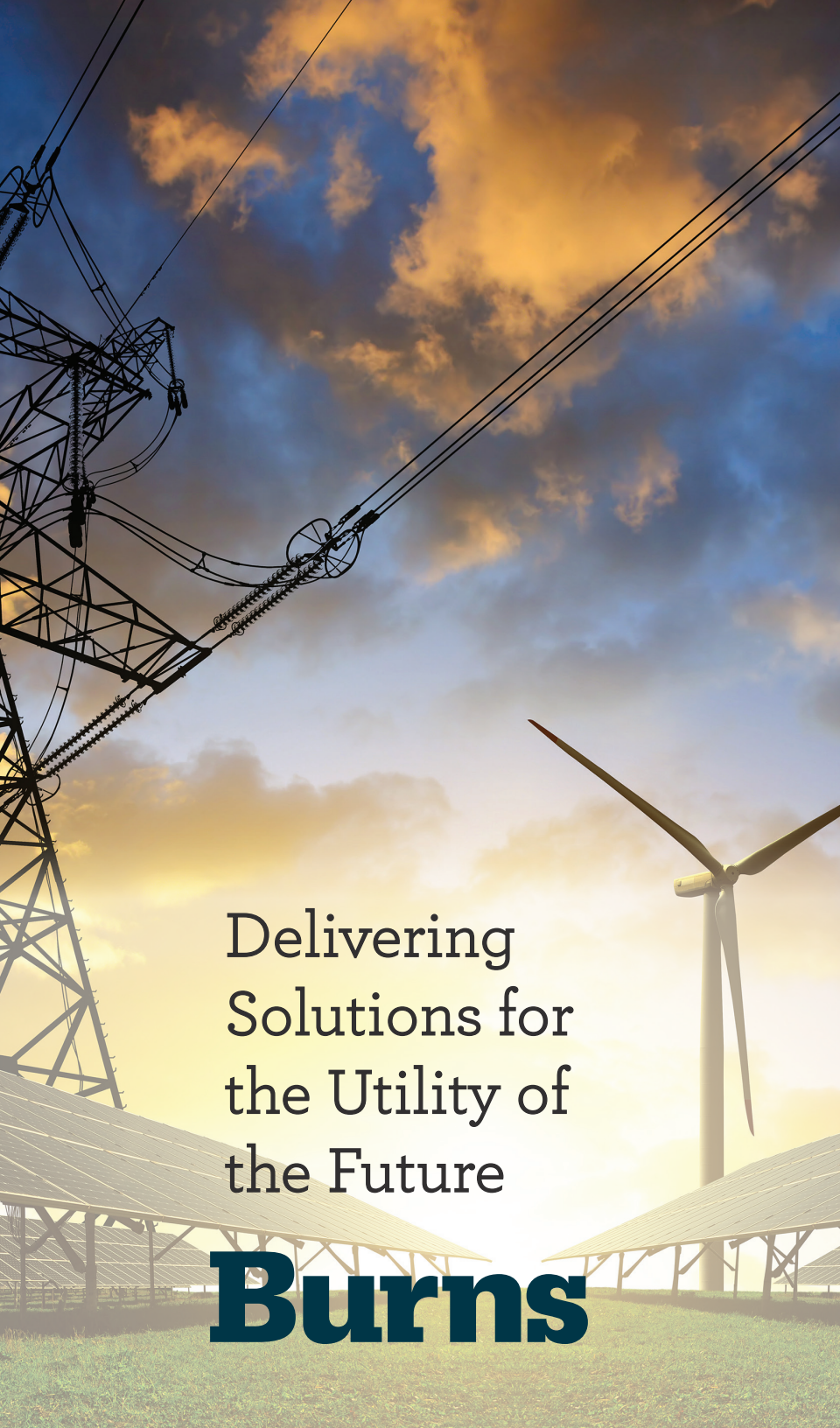
Delivering
Solutions for
the Utility of
the Future
Burns

Advanced electric grids and the Utility of the Future will help define a region's resilience, economic attractiveness, and capacity for population growth. Burns has solutions for creating and maintaining this future.

By combining resilience, reliability, efficiency, return on investment and sustainability, Burns can deliver solutions that meet both utility and customer needs. Our experience, deep knowledge and skills provide holistic end-to-end utility client support, including:

- Design
- Engineering
- Construction
- Commercial
- Financial
- Policy issues

The future grid connects and optimizes distributed energy resources in real-time to create a resilient, low-carbon energy platform. Advanced microgrids, hybrid energy systems and non-wire alternatives are configured and customized to engage customers and maximize participation at the grid edge.

- Distributed energy resource and microgrid modeling and optimization
- Conceptual design through detailed engineering and project implementation
- Interconnection engineering and agreements
- Power systems analysis
- Prime mover selection and equipment configuration
- Active load management
- Microgrid protection, control and communications
- Seamless islanding & resynchronization
- Remote DMS monitoring and control
- Distribution feeder capacity deferral
- Utility voltage support
- Primary and secondary energy storage

Customized distributed generation and on-site power solutions help owners achieve economic and environmental benefits that best meet the needs of their facilities. Demand for solar photovoltaic (PV) coupled to stationary battery energy storage systems (BESS), will continue to increase as costs decline and carbon concerns grow. Similarly, stationary BESS solutions will become a centerpiece of non-wire solutions to optimize transmission and distribution systems.

- Modeling and optimization
- Conceptual design through detailed engineering and project implementation
- Interconnection engineering and agreements
- Power systems analysis
- Module and inverter configuration
- Financial and deal structuring support and analysis
- PV smoothing and load shifting
- Battery Energy Storage Systems (BESS)
- Use case development
- Commercial structuring support and analysis
- Smart inverter/smart grid power quality applications
- UFLS support

Burns provides planning, design and construction related services for traditional power transmission and distribution for utilities, commercial campuses, and transit authorities.

- Substation design
- Power flow modeling and analysis
- Underground ductbank distribution
- Aerial distribution
- Distribution automation
- Protection and control
- 69kV – 230kV transmission

The proliferation of electrified vehicles represents a massive, new, long-term market opportunity that will require reinforced distribution infrastructure and innovative engineering solutions. Vehicle manufacturers are investing in electrification to meet growing customer demand and in response to local and state initiatives to electrify bus fleets and decarbonize public transit.

- Charging station engineering
- Vehicle charging business models
- Vehicle-to-grid services, support and use cases
- Stationary storage to support vehicle charging

Overview

Burns is a nationally respected provider of specialized engineering services, bringing highly-technical, sought-after engineering expertise to complex power systems, utilities, transportation and critical infrastructure projects.

For more than 50 years, we have helped owners deliver power systems that maximize resiliency, cost savings and sustainability. Ranked a Top Workplace and ENR Top 500 Design Firm, we employ both technical and advisory expertise to help achieve sustainable, lifecycle solutions. Our team is personally invested in helping our clients achieve their goals, successfully guiding them through the challenges of multifaceted projects using our no-surprises Burns Unique Client Experience.

Industry Leadership

"Resiliency and Responsiveness – Keeping Your Airport Operational Come Hell or High Water"
ACC Conference, 2018

"Critical Infrastructure and Resiliency"
New York Advanced Energy Stakeholder March Breakfast, 2018

"Battery Energy Storage System Applications for your College Campus"
KAPPA Spring Meeting, 2018

"Finance & Development – What Funding and Ownership Structures Enable Microgrids"
Pennsylvania Resiliency through Microgrid Summit, 2018

"DER Integration" Panel
New York Power Summit, 2018

"From Sustainability to Resilience: Airport Microgrids and Business Continuity"
Microgrid Conference, 2018

"The Path to Zero – How Microgrids Can Get You There"
Airport Planning, Design & Construction Symposium, 2018

"Battery Energy Storage Systems: The Grid's Next Leap Forward"
Civil + Structural Engineer Magazine, November 2017.

"Microgrid Design and Economics"
Pennsylvania Society of Professional Engineers Boot Camp Central Conference 2017

"Streamlining Microgrid Development, Design and Implementation"
New York Power Summit's Post-Conference Workshop, 2017

"Disaster Resiliency"
Airport Planning, Design and Construction Symposium, 2017

Microgrid Workshop
IDEA Campus Energy Conference, 2017

"Implementing Smart Grid Technology in Campus Environments"
Globalcon Conference, 2015

Industry Partners

Utilities

- PECO
- New York Power Authority
- Duquesne Light Company
- Consolidated Edison
- Navy Yard Electric Utility
- Public Service Enterprise Group (PSEG)
- Long Island Power Authority
- National Grid
- Greenport Electrical Utility

Research and Policy

- New York State Energy Research and Development Authority
- Lawrence Berkeley National Lab
- Penn State University, Microgrid Center of Excellence
- Sandia National Labs
- US Department of Energy
- China National Energy Administration

Resilient Energy and Microgrid Customers

- United States Navy
- New York State Office of Mental Health
- Philadelphia Industrial Development Corporation
- State University of New York
- New York City Health and Hospitals Corporation
- City of Atlanta/Hartsfield Jackson International Airport
- City of Denver/Denver International Airport
- New Jersey Transit
- Allegheny County Airport Authority
- Port Authority of New York and New Jersey
- New York State Army National Guard
- Temple University
- New York University Healthcare System

Contact Us

With more than 30 years of diverse energy industry experience, Dave is focused on helping clients navigate the rapidly transforming energy landscape where integrated distributed energy generation and storage resources are enabling cost savings, increased resilience, and carbon reductions. His passion for delivering customized energy solutions in this emerging energy infrastructure, which some refer to as "Grid 2.0", allows opportunities for his clients to leverage data, communications, new business models, dynamic energy markets, and advanced technologies to achieve economic, operational, and environmental goals.

David Smith, Director of Energy Services
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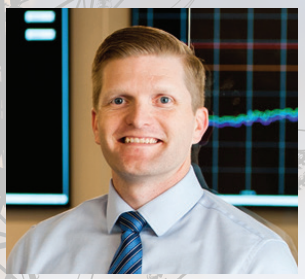

Mike is a determined leader, focused on creating solutions for his clients with complex electrical infrastructure needs. He helps them not only provide comfortable and suitable building systems, but helps them remain competitive within their industries. With an eye for state-of-the-art technologies and a youth spent working for his family's contracting business, Mike's unique experience makes him extremely effective in developing efficient building systems for large scale facilities and infrastructure clients.

Michael P. Walton, PE, DGCP, Director of Advanced Power Systems
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Laura excels at understanding her clients' goals and project drivers. Her expertise was built over 20 years in consulting to large, multi-national companies on projects that achieve operational and financial goals. Laura is an expert at developing strategies and facilitating collaboration that solves our clients' most complex engineering challenges.

Laura Hughes, LEEP AP, Director of Business Development
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Burns

Inspire. Create. Deliver.

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