

# Emerging Opportunities: Models such as Energy-As-A-Service

## Moderator:

- Matt Rogotzke, Policy Analyst, Center for Best Practices, Energy, Infrastructure & Environment Division

## Speakers:

- Anastasia Beckett, Senior Vice President of Business Development, Metrus Energy
- Shawn Bennett, Advisor, US Air Force, Office of Energy Assurance



# Delivering Efficiency as a Service: The Metrus ESA

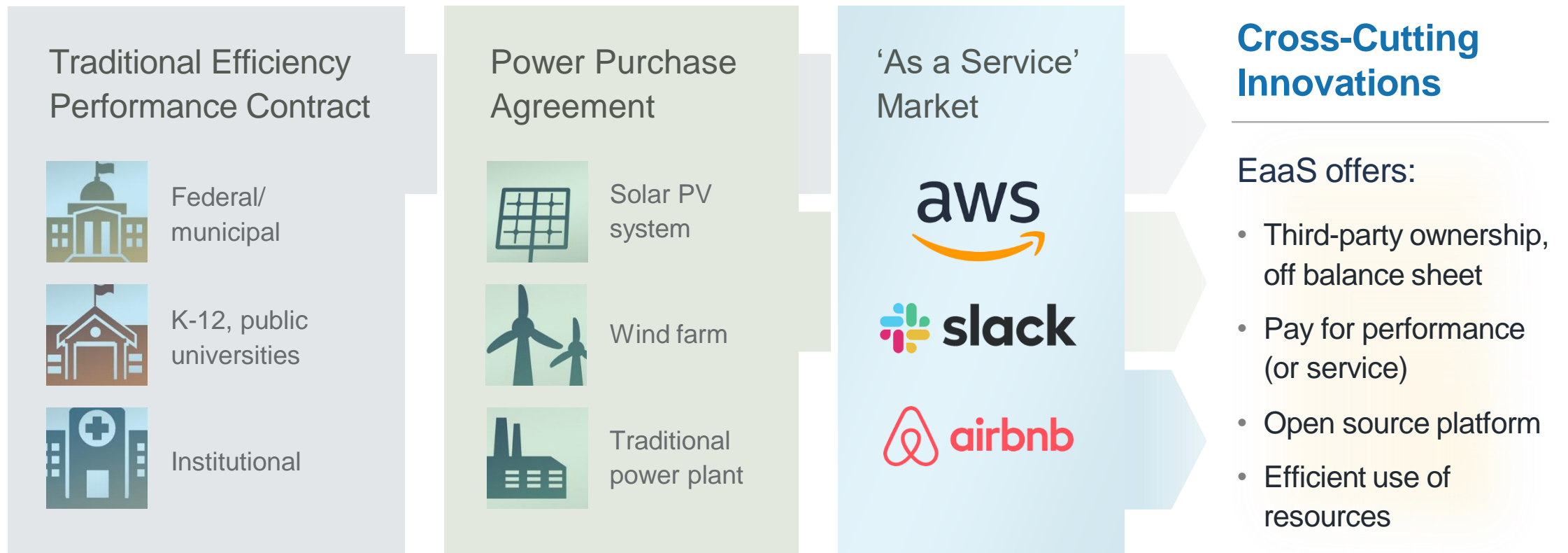
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# Overview

- Metrus develops, finances, owns, and operates large-scale efficiency projects. Customers include colleges, hospitals, Fortune 500 companies, and Public Sector.
- Metrus sells efficiency as a service (EaaS) through our Efficiency Services Agreement (ESA).
- Metrus has operational energy and water efficiency projects in 26 different states, resulting in savings of over 1.5 billion kWh.



# The Evolution of Efficiency as a Service (EaaS)



# 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.



## Efficiency Services Performance Contract (ESPC)

ESCO (contractor) designs project, installs efficiency equipment, and provides long-term maintenance and monitoring services.

# Key Customer Benefits

## FINANCIAL

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- No capital outlay
- **Optimized procurement process**
- Preservation of debt capacity
- **Immediate positive cash flow from energy and water savings**
- **Customers only pay for realized savings**
- Incorporate all available utility incentives

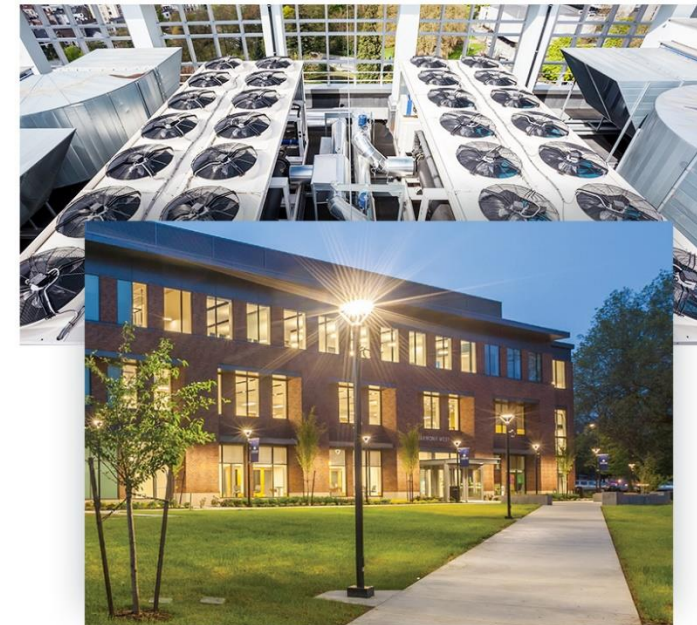
## OPERATIONAL

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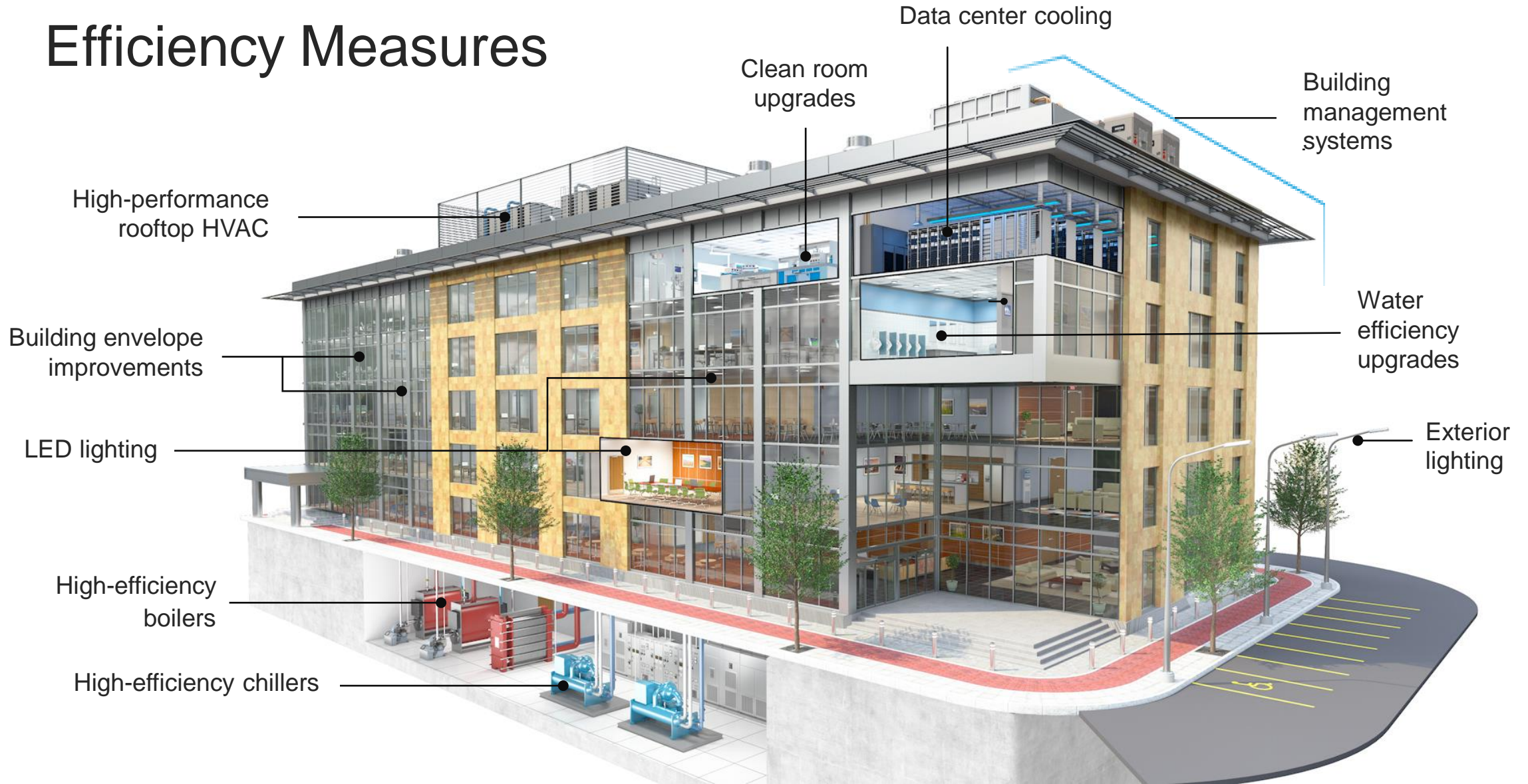
- Turnkey approach with ongoing project management
- **Key equipment upgrades that increase resiliency and reliability**
- Improved efficiency of building operations and systems
- **Ongoing maintenance and monitoring**
- Flexibility to add new upgrades

# Typical Project Profile

- Integrated energy and water efficiency retrofits
- Project **size** is generally **\$1 million to \$50 million**
- Upgrades from **different facilities are bundled** into a single project
- Typical weighted average payback period is 7 to 10 years
- **ESA project term is generally 7 to 15 years (20-year term is possible)**



# Efficiency Measures





# Project Lifecycle



## Develop

- Identify efficiency upgrades
- Design project scope
- Structure financing solution
- Ensure competitive pricing on project implementation and equipment



## Finance

- Fund 100% of project costs
- Pay contractor for construction
- Own project assets
- Monetize available incentives



## Operate

- Measure performance and savings
- Cover ongoing maintenance costs
- Identify new savings opportunities



## Reap benefits

- Save energy and lower utility bills
- Increase reliability and resiliency
- Enhance building occupant comfort
- Hit sustainability targets

# Things to Consider

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- How long are you planning to be in a facility?
- What is the credit of the contractor/ESCO? – value of performance guarantee
- Do you need to go to RFP for both finance and construction or just one or the other?
- What utility escalation rate is appropriate? If any?
- Avoid only doing low hanging fruit – faster payback items can pay for longer payback items.
- If you require off-balance sheet accounting treatment, involve your auditor early in the process.

# What can State Government do to help?

## Procurement/Finance

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- Many States have pre-approved vendors for energy services – considering adding financing
- Construct a pre-vetted ESA financial contract
- List ESA providers on State agency websites
- Establish grant for initial audits

## Policy

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- Establish energy efficiency goals for local government, school districts and businesses
- Consider a monetary benefit similar to some renewable energy programs – instead of energy generated, credit energy saved

## CASE STUDY

### Wells College

- High-performance LED fixtures
- Building envelope improvements
- Building automation systems (BAS) upgrades
- Steam trap repair and replacement

Total investment:

**\$2.2**

Million

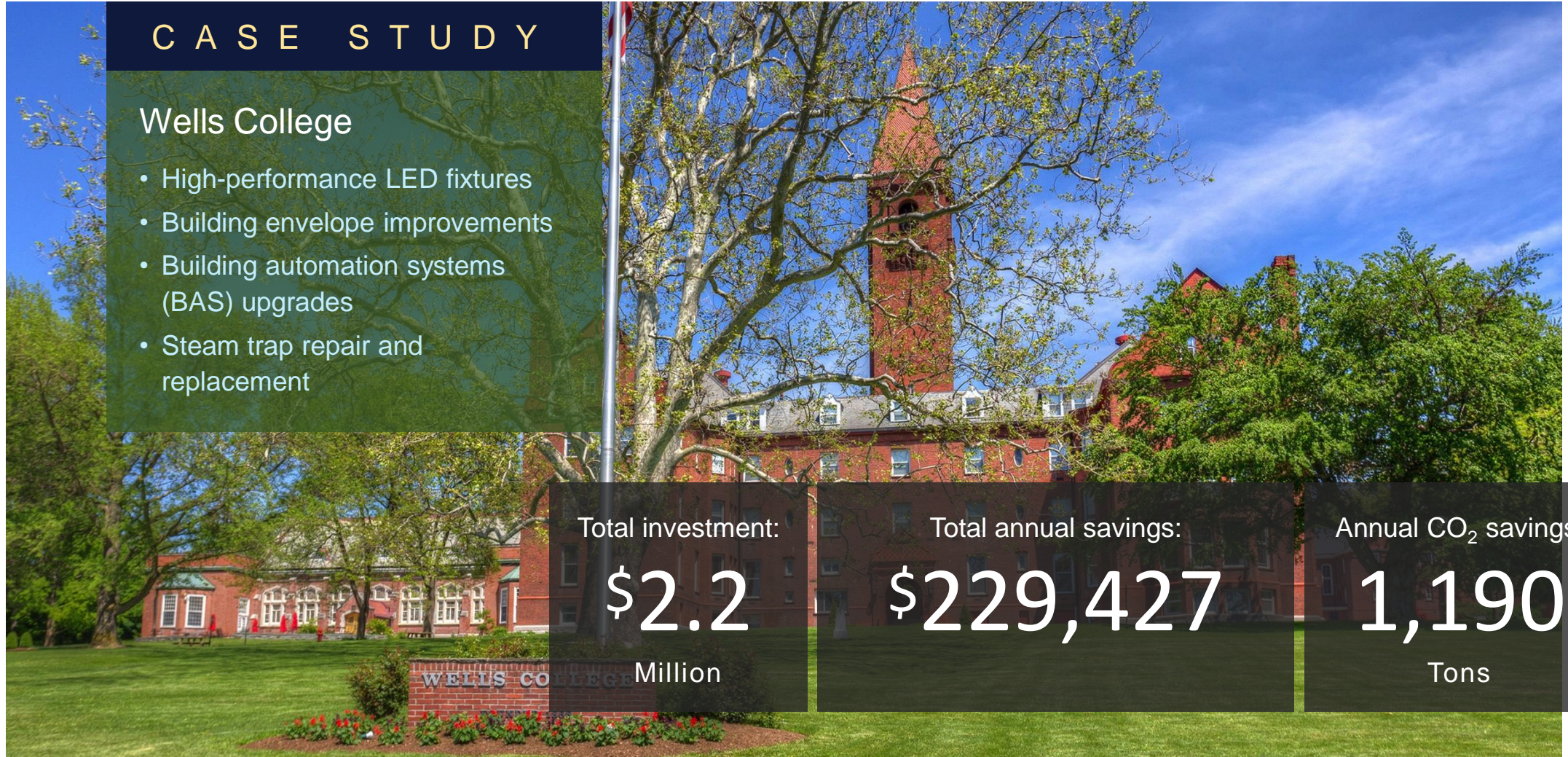
Total annual savings:

**\$229,427**

Annual CO<sub>2</sub> savings:

**1,190**

Tons



## CASE STUDY

### Fortune 100 Technology

56 SITES • 23 STATES

- LED lighting upgrades
- Building management systems

Total investment:

**\$74.3**

Million

Total annual savings:

**\$16.9**

Million

Annual CO<sub>2</sub> savings:

**138,530**

Tons

## CASE STUDY

### 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 CO<sub>2</sub> savings:

**15,000**

Tons



## CASE STUDY

### 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 CO<sub>2</sub> savings:

**1,320**

Tons

# Contact

## Metrus Energy

5 Third Street, Suite 822  
San Francisco, CA 94103  
Tel: 415-284-5000

<http://www.metrusenergy.com>  
[sales@metrusenergy.com](mailto:sales@metrusenergy.com)

Anastasia Beckett

Senior Vice President, Business  
Development

[Beckett@metrusenergy.com](mailto:Beckett@metrusenergy.com)



# ***Headquarters U.S. Air Force***

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*Integrity - Service - Excellence*

## **Energy-as-a-Service**



**Shawn Bennett**

4 Oct 2019

**U.S. AIR FORCE**

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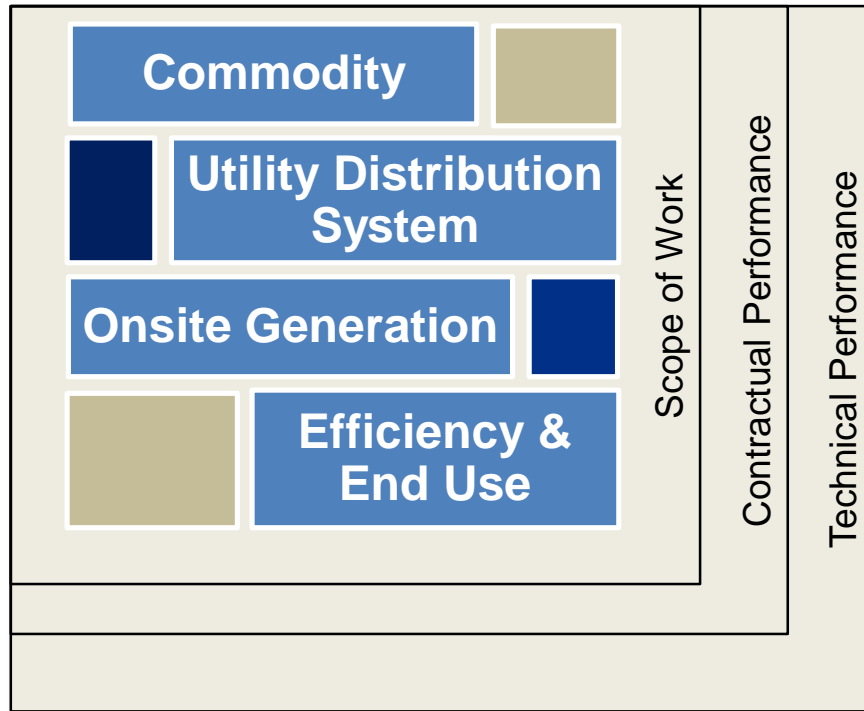
**A long-term arrangement with a single industry provider to comprehensively and cost-effectively deliver reliable, resilient and efficient energy to mission owners at an Air Force installation**

- Deliver holistic view of energy assurance & eliminate silos
- Leverage resources from industry

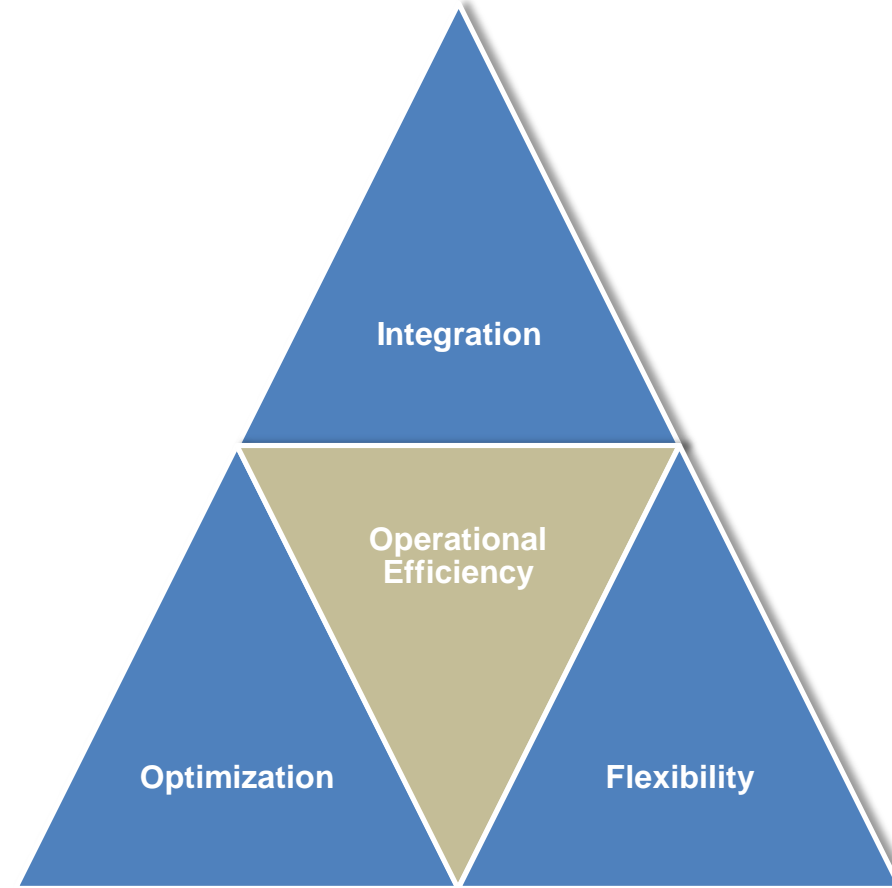
**Vision: Ensure the Air Force has the power when, where and how it's needed so Airmen can focus on the mission**



# EaaS Structuring



**Contractual Framework for Services Sought**



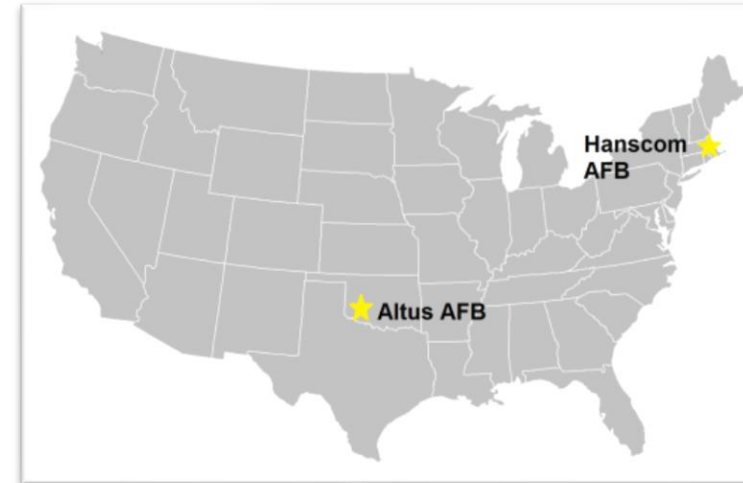
**EaaS Objectives**



# Procurement Pathway

Combined contract for:

- 1. Utility services
- 2. Energy savings



|                     | Altus AFB                                       | Hanscom AFB                                   |
|---------------------|---|---|
| Procurement Process | Sole source with local electric utility         | Competitive solicitation                      |
| Partners            | National Rural Electric Cooperative Association | Massachusetts Clean Energy Center             |
| Status              | RFP issued Oct 2018                             | RFI issued and industry day held Apr-May 2019 |



# Energy as a Service