

EaaS vs. ESCO: Who Carries the Risk?

Highlights

ESCO vs. EaaS: The short version

The line between EaaS and ESCO is blurring. Here's what still matters.

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Is EaaS the right fit for your portfolio?



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Summary: An energy service company (ESCO) delivers energy efficiency projects under a performance contract, typically guaranteeing a baseline level of savings. An energy-as-a-service (EaaS) provider delivers energy infrastructure as an ongoing service, funding, installing, owning, and maintaining equipment, with the provider bearing performance and operational risk over a multi-year term. The categories overlap in practice, but the real differences sit in contract structure, risk transfer, and how savings are verified.

ESCOs, EaaS providers, lenders, and contractors all promise similar outcomes: reduced energy costs, upgraded equipment, and a lower carbon footprint. But they provide the outcomes through very different contract structures.

With an ESCO, you're buying a savings guarantee.

With EaaS, you're buying an ongoing service relationship.

The distinction is more than semantic. The type of contract determines who carries the risk if things don't go as planned.

ESCO vs. EaaS: The short version

[The U.S. Department of Energy](#) identifies contract structure, risk allocation, and savings verification as the three dimensions where ESCO and EaaS models diverge most meaningfully. Here's how that plays out in practice.

Energy service company (ESCO)
<i>What you're buying:</i> A savings guarantee against a measured baseline.
Contract structure: Energy savings performance contract (ESPC), fixed scope, typically 15–40 years
Capital: Customer- or ESCO-financed, typically on-balance-sheet
Risk allocation: Performance risk borne by customer when operations change (baseline exclusions apply)
Savings verification: Whole-bill measurement against a negotiated baseline; exclusions can reduce verified savings
Incentive collection: Typically borne by customer
Vendor relationships: Often tied to specific contractors, suppliers, or proprietary equipment
Best fit: Public sector and institutional organizations with access to tax-exempt financing, single-site upgrades

Energy-as-a-service (EaaS)
<i>What you're buying:</i> A continuous service relationship.
Contract structure: Multi-year service agreement, expandable scope, typically 5–20 years
Capital: Provider-financed, typically structured as an operating expense rather than a capital lease
Risk allocation: Performance risk borne by provider; provider owns and maintains equipment throughout term
Savings verification: Asset-level metering tied to measured output, often per-kWh-saved; provider certifies performance
Incentive collection: Borne by provider
Vendor relationships: Typically agnostic to technology and vendor; solutions selected based on site requirements
Best fit: Multi-site C&I, manufacturing, and commercial portfolios

The line between EaaS and ESCO is blurring. Here's what still matters.

According to [Verdantix's Future of the Energy Services Landscape \(April 2025\)](#), providers across ESCO, equipment, facilities management, and EaaS backgrounds are all expanding into each other's service lines. EaaS is best understood as the next evolution of the ESCO model, distinguished by risk transfer to the provider and the ability to scale across an organization's building portfolio. For finance leaders, that means three factors matter more than the label: who finances the equipment, how performance is measured and by whom, and who absorbs incentive and baseline risk.

What to ask before signing an EaaS or ESCO contract

Who finances the equipment, and what does that mean for how it appears in your books?

With a traditional ESCO, the customer typically owns or finances the equipment. The project is treated as a capital investment on the balance sheet, even when the ESCO provides project financing through a third-party lender. Because the customer holds title, the customer also bears the long-term operational and performance risk of the equipment. This structure works best for organizations that can issue tax-exempt bonds, typically municipalities, public schools, universities, and large healthcare non-profits.

With an EaaS arrangement, the provider finances and owns the equipment throughout the contract term. The customer pays a service fee tied to measured output, which is typically structured as an operating expense rather than a capital lease. The provider retains ownership and, as a result, it bears the operational, maintenance, and performance risks of the equipment for the duration of the contract.

How is performance measured, and who certifies it?

Measurement methodology is where reported and actual savings most often diverge. The two models take different approaches.

ESCO contracts typically use whole-bill measurements against a negotiated baseline. Savings are calculated as the difference between projected utility costs (based on the pre-installation baseline) and actual utility costs after the project is implemented. This approach is straightforward, but it's sensitive to baseline adjustments. When occupancy, operations, or equipment changes occur, the baseline can be reset, which directly affects reported savings.

EaaS contracts use asset-level metering. Each piece of equipment is measured individually, often with sub-meters that track real-time output. Savings are calculated on a per-kWh-saved basis, independent of broader changes in the facility's overall energy use. This approach requires more upfront measurement infrastructure but is less exposed to baseline disputes.

Who absorbs incentive and baseline risk?

Utility incentive programs carry defined budgets. Once the funds are exhausted, they're gone, and many programs close without notice. With an ESCO, if the incentive program runs out of budget, the customer pays the full project cost without the expected incentive offset. Baseline risk is separate but related: ESCO savings guarantees can be eroded by adjustments when occupancy shifts, new equipment is added, or operations change.

Under an EaaS contract, both risks generally shift to the provider. The provider assumes incentive-collection risk across its portfolio and credits the project with the incentive value upfront, regardless of whether the utility ultimately pays. The provider also bears performance risk for the duration of the contract, without the baseline exclusions common in ESCO agreements.

Other frequently asked questions about EaaS vs. ESCO

Is energy-as-a-service off-balance-sheet?

It can be, depending on how the contract is structured. EaaS agreements structured as service contracts, where the provider owns the equipment and the customer pays for measured output, typically qualify for operating expense (off-balance-sheet) treatment.

Who pays for utility incentives in an EaaS contract?

It depends on the provider. Redaptive carries incentive-collection risk and credits the project upfront regardless of whether the utility ultimately pays. Most ESCO arrangements and other EaaS providers push that risk to the customer, which can reduce projected savings.

How do ESCO, EaaS, and traditional equipment leasing compare?

For organizations weighing all three options, the structural differences are clearest side by side.

	ESCO	EaaS	Traditional equipment leasing
Customer type/project scope	Single site or large campus. Government, academic, healthcare	Multiple sites and locations. Corporate, academic, healthcare	Any organization
Performance risk	ESCO takes on risk	EaaS provider takes on risk	Organization owns all risk
Measurement	Campus-based measurement across multiple inputs (HVAC, lighting); verified against utility bill	Single asset measurement, one input at a time; verified through meters	Measurement through utility bill; organization contracts with meter or platform provider
Equipment ownership	Building owner owns equipment	Provider owns equipment, removing it from the owner's balance sheet	Building owner owns equipment
Approach	Product and technology-based; standardized	Vendor-agnostic; variable and customized to site requirements	Organization determines which projects to fund and implement, then contracts vendors to install
Accounting implications	On balance sheet	Off-balance-sheet potential	On balance sheet

What happens to the equipment at the end of an EaaS contract?

In a typical EaaS arrangement, the provider owns the equipment throughout the contract term. At the end of the term, options generally include transferring ownership to the customer, refreshing the equipment under a new agreement, or extending the existing contract. The specific terms vary by provider and should be negotiated up front. End-of-term provisions are one of the contract details worth scrutinizing before signing.

Can EaaS work for organizations that lease rather than own their facilities?

Yes. This is one area where EaaS has a structural advantage over traditional ESCO contracts. Because the provider owns the equipment and the customer pays for measured output rather than purchasing assets outright, EaaS can be structured to work in leased spaces where the building owner and the energy buyer are different parties. Contracts can also be tailored so that payback occurs within the lease term, making the model viable for tenants without long-term ownership of the facility. ESCOs typically require direct access to energy usage data and a long-term facility commitment that leased arrangements often can't support.

Is EaaS the right fit for your portfolio?

Not every energy infrastructure model fits every organization. But if you manage multiple sites, want to keep energy assets off the balance sheet, and need a provider that absorbs incentive and performance risk (rather than passing it back through contract exclusions), EaaS may be worth a closer look.

Redaptive pioneered the EaaS model and has worked with multi-site industrial, healthcare, and commercial real estate organizations to fund, design, and deliver critical facility infrastructure at scale.

Ready to see how our model applies to your portfolio?

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