



## Financial Considerations: Leveraging the Value of Assets and Savings

Better Buildings Summit

May 11, 2016

9:45-11:00 AM



# Today's Presenters



**Rachel Gold**  
Rocky Mountain  
Institute



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Institute for Market  
Transformation





# Leveraging the Value of Assets and Savings in Multifamily Buildings

Rachel Gold

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Rachel Gold

Better Buildings Summit 2016, Washington, DC, 11 May 2016



1

RMI's recent learnings from RE<sup>+</sup> and CE<sup>+</sup> programs

2

Emerging opportunities in energy efficiency valuation for multifamily buildings

3

Enabling mechanisms from adjacent sectors





# RMI's recent learnings from RE<sup>+</sup> and CE<sup>+</sup> programs



RMI transforms global energy use to create a clean, prosperous, and secure future

# RMI's RE+ Learnings

## Barriers to EE

- **Disaggregated** suppliers and buyers
- **Lack of time** and motivation available by key decision-makers
- **Complex** process, involving multiple contractors
- Lack of **awareness of** EE connection to key values (comfort, health, privacy)
- Rise in number of **rented** homes, increasing split incentive issues

## Key Metrics

- **Cheap:** decreased project cost
- **Easy:** decreased project duration / touch points
- **Compelling/Innovative:** increased control; leverage solar/EV interest; new biz models
- **Low Risk:** improved certainty around financial opportunity, impact on home valuation
- **Trust:** enhanced trust / relationship between owners/renters and EE providers

## Sources of Innovation

- Transparency and valuation opportunities with **real estate portals, GSEs, and energy algorithms**
- Drive consumer demand through **social norming** and other insights from behavioral science.
- Streamlining energy upgrades through **industrialization**, standardized **bundles** to simplify training, customer acquisition, financing, and delivery



RMI transforms global energy use to create a clean, prosperous, and secure future.

# RMI's CE+ Learnings

## Barriers to EE

- **Disjointed** offerings and system architecture
- **Lack of time** and motivation available by key decision-makers
- **Tedious** implementation process
- Misunderstanding of building owner's **motivations**
- Misperception of **risk** associated with EE

## Key Metrics (value proposition to building owners/investors)

- **Cheap:** decreased project cost
- **Easy:** decreased project duration / touch points
- **Exciting/Innovative:** improved control; forward-thinking, grid interactive systems/technology; new biz models
- **Low Risk:** improved certainty around persistence of savings / financial opportunity
- **Trust:** enhance trust / relationship between buildings and EE providers

## Sources of Innovation

- **Portfolio-level** offering rather than custom solutions for individual buildings
- Integration of a **shared technology platform** to maximize synergy of ECMs
- Matching ECMs to **maximize the income potential** from incentive programs, rates, and demand response programs



RMI transforms global energy use to create a clean, prosperous, and secure future.



# Multifamily Rental Housing an Increasingly Important Sector for Energy Efficiency

## Sources of Growth

- Favorable **demographic trends**
- Strength in **job market**, especially in urban areas
- **Reduced affordability** of owning a home

## Outlook for Growth

- 306,000 MF units entered the market in 2015, the highest level since 1989. Likely to remain high as **new construction permits** rose again in 2015.
- **Price growth** on MF properties will remain strong. Short term capitalization rates unlikely to be affected by December 2015 interest rate increase.
- Record MF **origination** in 2015; 2016 may be another record year.
- **Diversity** in growth across metro areas.

Source: Freddie Mac Multifamily Outlook 2016



RMI transforms global energy use to create a clean, prosperous, and secure future.

2

## Emerging opportunities in energy efficiency valuation for multifamily buildings



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# Segmentation to target key opportunities amongst diverse set of buildings

**Diversity in ownership structures, decision making audiences, building types, and available incentives and programs requires program managers to segment the market and make tough decisions about how to effectively target potential customers.**



**RMI transforms global energy use to create a clean, prosperous, and secure future.**

# Financial innovation to unlock tax benefits

**Just as the innovation enabling market actors to take advantage of tax credits fueled solar's growth, commercial and multifamily buildings may similarly require innovation to capture the value of the 179D tax deduction opportunity.**



**RMI transforms global energy use to create a clean, prosperous, and secure future.**

# Real estate portfolio benchmarking tying energy performance to asset valuation for large owners



**RMI transforms global energy use to create a clean, prosperous, and secure future.**

# Leveraging interest in ‘zero energy’ or ‘low energy’ districts and communities

Mixed-use developments in urban areas increasingly aim to promote their green benefits, creating an opportunity to shift value in a way that encourages upfront investment in the buildings.



RMI transforms global energy use to create a clean, prosperous, and secure future.



## Enabling mechanisms from adjacent sectors



# Industrialization and Aggregation

**Creating 'mass customization' opportunities to match likely ECMs to particular buildings can reduce costs and decrease risk for property owners.**



**RMI transforms global energy use to create a clean, prosperous, and secure future.**



# MPG for Homes

Targeting real estate portals and algorithm-based scores can improve consumer focused energy transparency early in the real estate search process (as a 'first step' to lead to audits and upgrades).



RMI transforms global energy use to create a clean, prosperous, and secure future.

# “Finance the Future”

Increasing interest in energy disclosure requirements in underwriting and new financial products from government-sponsored entities could stimulate lenders to consider cash-flow risks associated with ‘energy hogs’ and value from energy savers.



RMI transforms global energy use to create a clean, prosperous, and secure future.

# New Normal

Creating a “new normal” where improved energy performance becomes the expected and aspired-to standard in US homes can unlock consumer demand, particularly important for certain segments of the multifamily market.



RMI transforms global energy use to create a clean, prosperous, and secure future.



# Thank you



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# Financial Considerations: Leveraging the Value of Assets and Savings

## Megan Houston

# Financial Considerations: Leveraging the Value of Assets and Savings

Megan Houston

**Better Buildings  
Summit**

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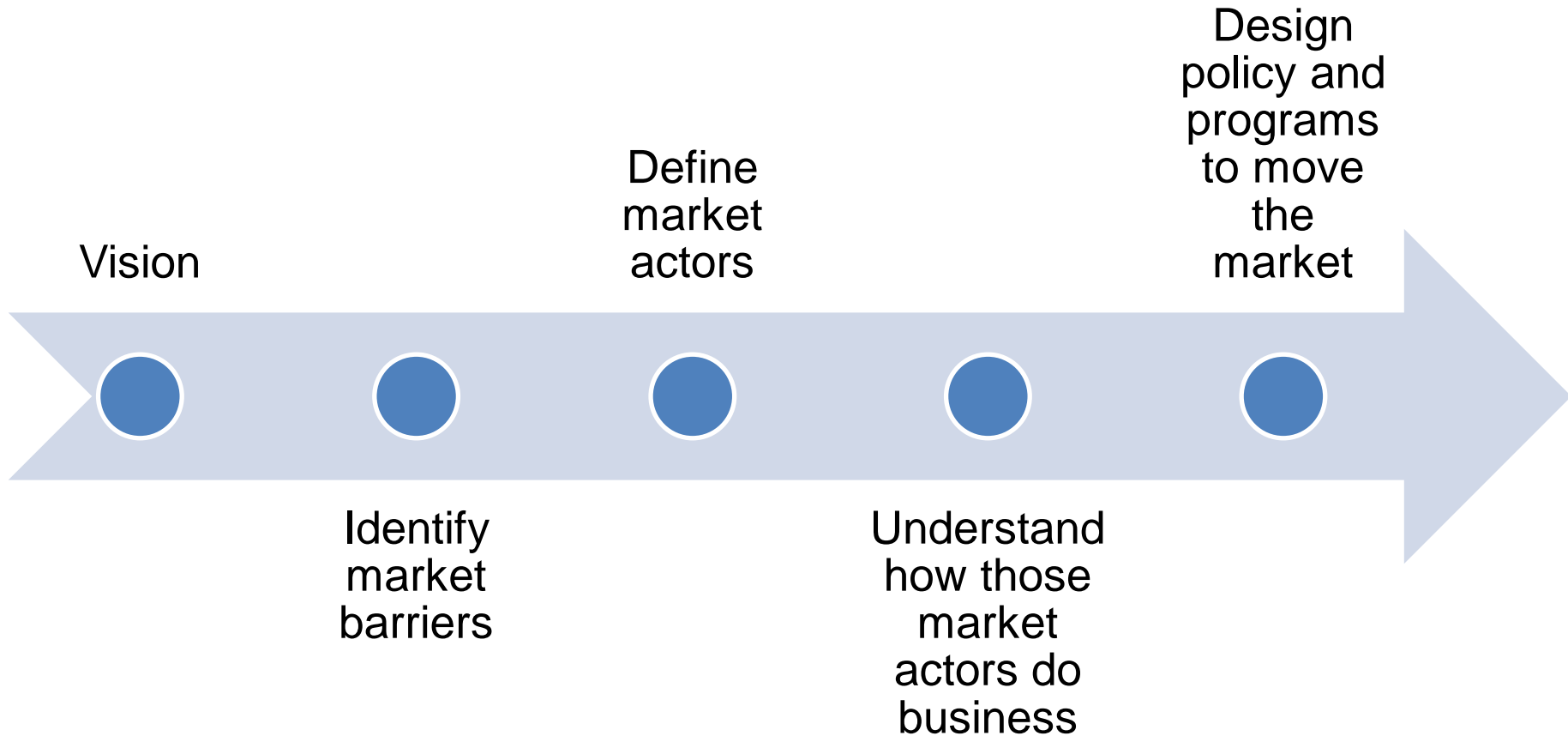
# The Institute for Market Transformation (IMT)

## Our Vision

A future in which the social, environmental, and economic value of energy efficiency is realized and all buildings are highly efficient.

**Our market transformation context:**  
business practices related to buildings

# Market Transformation Program Development



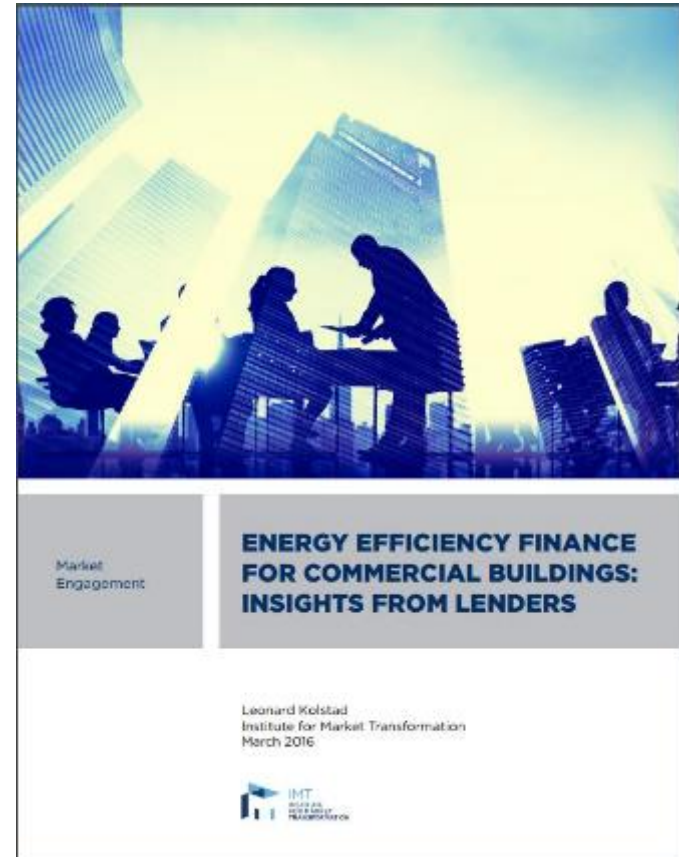


# Policy & Program Solutions

Barrier	Policies and programs to address the barrier
<b>Informational</b>	Benchmarking and transparency Industry education (construction, design)
<b>Institutional</b>	Appraisers' valuation of efficiency Industry education (lenders)
<b>Transactional</b>	Energy-aligned leasing Industry education (brokers)
<b>Organizational</b>	Energy management systems Code compliance
<b>Inertia</b>	Retrofit accelerator Energy audit/building tuning (RCx) law Mandatory building performance improvement

# Identifying Barriers: Commercial Lending Valuation of Energy Efficiency

Institution Size and Type	Number of Interviews
>\$200B Banks	5
\$5B-\$200B Banks	10
<\$5B Banks	12
CDFIs	3



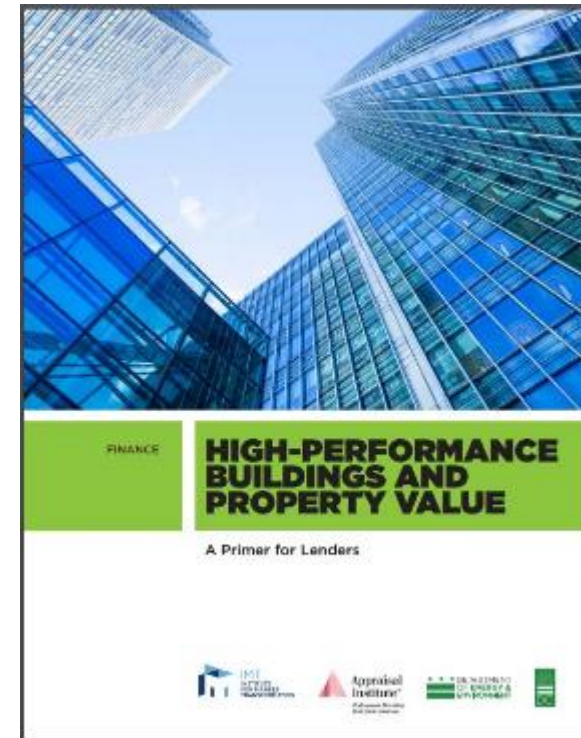
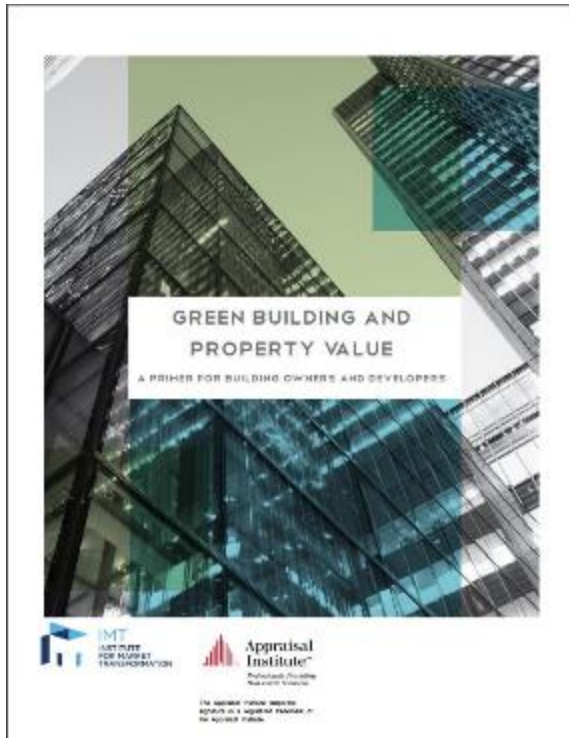
# Identifying Barriers: Commercial Lending Valuation of Energy Efficiency

## Key Findings

- Energy Efficiency Financing Demand
  - Low perceived demand.
  - Lenders aren't incentivizing energy efficiency.
- Energy Efficiency Lending Risk
  - Some lenders' unfamiliarity with energy efficiency has made them concerned about these projects' associated risks, i.e. savings won't occur.
  - Others saw energy efficiency as risk-mitigating.
- Energy Data
  - 9 banks and 3 CDFIs thought building energy data would benefit underwriting.
  - Most were unfamiliar with energy benchmarking policies.

# Market Guidance: Owner and Lender Energy Efficiency Valuation

## IMT and the Appraisal Institute Owner and Lender Guides



# Leveraging the Value of Energy Savings: Continental Plaza

## Continental Plaza, Chicago, IL

- 164-unit senior apartment building
- Hispanic Housing Development Corporation (HHDC) property
  - Affordable Community Energy (ACE)
  - eConserve



# Leveraging the Value of Energy Savings: Continental Plaza

- ACE invested \$1,641,154 for energy measures at Continental Plaza, as part of a broader 11-property financing package.
  - Solar Investment Tax Credits
  - New Market Tax Credits
  - HUD Energy Innovation Fund
  - State and utility incentives
  - And other sources
- eConserve invested \$30,692 for water conservation measures.
- Continental Plaza invested \$162,000 from replacement reserves.

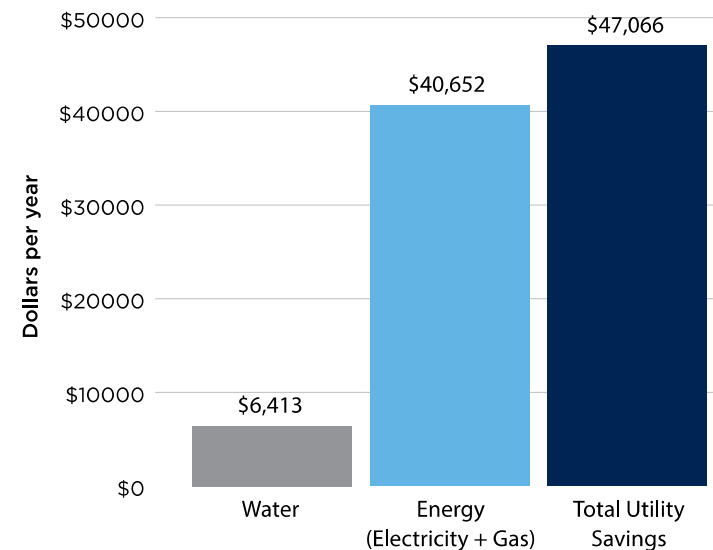


# Leveraging the Value of Energy Savings: Continental Plaza

## 2014 Owner Results

- Reduced energy bills by \$40,652 (23%)
- Reduced water bills by \$6,413 (5%)
- Net operating income increase of ~\$47,066

Building Owner's Water and Energy Cost Savings  
from Efficiency Improvements



# Leveraging the Value of Energy Savings: Continental Plaza

- Assumptions
  - 10-year period, 5% discount rate
  - Consistent annual savings
  - Utilities inflation of 3%
  - \$47,066 reduced operating expenses
  - 6% cap rate
- Net present value: \$249,714
- Internal rate of return: 29%
- Total return on investment: 254%
- Annual ROI: 25%
- Potential Added Asset Value
  - \$784,433
  - 5% to 6.7% increase



# Leveraging the Value of Energy Savings: Continental Plaza

## Continental Plaza Case Study Findings

- Predicting the financial savings and measuring post-retrofit results depends on accurate energy data.
- Building owners can use energy data to demonstrate how retrofit measures result in:
  - Reduced operating expenses;
  - Increased net operating income; and
  - Potentially increased property value.
- Credible results can lead to more favorable underwriting and asset performance ratings.

# Designing Policies and Programs

## IMT's Forthcoming Report: Unlocking Multifamily Energy Information and Value

- By collecting, analyzing, and acting on energy and water performance data, sophisticated real estate stakeholders are reducing expenses and valuing energy and water efficiency throughout all business transaction life cycles.
- There are both market-rate and affordable housing leaders. But, the vast middle of these markets still need considerable support.
- Method: Research and interviews with apartment building owners, lenders, investors, and policymakers.
  - How are you finding value from energy and water performance data?
  - What motivates you to collect, analyze, and act upon data?

Thank you!

Megan Houston  
**[megan.houston@imt.org](mailto:megan.houston@imt.org)**



 **Spark Fund**

# Summary

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- 1) How financing can unlock the C&I energy efficiency market
- 2) SparkFund's pay over time solutions
- 3) The future: selling efficiency "as a service"
- 4) Case Studies
- 5) Q&A

# What is the problem?

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## **Vendors are losing deals every day**

- Technology vendors are confronting a sea change in how customers want to access their products
- Major companies and small installers alike currently lack crucial competencies to meet that growing demand easily

## **Capital providers have trouble lending directly to C&I**

- Recognize opportunity in C&I market, and are actively searching for access
- Good at underwriting large projects with rated corporate
- Poor fit with C&I market's small average project size and unrated customers

# SparkFund has built the solution

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SparkFund is a platform capable of unlocking the C&I market for both equipment vendors and capital providers.

## CapEx to OpEx

Convert sales approach from cash upfront (CapEx) to pay over time (OpEx).

## Integration

Technology integrates directly into our partner's sales process.

## Access

Financial technology and tools needed to originate, qualify and transact small C&I projects at very low marginal cost to volume.

# What products are we focused on?

SparkFund's versatile platform can unlock the fast growing C&I market for equipment sales across market sectors.

## Target Customer Sectors

Small  
Business



MUSH



Corporate



Commercial  
& Industrial



## Technology Types

LED  
Lighting



HVAC &  
Controls



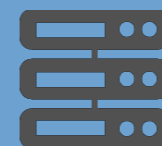
Energy  
Storage



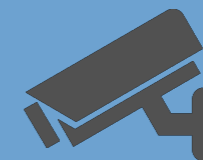
Medical  
Devices



Information  
Technology



Smart  
Surveillance



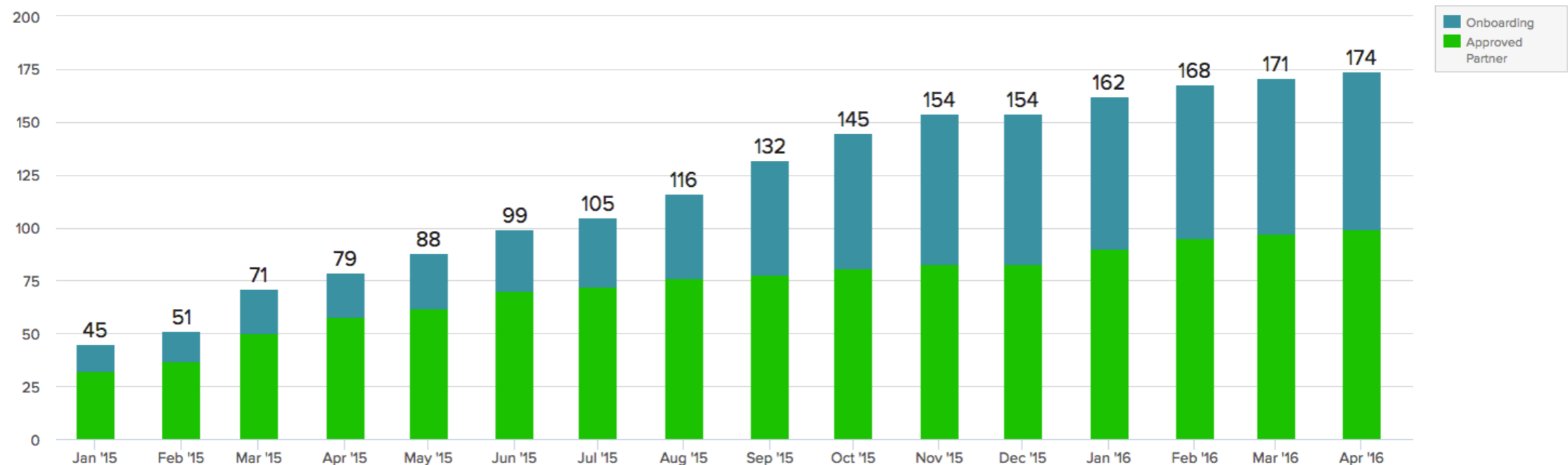
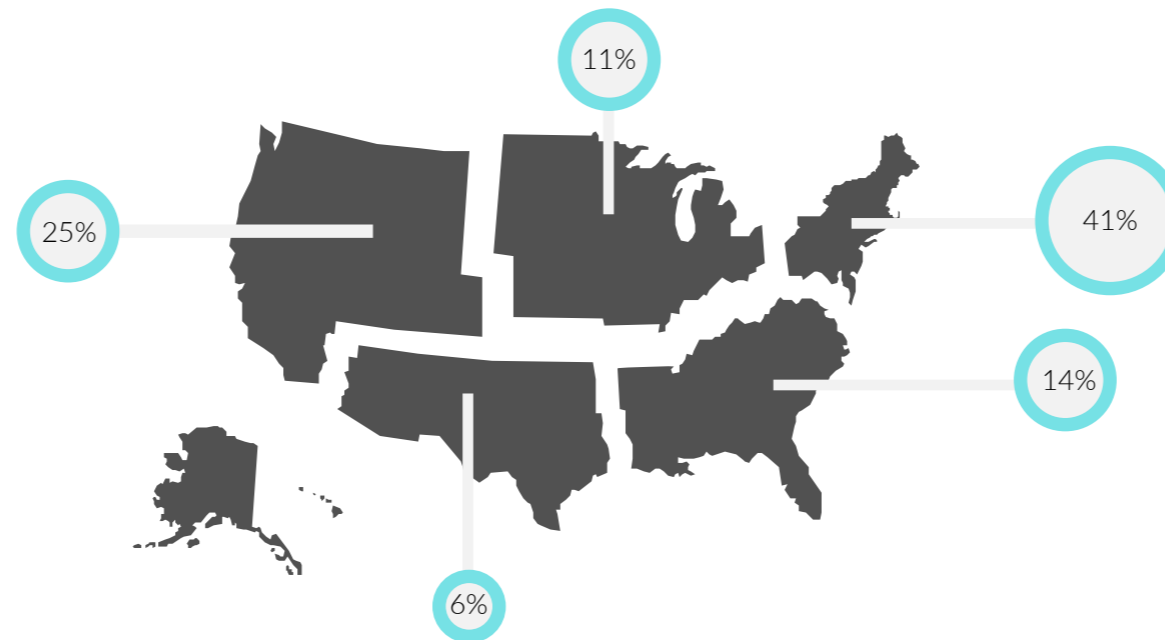
Water  
Efficiency





# Our Partners

SparkFund has integrated our platform offering with several top tier corporate OEMs and ESCOs, as well as over 100 regional contractors and equipment vendors.



# Strong initial project origination

33

## Projects Closed & Funded in Fund I



### Freshly Grown Farms

Simple LED financing helps Columbia, SC business grow fresh produce year-round



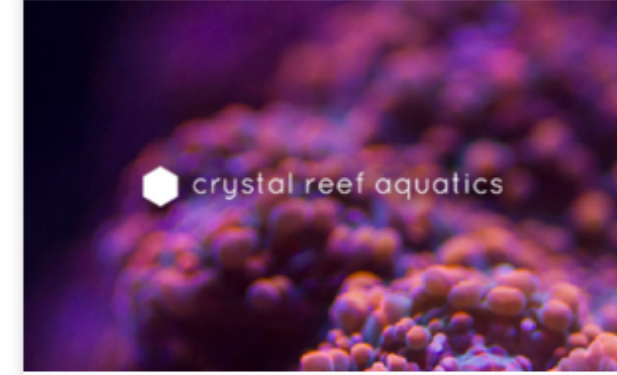
### Community Christian Academy

School captures big energy & dollar savings with "lighting as a service" upgrade



### Lakewood Animal Hospital

Ohio animal hospital upgrades to LEDs, sees immediate utility bill savings



### Crystal Reef Aquatics

Bellingham, WA aquarium store uses tunable LEDs to showcase coral's brilliant colors



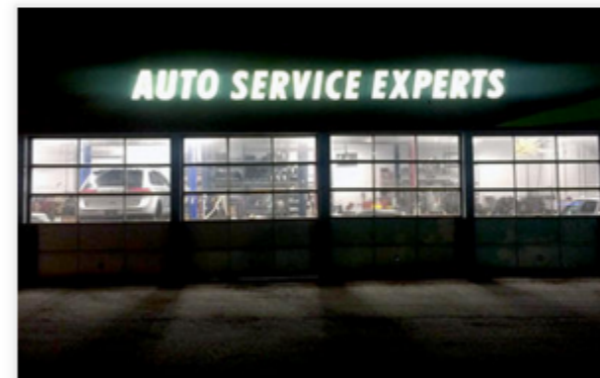
### Element31

Luxury rental complex gives residents smart apartments using streamlined payment plan



### Essex Condo Association

Washington, D.C. condo upgrades lighting with LED "pay as you save" program



### Midas Auto Service Experts

South Carolina auto repair shop upgrades to LEDs for performance and energy savings



### Nature's Pavilion

Natural foods store upgrades to LEDs, reducing utility bills and improving customer experience

# SparkFund's value add to Partners

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Our platform unlocks the “As a Service” mode of sale, by providing...

Customer Pricing Interface  
& Sales Support



Credit Risk  
Assessment



Low-Cost  
Capital



Automated Transaction  
Management

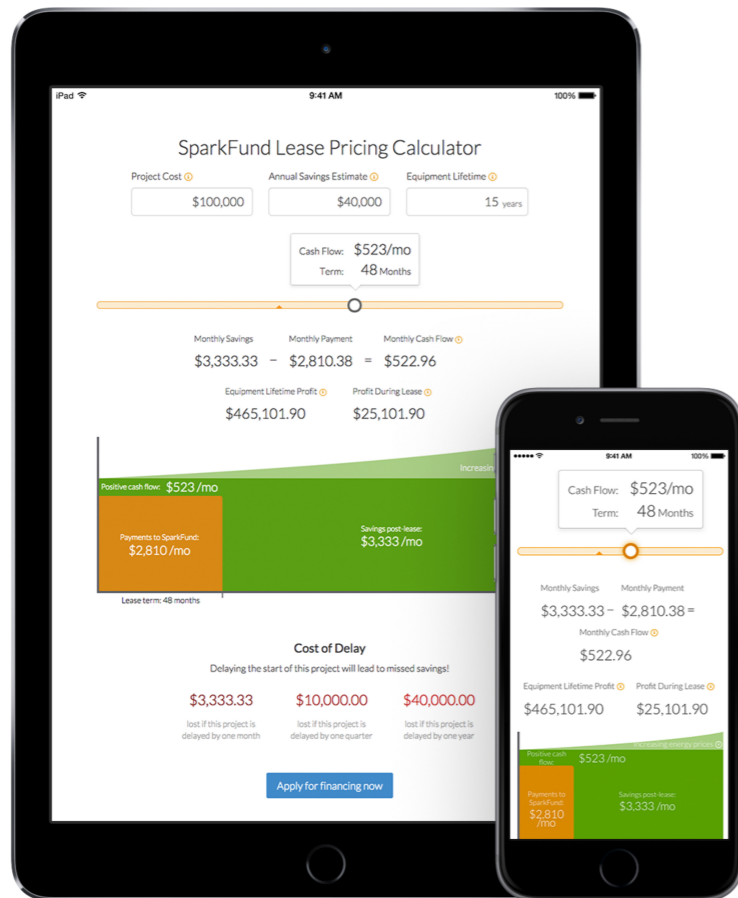


Which enables partners to...

1. Drive increased sales growth through shorter sales cycles and increased conversion rates
2. Standardize & streamline the customer interaction, from proposal to final pricing
3. Reduce back-office cost of manually servicing transactions

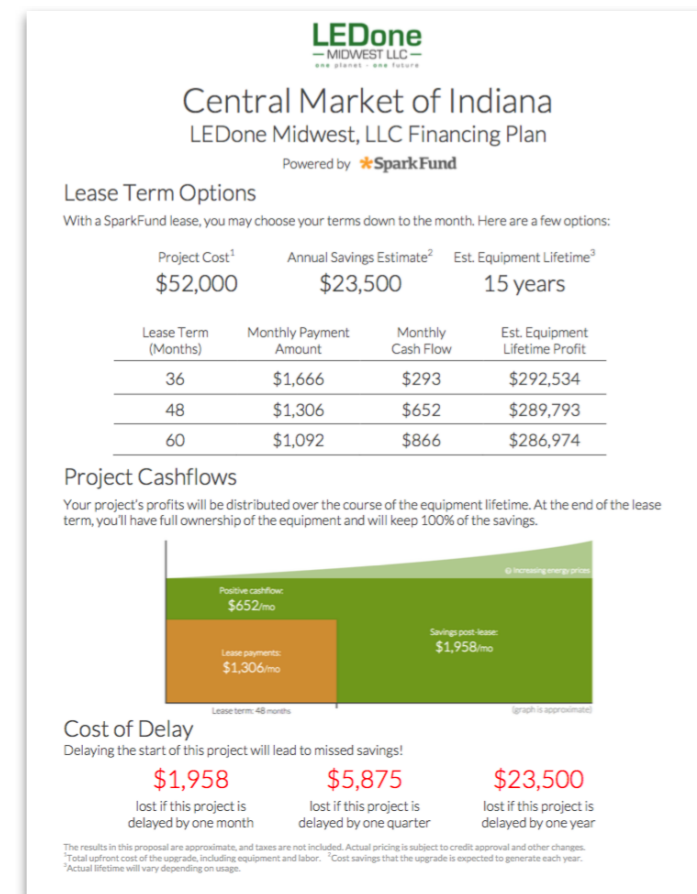
# Streamlined Customer Pricing Interface

## Pricing Calculator



Our tools enable partners to generate robust online estimates in real time with our Project Proposal Calculator.

## Project Proposals

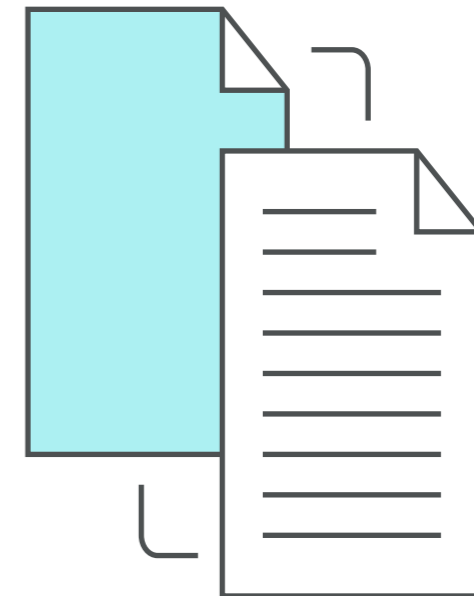
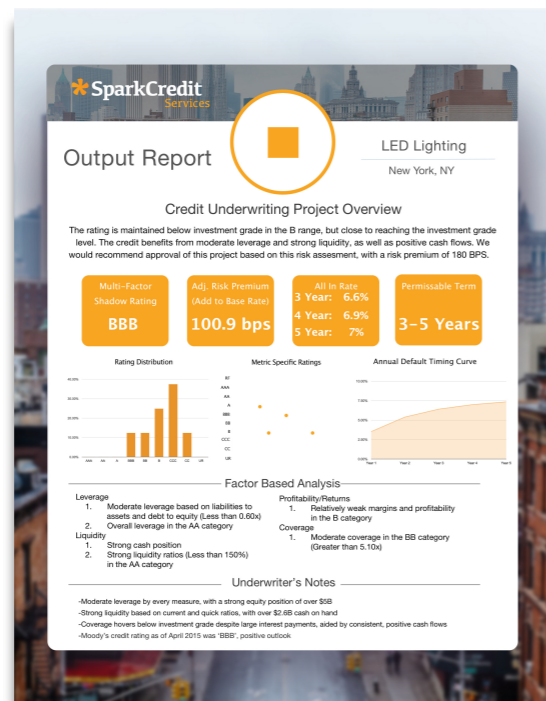


Our white-labeled proposal tools enable partners to generate streamlined customer offers that help projects close faster.

# Customer Risk Assessment & Contracts

Underwriting:  
 SparkCredit  
Services

“As a Service”  
Contract Templates



We have unlocked streamlined, scalable C&I credit underwriting, even for customers without a public rating. Our approach has received significant bank & major corporate partner validation.

We provide our partners with contract templates that ensure enforceability, proper accounting treatment, and are simple for the customer to understand. Templates are modular and customizable to partner product and process.

# Transaction Management & Automation

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We handle the back-end flow of funds at no fixed cost.

SparkFund's secure transaction automation engine helps our Partners avoid significant manual effort and cost...

Servicing Cost  
With SparkFund

25- 50 bps

Servicing Cost  
Without SparkFund

100 to 350 bps

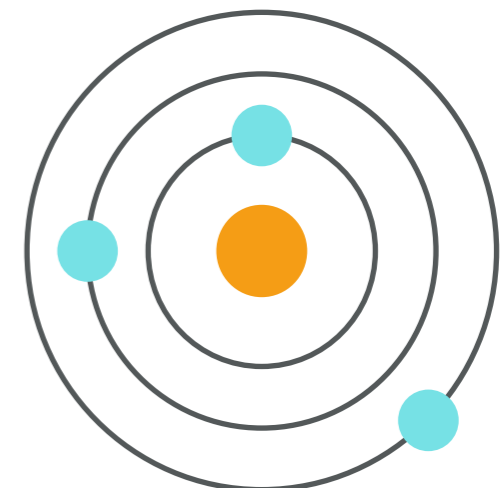
Manage increased  
complexity



Avoid adding FTEs in a  
costly back-office



Handle accuracy &  
error concerns



# Major Market Shift Towards “As a Service”



## GE Launches \$1B Energy Services Company, Current



“It’s a sign of the times that GE has created a specific focus on an integrated offering, one that has the ability to marry technology with digital analytics to engage end-use

General Electric has relaunched its global energy business based on the “As a Service” sales model.



Forbes / Tech

NOV 30, 2015 @ 03:47 PM 1,114 VIEWS

## The As-A-Service Economy Is Untapped

Companies need to find new ways to increase value by leveraging technologies including cloud, automation, analytics, artificial intelligence and mobile. These technologies have created a new “As-a-Service” business model where the whole is more powerful than the sum of its parts. This is the power of integrating software, infrastructure and business processes on demand, providing companies with plug-in, modular, scalable and consumption-based services. It enables

Major European utilities are investing heavily to become global energy services businesses.

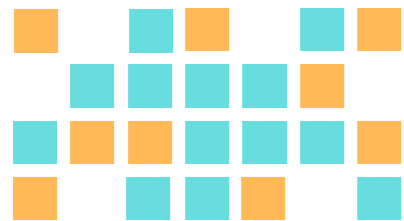
**'Everything-as-a-Service' goes way beyond technology**

# What trends are driving increased complexity?

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Vendors must adjust to three distinct challenges to effectively administer an “As a Service” solution:

## C&I Fragmentation



Falling cost of technology means smaller project sizes and more customers to service.

## More Complex Transactions



“As a Service” projects are inherently more complicated, with more distinct servicing tasks required each month.

## Larger Corporate Rollouts

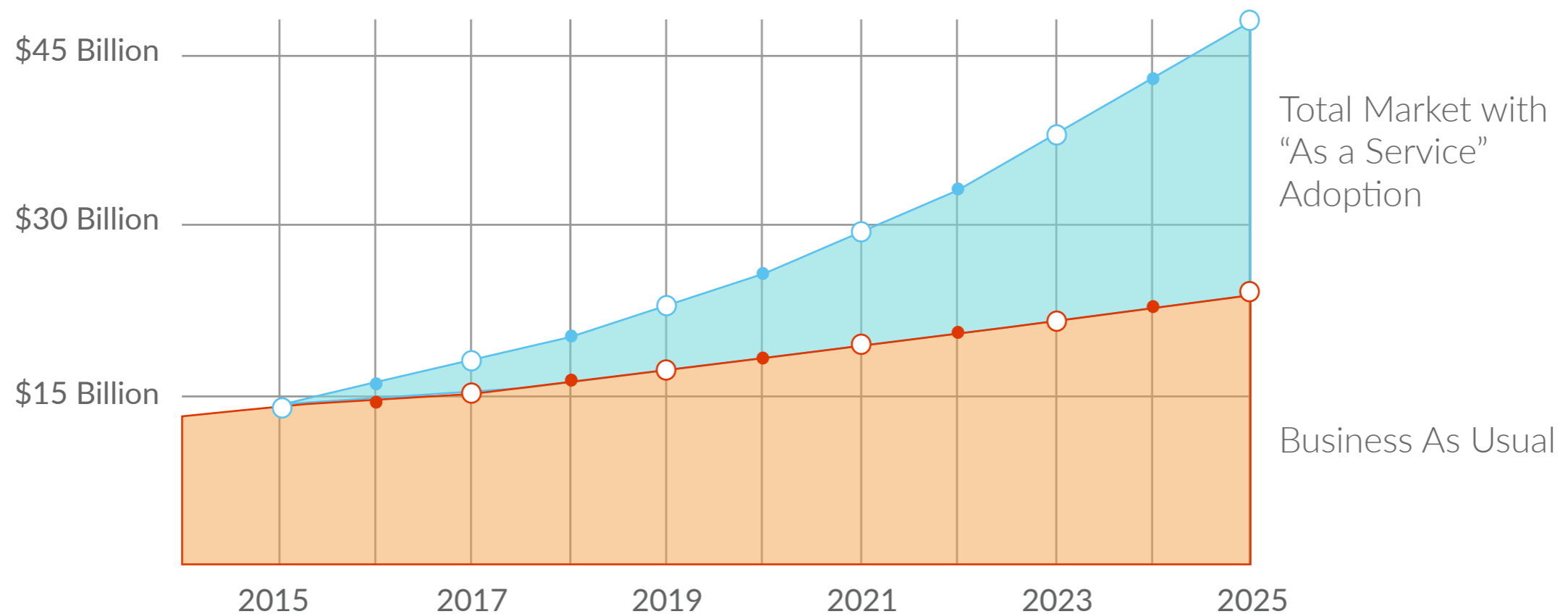


Without balance sheet constraint, corporates are choosing to implement energy saving technology at scale, meaning more complex multi-location projects.



# Efficiency As A Service

## “As a Service” Could Double Energy Efficiency Market by 2025



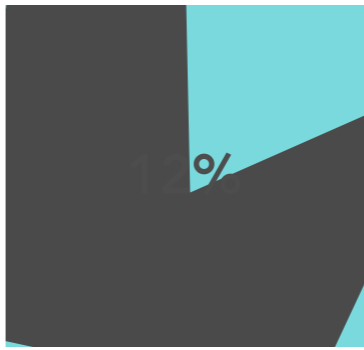
Projected market growth with adoption of Service Model vs. status quo

# Efficiency As A Service

**4.4X Increase In Conversions**

SparkFund has seen a larger average project close rate compared to traditional lease & loan financing.

Traditional Financing



As a Service



SparkFund



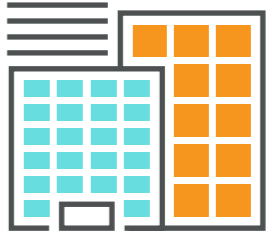
Loan: SparkFund and Partner

Service Provider



Service Plan: Partner and Customer

Customer



An aerial photograph of a city skyline, showing various skyscrapers and buildings. A semi-transparent white rounded rectangle is centered over the image, containing the text "Case Studies".

# Case Studies

# Lakewood Animal Hospital

Lakewood  
Animal  
Hospital



Industry Type

Hospital



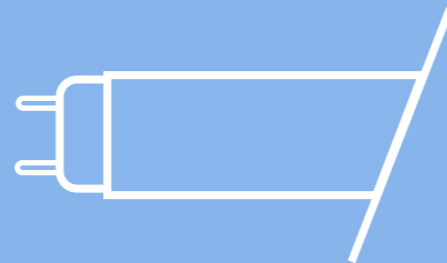
CO<sub>2</sub> Reduction

692,613  
lbs

Location



Equipment



250 T8 LED Tubes

Expected Annual Savings

\$4,630

40 Month

Financing Plan

# Community Christian Academy

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Community  
Christian  
Academy

Industry Type



School

CO<sub>2</sub> Reduction

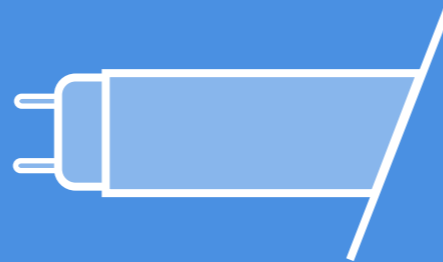


428,997 lbs

Location



Equipment



T8 LED Tubes

Expected Annual Savings

\$11,354

60 Month

Lighting As A Service



# Perimeter Place

Perimeter  
Place



Industry Type  
**Offices**



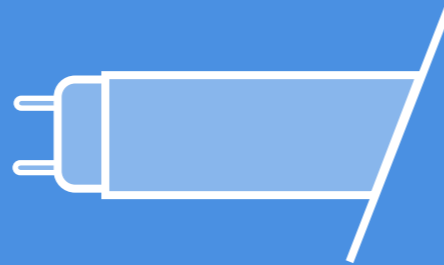
CO<sub>2</sub> Reduction  
**11,100 lbs**

Location



GA

Equipment



High efficiency  
LED

Expected Annual Savings

**\$61,923**

**40 Month  
Financing Plan**



An aerial photograph of a city skyline, featuring various skyscrapers and buildings. A large, white, rounded rectangular box is centered over the image, containing the text "Questions?".

**Questions?**



# Discussion