

Trusted Energy
Interoperability Alliance

EXECUTIVE BRIEF

OEM guide: breaking free from proprietary lock-in

Reach more markets with a single implementation.



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Founders



intertrust®



Qualification that does not scale prevents growth

Device manufacturers do not have a security problem. They have a scaling problem, and it surfaces every time they enter a new market.

Your devices pass security assessments. Your engineers know the implementation. Your customers are not reporting security failures. From an engineering perspective, rebuilding a proven stack rarely makes sense. The challenge isn't technical: it's commercial. As OEMs expand into new utilities, new markets, or new aggregator partnerships, the same pattern repeats.

One utility requires alignment with its identity and certificate infrastructure. Another requires compatibility with an aggregator's trust framework. A third requests additional security validation before it approves deployment. The market rewards manufacturers who clear that hurdle quickly.

The US Department of Energy estimates that deploying 80 to 160 gigawatts of virtual power plant capacity by 2030 could serve 10 to 20 percent of US peak demand and cut grid costs by about \$10 billion a year¹.

That capacity is derived from devices like yours, one qualification at a time. The bottleneck is well documented. Because each utility-to-aggregator interface is unique, integration today demands custom software and takes months or years to complete, according to the Electric Power Research Institute². Every one of those cycles is time your product spends waiting outside a market rather than earning in it.

Device differentiation
earns the shortlist.
Meeting security
requirements determines
how long it takes to close.



One implementation. More markets.

The Trusted Energy Interoperability Alliance (TEIA) defines a common trust model that gives every device a verifiable identity, cryptographically authenticated communications, and an immutable audit trail.

It works alongside the protocols already in your products, so manufacturers build on what they have rather than redesign it. Instead of negotiating a different security model for every deployment, you present one openly specified trust framework that utilities and partners can evaluate consistently. Procurement shifts from interpreting a proprietary implementation to confirming conformance with a published specification, and that is a faster conversation on both sides.

TEIA provides a common trust model that gives every device a verifiable identity, cryptographically authenticated communications, and an immutable audit trail. It works alongside standards such as OCPP, OpenADR, IEEE 2030.5, and Matter, allowing manufacturers to build on existing products rather than redesign them.

Because the specification is open, the same implementation carries across multi-vendor deployments and works alongside existing protocols.

The blocker is rarely the device or the protocol. It is whether the architecture underneath can carry the fleet you are about to enroll.

Standard	What TEIA adds
OCPP	Verifiable charger identity and authenticated session records.
OpenADR	Signed flexibility signals with an auditable trail of dispatch.
IEEE 2030.5	Consistent certificate handling across utility territories.
Matter	A shared trust model where home devices meet grid programs.

What OEMs gain, and how adoption starts

Open-architecture figures model platform cost as a per-asset operating rate that declines as automation absorbs growth.

More markets are reachable, with fewer security negotiations, saving engineering time that can go back to developing the product. An open, interoperable trust model reduces that friction, making it easier to participate in multi-vendor deployments and enter new markets.

Utilities and aggregators get a security model they can assess against a published specification rather than a vendor document. Your engineering team stops maintaining trust infrastructure that customers increasingly expect to be interoperable and spends that time on efficiency, reliability, and cost.

Your commercial team walks into procurement with a framework the buyer already recognizes. Virtual power plants, demand response programs, and grid flexibility services all depend on secure interoperability between devices from many manufacturers.

An open trust model is what makes participation in those programs practical as they grow.

Expand market access.

One conformant implementation qualifies across multi-vendor deployments and new territories.

Reduce procurement friction. Buyers evaluate conformance to an open specification instead of a bespoke design.

Focus engineering on differentiation. Hardware performance stays the priority, not trust infrastructure maintenance.

Meet evolving requirements.

A shared framework absorbs regulatory change once, rather than product by product.

Joining TEIA gives OEMs immediate access to specifications, reference implementations, and technical guidance. The objective is not to replace existing investments. It is to extend it.

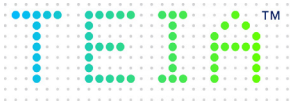
Your devices already compete on performance. TEIA helps them compete on how easily they can be bought.

Sources

- [1] US Department of Energy, *Pathways to Commercial Liftoff: Virtual Power Plants*.
- [2] Utility Dive, *EPRI, Kraken advance DER interoperability standards to boost virtual power plant deployment*, November 27, 2024.

Build products that are easier to buy.

[Request a technical briefing and see how TEIA fits the products you already ship.](#)



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Interoperability Alliance

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