

Distributed Energy Resource Strategy Development

Helping Utilities Navigate an Evolving Technology Landscape

A photograph of a renewable energy landscape. In the foreground, rows of solar panels are visible, receding into the distance. In the background, several wind turbines stand on a grassy field under a bright, hazy sky. The overall tone is warm and optimistic.

IMPLEMENT

[INTEGRATE]

INNOVATE

TACKLE DER CHALLENGES, DEFINE A PATH FORWARD AND ENSURE COMPLETE INTEGRATION.

The falling cost and increasing spread of distributed energy resources (DER) such as renewable energy, storage systems and virtual resources creates opportunities for **utilities to rethink their approach** to traditional grid operations. But as utilities look to capitalize on the benefits of DERs, they also must understand the challenges, including:

- Added **complexities** to integration and control on the existing distribution network.
- Incorporating DERs into grid planning and managing them efficiently in real-time, while continuing to maintain a **safe, reliable and resilient** power system.
- Technological advances, regulatory pressures, changing consumer behaviors and **third-party vendors** all driving change.

Utilities must adapt and prepare with a comprehensive **DER integration strategy**. To do this successfully, it is important to partner with experts who only understand the utility industry and the evolving technologies that can solve the business challenges DERs present to the electric utility industry.

TRC can help

TRC's knowledge of the utility industry and technology and integration experience helps utilities bridge the gap between current capabilities and future goals through the development of a **strategic DER and integration framework**. Our process is designed to include a clear definition and assessment of associated business cases, evaluation of the technology landscape and procurement process, and management of implementation and integration of the selected DER solutions.



Solutions for implementing a DER technology strategy

Identify and solve DER integration challenges. Achieve utility business and operational goals.

TRC brings together comprehensive **DER domain expertise and veteran utility professionals** with extensive knowledge of the DER management systems technology landscape to deliver solutions for DER research, strategy development, vendor evaluations and selections, and implementation. We have a robust delivery methodology and a proven history of successful project execution.



DER Strategy, Roadmap and Business Case Development

TRC's approach to creating a DER framework, strategy and roadmap includes a rapid current state assessment (people, processes and technology) to set the baseline. This is followed by an evaluation of the **organization's future vision** and requirements, with a gap assessment providing clear action items and steps required to achieve these goals. Our team develops a business case that assesses the costs and potential benefits of the execution of specific use cases or a full rollout strategy.



Use Case Development

TRC's team of industry experts collaborate with our clients to define specific use cases through market analysis, case studies, **technical assessments** and compiling functional requirements from the client and third-party stakeholders. We bring together a cohesive view of each use case and identify value stacking opportunities related to the utility's current initiatives and overall goals.



Solution Requirements Gathering and Design

TRC facilitates workshops with client stakeholders, subject matter experts, and business and technical advisors to identify specific business, **functional and technical requirements**. We help facilitate decision making regarding functionality, usability and compatibility, and find the right combination of cost, high-priority requirements and vendor capabilities.

Requirements are used in process mapping, overall solution design and blueprinting, as well as subsequent vendor evaluations. We help to ensure that the **monitoring, control, communication and reporting** capabilities and technology vendors align with the utility's vision and roadmap. Ultimately, these requirements will become an integral part of the procurement process and ensure traceability through the implementation of the solution.



Technology Procurement

TRC works closely with various client stakeholders, including supply chain, to assist in all phases of the **procurement process**. This includes requirements gathering and documentation, the creation of the request for proposal, information or quote, vendor demonstrations, vendor evaluations, vendor selection assistance and contract negotiations.



Solution Integration Service

Once the vendor selection is complete, TRC provides system integration services, including planning and program set-up, **solution design and architecture**, infrastructure requirements and readiness, data readiness and migration, customizations, integration development, testing, training, business readiness, process documentation, reporting, deployment and cutover and post-production support.

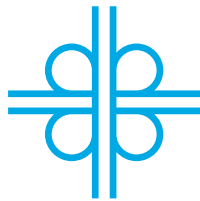
About TRC

Groundbreaker. Game changer. Innovator. TRC is a global firm providing environmentally focused and digitally powered solutions that address local needs. For more than 50 years, we have set the bar for clients who require consulting, construction, engineering and management services, combining science with the latest technology to devise solutions that stand the test of time.

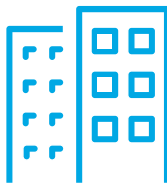
TRC's nearly 6,000 professionals serve a broad range of public and private clients, guiding complex projects from conception to completion to help solve the toughest challenges. We break through barriers for our clients and help them follow through for sustainable results.



Power &
Utilities



Transportation



Real Estate



Government



Water



Environment & Sustainability



Digital Solutions