David W. Burlingame

3305 Arctic Blvd, Suite 201
Anchorage, AK 99503
(907) 646-5103 (Voice)
(907) 522-1182 (FAX)
dburlingame@epsinc.com

Professional Registration

Electrical Engineer - Alaska, Hawaii, Guam, Commonwealth of the Northern Marianas Islands, Oregon, Washington

Professional Experience

1996 to Present

Electric Power Systems, Inc.

Anchorage, AK

Principal Consulting Engineer

Mr. Burlingame was a co-founder of Electric Power Systems, Inc in 1996. The firm is dedicated to providing engineering services to the power industry. Growing to over 140 employees over the past 26 years, the company is now a wholly owned subsidiary of Engineered Solutions Group, Inc., with offices in Anchorage, Palmer and Juneau, Alaska and Redmond, Olympia and Vancouver, Washington. ESG specializes in electrical and mechanical engineering and provides consulting, design and construction services to utility and industrial customers in Alaska, Pacific Northwest, Hawaii and the South Pacific.

Project lead in developing a Long-Range Transmission Plan for the Alaskan Railbelt system, including solutions involving HVDC, BESS, hydro and inverter-connected generation.

Mr. Burlingame co-authored a paper on the cause and mitigation measures associated with 250 MW oscillations occurring in the Railbelt system.

Mr. Burlingame served as a representative for the Hawaiian utilities in a 30 member group of interested parties to develop the Hawaiian Reliability Standards.

Coordinator for AEA to reach agreement among the core group of Reliability and Planning Standards for the Railbelt.

Project manager for various system studies for the Railbelt utilities on 34.5 kV – 230 kV transmission systems involving transmission losses, metering stability, voltage control and reliability assessments.

Project manager for system studies and analysis for a 700 MW load and generation involving 200 miles of overhead transmission line, 60 miles of submarine cable and HVDC terminals.

Project manager for system studies for 400 MW of PV, HVDC submarine cables, 100 MW ESS, synchronous condensors and other stability measures to increase renewable penetration to over 50% in Hawaii.

Project manager for various Bradley Lake studies to define system stability limits and control solutions for 120 MW power plant.

Project manager for long range transmission plans for Anchorage Municipal Light & Power, Chugach Electric Association and Homer Electric Association. Plans involved analyzing various generation project impacts on the Railbelt transmission system's gird stability and loadshedding system.

Project manager for the completion of several versions of the Railbelt Transmission Plan. A plan analyzing the improvements required to meet AK-TPL1-4, Transmission Planning standard.

Project manager for 25 substation designs from 12.47 kV through 230 kV.

Completed the feasibility design and analysis for a 1,100 MW IPP development in the State of Washington.

Project Manager for the design, construction management and inspection of improvements to four 69 kV/ 12.47 kV substations, 138 kV substation, 34.5 kV/12.47 kV substation and 115/24.9 kV substations.

Developed Long-Range distribution plan for 65,000-meter utility, 7,000-meter utility and 15,000-meter

utility.

Project Manager for the analysis and scope of system stability studies for the Alaska interconnected system.

Developed Long-Range distribution plan for Chugach Electric Association. Developed transient stability cases used to verify Chugach Transmission Plan. Recommended system improvements to mitigate system stability and operating deficiencies.

Education

University of Oklahoma

1981 B.S., Electrical Engineering 1981

Testimony, Publications and Presentations

FERC - Plains Electric G&T vs Public Service New Mexico 211Complaint
Provided testimony on system impact of proposed transmission rates and capacity studies of PNM. Developed transmission impact studies and loss evaluations, coordinated rate case development, negotiations and settlement.

New Mexico Publc Utilies Commission
Provided testimony on generation and transmission system, reliability and generation and transmission costs. Provided supporting testimony for Plains rate cases. Provided testimony of Southwest Public Service Co and Public Service Company of Colorado merger impacts.

Alaska Publc Utilies Commission
Provided testimony on transmission reliability and outages

2003 Northwest Public Power Association – Spring Session
Power System Fault Studies and Interpretation

2004 Pacific Power Association
SCADA Systems for Small Utilities

2005 Northwest Public Power Association
Power System Coordination & Sectionalizing

2007 Northwest Public Power Association
SCADA Systems for Small Utilities

2009 Northwest Public Power Association
Generation Monitoring & Control Systems

2009 Northwest Public Power Association
Generation Monitoring & Control Systems

2013 Hawaii Renewable Energy Conference
Impacts of Renewable Energy on Islanded Power Systems

2014 Utility Variable-Generation Integration Group
Impact of Variable Generation on Islanded Systems

2017 Guam Renewable Energy Symposium
Planning for Increased Renewables

2019 Northwest Public Power Association
Generation Governors and History of Railbelt

2022 Railbelt Utiltiies
Railbelt Oscillation & Mitigation Study