

Green Technologies: Generation & Diffusion

Mr. Eric Chong President & CEO, Siemens

Our Businesses



Power & Gas



Energy Management



Process Industries & Drives



Wind Power and Renewables



Building Technologies



Digital Factory



Power Generation Services



Mobility



Healthcare

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Innovations Mitigate Effects of Megatrends

Global trends Digital Market development (illustrative) **Personalized** transformation Medicine Market growth: ~7-9% Globalization **Digital** Digitalization **Factory** Market growth: ~4-6% Automation Urbanization **Smart Grids** Demographic Market growth: ~2-3% **Smart** Electrification change **Buildings** Climate Today Mid term-2020 Renewable change **Energy** Power Imaging Power Transmission. **Efficient Energy** & In-Vitro Distribution & Application Diagnos-Generation

Smart Grid

tics



Green Technologies for Relieving Climate Change

Sustainable power generation



Intelligent distribution and storage

Efficient energy use



Renewable energies
→ Wind Power

Fossil power

→ Combined cycle

generation

power plants

(CCPP)



Power transmission and distribution

→ High-voltage directcurrent (HVDC) transmission



Smart grids

→ Smart metering data management and services



Energy storage



Mobility

→ Urban Traffic Systems and Services



Industry solutions

→ ELFA Hybrid Drive



Building technologies

→ Energy Performance Optimization

→Demand FlowTM



Healthcare

→ BiographTM mCT



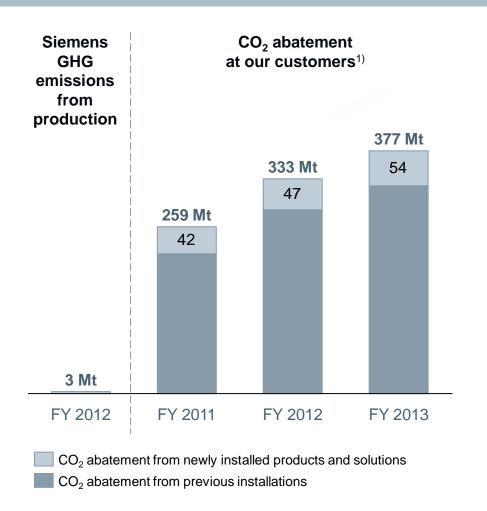
Water

→ Water distribution & control service

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Green Technologies Abate CO₂ Emissions



Cape Town Berlin London Los Angeles Melbourne **Mexico City New York City** Moscow SOUL OF ASIA São Paulo Seoul 本 **Singapore** Tokyo Total emissions $\Sigma \sim 377$ Mt (CO2-equivalent)

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¹⁾ On a comparable basis

As of Nov. 2013



Case Study

Demand FlowTM



Case Study: Demand Flow™

Energy cost savings application for water-cooled, central chilled water plants. With specialized control algorithms together with variable frequency drives, it helps to maintain optimal differential system pressure, reduce excessive pumping energy as well as equipment runtime for the chiller plants

Benefits:

- Reduce energy consumption
- Simplified system operation
- Extended equipment life
- Less maintenance



Over 150 applications worldwide:

- Aquarium of the Pacific in Long Beach, California
- Point Loma Nazarene University in San Diego, California



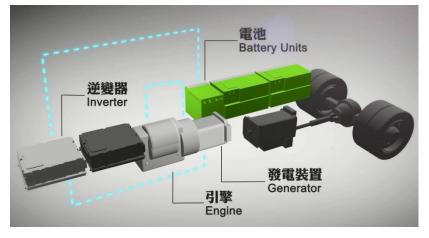
Range Extended Electric Light Bus



Partner with Green Mobility Innovations Ltd (GMI) Developed 'Electric Light Bus'

- Local R&D and manufactured
- Equipped with Siemens
 ELFA® Traction Drive System
- Improves fuel efficiency by more than 50% compared to conventional diesel buses (reduces up to 160,000 tonnes of GHG emission per year if 4,350 conventional diesel buses will be replaced)





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Industry & University Collaboration

Diffuse knowledge and innovations through joint research projects

Build up people resources which is key to future innovations

Achieve industry leadership to have sustainable success in driving innovations

Research and Development

Access cutting edge know how

Access state of the art research

Foster out of the box thinking

→ Innovation

Human Resource and Talent Acquisition

Siemens as employer of Choice

Build up a talent pipeline

Provide input to educational policies

Train and further qualify Siemens employees

→ People

Build Business Image

Make portfolio visible

Provide products and services for educational purposes

Foster dialogue with decisions makers and opinion leaders

→ Thought



THANK YOU



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