SESSION TITLE:

Built Environment: What are the best energy efficiency (EE) building practices from around the world? And how do they differ between climates?

By Daniel Gebremicheal

SPEAKER SUMMARIES:

Jens Laustsen, Technical Director, Global Buildings Performance Networks

- Ms. Laustsen introduced the panelists, who came from diverse geographical areas ranging from the semi-arid United Arab Emirates to Canada's cold climate. He asked each of them to address relevant energy efficiency lessons learned from within their own countries.

Odon de Buen, Director General, CONUEE

- Mr. Buen, from Mexico, discussed five energy efficiency practices: collection of data, performance contracting, target benchmarks, government follow-up, and procurement. He explained that the company lacks sufficient data that would enable them to convince policy makers to draft robust energy efficiency building codes in their country.

Michael Geissler, CEO, Berlin Energy Agency

- Mr. Geissler explained how incentives and government regulations helped implement tremendous energy saving practices in Germany. He elaborated on how Germany was able to lower energy consumption by heavily investing in public awareness about energy efficiency.

Dr. Nawal Al-Hosany, Director of Sustainability, Masdar

- Dr. Al-Hosany discussed how the Masdar City government is committed to sustainable building practices. Furthermore, she explained that Masdar City is designed to be a test center for low carbon emission.

Toh Eng Shyan, Director, Green Mark Department for Existing Buildings, Singapore Building & Construction Authority

- Mr. Shyan outlined an ambitious plan to implement 80% green practices by the year 2030 in Singapore. He emphasized how important it is for the public sector to take the lead in energy efficiency practices in his country.

Jay Nordenstrom, Executive Director, NAIMA Canada

- Mr. Nordenstrom discussed how resources rich Canada is embracing a cultural shift towards energy efficient practices. He addressed the current national dialogue which advocates for net zero energy consumption communities in Canada.

SESSION WRAP-UP

The entire panel addressed the need for innovative, cost-effective, and energy-saving solutions, which will help their respective countries achieve better energy efficient building practices. The government of Mexico has identified five energy efficient building practices to achieve better buildings. However, the absence of nationwide data to support energy efficient practices is mentioned as one of the drawbacks in convincing policy makers to adopt robust and comprehensive energy efficient building practice codes.

Germany was praised for promoting energy efficient practices to achieve a healthier economy, a cleaner environment, and greater energy security. As an example, the country has recently adopted a policy which requires 65% of Berlin buildings to be retrofitted with EE building practices. In addition, public hospitals and government buildings are guaranteed 40% in energy cost savings if they adhere to EE practices. Furthermore, if tenants want to sell a house, they must present an EE certificate for their buildings.

Middle Eastern countries have increasingly embraced the challenge of green development. The move is part of an effort to shift excessive energy waste and set a legacy that serves the future. United Arab Emirates (UAE) with its test bed city, Masdar, is at the heart of this grand project. One of the key strands in this approach is a sharper focus in building practices as construction continues to boom. Perhaps the most prominent recent example of a new governmental focus on sustainable building practice is the Abudabi street lighting project. They have managed to achieve a 75% reduction in carbon emission by implementing energy efficienct street lighting in Abu Dhabi. Dr. Nawal Al-Hosany pointed out that while almost all new buildings in the UAE are built with sustainable principles in mind, the upgrading of older buildings that are already being leased remains a challenge in meeting sustainability targets.

Promoting energy efficiency is a key pillar of Singapore's strategy to reduce energy use and carbon footprints. In order for businesses and industries to overcome EE practice barriers, the government established the EE program office to drive and encourage EE practices. Therefore, they were able to address the high upfront costs and long pay back periods. Moreover, in order to drive Singapore's construction industry towards more environmentally friendly buildings, developers can increase their floor levels by 2 stores if they embrace EE practices. Furthermore, the building and construction authority has a $100 million green mark incentive scheme in order to upgrade and retrofit existing buildings. In line with these initiatives, the government supervises and regulates buildings for EE practices every three years.

Finally, Jay Nordenstrom explained the need for net zero energy communities in energy rich Canada. To accelerate the market adoption of net zero energy buildings and communities, national dialogue and awareness were perceived to be instrumental. Mr. Nordenstrom closed his remark by outlining EE codes will be put in action next year.

ACTION ITEMS & TAKEAWAYS

- Internationally, there has been a rise in customized solutions and new waves of investments for EE building practices.
- There is a need for international cooperation to share experiences and spread public awareness that will benefit future EE practitioners and inspectors.