



***METRUS  
ENERGY***

# **Enabling Energy Efficiency As a Resource**

Presentation to 

October 13, 2011



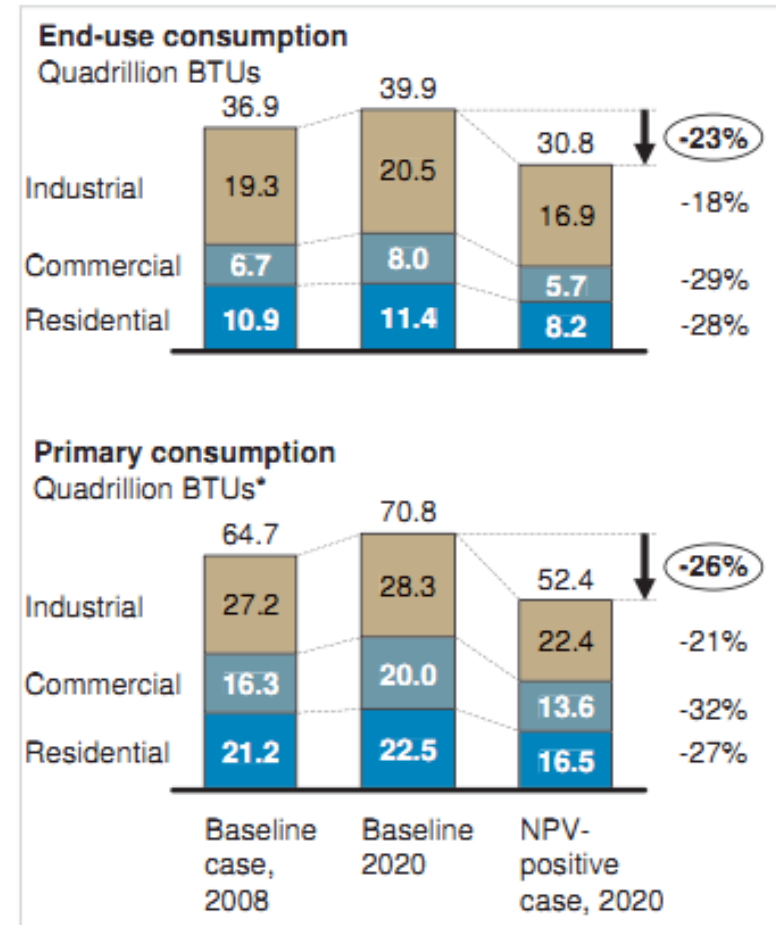
# Presentation Agenda

- **State of the Energy Efficiency Market**
  - Size of the Opportunity
  - Barriers to Project Implementation
  - Current Landscape of Financing Alternatives
- **Introduction to Metrus Energy**
  - Mission, Methods & Markets
- **Metrus' ESA Structure**
  - ESA Mechanics
  - Project Development Process
- **Case Study**
  - Typical Project Profile
  - Example Project: BAE Systems
  - Sample ESA Terms & Cash Flows
- **Value Proposition**
  - Benefits of Partnership
  - Enhancing Customer Value
- **Questions & Appendix**



# State of the Market: The Opportunity

- **Significant Market Potential**
  - \$250 billion investment market for private EE retrofits over the next decade (ACEEE)
  - \$18 billion annual market for commercial EE retrofits (Urban Land Institute)
- **Large Untapped Annual Savings**
  - EE retrofits could yield \$1.2 trillion in savings over the next decade (McKinsey)
- **Attractive Project-Level Economics**
  - High volume of EE projects with 3-7 year simple paybacks

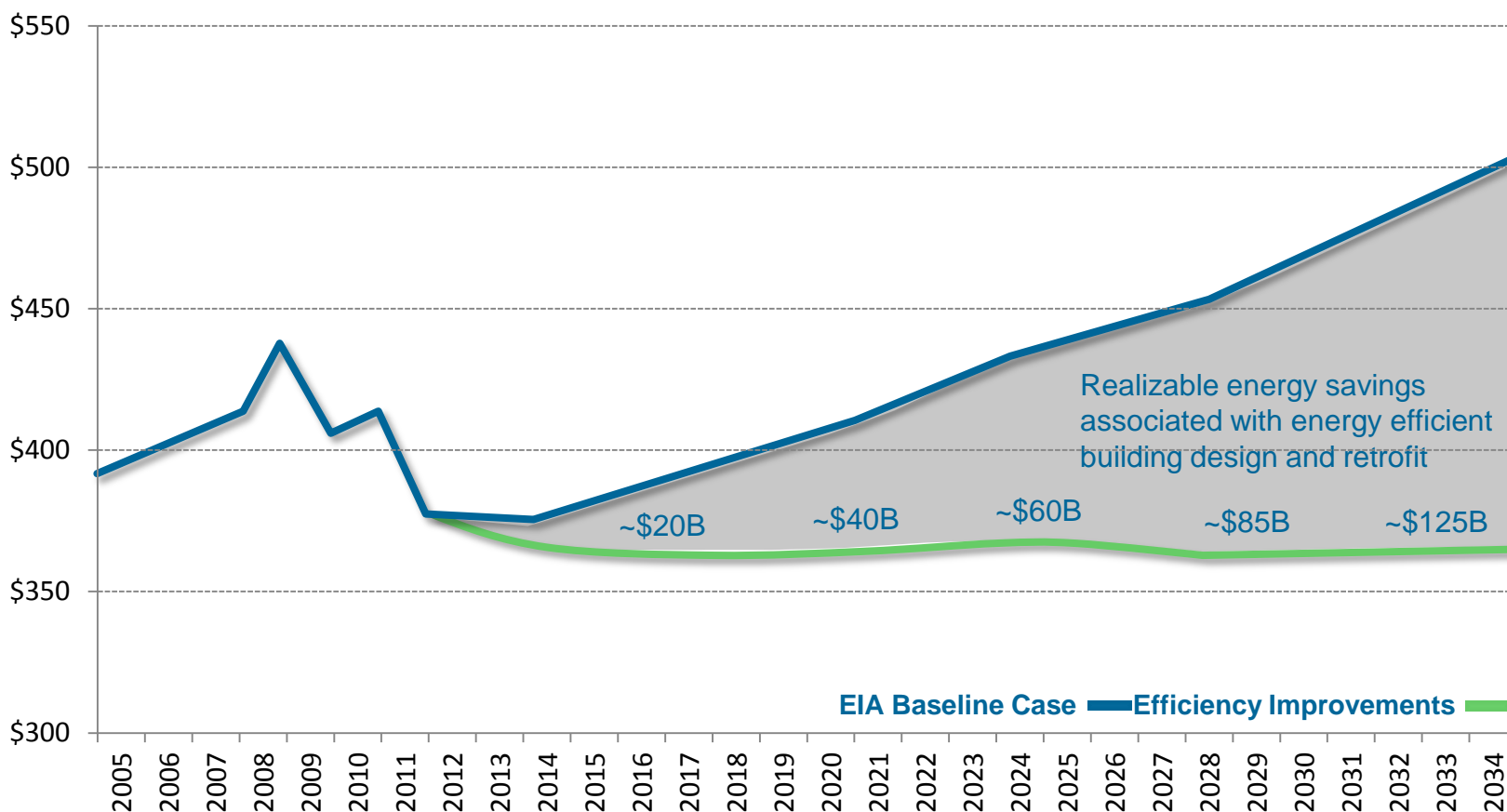


Source: McKinsey & Company Report



# State of the Market: The Opportunity

- Energy and operational efficiencies associated with buildings improvement represent critical sources of economic value to companies and the country

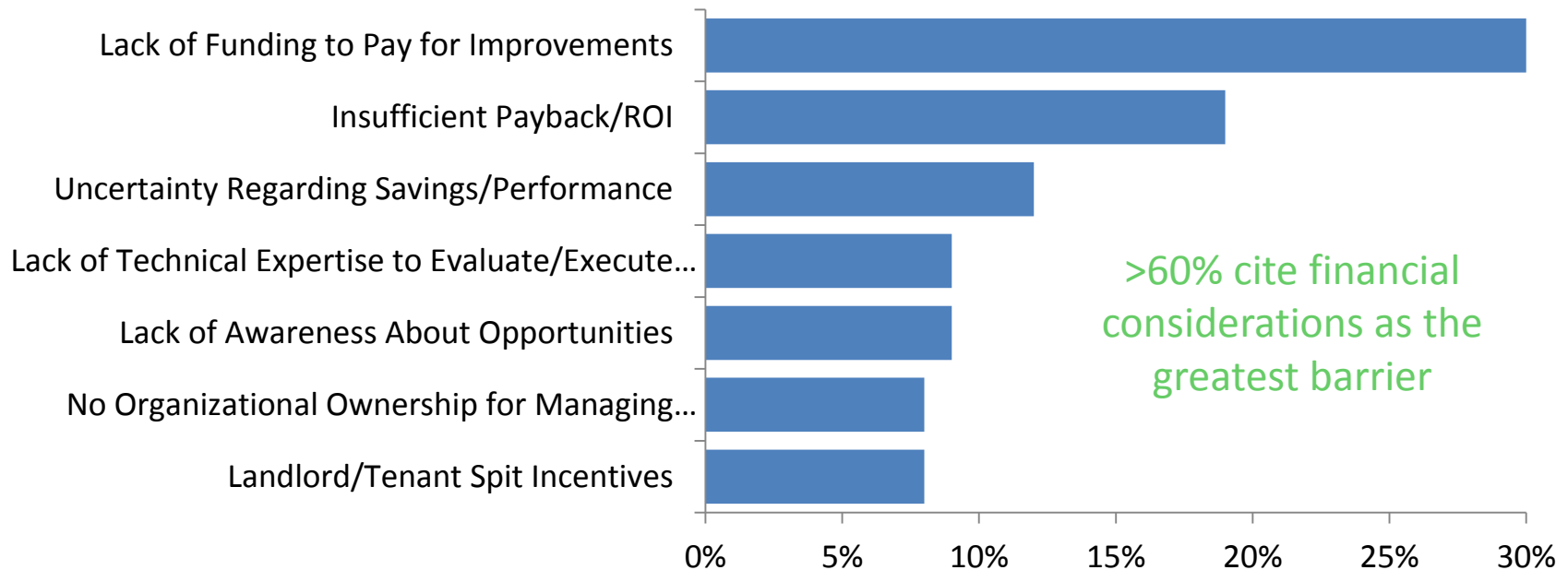


Source: Peterson Institute for International Economics & EIA 2011



# State of the Market: The Obstacles

- When asked “What is the top barrier to pursuing energy efficiency at your company/organization”:



- Metrus was founded to: **(1)** eliminate first-cost hurdles, **(2)** remove performance risk, and **(3)** integrate financial & technical solutions

Source: Johnson Controls Institute for Building Efficiency



# The Metrus Mission

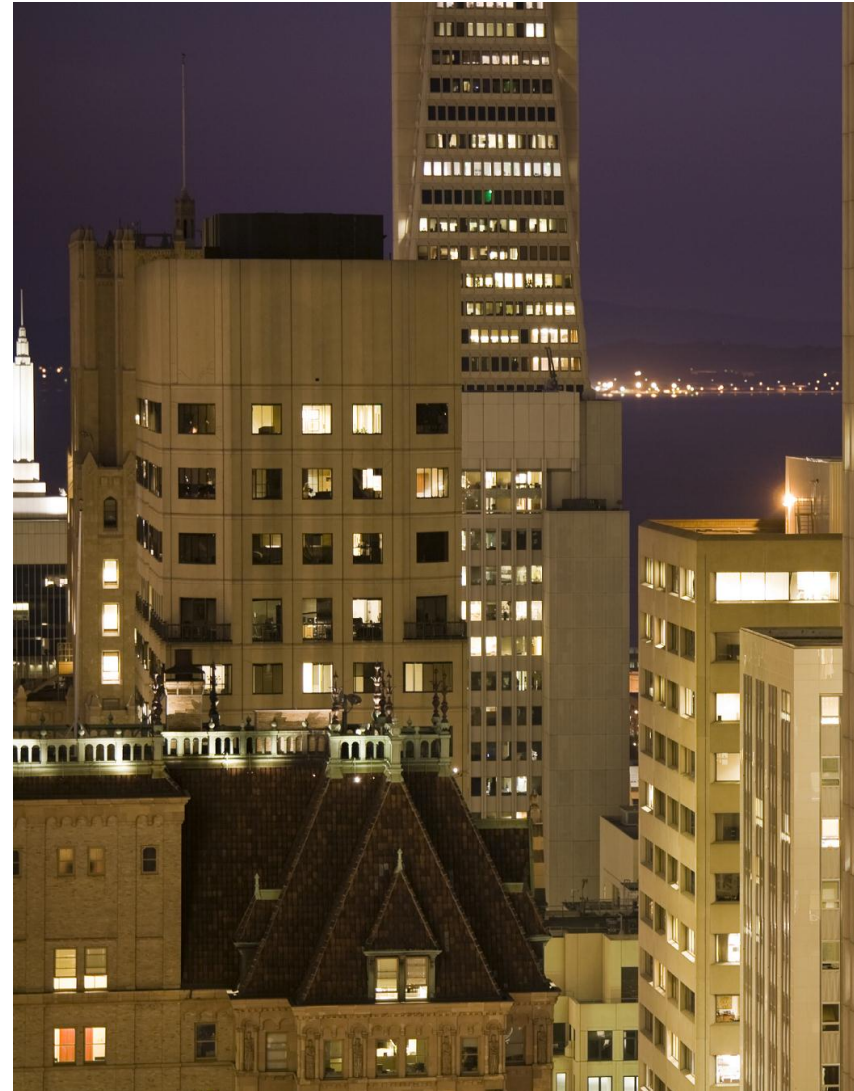
**SAVED IS EARNED**

Metrus is committed to enabling a paradigm shift to unlock energy efficiency as a resource.



# Introduction to Metrus Energy

- **OUR COMPANY:** Headquartered in San Francisco, California, Metrus Energy is a developer, owner and financier of energy efficiency retrofit projects and a pioneer in private sector energy efficiency finance
- **OUR TEAM:** Metrus has an experienced team with backgrounds ranging from energy development to government to finance
- **OUR SOLUTION:** Metrus' Efficiency Services Agreement (ESA) eliminates all upfront costs to efficiency upgrades and turns energy efficiency into a resource for customers
- **ACCOLADES:** Metrus was selected to the White House and U.S. Department of Energy's Better Buildings Challenge as a Financial Ally, and is a partner in the AlabamaSAVES™ program





# Current Financing Landscape

Financing Method	Description	Pros	Cons
<b>Self-Funding</b>	<ul style="list-style-type: none"> <li>Upfront and ongoing costs of EE upgrades paid for via corporate debt and/or internal cash flow</li> </ul>	<ul style="list-style-type: none"> <li>Standard capital budgeting process</li> <li>Captures full value of future energy savings</li> <li>Potentially well-established and quick decision process</li> </ul>	<ul style="list-style-type: none"> <li>Requires substantial capital outlay and multiparty internal buy in</li> <li>Subject to internal hurdle rates and payback requirements</li> <li>Take on additional debt</li> </ul>
<b>On-Bill Financing</b>	<ul style="list-style-type: none"> <li>Utility or other third party incurs upfront costs and is repaid via a charge on customers' utility bills</li> </ul>	<ul style="list-style-type: none"> <li>Flexibility to be structured as either a loan (stays with customer) or tariff (stays with meter)</li> <li>Enhanced security</li> </ul>	<ul style="list-style-type: none"> <li>Administrative barriers to supporting on-bill format</li> <li>Typically limited in terms of amount financed, and often does not cover long term or deep retrofits</li> </ul>
<b>Commercial PACE</b>	<ul style="list-style-type: none"> <li>Local governments finance the upfront costs of improvements, and property owners repay the costs as a line item on property tax bill</li> </ul>	<ul style="list-style-type: none"> <li>Incentivizes deeper projects and savings with longer paybacks</li> <li>Leverages municipal involvement to tap into private capital</li> </ul>	<ul style="list-style-type: none"> <li>Political, legal and administrative setup costs</li> <li>Davis-Bacon compliance requirements</li> <li>Mortgage holder approval required</li> </ul>
<b>Efficiency Services Agreement</b>	<ul style="list-style-type: none"> <li>Metrus provides 100% of upfront project cost with payments based on realized savings on per-unit-saved (e.g., kWh) basis</li> </ul>	<ul style="list-style-type: none"> <li>Off-balance sheet financing</li> <li>Avoids limiting capital budgeting process</li> <li>Incentivizes deeper projects with longer paybacks</li> <li>Immediate operational savings</li> <li>Focus on underserved private sector C&amp;I customers</li> </ul>	<ul style="list-style-type: none"> <li>Requires multi-party project coordination and negotiation</li> </ul>



# Private Sector Focus

- Historical focus by ESCOs on federal and MUSH (municipalities, universities, schools, and hospitals) markets
  - Traditional financing options limited to tax-exempt capital leases and municipal bonds to fund ESCO projects
  - Private sector companies represent a sizeable, underserved market
  - Metrus was established to provide customized efficiency financing solutions for private sector customers
- ✓ Industrial Manufacturing
  - ✓ Commercial Facilities
  - ✓ Private Healthcare
  - ✓ Private Higher Education

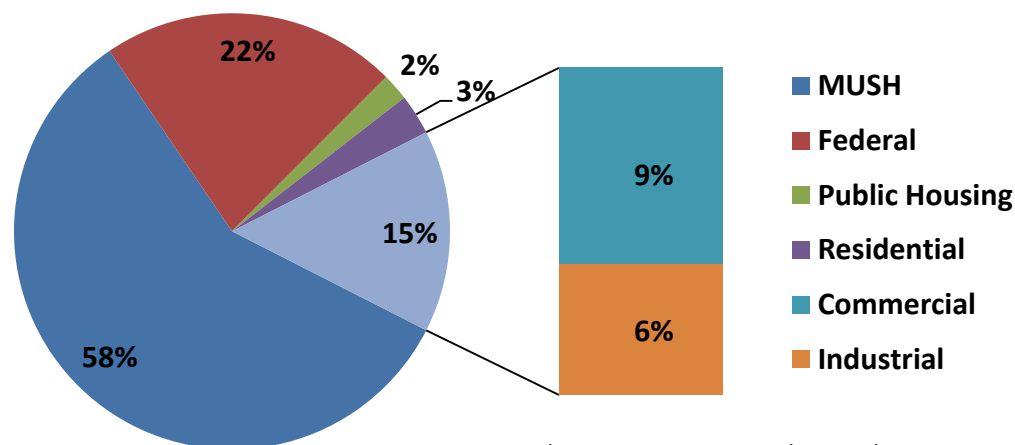


Chart: ESCO Revenue by Market Segment



# Metrus' Efficiency Services Agreement

- Metrus enables you to focus on project design and execution by supporting you throughout the development process
- Metrus removes complexity by providing:
  - ✓ Financial, accounting and legal consultation and flexible sales and marketing support
  - ✓ Structuring of service agreement terms and conditions

## DEVELOP PROJECT

- ESCO conducts site audits to identify projects and define scope
- Metrus can pre-screen candidates for ESA

## FUND & IMPLEMENT

- Metrus structures financing vehicle and sources funding
- Metrus pays ESCO entire project cost upfront
- Metrus takes title to project assets for 5-12 year term
- Customers pay only for achieved savings

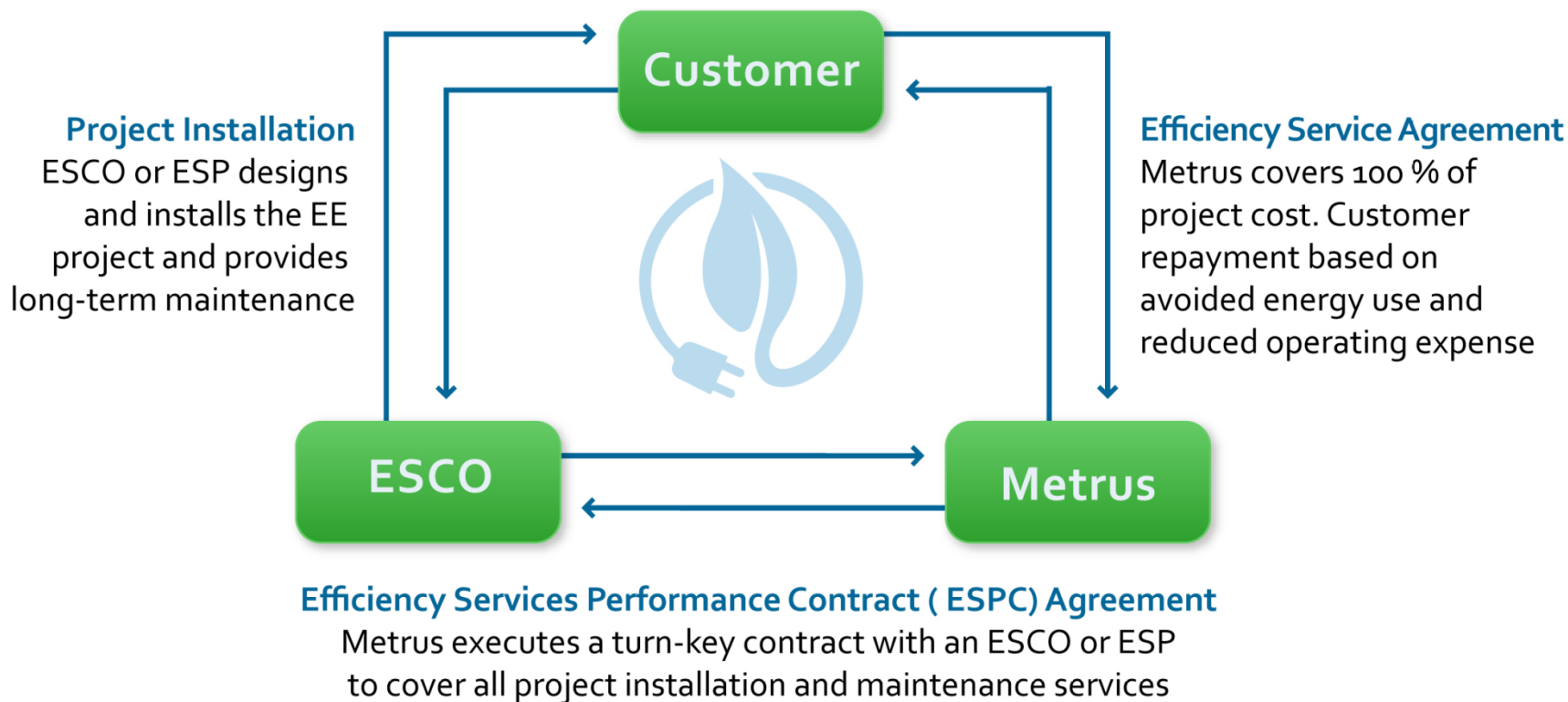
## ONGOING SERVICES

- Metrus pays ESCO for ongoing O&M of project assets and M&V of project savings
- ESCO seeks to identify new energy savings
- New facilities and new technologies can be rolled into the existing ESA



# Metrus' Efficiency Services Agreement

Metrus' ESA structure turns efficiency into a resource by removing all first-cost barriers and charging only for realized energy savings





# Two Key Contracts: ESA & ESPC

## Efficiency Services Agreement

- **Parties**
  - Metrus
  - Customer
- **Metrus Role**
  - Facilitate and fund installation of project
  - Take title to all efficiency equipment
  - Pay for selected maintenance costs
- **Customer Role**
  - Make service charge payments which are based on actual project performance
- Typical contract duration = 5-10 years (periodic termination and buyout options)

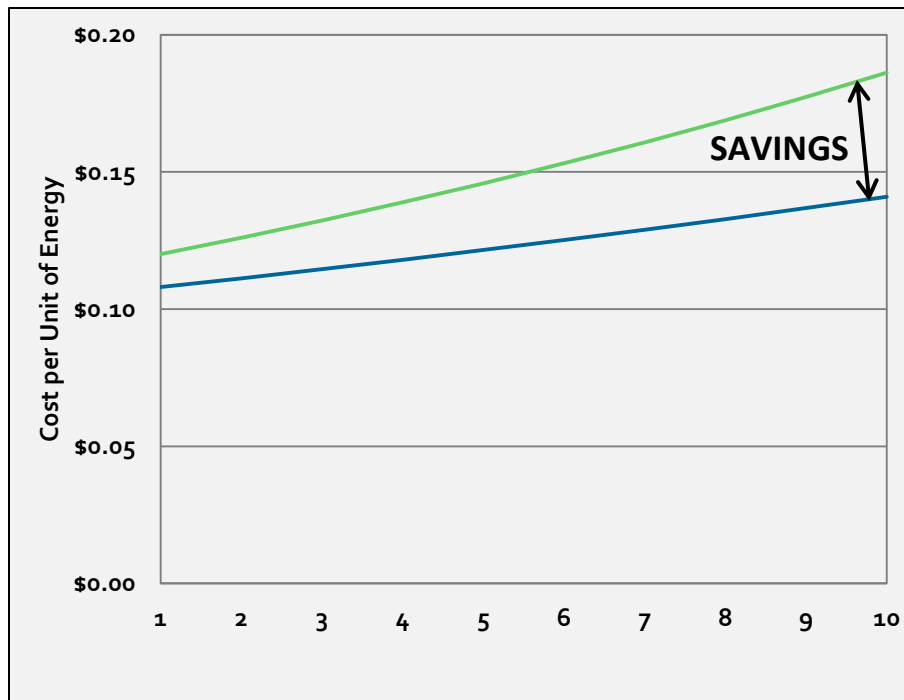
## Energy Service Performance Contract

- **Parties**
  - Metrus
  - Energy Services Company (ESCO)
- **Metrus Role**
  - Pay ESCO for design, installation, and maintenance services
- **ESCO Role**
  - Design and install project
  - Provide ongoing maintenance services
  - Measure and verify project savings
  - Guarantee project performance (approximately 90% of expected savings) for entire term of ESA



# The ESA: Service Charge

$$\text{Service Charge} = (\text{Physical Units of Savings}) * (\text{Service Rate, \$/unit}) + \text{Non-Energy Savings}$$



<b>Billing Period</b>	Quarterly
<b>Basis</b>	Quantity of energy units saved (e.g., kWh of electricity)
<b>Service Charge</b>	\$ per unit of energy units saved
<b>Non-Energy Savings</b>	% of non-energy savings that are attributed to project operation
<b>Annual Escalation</b>	Service charge escalates at a fixed annual rate

- Savings created by:
  - Year 1 Service Charge is  $\leq$  Avoided Utility Cost
  - Fixed Annual Escalation is  $\leq$  Expected Utility Rate Increase



# The ESA: Measurement & Verification

- Service charge payments are based on actual project performance and energy savings, as defined by measurement & verification (M&V)
- At the end of each billing period, ESCO prepares an M&V report to quantify the project's performance and energy savings
- [International Performance Measurement & Verification Protocols](#) have been used in the efficiency industry for decades:

<b>Stipulated</b>	Savings are defined by engineering analysis. All parties review and approve the analysis prior to executing contracts. The quantity of energy savings does not vary during the ESA term.
<b>One-Time Measurement</b>	Savings are defined by measurements taken before and after installation. After the measurements are completed, savings become stipulated and do not vary during the ESA term.
<b>Ongoing Monitoring</b>	Savings are defined by monitoring the actual performance of project equipment and systems during each billing period. Actual energy savings vary over time.



# The ESA: Scalability & Flexibility

- Scalable efficiency financing solution across multiple facilities
- Dynamic service that identifies and implements new technologies and efficiency improvements as they become available
- Metrus partners with customers for deep energy savings projects
- Agile platform that can be utilized to finance a wide range of technologies and work with a diverse group of ESCOs/contractors





# Typical Project Profile & Scope



## Typical Project Scope

- Building automation & controls
- Lighting retrofits & controls
- Compressed air (leak detection & repair)
- Utility tariff rate optimization
- Heating, ventilation, & air conditioning (HVAC)
- Chiller replacement & system improvements
- Boiler replacement & system improvements
- Pumps, fans, motors, drives
- Cogeneration (onsite generation)

## Typical Project Profile

- Clients are typically private sector commercial, industrial, healthcare and higher education
- Multiple energy efficiency measures are blended into single project scope of work
- Total project size is typically \$1-5 million
- Average simple payback on a project is usually between 3 and 7 years
- Project term is typically 7 to 10 years



# Sample Project: Indicative ESA Terms

## Example Project Characteristics

- Scope:
  - Building automation & controls
  - Lighting retrofits & controls
  - Compressed air (leak detection, repair)
  - HVAC replacement
  - Chiller replacement & system improvements
  - Boiler replacement & system improvements
  - Pumps, fans, motors, drives
- \$3 million project costs
- \$525,000 in total annual savings

## Example ESA Terms

- 5.6 year simple payback period
- ESA contract term of 10 years
- Utility Rate: \$0.09 per kWh
- Utility Escalation: 4%
- ESA Rate: \$0.081 per kWh (10% discount)
- ESA Escalation: 3%



# Sample Project: Cash Flows

## Example Project \$3M Project Customer Cash Flow Pro Forma

YEAR	construction	1	2	3	4	5	6	7	8	9	10	11
<b>PROJECT SAVINGS</b>												
Reduced Electricity Consumption, kWh	0	5,833,333	5,833,333	5,833,333	5,833,333	5,833,333	5,833,333	5,833,333	5,833,333	5,833,333	5,833,333	5,833,333
Utility Tariff, \$/kWh (4.0% annual escl)	0.0900	0.0900	0.0936	0.0974	0.1013	0.1053	0.1095	0.1139	0.1185	0.1232	0.1281	0.1333
<b>Value of Project Savings, \$</b>	<b>0</b>	<b>525,000</b>	<b>546,000</b>	<b>568,167</b>	<b>590,917</b>	<b>614,250</b>	<b>638,750</b>	<b>664,417</b>	<b>691,250</b>	<b>718,667</b>	<b>747,250</b>	<b>777,583</b>
<b>ESA CUSTOMER PAYMENTS</b>												
ESA Rate, \$/kWh (3.0% annual escl)	-	0.0810	0.0835	0.0860	0.0886	0.0912	0.0940	0.0968	0.0997	0.1027	0.1057	-
Payment for Realized Electricity Savings	-	472,500	487,083	501,667	516,833	532,000	548,333	564,667	581,583	599,083	616,583	-
End-of-Term Payment for Fair Market Value	0	0	0	0	0	0	0	0	0	0	0	300,000
<b>Total ESA Customer Payments</b>	<b>0</b>	<b>472,500</b>	<b>487,083</b>	<b>501,667</b>	<b>516,833</b>	<b>532,000</b>	<b>548,333</b>	<b>564,667</b>	<b>581,583</b>	<b>599,083</b>	<b>616,583</b>	<b>300,000</b>
<b>NET CUSTOMER SAVINGS</b>												
Project Savings	0	525,000	546,000	568,167	590,917	614,250	638,750	664,417	691,250	718,667	747,250	777,583
ESA Customer Payments	0	472,500	487,083	501,667	516,833	532,000	548,333	564,667	581,583	599,083	616,583	300,000
<b>Net Cash Flow, annual</b>	<b>0</b>	<b>52,500</b>	<b>58,917</b>	<b>66,500</b>	<b>74,083</b>	<b>82,250</b>	<b>90,417</b>	<b>99,750</b>	<b>109,667</b>	<b>119,583</b>	<b>130,667</b>	<b>477,583</b>
<b>cumulative</b>	<b>0</b>	<b>52,500</b>	<b>111,417</b>	<b>177,917</b>	<b>252,000</b>	<b>334,250</b>	<b>424,667</b>	<b>524,417</b>	<b>634,083</b>	<b>753,667</b>	<b>884,333</b>	<b>1,361,917</b>



# Customer Case Study: **BAE SYSTEMS**

Metrus Energy has developed, financed, and completed construction on more than \$3 million in energy efficiency improvements for global aerospace and defense contractor BAE Systems as a part of ongoing multi-facility energy efficiency initiative.

	Merrimack, New Hampshire	Greenlawn, New York
<b>Facility</b>	<ul style="list-style-type: none"> <li>467,000 ft<sup>2</sup> mixed-use office, manufacturing, environmental testing</li> </ul>	<ul style="list-style-type: none"> <li>492,148 ft<sup>2</sup> mixed-use office, manufacturing, environmental testing</li> </ul>
<b>Project Scope</b>	<ul style="list-style-type: none"> <li>Lighting Retrofits</li> <li>Building Automation</li> <li>Air Compressor Replacement</li> <li>Transformer Replacement</li> <li>Demand Control Ventilation</li> <li>Operational Best Practices</li> </ul>	<ul style="list-style-type: none"> <li>Lighting Retrofits</li> <li>Building Automation</li> <li>Boiler and Chiller Replacement</li> <li>Demand Control Ventilation</li> <li>Variable Frequency Drives for AHU and Water Pumps</li> </ul>
<b>Project Cost</b>	<ul style="list-style-type: none"> <li>Approximately \$1 million</li> </ul>	<ul style="list-style-type: none"> <li>Approximately \$2.2 million</li> </ul>
<b>Annual Savings</b>	<ul style="list-style-type: none"> <li>&gt; \$200,000 in Utility Savings</li> <li>&gt; 1.1 million kWh of Electricity</li> <li>&gt; 31,000 therms of Natural Gas</li> <li>Various Non-Energy Operational Savings</li> <li>~ 400 tons of CO<sub>2</sub></li> </ul>	<ul style="list-style-type: none"> <li>Total Expected Annual Savings &gt; \$300,000</li> <li>&gt; 300,000 kWh of Electricity</li> <li>&gt; 125,000 therms of Natural Gas</li> <li>Various Non-Energy Operational Savings</li> <li>~ 800 tons of CO<sub>2</sub></li> </ul>
<b>Term</b>	<ul style="list-style-type: none"> <li>Simple Payback: &gt; 5 years</li> <li>ESA Contract Term: 10 Years</li> </ul>	<ul style="list-style-type: none"> <li>Simple Payback: &gt; 7 years</li> <li>ESA Contract Term: 11 Years</li> </ul>
<b>Ongoing Services Provided by Metrus</b>	<ul style="list-style-type: none"> <li>Metrus covers over \$60,000 in annual project maintenance and energy savings performance monitoring services</li> </ul>	<ul style="list-style-type: none"> <li>Metrus covers over \$35,000 in annual project maintenance and energy savings performance monitoring services</li> </ul>



# Metrus: Your Development Partner

The Metrus services model removes first-cost barriers to large-scale energy efficiency projects. Metrus provides its partners with programmatic solutions that are scalable, enabling larger projects and faster sales to a wider range of customers.

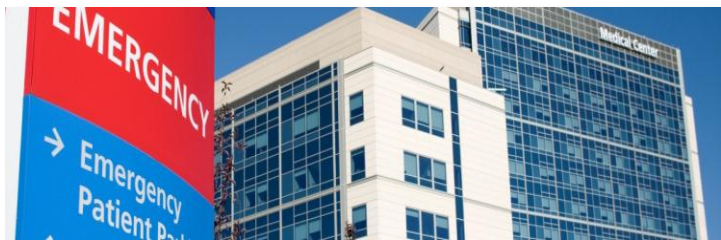


# Deliver Enhanced Value to Customers

Benefit	Description	Who Cares?
<b>Avoid Capital Outlay</b>	Metrus pays for all design and implementation costs, enabling customers to conserve capital for core business investments	<ul style="list-style-type: none"> <li>▪ CFO</li> <li>▪ Facility Mgr.</li> </ul>
<b>Use Savings to Pay for the Project</b>	ESA service payments are based solely on the realized energy and operational savings created by the project	<ul style="list-style-type: none"> <li>▪ Facility Mgr.</li> </ul>
<b>Reduce Operating Expenses</b>	ESA service payments are set below the current utility price, which immediately improve the bottom line	<ul style="list-style-type: none"> <li>▪ CFO/COO</li> <li>▪ Facility Mgr.</li> </ul>
<b>Enhance Reliability of Operations</b>	Under the terms of the ESA, Metrus pays for periodic maintenance services to ensure long-term reliability and performance of the project equipment	<ul style="list-style-type: none"> <li>▪ CFO/COO</li> <li>▪ Facility Mgr.</li> </ul>
<b>ESA Payments are an Operating Expense</b>	The ESA is designed to be an off-balance sheet financing solution with regular payments similar to a standard utility bill	<ul style="list-style-type: none"> <li>▪ CFO</li> <li>▪ Facility Mgr.</li> </ul>
<b>Reduce Exposure to Utility Uncertainty</b>	During the term of the ESA, service payments escalate at a fixed annual rate below historical utility price increases	<ul style="list-style-type: none"> <li>▪ CFO/COO</li> <li>▪ Procurement</li> </ul>
<b>Expand Feasible Project Scope</b>	By circumventing the traditional capital budgeting process, Metrus unlocks longer (3+ year simple payback) projects with higher upfront costs and deeper operational benefits	<ul style="list-style-type: none"> <li>▪ Facility Mgr.</li> <li>▪ ESCO</li> </ul>



# Maximize the Size of the Prize



- Eliminate a critical barrier to sales
- Broaden your available market to include private sector customers:
  - Commercial & Industrial
  - Hospitals & Higher Education
- Increase deal size:
  - Multi-measure, multi-facility projects
  - Broaden project scope and ↑ total project size from \$1M to \$5M+
  - Implement projects with simple paybacks up to eight years
- Roll-up multiple customer sites into a scalable programmatic solution
- Enhance margins and lock in recurring services revenue



# Typical Development Process

Process Step	Description
<b>Facility Screening</b>	Metrus works with customer and ESCO/contractor(s) to evaluate potential savings
<b>Mutual Non-Disclosure Agreement</b>	Transfer of information initiated (e.g., customer's audited financials, utility billing information, ESA structure/pricing)
<b>Letter of Intent</b>	Letter details key project development activity and timeline
<b>Preliminary Scoping Study</b>	Energy contractor(s) summarizes potential EE improvements and associated operational and economic benefits
<b>Project Agreement</b>	Binding project agreement summarizes the criteria that will be used to determine if the final project scope is acceptable; if the final recommended scope is acceptable and customer does not proceed with ESA, customer pays breakage fee
<b>Investment Grade Energy Assessment</b>	Energy contractor(s) provides detailed costs and savings, which forms the basis for the design, engineering and construction activities
<b>Efficiency Services Agreement</b>	Metrus enters into ESA with customer detailing project scope, operation and measurement and verification protocols
<b>Efficiency Services Performance Contract</b>	Metrus project company enters into ESPC with contractor(s), addressing all EPC work as well as ongoing maintenance, repair and replacement, monitoring and performance guarantee



# Ways to Partner with Metrus

## INFORMAL

Two-way partnership on deal flow, in which Metrus and ESCO look for project opportunities to work with one another on an ad hoc basis

## PROGRAMMATIC

Joint responses to RFQs/RFPs, as well as joint application to utility third-party program commitments

## FORMAL

Development of co-branded or white label product offering, including joint processes for sales and marketing



# Questions?

## Metrus Energy

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# Appendix: Frequently Asked Questions

- At what point in the process does Metrus enter the conversation?
  - Metrus supports the sales cycle at any point during the development process (prior to preliminary audit or post detailed audit). Engaging Metrus early as a development resource (accounting, financial, legal) can accelerate the closing process.
- Under an ESA, who holds title to all project assets?
  - Metrus holds title to all project assets financed under an ESA, and is responsible for ensuring project performance via maintenance. Customers bear no performance or technology risk, paying only for realized savings, and have periodic termination and FMV buyout options over the term of the contract.
- For accounting purposes, is the ESA considered an “off-balance sheet” transaction?
  - The ESA is designed to be treated as a “services agreement” rather than a “lease” and Metrus customers have treated it as such. However, each customer is responsible for making its own accounting determination.
- What happens if actual savings fall above or below expectations?
  - A customer pays only for realized savings. If actual savings > guarantee, Metrus and the customer “share” those additional savings (i.e., the customer pays Metrus the pre-agreed upon \$/kWh price for the additional units saved. If actual savings < guarantee, the customer pays Metrus only for actual savings and Metrus.
- What happens if a customer makes operational changes that impact the baseline?
  - The ESA is structured to cover technical, but not operational or behavioral risks associated with a project. Operating hours are typically a stipulated component of IPMVP calculated savings. For example, if a customer reduced the number of shifts in a facility from 3 to 2, realized savings and ESA payments) would be calculated based on 3 shifts. Alternatively, the customer would have the option of early termination/buyout.
- What happens if the customer sells the facility during the ESA term?
  - The customer may elect to (1) terminate the ESA prior to end of term subject to breakage costs, (2) purchase the covered equipment at FMV, or transfer the ESA to the new building owner subject to Metrus credit approval.