

## RANDELL M. JOHNSON

220066-CENSE-Rply-  
PSE-Resp-Pet-Att4-  
2-25-22

### CAREER PROFILE

Dr. Randell Johnson has 25 years of experience in leadership and technical positions with expertise and experience in demand, distribution, transmission, and generation and wholesale power markets. Dr. Johnson has international recognition in distributed energy resource studies of incorporating distributed energy resources in grid planning and policy studies. Randell has background in electricity markets, regulatory, public policy, and power engineering, and power system analysis and connection studies with power flow, harmonics, fault current, transient stability, production cost, capacity optimization, and controls engineering. Randell has provided leadership and development for teams for software development, distribution planning, distributed energy resource planning, energy storage, transmission planning, generation expansion planning, integration of renewables and public policy, and market simulation and investment valuations. Dr. Johnson has invented and developed software for analytics and for management software for unlimited distributed energy resources providing stacked services for grid needs. A Harvard Business School Case has been written for the Massachusetts Energy Storage Initiative which includes methods pioneered by Dr. Johnson.

### EXPERIENCE

**Acelerex, Inc., Cambridge, MA, USA, 2017-Present, President**

Software Development, Grid Analytics, Energy Storage Project Development, Strategy, Cloud Computing, EMS and SCADA software development, AI, Blockchain and Smart Contracts, Demand Response Controls, Virtual Power Plant, Distributed Energy Resources, Connection Studies, DER and Energy Storage Policy, Energy Storage Testing

**Alevo Analytics, Inc., Concord, NC, USA, 2015-2017, Chief Analytics Officer**

Strategy, Energy Storage Valuations, Connection Studies, DER Business Intelligence, High Performance Computing, EMS and SCADA software development, Big Data Analytics, Fault, Harmonics, Power Flow, Transient Stability Analysis

**Energy Exemplar LLC, Hartford, CT, USA, 2013-2015, Regional Director**

Natural Gas and Electric Coordination, PLEXOS Software, Training, Consulting, Market Simulation, Sub-Hourly Ancillary Services Pricing, Renewables Integration, Public Policy, Power Trading Systems, Integrated Resource Plans

**Eversource, Hartford, CT, USA, 2009-2013, Team Lead Planning and Strategy**

Transmission Sector Representative for EIPC Phase 1 and Phase 2 Study, Gridview Production Cost Simulations of New England, New York, PJM, IESO, HQ, and Maritimes, Power Market Simulation, Transmission Planning Studies, Transmission Valuations, Regulatory, Policy, Planning and Strategy, Corporate Finance, Rate Case Design, Distribution Restorations after Storm Damage

**Klesch & Company Limited, London, England, 2008-2009, Investment Executive**

Demand Response Controls for Industrial Sites, Power, Energy, and Metals Trading Desk, Power Plant Deal Valuations, M&A Desk, Integration, Corporate Finance

**Mott Macdonald Group, Glasgow Scotland, Brighton, United Kingdom, 2004-2008, Manager**

Manager, Distribution and Generation Investments, Global Consulting in Power and Energy Sectors of 40 countries, distribution planning, power flow, transients, harmonics, voltage flicker, electro magnetics, grid design, market studies, connection agreements, distribution analysis. Contributed to the development of \$35B of assets

**Anchorage Municipal Light and Power, Anchorage, Alaska, USA, 1997-2001, Power Management Engineer**

Distribution System Investments, Vault and Cable Systems, Network Dispatch, Trading Regulated Power, SCADA, Operator Training Simulator, Transient Stability, Hydro-Thermal Optimizations, Controls Design, Energy Storage

**Power Technologies, Incorporated (PTI), Schenectady, NY, 1996-1997, Technical Assistant**

Substation Fault Analysis, Powering Mines, Clark Components, Power System Stabilizer, Transient Stability

## EDUCATION

**University of Connecticut School of Business**, Hartford, CT, USA, 2010-2012

Electric and Gas Utility Finance, Rate Case Design, Revenue Requirements, Valuations, Treasury

**Bayes Business School**, London, England, 2007-2008, MSc Mathematical Trading and Finance

Economics, Energy and Electricity Markets, Risk, Econometrics, Finance, Derivatives

**Rensselaer Polytechnic Institute**, Troy, NY, USA, 2001-2004, Ph.D. Electric Power Engineering

Power Generation Operation and Control, Power Markets

**Rensselaer Polytechnic Institute**, Troy, NY, USA, 1995-1997, MEng Electric Power Engineering

Power System Analysis, Magnetics

**University of Alaska**, Fairbanks, Alaska, USA, 1991-1995, BS Electrical Engineering

Minor Mathematics, cum laude

**Rensselaer Polytechnic Institute**, Hartford, CT, 2012, Adjunct Professor

Instructed course in power markets and power sector investments

## KEY SKILLS

DER Connection Studies, Harmonics, Power Flow, Transient Stability, Fault Analysis, Quantitative Finance, Power Markets, Derivatives, Production Cost Modeling and Simulation, Policy, Regulatory, Planning and Strategy

## INTERNATIONAL EXPERIENCE

United States, Great Britain, Republic of Ireland, Iceland, China, Netherlands, Germany, Qatar, Bahrain, UAE, Saudi Arabia, India, Australia, Singapore, Norway, Switzerland, Chile, Ukraine, Russia, South Africa, Morocco, Barbados.

## PUBLICATIONS AND PAPERS

- Sizing Storage to Manage Reliability Needs (2021)
- Barbados Utility Licensing for Competitive Procurements of Clean Energy (2020)
- UN Report, Energy Storage Road Map for the Maldives (2019)
- NY Energy Storage Road Map, NYSERDA (2018)
- MA State of Charge Report, Massachusetts Department of Energy and Resources (2016)
- IEEE, American Society of Mechanical Engineers, American Control Conference, and European Wind and Power Conferences (2015)
- Co-Optimization of Transmission and Other Resources, NARUC funded by DOE (2015)

## DISTRIBUTED ENERGY RESOURCE STUDIES

Dr. Johnson was principal lead for modelling and analytics for the following studies:

- Energy Storage Road Map for the Maldives, United Nations Climate Action Summit, 2019
- New York Energy Storage Road Map, 2018
- Massachusetts State of Charge Study, 2016
- MISO Energy Storage Study, 2019
- Ontario Energy Storage Study, 2019
- Bermuda Energy Storage Sizing Study that led to investment of a BESS in Bermuda, 2017