

Appendix A – Representative Achievements & Projects

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Summary of Qualifications & Achievements

- 25+ years of experience designing, managing, and standardizing resilient power systems supporting U.S. diplomatic facilities in over 70 countries—functionally equivalent to Tier III/IV data centers.
- Architect of global electrical standards for the U.S. Department of State, including N+1/N+2 generator plants, UPS, BESS (battery energy storage systems), LED security lighting, and redundant utility service entry points.
- Directed a \$40M/year global infrastructure program deploying secure and sustainable electrical systems for U.S. Government compounds across five continents.
- Designed and delivered mission-critical infrastructure supporting secure communications, technical security (CCTV, access control, intrusion detection), and life-safety systems with 5-9s uptime goals.
- Led utility coordination and dual-feed substation negotiations on behalf of U.S. Government projects, including grid-interactive microgrid deployments and BESS integration.
- Authored generator transition sequence standards, power reliability protocols, and BESS specifications now used across U.S. capital construction projects.
- Mentored and led multidisciplinary design teams, integrating architectural, mechanical, fire protection, security, and telecom scopes for comprehensive project execution.

Standards Development & Critical Power Architecture

- Authored and implemented global electrical design standards for the U.S. Department of State covering:
 - Generator paralleling schemes (N/N+1/N+2) with automatic load shed/transfer
 - Battery Energy Storage Systems (BESS), including grid-interactive and double-conversion topologies

- LED exterior lighting, power conditioning, voltage regulation, and facility-wide metering
 - Designed multi-tiered backup infrastructure for diplomatic compounds—direct analogs to modern data center architectures
 - Developed scalable microgrid-compatible systems supporting critical and secure operations
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Program & Project Leadership – Energy Resilience

- Directed \$40M/year electrical and energy infrastructure program for mission-critical and secure facilities
 - Delivered dual-utility service entrance projects with backup generation, UPS, and BESS integration across multiple geographic regions
 - Served as AHJ and senior design authority on high-security power systems in diplomatic, military, and federal civilian facilities
 - Led multi-disciplinary engineering teams through concept development, design, technical review, procurement support, and construction phase services
 - Regularly interfaced with executive stakeholders (Ambassadors, senior PMs, overseas staff) to communicate technical solutions and project status
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Select Project Sites – Data Center Equivalent Loads

- **Harare, Zimbabwe** – Secure PV + BESS installation with N+1 generator transition and isolated microgrid support
- **Niamey, Niger** – First lithium-ion BESS deployed by DoS; enabled annual fuel savings of over \$1M
- **Koror, Palau** – Net-zero campus with integrated diesel/BESS hybrid system and redundant utility architecture
- **Kolonia, Micronesia** – PV + BESS microgrid with grid disconnect capability; supports high-availability embassy operations
- **Majuro, Marshall Islands** – Shore-hardened critical power distribution upgrade with extended backup runtime

- **Manila, Philippines** – Dual-utility coordination, N+2 generator backup, UPS-fed security and comms systems
 - **Cotonou, Benin** – Full-scale replacement of electrical systems supporting technical security and 24/7 operations
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Cross-Disciplinary Federal Infrastructure Projects

- **Pristina, Santo Domingo, Dakar** – Power coordination for new embassy compound (NEC) projects
 - **Richmond Defense Supply Center** – Emergency generator and security power system integration
 - **Naval Surface Warfare Center (Indian Head, MD)** – Grounding, lightning protection, and emergency backup compliance
 - **Carderock Navy Base** – Electrical coordination studies and panelboard upgrades for lab and secure zones
 - **NASA / Smithsonian** – Power modernization projects within secure and public-access environments
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Additional Technical Contributions

- Provided commissioning oversight for generator transition logic, secure lighting systems, and BESS operational readiness
 - Presented at professional conferences on resilience, power quality, and remote infrastructure deployment
 - Contributed articles and briefings on global power system modernization for federal publications and stakeholder audiences
 - Supported project feasibility, capital budgeting, and technical evaluation for multi-million-dollar infrastructure initiatives
 - Ongoing Schneider Electric University – Data Center Associate training (exam pending); aligning industry language and systems with commercial DC standards
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Additional International Project Locations

These additional projects reflect the global scope of execution across a range of climates, regulatory environments, and grid constraints:

- **Africa:** Maputo (Mozambique), Yaoundé (Cameroon), Abuja (Nigeria), Kigali (Rwanda), Ouagadougou (Burkina Faso)
- **Asia:** Phnom Penh (Cambodia), Suva (Fiji), Amman (Jordan)
- **Europe:** The Hague (Netherlands), Athens (Greece), Lisbon (Portugal), Milan (Italy), Valletta (Malta)
- **Caribbean / Latin America:** Kingston (Jamaica), Monterrey (Mexico), Managua (Nicaragua), Belmopan (Belize), Bridgetown (Barbados), Curaçao (Netherlands Antilles), Nassau (Bahamas)
- **Other Key Sites:** Apia (Samoa), Praia (Cape Verde), Bujumbura (Burundi), N'Djamena (Chad), Nouakchott (Mauritania)