

OVERVIEW

Mr. Copeland has over 19 years in the energy industry with a specialty in generation and transmission economic analysis. His expertise includes the following areas:

- Nodal Congestion & Curtailment Analysis
- Long Range Resource Planning & Market Price Forecasting
- Asset Valuation & Transactional Due Diligence
- Nodal Market Cost/Benefit Analysis
- Transmission Investment Analysis
- Expert Witness Testimony: FERC, State, and Federal Jurisdictions

Mr. Copeland has completed numerous consulting engagements for diverse stakeholders, including regulatory agencies, project developers, load-serving entities, generating companies, private equity firms and investment banks. Mr. Copeland has supported project development and financing for construction of new generation, refinancing of existing generation, and development of transmission. Mr. Copeland also has extensive experience with the use of commercial price forecasting tools such as the ABB/Ventyx *PROMOD IV*® software.

PROJECT EXPERIENCE

Security Constrained Economic Dispatch & Locational Marginal Pricing

Mr. Copeland has provided short-term security constrained economic dispatch (“SCED”) analysis for the potential purchase, sale, refinancing, and operational analysis of generating assets within the United States. The SCED analyses examined the future market supply (including increased renewable penetration), market demand (including increased EE penetration), and transmission additions that could affect the operation of the assets. Projections of market energy prices, unit production, curtailment, and key congestion facilities were developed, as well as revenue projections, performance projections, and projected gross margins. Types of projects and locations are listed below:

- Thermal, wind, solar, and transmission projects located in WECC (CA), ERCOT (TX), SPP (TX, KS, OK, NE), NYISO (Zone J), ISONE (NH, ME), PJM (IL, PA, NJ, MD, VA, OH), MISO (IL, IA, KY, TX, AR, LA, MS), Southeast (FL, GA, SC, NC, TN), MO, and Alberta.

Asset Valuation & Long-Term Power Price Forecasting

Mr. Copeland has developed long-term energy and capacity price forecasts and gross margin analysis for power plants located in many areas of the United States and Canada. The analyses examine the current and future market structure, supply, and demand in these areas, and included transmission analysis and upgrades, economic new entrants into the market, retirements, increased renewable penetration, transportation electrification, and unit operations and profitability. Types of projects and locations are listed below:

- Combined cycle, peaking, and coal power plants located in WECC (AZ, NM, CO, CA, WA, MT), ERCOT (TX), SPP (TX, NE), Southeast (GA, SC, NC, FL), NYISO (Zone C, F, G, J, K), ISONE (ME, MA,

RI, NH), PJM (IL, PA, NJ, MD, VA, OH), MISO (IL, IA, MI, KY, IN, TX, AR, LA, MS), Ontario, and New Brunswick.

RTO, Generation & Transmission Cost/Benefit Analysis

Mr. Copeland has provided cost/benefit analyses to assess impacts to utilities, cooperatives, municipalities and private developers due to the insertion and removal of individual generation and transmission assets to a market. In addition, Mr. Copeland has assessed the cost and benefits for several utilities in their evaluation to transfer all their assets into or out of existing RTO markets. Such analyses focused on changes in generating asset operations and profitability, locational marginal prices, congestion costs, and utility adjusted production costs.

Expert Witness & Litigation Support

Mr. Copeland has provided testimony as an expert witness in numerous state, FERC, and federal jurisdictions on energy related issues such as economic transmission assessment, generation retrofit and retirement, control area cost/benefit, long term generation expansion, natural gas pipeline, and utility conduct.

These filings were considered at the Public Utilities Commission of Texas, the State Office of Administrative Hearings in Texas, the Indiana Utility Regulatory Commission, the Department of Public Utilities in Massachusetts, the Missouri Public Service Commission and the US District Court in the State of Mississippi.

PROFESSIONAL HISTORY

Mr. Copeland started his career in the energy industry as a Senior Reactor Operator at Georgia Tech's five (5) MW nuclear reactor, followed by well recognized software and consulting firms such as ABB/Ventyx, Navigant Consulting, R.W. Beck/SAIC, Black & Veatch Management Consulting, and GDS Associates.

Other notable experience includes nuclear non-proliferation work inside North Korea, an engineer for the manufacturing of the reactor cores used by the US Navy in their submarines and ships, and sales for an IT start-up company.

EDUCATIONAL AND PERSONAL

Mr. Copeland holds Mechanical and Nuclear Engineering degrees from the Georgia Institute of Technology and is a licensed professional engineer in the Commonwealth of Virginia.