



# Leading Low-Carbon City Transformation by Industrialized Housing and Green Building Practices

Founded in 1984, Vanke has evolved into the world's largest real estate developer in the past three decades. At the new start, Vanke positions itself as an urban ancillary service provider and is committed to promoting the low carbon city transformation.



**Shenzhen Vanke Center**

Based on an ecological friendly open-ended design, the Vanke Center is a delicate intertexture of construction, landscape, engineering and nature. It is the first LEED Platinum certified public building in China and a Three-star certified building by The Chinese Green Building Standard.

## **Vanke's Climate Savers' commitment:**

### **By 2018, Vanke will:**

- Increase prefabrication rate from 20% in 2012 to 60% in 2018 and achieve cumulative reduction of 1.46 million tons CO<sub>2</sub>e through increasing the adoption of industrialized housing techniques;
- Achieve reduction of 2.56 million tons CO<sub>2</sub>e between 2013 and 2018 through vigorously developing green certified residential buildings; and the increasing rate of the buildings certified by Three-star Green Building Standard will be no less than 15% each year.
- Achieve reduction of 1.28 million tons CO<sub>2</sub>e between 2013 and 2018 through promoting the utilization of renewable energy in residential buildings; in 2018, more than 18% of developed buildings will be installed with solar water-heating system and the total space will reach 560,000 square meters.
- Promote the utilization of renewable energy on self-owned office buildings, more than 90% of which will be equipped with roof-top PV systems by 2018.

## **Lead the industrial upgrading of China's residential building segment**

As a pioneer in the exploration of housing industrialization, Vanke is committed to the development and promotion of industrialized housing techniques. By the end of 2013, the total space of Vanke's newly constructed projects was 6.08 million square meters. Industrialized construction enables Vanke to effectively utilize resources, avoid industrial waste, reduce wood consumption and protect the forest. By 2018, Vanke aims to increase the PC<sup>1</sup> percentage to more than 60%. Between 2013 and 2018, Vanke will develop no less than 49 million square meters of industrialized housing, resulting in upstream emissions' reduction of 14.6 million tons CO<sub>2</sub>e, along with the absorption of 1.08 million tons CO<sub>2</sub>e by saved forests.

## **Continuous supply of green and low-carbon buildings**

Vanke has long been committed to the research and promotion of green and sustainable development in the construction industry. It is also the most active and largest promoter of the Chinese Green Building Standard. In 2013, Vanke's green standard certified buildings covered 5.12 million square meters, among which 1.72 square meters was Three-star certified. Motivated by WWF, Vanke has set a higher target for itself. By 2018, more than 90% of its newly constructed residential buildings are

<sup>1</sup> PC : Abbreviation of Prefabricated Components, which are reinforced concrete components prefabricated at an off-site location and assembled with other on-site components through casting.

“I have summited the highest mountain peaks of the world’s seven continents, where I always saw glaciers melting rapidly. As a climbing enthusiast, I have clearly observed our earth is warming, to which we are calling the public to pay attention. Let’s start from ourselves. Let’s start from power saving and environmental protection. There is no time for us to regret. We have to start saving wood, water and electricity. This is a must-do. Only the companies take more responsibility, the carbon footprint of housing industry can be reduced.”

— Mr. WANG Shi  
Founder of Vanke,  
Chairman of the Board

expected to be certified by green building standards; cumulatively, Vanke targets to develop more than 100 million square meters of green standard certified buildings. Between 2013 and 2018, the development of Three-star certified buildings is expected to grow at an average annual rate of no less than 15%; cumulative development of Three-star certified buildings is to exceed 13.5 million square meters. Based on the above target, Vanke will be able to reduce GHG emissions by 0.588 million tons CO<sub>2</sub>e by 2018, and achieve cumulative emissions reductions of 2.56 million tons CO<sub>2</sub>e between 2013 and 2018.

### **Actively promote the utilization of renewable energy**

Vanke believes that advocating and promoting the utilization of renewable energy is an active solution for the world’s severe energy consumption situation. Vanke installed PV systems of 280 kwp and 142 kwp on the Shenzhen Vanke Center in 2009 and 2011. And it aims to install PV systems on more than 90% of its self-owned office buildings and increase the share of renewable electricity in its total electricity consumption of self-owned office buildings to 26.7% by 2018. In 2013, Vanke installed 7,000 square meters of solar water heating system on its residential buildings. In the next 5 years, it plans to install at least 0.56 million square meters of solar water heating system, which is expected to reduce GHG emissions of approximately 1.28 tons CO<sub>2</sub>e.

### **Promote the transformation of business partners**

In addition to its own efforts on GHG emissions reduction, Vanke actively guides its business partners such as suppliers to protect the environment and care about employee health and safety. Currently, Vanke has required its group centralized purchasing suppliers to adopt the ISO 90001 and ISO 14001 standards to improve their performance in resources utilization efficiency, environmental protection and employee well-being. By 2018, Vanke requires more than 90% of its group centralized purchasing suppliers to adopt ISO9001 and ISO4001 standards. In addition, it will encourage 12 suppliers to adopt GB/T23331 Energy Management Standard (comparable to ISO50001) and promote their achievements to its other business partners.

### **Lead green & low-carbon city transformation**

As the world’s largest real estate developer, Vanke has been involved in the evolution of urbanization, imposing profound influences on the environment and people’s life styles. It is a strategic choice of Vanke to carefully consider the driving forces behind urban development while designing its future business model. In addition to giving peer companies free access to its patented industrialized housing techniques, Vanke actively participate in the standardization of the Chinese Industrialized Housing Standard and help the improvement of the Chinese Green Building Standard with peer companies. In order to promote the application of prefabrication technology in China, Vanke will further improve its entire life cycle evaluation of prefabricated housing and conventional housing. Furthermore, Vanke will strive to encourage its suppliers to join GFTN and work with WWF to develop carbon footprint calculation tools for residents, which will promote the adoption of a low-carbon life style. Vanke believes that continued exploration of industrialized housing and green techniques is in line with the trend of emissions reduction and environmental protection, which will lead cities to a successful transformation towards a sustainable development.