



**SIEMENS**



The new SWT-7.0-154

Think inside the box

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# The SWT-7.0-154: Minimum upgrade for maximum effect

On the outside, our new 7 MW turbine isn't new at all. But we found a smart way to significantly increase the energy output of our proven SWT-6.0-154. Instead of "thinking outside the box," we actually thought "inside the box" and made some upgrades within the nacelle.

The SWT-7.0-154 delivers 10% more energy than its predecessor, building on certified, proven, and reliable technology.

Siemens' unique experience with offshore wind power opens the door to fantastic opportunities. When we decided to improve the energy output of our largest offshore wind turbine, we used our expertise to approach product development in a new way. Instead of following the conventional wisdom, which tells us that "bigger is always better," we started with a proven product. We looked closely at every detail of the wind turbine and made as few upgrades as possible. Upgrades we knew would yield the greatest results – and so we created the new SWT-7.0-154.

#### Higher output at low risk

We improved the electrical system within the nacelle. All upgraded components relate to power output, and include:

- *More powerful magnets*
- *Upgraded power converter*
- *Upgraded transformer*

These upgrades allow us to provide 10% more output than the predecessor, the SWT-6.0-154.

#### No need to give up familiar advantages

The rest remains the same. You can count on our proven and reliable Direct Drive

technology, Integral Blades, and hub and tower concepts, as well as maintenance and safety systems – all lowering the risk of your total investment.

Utilizing components that are already in play also means that the supply chain is ready to go and that all associated processes are already established.

Ultimately, since the new 7 MW turbine is based on the certified SWT-6.0-154, we are improving profitability along with reduced project risk. Thus, facilitating bankability, increasing our customer's business case.

#### Uniting reliability and safety

Siemens has been a major driver of innovation in the wind power industry since 1980. Technology has changed with the times, but Siemens' commitment to providing its customers with reliable wind turbine solutions has always remained the same.

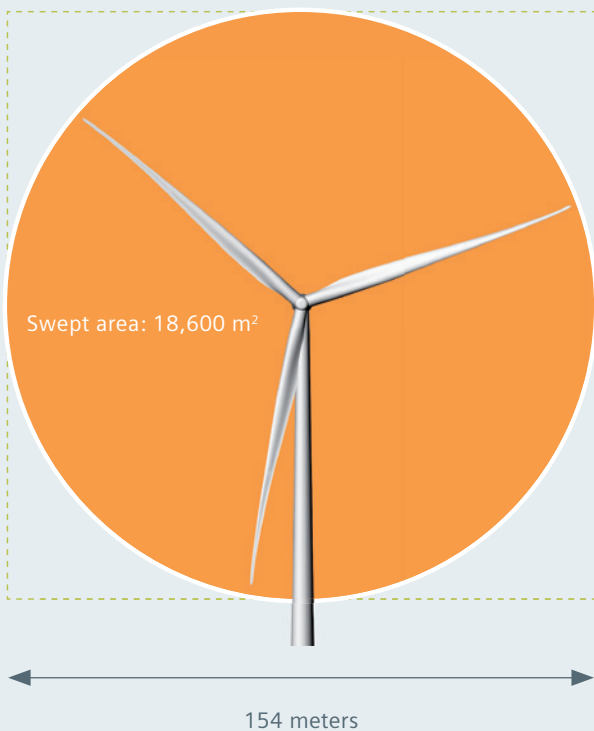
Building on our proven gearless Direct Drive technology, known from the D3 and D6 platforms, the new SWT-7.0-154 leverages our highly efficient generator concept. Compared to an entirely new

Peace of mind for our customers:  
Thanks to an already developed supply chain, the 7 MW wind turbine further reduces the commercial risk of an investment.



product introduction, staying within the SWT-6.0-154 design envelope, the 7 MW allows for a smooth transition for our customers' future projects in numerous ways.

First, product risk is reduced. Second, certification processes will be shorter. Third, the balance-of-plant supply chain impact from turbine configuration is minimal. In sum, we are reducing risk not only on a turbine level, but by extending on our proven platform, we provide valuable synergies to project development. Add a reduced need for turbine positions while increasing the power output and we arrive at the introduction of our SWT-7.0-154: Minimum upgrade for maximum effect.



#### SWT-7.0-154

IEC Class	IB
Nominal power	7,000 kW
Rotor diameter	154 m
Blade length	75 m
Swept area	18,600 m <sup>2</sup>
Hub height	Site specific
Power regulation	Pitch regulated, variable speed

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Wind Power and Renewables  
Lindenplatz 2  
20099 Hamburg, Germany  
[siemens.com/wind](http://siemens.com/wind)

For more information, please contact  
our Customer Support Center.  
Phone: +49 180 524 70 00  
Fax: +49 180 524 24 71  
(Charges depending on provider)  
E-mail: [support.energy@siemens.com](mailto:support.energy@siemens.com)

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