
OVERVIEW

Jessica Grier has served as a technical and business consultant in the energy industry with over ten years of experience in transmission, renewable energy and smart grid. Ms. Grier supports financing and equity investment due diligence and provides technical advisory services for power plant developers, system operators, municipal and independently-owned utilities, financiers and other energy market participants. She has managed energy transmission system- and market-related analyses throughout all market regions in the United States and Canada.

Ms. Grier assists in power flow transmission assessments as well as security-constrained economic dispatch (SCED) congestion and curtailment studies, evaluating transmission risks, power flows, and delivery impacts in all North American Electric Reliability Corporation (NERC) regions to address curtailment and congestion. She also assists in identifying sites for potential interconnection, interconnection and network upgrades for new resources, evaluating regional interconnection queue and tariff information, researching regional transmission expansion plans, modeling future delivery risk, and evaluation of Locational Marginal Prices and project market risks.

PROJECT EXPERIENCE

Project Integration, Curtailment and Delivery

Ms. Grier has been responsible for providing consulting services for utilities, generation owners, developers, lenders, and equity investors that required an understanding of transmission upgrade costs, loss of energy/revenues due to curtailment, transmission service options and market costs associated with scheduling energy delivery. For the purpose of project financing, asset acquisition, assessment of risk under power purchase agreements, or evaluation of resource options, Ms. Grier has been responsible for integration, transmission curtailment, delivery risk and market cost assessments for over one hundred renewable projects. The assessments considered local interconnection and upgrade requirements, transaction impacts, transmission service arrangements, power purchase arrangements, market deliveries, operational issues associated intermittent resources, and impact of future generation and transmission additions. The technical, quantitative, and qualitative findings are used to understand risk uncertainty, including the potential impacts of future events such as new generation, transmission expansion, and variations in market structures.

LMP/Security Constrained Economic Dispatch

Ms. Grier assists with performing and supervising numerous assessments involving Security Constrained Economic Dispatch (SCED) analyses which is used as a planning tool for evaluation of transmission impacts associated with the benefits of new transmission facilities, congestion differentials between load and resources, reliability curtailment risk, transmission service delivery risks, and other market factors such as energy imbalance costs. SCED supports intermittent resource curtailment estimates for project financing, development of transmission upgrade strategies to mitigate reliability curtailment, calculation of losses factors, and cost allocation for transmission upgrades.

Transmission and Distribution Project Consultant

Ms. Grier has been responsible for independent transmission analysis and technical advisory consulting services associated with financing and equity investments including identification of transmission risks, curtailment and congestion assessments, transmission planning, new resource integration/siting and contractual arrangement support.

- Due diligence of power generation and transmission assets, financial and acquisition support, and generation resource siting, interconnection and integration.
- Risk mitigation and strategic planning studies for transmission and generation facilities including transmission interconnection, delivery under power purchase arrangements, market structure, and transmission service arrangements.
- Review of project contractual agreements, feasibility, system impact studies, and facility studies.
- Transmission and generation facility costs analysis including direct assigned upgrade costs, transmission build-out, network upgrades, transmission service, interconnection service, and congestion and curtailment risks.
- Incorporation of power flow and Security Constrained Economic Dispatch (SCED) analyses to identify nodal cost/benefit, curtailment, congestion, and losses.
- Ancillary service and open-access support including development and review of interconnection requests, tariffs, PPAs, and Interconnection Agreements.
- Distributed energy distribution assessments to determine utility feeder upgrades.

Renewable Energy Project Consultant

Ms. Grier has been responsible for several successful technical, business and financial consulting assignments for utilities, developers and financiers in the renewable energy industry, including the following types of assignments.

- Independent engineering, technical and financial due diligence, and new project finance for solar and wind projects.
- Commercial and technical risk assessment of solar and wind projects.
- Feasibility, fatal flaw, financial and in-depth technology due diligence assessments of PV technologies, tracker systems, inverters and manufacturing facilities.
- Solar PV design and resource assessments using PVSyst to determine life-cycle energy production, losses and project finances.
- Review of engineering design, EPC contracts, lease, power purchase, and transmission and interconnection agreements.
- Annual construction and O&M review including facility and site inspections.

Smart Grid Project Consultant

Ms. Grier has been responsible for project management and technical consulting advisory services for municipalities, investor owned utilities and state agencies relating to smart grid development.

- Strategic project planning and technology roadmap development.
- Technical feasibility studies, use case and business case development for multiple Smart Grid, AMI, energy efficiency, and demand response technologies.
- American Recovery and Reinvestment Act (ARRA) grant writing and Smart Grid Investment Grant (SGIG) funding and associated metrics and benefits analysis, reporting and auditing.
- Procurement support including: requirements definition, RFP generation, vendor and technology proposal evaluation and selection, scope of work definition, and contractual T&Cs development.
- RFP generation for AMI, outage management systems, demand management systems, meter data management systems, and in-home displays.
- Radio frequency communication and public and private wireless networks design support, including review of latency, security, scalability, robustness and cost.
- Utility stakeholder engagement, communication and education outreach plans.
- Department of Energy, legislative, and regulatory support.

EDUCATION

Prior to joining nFront Consulting, Ms. Grier spent nine years with R. W. Beck, Inc. and its successors, SAIC and Leidos, Inc., serving as a multi-discipline project consultant across various sectors in the energy industry. Ms. Grier's educational background includes a B.S. in Electrical Engineering from Colorado State University.