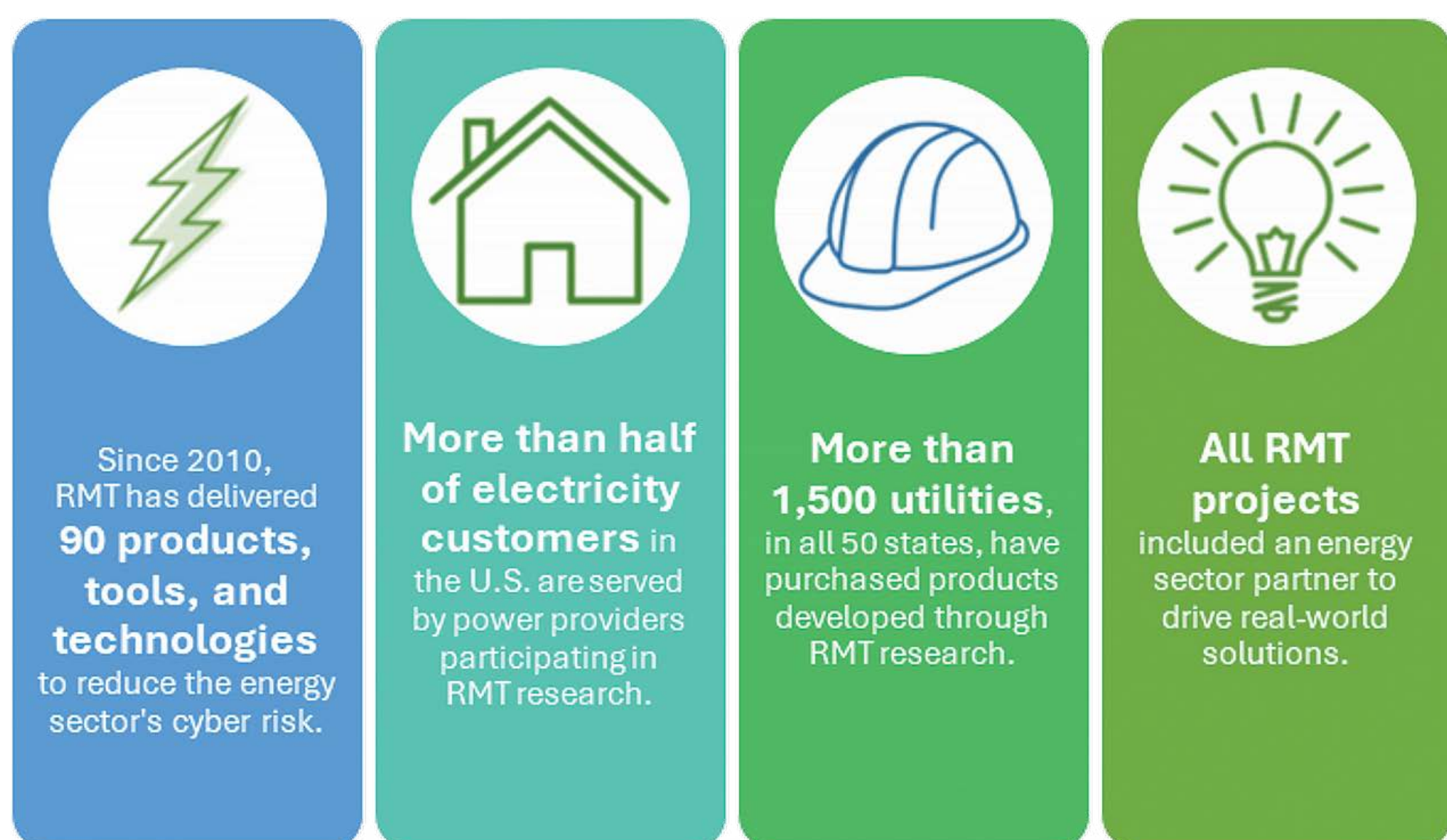


Energy Delivery and Security Directorate Research, Development and Demonstration Portfolio

EDSD RD&D project management is impactful and beneficial as it ensures compliance, transparency and alignment to Office of Electricity (OE) and the Office of Cybersecurity, Energy Security and Emergency Response (CESER) objectives leading to innovation and transformational energy sector advancement.



Transition to practice.

The CESER mission is to strengthen the security and resilience of the U.S. energy sector from cyber, physical and climate-based risks and disruptions.

- Through the CESER Risk Management Tools and Technologies (RMT) program, NETL has partnered with industry, electric utilities, academia, and national laboratories for more than a decade to deliver 90 products, tools and technologies to help reduce the risk that a cyberattack might disrupt our nation's critical energy delivery infrastructure.
- NETL manages a diverse portfolio of competitively funded R&D projects in support of CESER mission.
- NETL tracks the successful transition to practice of tools and technologies as a key metric for success.



Transition to practice: flexible large power transformer.

The OE mission is to develop a resilient, reliable, secure and affordable electricity grid of the future.

- OE addresses essential areas in modernizing the power system.
- Example of an NETL-managed project accomplishment:
 - Designed and manufactured the world's first flexible large power transformer (LPT) prototype.
 - Energized the prototype –the world's first flexible power transformer in operation.
 - The LPT enhances grid resilience, load sharing and flexibility to adapt to changing grid conditions over a variety of substation installation parameters.