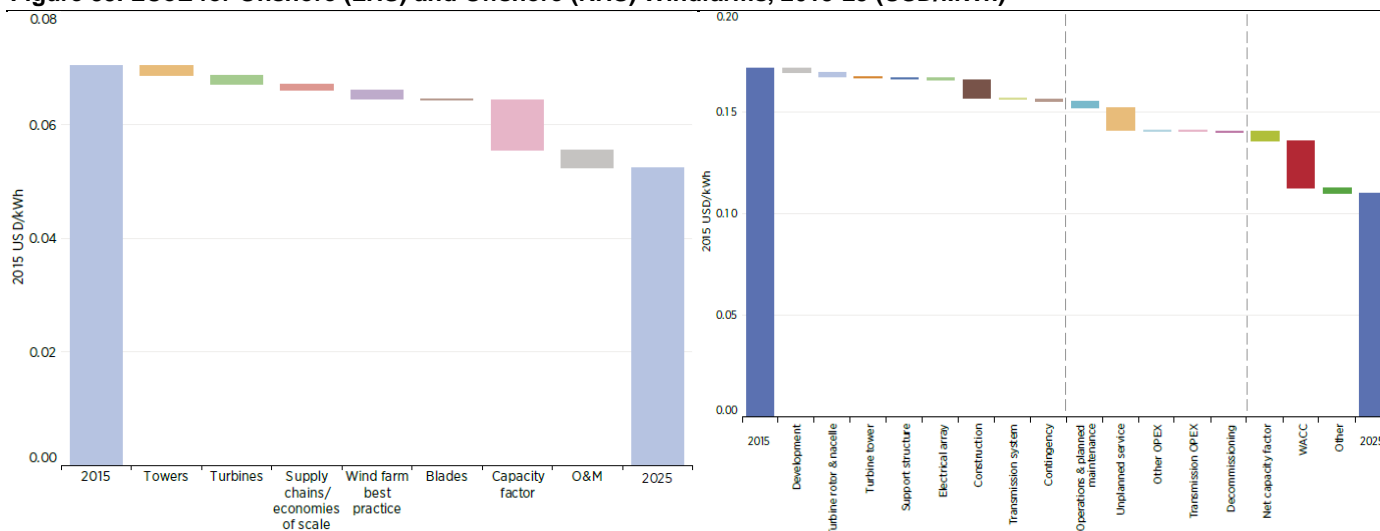


Source: IRENA, Bloomberg New Energy Finance, MAKE, EY, company data and Santander Investment Bolsa estimates.

What is driving the cost down? According to IRENA's report, there are several factors that are reducing the LCoE of on/offshore windfarms. The main ones are:

- **Onshore windfarms:** The load factor of the plants, bigger turbines and lower O&M cost are the main reasons.
- **Offshore windfarms.** (1) construction costs (an example from innogy is the number of days needed to install each foundation, which was reduced from 8.2 in the case of Nordsee Ost (CoD 2015) to just 2.3 days for Nordsee One (CoD 2017); (2) less need for unplanned services due to the learning curve, which accounts for c43% of the total reduction in the LCoE, and (3) a decrease in the WACC. According to IRENA, the WACC should fall from the current 8%-10% to 7.5%. The improvement in WACC would come from more extensive developer experience, leading to improved project development and commissioning practices, while a wider range of financing institutions will acquire experience with offshore wind farm risks and will thus be able to price these risks more realistically.

Figure 33. LCoE for Onshore (LHS) and Offshore (RHS) Windfarms, 2015-25 (USD/MWh)



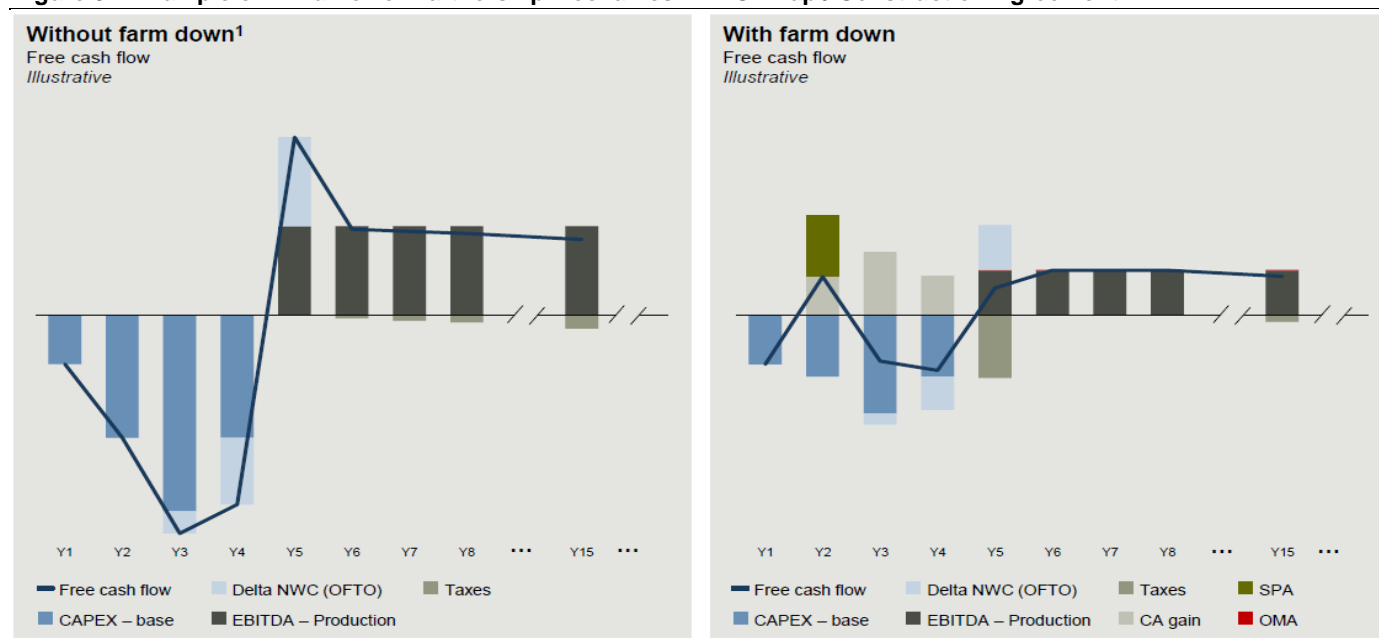
Source: Irena.

‘Farm Down’ Model

We have seen how the sector is tending to this format to reduce risks and avoid major capital expenditure. The farm down model consists of selling a stake in the project during the construction process. This implies cash in for the disposal and reduces the capex allocation in the project. In other words, it is a way to monetise part of the project at the beginning, instead of spread over its whole life.

Innogy used ‘farm down’ with Galloper and Nordsee One in 2015 and it now has stakes of 25% and 15%, respectively. The cash flow profile with and without farm down is shown in the charts below, taken from a recent Dong Energy presentation.

Figure 34. Example of Wind Power Partnership Mechanics – EPC Wrap / Construction Agreement



Note: Please note that this is an illustrative example and does not reflect any particular transaction. The only purpose of the example is to illustrate the Wind Power partnership mechanics
1. Hypothetical case without farm down is assuming the wind farm is developed and operated within the same entity without any inter-company transactions

Source: Dong Energy, May/June 2016 presentation.



Implications for the Sector

Although the implications for conventional generation of the fall in renewables' LCoE are negative, this opens new areas of growth for those companies that adapt quickly to the new environment.

We are going to focus on conventional generation, even though innogy has only negligible exposure to it (800MW in G&I Germany of hydro and small lignite and coal). This highlights the innogy's unique asset profile, which should benefit from technological disruption. Each MW installed in renewables means less fossil-fuel consumption, meaning that renewables will cannibalise demand for coal and gas. The impact of these changes is considerable and is likely to end up changing the world's generation mix. Eventually, this is likely to weaken commodity prices directly and, indirectly, to reduce electricity prices. That would have a negative impact on all technologies, but particularly on the infra-marginal ones (hydro, lignite and nuclear). This could have a negative impact in innogy as it has 500MW of hydro capacity, of which 75% is linked to wholesale prices.

- **Peak prices flattening**, particularly for PV as it produces more during hours of higher demand. This may not only lead to flattening prices but also to off-peak level prices at moments of peak demand (lower prices in spite of higher demand). This is obviously pretty bad news for utilities, since wholesale prices are usually averages or weighted averages of prices that can vary substantially at different times of day. This means that the impact on generators' P&Ls could be much higher than the average price reduction may suggest.
- **Wind and PV are likely to lead the sector's asset replacement.** A large proportion of the capacity that goes offline in future (initially mainly nuclear and, subsequently, coal) is likely to be replaced by wind and solar PV in preference to traditional technologies. This would change the mix, not only of the sector as a whole, but also of the individual companies, something that we think the market is ignoring when valuing independent stocks.
- **Wind and PV are likely to compete in wholesale markets.** The threat is that wind and PV may start to expel plants that are a long way from the end of their theoretical lives (not just replacing old plants as in the previous point). This could happen if the learning curves of these technologies continues in line with past progression. If this were the case, wind and PV would reach grid parity soon. This means that their total costs would not only be below the LCoEs of other technologies, but also below the marginal cost of the system (spot and forward prices). This is likely to take time, because there are probably markets that are more attractive than Europe. However, the threat is there and, if it materialises, it would have a negative impact not only on the expelled technologies (coal and gas) but on all of them (hydro and nuclear included). Technologies will only be expelled through lower prices and this affects the margins of the whole generation park.

- **Traditional utilities are likely to lose share in generation and supply.** We believe that the possibility of the traditional integrated companies losing significant market share in generation and, to a lesser extent, in supply, is a real one.
 - **In generation,** this happens because PV is not the natural business of the big, traditional utilities. PV has no barriers to entry and newcomers have competitive advantages vs the traditional utilities:
 - (a) **Agility:** Being smaller, newcomers tend to be more agile in taking investment decisions, something that is crucial in this business.
 - (b) **Lower cost of capital:** Newcomers usually enjoy a lower cost of capital than the traditional utilities because: (a) project finance allows higher leverage than debt at the corporate level (innogy for example is changing its financing profile in offshore wind farms from debt at holdco level to project finance); and (b) the equity for many renewable projects and ventures comes from pension funds and other financial institutions that require low returns.
 - (c) **No cannibalisation:** Newcomers do not have existing plants that would suffer from new generation being commissioned (no cannibalisation risk).

Onshore wind has also started to take market share from traditional generation. It has started to 'commoditise', as opposed to **offshore** wind, which is far more complex and demanding (technically and financially) and **not an appropriate business for newcomers**, in our view. **That is why we think innogy has a good niche to grow in this segment.**

- **In supply,** because we expect new supply companies to appear thanks to the 'firm capacity' renewables can grant (thanks to the law of large numbers, even intermittent renewables like wind and PV can provide firm capacity to hedge supply risks). This may take time though, as it would require a certain critical mass and geographic concentration of assets, which may imply complex agreements affecting several parties (JVs, M&A, etc.).
- **Installation of renewables is likely to accelerate:** The question is not whether this will happen, but when, in our view. The process cannot be stopped, but it could accelerate (in the case of Germany, as solar and wind capacity has increased so much, capacity ceilings will be introduced again from 2017 onwards) depending on:
 - **Political decisions.** Social, political or environmental reasons could lead politicians to speed up the process. This would be very easy to do through subsidies or guarantees (floors for wholesale prices, for example).

Subsidies, incentives and other regulatory schemes obviously have a cost for the system that must be covered by access tariffs, national budgets or other mechanisms. However, the costs of accelerating the process should be in line with the learning curve and renewables' LCoE.
 - **Battery development.** Wind and PV's biggest disadvantage is their intermittency and the fact that they are not manageable. These problems can be overcome, or at least significantly reduced, by: increasing interconnections; the development of smart grids and grid chains; and improvements in bulk storage mechanisms, especially the development of batteries (developments here, although very incipient, look promising, and prices have fallen by 60% since 2010).



INNOGY VS PEERS

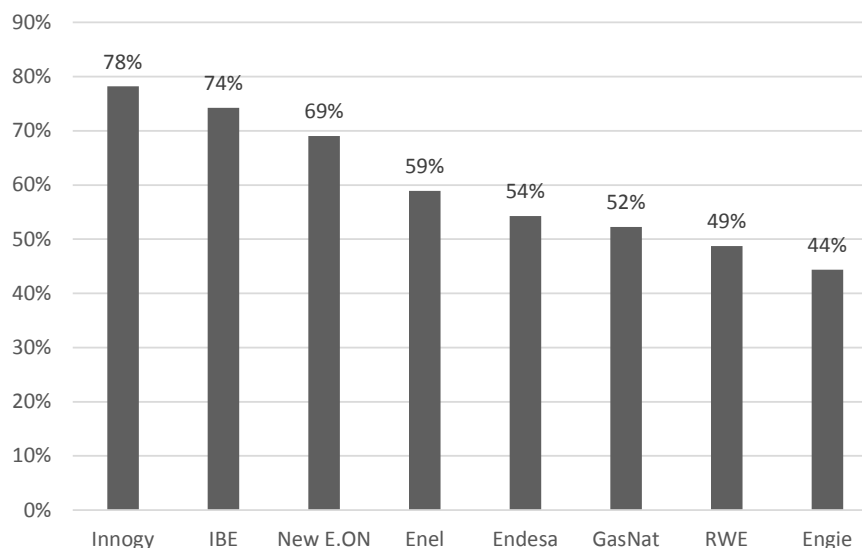
GROWTH, ATTRACTIVE DIVIDEND WITH LEVERAGE IN LINE WITH PEERS

First, we will consider who innogy's peers are. Due to its portfolio of assets with a negligible exposure to conventional generation (it has two small lignite and hard coal plants in the G&I division that represents less than 1% of the EBITDA) and no nuclear liabilities (innogy sought to ensure that it will not be held liable for RWE's historic liabilities, in particular nuclear liabilities, under existing law) there are no obvious close peers. However, given the trend in the sector is towards the three Ds: Decarbonisation, Decentralisation and Digitalisation, the main integrated European utilities are increasing their investments in grids and renewables (Iberdrola was one of the first to decide to be more focused on these two businesses). Owning these kind of assets is one thing, but utilities also need to be prepared for the technological disruption, to improve their grids (smart grids) and offer prosumers (producer-consumers) the best services. In our opinion, innogy will be benchmarked against the integrated utilities, although the market should differentiate between the quality and the business mix of each of them.

We are comparing innogy mainly with the following group of companies: Iberdrola (the most similar in terms of assets, growth, dividends), E.ON (now that Uniper is trading –since September 12– E.ON will be the main peer, in our view, despite the German nuclear liabilities on its balance sheet); Enel, Engie (these last two focus on distribution, renewables and regulated/quasi-regulated business and are reducing their exposure to pure merchant activities), EDF (in some calculations), Endesa and Gas Natural. When we refer to the sector in this section, we are referring to this group of companies.

Regarding the business mix, we have taken the 2015 EBITDA of the grid and renewable divisions for each of the companies. In the case of innogy, these account for c78% of total EBITDA. According to the company, the overall exposure to regulated or quasi-regulated activities is 60% (80% in regulated activities in G&I and 60% in renewables). The most similar companies would be Iberdrola and New E.ON (where we include German nuclear EBITDA, without which the ratio would rise to 82%). The rest, as of today, would average more than 50% (see chart below).

Figure 35. Sector – Weight of the Grid and Renewable Businesses in 2015 EBITDA



Source: Company data and Santander Investment Bolsa estimates.

Regarding dividends, innogy's policy is in line with the sector's and should be one of the most attractive in terms of growth. We assume a 77% pay-out, in the upper part of its proposed range of 70%-80%. The reason is that innogy has already said that for the 2016 DPS its intention is to reach c80%. This level of pay-out does not really affect the END/EBITDA ratio much, as we are expecting 3.6x by 2020E. We are expecting a 2016E-20E CAGR of 7.3%. The closest peers here are Enel, as we are expecting a c15% 2016E-20E CAGR in dividends, and Iberdrola, where we forecast a 5% CAGR in 2016E-20E with a 76% pay-out.

We think that the dividend yield is attractive: 5.3% on average in 2017E-20E. However, it is not one of the highest at this stage. The recent weakness in the sector in recent weeks, mainly of the more regulated stocks, has increased their dividend yields. In mid-September, the sector average was c5.3%, whereas now it is closer to 6.0%. Thanks to the growth at EPS/DPS level, we expect innogy to reduce the difference vs the sector in the coming years.

Figure 36. Sector Dividends – Forecasts for innogy and the Sector, 2016E-20E

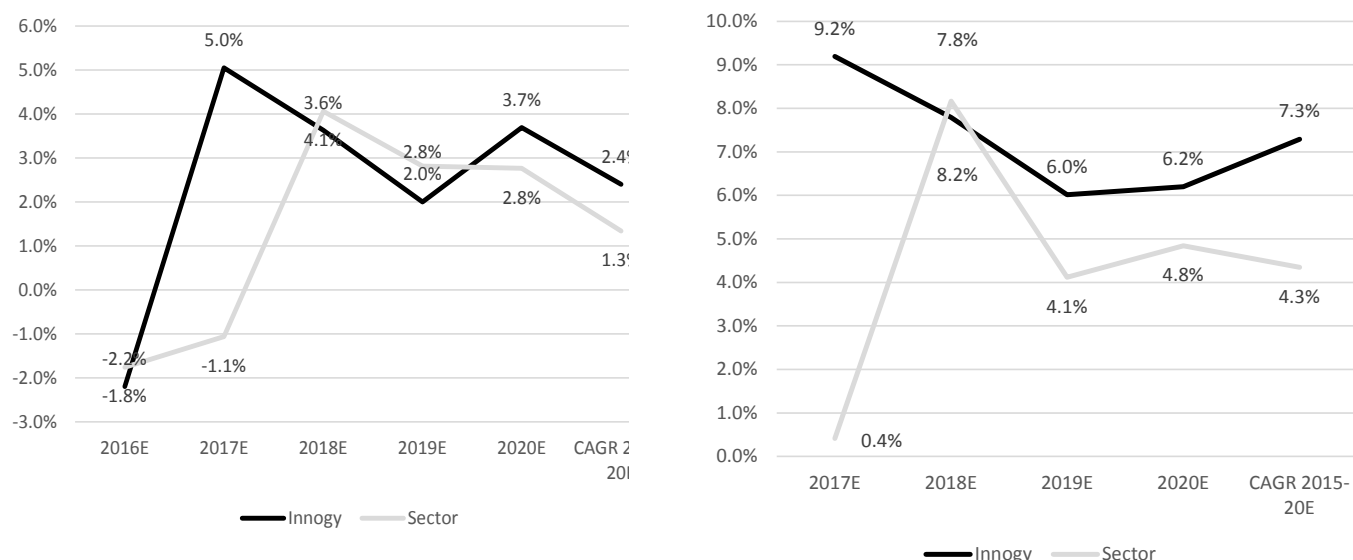
Company (€)	2017E	2018E	2019E	2020E	Average Yield	CAGR 2016-19
IBE - DPS	0.30	0.32	0.33	0.35	–	5.0%
Yield	5.4%	5.6%	5.9%	6.2%	5.8%	–
GAS - DPS	1.00	1.00	1.00	1.00	–	0.0%
Yield	6.2%	6.2%	6.2%	6.2%	6.2%	–
ELE - DPS	1.22	1.16	1.17	1.16	–	-1.6%
Yield	6.8%	6.5%	6.5%	6.5%	6.6%	–
ENG - DPS	1.39	1.46	1.53	1.60	–	5.0%
Yield	6.1%	6.4%	6.7%	7.0%	6.5%	–
REE - DPS	0.86	0.92	0.98	1.05	–	7.0%
Yield	5.2%	5.6%	5.9%	6.4%	5.8%	–
SSE - DPS	1.22	1.06	1.09	1.12	–	-2.8%
Yield	7.3%	6.3%	6.5%	6.7%	6.7%	–
Engie - DPS	0.85	0.70	0.73	0.75	–	-4.1%
Yield	7.3%	6.0%	6.3%	6.5%	6.5%	–
Enel - DPS	0.18	0.20	0.24	0.27	–	14.9%
Yield	5.0%	5.7%	6.6%	7.6%	6.2%	–
E.ON - DPS	0.22	0.25	0.26	0.29	–	9.0%
Yield	3.6%	4.0%	4.1%	4.6%	4.1%	–
innogy – DPS	1.50	1.60	1.75	1.85	–	7.3%
Yield	4.7%	5.1%	5.5%	5.9%	5.3%	–
Sector average yield, excluding innogy	5.9%	5.8%	6.1%	6.4%	6.0%	–
Difference innogy vs sector average	-1.1%	-0.7%	-0.6%	-0.5%	-0.7%	–

Source: Company data, Bloomberg and Santander Investment Bolsa estimates.

In terms of P&L growth, innogy should be one of the most attractive companies in the sector, according to our estimates. Its 2015-20E CAGR in EBITDA should be 2.4% vs 1.3% for the sector (mainly due to its performance in 2017E, while in the rest of the years it should be in line with the sector). Its **net income CAGR in 2016E-20E should be 7.3% vs the sector's 4.3%**. There are two main reasons for these differences: (1) **innogy's EBITDA** should grow faster due to the recovery in the supply business in the UK and the expected growth in offshore wind, while its net income should be boosted by the decrease in the financial expenses; (2) **the sector is likely to suffer** from the negative trend in achieved power price, although it should also gain from the lower cost of debt.



Figure 37. Sector – innogy vs Sector Growth Rates for EBITDA 2016E-20E (LHS) and Net Income 2017E-20E (RHS)

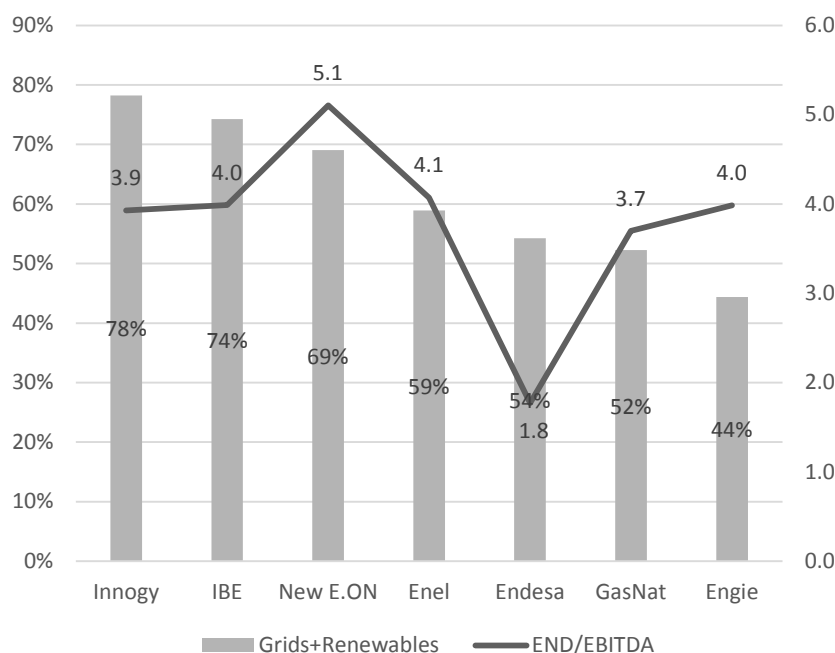


Source: Bloomberg and Santander Investment Bolsa estimates.

Lastly, in terms of leverage, we estimate that after the 11% capital increase, innogy's **END/EBITDA 2016E would be 3.9x**. The sector is around that level, excluding two cases: E.ON (which is working on strengthening its balance sheet) and Endesa, which we think is clearly under leveraged. The END/EBITDA numbers are from Moody's for 1H16. The only adjustments we have made are for E.ON (where we use our own END/EBITDA assumptions) and Endesa (which includes the acquisition of EGPW España).

Taking a view based on leverage vs exposure to grids and renewables, we think innogy compares well with the sector.

Figure 38. Sector – END/EBITDA 1H16 vs Weight of Grids+Renewables in EBITDA 2015



Note: Endesa numbers include the recent acquisition of EGPW España.
Source: Company data and Santander Investment Bolsa estimates.

UK EXPOSURE

NUMBER TWO COUNTRY IN TERMS OF EBITDA

The UK has been a significant market for RWE AG for many years and now it is for innogy as well. We will examine innogy's exposure to the UK for two main reasons (1) Brexit and its implications for the British pound, and (2) the supply market, as it is one of the most competitive worldwide and innogy is looking for solutions to a number of problems there.

The UK should account for an average c10.2% of group EBITDA in 2016E-20E. This compares with the c7% in 2015E, due to the losses in the supply business.

- **Renewables:** According to our calculations, more than 40% of the EBITDA of this division comes from the UK where the group has onshore and offshore projects. We think innogy will continue to invest in the UK: 57% of the 4.4GW of group projects under construction and in the pipeline are in the UK.
- **Supply:** The weight of the UK in the Retail division is likely to increase. In 2013-14 it reached c30% of the EBITDA, but retreated in 2015 and 2016 because of retail billing problems, among others. Once the situation is more normal in 2017E-18E, we expect exposure to be c17%. This exposure is lower than in 2013-14 for two reasons: (1) we prefer to be cautious until we see the result of the efficiency program launched for this division; and (2) the East region, mainly Germany, is performing well and results and exposure have increased.

Figure 39. innogy – Exposure to the UK at EBITDA level, 2016E-20E

(€mn)	2015E	2016E	2017E	2018E	2019E	2020E
EBITDA UK	299	385	391	491	507	513
UK on total EBITDA	6.6%	9.2%	9.0%	10.9%	11.0%	10.8%

Source: Santander Investment Bolsa estimates.

Exchange Rate Impact

We expect the EUR/GBP rate to have its most negative impact in 2016E and 2017E but this should be offset by an improvement in the retail business. Our estimates for the EUR/GBP are close to parity from 2017E onwards.

Figure 40. GBP/EUR Exchange Rate, 2013-20E

	2013	2014	2015	2016E	2017E	2018E	2019E	2020E
GBP/EUR	1.18	1.24	1.38	1.23	1.06	1.06	1.06	1.06

Source: Bloomberg and Santander estimates.

We have done two exercises and these are the conclusions:

- **Leaving the EUR/GBP rate at 1.16, the current market level, from 2017 onwards** would imply an increase of c1.1% in EBITDA and 1.4% in adjusted net income in the period 2017-20 vs our group forecasts. As innogy's biggest division, G&I, has no exposure to the UK; the impact is relatively small. In terms of valuation our range would increase by c2.5%.
- **Applying parity from 2017 onwards:** As our estimates are already based on a EUR/GBP rate of 1.06, the impact would be minor, -0.7% in EBITDA and -0.9% in adjusted net income on average in 2017E-20E. In terms of valuation our range would decrease by c1.3%.



Figure 41. innogy – Sensitivity to Changes in the EUR/GBP at EBITDA and Adjusted Net Income Level, 2017E-20E

(€mn)	2016E	2017E	2018E	2019E	2020E	2017E	2018E	2019E	2020E
EUR/GBP	1.23	1.06	1.06	1.06	1.06	–	–	–	–
Retail	51	96	197	211	215	–	–	–	–
Renewables	335	294	294	296	298	–	–	–	–
EBITDA	4,189	4,346	4,502	4,591	4,759	–	–	–	–
Adjusted net income	1,065	1,163	1,254	1,329	1,411	–	–	–	–
EUR/GBP	1.23	1.16	1.16	1.16	1.16	–	–	–	–
Retail	51	105	215	230	235	9.3%	9.3%	9.3%	9.3%
Renewables	335	322	322	323	326	9.3%	9.3%	9.3%	9.3%
EBITDA	4,189	4,382	4,550	4,643	4,814	0.8%	1.1%	1.1%	1.2%
Adjusted net income	1,065	1,171	1,272	1,351	1,436	0.7%	1.5%	1.6%	1.7%
EUR/GBP	1.23	1.00	1.00	1.00	1.00	–	–	–	–
Retail	51	91	185	198	202	-6.0%	-6.0%	-6.0%	-6.0%
Renewables	335	277	277	278	280	-6.0%	-6.0%	-6.0%	-6.0%
EBITDA	4,189	4,322	4,471	4,557	4,723	-0.5%	-0.7%	-0.7%	-0.8%
Adjusted net income	1,065	1,158	1,242	1,315	1,396	-0.4%	-1.0%	-1.1%	-1.1%

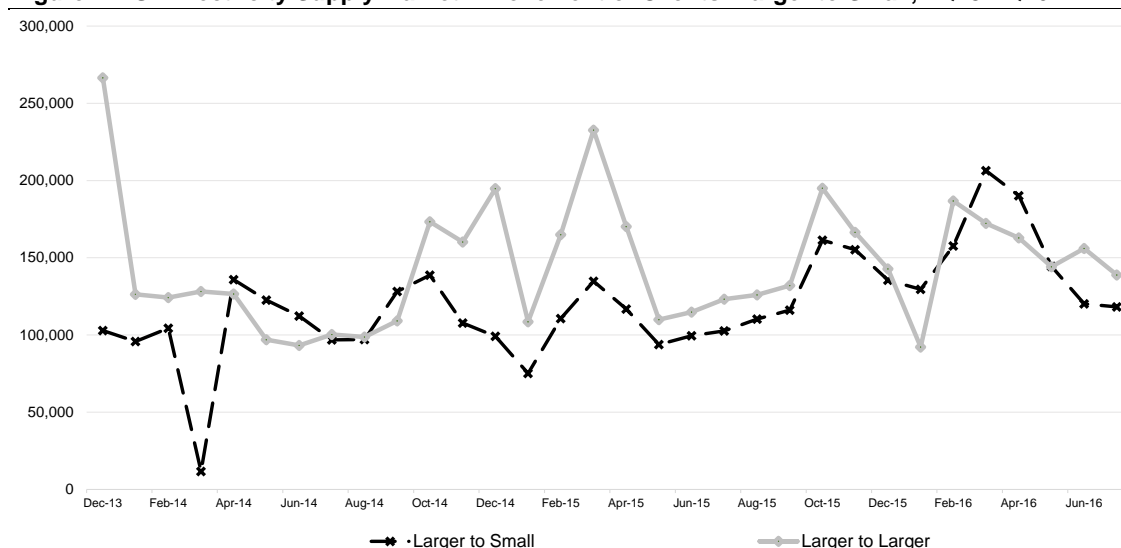
Source: Santander Investment Bolsa estimates.

Fierce Competition in the Supply Business

The UK gas and electricity market is one where competition is most intense and the number of new players rivalling the traditional ‘Big Six’ has increased substantially in the last four years. In that time, the new players have increased their share of the electricity market from zero to 13% and of the gas market from zero to 14%. The main conclusions we extract are:

- **The trend in power prices has helped the newcomers.** When power prices fall, it is easier to offer lower prices and gain market share. However, when power prices rise, that is more difficult. Power prices have decreased in recent years. The chart below shows the movement of clients in the electricity sector. We can see how, since power prices began to increase this year, fewer customers have been switching.

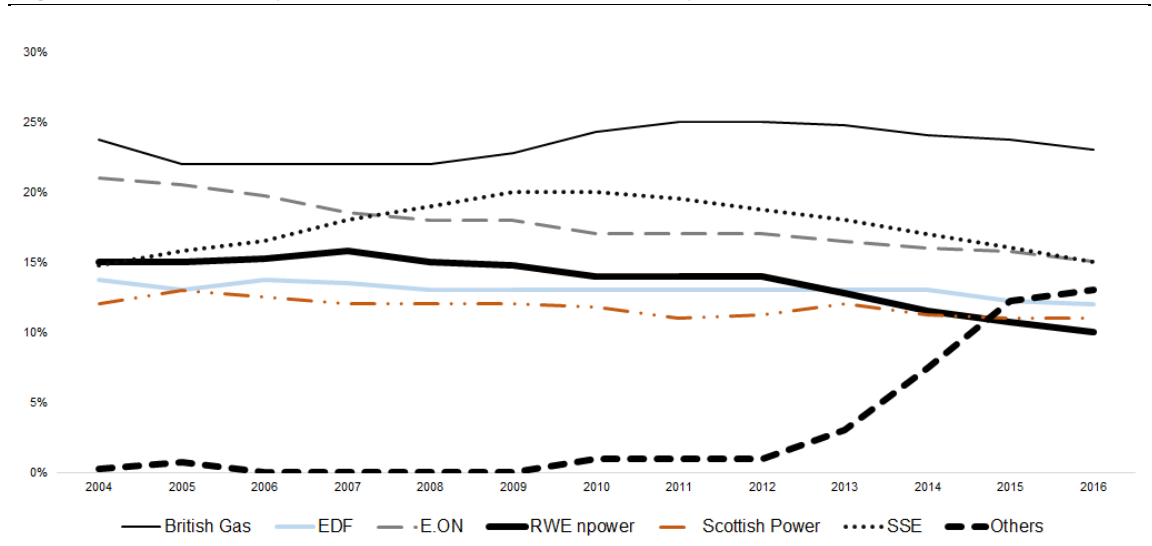
Figure 42. UK Electricity Supply Market – Movement of Clients: Larger to Small, 4Q13-2Q16



Source: Energy-UK.

- **In electricity**, the companies that lost most market share between 2012 and 2016 were RWE/Innogy and SSE, which dropped from 14% to 10%. The rest lost c2 percentage points. In this period, the new companies reached a 13% market share.

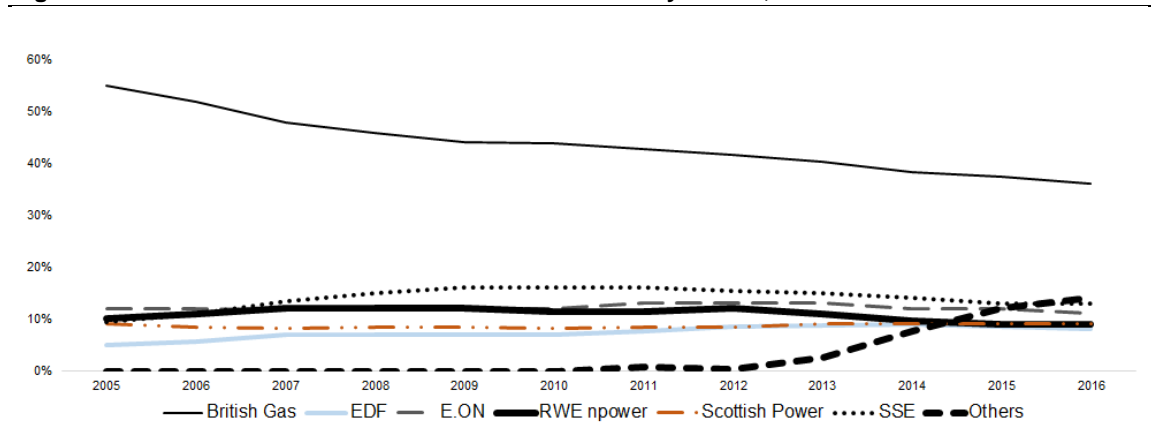
Figure 43. UK Electricity Market – Market Share in Electricity, 2004-2Q16



Source: OFGEM.

- **In gas, British Gas has lost most market share, but RWE/innogy and E.ON have each lost c2.5 percentage points.** New suppliers have a combined 14% market share, more than any of the Big Six (excluding British Gas).

Figure 44. UK Gas Market – Market Share in the Electricity Market, 2005-2Q16



Source: OFGEM.

Innogy wants to regain market share. We need to ask how and at what price? The first step is to resolve the problems with residential customers in 2015, then it needs to regain customer confidence. Thirdly, it needs to make good offers, (which could have a negative impact on margins) complemented by new products (which could support margins). In our estimates we have an improvement in margins in 2016E-19E, based on the company solving the billing problems and achieve cost efficiency measures. Beyond that, we maintain a stable margin of c3.3%.

Figure 45. innogy – UK Retail Main Data, 2013-20E

(€mn)	2013	2014	2015	2016E	2017E	2018E	2019E	2020E
Sales	9,396	9,454	9,561	8,410	7,277	7,422	7,571	7,722
EBITDA	366	294	-65	51	96	197	211	215
EBITDA margin	3.9%	3.1%	-0.7%	0.6%	1.3%	2.6%	2.8%	2.8%

Source: Company data and Santander Investment Bolsa estimates.



FINANCIALS

ADJUSTED NET INCOME SHOULD POST CAGR OF 7.3% 2016E-20E

A company whose activity is 60% regulated/quasi-regulated should provide some stability and visibility in results. Later on in this section we will discuss the main drivers in each of the subdivisions, but let us highlight a few things first.

Between now and 2020 innogy faces some significant changes: (1) new regulatory periods for gas and electricity will begin in 2018/19 respectively in Germany, with a decrease in the allowed returns; (2) regulations are due to be updated in Hungary and Slovakia; (3) greater competition in the supply business, especially in the UK, where innogy needs to improve its earnings; and (4) low power prices in generation, which have an impact on some of the renewable assets, mainly the hydro ones.

Despite these challenges, we think innogy **should be able to achieve moderate but stable growth, due to:** (1) growth capex in all the divisions; (2) changes in German grid regulations that should almost fully compensate the decrease in returns; (3) efficiency programs, particularly in the UK supply business; (4) new capacity installed in renewables, c1GW by 2020E and (5) a decrease in financing costs from 5.4% in 2016E to 4.7% by 2020E. In summary, our estimates for 2016E-20E are:

- **P&L:** We take 2016 as a base year, based on our assumption of an absence of one-offs (in 2015 there were €336mn) and because below EBIT, the period 2013-15 is not a reference due to substantial changes in the balance sheet. We are expecting **moderate but stable growth in adjusted EBITDA (CAGR 2016E-20E 2.4%) and stronger growth at adjusted net income level (CAGR 2016E-20E 7.3%).**
- **Dividends:** Innogy's pay-out policy is 70%-80% of the adjusted net income. We are assuming 77%, starting in spring 2017 and we are expecting €833mn to be paid from 2016 profits. We see dividends growing by 6.8% (CAGR) in **2016E-20E**. This would imply an average yield for 2016E-20E, of 5.5%
- **FFO:** We are expecting FFO before WC of c€2.7bn in 2016E-20E, c64% of EBITDA.
- **Economic net debt (END):** The target is to reach an END/EBITDA ratio of c4x after the capital increase. For 2016E, we forecast END of €16.5bn, or 3.9x EBITDA. This ratio should fall to 3.6x in subsequent years, thanks to the increase in EBITDA and a slight increase in END.

Figure 46. innogy – Main Estimates, 2016E-20E

(€mn)	2016E	2017E	2018E	2019E	2020E
EBITDA	4,189	4,346	4,502	4,591	4,759
Adjusted EBITDA	4,093	4,300	4,456	4,545	4,713
EBIT	2,742	2,884	3,008	3,054	3,181
Adjusted net income	1,065	1,163	1,254	1,329	1,411
FFO	2,667	2,910	3,035	3,155	3,286
FFO/EBITDA	64%	67%	67%	69%	69%
Dividends to shareholders	833	890	972	1,030	1,082
Change in net debt	2,318	-272	-208	95	225
END	16,460	16,828	17,134	17,138	17,015
END/EBITDA	3.9	3.9	3.8	3.7	3.6

Source: Santander Investment Bolsa estimates.

Regarding targets, innogy has provided figures for EBITDA, END/EBITDA and pay-out for 2016-17 and adjusted net income for 2016. Our estimates are in line with this guidance.

Figure 47. innogy – Targets vs SAN Estimates, 2016-17

(€mn)	Innogy			SAN	
	2015	2016	2017	2016E	2017E
EBITDA	4,521	4,100-4,400	4,300-4,700	4,189	4,346
G&I	2,878	2,500-2,700	NA	2,540	2,663
Retail	988	1,000-1,200	NA	1,097	1,156
Renewable	818	600-800	NA	719	691
Adjusted net income	NA	1,100	NA	1,065	1,163
Target END/EBITDA (x)	–	4.0	4.0	3.9	3.9
Pay-out on adjusted net income	–	70-80%	70-80%	78%	77%

Source: Company data and Santander Investment Bolsa estimates.

CONSOLIDATED EBITDA

In a context of moderate growth in consolidated EBITDA in the next few years we note that 2016 is a special case, as innogy accounted for €336mn one-offs in 2015. Excluding those, LfL EBITDA would be flat vs 2015. We are expecting a growth of c3.6% from 2017 onwards, thanks to renewables and despite the new German grid regulations in 2018/19.

Figure 48. innogy – EBITDA by Division and Subdivision, 2013-20E

(€mn and % change)	2013	2014	2015	2016E	2017E	2018E	2019E	2020E
Grids & Infrastructure	2,789	2,862	2,878	2,540	2,663	2,676	2,686	2,768
o/w Germany	1,998	2,223	2,016	1,799	1,888	1,873	1,859	1,927
o/w East	791	639	862	740	775	802	827	840
Retail	1,113	1,069	988	1,097	1,156	1,248	1,250	1,260
o/w Germany	279	394	583	580	578	563	549	543
o/w Netherlands & Belgium	257	191	236	242	238	228	215	210
o/w UK	366	294	-65	51	96	197	211	215
o/w East	211	190	234	225	243	260	276	292
Renewables (1)	448	524	818	719	691	742	816	891
o/w onshore wind	155	225	248	208	212	227	241	257
o/w offshore wind	96	170	351	414	381	386	447	503
o/w hydro	67	104	88	88	84	81	78	75
o/w others & op income	130	25	131	9	14	47	50	56
Others	-157	-157	-163	-166	-165	-163	-161	-160
EBITDA	4,193	4,298	4,521	4,189	4,346	4,502	4,591	4,759
EBITDA adjusted (2)	4,285	3,996	4,185	4,093	4,300	4,456	4,545	4,713
Grids & Infrastructure	–	2.6%	0.6%	-11.8%	4.9%	0.5%	0.4%	3.0%
o/w Germany	–	11.3%	-9.3%	-10.8%	4.9%	-0.8%	-0.8%	3.7%
o/w East	–	-19.2%	34.9%	-14.1%	4.7%	3.5%	3.0%	1.6%
Retail	–	-4.0%	-7.6%	11.0%	5.4%	7.9%	0.2%	0.7%
o/w Germany	–	41.2%	48.0%	-0.6%	-0.2%	-2.7%	-2.5%	-1.1%
o/w Netherlands & Belgium	–	-25.7%	23.6%	2.4%	-1.4%	-4.4%	-5.5%	-2.5%
o/w UK	–	-19.7%	NM	NM	90.4%	104.0%	7.1%	2.2%
o/w East	–	-10.0%	23.2%	-3.9%	8.1%	7.1%	6.1%	5.7%
Renewables	–	17.0%	56.1%	-12.1%	-3.8%	7.3%	10.0%	9.2%
o/w onshore wind	–	45.5%	10.0%	-16.3%	2.2%	7.2%	5.8%	6.7%
o/w offshore wind	–	77.5%	106.6%	17.9%	-8.0%	1.5%	15.8%	12.5%
o/w hydro	–	53.7%	-15.2%	0.5%	-4.9%	-4.1%	-3.8%	-3.5%
o/w others & op income	–	-80.8%	425.7%	-93.2%	59.0%	231.3%	6.4%	12.1%
Others	–	0.0%	3.8%	2.0%	-1.0%	-1.0%	-1.0%	-1.0%
EBITDA	–	2.5%	5.2%	-7.3%	3.7%	3.6%	2.0%	3.7%
EBITDA adjusted	–	-6.7%	4.7%	-2.2%	5.0%	3.6%	2.0%	3.7%

(1) Innogy only provides information for Renewables, while the subdivisions are our estimates. (2) Please see page 158 of the analysts' presentation for the period 2013-15; From 2016E, it is adjusted for grid disposals.

Source: Company data and Santander Investment Bolsa estimates.



G&I

This division represents 61% of total EBITDA. Excluding the positive effect of asset disposals and capital gains (€143mn, due to the consolidation of VSE in 2015), we are expecting EBITDA to grow from €2.6bn in 2015 to c€2.8bn by 2020E, thanks to growth capex and cost cutting and despite expected a reduction in returns under new German regulations.

We are expecting total RAB to go from €13.6bn in 2015 up to c€15.9bn by 2020E, while the average return should go from 6.1% to 5.2% in Germany and be flat at 6.5% in the East division.

Figure 49. innogy – G&I, Main Data, 2013-20E

(€mn)	2015	2016E	2017E	2018E	2019E	2020E
Germany	2,016	1,799	1,888	1,873	1,859	1,927
East	862	740	775	802	827	840
EBITDA	2,878	2,540	2,663	2,676	2,686	2,768
o/w operating income from investments	294	270	283	279	275	289
Adjusted EBITDA excluding disposals/capital gains	2,582	2,444	2,617	2,629	2,640	2,721
D&A	-948	-941	-955	-970	-985	-997
Operating profit	1,930	1,648	1,758	1,757	1,754	1,824
RAB (2)	13,581	14,359	14,780	15,191	15,559	15,917
o/w Germany	9,941	10,573	10,854	11,130	11,403	11,671
o/w East	3,640	3,786	3,926	4,061	4,156	4,246
RAB for retribution	13,340	13,486	13,626	14,155	15,559	15,917
o/w Germany	9,700	9,700	9,700	10,094	11,403	11,671
o/w East	3,640	3,786	3,926	4,061	4,156	4,246
Average allowed return WACC						
o/w Germany (1)	6.1%	6.1%	6.1%	6.1%/5.2%	5.2%	5.2%
o/w East	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%

(1) 6.1% for electricity, as its regulatory period begins in 2019 and 5.2%E for gas, as its regulatory period begins in 2018.

(2) The RAB is a SAN assumption as RAB in Germany will remain flat in RP II until 2018/19 when the new RP begins.

Source: Company data and Santander Investment Bolsa estimates.

Germany: Updated Regulations Are Coming

We expect quite stable results in this sub-division, with an EBITDA of c€1.9bn and EBIT c€1.2bn in 2016E-20E. It is important to highlight that c20% of EBIT comes from companies accounted as equity method (or income from investments). This is the net profit of these participations after tax, so it goes directly to innogy's adjusted net income, representing c16% on average in 2016E-20E.

The new five-year regulatory period will begin in 2018 for gas and 2019 for electricity. Currently, the regulator has published a draft with the main details and that is what we have applied in our model. We have decided not to assume the improvement in equity returns proposed until they are finally approved.

Figure 50. innogy – G&I Germany, P&L, 2013-20E

(€mn and % change)	2013	2014	2015	2016E	2017E	2018E	2019E	2020E
Total sales	9,282	9,392	9,522	8,498	8,918	8,848	8,782	9,103
Total Sales	1,998	2,223	2,016	1,799	1,888	1,873	1,859	1,927
EBITDA	254	251	233	221	232	227	222	236
o/w operating income from investments	-668	-769	-734	-717	-725	-732	-740	-746
Amortizations	1,330	1,454	1,282	1,082	1,163	1,141	1,120	1,182
Operating profit		1.2%	1.4%	-10.8%	4.9%	-0.8%	-0.8%	3.7%
Total Sales	—	11.3%	-9.3%	-10.8%	4.9%	-0.8%	-0.8%	3.7%
EBITDA	—	-1.2%	-7.2%	-5.0%	5.0%	-2.2%	-2.3%	6.2%
o/w operating income from investments	—	15.1%	-4.6%	-2.3%	1.0%	1.0%	1.0%	0.8%
Amortizations	—	9.3%	-11.8%	-15.6%	7.5%	-1.9%	-1.9%	5.5%
Operating profit	—	9,392	9,522	8,498	8,918	8,848	8,782	9,103

Source: Company data and Santander Investment Bolsa estimates.

Innogy provided further disclosures for 2015: a sum of several items, of which the most important are the return on RAB and the D&A, which together account for 60% of total EBITDA of G&I Germany. Adjusting EBITDA for disposals, volatility is lower in the period 2015-17E at c€1.8bn.

Figure 51. innogy – G&I Germany, EBITDA by Sub-Divisions, 2015-20E

(€mn)	2015	2016E	2017E	2018E	2019E	2020E
Return on RAB	592	592	592	575	559	602
Other grid earnings (regulated/unregulated)	400	193	271	276	280	285
of which disposals	153	96	46	46	46	46
of which others	247	97	225	230	234	239
D&A regulated	540	543	545	548	550	553
Grid EBITDA	1,532	1,327	1,408	1,398	1,389	1,440
Income from participations	233	221	232	227	222	236
Non-grid business/other	251	250	248	248	248	252
EBITDA Germany	2,016	1,799	1,888	1,873	1,859	1,927
Change (%)	-9.3%	-10.8%	4.9%	-0.8%	-0.8%	3.7%
EBITDA Germany excl. disposals	1,863	1,703	1,842	1,827	1,813	1,881
Change (%)	–	-8.6%	8.2%	-0.8%	-0.8%	3.8%

Source: Company data and Santander Investment Bolsa estimates.

How is the return on RAB calculated? During the second regulatory period (2013/14 to 2017/18) the return on RAB should be stable. We calculate it by multiplying the RAB, €9.7bn, by the average WACC return, 6.1%. The third regulatory period will bring changes. These changes were approved by the government on August 3, 2016. **The main assumptions for the calculation of the return on RAB are:**

- (1) **RAB calculation: According to innogy, the German RAB 2015/16 for innogy should be c9% higher than the €9.7bn** assumed for the whole of the second regulatory period. This new RAB would be €10.6bn. However, this will not be used to calculate EBITDA until the new regulatory period begins (2018 for gas and 2019 for electricity).

Furthermore, **the new regulations recognise investments made in year n in the year n+1**. In the two previous regulatory periods, the RAB was updated every five years. This recognition of a higher RAB every year applies from 2018/19. The RAB we will see in 2019 will be the €10.6bn adjusted for 2017-18 capex and D&A. As the company is investing more than it amortises (c€0.8bn capex vs c€50mn D&A), 2019 RAB should be higher than €10.6bn. According to our estimates, **by 2021E the RAB should be more than 10% above the €10.6bn of 2015/16**.

To be more accurate, we have calculated the RAB for the gas and electricity businesses separately (28% and 72%, respectively, of the €9.7bn based on our calculations using the respective areas in km² provided by innogy). We apply the same proportions to capex and D&A and calculate both RABs. Out of the €10.6bn RAB in 2016E, €2.9bn is gas and €7.7bn electricity, according to our calculations.

- (2) **WACC return calculation: According to innogy, the WACC is 6.1%.** This figure comes from applying a formula to the equity returns of 9.05% for new assets nominal pre trading tax (assets built after 2006) and 7.14% for old assets real pre trading tax (assets built up to 2006). This requires a few clarifications:
 - a. **Equity /debt:** According to the regulations, the maximum proportion of equity in the RAB is 40%, which implies 60% debt. We maintain this proportion for the whole forecast period.



b. **The new/old asset split:** According to innogy, the split between old and new assets is more or less 50/50. **This split will be different in the future** as old assets are amortised and capex goes into new assets. We have estimated that **by 2020E old assets should represent 39% of the total**, falling to c15% by 2040E. The decline in the value of old assets should be faster but, as the equity remuneration for these assets is in real terms, the regulator updates the RAB for old assets in line with inflation.

c. **Equity remuneration:** We calculate the average equity return pre trade tax (of 15%) at 9.5% until 2015/16E and 7.3% afterwards. The formula is:

Return on equity pre trade tax: (Weight of old assets*Equity return old assets pre trade tax+ Weight of new assets*Equity return new assets pre trade tax)

With numbers for this regulatory period, the equation would be:

$$9.5\% = 50\%*7.14\% / (1-15\%) + 50\%*9.05\% / (1-15\%)$$

d. **Debt remuneration:** This is a pass through recognised by the regulator. Innogy has guided for a c4% cost of debt. It could reduce this if it considers it too high, but would consult with the companies first.

(3) **Formula for the WACC return:** Once we have these parameters, the calculation of the WACC return would be:

WACC = Weight of equity*return on equity + Weight of debt* cost of debt

For the current period it would be:

$$6.1\% = 40\%*9.5\% + 60\%*4\%(cost\ of\ debt\ is\ a\ pass\ through)$$

Figure 52. innogy – RAB and WACC Return Assumptions and Calculation, 2013-20E

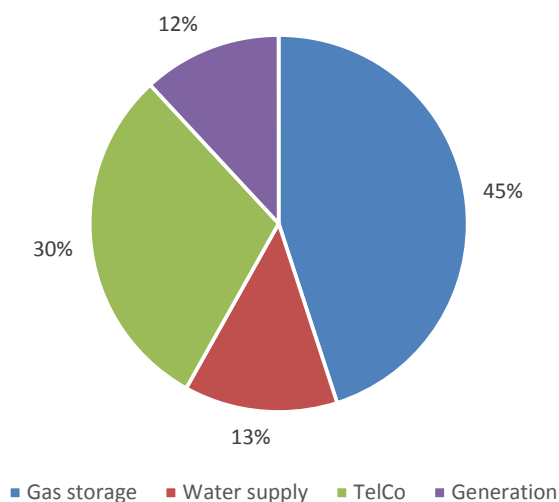
(€mn)	2013	2014	2015	2016E	2017E	2018E	2019E	2020E
RAB	9,700	9,700	9,941	10,573	10,854	11,130	11,403	11,671
o/w old assets	4,850	4,850	4,970	5,287	5,092	4,909	4,737	4,575
o/w new assets	4,850	4,850	4,970	5,287	5,762	6,221	6,665	7,096
o/w gas assets	2,673	2,673	2,914	2,914	2,991	3,067	3,142	3,216
o/w electricity assets	7,027	7,027	7,027	7,659	7,863	8,063	8,260	8,454
WACC	6.1%	6.1%	6.1%	6.1%	6.1%	6.1%	5.2%	5.2%
o/w gas assets	6.1%	6.1%	6.1%	6.1%	6.1%	5.2%	5.2%	5.2%
o/w electricity assets	6.1%	6.1%	6.1%	6.1%	6.1%	6.1%	5.2%	5.2%
Equity	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%
Debt	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%
Old assets	50.0%	50.0%	50.0%	50.0%	46.9%	44.1%	41.5%	39.2%
New assets	50.0%	50.0%	50.0%	50.0%	53.1%	55.9%	58.5%	60.8%
Trade tax	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
Return on equity pre trade tax	9.5%	9.5%	9.5%	9.5%	9.6%	9.7%	7.3%	7.3%
Return on equity old assets post trade tax (real)	7.1%	7.1%	7.1%	7.1%	7.1%	7.1%	5.1%	5.1%
Return on equity new assets post trade tax (nominal)	9.1%	9.1%	9.1%	9.1%	9.1%	9.1%	6.9%	6.9%
Return on RAB for gas	163	163	163	163	163	149	162	166
Return on RAB for electricity	429	429	429	429	429	426	398	436
Total return on RAB	592	592	592	592	592	575	559	602

Source: Company data and Santander Investment Bolsa estimates, including 2013-15 RAB for gas and electricity assets.

The rest of the EBITDA calculation in the previous figure is as follows:

- **Other grid earnings:** These include two main things: (a) **regulated and non-regulated income**, where we include the cost efficiencies, and the base year for total cost (that is why we see a deterioration in 2016 and an improvement in 2017); and (b) **the disposal of concessions** that innogy is not able to renew. This has had a considerable impact in the last five years, as 65% of the total concessions have come up for renewal and innogy has managed to successfully renew or transfer to grid participations 90% of them (and win others). Disposals were €153mn in 2015. We expect this to be less in the next five years as just 25% of the total concessions are due for renewal and innogy expects to lose no more than 10% of the total and to gain more new ones than in the past. In 1H16 innogy booked €9mn from disposals, so we are expecting c€0.1bn for FY16E.
- **D&A:** We are expecting the numbers to increase gradually because of new capex. However, we also adjust the figures for assets that reach the end of their useful lives. The current split of old vs new is 50/50, but some of the ‘new’ ones are already ten years old.
- **Income from participations:** The trend should be similar to the return on RAB and that is why we linked its performance to it. In 2016 we are expecting a small decrease due to the base year effect.
- **Non-grid business / others:** This line consists of four totally different businesses, with varying stability: gas storage, water supply, telco services and generation (800MW of hydro and small lignite and coal). The breakdown of the €251mn accounted for in 2015 is shown in the chart below. We expect this to be fairly stable, despite a decrease in generation (already very small) and some volatility in gas storage.

Figure 53. innogy – G&I Germany, Non-Grid Business EBITDA Breakdown, 2015



Source: Santander Investment Bolsa estimates, based on Innogy pie chart without specific numbers.

East: Czech Republic Dominates

This division includes innogy's regulated and non-regulated assets in the Czech Republic, Hungary, Poland and Slovakia. We expect EBITDA growth of c17% in 2020E vs 2015 (excluding VSE book gain), or a 3.2% CAGR. The main reason for this is the expected increase in RAB, from €3.6bn to €4.2bn, and a flat return of 6.5%. In 2015, there was a change in the consolidation of VSE in Slovakia. Due to the revaluation of the asset, innogy accounted for a positive one-off of €143mn. Excluding it, in 2016E EBITDA should increase by 3.0%.



Figure 54. innogy – G&I, East, P&L, 2013-20E

(€mn)	2013	2014	2015	2016E	2017E	2018E	2019E	2020E
Total Sales	3,610	3,652	3,703	3,181	3,330	3,446	3,551	3,609
EBITDA	791	639	862	740	775	802	827	840
o/w operating income from investments	45	50	61	49	50	52	53	54
Amortizations	-184	-188	-214	-224	-231	-238	-245	-251
Operating profit	607	451	648	566	594	616	635	642
Total Sales	–	1.2%	1.4%	-14.1%	4.7%	3.5%	3.0%	1.6%
EBITDA	–	-19.2%	34.9%	-14.1%	4.7%	3.5%	3.0%	1.6%
o/w operating income from investments	–	11.1%	22.0%	-20.0%	3.0%	3.0%	3.0%	0.5%
Amortizations	–	2.2%	13.8%	4.5%	3.3%	3.1%	3.0%	2.5%
Operating profit	–	-25.7%	43.7%	-12.7%	5.1%	3.6%	3.1%	1.2%

Source: Company data and Santander Investment Bolsa estimates.

As was the case for Germany, innogy provided further details of how to calculate the EBITDA. In this case, the return on RAB + D&A represents c64% of the total EBITDA of this sub-division. Income from participations and the non-grid businesses are smaller than in Germany at 11% of the total vs 26% in the case of Germany. The main assumptions are as follows:

Figure 55. innogy – G&I East EBITDA by Sub-Divisions, 2015-20E

(€mn)	2015	2016E	2017E	2018E	2019E	2020E
Regulated RAB for remuneration	3,640	3,786	3,926	4,061	4,156	4,246
Pro-forma WACC	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Return on RAB	237	246	255	264	270	276
Other grid earnings(regulated/unregulated)	175	193	202	212	221	222
D&A regulated	214	224	231	238	245	251
Grid EBITDA	626	662	688	714	736	749
Income from participations	61	49	50	52	53	54
Non-grid business/other	32	34	35	36	37	37
VSE consolidation effect	143	0	0	0	0	0
EBITDA East	862	745	774	802	827	840
Forex impact	0	-5	2	0	0	0
EBITDA East incl. forex effect from 2016E onwards	862	740	775	802	827	840

Source: Santander Investment Bolsa estimates including the precise numbers of each of the components of the EBITDA based on innogy's indications. This is the case of RAB, indicated at €3.6bn, but we estimate €3,640mn to match as when we sum up the individual figures provided by innogy (page 80 AP) we get €3.7bn).

- **Return on RAB:** We multiply the RAB (€4.0bn average 2016-20E) by the WACC (6.5% flat) to obtain the c€260mn return on RAB per year.
 - **The RAB is a blended one provided by innogy for the four countries**, (the Czech Republic represents 43% of total RAB). As we do not have information by country in terms of capex or P&L to check our numbers, we calculate overall RAB. We add c€330mn capex/year and subtract D&A of c€250mn/year and update it by CPI.
 - **In terms of regulatory regimes**, as seen in the description section, the Czech Republic and Poland have already approved theirs for 2016-18 and 2016-2020, respectively. Hungary and Slovakia working on updates for their next regulatory periods of 2017-20 and 2017-21, respectively.
 - **For simplification, we have maintained a flat 6.5% WACC.**
- **Other grid earnings:** We include cost cutting measures so expect some improvement in the coming years and a CAGR 2015-20E of 5.5%.
- **Income from participations:** This should be lower in 2016, due to the change in the consolidation method of VSE from equity method to global consolidation. It should be quite stable in subsequent years.
- **Forex:** We do not have further disclosures by country except for the RAB, but we think it necessary to calculate of the impact of forex rates. We have taken the weight of the RABs by country to assess the impact of currencies and we apply this number to EBITDA. Just as an example, **a 10% depreciation of the Czech koruna would imply a 4% fall in the EBITDA of the division**, irrespective of any hedging strategy applied.

RETAIL

In the last three years the Retail division, despite some volatility in the UK, has published stable numbers with EBITDA in the €1.0-1.1bn range. Innogy has said it will invest c€0.8bn in 2016-18 (vs our €734mn estimate) to reinforce the business, improve the UK business (that incurred losses in 2015) and implement cross-selling under the energy+ program (not just commodities but other things such as solar PV panels, services, insulation, etc.).

Figure 56. innogy – Retail Sales, EBITDA and EBITDA Margins per Sub-Division, 2013-20E

(€mn)	2013	2014	2015	2016E	2017E	2018E	2019E	2020E
Germany	19,390	18,472	17,653	16,854	16,435	16,223	16,015	15,764
Netherlands & Belgium	6,342	4,498	4,241	3,683	3,743	3,804	3,823	3,842
UK	9,396	9,454	9,561	8,410	7,277	7,422	7,571	7,722
East	4,007	3,394	3,612	4,039	4,240	4,541	4,864	5,192
Sales	39,135	35,818	35,067	32,986	31,694	31,991	32,272	32,520
Germany	279	394	583	580	578	563	549	543
Netherlands & Belgium	257	191	236	242	238	228	215	210
UK	366	294	-65	51	96	197	211	215
East	211	190	234	225	243	260	276	292
EBITDA	1,113	1,069	988	1,097	1,156	1,248	1,250	1,260
Germany	2.2%	2.1%	2.8%	3.2%	3.4%	3.4%	3.4%	3.4%
Netherlands & Belgium	4.1%	4.2%	5.6%	6.6%	6.4%	6.0%	5.6%	5.5%
UK	3.9%	3.1%	-0.7%	0.6%	1.3%	2.6%	2.8%	2.8%
East	5.3%	5.6%	5.3%	5.6%	5.7%	5.7%	5.7%	5.6%
Adjusted EBITDA margin	2.8%	3.0%	2.8%	3.3%	3.6%	3.9%	3.9%	3.9%

Source: Company data and Santander Investment Bolsa estimates including the adjusted EBITDA margins 2013-15.

However, we find it difficult to envisage growth in this business, excluding the improvement in the UK, for three main reasons:

- **Tougher competition:** clients are now more active and have more information than in the past. New technologies facilitate their changing supplier. Competition is tough with incumbents that do not want to lose market share. The main companies have similar strategies: selling end clients not only gas and electricity but also other things (as energy+ tries to do).
- **New competitors:** We have seen how new companies are taking market share from incumbents. For example, in the UK, in the last four years, new companies have gone from a close to zero market share in electricity and gas to 13% and 14%, respectively (in gas, taken together, they are number two behind British Gas).
- **Tougher sector legislation:** Once again, we have already seen this in the UK market. This could be adopted in other markets as well and reduce margins.

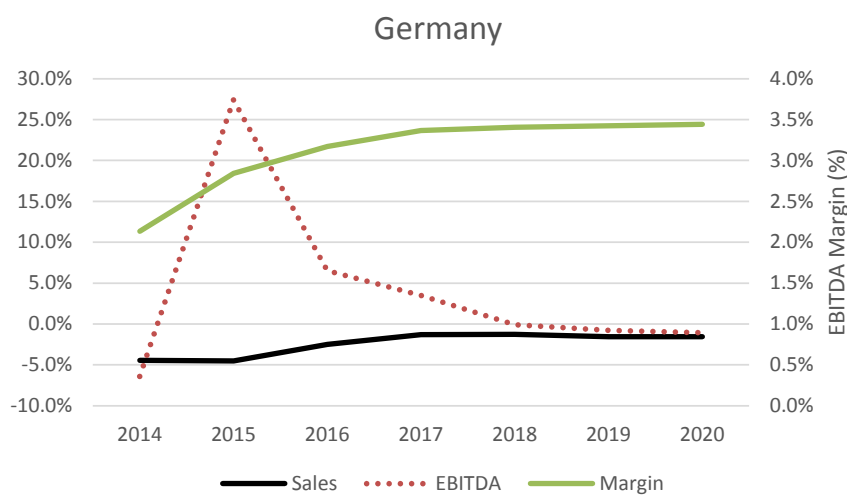
We think innogy is investing strongly to improve this business, has a good market position with c23mn clients and is reducing cost and applying best practices in all markets. Having said that, we think it is prudent to expect flat earnings, assuming the actions being taken by innogy will help them to maintain but not considerably increase results. We adopt a wait-and-see approach as, in the past, we have seen other companies (and RWE itself) suffer some specific problems in supply results.



By sub-division, we expect the following:

- **Germany:** In 2015 there was a reversal of a €81mn provision. After the recovery in margins of the last two years we see stabilization. EBITDA should remain around €540mn. Germany is a mature market. The churn rate in the B2C segment is c12%, not too high, but we think in this kind of market newcomers could increase their market share. The energy+ plan should have a positive impact on Germany and that is why we are not reducing our numbers.

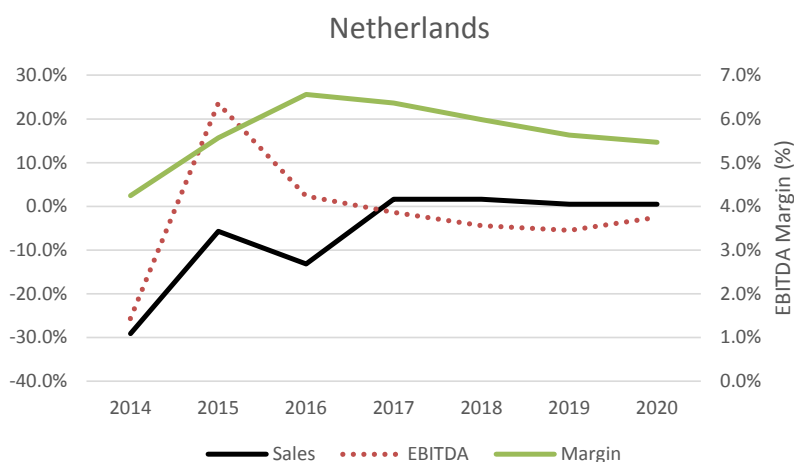
Figure 57. innogy – Retail Germany, Growth in Sales and EBITDA vs EBITDA Margins (secondary axis), 2014-20E



Source: Company data and Santander Investment Bolsa estimates.

- **Netherlands/Belgium:** These countries have improved a lot in the last two years, with the EBITDA margin rising from 4.1% in 2013 to 5.6% in 2015E, according to our calculations thanks to a reduction in OPEX of c€40mn. Innogy is gaining market share in Belgium and the partnership with other companies (MediaMarkt for example) is going well. The churn rate is quite high, c21% in the B2C segment, which is why we see a deterioration of margins going forward, while sales should be more or less stable resulting in a slight decrease in EBITDA.

Figure 58. innogy – Retail Netherlands/Belgium, Growth in Sales and EBITDA vs EBITDA Margins (secondary axis, 2014-20E)



Source: Company data and Santander Investment Bolsa estimates.

- **UK:** this has been always the most difficult market for innogy. In 2015, due to problems with billing and regulatory pressure, the company recorded an EBITDA loss of €65mn. After that, innogy launched an improvement programme to reduce costs by GBP200mn by 2018 that seems to be working. In 9M16, EBITDA was €6mn vs €20mn in 9M15.

As mentioned previously, competition in the UK is tough. Innogy has lost many clients (in electricity, its market share decreased from 14% in 2012 to 10% in 2016, and in gas from 12% to 9%) and margins are under pressure (even without the problems mentioned above).

Moreover, the GBP/EUR exchange ratio is not helping and in 2017E should limit the improvement in this division, according to our estimates. In 2016, we are expecting an average of 1.23 EUR/GBP while for 2017 the SAN forecast is 1.06 EUR/GBP. We are expecting EBITDA in 2017E of €96mn.

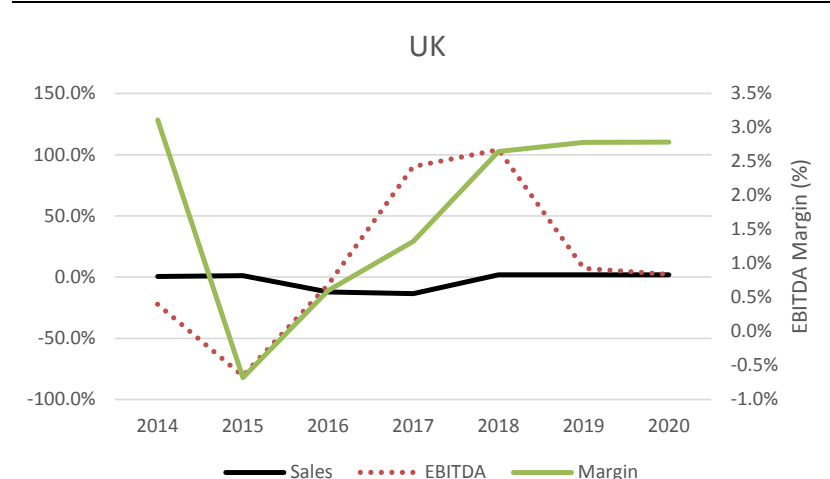
Figure 59. GBP/EUR Exchange Rate, 2013-20E

	2013	2014	2015	2016E	2017E	2018E	2019E	2020E
GBP/EUR	1.18	1.24	1.38	1.23	1.06	1.06	1.06	1.06

Source: Bloomberg and Santander estimates.

We are expecting a normalisation of the situation by 2018E, with EBITDA slightly above €0.2bn and margins below those in Germany.

Figure 60. innogy – Retail UK, Growth in Sales and EBITDA vs EBITDA Margins (secondary axis, 2014-20E)



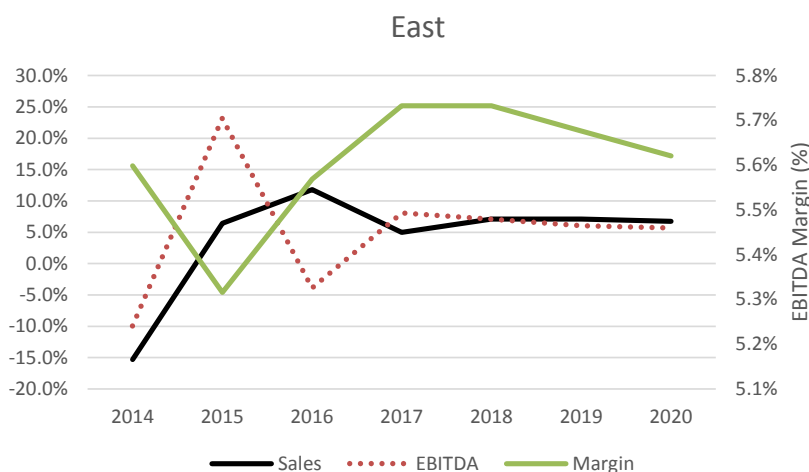
Source: Company data and Santander Investment Bolsa estimates.

- **East:** Innogy is doing well in this region, growing not only in those countries where it has gas grid assets (complementing gas or electricity sales with sales of the other commodity) but in new markets such as Croatia. The implementation of energy+ and the company's know-how should help to improve results in these markets.



Accordingly, we are expecting a 8.7% 2015-20E CAGR for EBITDA (adjusted for the €42mn recorded in 2015 as a higher book gain from the revaluation of VSE in Slovakia). We think that competition will increase in the following years as well, which is why we do not estimate higher growth, but this is the region where we see the clearest growth in retail.

Figure 61. innogy – Retail East, Growth in Sales and EBITDA vs EBITDA Margins (secondary axis, 2014-20E)



Source: Company data and Santander Investment Bolsa estimates.

RENEWABLES

This is the division where we are expecting the clearest growth; adjusted EBITDA +30% 2020E vs 2015 (in the case of Retail the growth results from the recovery of the UK business to normal levels). The expected growth is based on capex of €1.5bn in 2016E-19E vs the target of €1.3bn in 2016-18.

Figure 62. innogy – Renewables EBITDA and Installed Capacity, 2013-20E

(€mn)	2013	2014	2015	2016E	2017E	2018E	2019E	2020E
EBITDA (1)	448	524	818	719	691	742	816	891
o/w Onshore wind	155	225	248	208	212	227	241	257
o/w Offshore wind	96	170	351	414	381	386	447	503
o/w Hydro	67	104	88	88	84	81	78	75
o/w Others	174	28	29	29	29	30	30	30
o/w Operating income from investments	-44	-3	102	-20	-15	18	20	26
Adj EBITDA exc 1 offs and eq method	512	428	692	739	706	724	796	865
EBIT	200	253	488	394	358	391	438	487
Installed capacity (MW-accounting) (2)	2,633	2,805	3,280	3,291	3,382	3,495	3,738	3,967
Output (MWh-accounting)	6,833	7,048	8,581	9,624	9,834	10,092	10,821	11,497
Installed capacity (MW, pro rata)	2,550	2,691	3,129	3,140	3,231	3,477	3,720	3,950

Note: (1) The subdivisions are our estimates as the company does not provide this information. (2) 2020E capacity excludes two equity method holdings: the offshore plants Galloper and Nordsee One. Adding their respective capacity, adjusted for innogy's stake (84MW and 50MW respectively), would increase the total capacity to 4,084MW by 2020E.

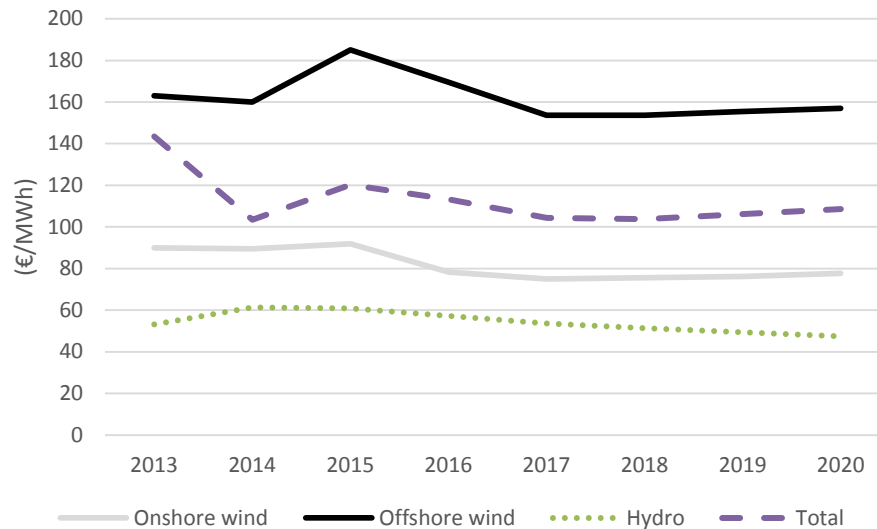
Source: Company data and Santander Investment Bolsa estimates.

Our main assumptions are:

- The 289MW the company is building (excluding the disposal of 18MW);
- 60% of the 0.9GW in the final investment decision; 540MW of installed capacity in 2018E-20E. The split between onshore and offshore is 50/50;
- The prices assumed for these new assets is the average price obtained in Germany, UK and The Netherlands for the onshore assets and in Germany and UK for offshore;

- We have applied a useful life of 25 years for the wind assets;
- For onshore assets, we have assumed a regulatory life of 20 years; and
- For offshore assets, we have assumed a regulatory life of ten years for the German assets (assuming the “acceleration model” and €39 /MWh thereafter and 15 years for the UK ones.
- The average power prices have been calculated taking into account total sales divided by the total output by technology.

Figure 63. innogy – Renewable Power Prices Achieved by Technology, 2013-20E



Source: Company data and Santander Investment Bolsa estimates.



P&L

We are expecting adjusted net income of €1,065mn in 2016E that should increase to €1,411mn by 2020E. This improvement is based on a good performance at the operating level and better net financial results. Our tax rate is in line with the indications of the company; 25% in 2016E and 27.5% going forward vs the 25%-30% range provided by innogy.

Figure 64. innogy – P&L Estimates, 2013-20E

(€mn)	2013	2014	2015	2016E	2017E	2018E	2019E	2020E
EBITDA	4,194	4,297	4,521	4,189	4,346	4,502	4,591	4,759
D&A	-1,350	-1,438	-1,471	-1,447	-1,461	-1,494	-1,537	-1,578
Operating result	2,844	2,859	3,050	2,742	2,884	3,008	3,054	3,181
Net financial results	-389	-324	-170	-688	-527	-542	-559	-570
Financial provisions	-178	-231	-132	-113	-116	-118	-120	-122
Non-operating	-832	-83	50	399	0	0	0	0
PBT	1,445	2,221	2,798	2,339	2,242	2,349	2,375	2,489
Taxes	-551	-523	-860	-544	-586	-622	-653	-689
Minorities	-230	-231	-325	-289	-301	-302	-303	-311
Net profit	664	1,467	1,613	1,506	1,356	1,424	1,419	1,489
Adjusted net income	NA	NA	NA	1,065	1,163	1,254	1,329	1,411

Source: Company data and Santander Investment Bolsa estimates.

Financial Expenses and the Step-up Adjustment

We think the two things we should explain in detail are the trend for financial expenses and the adjustment of the step-up.

Regarding financial expenses, innogy has €0.2bn in bonds at FY16E with an average cost of 5.4%, according to our estimates. According to Innogy, the average coupon is c5%. Our calculation has been made by applying the coupon to each of the principal amounts, adding together all the expenses (€36mn in 2016E) and dividing this amount by the €0.2bn debt at year end. Once a bond matures we assume that it will be refinanced at a lower cost. By 2020E we are expecting the cost to be reduced to 4.7% and financial expenses to be €433mn, over €100mn less.

How does the amortization of the step-up work? According to IFRS, when the bonds were transferred to innogy the buyer had to adopt a MtM approach. This has implied an “increase” in the value of the bonds from €1.3bn at the end of 2015 to €2.5bn, a total of €1.245mn. This amount has to be amortized over the life of each asset. For example, the bond that matures in August 2021 (€1,000mn) has a step-up of €264mn. It will take c5.7 years to be amortized; c€47mn/year. Our calculations are based on the number of days until maturity for each of the bonds. In 2016E we are expecting a c€0.2bn adjustment to the financial expenses.

This adjustments in the P&L should not be taken into account to calculate adjusted net income or CF generation as both take into account the real coupon and no adjustment due to the step up is made.

Lastly, there are two things to highlight in the 2016 financial expenses: (1) in 1H16 there was a positive forex impact of €54mn on the step-up. This amount, like the amortization, should not be used to calculate either the adjusted net income or the CF generation; and (2) in 1H16 innogy recorded €158mn in financial expenses. This figure includes €120mn of one-off losses from the early redemption of intercompany loans as well as €38mn from the amortisation of a balance sheet step-up of a loan to RWE AG (financial receivable), both reported under interest.

CASH FLOW & BALANCE SHEET

END/EBITDA 2016E 3.9x Post Capital Increase

The END/EBITDA ratios would be in line with the c4.0x indicated by innogy. We are expecting it to continue decreasing. Obviously this would depend on the next three assumptions, FFO, capex and dividends:

- (1) FFO, cash conversion c67% 2016E-20E, before WC;
- (2) Capex 2016E-18E of €5,752mn vs €6.2bn targeted by the company. We have only assumed €1.1bn in renewables, instead of the €1.3bn targeted, as we do not have visibility on the precise projects;
- (3) Dividends, we are applying a 77% pay-out to adjusted net income.

Figure 65. innogy – Financial Ratios, Balance Sheet, and CF Statement, 2016E-20E

(€mn)	2016E	2017E	2018E	2019E	2020E
Financial ratios					
Financial net debt	12,384	12,433	12,438	12,218	11,880
ND/EBITDA (x)	3.0	2.9	2.8	2.7	2.5
Economic net debt	16,460	16,828	17,134	17,138	17,015
Economic net debt /EBITDA (x)	3.9	3.9	3.8	3.7	3.6
FFO/Economic net debt	16.2%	17.3%	17.7%	18.4%	19.3%
FFO/ net financial expenses (x)	4.8	6.3	6.4	6.4	6.5
RCF/ economic net debt	14.9%	11.0%	11.2%	11.3%	11.8%
Balance sheet					
Intangible assets	11,617	11,617	11,617	11,617	11,617
o/w Goodwill	10,974	10,974	10,974	10,974	10,974
Property, plant and equipment	17,623	18,118	18,617	18,892	19,061
Equity investments	2,152	2,152	2,152	2,152	2,152
Other non-current financial assets	4,330	4,330	4,330	4,330	4,330
Non-current assets	35,722	36,217	36,716	36,991	37,160
Inventories	527	518	523	529	539
Trade accounts receivable	3,577	3,514	3,551	3,590	3,656
Other current assets	1,633	1,633	1,633	1,633	1,633
Cash & equiv. & mktable securities	4,481	4,345	4,241	4,289	4,401
Asset held for sale	0	0	0	0	0
Total Assets	45,940	46,226	46,664	47,031	47,389
Equity	8,121	8,420	8,721	8,922	9,128
Minorities	1,709	2,010	2,312	2,615	2,926
Provisions for pensions	4,695	4,791	4,889	4,988	5,090
Other provisions	3,919	3,939	3,958	3,978	3,998
Financial liabilities	17,165	17,078	16,979	16,807	16,581
Other liabilities	6,940	6,840	6,740	6,640	6,540
Trade accounts payable	3,391	3,149	3,065	3,080	3,125
Total liabilities	45,940	46,226	46,664	47,031	47,389
Cash flow statement					
EBITDA	4,189	4,346	4,502	4,591	4,759
Financial expenses	-688	-527	-542	-559	-570
Taxes	-544	-586	-622	-653	-689
Step up adjustment	-239	-223	-203	-124	-113
Others	-50	-100	-100	-100	-100
FFO	2,667	2,910	3,035	3,155	3,286
FFO on EBITDA	64%	67%	67%	69%	69%
Net investments	-1,802	-1,956	-1,994	-1,812	-1,747
Disposals and others	0	0	0	0	0
Dividends	-213	-1,056	-1,124	-1,218	-1,283
Change in working capital	-335	-170	-126	-31	-31
Change of debt	2,318	-272	-208	95	225

Source: Santander Investment Bolsa estimates.



APPENDIX I. GRID & INFRASTRUCTURE

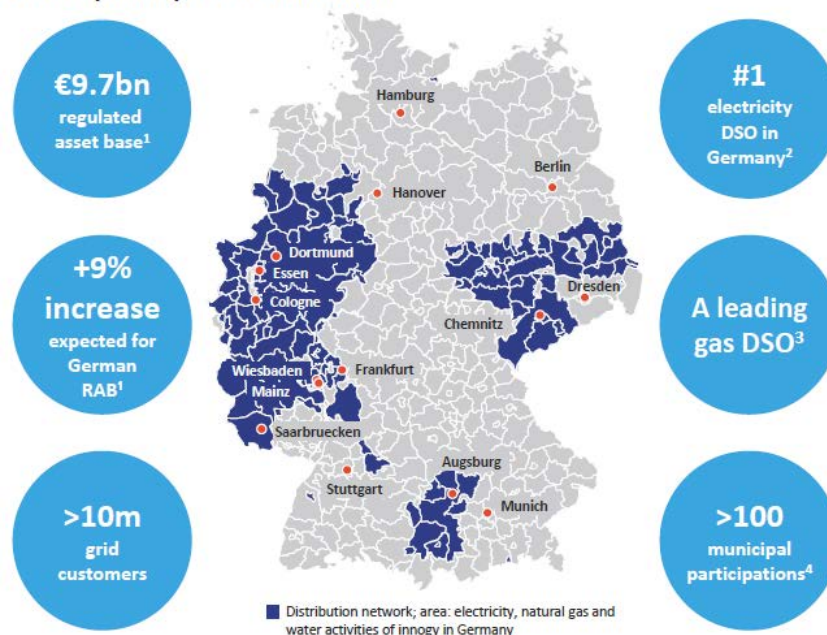
A DETAILED LOOK AT ASSETS AND REGULATION

German Distribution Business

German distribution assets are innogy's main asset. In electricity, innogy is number one while in gas it is second (E.ON is number two and one, respectively) out of a total 900 and 700 DSOs for electricity and gas, respectively. Innogy is present in major, densely-populated industrial centres with 9.3mn electricity delivery points and 1.0mn gas.

Figure 66. innogy – DSO Areas in Germany

Grid & participations overview



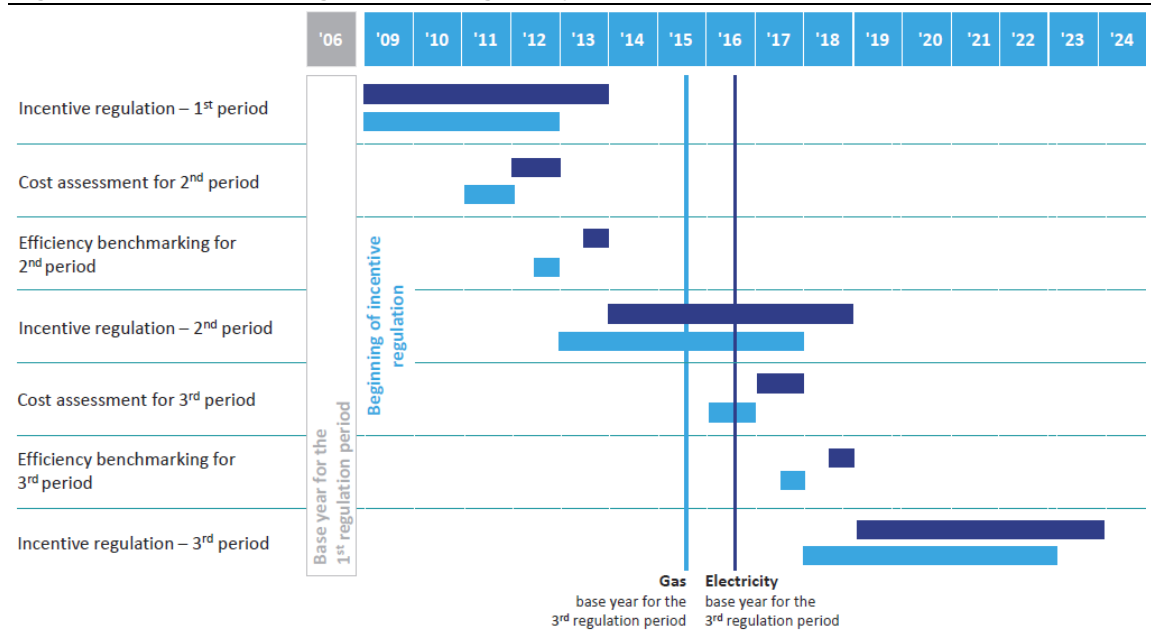
(1) Numbers based on latest notification by regulator or based on calculations in latest filings with regulators. Expected increase in German regulated asset base calculated as RAB 2010/2011 plus net investments (post concession gains/losses) in regulated assets in the years 2010/2011 to 2015/2016E, assuming full recognition by the regulator. Throughout this presentation, RABs are always stated excluding pro-rata share of RAB from participations that are not fully consolidated. (2) Based on distributed volume. Source: RWE, E.ON, EnBW, EWE. Data as of 2015 (except for some EnBW-DSOs which are based on 2014). (3) Based on distributed volume. (4) Not fully consolidated municipal utilities. Source: Company data and Santander Investment Bolsa estimates.

Regulations in Germany are incentive based. The implicit RAB for innogy's assets is €9.7bn, calculated in 2010/11. This RAB will be updated in 2015/16 and, according to the company, should increase by 9%. This RAB does not include all the participations innogy does not fully consolidate, which represent c€230mn accounted as equity method.

The following explains how the regulations work, in three simple steps.

- (1) **What are the regulatory periods?** We are in regulatory period (RP) II, which goes from 2013/14 to end 2017/18. For gas the RP is 2013-17 and for electricity 2014-18. The regulator takes a base year from the previous RP to calculate the controllable cost (this is 2015 for gas and 2016 for electricity for the next RP) and establishes the new RABs and the equity returns for old and new assets (old are those built before 2006). The next regulatory period will begin in 2018/2019 and will last for another five years. The base years for the following RP will be 2020 for gas and 2021 for electricity.

Figure 67. German Grid Regulations – Regulatory Period Calendar, 2006-24



Source: Company data.

- (2) **Incentive regulation:** This is based on a formula that takes into account how efficient the company is, the return on RAB and the cost of debt. These parameters are set and the formula to calculate the revenue cap is:

$$\text{Revenue cap} = \text{non-controllable cost} + (\text{controllable cost} \times \text{efficiency} \times (\text{inflation} - \text{productivity}))$$

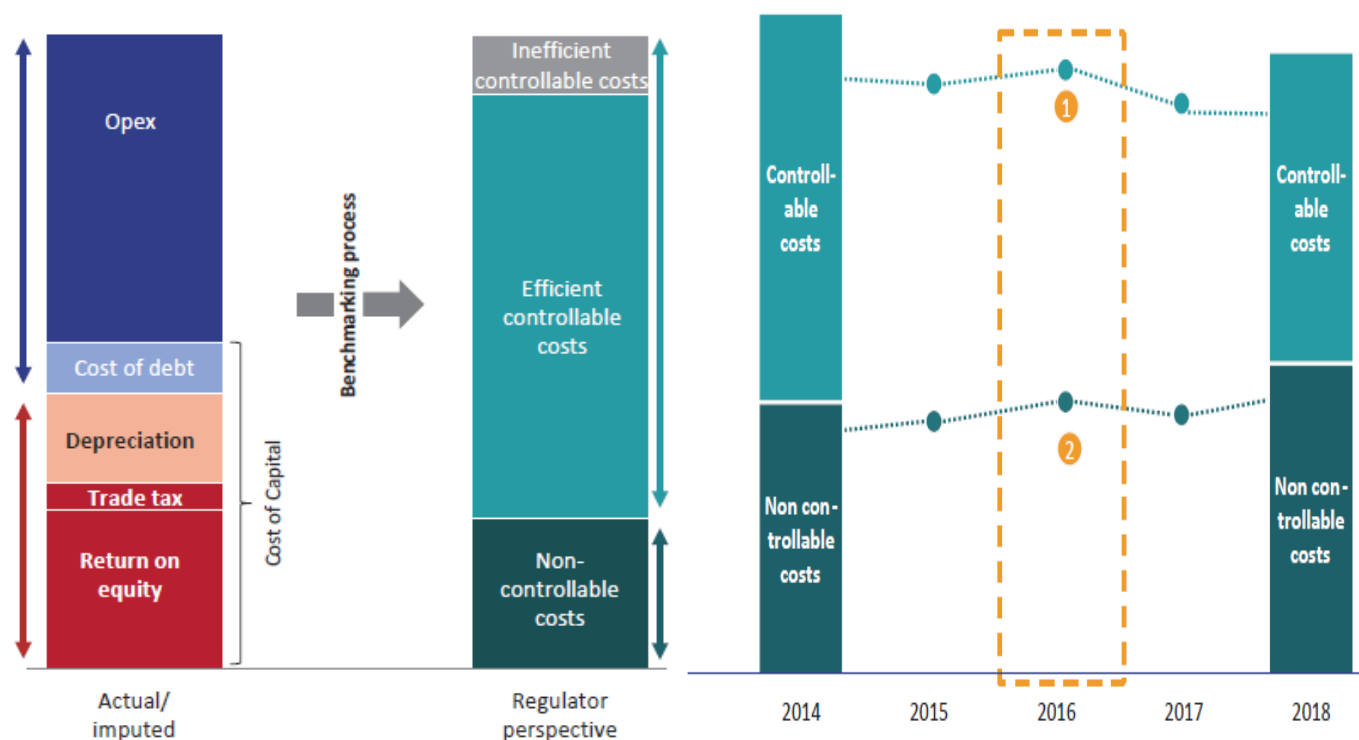
In RP III companies will be eligible for a bonus if they are superefficient. Innogy is one of the most efficient companies in terms of cost/grid length, cost per substation (four of the ten substations with the lowest costs, including the lowest one, are innogy's) and cost per connection point. The productivity factor is 1.5% in the current RP and in the proposal for RP III.

Controllable costs are subject to efficiency adjustments and efficient companies can benefit from that. If not, the company is penalised until it reaches the required efficiency level. Furthermore, the tariff should recognise the return on equity, trade tax (15%) D&A, cost of debt (which is a pass through at 4% at this point) and, finally, opex. All of this should match the sum of the costs.

During a regulatory period, there are two kind of adjustments: (1) for controllable costs in annual terms via the expansion factor (which will be used for the last time in RP II), which applies to medium and low voltage levels, and (2) for non-controllable costs.



Figure 68. German Grid Regulations – How Regulations Are Applied



(1) Annual adjustment of controllable costs via expansion factor (a) Applies to medium- and low voltage levels and (b) Measured by relative growth of area supplied (low voltage) and relative growth of the number of connections (2) Annual adjustment of non-controllable costs. Investment measures treated as non-controllable costs (110kV networks).

Source: Company presentation.

- (3) **Returns:** The return in the II RP would be the €9.7bn multiply by the 6.1% allowed return, so c0.6bn. This 6.1% allowed return is calculated using the formula:

$$\text{Allowed return} = \text{Weight of equity} \times \text{return on equity} + \text{Weight of debt} \times \text{cost of debt}$$

According to the regulations, the return on equity, which is a maximum of 40% of the RAB, is 9.05% nominal for new assets and 7.14% real for old assets, both pre corporate and trade tax (15%) (the proposal for RP III is 6.91% nominal for new ones and 5.12% real for the old ones). The debt part is a pass through and the cost of debt taken is c4% pre tax (as seen on pg 88 of the AP footnote 2). Innogy indicated as an assumption that the split between new and old assets is 50/50.

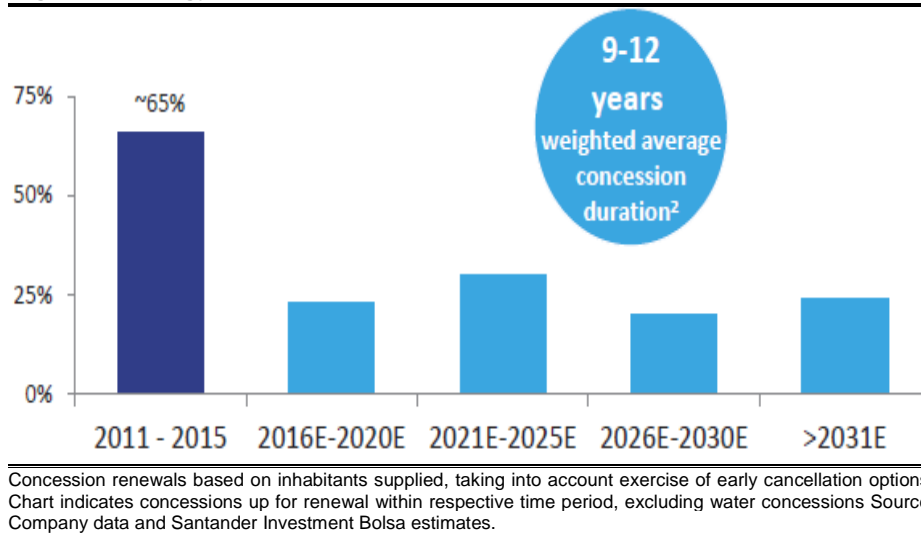
In the III RP, capex will be recognised every year instead of every five years as before. On our assumptions, we assume that the capex 2017/18 should increase the RAB for electricity and begin to be remunerated in 2019E.

So in conclusion, for the current RAB of €9.7bn, the allowed return would be 6.1% and the return c€0.6bn during RP II. **In RP III, we are expecting RAB 2019E to increase to €11.4bn** (due to the 9% updated RAB for 2015/16 and the additional capex in 2017/18) and a **new allowed return of 5.2%**, so the return on RAB would be c€560mn, slightly less than the previous period.

Innogy plans to invest €3.1bn in 2016-18 to improve and expand its distribution grid in Germany:

- (1) **Concessions:** Innogy holds 3,800 concessions (electricity, gas, water and concessions held by our grid participations). In the last five years, c65% of the gas and electricity concessions came up for renewal and innogy successfully renewed or transferred to grid participations 90% of them (based on inhabitants supplied) In the next five years, a further c25% of the concessions are up for renewal. We think innogy will try to increase the percentage it retains thanks to its good relationships and technical solutions, and to gain some new concessions. According to the company, one-third of the total RAB is not concession-related, which provides further earnings stability.

Figure 69. innogy – Calendar for Concession Renewal

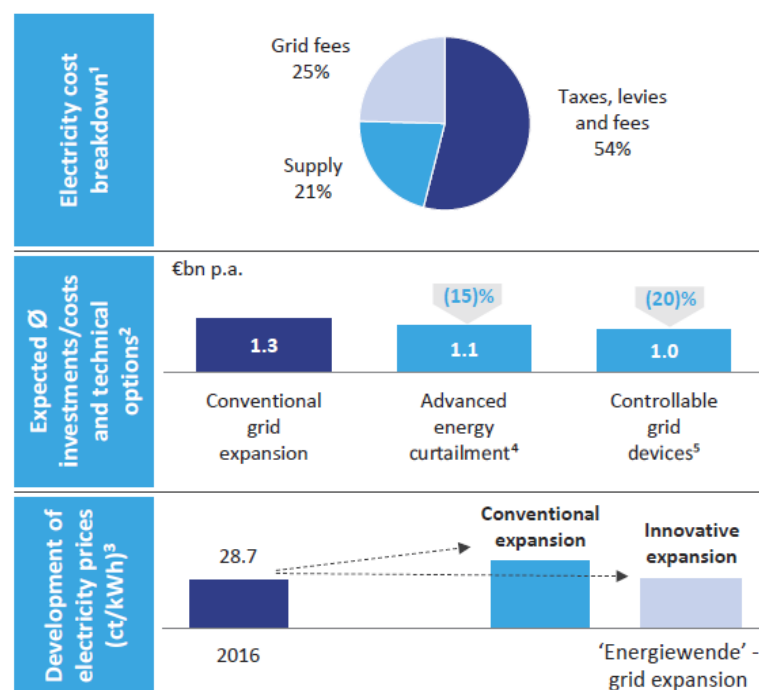


- (2) **Energiewende** (energy transition): 90% of renewables are connected to the grid. Renewables will continue growing in Germany: in 2050, 80% of the electricity needs have to be covered by renewables. The Economy Ministry says €23-49bn of investment is needed for the expansion and modernisation of distribution grids by 2032. The concept of the “prosumer” (producer and consumer) is already in the market and will become more important in the coming years. A continuing communication will be needed to cover the prosumer’s necessities as well as smart grids and big data to manage the system properly.

Innovation should have an impact on final tariffs, by minimizing the impact of expansion, or even creating cost savings (at least in €/kWh, if not in absolute terms).



Figure 70. German DSO System – Intelligent Solutions are Needed



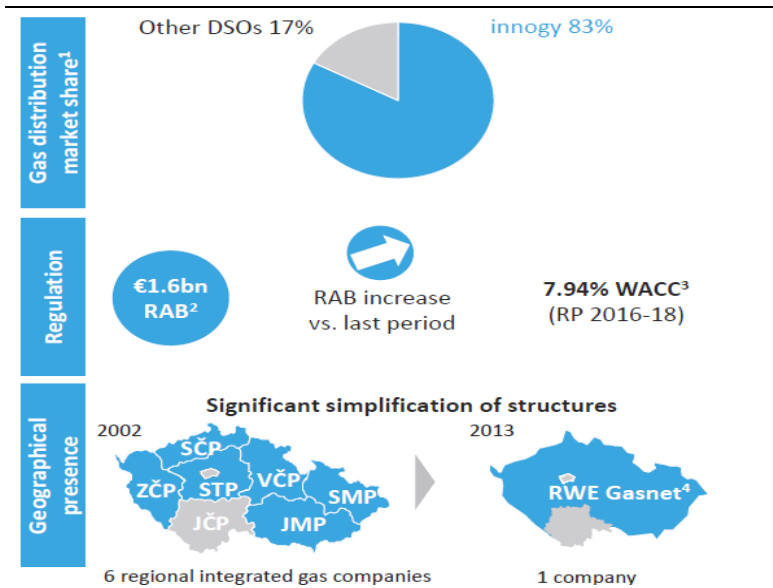
(1) Source: German Energy and Water Association, May 2016; Cost breakdown of electricity for household customers – annual consumption of ca. 3,500 kWh. (2) Source: 'Moderne Verteilernetze für Deutschland' (Verteilernetzstudie) – study for the German Ministry of Economics and Energy (BMWi). Investment needs from 2014-2032 assuming conventional grid expansion. (3) Source: German Energy and Water Association, May 2016; Development of electricity prices for household customers (ct/kWh) incl. taxes, levies and fees; annual consumption of ca. 3,500kWh. (4) Curtailment occurs when power output must be shut down in order to balance the grid. Advanced energy curtailment seeks to minimise the resulting economic losses. (5) Controllable grid devices seek to actively address and manage changes in electric frequency due to changes in supply or demand, resulting in less system interruptions as well as adjustments of load depending on current electricity prices. Source: Company data.

East Distribution Business: More Details on Assets and Regulation

Innogy has distribution assets in four countries:

- **Czech Republic:** This is innogy's main market in the East division, with a €1.6bn RAB. Innogy is the main DSO in gas through the subsidiary RWE GasNet. Innogy shares the ownership with Macquarie, which has a 49.96% stake after buying 14.96% in 2015 (the price was not disclosed). In 2002, RWE had six regional integrated companies that merged to form RWE GasNet. This consolidation has simplified the governance structures and increased the synergies.

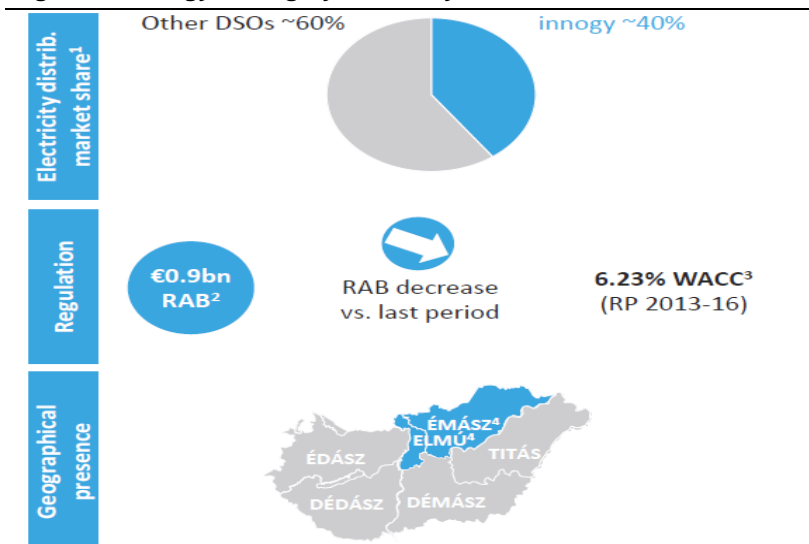
Figure 71. innogy – Czech Republic Gas DSO, Main Data



1. Source: Energy Regulatory Office (2016): yearly report on the operation of the Czech gas system in 2015. Based on distributed volume in 2015. 2. As of 2015. 3. Nominal WACC value. 4. Only DSO. Source: Company data.

- **Hungary:** Innogy is the second-biggest electricity DSO in the country with a market share of 43%. The RAB as of 2015 is €0.9bn and decreased in the latest update mainly due to the EUR/HUF rate. The company has a c54% stake in ÉMÁSZ and a c55% stake in ELMŰ. Innogy has increased capex and improved operational performance to compensate for the decrease in remuneration caused by politically-driven energy price cuts and sector-specific taxes.

Figure 72. innogy – Hungary Electricity DSO, Main Data

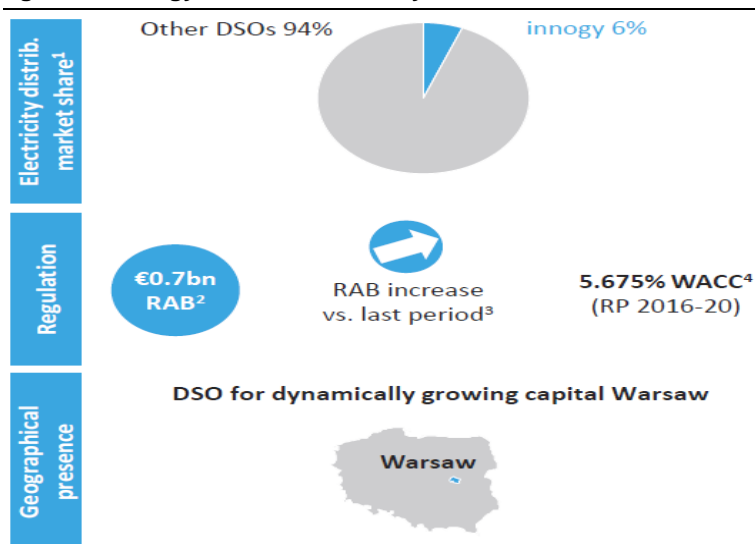


1 Based on innogy estimation of distributed volumes. 2 As of 2015. 3 Real WACC value. 4 innogy subsidiaries: ~54% and ~55% share in ÉMÁSZ and ELMŰ, respectively. Source: Company data.

- **Poland:** Innogy is the DSO in Warsaw, where it is the front runner in a smart metering pilot project for 100,000 meters. It has a €0.7bn RAB and a market share of 6%.



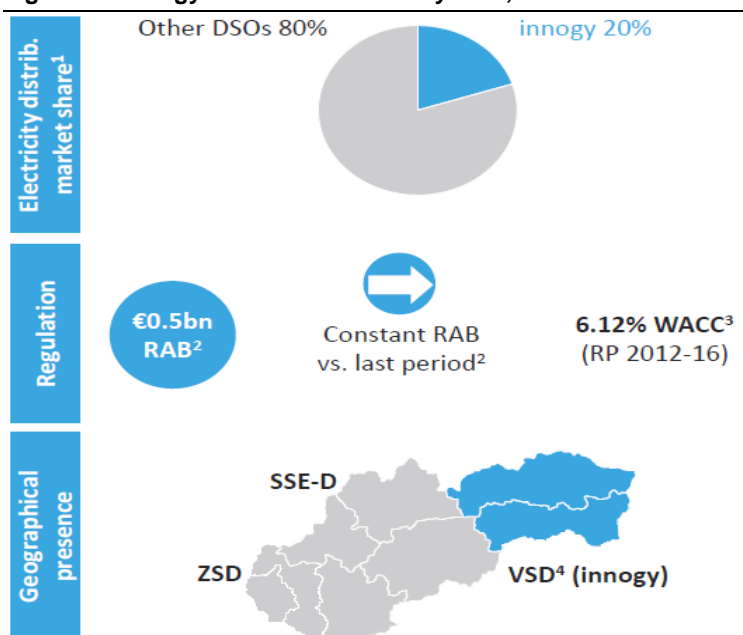
Figure 73. innogy – Poland Electricity DSO, Main Data



1. Based on distributed volume. Data as of 2015. 2. As of 2015. 3. RAB adjusted each year. 4. Nominal WACC value confirmed for 2016; following years to be adjusted according to risk free rate development. Source: Company data.

- **Slovakia:** With a €0.5bn RAB and a 20% market share, this is innogy's smallest asset in the region. In 2015, innogy started to globally consolidate VSE Holding for the first time. This implied a book gain of €143mn in the division due to its revaluation.

Figure 74. innogy – Slovakia Electricity DSO, Main Data



1. Source: Energy Analytics – Energetický TRH SR 2015. 2. RAB introduced in 2012. 3. Real WACC in 2016. 4. Subsidiary of VSE Holding. Source: Company data.

Figure 75. innogy – G&I, Summary of Main Assets in the East Division

	DSO	RAB (€bn)	WACC	Distributed Volume (GWh)	Customers (mn)	Grid Length (km)	Current Reg. Period	RAB trend vs last RP
Czech Rep.	Gas	1.6	7.94% nominal	66,500	2.3	65,000	2016-18	Up
Hungary	Electricity	0.9	6.23% real	16,800	2.3	67,000	2013-16	Down (Mainly forex)
Poland	Electricity	0.7	5.675% nominal	7,200	1	17,000	2016-20	Up
Slovakia	Electricity	0.5	6.12% real	3,700	0.6	22,000	2012-16	RAB introduced in 2012

Source: Company data.

In terms of remuneration and regulation, the total RAB for these assets is €3.6bn, with a blended WACC of 6.5% (which only includes four months of VSE in 2015). However, it is difficult to fully compare RABs and WACCs due to the differences in the regulatory regimes of each country. For example, the WACCs in the Czech Republic and Poland are nominal, while in Hungary and Slovakia they are real.

In our estimates we use the sum of the RABs that innogy has provided, multiplied by a blended WACC of 6.5% (which only includes four months of VSE in 2015). We update the RAB for capex, D&A and inflation each year. We think this is the best way to calculate it, given the information available. We would need more detailed information (for example P&L by country) for a more accurate estimate of the RAB per country. In short, the return on equity of the whole region represents c5% of the total EBITDA of the company and less than that at adjusted net income level, due to the minorities.

For those interested in a more in-depth analysis of the regulations, we include a fuller explanation of the case country by country.



Figure 76. innogy – East, DSO Regulations by Country

		Czech Republic	Hungary	Poland	Slovakia
General	Current regulatory period	2016-2018	2013-2016	2016-2020	2012-2016
	Type of regulation	Revenue cap	Price cap	Price cap	Price cap
	Incentive elements in regulatory framework	✓	✓	✓	✓
RAB/WACC	Regulated asset base (RAB)	€1.6bn	€0.9bn	€0.7bn	€0.5bn
	Regulatory WACC (pre-tax)	7.94% ¹	6.23% ²	5.675% ³	6.12% ²
Regulatory opex treatment	Efficiency factor ⁴	✓	✓	✓	✓
	Pass-through of financing costs	✗	✓	✗	✗
Other	Regulation of quality of supply ⁵	✗	✓	✓	✓
	Exposure to volume risk	✓	✗	✓	✓
	Inflation ⁶	✓	✓	✓	✓
	Compensation for investments	✓	✓	✓	✓

(1) Nominal WACC value. (2) Real WACC value. (3) Nominal WACC numbers confirmed for 2016; following years to be adjusted according to risk free rate development. Nominal WACC value. (4) Efficiency factor reflects elements of individual as well as industry/macro-related productivity components. (5) Bonus/malus system for stability. (6) Inflation effects considered in regulatory revenues.
Source: Company data.

Figure 77. innogy – Regulations for the Czech Gas DSO

	Element	Key feature	Comments
General	Current regulatory period	2016-2018	Next regulatory period: 2019-2024 (expected)
	Type of regulation	Revenue cap	Revenue cap with certain limitation in max. tariff increase y/y
	Incentive elements in regulatory framework	✓	Opex outperformance on behalf of distribution company
RAB/WACC	Regulated asset base (RAB)	€1.6bn	$RAB_t = RAB_{t-1} + capex_t - k \cdot \text{allowed depreciation}_t$ where $k = RAB_{t-1} / (\text{revaluated}) \text{ net book value}_{t-1}$ (RAB partially revaluated. Depreciation for assets procured <2007 revaluated, depreciation for assets >2006 not revaluated. Working capital, assets under construction not included in RAB)
	Regulatory WACC (pre-tax)	7.94%	Nominal, fixed for the entire fourth regulatory period
Regulatory opex treatment	Efficiency factor ¹	✓	Allowed opex based on 2012/2013 average, efficiency factor 1,01%
	Pass-through of financing costs	✗	Debt financing costs considered in WACC
Other	Regulation of quality of supply	✗	No SAIDI or SAIFI applied
	Exposure to volume risk	✓	Deviations between allowed revenues and actual revenues which are caused by deviations between actual and planned consumption volumes are reimbursed in year +2
	Inflation ²	✓	Opex indexation = 70% market service index + 30% CPI with 1% bonus
	Compensation for investments	✓	Capex is considered in RAB as planned value in the relevant year, deviations to Actuals are corrected via k-factor in year + 2

¹ Efficiency factor reflects elements of individual as well as industry/macro-related productivity components. ² Inflation effects considered in regulatory revenues.

Source: Company data.

Figure 78. innogy – Regulations for the Hungarian Electricity DSO

	Element	Key feature	Comments
General	Current regulatory period	2013-2016	Next regulatory period: 2017-2020 (expected)
	Type of regulation	Price cap	Regulated revenue is the sum of the acknowledged values of capital costs (RAB times WACC) plus opex plus depreciation plus grid losses, adjusted by additional factors
	Incentive elements in regulatory framework	✓	When determining the value of acknowledged costs the regulator lowers the level of cost reduction for DSOs that perform better, DSOs not performing up to standard have to give a specified discount on distribution tariffs
RAB/WACC	Regulated asset base (RAB)	€0.9bn	RAB = gross re-evaluated value * aging – (net value of foreign sources) The value of RAB is adjusted separately each year by inflation and efficiency factor
	Regulatory WACC (pre-tax)	6.23% ¹	WACC is real value. The (theoretical) nominal WACC value would be 7.3% for 2015 and 8.53% for 2016
Regulatory opex treatment	Efficiency factor ²	✓	CPI-X method, X: required efficiency improvement factor
	Pass-through of financing costs	✓	
Other	Regulation of quality of supply	✓	Taken into account during the benchmarking by the regulator
	Exposure to volume risk	✗	
	Inflation ³	✓	CPI-X (customer price index decreased by the required efficiency improvement factor). In the current regulatory period this adjustment was not applied regularly due to low level of inflation
	Compensation for investments	✓	Depreciation + bonus/malus system

¹ Corresponds to real WACC, RAB for Hungary includes annual inflation adjustment. ² Efficiency factor reflects elements of individual as well as industry/macro-related productivity components. ³ Inflation effects considered in regulatory revenues.

Source: Company data.

Figure 79. innogy – Regulations for the Polish Electricity DSO

	Element	Key feature	Comments
General	Current regulatory period	2016-2020	Next regulatory period: 2021-2025 (expected)
	Type of regulation	Price cap	Each year the regulator sets distribution charges via setting up the regulated revenues and dividing it into fixed prices
	Incentive elements in regulatory framework	✓	Efficiency increase of opex and network losses set up for entire regulatory period. Quality parameters without any bonus, tariff effective from 2018
RAB/WACC	Regulated asset base (RAB)	€0.7bn	RAB is calculated based on starting value agreed with regulator and adjusted yearly (current value) $RAB_t = RAB_{t-1} + \text{investments}_{t-1} - \text{depreciation}_{t-1} - \text{connection fees}_{t-1} - \text{non refundable sources}_{t-1} - \Delta(I, C, N)_{t-2}$
	Regulatory WACC (pre-tax)	5.675% ¹	WACC is nominal value. Tendency: slightly decreasing risk free rate
Regulatory opex treatment	Efficiency factor ²	✓	Individual (based on benchmark), sector (set up by the regulator)
	Pass-through of financing costs	✗	
Other	Regulation of quality of supply	✓	
	Exposure to volume risk	✓	
	Inflation ³	✓	Only opex and some minor additional revenues
	Compensation for investments	✓	Before investments become part of RAB: compensation via depreciation (2% of current annual investment value), after 1 year capex = RAB

(1) Nominal WACC numbers confirmed for 2016; following years to be adjusted according to risk free rate development. (2) Efficiency factor reflects elements of individual as well as industry/macro-related productivity components. (3) Inflation effects considered in regulatory revenues.

Source: Company data.



Figure 80. innogy – Regulations for the Slovak Electricity DSO

	Element	Key feature	Comments
General	Current regulatory period	2012-2016	Next regulatory period: 2017-2021 (expected)
	Type of regulation	Price cap	Main: opex, reg. depreciation, allowed profit (RABxWACC), distribution volumes Secondary: core inflation, efficiency factor, coefficient of disposable funds utilisation, other revenues
	Incentive elements in regulatory framework	✓	No revenue correction. Outperformance on individual elements can be retained. Incentive scheme on losses
RAB/WACC	Regulated asset base (RAB)	€0.5bn	Assets from revaluation done by Regulator as per 2005, later updated as per 2010. Currently undergoing revaluation for next regulatory period
	Regulatory WACC (pre-tax)	6.12% ¹	WACC is real value. Proposal for next regulatory period: 6.47%
Regulatory opex treatment	Efficiency factor ²	✓	Efficiency factor – 3.5%
	Pass-through of financing costs	✗	
Other	Regulation of quality of supply	✓	Quality factor – not applicable, but automatic compensations in place
	Exposure to volume risk	✓	Actual revenues depend on actual volumes, while price cap on planned
	Inflation ³	✓	Opex escalated by core inflation minus efficiency factor. If negative, then no reduction occurs
	Compensation for investments	✓	One-off increase of regulated depreciation for the year following the completion of investments. Lag for introduction into RAB → until next reg. period.

(1) WACC for 2016.(2) Efficiency factor reflects elements of individual as well as industry/macro-related productivity components.(3) Inflation effects considered in regulatory revenues.

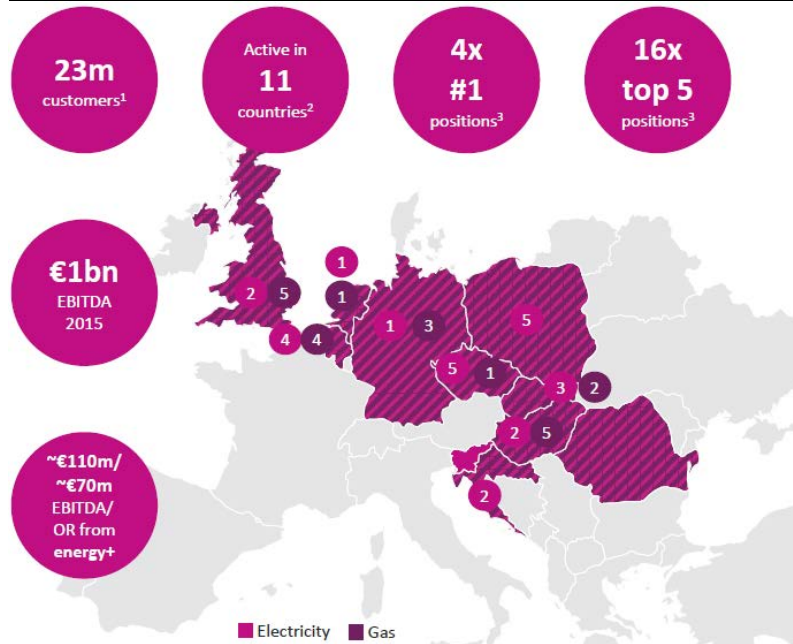
Source: Company data.

APPENDIX II. RETAIL

GEOGRAPHIES AND SALES

Retail is the supply division that sells gas and/or electricity to 23mn customers in 11 countries. It is the second biggest in the group with EBITDA of c€1bn in 2015. Innogy is active in four areas: Germany, Netherlands/Belgium, the UK and what it calls East, where the Czech Republic and Hungary are its main markets.

Figure 81. innogy – Retail Division's Geographic Exposure



Source: Company data and Santander Investment Bolsa estimates.

Retail is a capital light division. Excluding the UK business, where innogy is investing to improve the situation, capex/EBITDA averaged c9% in 2013-15. It is increasing due to investments in energy+. Innogy plans to achieve capex 2016-18 of €0.8bn, of which 40%-50% will be allocated to energy+.

Figure 82. innogy – Retail Capital Intensity

(€mn)	2013	2014	2015
Adjusted EBITDA	1,113	1,069	865
Capex	158	212	287
Capex intensity	14.2%	19.8%	33.2%
Adjusted EBITDA excluding the UK	747	775	930
Capex excluding UK	52	64	98
Capex intensity excluding UK	7.0%	8.3%	10.5%

Source: Company data and Santander Investment Bolsa estimates, including the capex intensity, calculated with adjusted EBITDA.






Innogy wants to be one of the leading players in each of the markets in which it operates. Its experience in both Western and Eastern European markets should help. This experience enables innogy to react quickly and effectively when there are regulatory changes (from fully regulated to fully deregulated), particularly in Eastern Europe where the company is growing with new products and entering new markets.

In terms of new products, innogy is offering a whole battery of different products, as well as gas and electricity. We think this will be the new normal in a few years' time, when the auto-consumption is well implanted in countries where the 'prosumer' is an accepted concept.



Energy+ is another way to continue growing. It is already an important part of the business, producing c11% (€110mn) of total EBITDA. By 2018, innogy is expecting it to post more than €150mn EBITDA, after directing 40%-50% of its total €0.8bn capex for the next three years to this platform. We see this as a long-term investment. Clients and producers (future prosumers) are demanding more services from the companies. Energy + is already offering combined heat and power and operation and maintenance services, insulation, lighting (LED) and insurance services. Innogy also offers batteries, solar PV, smart home services and more.

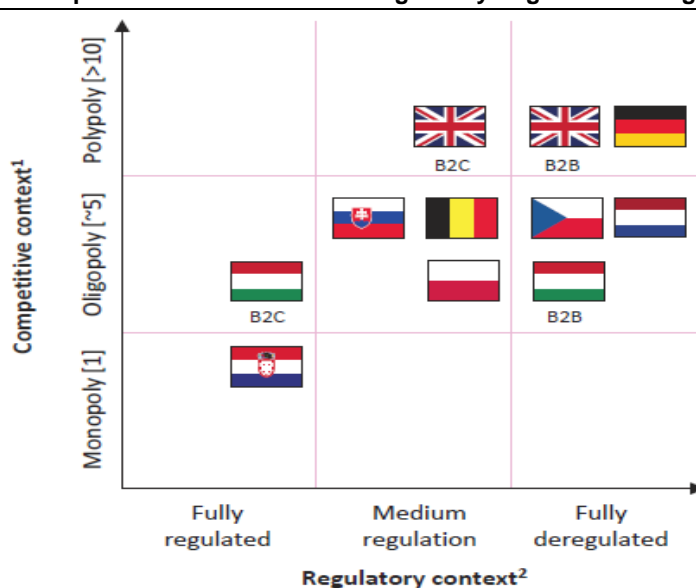
Figure 83. innogy – Products on Offer

Customer type	Product needs	Targeted innogy product offering
 <p>Classic consumer</p>	<ul style="list-style-type: none"> > Commodities > Fix, flexible 	<ul style="list-style-type: none"> > Electricity > Gas
 <p>Advanced consumer</p>	<ul style="list-style-type: none"> > Targeted tariffs > Energy related tools and services (smart, energy efficient) 	<ul style="list-style-type: none"> > Insurance/assistance services > Energy audits and savings solutions > Security solutions > Home automation
 <p>Prosumer</p>	<ul style="list-style-type: none"> > Own, decentral production (CHPs, solar, wind) and storage > Customised offers 	<ul style="list-style-type: none"> > PV > CHP/Micro CHP > Batteries > O&M services
 <p>Energy manager</p>	<ul style="list-style-type: none"> > 'Trading' energy > Optimising energy usage (demand-response) 	

Source: Company data and Santander Investment Bolsa estimates.

In terms of new markets, Belgium is the clearest example. Innogy had exposure there in 2002 and continually grew its customer base, thanks to the acquisition of Essent, increasing it to 590,000 clients by 2015. Sometimes innogy enters a new market by buying a small player and expanding it, as it did in Croatia.

Figure 84. Competitive Environments vs Regulatory Regimes in Innogy's Markets



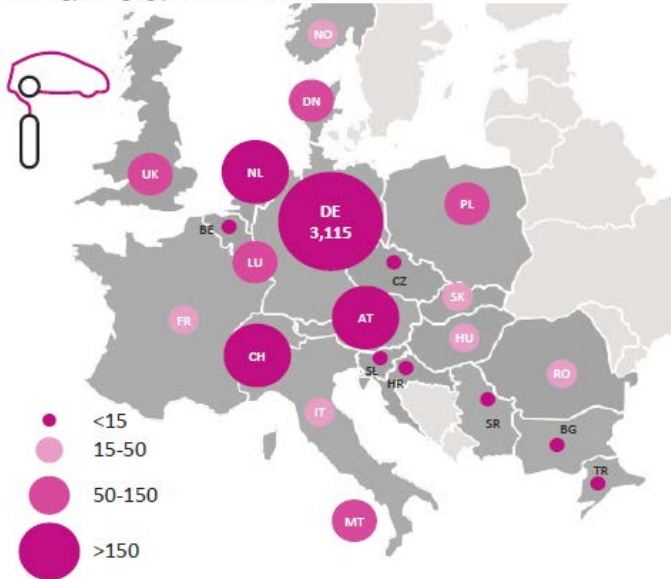
(1) # of competitors shown referring to # of competitors jointly representing at least 80% of market volume.
 (2) Regulatory context taking into account degree of liberalisation) and regulatory interventions.

Source: Company data.

The last thing we would highlight is the increase in electric vehicles. In future, we should see less polluted cities and clean electricity produced in cities and countries that is much less dependent on commodities. For this to happen will take many years, but we think this is a clear trend. Infrastructure is a necessary part of this, as is R&D and a contribution from politicians and regulators. Innogy is in a good position in Germany and could potentially export elsewhere, such as East Europe. In Germany, innogy has already 3,115 charging points for electric cars. As of today, there are c50,000 electric cars in Germany and the government has a target of 500,000 by 2019, helped by its support programme.

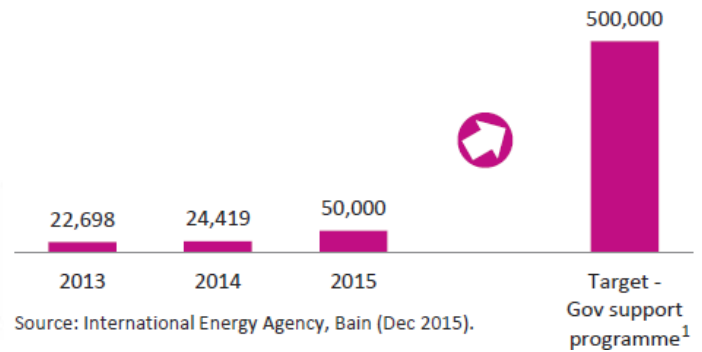
Figure 85. innogy's Charging Points

innogy charging points as of 31 December 2015



Number of Electric Vehicles in Germany

EV stock Germany



Source: Company data and Santander Investment Bolsa estimates.

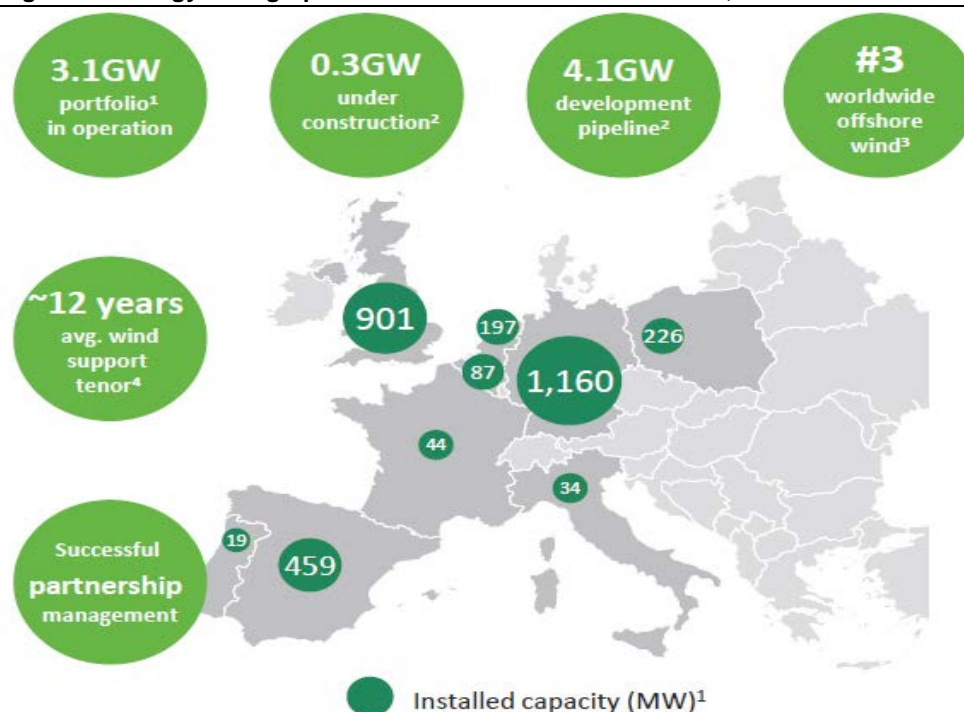


APPENDIX III. RENEWABLES

MORE DETAILS OF ASSETS AND REGULATORY REGIMES

At present, the company's renewable assets are all located in Europe. The main country is Germany (37% of total capacity), closely followed by the UK (29%), and, taking into account the current pipeline, we think the UK will become the most important country for innogy. Out of the 3.1GW of portfolio in operation, 53% is onshore wind and 31% offshore, the other c500MW being hydro assets.

Figure 86. innogy –Geographical Location of Renewable Assets, 2015



(1) As of 31 December 2015; pro-rata view, excluding the Zephyr portfolio. innogy has further renewable capacity of 0.3GW in consolidated participations related to the Grid & Infrastructure segment.

(2) Pro-rata view.

(3) By capacity. Source: Bloomberg New energy finance; asset owner database, as of March 2016.

(4) Capacity-weighted company estimate for offshore and onshore wind farms subject to an unexpired support tariff for ~1.5GW for onshore and ~1.0GW for offshore; pro-rata view as of 2015, excluding Zephyr portfolio. Source: Company data.

In terms of existing assets, we provide below further details by country in terms of installed capacity and output.

Figure 87. innogy – Installed Capacity (MW) and Output (GWh), 2015-20E

(MW)	2015	2016	2017	2018	2019	2020
Germany	1,245	1,245	1,251	1,251	1,251	1,251
UK	1,011	1,011	1,051	1,051	1,051	1,051
Spain	459	459	459	459	459	459
Netherlands	197	207	252	297	297	297
Poland	242	242	242	242	242	242
Italy	67	67	67	67	67	67
France	44	44	44	44	44	44
Portugal	16	16	16	16	16	16
Others	0	0	0	68	311	540
Total	3,280	3,291	3,382	3,495	3,738	3,967
(GWh)						
Germany	3,186	3,899	3,909	3,909	3,909	3,909
UK	3,139	3,349	3,446	3,446	3,446	3,446
Spain	1,019	1,088	1,088	1,088	1,088	1,088
Netherlands	478	471	574	676	676	676
Poland	499	530	530	530	530	530
Italy	111	117	117	117	117	117
France	125	126	126	126	126	126
Portugal	24	44	44	44	44	44
Others	0	0	0	156	885	1,561
Total	8,581	9,624	9,834	10,092	10,821	11,497

Source: Company data and Santander Investment Bolsa estimates.

In terms of offshore, the figure below shows the most significant details of innogy's finished assets and those still under construction (Galopper and Nordsee One). We think it is very interesting to see the advances being made in terms of distance to shore and water depth. This technology is improving fast too. Innogy gave the example of the number of days for installation per foundation. In the case of Nordsee Ost it was 8.2 days vs just 2.3 in the case of Nordsee One.

Figure 88. innogy – Track Record of Installing Offshore Turbines

Project	North Hoyle ¹	Rhyl Flats	Gwyn y Môr	Greater Gabbard	Thornton Bank	Galopper	Nordsee One	Nordsee Ost
(Expected) CoD	2004	2010	2015	2012	2009-2013	2018	2017	2015
Capacity	60MW	90MW	576MW	504MW	325MW	336MW	332MW	295MW
Turbines	30 x 2.0MW	25 x 3.6MW	160 x 3.6MW	140 x 3.6MW	54 x 5-6.15MW ²	56 x 6MW	54 x 6.15MW	48 x 6.15MW
Water depth	7-11m depth	10-15m depth	12-28m depth	24-34m depth	12-30m depth	27-36m depth	26-29m depth	22-26m depth
Distance to shore	7 km	8km	13km	23km	28km	30km	45km	60km
Support scheme	1.0 ROC + WS	1.5 ROC + WS	2.0 ROC + WS	2.0 ROC + WS	WS + Certificate ³	1.8 ROC + WS ⁴	EEG 2014 ⁵	EEG 2014 ⁵

Source: Company data.

Finally, innogy provides the prices achieved by each of the technologies. According to the company, 60% of EBITDA is regulated and this is reflected by the fact that the prices achieved are, in general, much higher than current market prices.

Figure 89. innogy – Price Achieved per Country and Technology in 2015.

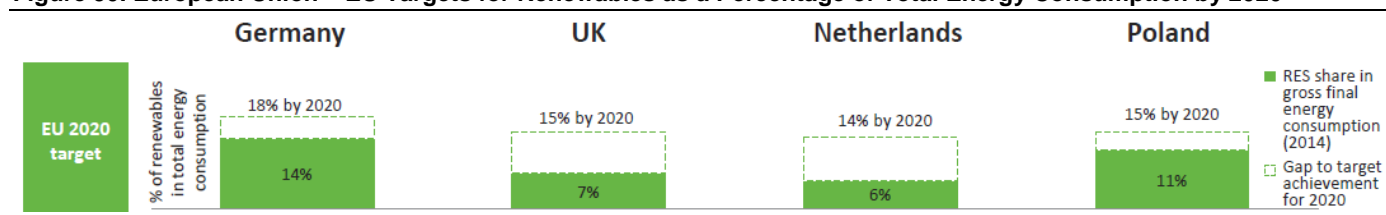
(€/MWh)	Onshore	Offshore	Hydro
Germany	95	192	56
UK	135	183	147
Spain	48	–	69
Netherlands	110	–	–
Poland	70	–	–
Italy	145	–	–
France	–	–	44
Portugal	–	–	91

Source: Company data.



National targets in Europe, a positive for innogy: Innogy's main markets are countries where capex is needed in the short term to fulfill EU targets. This is a positive thanks to the company's good position in these markets.

Figure 90. European Union – EU Targets for Renewables as a Percentage of Total Energy Consumption by 2020



Source: Company data.

Finally, here is a brief summary of regulatory regimes in the six main European countries.

Figure 91. innogy – Regulatory Onshore and Offshore Regimes in Germany and the UK

	Germany	United Kingdom
Onshore	<ul style="list-style-type: none"> > Support mechanism: statutory feed-in tariff/feed-in premium system in transition to feed-in premium system based on auctioning > Remuneration: wholesale price plus premium to reach fixed tariff level. Increased starting tariff (8.90 ct/kWh¹) for a period depending on asset energy yield, then base tariff (4.95 ct/kWh¹) – both depending on commissioning date (tariff degression) > Auctions: switch to auctioning from 2017, pay as bid remuneration with correction factor based on energy yield 	<ul style="list-style-type: none"> > Support mechanism: Renewable obligation/green certificate (RO) system in transition to feed-in premium system based on auctioned contracts for difference (CfD). Statutory feed-in tariff for small-scale generation (<5MW) > Remuneration: RO: wholesale price plus 0.9-1.0 ROC/MWh, CfD: wholesale price plus premium to reach individual 'strike price', feed-in tariff incl. export tariff (9.24-13.30 p/kWh, July 2016) for small scale (<5 MW) > Auctions: from 2017², only CfD auctions for low carbon projects >5MW, but no future auctions currently announced for mature technologies like onshore wind
Offshore	<ul style="list-style-type: none"> > Support mechanism: statutory feed-in tariff/feed-in premium system in transition to feed-in premium system based on auctioning > Remuneration: whole sale price plus premium to reach fixed tariff level. Increased starting tariff (15.40 ct/kWh¹ / 19.40 ct/kWh¹) for a period depending on distance to shore / water depth, then base tariff (3.90 ct/kWh¹) – both depending on commissioning date (tariff degression) > Auctions: switch to auctioning from 2017, interim auction model for installations 2021-2024, then centralised tender model, pay as bid remuneration 	<ul style="list-style-type: none"> > Support mechanism: Renewable obligation/green certificate (RO) system in transition to feed-in premium system based on auctioned contracts for difference (CfD). Feed-in tariff not applicable > Remuneration: RO: wholesale price plus 1.8 – 2.0 ROC/MWh, CfD: wholesale price plus premium to reach individual 'strike price' > Auctions: from 2017² only CfD auctions for for low carbon projects >5 MW

¹ For assets commissioned in 2014. Operators can opt for a so-called compressed tariff model with a higher starting tariff for a shorter period.

² 2018 if the project has secured an RO grace period.

Source: Company data.

Figure 92. innogy – Regulatory Onshore and Offshore Regimes in The Netherlands and Poland

	Netherlands	Poland
Onshore	<ul style="list-style-type: none"> > Support mechanism: feed-in premium system based on auctioned contract for difference > Remuneration: wholesale price plus premium to reach fixed support level¹ (max .70-114 €/MWh in spring 2016²) > Auctions: individual support levels are determined per technology in different rounds on a first come, first serve basis as well as on a pay-as-bid basis 	<ul style="list-style-type: none"> > Support mechanism: green certificates system in transition to feed-in premium based on auctioned contract for difference > Remuneration: Wholesale price plus one certificate per MWh (2015: average certificate price €29.42, substitution fee €71.78), auction: wholesale price plus premium to reach individual bid level > Auctions: New support scheme based on auctions effective since July 2016, separate auctions for seven defined RES categories and for capacity below 1 MW, wind onshore in residual category 7 'other RES sources'
Offshore	<ul style="list-style-type: none"> > Support mechanism: feed-in premium system based on auctioned contract for difference > Remuneration: wholesale price plus premium to reach fixed support level determined by auction¹ > Auctions: separate budget and process based on a centralised tender model, first auction accomplished in 2016 (max. bid 124 €/MWh, winning bid 72.7 €/MWh) 	<ul style="list-style-type: none"> > Support mechanism: only new feed-in premium based on auctioned contract for difference relevant > Remuneration: wholesale price plus premium to reach individual bid level > Auctions: new support scheme based on auctions effective since July 2016, separate auctions for seven defined RES categories and for capacity below 1 MW, wind offshore in category 3 'sources guaranteeing CO₂ emission below 100 kg/MWh and production above 3504 MWh/MW/a'

1 Premium (SDE- contribution) calculated as the individual 'base amount' (auction outcome) minus conventional electricity price ('correction amount'); however, premium is capped if the wholesale price falls below a defined floor price. The maximum support level per technology ('cost price') is determined per technology on an annual basis.

2 The cost price ranges for onshore wind refer to different site qualities (wind speed categories) with own categories for wind installations on dykes and in lakes. Source: Company data.



Figure 93. innogy – Regulatory Onshore and Offshore Regimes in Italy and Spain

	Italy	Spain
Onshore	<ul style="list-style-type: none"> > Support mechanism: combination of feed-in tariffs (FiT) and tender schemes; tax regulation mechanisms for investment in RES-E plants; previous system based on green certificates > Remuneration: feed-in tariff based on register or determined in bidding process; bids based on a per cent reduction from base tariff¹ of 127€/MWh with a floor at -30%; in previous system producers received market price + value of green certificate² > Auctions: since 2013, individual feed-in determined in auctions for onshore assets >5MW capacity (pay-as-bid); plants <5MW are eligible for direct feed-in tariff through a specific register 	<ul style="list-style-type: none"> > Support mechanism: FiT and FiP until mid 2013. Pool price + fix investment compensation + opex compensation (not for wind and hydro) since mid 2013, aimed to achieve a 'reasonable return' based on the 10-year government bond plus a spread³ > Remuneration: sum of pool price and the yearly Investment Compensation (fix amount per MW installed) > Auctions: auctions used to provide support for new installations; first RES auction conducted in January 2016; no pre-qualification requirements apply⁴
Offshore	<ul style="list-style-type: none"> > Support mechanism: combination of feed-in tariffs and tender schemes; tax regulation mechanisms for investment in RES-E plants; previous system based on green certificates > Remuneration: feed-in tariff determined in bidding process; bids based on a per cent reduction from base tariff¹ of 165€/MWh; in previous system distributor received market price + value of green certificate² > Auctions: Individual feed-in determined in auctions for any offshore plant due to high capacity 	<ul style="list-style-type: none"> > Support mechanism: FiT and FiP until mid 2013. Pool price + fix investment compensation + opex compensation (not for wind and hydro) since mid 2013, aimed to achieve a 'reasonable return' based on the 10-year government bond plus a spread³ > Remuneration: sum of pool price and the yearly investment compensation (fix amount per MW installed) > Auctions: auctions used to provide support for new installations; first RES auction conducted in January 2016; no pre-qualification requirements apply⁴

1 Value 2013, constantly reduced since then. Base tariff at 110 €/MWh for auction 2016, with the floor set to -40%.

2 innogy's assets in Italy started operation under the former green certificate scheme. They will now receive a feed-in tariff equal to the corresponding value of the former certificates for the residual period of the incentive.

3 Incentives are based on a standardised asset maintained by a well-managed company including investment costs, wholesale market income and operational costs during the regulatory lifetime.

4 Conditions may be different for future auctions.

Source: Company data

APPENDIX IV. CORPORATE GOVERNANCE

MANAGEMENT AND CORPORATE GOVERNANCE

Innogy's management board comes from RWE AG and consists of:

- **Peter Terium, CEO.** He was formerly RWE AG's CEO (from September 1 2011). Since 2003, Mr Terium had previously held several positions within the group, such as CEO of Supply & Trading and person responsible for the integration of Essent.
- **Bernhard Günther, CFO.** Mr Günther was formerly RWE AG's CFO (from July 2012). He joined RWE AG in 1999 as head of department in Group Controlling. He subsequently held several other positions, such as CFO of Supply & Trading.
- **Uwe Tigges as CHO & Labor Director.** Mr Tigges took over the role of CHO of RWE AG in 2013.
- **Hildegard Müller as COO Grid & Infrastructure.** Ms Müller joined the group on May 1, 2016. Since October 2008, Hildegard Müller had been the Chairwoman of the General Executive Management of the German Association of Energy and Water Industries (*Bundesverband der Energie und Wasserwirtschaft – BDEW*).
- **Martin Herrmann, COO Retail.**
- **Hans Bünting, COO Renewables.** Mr Bünting joined RWE in 1995 as Controller. He held several positions until February 2008, when he was appointed CFO for RWE Innogy, the renewable business. In July 2012 he was appointed CEO of RWE Innogy.

The independence of innogy's board from RWE AG is very important. Innogy needs to be able to take its own decisions independently from RWE AG's financial and strategic needs. According to innogy, it has a high degree of independence, and this is reflected in its supervisory board structure.

The supervisory board consists of 20 members, of which ten are shareholders and ten employee representatives. RWE AG will be represented on this board by one management board member (CFO Markus Krebber). Werner Brandt and Frank Bsirske, in personal union, are the Supervisory Board Chairman and Supervisory Board Deputy Chairman, respectively, for RWE AG and innogy. There will also be an Audit Committee that will consist mainly of independent board members.

How is independence guaranteed? There are three main principles governing the relationship between innogy and RWE AG:

- RWE AG and innogy will be in a position to pursue their strategic, operational and financial targets individually and independent from each other.
- Shortly prior to the IPO, the domination agreement between innogy and RWE will be terminated.
- All intercompany relations and agreements are to be carried out at arm's length (principle whereby parties to a transaction are independent and on equal footing).



There are also a few other salient points regarding the agreement of basic principles between the two companies:

- There is a non-compete clause in force until December 31 2019.
- **RWE will manage innogy as a financial investment.** This means that RWE AG will not impose strategic and financial targets and is not involved in planning and management incentive discussions.
- Investment decisions at innogy will not be subject to approval by RWE AG.

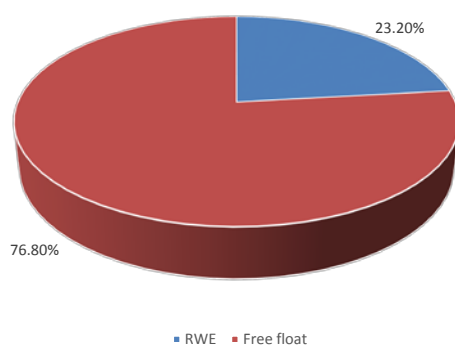
MANAGEMENT INCENTIVES

It is important that management remuneration is aligned with the total return received by shareholders and the achievement of KPIs. Although we do not currently have all the details on the management incentives, these are to be based on:

- **Individual annual bonus scheme:** based on the economic performance of the company, including both individual and collective performance as well as performance regarding corporate responsibility and employee motivation.
- **Long-term incentive plan:**
 - Aims to reward the achievement of long-term strategic objectives while facilitating capital market orientation.
 - Conditional right to receive a pay-out in cash following a period of four years.
 - **Pay-out dependent on achievement of performance targets derived from the strategic planning and set before the start of the first tranche ('3-year IPO business plan')** and based on the share price development as well as the accumulated dividends paid to shareholders (total shareholder return).

SHAREHOLDER STRUCTURE

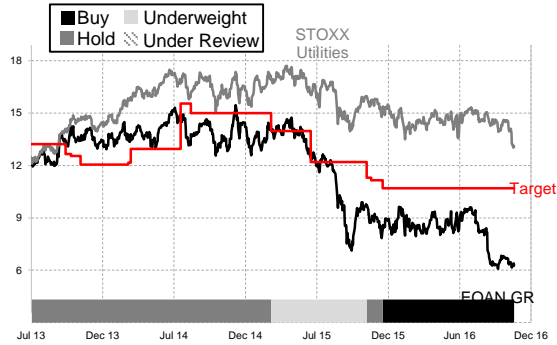
Figure 94. innogy – Shareholder Structure, 2016



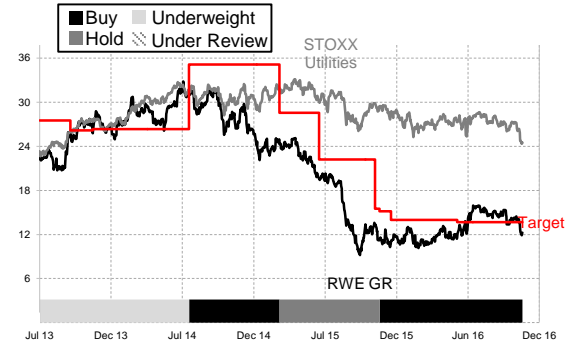
Source: Company data.

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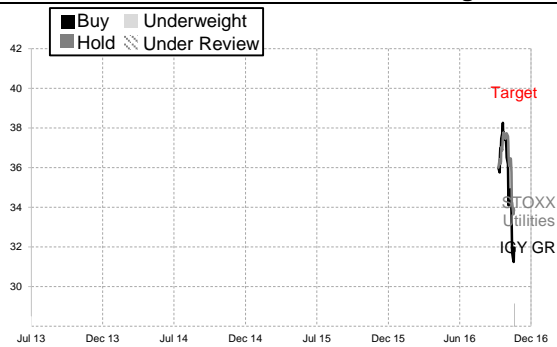
EOAN GR – 3Y Stock Performance vs Rating



RWE GR – 3Y Stock Performance vs Rating



IGY GR – 3Y Stock Performance vs Rating





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Under Review		0	0

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