

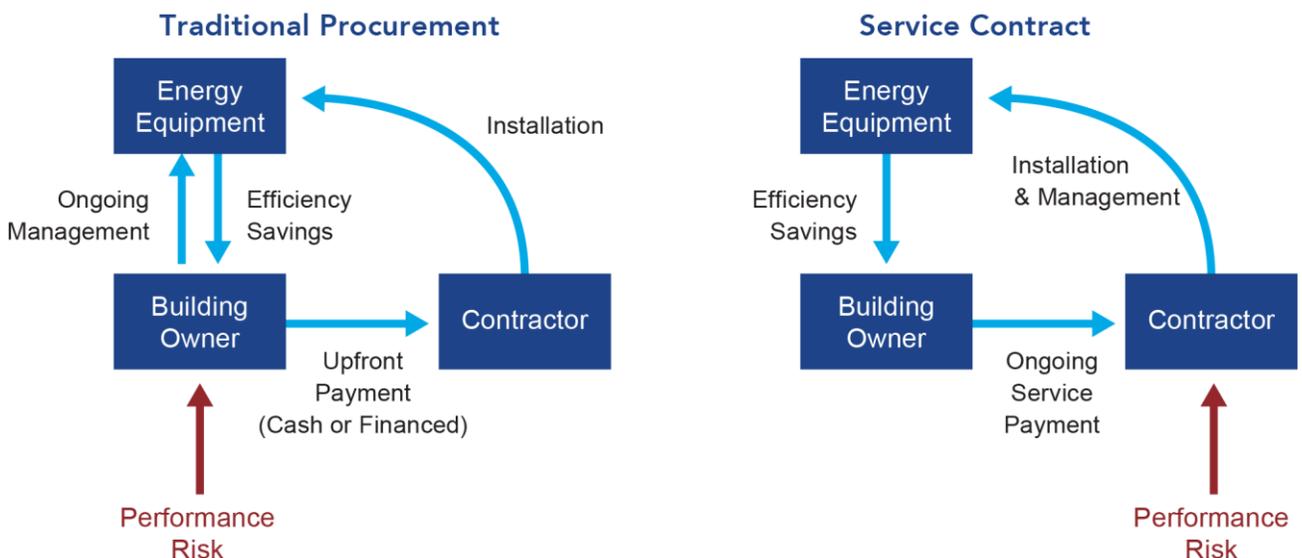
## Understanding the differences between Efficiency-as-a-Service and Energy Savings Performance Contracts

Many public and private organizations are turning to energy services contracts to help with implementation of efficiency retrofits in their buildings. Two popular options are Energy Savings Performance Contracts (ESPCs) and Efficiency-as-a-Service (EaaS). While both service models accomplish the goal of delivering energy efficiency upgrades at scale, they have key differences that building owners should understand before determining which is the best fit. This fact sheet explains and explores the similarities and differences of these two models.

### Background

Energy efficiency can reduce operating costs, cut greenhouse gas emissions, address deferred maintenance, and improve the resiliency of buildings. However, upfront costs can be a barrier to getting efficiency projects done, and some building owners prefer not to take on the management complexity and performance risk associated with implementing energy efficiency in their properties. Many organizations therefore outsource the management of these projects using specialized service contracts. Under these arrangements, a service provider takes responsibility for installation, maintenance, and performance of energy efficiency measures and is frequently paid out of the resulting savings. Service contracts can take many forms, but they typically share the attributes described in Figure 1.

Figure 1: Service contracts shift performance risk and project management to a third party



Both ESPCs and EaaS are variations on this service contract approach. Under both models, service providers commit to ensuring that installed equipment generates efficiency savings, assuming some of the equipment’s performance risk. However, they have several key differences—including how they are contractually structured to deliver these savings—which are explored further below.

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## How does an ESPC work?

Under an ESPC, an energy service company (ESCO) installs equipment following a pre-defined scope of work and typically guarantees that the project will achieve an agreed savings threshold, called a "[Performance Guarantee](#)." The customer can pay for upfront installation costs with on-hand cash or third-party financing. As such, the customer owns the equipment during the entirety of the contract. If the measured savings of the equipment fall below the guaranteed threshold, the ESCO will pay the customer for the under-performance to satisfy their Performance Guarantee.

ESPCs have existed in some form since the 1980s and have been widely used in government and municipal, university, school, and hospital (MUSH) markets. More recently, ESPCs have seen increased adoption and [standardization](#) in the broader commercial building sector. According to [NAESCO](#), ESCOs have completed \$50B in projects since 1990. You can learn about ESPCs in the Better Buildings Financing Navigator [ESPC fact sheet](#).

## How does Efficiency-as-a-Service work?

Under an EaaS agreement, the building owner contracts with a service provider to directly purchase energy savings. The source of savings is agreed upon upfront (e.g. lighting improvements) and the service provider works with their customer to design an optimal upgrade. The service provider then funds 100% of the upfront project cost and procures this equipment, installing it at their own expense. The service provider continues to own and operate the equipment during the contract term. The customer pays the service provider on a pay-for-performance basis, based on the measured and verified energy savings at a contracted rate, such as a fixed price per kilowatt hour (kWh) or the going utility price per kWh. At the end of the contract term, the customer can elect to purchase the equipment at fair market value, extend the contract, or (less commonly) return the equipment. Energy services agreements (ESA) are a common type of EaaS but other structures are in use as well.

Efficiency-as-a-service is a relatively new but proven structure that has been available since 2009. It is part of a broader trend toward "energy-as-a-service" products, which some forecasters predict could become a global market of over \$200 billion annually by 2026 ([Navigant](#)). To date, EaaS has been most widely adopted in the commercial sector, but the model is making some inroads in the MUSH sector. You can learn more about EaaS in the Better Buildings Financing Navigator [EaaS fact sheet](#).

## How does EaaS differ from ESPCs?

Key differences between the models are discussed below and summarized in Figure 2.

- ▶ **Project Scope:** ESPCs tend to be well suited to large projects in groups of buildings or campuses that can effectively support multiple types of efficiency measures under a single contract. While EaaS can also support large, multi-site, multi-measure projects, including portfolio-wide initiatives, it can be applied to smaller, targeted projects in individual buildings.
- ▶ **Ownership:** EaaS is a third-party financing and ownership model in which the service provider purchases and installs its equipment—which it then owns—meaning there is no asset or liability added to the building owner's balance sheet. This makes the service payment similar to any other operating expenditure, such as a subscription payment. Under an ESPC, the building owner owns the energy equipment. The building owner can (optionally) finance the installation through a separate third-party financier, typically using a loan or capital lease structure. This means that the equipment will usually appear as an asset on the owner's balance sheet while any financing appears as a liability.
- ▶ **Measuring Savings:** [Measurement and Verification](#) (M&V) is integral to the contract structure of most ESPCs, as it defines when the Performance Guarantee is triggered. Determining the level and frequency of M&V can significantly affect the costs of structuring an ESPC. EaaS contracts also rely on intensive M&V in their efficiency upgrades. EaaS providers typically bill for energy savings using the results of annual M&V reports. This results in a variable customer payment, along with ensuring that customers only pay for realized savings. Some simpler EaaS models forgo active M&V by replacing variable

payments with fixed payments equal to the “deemed savings” of the installation, though some organizations feel this may affect the off-balance sheet accounting treatment of the project.

- ▶ **Payment Structure and Guarantee.** A key difference between these models is that EaaS is a pay-for-performance structure whereby customers directly purchase realized, measured energy savings. EaaS arrangements frequently define service payments using a fixed rate, such as dollars per kilowatt-hour saved, akin to the rate used in a power purchase agreement for renewable energy. Under an ESPC, a customer makes recurring payments to the ESCO to pay for any contracted services such as M&V, maintenance, and repair. Should the realized savings fall below the Performance Guarantee, the ESCO will pay the customer for any savings under the guarantee threshold. If the installation is financed, the customer will make fixed financing payments to the lender as well, regardless of the savings performance.
- ▶ **Adoption and Standardization:** ESPCs have received widespread governmental support and standardization, including [guidance](#) from the Federal Energy Management Program (FEMP) on how to solicit ESPC bids for government contracts. EaaS is a newer, less-standardized structure, with ongoing innovation in available approaches. It has seen greatest traction in the private commercial building market.

Figure 2: Comparing ESPCs and EaaS

Category	ESPC	EaaS
Ownership	<b>Customer owns</b> the equipment and can choose to pay for the installation with cash or financing.	<b>Service provider owns</b> any installed technology or equipment and pays for 100% of any installation costs.
Accounting Implications	Typically <b>on-balance sheet</b> . The building owner can expense equipment depreciation and any cost of financing.	Typically <b>off-balance sheet</b> . The building owner can expense 100% of service payments to the provider.
Contract Complexity	<b>High</b> . Creating an ESPC can involve extensive contract negotiation to tailor the Performance Guarantee and define how savings will be measured. Time to project close may be a year or more.	<b>Medium-High</b> . EaaS contracts can be simpler and faster to negotiate, though more complex than traditional financing such as loans or leases. Time to project close is typically <9 months.
Project Size and Contract Length	Typically used for <b>larger projects</b> (>\$1 million) with <b>longer contract terms</b> (10-20 years).	Can be used for <b>both</b> for large projects (>\$1 million) and smaller projects (as low as \$25,000) and can support <b>shorter terms</b> (5-20 years).
Common Sectors	Most common in municipal, university, school, and hospital (MUSH) markets. Growing in private commercial market.	Most common in private commercial, higher education and healthcare markets. Growing in MUSH and other markets.
Standardization	Highly standardized, with long operating history and federal procurement adoption.	Less standardized, with a wider variety of approaches and service providers available.

You can find more detailed information about EaaS and ESPCs—and connect directly with Better Buildings Financial Allies who provide them—on the [Financing Navigator](#).

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