

# WHAT'S THE DEAL?

OCTOBER 5, 2011



## Emerging Trends & Best Practices in Building Energy Efficiency Monetization

*Presented by:*

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# SRS Introduction

## Trumbull, CT based

- Founded in 2007
- Funded in part by Connecticut Innovations (CI)

## Software-as-a-Service (SaaS) Platform for Building Energy Performance Assessment

# SRS Solutions

Sustainable Real Estate Manager® automates building energy assessment workflows

- **Step-One:** Pre-retrofit assessment & benchmarking
- **Step-Two:** Post-retrofit monitoring & optimization



**ASSESS & BENCHMARK**  
PROPERTY-LEVEL PERFORMANCE



**MONITOR & OPTIMIZE**  
PORTFOLIO PERFORMANCE

# SRS Market Positioning & Leadership

**SRS is Engaged Nationwide in the Implementation of Emerging Regulatory & Business Drivers designed to Monetize Commercial (CRE) & Public Building Energy Efficiency**

## **3 Key Trends:**

- Public-Private Partnerships
- Benchmarking & Disclosure Regulations
- Portfolio Owners Screening, Prioritization & Monetization

# Public - Private Partnerships

Los Angeles: LACBPP is bellwether program & potential model for cities & states nationwide



# LACBPP Overview

## Program Goal: Increase EE in CRE

- Developed as part of CECs Energy Upgrade CA statewide program
- Innovative public-private program to stimulate CRE EE investments
- LA CRE owners offered FREE energy audits:
  - ~ 200 buildings over Aug11 to Mar12 period
- CRE EE Retrofit financing options:
  - Property Assessed Clean Energy (PACE) loans
    - Innovative financing mechanism via property tax bill (15-20 yr term)
  - 100% EE financing via specialist firms (Managed Utility Services Contract)
  - ESCOs Energy Savings Performance Contracts
  - Bank loans / mortgage refinancing



# LACBPP Overview

## Program Funding \$7.5mm:

- \$3 mm ARRA stimulus funds
- \$4.5 mm CA Energy Commission (CEC) funds

## Program Actors – Government & Non-Profit Agencies:

- City of LA Community Redevelopment Agency
- CA Energy Commission (CEC)
- Clinton Climate Initiative (CCI)



# Benchmarking & Disclosure Regulations

## Drivers – Policy

### Renewable Energy Goals

- Define Energy Efficiency as “*the most efficient*” renewable energy source
- Delivered *faster* at *much lower cost* than traditional renewable projects

### Energy Security

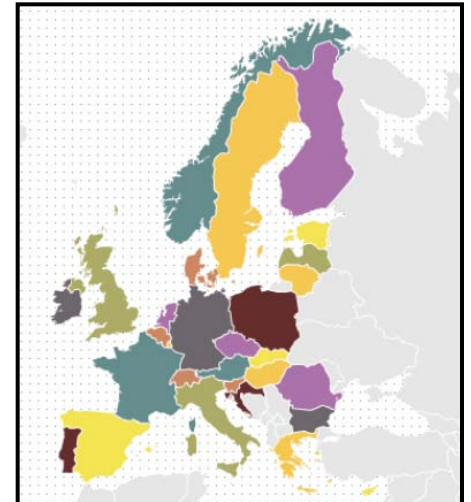
- Less consumption is the best weapon

### Transparency Drives Behavior

- Informed negotiations
- Benchmarking drives competition

### Based on the EU Model

- Now standard operating procedure



# Drivers - Regulatory

## Energy Labeling and Disclosure Regulations:

- **Transactional Triggers**
  - Sale, Lease or Financing
- **Date-based Triggers**
  - Annual benchmarking & disclosure regulations
- **Building Size** – Rolling Implementation, e.g.:
  - > 50k SF in Year 1
  - > 25k SF in Year 2
  - > 10k SF in Year 3

# Disclosure Regulation Expansion

Energy Performance Disclosure in EU

(2003)

- California - AB 1103 (effective **2012**)
- Washington State (effective **2011**)
- New York City, NY (effective **2011**)
- San Francisco, CA (effective **2011**)
- District of Columbia (effective **2011**)
- Seattle, WA (effective **2011**)
- Austin, TX (effective **2011**)
  
- Additional **Cities** considering
  - Denver, Portland & others
  
- Additional **States** considering
  - CO, CT, IL, MA, MD, ME, MI, MN, NM, OH, OR, TN, VT
  
- **Federal** Legislation being discussed

# Driving Forces – Market / Business

## More Energy Efficient Buildings

- Lower operating costs
- Higher net operating income (NOI)
- More valuable
- More attractive to tenants

## Less Energy Efficient Buildings

- Less competitive in the marketplace
- Higher obsolescence risk

**FOR SALE** Smith-Jones Real Estate

Let's do a deal

- Up to 5,500m<sup>2</sup>
- Flexible fitted out space
- Basement car parking
- 2.5-star NABERS Energy rating

PHONE 00 1234 5678  
www.example1.com.au  
Ground Floor, 1-2 Example St, Example City

# CRE EE Market Opportunity

## CRE Market Size - large & growing market

- **5 million commercial buildings in US**
  - 40% are more than 30 years old
- **18% of all US annual energy consumption from CRE**
  - \$170 billion in US CRE annual energy costs
- **\$190 billion projected CRE energy retrofit market over 10 yrs**
  - Market growing 20% per year
- **20% to 30% CRE average achievable energy savings**

*Urban Land Institute Study Nov 2010*

# Portfolio Owners – EE Monetization

## As a Result of These Regulatory & Business Drivers an Industry Best Practice Methodology has Emerged

- Technically sound & fully-transparent
- Time & cost efficient
- Enabling portfolio owners to monetize their EE retrofit opportunities

# Portfolio Owners – EE Monetization Model

1

- **Portfolio Owner Hires Energy Consultant to:**
  - Perform Desktop Energy Performance Benchmarking & Prioritization

2

- **Energy Consultant Performs Onsite Energy Audits:**
  - Onsite Level I or II Energy Audits for Poor Performing Buildings
  - Determine Optimized Bundle of ECMs with ROI & Payback

3

- **Portfolio Owner Funds/Finances EE Retrofits for Select Buildings:**
  - Energy Consultants Implement ECMs

4

- **Energy Consultant Post-Retrofit M&V:**
  - Post-Retrofit Measurement & Verification
  - Monitor Actual vs Goal Performance (Reprioritize & Repeat)

# CT State-owned & CRE EE Market Opportunity

## Key Assumption to Size Opportunity:

Key Assumptions	
Cost / kWh in CT for Commercial end-users (DOE)	\$0.16
Electricity Efficiency Upgrade Cost per Sq Ft (DOE)	\$2.50
Assume X % of buildings retrofit / yr	10%
Reduce demand by X %	20%
Direct new CT Jobs created / \$1.0 million invested <sup>1</sup>	12
CT State & Local Tax Revenue / \$1.0 million invested	\$40,000
Capitalization rate	8%
Property tax percentage	1.90%

# CT State-owned & CRE EE Market Opportunity

## Key Assumption to Size Opportunity:

CT Public & Private Bldg Stats	Commercial Properties	State-Owned Bldgs Over 10K Sq Ft
Total Square Feet <sup>2</sup>	656,000,000	46,241,004
# of Buildings <sup>2</sup>	36,000	782
Average Square Feet	18,222	59,132
kWh consumed in CT (DOE '10)	13,418,000,000	945,825,907
Avg kWh per building	372,722	1,209,496
Cost / kWh in CT	\$0.16	\$0.16
Annual electric cost / Avg Bldg	\$58,666	\$190,375
Avg electric cost / sq ft / yr	\$3.22	\$3.22

# CT State-owned & CRE EE Market Opportunity

## Key EE Retrofit Assumptions to Size Opportunity:

Electricity Retrofit Assumptions	Commercial Properties	State-Owned Bldgs Over 10K Sq Ft
# of Buildings	36,000	782
Avg Sq Ft / Building	18,222	59,132
Electricity Efficiency Upgrade Cost per Sq Ft (DOE)	\$2.50	\$2.50
Average Bldg. Cost to Upgrade Efficiency	\$45,556	\$147,829
Assume X % of buildings retrofit / yr	10%	10%
Annual # of Buildings upgraded	3,600	78
Cost to upgrade	\$164,000,000	\$11,560,251
Reduce demand by X %	20%	20%
Annual electricity reduction in kWh	268,360,000	18,916,518
Annual Value of electricity not purchased	\$42,239,864	\$2,977,460
Payback in yrs	3.88	3.88

# CT State-owned & CRE EE Market Opportunity

## Key EE Job Creation Assumptions to Size Opportunity:

CT EE Jobs created:	Commercial Properties	State-Owned Bldgs Over 10K Sq Ft
Impact of investing \$1M in EE	\$1,000,000	\$1,000,000
Direct new CT Jobs created / \$1M invested	12	12
CT Investment	\$164,000,000	\$11,560,251
CT Jobs created:	1,968	139
Multiplier to determine # of "downstream" jobs	5	5
Downstream jobs created	9,840	694
Total Jobs created	11,808	832
CT State & Local Tax Revenue / \$1M invested	\$40,000	\$0
Total State & Local Tax Revenue impact	\$6,560,000	\$0

# Conclusion

**Leading Commercial & Public Building Stakeholders are Focused on “Cracking the Code” to Unlock the Full-Potential of the Energy Savings & Job Creation Opportunities in their Real Estate Portfolios.**

- Industry Best Practice has Emerged to Quantify Opportunities
  - Cost effective & technically sound scope of work
- Innovative Financing Options are Emerging
  - Evolve beyond low-cost / no-cost owner funded initiatives
- Market is Moving to Scale Execution Stage

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QUESTIONS & ANSWERS

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