



distinguished sustainability lecture series

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Key lecture points from the Distinguished Sustainability Lecture Series

Riyadh, Saudi Arabia

December 4, 2013



John Mandyck

chief sustainability officer
UTC Building & Industrial Systems

John Mandyck serves as chief sustainability officer for United Technologies Building & Industrial Systems, the world's largest provider of technologies and services dedicated to making buildings and cities more energy efficient, safe and secure. With more than 100,000 employees and sales in nearly every country, UTC Building & Industrial Systems serves customers with innovative elevator, escalator, heating, air conditioning, refrigeration, fire safety and security solutions from well known global brands such as Otis, Carrier, Kidde and Chubb. In addition to sustainability, he leads the company's marketing and communications function.

John works with universities and organizations around the world to accelerate green building, such as the U.S. Green Building Council, which Carrier helped found and joined as the first member in 1993. John chairs the Corporate Advisory Board of the World Green Building Council, and serves as incoming chairman of the Board of Directors for the Urban Green Council in New York City. He is also an advisor to the China Green Building Council. He was appointed by the U.S. Secretary of Energy to co-chair the Department of Energy's Appliance Standards and Rulemaking Federal Advisory Committee. He has presented energy efficiency and sustainability strategies to audiences around the world.

We're standing today in a green building revolution, with 44% of new commercial construction now green in the U.S.

Urbanization is the trend of our time.

For the first time in history, more people live in the city than in a rural setting.

By **2050**, we'll have many more people and **2/3** of all those people will live in the city.

People who live in cities use three times more energy than the people who live in the country. Urbanization is driving energy demand around the world.

Urbanization is also creating the need for more buildings. And buildings consume a lot of energy.

In the United States we spend **28%** of our energy in transportation, **32%** of our energy in industry, but a full **40%** of our energy is in buildings.

In **2005**, green buildings represented just **2%** of the market. We concluded **2012** with green buildings representing **44%** of the market. In the recession, green building construction actually accelerated in the United States. Why? The answer to that comes down to one word: value.

Water will be the new oil. Especially when you consider that of all the water on this planet, just **2.5%** is fresh water.

And of that just **1%** is really accessible to us. Over the last **100 years** we've been using water twice as fast as we've been growing our population. Each generation uses more water than the last.

By 2025, **2/3** of all people on earth will live in a water-distressed region.



The green building revolution is real, it's real here in Singapore, it's real around the world, and it's real in the United States.

improve buildings



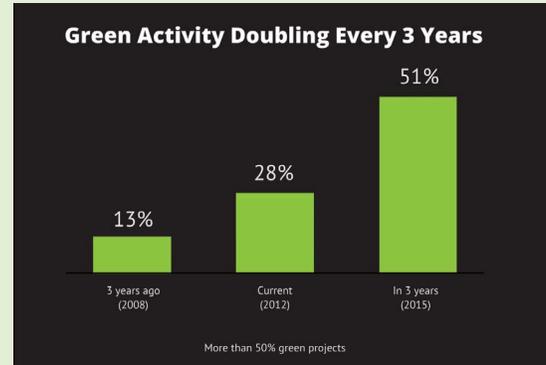
The **AquaEdge® 23XRV** with **Foxfire®** compression technology is the world's leading efficiency screw chiller, **44% better** than industry standard.

improve shipping



The **NaturaLINE™** unit is the world's first **container refrigeration system** to use the **natural refrigerant CO₂**.

Green products must start at a green company.



The research shows that green building activity is doubling every three years.

Green buildings have been shown to reduce water consumption by as much as **40%**.

The next evolution of green buildings will be about health. Up until now the green building movement has been about reducing the built environment's impact on the natural environment. Going forward the evaluation will be about reducing the built environment's impact on human health and improving productivity.

90% of the cost of the building is salaries and the benefits of the people inside the building. Green buildings have the ability to impact the health of people in those buildings.

Since the year 2000, Carrier CO₂NSERVATION Meter has **avoided 125 million metric tons of carbon dioxide** from the installation of our high-efficiency systems.

We have reduced our water consumption by **36%** on an absolute basis since the year **2006**. And we've reduced our total greenhouse gas footprint by **42%**.

We offer the most diverse portfolio of sustainable products and services in the industry.

The triggers for green buildings are now market-driven.

At the end of the day green buildings are good business and good environmental decisions.