



Electric Transportation and Infrastructure

Capabilities

Generation and transmission systems can and will likely need to handle millions of plug-in electric vehicles (EVs). However, a thorough understanding of technical issues on the distribution system is vital when considering how best to integrate EVs into the grid. Challenges include potential overloads of distribution transformers and circuits, changes in equipment cooling patterns, and inability to accommodate high-power charging in older neighborhoods with legacy distribution infrastructure.

Service Offering

Quanta has a holistic approach to transportation electrification that stretches from strategy to implementation. Quanta offers high-level strategy, regulatory, and policy recommendations as well as detailed engineering and economic analysis, and testing. Quanta also offers P-EPC via our parent company, Quanta Services.

Quanta can demonstrate how transportation electrification fits within the utility business and technology strategy as well as break down the technology, integration aspects, and regulatory and technical gaps. Additionally, Quanta has pursued and patented several cutting edge testing technologies such as the Battery Energy Storage System Tester Instrument (BESSTI™), a portable device specifically designed for testing of commercial energy storage systems.

Why Quanta Technology

Quanta's comprehensive approach and understanding of the "big picture" makes Quanta's offering distinct from other firms. Unlike management consultants, Quanta performs detailed model-based engineering analyses which enables our studies to be more practical and feel "more real." Unlike pure engineering firms, Quanta can offer detailed benefit-cost analyses. Also Quanta is capable of performing testing and implementation of EV devices.

Service Offering Summary

Advanced Solutions & EPC

Testing/calibration of charging infrastructure and metering equipment, control and integration into utility enterprise systems, implementation of advanced concepts (e.g., smart communities).

T&D Planning & Analysis

Modeling, analysis and planning of utility infrastructure for transportation electrification, and implementation of pilot/demonstration/pro of-of-concept projects

Foundational Services

Technology strategy, implementation roadmap, regulatory advice, T&D impact studies, benefit-cost analyses, and development and evaluation of business models



Key Projects

Business Cases

Chrysler and BMW: Electric Vehicles Evaluation and Business Models for Extended Services

Japanese Multi-National Electronics Firm: Assessment of Super-Fast EV Charging Market

Ericsson/InCode Consulting: Deployment of Fast Charging Platform to Utility Market

New York Power Authority: Review of Distributed Energy Technologies

Electric Transportation and EMS

Leap Frog: Residential Hybrid Energy Management System with EV and PVs

Roadmapping and Strategy

Southern California Edison (SCE): Tech Program Development in System Protection - High-DG

Southern California Edison (SCE): Electric Vehicle Impact Study

Zeem Solutions: Strategy Evaluation of Utilization of Zeem Short-Haul Truck Fleet

Alternative Transportation

Hawaiian Electric Company (HECO): Honolulu Rail Transit System (HRTS) Voltage Flicker Study

Standards development

National Institute of Standards and Technology (NIST): Development of standards for electric transportation charging infrastructure

Testing

San Diego Gas & Electric (SDG&E): Building EVMT and Field Load Bank

San Diego Gas & Electric (SDG&E): Integrated Test Facility (1 Phase)

San Diego Gas & Electric (SDG&E): VGI Vendor Sub-Metering Validation Testing

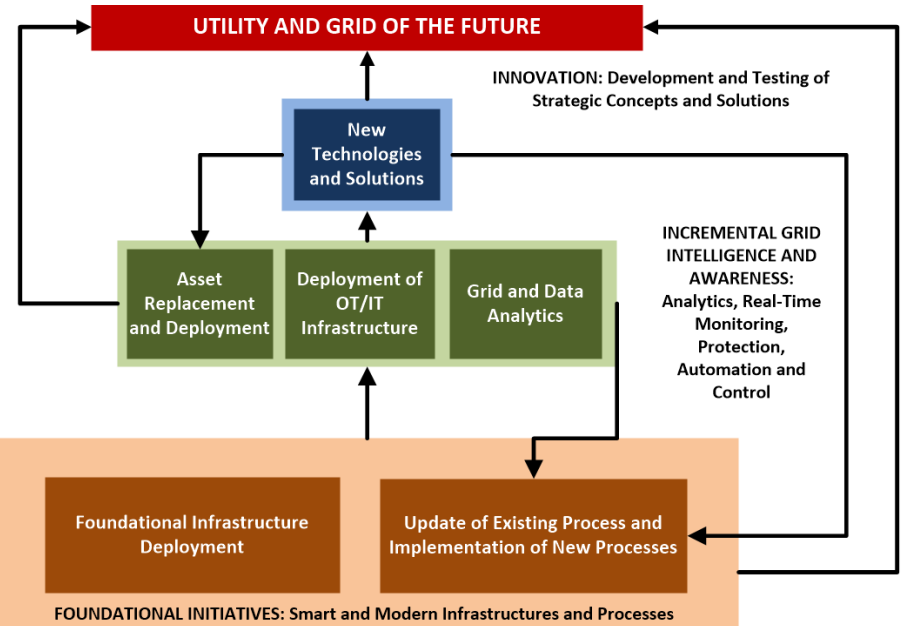
Pacific Gas & Electric: Assessment of Level II Charging Metering Collection Methods

Project Management

New York Independent System Operator (NYISO): Synchrophasor Integration (Control Center capability expansion)

About Quanta Technology

Quanta Technology is an independent technology, consulting, and testing company providing business and technical expertise, along with advanced methodologies and processes, to utilities and others in the power and energy industries. Our mission is to provide unparalleled value to our clients in every engagement across the value chain by using advanced software and hardware, laboratories, and custom tools for a holistic approach to practical service and the most insightful thought leadership in the industry.



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Smart Solutions Practical Results

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