

Policy and Market Design to Encourage Energy Efficiency as a Resource

Regulatory Mechanisms and Utility Business Models for Energy Efficiency as a Resource

Presented at the 2019 ACEEE National Conference on Energy Efficiency as a Resource

October 15, 2019



Agenda



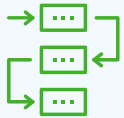
Willdan Overview

Experience, Markets



Con Edison Programs

1. Commercial Direct Install Program
2. Multifamily Energy Efficiency Program



Program Design

Challenges, Solutions, Strategies



Case Study

Customer Examples



Results

Savings, Lessons Learned



Questions

National Energy Services and Professional Engineering Firm



Founded in **1964**



Publicly Traded **NASDAQ: WLDN**



90+ Utilities and **100+** Programs



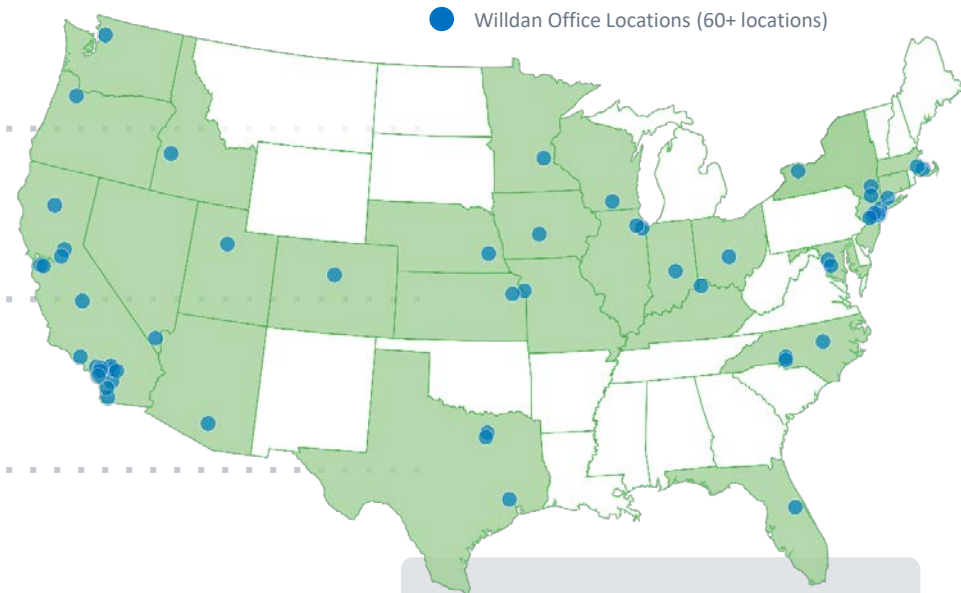
Saved **1,400** MW and **6,800** GWh



Saved **92M** Therms



5,000,000 Metric Tons Greenhouse Gas Emissions Avoided



Innovative Solutions:

- Energy and Sustainability
- Performance Engineering
- Smart Cities
- Distributed Energy Resources
- Grid Analytics Software

Con Edison Programs

Consolidated Edison Company of New York, Inc. (Con Edison)

- Serves 5 boroughs - NYC and Westchester County
- Core Programs
 - Commercial Direct Install, formerly SBDI
 - Multifamily
 - Residential
 - C&I
- Willdan Implements
 - **Commercial Direct Install (CDI) program** (2009-present)
 - **Multifamily Energy Efficiency (MFEE) program** (2016-present)
- CDI and MFEE = ~50% of savings in Con Edison's portfolio
- Implemented **Non Wires Solutions** through the core programs
 - Since 2014 in CDI
 - Since 2016 in MFEE



Commercial Direct Install Program

Con Edison Programs

- Small & Medium-sized businesses
< 300 kW demand
- Top participants: Retail, Grocery, Offices,
Convenience Stores, Small Services
- Measures
 - 💡 Lighting
 - 🌀 HVAC
 - ❄️ Refrigeration
 - 🔥 Gas
- Achievements to date
 - 🔧 **40,000+** projects
 - ✅ **780M kWh** delivered
 - 👷 **100+** participating contractors



Multifamily Energy Efficiency Program

Con Edison Programs

- Large Residential Buildings w/ 5+ dwelling units
- Includes assisted living, supportive housing, dormitories, etc.
- Measures

 Lighting

 HVAC

 Gas

- Achievements to date

 **7,500+** projects

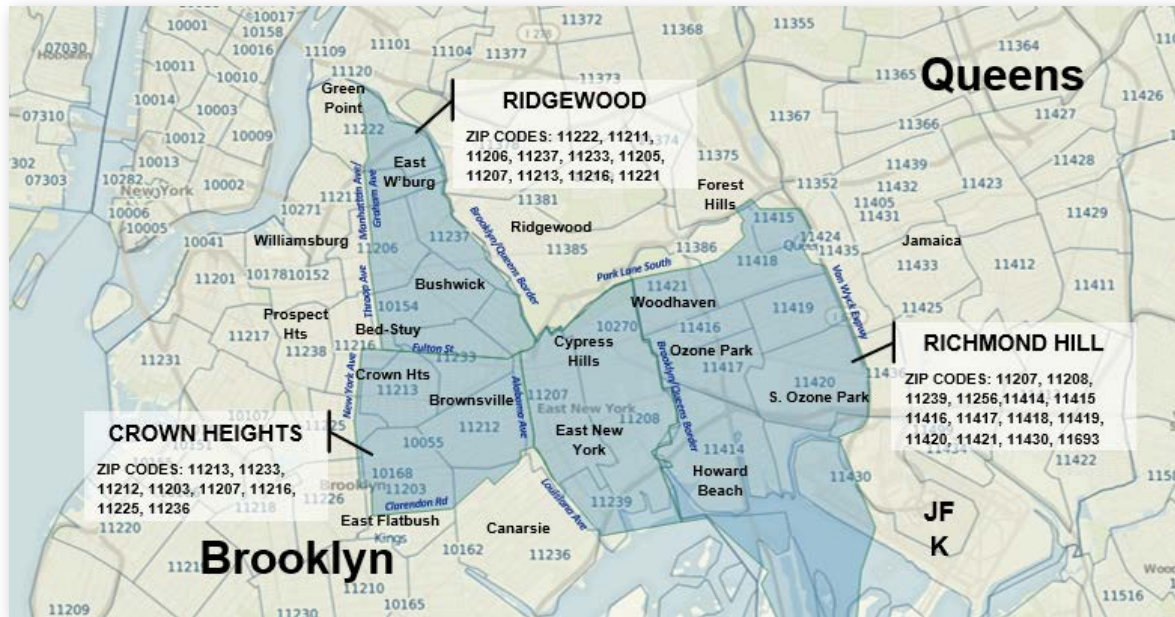
 **151M kWh** and **905,000 Dekatherms** delivered

 **120+** participating contractors



Program Design

- Economic boom in most populated service areas
 - ↑ residential and small/large commercial development
 - ↑ energy usage in Brooklyn & QueensForecast: expect higher usage
- In 2013, the *New York Public Service Commission* tasked Con Edison to find **non-traditional, customer-side solutions** to defer a \$1.2B substation upgrade
- Con Edison decides to invest in infrastructure and customer-side EE



Brooklyn Queens Demand Management (BQDM) Program

- Goal: deliver 51.7 MW in peak load reduction through EE, fuel cells, battery storage, CHP, and demand response
- BQDM MW carve-out in EE programs
- Since 2014, Willdan has used **targeted EE** to deliver **18.1 MW** to BQDM (50% of BQDM's customer-side load reductions)



Leverage the following:



Existing EE direct install programs



Utility data (outreach/sales targeting)



Local sub-contractors, supplement with self-installs



Copay-free options to re-engage customers, achieve deeper savings



Advertise: Twitter, Instagram, Facebook, radio, TV, direct mailers

Highlight:

1,188 customers had at least 1 lighting project pre-launch and pursued additional measures/savings once BQDM launched.

Case Study

Re-engaging customers with co-pay free options

CDI

A house of worship (a community-based organization) in East New York paid to upgrade T8s a few years prior to BQDM launch.

★ BQDM incentives and re-engagement led them to upgrade to LED much sooner than planned.

MFEE

LEDNext, a top contractor in BQDM, had a client with 3-4 buildings. 2 became free when BQDM opened.

★ Secured \$250,000 worth of incentives; proceeded to upgrade lighting for the entire portfolio.



Highlight:

Free projects are the best way to start a sales conversation with a customer.

Results

Con Edison exceeded the BQDM goal of 51.7 MW (53.8 MW)

- ☑ Ahead of schedule
- ☑ Using ~50% of budget

Currently pursuing **additional, deeper savings** through Willdan's model

This model is being replicated:

- Con Edison's non-wires solutions
- The Water Street initiative
- Other grid-constrained areas

- **Data-driven geo-targeting** helps to deploy a scalable marketing / sales strategy.
- **Local contractors** re-engage **existing client base with new offerings** to drive deeper savings, achieve the goal faster, and reduce soft costs of new customer acquisition.
- Smaller **co-pays** lead to **higher** implementation rates.
 - Inflection point of uptake is 1% or less out-of-pocket spend

Questions

Questions?

Questions

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Thank you