

# **EPRI**

## **2011 Global Climate Change Research Seminar**



**CHINA'S ROLE IN MANAGING  
GREENHOUSE GAS EMISSIONS**

**A UTILITY INDUSTRY PERSPECTIVE**

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*View of Pudong, Shanghai (1983)*

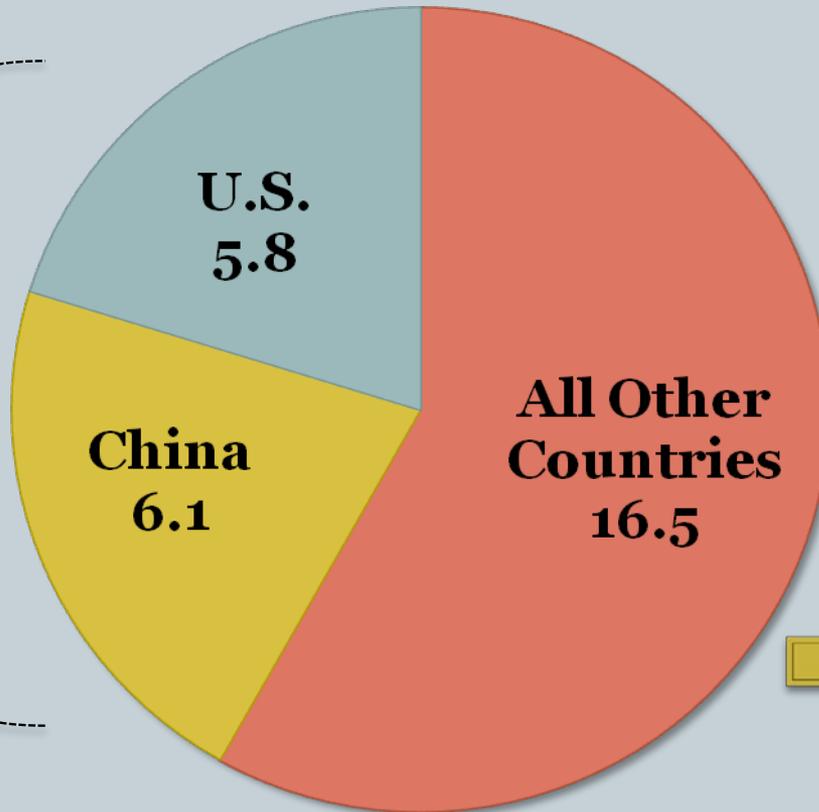


*View of Pudong, Shanghai (2010)*



# Total and Per Capita Emissions Foreshadow a Difficult Challenge

**Annual CO<sub>2</sub> Emissions  
(Billion Metric Tons)**



	MWh Electric Consumption Per Capita
China	2.3 (- exports)
U.S.	13.6 (+ imports)

**Although China leads the world in total emissions, the U.S. consumes much more electricity per capita.**

**As the consumption gap narrows, Chinese emissions will grow significantly.**

# Partnership Objectives



- Accelerate technology development and commercial application through technology demonstration, deployment, and knowledge transfer
- Generate & execute new commercial investments and business development opportunities
- Gain access to diverse sources of capital
- Attract companies to Duke Energy's service territory in support of economic development

**Potential partners are selected based on:**

- Commitment to our objectives
- Areas of technology expertise
- Desire to build a mutually beneficial relationship

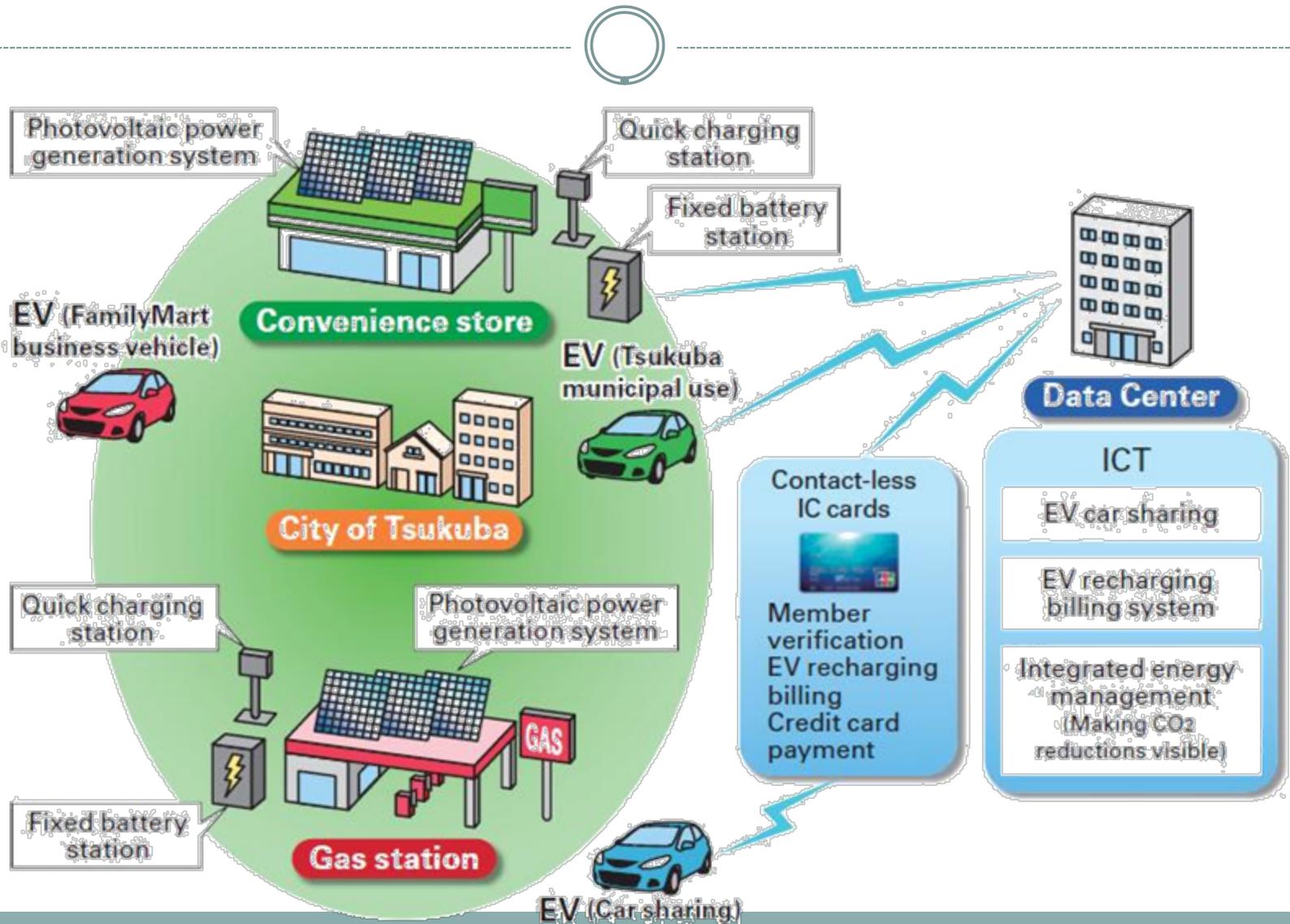
**EV Fast Charging  
coupled with Storage:  
an avenue to mitigate demand  
spikes created by EV charging**

**BYD's all  
electric E6:**

**In support of  
electrifying our  
fleet we are in  
discussions to  
integrate six e6's**



# ITOUCHU Tsukuba City Project Plan





Absorption tower

Regeneration tower

Huaneng Post Combustion CO<sub>2</sub> Capture System removes 3,000 tons of CO<sub>2</sub>/year



# ENN Greenhouses for CO<sub>2</sub> BioFixation





## ENN EcoCity:

As part of the US-China EcoPartnership, ENN will share lessons from the EcoCity which features a variety of distributed technology solutions