



Trusted Energy Interoperability Alliance (TEIA)

Security and interoperability data standards
for a sustainable energy future

The Trusted Energy Interoperability Alliance (TEIA) establishes the first open global security standard spearheaded by leading industry operators—encompassing power generation, transmission, distribution, and energy services.



TEIA's global security standard offers the entire energy ecosystem a security and trust model for building a new, interoperable energy system.

TEIA pioneers a robust security and trust model essential for crafting an interoperable, sustainable energy system purpose-built for the era of IoT & AI.

Formed at the end of 2023, TEIA members represent some of the largest energy companies in Germany, Japan, Australia and Korea.

Macrotrends driving the energy industry

Energy dynamics

- **Energy demand**
Projected to triple by 2050
- **Decarbonization**
A pivotal shift toward renewable energy sources to combat climate change
- **Volatility**
Supply, demand and energy prices become less predictable

Technological innovations

- **Emerging AI technologies**
Enhancing decarbonization efforts and operational efficiency through artificial intelligence
- **IT and OT convergence**
Integrating information technology (IT) and operational technology (OT) to fortify digital trust

The imperative for new standards

The energy sector is becoming increasingly digital—with a sharp rise of IoT devices, digital services, and AI—leading to an acute interoperability crisis:

- **Growing security risks**
An expanding digital attack surface
- **Standardization gaps**
A pressing need for uniform security protocols across diverse technologies and value chains
- **Lack of coordination**
Greater collaboration is required to increase share of renewables and reduce system stress

TEIA aims to create data security standards and agreed-upon formats and protocols for secure and interoperable data communications within the energy system.

Advantages of joining TEIA

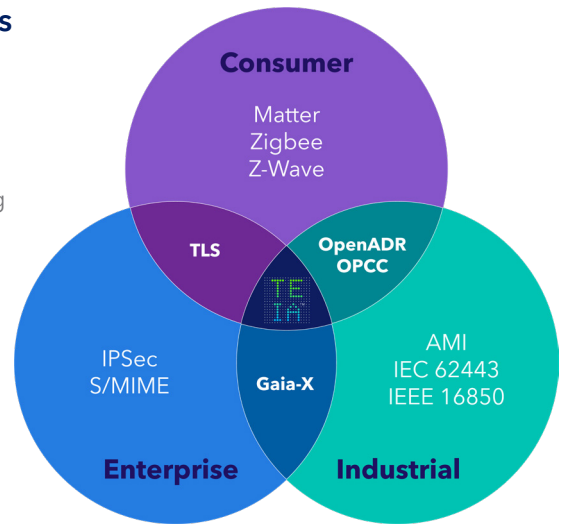
TEIA specifications define an architecture to support secure collaboration around data and IoT devices for the energy value chain. This includes protocols, APIs, and security standards that are independent of underlying networking technologies and demonstrate zero-trust networking principles.

- **Data security enhancements**
 - Robust cybersecurity featuring a zero-trust architecture
 - Persistent data protection across platforms
 - Preparation for AI integration, reducing the lead time for AI deployment
 - Secured convergence of IT and OT systems

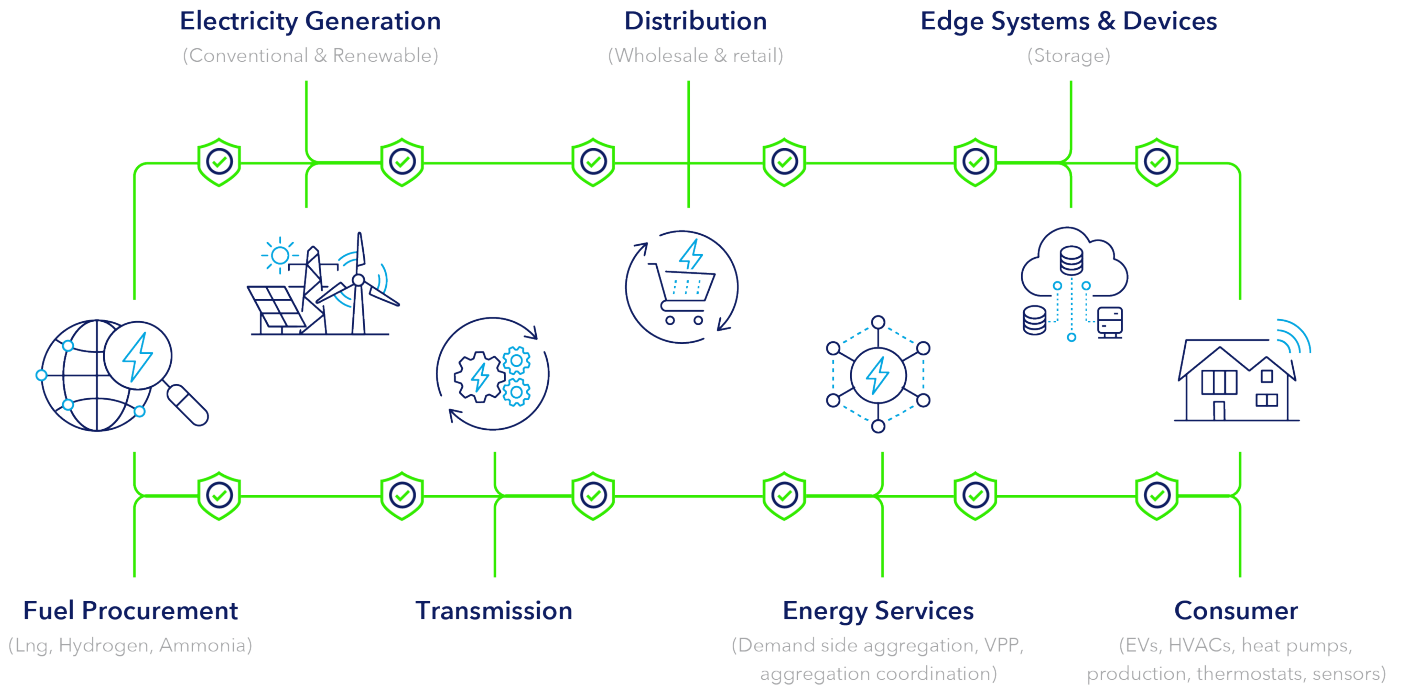
- **Economic and operational benefits**
 - Lower procurement costs through standardized technology specifications
 - Mitigation of vendor lock-in, providing greater access to data and system controls
- **Innovation**
 - Fostering innovation through peer-to-peer learning and collaborative development at quarterly meetings, TEIA events, task forces and more

TEIA and other standards

TEIA's Universal Trust Model embeds security within the application layer, promoting reliable communication and seamless integration of emerging technologies across generation, transmission, distribution, and consumer networks.



Founders and members



TEIA's standards of trust and security will bind the energy ecosystem together for greater security, efficiency, lower costs, and accelerated decarbonization.



Trusted Energy
Interoperability Alliance

Learn more at: trusted-energy.org