



# Advanced Energy Research & Technology Center

November 8, 2010

### "Technology Enabled Large Scale Energy Efficiency Programs"

By
Stephen Guthrie, CEO
EnerPath

**EnerPath** is a market leader in the delivery of large-scale, cost-effective energy efficiency programs.

We make energy efficiency easy.

enerpath.com 1

### **EnerPath Overview**



- EnerPath is a <u>technology-enabled service</u> company that <u>optimizes the</u>
   <u>entire supply chain</u> of delivering cost-effective energy services into the
   <u>mass market</u> resulting in extraordinary <u>customer satisfaction</u> and high
   rates of <u>adoption</u>.
- The key to our success has been integrating a high-touch, best-practice business processes with enabling technologies that reduce transaction costs while enhancing customer experience.
- EnerPath's platform was originally designed to deliver large-scale Energy
  Efficiency programs, but it has naturally extended to deliver a broad range
  of other EE related solutions. This would include SaaS Solutions for Mobile
  Lead Generation, Appliance Recycling Programs, Energy Auditing Software
  and other unique technology based products and services.

### Select clients



EnerPath has delivered energy efficiency for utilities and businesses across the U.S. and Canada

#### **Utilities**







Los Angeles Department of Water & Power













Ontario Power Authority









### **Business Customers**















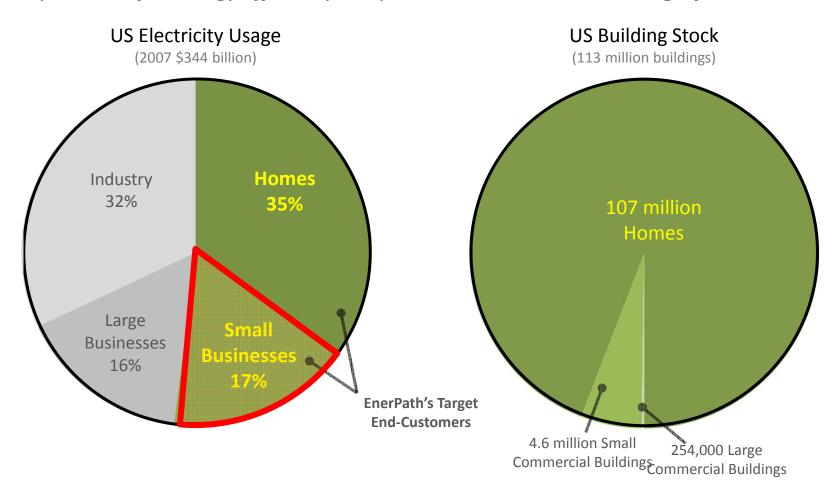




### Market characteristics



The mass market segments (homes and small businesses) do not yet have well-defined delivery solution for energy efficiency. Any solution will need to be a **highly scalable model**.



Source: EIA 2007 data and CBECs building data.

### **General Market Observations**



### The Economist

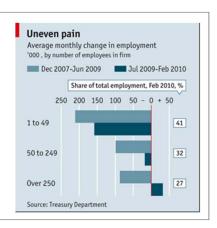
#### Jobs and businesses

#### The perils of being small

New data confirm that small firms are dragging on the job market

May 13th 2010 | WASHINGTON, DC

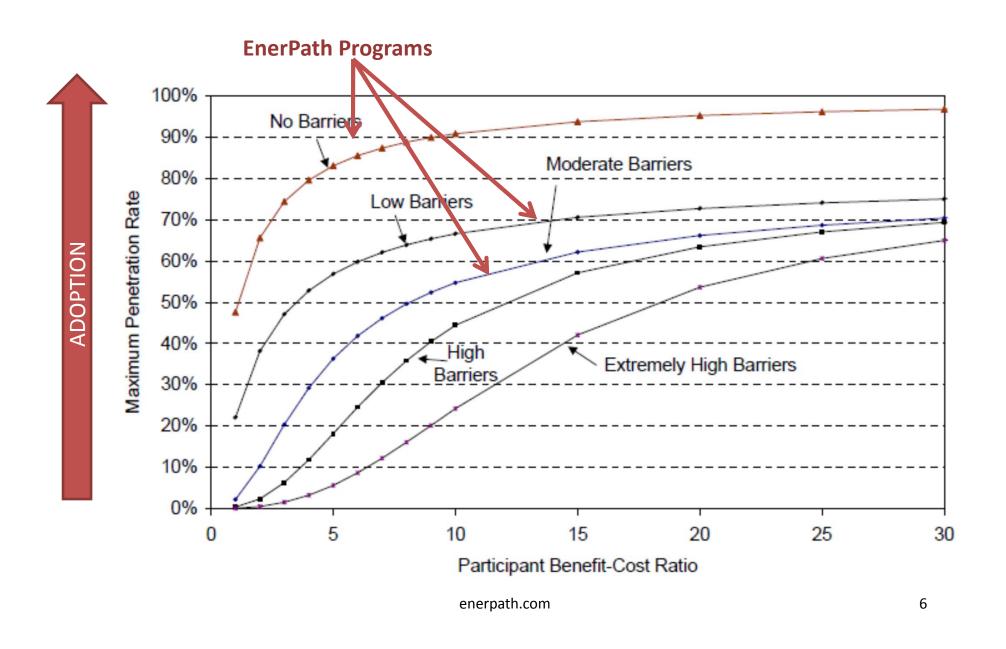
"Small business need a little sympathy these days...they account for most job losses... and continued to lose jobs since the end of the recession."



- Approximately 84% of Small Business will take no-cost actions to reduce their bill, but participation drops to 29% when measures have a 2-year payback. (Quantum/Xenergy 2001)
- 80% of the very-hard-to-reach customers would have been "Not at all likely" to install lighting measures in the absence of a program. (Khawaja 2003)
- Impact evaluations find less than 4% free-ridership in small business lighting programs.
   (Nexant 2010)
- Financing the customer co-pays on their utility bill can be attractive to customers because their overall bill may still decrease if finance payments are less than the savings. Such methods have increased adoption by two-fold. (Meyers 2006)

# Overcoming Barriers and Driving Adoption





# The Technology Play











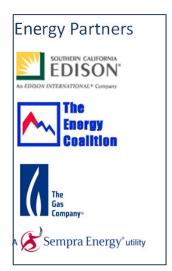




Palm Desert pledged to reduce energy consumption by 30 percent by 2012.







- Set to Save goal: Save 30% citywide in 5 years by end of 2012.
  - 215 M kWh/yr.
  - 50 MW peak demand
  - 6 M Therms NG
- Efficient technologies include gas, water, and electricity ECMs (e.g. lighting, AC-tune-ups, pool pumps, shower heads, gaskets, night-lights, exit signs, etc...)
- Partnerships with schools, senior centers, Chamber of Commerce, HOA's
- Funded through utility funds, loans, and customer payments
- Just last year...
  - 5,300 homes annually save ~2,000 kWh per customer
  - 1,000 small business annually save ~5,000 kWh each



# LADWP Small Business Lighting Program



#### **Real-time program tracking**



 Real-time Web-based tools show results (e.g. percent of participating businesses) by zip code. This allows program managers to track realtime progress, ensures a more fair distribution of program resources, and creates competition among neighborhoods.

## LADWP Small Business Direct Install Program Customer Satisfaction Survey Results (CSS)

Energy Service Provider: Energy Controls & Concepts

Date Prepared: 12/7/2009

Total Customers Installed 24,665

Total Customers Contacted for Customer Satisfaction Survey - (# Survey Sampli 9,469 38.39%

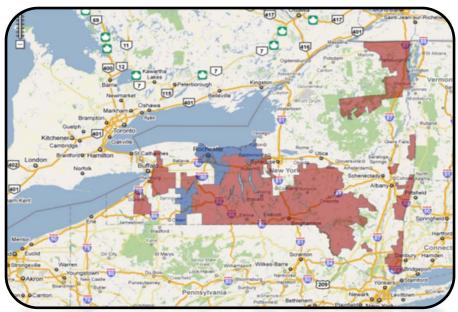
# Questions		Answer	Count	Percent	
Were you Satisfied with the Performance of our Energy Services					
Representation		Very Satisfied	7,867	83.08%	
i) <u>Representa</u>		Satistied	1,538	16.24%	99.32%
		Not Satisfied	64	0.68%	00.0270
Did vou Not	ice an Improvement to the Lighting / Lighting Quality				
2) in your Busi		Yes	8,807	93.01%	
		No	661	6.98%	
3) Was the Ins	tallation Performed to Your Satisfaction?	Very Satisfied	7,731	81.65%	
		Satisfied	1,638	17.30%	98.94%
		Not Satisfied	100	1.06%	
4) How would	you Rate the Installers Performance?	Very Good	7,960	84.06%	
.,	, 64 - 1616 1116 1116 1116 1116 1116 1116	Good	1,331	14.06%	98.12%
	·	Fair	114	1.20%	
		Poor	64	0.68%	
5) Were you S	atisfied with Time it Took to Complete the Work?	Yes	9,348	98.72%	
		No	121	1.28%	
6) Would You I	Participate in Similar Programs?	Yes	9,173	96.87%	
		No	296	3.13%	
7) Would you f	Recommend this Program to Another Business?	Yes	9,359	98.84%	
		No	109	1.15%	
8) Do you have	e LADWP Service at your Home?	Yes	7,112	75.11%	
		No	2,355	24.87%	
9) Will you Ma	ke Energy Efficiency Improvements at your Home?	Yes	8,142	85.99%	
		No	1,326	14.00%	
10) Please Rate	Overall Program Performance.	Excellent	7,523	79.45%	
		Very Good	1,722	18.19%	97.63%
		Average	183	1.93%	
		Poor	40	0.42%	

# Town of Huntington NY & NYSEG/RGE



- LI Green / EnerPath Partnership The Town of Huntington residences will be offered 2,000 free tier 1 energy efficiency assessment and recommendations to address low cost, high payback electrical and heating efficiency opportunities.
- The program can link homeowners to already available community and utility programs and encourages customer to implement tier-2 assessments and install higher-cost measures.
- EnerPath received received award end of Q2 2010 for turn-key SBEEP for NYSEG/RGE target nearly 15,000 small businesses
- Initial scope to retrofit lighting in small businesses (<100kW) with opportunities to lead-gen and expand program with other measures
- Leverages the EnerWorks platform to deliver on-site reports, real-time dashboards, sitelevel savings/reports and automated financial settlement





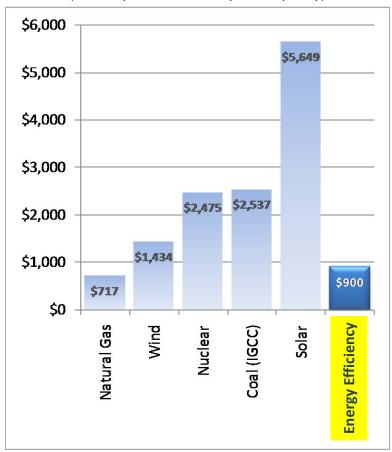
# Why energy efficiency?



Energy efficiency both costs less and creates more new jobs than other energy resources.

#### **Comparative Costs of Electricity Generation**

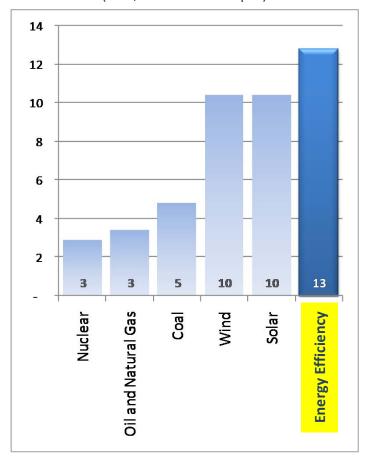
(Dollars per kW of Nameplate Capacity)



- NOTE: Costs only includes capital costs
- Source: EIA Assumptions for the Annual Energy outlook 2008, Table 38, p. 79.

#### **Jobs Created per Energy Sector**

(Per \$1 Million in Output)



Source: Political Economy Research Institute (December 2008) http://www.peri.umass.edu/green\_recovery/

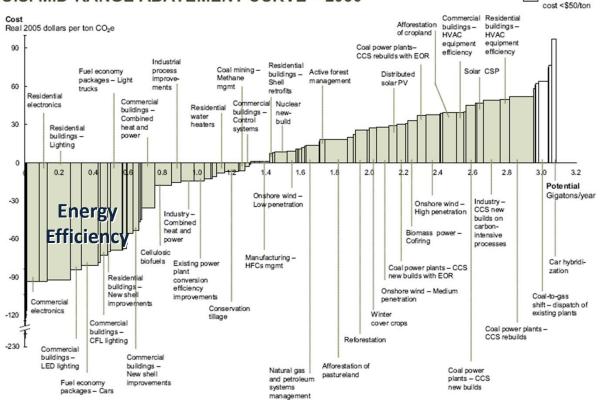
# Why energy efficiency? (Additional Benefits)



#### McKinsey Analysis: Costs of Technologies Reducing GHG

(Energy efficiency technologies are clustered to the left having "negative" costs)

#### U.S. MID-RANGE ABATEMENT CURVE - 2030



- Source: McKinsey analysis
- A recent McKinsey study calculated over \$40 billion of annual energy savings from implementing efficiency measures.
- The lowest-cost opportunities exist in homes and small businesses.
- Sample technologies include LED lighting, commercial lighting efficiency, and insulation.

 Lowest-cost, most immediate energy alternative

Abatement

- Directly reduces
   Greenhouse Gases
   (GHG)
- Improves aesthetics and comfort
- Largest impact on local employment
- Improves national security



"The most environmentally sound, inexpensive and reliable power plant is the one we don't have to build..."

Jim Rogers, Duke Energy CEO



## We make energy efficiency easy.

**Stephen Guthrie, CEO** 

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