We’ll be starting in just a few minutes….

Tell us…

What topics are you interested in for future webinars?

Please send your response to the webinar organizers via the question box.
Rethinking Traditional Finance: How Efficiency-as-a-Service Unlocks New Potential for Businesses

April 2, 2019
3:00 – 4:00 PM EST
What is efficiency-as-a-service?
What is Efficiency-as-a-Service?

- Efficiency-as-a-service is a pay-for-performance, off-balance sheet financing solution that allows customers to implement energy efficiency projects with no upfront capital expenditure.

- Key attributes:
  1) Third-party ownership of equipment
  2) Provider responsible for equipment installation, performance, and maintenance
  3) Typically off-balance sheet
  4) Simple, repeatable structure
What is Efficiency-as-a-Service?

“ESA”

“Energy Subscription”

“Efficiency-as-a-service”

“Services Contract”

“Lighting-as-a-service”
Efficiency-as-a-Service Toolkit

- Overview fact sheet
- Case studies from:
  - Allumia
  - Citi
  - Metrus Energy
  - Redaptive
  - Sparkfund
- Additional resources to be added

Available at: https://betterbuildingssolutioncenter.energy.gov/toolkits/efficiency-a-service
## Today’s Presenters

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bob Hinkle</td>
<td>Metrus Energy</td>
</tr>
<tr>
<td>Asher Burg</td>
<td>Sparkfund</td>
</tr>
<tr>
<td>Richard Braam</td>
<td>Bristol Hospital</td>
</tr>
</tbody>
</table>
Delivering Efficiency as a Service

April 2, 2019
Overview

- Metrus develops, finances, owns, and operates large-scale efficiency projects for Fortune 500 companies and major institutional customers.
- Metrus partners with leading ESCOs, contractors and lending partners to design, finance, construct and maintain projects.
- Metrus sells efficiency as a resource. We put our capital to work so our customers don’t have to.
- Metrus has operational energy and water efficiency projects in 23 different states, resulting in savings over 1.1 billion kWh.
Energy Efficiency as a Service

- Third-party ownership of energy/water efficiency assets
- Multiple types of upgrades/equipment
- Ability to bundle multiple sites into one project
- Includes upfront and ongoing technical and administrative services
- Equipment/technology agnostic
- Contract based on delivery of savings
- Payments go up/down each billing period
- Payments denominated in units of energy/water saved
Origins of Efficiency as a Service

- Power Purchase Agreement
- Traditional Performance Contract

Efficiency Services Agreement
- Funds 100% of total project costs
- Third-party ownership of energy and water efficiency assets
- Pay-for-performance structure
- Covers construction, O&M, M&V
- Off-balance sheet accounting
Project Contracts

**Efficiency Services Agreement (ESA)**

Metrus funds 100% of project cost, takes title to equipment, and pays for ongoing maintenance and monitoring. Customer pays service charge for realized savings.

**Energy Services Performance Contract (ESPC)**

ESCO (contractor) designs project, installs efficiency equipment, and provides long-term maintenance and monitoring services.
<table>
<thead>
<tr>
<th><strong>Key Customer Benefits</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FINANCIAL</strong></td>
<td><strong>OPERATIONAL</strong></td>
</tr>
<tr>
<td>▪ No capital outlay (cap-ex dollars can be invested in core business)</td>
<td>▪ Key equipment upgrades that increase resiliency and reliability</td>
</tr>
<tr>
<td>▪ Preservation of debt capacity</td>
<td>▪ Improved efficiency of building operations and systems</td>
</tr>
<tr>
<td>▪ Immediate positive cash flow through energy and water savings</td>
<td>▪ Ongoing maintenance and monitoring services</td>
</tr>
<tr>
<td>▪ Pay-for-performance ESA removes risk</td>
<td>▪ Flexibility to add new upgrades</td>
</tr>
<tr>
<td>▪ Incorporates available utility incentives</td>
<td></td>
</tr>
</tbody>
</table>
## Scope of Work

### TYPICAL PROJECT PROFILE
- Integrated energy and water efficiency retrofits
- Project size is generally $1-10$ million
- ESA (project) term is generally 5-15 years

### TYPICAL EFFICIENCY MEASURES
- Building automation and controls
- Lighting retrofits and controls
- Heating, ventilation and air conditioning (HVAC)
- Central plant systems
- Boiler replacement and system improvements
- Pumps, fans, motors, and drives
- Cogeneration (on-site electricity generation)
- Water efficiency measures
# Funding Options Comparison

<table>
<thead>
<tr>
<th>Key Attributes</th>
<th>ESA</th>
<th>Lease</th>
<th>PACE&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Cash</th>
</tr>
</thead>
<tbody>
<tr>
<td>100% third-party financing</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Off balance sheet</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Pay for performance</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Ongoing Maintenance</td>
<td>Yes</td>
<td>Sometimes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Ability to add new upgrades</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Term (years)</td>
<td>5-15 years</td>
<td>5-15 years</td>
<td>5-20 years</td>
<td>N/A</td>
</tr>
<tr>
<td>Cost of capital</td>
<td>5-7%</td>
<td>4-6%</td>
<td>5-7%</td>
<td>WACC&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

(1) Property Assessed Clean Energy.
(2) Weighted average cost of capital.
Project Lifecycle

- Start
  - Preliminary assessment
  - Project financial review
  - Initial customer approval
    - Sign Letter of Intent
  - Project-level contracts
  - Final project scope
  - Detailed assessment
    - Sign Project Contracts
  - Closing
    - Project construction
      - Project operations; identification of new efficiency measures
        - End of term
          - Ongoing savings
CASE STUDY

Fortune 100 Technology

40 SITES • 20 STATES

• LED lighting upgrades
• Building management systems

Total investment: $69.1 Million
Total annual savings: $14.8 Million
Annual CO₂ savings: 113,455 Tons
Bristol Hospital

- LED lighting retrofit
- Energy management system
- Power factor correction
- Steam trap replacements
- HVAC and AHU replacement
- Water efficiency

Total investment: $4.2 Million
Total annual savings: $525,000
Annual CO₂ savings: 1,320 Tons
BAE Systems
6 SITES • 3 STATES
• Lighting retrofits (interior & ext.)
• Building automation & controls
• Boiler and chiller replacement
• Transformer replacement
• Demand control ventilation
• Building envelope improvements

Total investment: $12 Million
Total annual savings: $4.1 Million
Annual CO₂ savings: 15,000 Tons
Contact

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http://www.metrusenergy.com
sales@metrusenergy.com

Bob Hinkle
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Mobile: (415)-203-5367
Asher Burg
Sparkfund
We’re already using subscriptions to improve the way we live and work

But there hasn’t been the option to do this for energy systems.
With the Sparkfund Technology Subscription™, you subscribe to the heating, cooling, lighting, resiliency, mobility and other energy systems your organization needs — all for less than you’re spending on these systems today.
Subscription organizes a complex ecosystem.

Customer
Access to the benefits of energy technology with significantly reduced capital, time, and risk

Subscription Provider
Web, Marketing, Call Center, National Accounts

- Vendor Selection
- Technology Selection
- Bulk procurement
- Installation Management
- Emergency Repairs
- Ongoing Service & Maintenance
- Transaction Management
- Energy Asset Optimization
- IoT Integration / APIs
- Uptime Monitoring

OEMs
Installers
O&M / Service

IoT / Monitoring / Controls
Demand Response / Grid Services

Capital Providers
The smartest way to deal with your energy systems

**Designed as a service contract**

- $0 capital outlay. You do not take on any debt.
- Risk is transferred to Sparkfund and our service providers. Monitoring & maintenance included.
- Contract specifies the measurable benefits of the technology. Guaranteed performance on all equipment.
- Off balance sheet treatment*. Does not affect borrowing capacity.

*Accounting treatment depends on customer tax and legal guidance.

**Subscription is flexible**

Contracts are typically 5 – 10 years.

**Your In-term Options:**
- Terminate
- Transfer

**Your End of Term Options:**
- Upgrade
- Extend
- Terminate
Online Portal Provides Transparency into System Performance

- Quickly view the performance of energy assets and systems.
- Drill-down into system-level performance
- Auto notification of any system issues
- Access to your specific account details such as (a) payment histories, (b) current contracts and (c) scopes of services.
- Detailed history of all projects, services, and activities performed on your systems.
<table>
<thead>
<tr>
<th></th>
<th>COMPREHENSIVE</th>
<th>TARGETED</th>
<th>STARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>For customers that want to get out of owning energy technology</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>For customers that know what projects they want to complete</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>For customers that don't know where to start</td>
</tr>
<tr>
<td>Covered Technology</td>
<td>All Technologies</td>
<td>All Technologies</td>
<td>Monitoring &amp; Controls and HVAC Optimization</td>
</tr>
<tr>
<td>Subscription Term</td>
<td>5-10 years</td>
<td>5-10 years</td>
<td>3-7 years</td>
</tr>
<tr>
<td><strong>EXISTING EQUIPMENT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance Monitoring</td>
<td>✓</td>
<td>✓ Optional</td>
<td>✓</td>
</tr>
<tr>
<td>Preventative Maintenance and Repairs</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full Unit Replacements</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Functional Guarantee Application</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NEW EQUIPMENT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance Monitoring</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Preventative Maintenance and Repairs</td>
<td>✓</td>
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<td>Functional Guarantee Application</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
What does a subscription look like to a customer?

Scope: Campus Wide Controls, Air Handling Units, Split Condensers, Split Air Handling Units, Heaters, Fan Coils, Hot & Cold Water Pumps, Boilers, Chillers, Air Cool Chiller, Mini-Split, Package Units, Wall Mounts, PoolPak, Cooling Tower
Affinity Case Study

Affinity Living Group is the eleventh-largest assisted living provider in the U.S., with 104 communities across the Southeast. A key part of achieving its mission — to create the best life for all they serve — is expanding their network of senior living communities to accommodate more residents, and improving resident experiences at each location.

Renovation and portfolio expansion were both necessary to fulfill Affinity’s mission, but the company didn’t have the time or capital — or want to take on the risk — to do both at once.

Rollout Schedule

- **11/17**: 1 facility
- **3/18**: 4 facilities
- **5/18 - 7/18**: 12 facilities
- **8/18 - 10/18**: 25 facilities
- **1/19 - 3/19**: 35 facilities
- **4/19 - 12/19**: 6 per month
Customers Powered by Sparkfund
How it Works

1. **Data Collection**
   - We collect data on your buildings and existing assets

2. **System Selection**
   - You select which systems you want covered at each location

3. **Monitoring & Controls**
   - We install monitoring & controls on your systems

4. **Functional Guarantee**
   - We take over responsibility for the performance of your systems

5. **Optimization**
   - We optimize your systems performance

6. **Maintenance**
   - We do preventative maintenance and emergency repairs (as needed)

7. **Replacement**
   - We replace underperforming assets
Thank you

Asher Burg
asher@sparkfund.com
Richard Braam

Bristol Hospital
EaaS Webinar
Richard A. Braam, CPA, MBA, CHFP, CSMC
Vice President & CFO – Bristol Health
EaaS at Bristol Hospital

- Bristol Hospital, Bristol, CT
  - 369,216 sq ft of aging facilities
  - Bldg 1 AHUs were original (1968)
  - Limited capital – Provider Tax
  - 100% of real estate mortgaged
EaaS at Bristol Hospital

- Complex transaction – multiple parties involved
  - Bristol Hospital
  - Metrus
  - Lender
  - Trane
  - Connecticut Health and Education Facilities Authority
  - Bond Insurer
  - Legal representation for all parties
  - Critical issue around securing debt
EaaS at Bristol Hospital

- Complex Project – 17 page scope of work
  - Air Handlers
  - Plumbing Fixtures
  - Light Fixtures
  - 24/7/365 Operations
  - Direct Patient Care Areas
  - Trane & Subcontractors displayed great flexibility
  - Project completed on-time
Financial Implications
- Off balance sheet – no asset or liability recorded
- “Service” – operating expense treatment
- Shared risk model
Additional Resources

- Efficiency-as-a-Service Toolkit: https://betterbuildingssolutioncenter.energy.gov/toolkits/efficiency-as-a-service
- Sparkfund – Affinity Living Group Project: https://betterbuildingssolutioncenter.energy.gov/solutions-at-a-glance/technology-subscription-assisted-living-provider
The Better Buildings Financing Navigator is an online tool that helps public and private organizations find financing solutions for energy efficiency and renewable energy projects.

Available at: https://betterbuildingssolutioncenter.energy.gov/financing-navigator

With the Navigator, you can…

1. **Explore:** Learn the basics of the clean energy financing market

2. **Find:** Answer a few simple questions to see which financing options might be a fit for your project

3. **Connect:** Speak to Better Buildings Financial Allies who may be able to finance your project
SOLUTIONS FOR SMALL TO MEDIUM Sized DATA CENTERS:
AIR MANAGEMENT

Tuesday, June 4, 2019 | 3:00 - 4:00 PM ET

This webinar will focus on how small data centers can develop air management best practices and see a reduction in infrastructure energy costs.
REGISTER NOW

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IMPROVING AMERICA’S BUILDINGS THROUGH LEADERSHIP AND INNOVATION

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Additional Questions? Please Contact Us

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