

Illumine-i stands at the forefront of delivering sophisticated, comprehensive electrical engineering consulting for critical power infrastructure. Leveraging a decade of global expertise and a track record with over 3 GW of project delivery, we specialize in high-voltage Substations (AC and HVDC), integrated Renewable Energy systems (Solar, BESS, and Microgrids), and advanced Power System Studies. We enable local businesses, utilities, and governments to accelerate their journey toward grid resilience and energy independence.

What we do

Substations

- Substation Design & Detailed Engineering
- HVDC Converter Station Design
- Lightning Protection System Design
- Earthing/Grounding System Layout
- Busbar Design & Calculations
- HV Conductor Sizing
- 2D & 3D CADD and Documentation

Renewables

- Solar, BESS and Microgrids
 - Site Assessment & Land Suitability
 - Conceptual System Sizing
 - Techno-Economic Feasibility Studies
 - Financial Modeling (IRR, ROI, Payback)
 - Grid Interconnection Analysis

- Technical & Commercial Due Diligence
- Permitting & Regulatory Compliance
- Procurement Strategy & Management

Power Studies

- Arc Flash Studies
- Load Flow and Fault Simulations
- Short Circuit Studies
- Device Coordination Studies
- Relay Coordination Study
- Harmonic Study
- Transient Stability Study
- Grid Islanding Study
- MET/Weather station design
- Lightning protection and system design
- DAS and SCADA Drawings

Impact that speaks



3 GW

cumulative system
size of projects
delivered



4 Continents

serving the Energy
& Construction
industry



700,000 hours

of consulting for
power engineering
projects



30% Reduction

in project time, ensuring
efficiency &
cost-effectiveness

Portfolio - Substations



138/13.8 kV Distribution class substation at Utilities



345 kV Substation,



69/13.8 kV Substation

Portfolio - Renewables



4 MW (Microgrid)
Carrollton, Georgia



30MW/30MWh (BESS)
Scurry County, Texas



1.2 MW (Ground mount)
Rockingham, Virginia



1.3 MW (Ground mount)
Winchester, Virginia

Portfolio - Power Studies

Project	Study Performed	Voltage Level	Location
Protection of Falling Conductors into Flammable Vegetation Faults	Distance Protection	230 kV	California
Distribution System Modelling, Analysis and Optimization	<ul style="list-style-type: none">Unbalanced Network Load Flow AnalysisVolt-Var OptimizationSwitching OptimizationFault Management and Service RestorationSolar Feeder Hosting Capacity	4.16 kV	California
Electric Vehicle Bus Yard Modelling and Charging Schedule	Time Domain Load Flow Analysis	4.16 / 0.48 kV	California