A market approach for valuing onshore wind farm assets
Global results
9th Edition · August 2017
1. Introduction

The renewable energy sector keeps attracting investors from all over the world

Onshore wind power is accounted for as one of the most competitive sources of electricity, not just within renewable energies but also among all energy sources. In addition, turbine costs have decreased by around 30% since 2009 showing great progress in developing the technology. This has led to prices on delivering electricity going as low as $0.04 per kWh.

In 2016, and during the last couple of years, the onshore wind farm construction rate has slowed down according to Bloomberg New Energy Finance. Meanwhile, demand for old projects has increased as more than one third of the wind capacity in Europe was traded between 2009 and 2016. Thus, as investors hunger for more installed capacity, increased attention has been brought to transactions during the construction phase, showing investors’ trust in the technology.

Global new investments in clean energy were $288 billion in 2016, down by approx. 12% from $329 billion in 2015. Installed wind power also went down from 63 GW in 2015 to 56.5 GW in 2016.

In 2016, global installed wind capacity reached 486.7 GW. Of the total global installed capacity, the 2 largest markets, Europe and China, accounted for almost 75%, with 161 GW and 204 GW, respectively.

In Europe, onshore wind investment dropped in 2016, for the first time in 5 years, to $10 billion. Thus, there is now approx. 148 GW onshore and 13 GW offshore wind power capacity installed in Europe.

Asia was again in 2016 the world’s largest regional market for new wind power investments for the eighth consecutive year in a row, with wind power investments of $28 billion, thus adding to the lead over Europe in terms of capacity installed.

The International Energy Agency (IEA) estimates that total wind capacity is expected to reach approx. 1,350 GW by 2040. In addition, the IEA has updated the 2050 target of total global electricity originating from wind energy from 12% to 15-18%. Since the wind market has grown at high speed and as growth is expected to continue, we have found it interesting to examine how the market values onshore and offshore wind farm assets.

Due to significant investments in renewable energy assets, we find it interesting to identify prices paid by investors across technologies and project lifecycles. This paper addresses how multiple regression analyses of transaction multiples can be used as a benchmarking tool to support a more comprehensive valuation based on a cash flow model when valuing onshore wind farm assets.

3 Global Wind Energy Council “Global Wind Statistics 2016”
2. Executive summary

In 2016, transaction prices for installed capacity decreased, while under construction and late stage capacity increased slightly as investors show increasing faith in non-installed capacity.

In 2016, new investments in onshore wind power decreased by 22%. Half of this number is attributable to lower construction costs from improved instalment efficiency, while the other half is attributable to lower investment activity. In other words, investments in new onshore capacity decreased by gross 11% in 2016 compared to the previous year.

Since the release of the 8th edition of this analysis in April 2016, we have added 49 transactions that are suitable for our analysis of onshore wind farm assets. The sample now totals 327 transactions, and the explanatory power of our model is 89%.

The installed capacity wind farm multiple has decreased from 1.6x in the 8th edition to 1.5x in this 9th edition. Multiples for under construction capacity have remained at 0.8x while late stage capacity of 0.3x increased slightly (up 0.01x). These multiples are based on all registered transactions since 2006.

However, in this year’s edition, we see a noticeable downward change in the preliminary installed capacity multiple when calculated based on a time regression on data from November 2015 until the beginning of 2017 (last 60 transactions). This approach estimates the installed capacity multiple at 1.3x. Thus, our time series analysis reveals a significant decrease in the installed capacity multiple and indicates that the multiple should rather be in the range of 1.3x to 1.5x.

In addition, our time analysis reveals that the installed capacity multiple decreased from 1.8x in 2008 to 1.3x in most recent transactions at the beginning of 2017. Although this decrease of roughly 30% appears as a significant decrease, construction costs have decreased at an even greater rate. In 2016 alone, average capex for onshore wind power fell by 11.5% to $1.6m per MW1.

Our analyses of onshore wind farm transactions have led to the conclusion that installed capacity, under construction capacity and late stage capacity affect the enterprise value of transactions significantly. In addition, we have concluded that investors in onshore wind farm assets assign slightly increasing value to under construction and late stage capacity, as demand for installed capacity is in excess of wind farms held for sale. Furthermore, greater confidence in the risks of onshore wind power has led to investors gaining increased interest in wind farms under construction and in the late stage.

We also conduct these analysis on offshore wind farm assets and solar PV assets.

This year’s edition of the offshore analysis shows an increase in the installed capacity multiple from 4.6x to 4.7x.

Last year’s edition of the solar PV analysis showed a noticeable downward change to 2.2x from 2.9x the previous year. It will be exciting to see if this tendency continues when we release this year’s solar PV analysis later this year.

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3. Methodology

**Introduction**
This paper addresses how multiple regression analyses of transaction multiples can be used as a benchmarking tool to support a more comprehensive valuation based on a cash flow model. We present the technical considerations underlying the analyses followed by practical examples that illustrate how the results can be applied from a valuation perspective.

From our point of view, one of the main challenges is the determination of the market value of wind capacity in different stages of the project lifecycle. We define a project lifecycle for wind farms as illustrated in the figure below.

We recognize that transaction prices depend on other factors than capacity, such as age of the wind farm, operating costs, local wind conditions, operating efficiency, power price agreements, local tax rules, subsidies and financing – most of which are country dependent. Hence, we also test for geographical effects and refer to “A market approach for valuing wind farm assets – geographical analysis and transaction details” and the order form at the bottom of that analysis.

Since wind and solar farm assets have different characteristics, and since offshore wind farm assets differ from onshore wind farm assets, we perform 3 separate analyses in 3 separate papers – 2 papers with analyses solely based on transactions in the offshore and onshore wind farm industries and 1 paper solely based on transactions in the solar PV farm industry. The approach yields “clean” multiple estimates for the different stages of the project, and it indirectly implies that in our analyses we assume that there is no interaction effect between holding a portfolio containing more than one kind of these assets. The multiple regression analysis is a market-based valuation approach, as it is based on data from historical transactions.
In the analyses, we disaggregate transactions into the different project stages as illustrated in the figure above. This disaggregation makes it possible to apply the multiple regression approach and gives us the possibility of assigning separate multiples to each stage of the project. The reason for applying the multiple regression approach is that it allows us to estimate EV/MW multiples for the capacity in each stage of the project lifecycle.

The quality of a multiple regression analysis is critically dependent on the quality of the underlying dataset. Hence, the data collection process becomes important to ensure sufficient and reliable data. It is our experience that collection of data is one of the main challenges when using statistical analysis. The accessibility of EV and the total capacity of target’s assets divided into the different project stages have been the primary criteria for including transactions in our analyses.

Below we give a more thorough introduction to the multiple regression analyses and present the underlying technical considerations of the analyses we have performed. To exemplify the analyses, we use a fictive company named Renewable Energy Company (REC) throughout the paper to illustrate how a multiple regression can be applied for valuation purposes. REC has wind farm assets in different lifecycle stages as illustrated in the table below.

The following sections 4 and 5 are structured in the same way. We present the findings of the regression analysis, followed by practical examples that illustrate how the results can be applied from a valuation perspective.

### Renewable Energy Company (REC)

<table>
<thead>
<tr>
<th>MWs</th>
<th>Early stage</th>
<th>Late stage</th>
<th>Under construction</th>
<th>Installed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind farms</td>
<td>1,600</td>
<td>800</td>
<td>400</td>
<td>200</td>
</tr>
<tr>
<td>Total</td>
<td>1,600</td>
<td>800</td>
<td>400</td>
<td>200</td>
</tr>
</tbody>
</table>

Source: Deloitte analysis

### Identification of data and choice of method

Our analysis of the value of wind farm assets is based on transactions over the past 10 years to secure a sufficient dataset. We have identified 372 wind farm transactions, which we find suitable for our multiple regression analysis. Of these transactions, 327 are transactions of onshore wind assets on which we will publish a report at a later stage. The remaining 45 transactions are transactions of offshore wind assets covered in this analysis.

Our analyses derive from the following regression model (1) which we have performed on onshore and offshore transactions. Based on this model, we find that installed capacity, capacity under construction and capacity in late stage affect the enterprise value of onshore wind farm assets significantly. In addition, based on this model, we can conclude that early stage capacity has no meaningful effect on the enterprise value (multiple close to nil) in onshore wind farms. Our analysis of offshore wind transactions leads to similar results. Hence, the early stage multiple has been excluded from the following analyses.

\[
EV = \alpha + \beta_1 \cdot MW_{\text{installed}} + \beta_2 \cdot MW_{\text{under construction}} + \beta_3 \cdot MW_{\text{late stage}} + \beta_4 \cdot MW_{\text{early stage}}
\]
4. Transaction analysis

By excluding early stage capacity from the model (1), we find that for onshore wind assets the EV/MW multiples for installed, under construction and late stage capacity are EUR 1.5m, EUR 0.8m and EUR 0.3m. The regression has a coefficient of determination (~ R-squared) of 0.89, which can be interpreted as the analysis having high statistical explanatory power. In other words, 89% of the variation in enterprise value for onshore wind farm assets can be explained by the capacity in each stage of the project lifecycle. Applying these multiples on REC’s assets yields a base case value of the wind farm assets of EUR 844m. The results of the analysis are summarised in the table below.

Regression and valuation of wind assets

<table>
<thead>
<tr>
<th>EURm</th>
<th>Late stage</th>
<th>Under construction</th>
<th>Installed</th>
</tr>
</thead>
<tbody>
<tr>
<td>EV/MW coefficient(^1)</td>
<td>0.3x</td>
<td>0.8x</td>
<td>1.5x</td>
</tr>
<tr>
<td>Significance (p-value)</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Upper 95%</td>
<td>0.4x</td>
<td>0.9x</td>
<td>1.6x</td>
</tr>
<tr>
<td>Lower 95%</td>
<td>0.2x</td>
<td>0.6x</td>
<td>1.5x</td>
</tr>
<tr>
<td>REC wind MWs</td>
<td>800</td>
<td>400</td>
<td>200</td>
</tr>
<tr>
<td>REC wind EVs</td>
<td>234</td>
<td>304</td>
<td>307</td>
</tr>
<tr>
<td>REC total EV</td>
<td></td>
<td></td>
<td>844</td>
</tr>
</tbody>
</table>

\(^1\) Transactions (n): 327, R-square: 0.89

Source: Deloitte analysis

\(^1\) All transactions that involve more than 1 stage also involve early stage capacity. However, the early stage multiple can be set at nil according to our regression analysis.
A multiple regression analysis is subject to uncertainty just like any other valuation method. One advantage of statistical models compared with other models is that the uncertainty is easier to quantify. The uncertainty can be expressed by the statistical term "standard error". The standard error is calculated for each EV/MW multiple and can be used to determine a lower and upper boundary, i.e. a value interval at a certain confidence level. Our analysis is based on a 95% confidence level. This can be interpreted as the EV/MW multiple estimate being within this interval with 95% confidence.

The lower boundaries for the EV/MW multiples on onshore wind assets are EUR 1.5m, EUR 0.6m and EUR 0.2m for installed, under construction and late stage capacity while the upper boundaries for the EV/MW multiples are EUR 1.6m, EUR 0.9m and EUR 0.4m for installed, under construction and late stage capacity.

The precision of our onshore EV/MW estimates has increased on last year’s edition of our analysis, which is mainly attributed to the increasing size of the data. For instance the uncertainty of the installed capacity multiple for onshore wind farms has been increased by 32% since the last edition, due to decreasing multiples the last few months as seen later on in our time analysis. The uncertainty intervals of the estimated EV/MW multiples are illustrated in the figure below.

### Wind asset valuation uncertainty

<table>
<thead>
<tr>
<th>EURm</th>
<th>Late stage</th>
<th>Under construction</th>
<th>Installed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Upper EV/MW multiple</strong></td>
<td>0.4x</td>
<td>0.9x</td>
<td>1.6x</td>
</tr>
<tr>
<td>REC wind MWs</td>
<td>800</td>
<td>400</td>
<td>200</td>
</tr>
<tr>
<td>REC wind EVs</td>
<td>311</td>
<td>367</td>
<td>319</td>
</tr>
<tr>
<td><strong>REC upper EV</strong></td>
<td></td>
<td></td>
<td>997</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lower EV/MW multiple</th>
<th>0.2x</th>
<th>0.6x</th>
<th>1.5x</th>
</tr>
</thead>
<tbody>
<tr>
<td>REC wind MWs</td>
<td>800</td>
<td>400</td>
<td>200</td>
</tr>
<tr>
<td>REC wind EVs</td>
<td>159</td>
<td>244</td>
<td>292</td>
</tr>
<tr>
<td><strong>REC lower EV</strong></td>
<td></td>
<td></td>
<td>694</td>
</tr>
</tbody>
</table>

Source: Deloitte analysis
The uncertainty of the EV/MW multiples consists of statistical uncertainty and general value creation uncertainty. Among other things, the statistical uncertainty relates to the size of the dataset, and as we add more transactions to the dataset, some of this uncertainty will diminish. However, the other part of the uncertainty interval will not. Value is created within the different stages of development and this creates a price interval for the EV/MW multiples. In particular, the value of a project under construction is highly dependent on the amount of project costs accrued by the developer, which is also emphasised by the relatively higher uncertainty of this multiple.

The figure below illustrates the development of the EV/MW multiple during the project lifecycle of onshore wind farm assets. The confidence intervals from the multiple regression are also illustrated.

**Early stage**

During the early stage of the project, the value increase is relatively low, i.e. the change in enterprise value is small. There are some costs related to wind testing, securing land, planning, etc., but they are not substantial. However, when dealing with offshore projects, there is significantly higher capex related to these preliminary analyses.

**Late stage**

During the late stage, the value of the project increases as project developers obtain project permits from local authorities and secure turbines and debt financing. As the value in this stage increases, we expect greater variation in transaction prices. The greater variation is due to greater differences between the value created for projects that have just entered the late stage and projects that are close to enter the under construction stage.

**Under construction stage**

Most of the value appears to be created in the under construction stage, presumably because the majority of project costs occur at this stage. This is also reflected in the results as this stage exhibits the widest uncertainty interval. This underpins one of the general drawbacks with relative valuation models compared with for example cash flow models. For instance, projects, in which the wind turbines have been paid for, will acquire a multiple near the upper bound of our construction stage interval and vice versa. The hatched area in the figure shows how potential large differences in accrued capex in the under construction stage affect this multiple.
Installed MWs
Upon completion, the project reaches its highest multiple. There are still differences in transaction prices, which can be explained by other factors than capacity, such as age of the wind farm, local wind conditions, operating efficiency, power price agreements, local tax rules, subsidies and financing.

For offshore projects, sea depth and distance to shore are also significant factors. As mentioned above, the EV/MW multiple for installed capacity is subject to least uncertainty.

Lifecycle/value creation for onshore wind farm assets

Source: Deloitte analysis
Time analysis
The size of the dataset on onshore wind transactions has enabled further analyses. More specifically, we have analysed whether transaction prices have changed over time.

As the onshore industry matures, it seems sound that supply chain improvements and technological progress will make the lifecycle curve shift to lower levels.

Reports on the wind farm industry show that construction costs related to onshore wind farm assets have been declining over our sample period of 11 years. However, during the past year, project costs have displayed an increasing trend. We therefore find it interesting to investigate a potential time pattern in transaction multiples. As the onshore industry matures, it seems sound that supply chain improvements and technological progress will make the lifecycle curve shift to lower levels. We believe that transaction multiples should find lower levels as the development of the market pushes down development and construction costs. The figure below illustrates this.

Lifecycle/value creation for onshore wind farm assets

Source: Deloitte analysis
To investigate a potential time effect, we have applied a rolling regression analysis. This method uses the latest 60 transactions on forward running dates by constantly substituting the oldest transaction with a newer transaction. By running 268 regressions, each with 60 transactions, we create a picture of how the installed capacity multiple has developed since 2008. We find that the multiple for installed capacity is EUR 1.3m or approx. EUR 0.2m lower than the estimate obtained in the regression analysis. This is a relative decrease on last year’s edition of this analysis where the installed capacity multiple was approx. EUR 1.6m per MW.

The figure below illustrates our findings. The dark-blue line illustrates the trend in EV per MW installed capacity. The values on the time axis represent the announcement date of the latest of the 60 transactions included in the relevant capacity multiple. Consequently, the first point on the dark-blue line represents the multiple based on 60 transactions with the most recent one occurring in August 2008. To illustrate the relation between transaction multiples and development costs, we have included average project costs per installed MW (the light-blue triangles). The average follows the same trend as the transaction multiples. The analysis suggests that the developer premium on onshore wind farm assets is approx. EUR 0.1m of project costs.

While the level of the installed capacity multiple has varied during the past 10 years, the latest estimated multiple is at a level similar to that of our overall analysis, which means that the results of the initial regression analysis on the overall dataset seem to be consistent with the current level of the installed capacity multiple.
The EV/MW multiple has historically decreased for onshore wind power, from 1.6x in 2009 for installed wind farms to 1.5x in 2017, a decrease of approx. 5% in 8 years. This tendency may be explained by increased competition and improved project costs. More significant is the decrease in the multiple for wind farms under construction, with 30% during the 8-year period from 1.1x in 2009 to 0.8x in 2017.

Our analysis is based on a 95% confidence level. This can be interpreted as the EV/MW multiple estimate being within this interval with 95% confidence. The upper boundary for the EV/MW multiples has also decreased from 1.8x in 2009 to 1.6x in 2017 for installed wind farms. Wind farms under construction have decreased from 1.5x to 0.9x and late stage wind farms have decreased from 0.7x to 0.4x. The lower boundary for the EV/MW multiples is approx. 1.5x in 2009 and in 2017 for installed wind farms. Wind farms under construction have decreased from 0.7x to 0.6x and late stage wind farms have decreased from 0.4x to 0.2x.

Late stage wind farms has decreased from 0.5x in 2009 to 0.3x in 2017, likely due to uncertainties in project fulfilment, thus associated with greater risk.

Source: Deloitte analysis
Age analysis
The increasing quantity of data has enabled us to perform further detailed analyses. More specifically, we have investigated how the age of the wind farm affects the level of the installed capacity multiple. Assuming an operational lifetime of 20-25 years, the rationale behind the analysis is that the remaining cash flows from a wind farm decrease as the wind farm gets older. A wind farm project should therefore reach its highest value at the commissioning date and from there the value should decrease as the wind farm operates throughout the years. In our analysis this effect would materialize in a lower installed capacity multiple for old wind farms when comparing to young or newly commissioned wind farms.

To enable the analysis we have collected data on the wind farm commissioning date in 120 transactions1. An average installed capacity multiple of 1.80 implies that the sample is representative to the overall dataset, although slightly higher.

Our analysis is based on the following regression model (3), in which we have included an “age” variable calculated as the difference in years between the transaction date and commissioning date of the transacted wind farms. The results of the analysis are summarised in the table below.

\[
\frac{EV}{MW_{installed\ capacity}} = \alpha + \beta_1 \cdot age_{wind\ farm}
\]

The 122 transactions are adjusted for outliers and include transactions with only installed capacity in order to adjust for disturbance caused by the late stage and construction stage capacities.
Our analysis suggests an installed capacity multiple of EUR 1.84m per MW for a newly commissioned wind farm. The installed capacity multiple then declines by EUR 0.08m per MW per operational year. These results indicate that the wind farm has a value of nil after approx. 22.5 years, which is in line with the expected lifetime of a wind farm of 20-25 years, taking into account a positive net scrap value of the assets after the operating period. The regression has a coefficient of determination (~ R squared) of 0.16, which may be interpreted as 16% of the variation in the installed capacity multiple being explained by variations in age of the wind farm. Some of the remaining variation in the installed capacity multiple may be explained by other factors, such as local wind conditions, operating efficiency, power price agreements, local tax rules, subsidies and financing.

Below we have estimated the value of REC, given that REC’s installed capacity has been operational for 5 years. This yields a total value of REC of EUR 823m.

### Regression and valuation of wind assets

<table>
<thead>
<tr>
<th>EURm/MW</th>
<th>Coefficient</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>1.84</td>
<td>0.0</td>
</tr>
<tr>
<td>Age1</td>
<td>(0.8)</td>
<td>0.0</td>
</tr>
</tbody>
</table>

1 Transactions (n): 120, R-square: 0.16  
Source: Deloitte analysis
The figure below shows the installed capacity multiple and age of the 120 transactions in this analysis. Note that only 7 transactions have an age above 8 years at transaction date. These 7 transactions may disturb the general picture, and estimating model (3) without these 7 wind farms yields an age coefficient significant at a 90% confidence level. In general, we expect the analysis to become stronger as more transactions with larger time intervals are added to the sample.

**EV installed MWs (EURm)**

Source: Deloitte analysis
5. Appendix A: Summary of transaction data from the onshore wind farm industry

Note: The transactions on this map sum up to 321. The missing transactions concern several onshore wind farms in different European countries and can therefore not be assigned to a specific country.

Source: Deloitte analysis

The data of the map are summarised in the table on the next page.
# A Market Approach for Valuing Onshore Wind Farm Assets

<table>
<thead>
<tr>
<th></th>
<th>EV in EURm</th>
<th>Installed MWs</th>
<th>Under constr, MWs</th>
<th>Late stage MWs</th>
<th>Early stage MWs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Obs.</td>
<td>Min.</td>
<td>Max.</td>
<td>Average</td>
<td>Total</td>
</tr>
<tr>
<td>Overall</td>
<td>327</td>
<td>1</td>
<td>1,442</td>
<td>170</td>
<td>90</td>
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<tr>
<td>Geography</td>
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<td></td>
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<td></td>
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<tr>
<td>Europe</td>
<td>198</td>
<td>1</td>
<td>1,442</td>
<td>140</td>
<td>14,435</td>
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<tr>
<td>Non-Europe</td>
<td>129</td>
<td>2</td>
<td>1,390</td>
<td>216</td>
<td>15,050</td>
</tr>
<tr>
<td>North America</td>
<td>69</td>
<td>2</td>
<td>1,390</td>
<td>273</td>
<td>9,333</td>
</tr>
<tr>
<td>Australia &amp; New Zealand</td>
<td>15</td>
<td>17</td>
<td>915</td>
<td>247</td>
<td>2,014</td>
</tr>
<tr>
<td>Central &amp; South America</td>
<td>19</td>
<td>9</td>
<td>815</td>
<td>202</td>
<td>1,827</td>
</tr>
<tr>
<td>Asia</td>
<td>20</td>
<td>7</td>
<td>324</td>
<td>55</td>
<td>1,637</td>
</tr>
<tr>
<td>Poland</td>
<td>14</td>
<td>2</td>
<td>270</td>
<td>55</td>
<td>374</td>
</tr>
<tr>
<td>France</td>
<td>23</td>
<td>6</td>
<td>597</td>
<td>111</td>
<td>1,807</td>
</tr>
<tr>
<td>Germany</td>
<td>26</td>
<td>2</td>
<td>567</td>
<td>70</td>
<td>1,238</td>
</tr>
<tr>
<td>Spain</td>
<td>29</td>
<td>5</td>
<td>1,442</td>
<td>179</td>
<td>2,527</td>
</tr>
<tr>
<td>UK</td>
<td>45</td>
<td>4</td>
<td>917</td>
<td>146</td>
<td>2,827</td>
</tr>
<tr>
<td>Year</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2005</td>
<td>1</td>
<td>25</td>
<td>25</td>
<td>25</td>
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</tr>
<tr>
<td>2006</td>
<td>10</td>
<td>5</td>
<td>1,442</td>
<td>241</td>
<td>894</td>
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<tr>
<td>2007</td>
<td>20</td>
<td>5</td>
<td>990</td>
<td>203</td>
<td>1,727</td>
</tr>
<tr>
<td>2008</td>
<td>40</td>
<td>5</td>
<td>1,150</td>
<td>83</td>
<td>1,421</td>
</tr>
<tr>
<td>2009</td>
<td>20</td>
<td>3</td>
<td>785</td>
<td>203</td>
<td>2,220</td>
</tr>
<tr>
<td>2010</td>
<td>15</td>
<td>5</td>
<td>320</td>
<td>84</td>
<td>743</td>
</tr>
<tr>
<td>2011</td>
<td>27</td>
<td>4</td>
<td>680</td>
<td>136</td>
<td>2,064</td>
</tr>
<tr>
<td>2012</td>
<td>27</td>
<td>5</td>
<td>1,128</td>
<td>186</td>
<td>2,587</td>
</tr>
<tr>
<td>2013</td>
<td>44</td>
<td>2</td>
<td>1,011</td>
<td>178</td>
<td>4,343</td>
</tr>
<tr>
<td>2014</td>
<td>30</td>
<td>2</td>
<td>734</td>
<td>163</td>
<td>2,487</td>
</tr>
<tr>
<td>2015</td>
<td>42</td>
<td>1</td>
<td>1,390</td>
<td>211</td>
<td>5,630</td>
</tr>
<tr>
<td>2016-2017</td>
<td>51</td>
<td>6</td>
<td>1,122</td>
<td>196</td>
<td>5,344</td>
</tr>
</tbody>
</table>

Source: Deloitte analysis
6 Appendix B: Regression output – onshore wind farm analysis

Regression statistics

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Std error</th>
<th>t Stat</th>
<th>P-value</th>
<th>Lower 95%</th>
<th>Upper 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Installed</td>
<td>1.535</td>
<td>0.034</td>
<td>44.588</td>
<td>0.000</td>
<td>1.467</td>
</tr>
<tr>
<td>Under constr.</td>
<td>0.760</td>
<td>0.078</td>
<td>9.729</td>
<td>0.000</td>
<td>0.607</td>
</tr>
<tr>
<td>Late stage</td>
<td>0.292</td>
<td>0.048</td>
<td>6.036</td>
<td>0.000</td>
<td>0.197</td>
</tr>
</tbody>
</table>

Source: Deloitte analysis

7 Appendix C: Regression output – onshore age analysis

Regression statistics

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Std error</th>
<th>t Stat</th>
<th>P-value</th>
<th>Lower 95%</th>
<th>Upper 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>1.838</td>
<td>0.073</td>
<td>25.239</td>
<td>0.000</td>
<td>1.695</td>
</tr>
<tr>
<td>Age</td>
<td>0.082</td>
<td>0.017</td>
<td>(4.754)</td>
<td>0.000</td>
<td>(0.116)</td>
</tr>
</tbody>
</table>

Source: Deloitte analysis
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Financial Advisory leverages from other Deloitte in-house experts in tax, business consulting and audit & accounting – both locally and globally. This enables us to match our clients’ needs in a professional and efficient way.

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