

# Customer Driven Efficiency Program Evaluation

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# LIPA Overview

- The Long Island Power Authority (LIPA) was created in 1986, operating as a non-profit entity. LIPA's Clean Energy Initiative (CEI) was created in 1998.
- LIPA's CEI Programs are part of a 10 year, \$355 Million Dollar Initiative
- LIPA provides electricity to more than 1.1 million Long Island customers through a system of 535,000 utility poles, 8,866 miles of overhead wire, and almost 5,000 miles of underground cable.

# Program Objectives

- The Customer Driven Efficiency (CDE) Program provides energy efficiency improvement assistance to commercial and industrial customers
- The program's overall objectives are:
  - To facilitate energy efficiency investments through identification of cost-effective measures by offering consult & audit services
  - To provide referral to other programs offered under LIPA's Clean Energy Initiative
  - To provide funding for unique efficiency opportunities which do not fall within LIPA's other programs

# Program Goals & Services

## Annual Goals:

- 445 participants
- .2490 MW
- 2,444 MWh
- Budget: \$675,000

## Services:

- Consults
  - Walk through facility and identify opportunities
- Audits
  - Audit facility and quantify opportunities
  - Debrief with customer
- Custom Incentives
- Prescriptive incentives for non-profit organizations

# Evaluation Objectives

- Assess the effectiveness of the consult and audit services
- Identify the extent participants implemented measures with and without assistance from Clean Energy Initiative Programs
- Conduct an overall process and performance evaluation to include:
  - Review of procedures, tracking system data and audit report documents
  - Interview staff, contractors, and customers to identify potential improvements that would enhance program performance
  - Examination of operations of similar programs for guidance on this issue.
  - Review of methodology of energy and demand savings including the use of current multipliers



# Estimated Program Savings

	Per Participant Savings Estimate	
	kW	MWh/Year
<b>Audit</b>		
Tracking System Assumption	0.89	4.05
High Estimate	2.31	7.45
Middle Estimate	1.73	5.59
Low Estimate	1.15	3.72
<b>Consults</b>		
Tracking System Assumption	0.15	0.49
High Estimate	1.37	5.44
Middle Estimate	1.03	4.08
Low Estimate	0.69	2.72

Estimated energy savings from implementation of recommended measures without financial incentives significantly exceeded tracking system assumptions.



# Intent of Evaluation

1. Help solicit increased participation in LIPA's non residential CEI Programs
2. Compare consult and audit customer follow up on referrals to other CEI Programs
3. Develop approach of determining program saving estimates



## Intent of Evaluation (Cont'd)

4. Track and identify cause of any time delays of audit recommendation to help customers move to the next phase of implementation once an audit or consult is complete
5. Enhance use of audit report to identify specific energy efficiency measures to implement





# Program Enhancements

- Program goals emphasis
  - Ultimate customer satisfaction was achieved
  - Referral of customers to other CEI Programs and increase implementation through emphasizing energy efficiency improvements
- Customer contact for scheduling onsite audits/consults was shortened



## Program Enhancements (Cont'd)

- A formal tracking procedure is in place that helps identify the customers and program referred, and whether follow up with those customers was made
- Increase participant awareness of other CEI Programs with emphasis on program contacts and potential rebate information to customers in the audit report

# Program Enhancements (Cont'd)

- Audit requests come in through:
  - Major Account Executive (MAE)
  - Economic Development Representative
  - Project Manager
  - Energy Infoline
  - LIPA
  - Field
  - Business Call Center
  - Siebel System
- A single point of contact was established and the Program Manager will first define an audit or consult
  - Weekly notification of assignment and date of audit/consult



# Program Enhancements (Cont'd)

- Customer notification within 1 week of the completion of the audit and schedule the debrief
- Program Manager notification within 1 week once a customer has an audit/consult is completed, the Program Manager will then notify the appropriate representative
- Debriefs are coordinated with the Major Account Executive, Project Manager, the auditor and the customer in advance
- Potential candidates for other CEI Programs are identified to a single point of contact and made aware of the referral so they can proactively follow up with CDE customers
- LIPA's Project Managers complete all the follow up with the customer



# Recommended Measures & Savings

Measure	# of Audits	Estimated Cost	Estimated Dollar Savings	Estimated kW Savings	Estimated kWh Savings	CCF	Gallons
Upgrade Lighting	416	31.6%	37.1%	53.7%	59.5%	N/A	N/A
Install Lighting Controls	267	3.4%	5.4%	N/A	10.6%	N/A	N/A
Improve Temp Control	171	0.3%	1.1%	N/A	3.4%	74.3%	37.4%
Upgrade HVAC	147	35.3%	14.2%	20.3%	N/A	9.5%	37.5%
Improve Motors	110	6.9%	6.6%	2.3%	2.2%	N/A	N/A
Improve Building Envelope	45	5.0%	4.0%	N/A	0.2%	15.1%	8.7%
Install EMS	24	8.3%	9.5%	0.0%	N/A	N/A	N/A
Modify Hot Water System	7	0.1%	0.1%	N/A	0.3%	-0.3%	0.0%
Install Pipe/Tank Insulation	4	0.0%	0.0%	N/A	0.0%	0.0%	0.1%
Other	176	9.2%	22.0%	23.8%	23.8%	1.3%	16.3%
<b>Total</b>	<b>427</b>	<b>\$22,896,503</b>	<b>\$5,966,458</b>	<b>\$7,812</b>	<b>\$27,904,063</b>	<b>1,136,061</b>	<b>183,669</b>



# Audit - Implemented Measures

**Percent of Customers that Sought Assistance from other LIPA Programs**

	Audit Customer – Incentive	Audit Customer – No Incentive	Total
Lighting	33%	21%	25%
HVAC	-	25%	17%
Geothermal Heat Pump	-	-	0%
Non Recessed Fixtures	-	-	0%
Other	50%	-	33%
N=	14	20	34

**Implemented Measures from Audit Report**

	Audit Customer – Incentive	Audit Customer – No Incentive	Total
Yes	74%	50%	58%
No	26%	48%	41%
Don't Know	-	3%	2%
N=	19	40	59



# Biggest Barrier to Implementation

	Audit Incentive	Customer –	Audit Incentive	Customer – No	Total
Cost of Implementation		90%		62%	69%
Upper management refusal		10%		7%	8%
Lease facility don't own		-		10%	8%
Rebate dollars available too low		-		7%	5%
Clarity of the Audit/Consult Information		-		3%	3%
Other		-		7%	5%
No		-		3%	3%
N=		10		29	39



# Consult - Implemented Measures

## Specific Measures Implemented

	Consult Customer – Incentive	Consult Customer – No Incentive	Total
Lighting	100%	82%	87%
HVAC	-	18%	13%
High Efficiency Motor	-	9%	7%
Occupancy sensors	-	9%	7%
N=	4	11	15





# Biggest Barrier to Implementation

	Consult Customer – Incentive	Consult Customer – No Incentive	Total
Cost of Implementation	67%	67%	67%
Upper Management Refusal	-	13%	11%
Rebate dollars available too low	-	13%	11%
Other	-	7%	6%
Don't Know	33%	-	6%
N=	3	15	18



# Program Satisfaction

	Audit Customer – Incentive	Audit Customer – No Incentive	Consult Customer – Incentive	Consult Customer – No Incentive	Total
8-10 Very Satisfied	74%	65%	86%	55%	66%
5-7 Satisfied	21%	30%	14%	45%	30%
Average Rating	8.21	8.18	9.00	7.10	8.00
N=	19	40	7	20	86

# Key Findings – Stakeholder Interviews

Position	Program Responsibilities					
	Planning/ Design	Overall Program Management	Program Administration	Marketing to Customers	Delivery of Services to Customers	Interface to other CEI Programs
Program Staff <sup>1</sup>	√	√	√	√		√
Daylight Savings Company Staff <sup>2</sup>	√		√		√	
Customer Representatives				√	√	
<sup>1</sup> Program Managers, Program Engineer, Support Clerk, Economic Development Specialist, Project Manager, Administrator (Total interviewed = 7) <sup>2</sup> Auditor and President (Total interviewed = 2) <sup>3</sup> Major Account Representatives (Total interviewed = 2)						

- **Program staff believe**
  - the program was well-designed and provided significant benefit to customers
  - customer satisfaction with the program services is high
  - the program contractor provides high quality technical services
- **Program staff & contractors**
  - believe program procedures are well-understood and work fairly well
  - made a number of suggestions to improve the program delivery
- **Staff & contractors identified first costs and other financial constraints as the major barriers to implementation of recommended measures.**



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Questions?  
Thank you

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