

# **Monetizing Energy Savings: A Path to Low Emission Buildings**

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# **Monetizing Energy Savings: A Path to Low Emission Buildings**

**Private Investment Decisions on the Energy Performance of Buildings do not Fully Reflect the Value of Building Energy Saving Investments**

**Financing Practices that Monetize Long-Term Energy Savings in Near-Term Investment Decisions can make a Major Contribution to Growing the Demand for High Performance Buildings**

# **Why Monetizing Energy and Pollution Savings is Important to the Path to Low Emission Buildings**

## **Addresses “First Cost” Barrier**

**The barrier to the up-front cost can be reduced if the consumer can access long-term, no-down-payment, affordable interest financing or if a third party finances the upgrades in order to have title to the monetized energy and pollution savings to trade in the open market**

# **Monetizing Building Energy Savings in Private Investment Decisions**

## **Opportunities**

- + Carbon Emission Savings**
- + White Tags**
- + Utility Capacity Market**
- + Energy Efficient Mortgages**

# **Carbon Cap & Trade**

**Created by Kyoto Protocol**

**European Union Taken Lead in Develop  
Carbon Cap and Trade Market**

**In EU a Total of \$8 Billion Traded in 2005**

**European Climate Exchange, 2006**

## **U.S. Carbon Voluntary Offset Market**

**Market is experiencing significant growth as companies not subject to caps decide voluntarily to offset their emissions**

**Los Angeles Times Projects That US Market for Carbon Offsets Will Reach \$40 Billion by End of Next Decade**

**Associated Press Reported in 2006 the Carbon Offsets Traded in the Chicago Climate Exchange Increased by 1,425%**

# Carbon Cap & Trade

## Potential Size of Market

**“Global Market Worth \$1 Trillion in the First Five Years Alone”**

**James Smith, Chairman, Shell Oil**

## **Carbon Cap & Trade**

### ***Carbon Trading – The Role of Building Energy Performance***

**Tuesday – 8:30 – 10:00 a.m. - Nautilus 2**

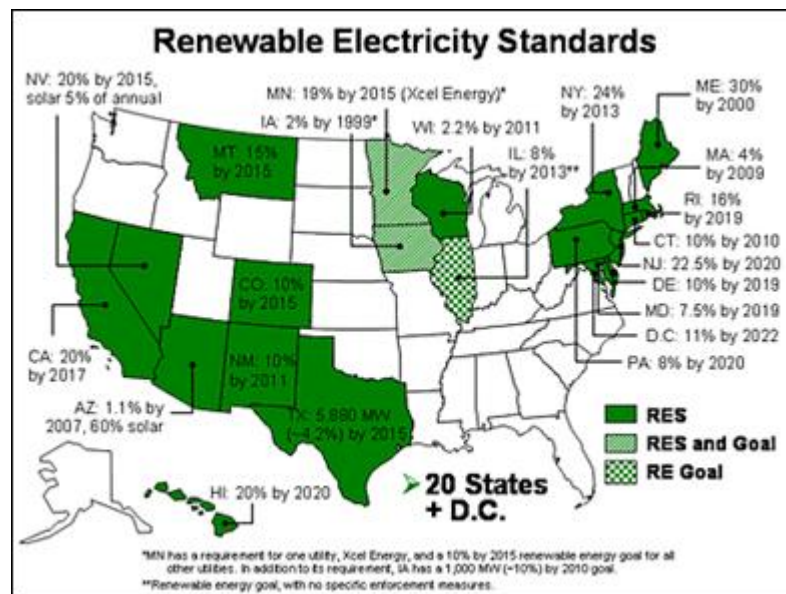
**Tuesday – 8:30 – 10:00 a.m. - Nautilus 2**



## U.S. White Tags

### Follow-up to Renewable Energy Certificates

State Sets Production Targets to Meet and Credits Can Be Bought or Sold - \$900 Million Traded in 2005 (Navigant Consulting 2006)



# White Tags

## Nevada

**25% of Required Savings Must Come From the Residential Sector**

## **White Tags**

***White Tags – Trading Energy Efficiency as a  
Commodity***

**Tuesday – 10:30 a.m. – Noon - Nautilus 2**

## **Capacity Markets**

### **Need for New Electrical Capacity**

**Development of Capacity Credits that would allow energy efficiency as alternative to new power plant construction.**

**New England Forward Capacity Market –  
Levels playing field among all types of  
resources**

## **Capacity Markets**

***Energy Efficiency: Beyond kW and kWh –  
Selling Environmental Benefits and More***

**Monday – 3:30 – 5:00 p.m. - Nautilus 3**

## **Energy Mortgages**

**Increases the Home Buying Power of Consumers and Their Home's Equity**

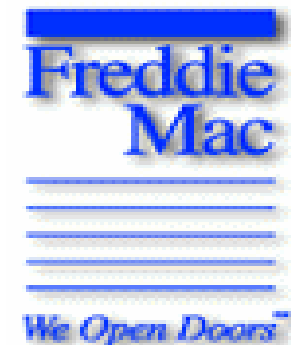
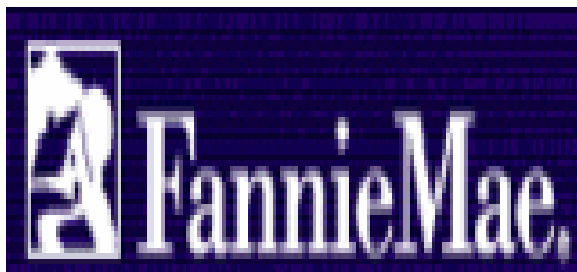
### **Energy Improvement Mortgage**

- + Finances the Energy Upgrade of an Existing Home in the Mortgage Loan Using the Monthly Energy Savings**

### **Energy Efficient Mortgage**

- + Uses Energy Savings of Efficient Home to Increase the Consumer's Buying Power**
- + Capitalizes Energy Savings in the Appraisal**

# Energy Mortgages Offered By Secondary Mortgage Market



## **Energy Mortgages**

***Time Has Come Today – A New  
Look at Energy Efficient Mortgages***

**Tuesday – 1:30 – 3:00 p.m. - Nautilus 2**



## Creating A Tipping Point

**Need for International Agreement on Defining  
Aspects of Calculating, Labeling and Certifying  
Building Performance**

**Need to Answer Question from Investment  
Community:**

***“Compared to What?”***

# Creating A Tipping Point

## Technical Issues

- + **Common Definitions & Rules for Reference Building**
- + **Standards for Computation of Energy & Pollution Savings**
- + **Standards of Verification of Software & Calculation Methods**
- + **Protocols for recommending upgrades & estimating costs**

# Creating A Tipping Point

## Verification Issues

- + **Qualification & Certification of Raters**
- + **Standards for Field Testing & Inspections**
- + **Definition of Quality Assurance Procedures**
- + **Definition of Insurance Requirements**

## **Why Important?**

**The Stakes Could Not Be More Critical**

- + National Security**
- + Global Environment**

## Why Important?

### National Security

**U.S. Annually Funnel Hundreds of Billion Dollars to Regimes Who See U.S. as the Enemy**

**Key Battleground on War on Terror Must be the Addiction on Imported Oil**

# Why Important?

## Global Environment

**Fourth report of the United Nation's  
Intergovernmental Panel on Climate  
Change**

## **U.N. Intergovernmental Panel on Climate Change**

- + 90% Certainty that global climate change is caused by human activity**
- + Best estimate that temperatures will rise between 3.2 to 7.8 degrees by 2010**
- + Sea levels could raise 7 to 23 inches by end of century (additional 4 to 8 inches if Arctic and Antarctic ice shelf melting continues at present rate) – Would effect more than 10 million people**

# What Has to Do With Building Performance?

**Buildings Produce 39% of U.S. Carbon Emissions**

**Residential – 21%**

**Commercial – 18%**

**Industrial – 28%**

**Transportation – 33%**

***Improved Building Performance is Low Hanging Fruit in Carbon Offset Market***



# EU Directive on Energy Performance of Buildings

***“Energy saving is without doubt the quickest, most effective, and most cost-effective manner for reducing greenhouse gas emissions.”***

# Why Monetizing Energy and Pollution Savings is Important to the Path to Low Emission Buildings

## Economic Potential

If *LA Times* prediction of \$40 carbon market by end of next decade & able to capture same % of residential carbon production - it would equate to:

*\$8.4 billion annual investment in U.S. in home energy performance improvements*

***“The era of procrastination, of half measures, of soothing and baffling expedients, of delays, is coming to its close. In its place we are entering a period of consequences.”***

**Winston Churchill**

# RESNET

Residential Energy Services Network

Setting the **STANDARD**  
for **QUALITY**

