



Exponent®
Engineering & Scientific Consulting

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Professional Profile

Adam Dow is a utility risk management, wildfire risk modeling, and asset management leader with experience across energy, utilities, nuclear generation, digital transformation, and technology implementation. He specializes in wildfire analytics, operational risk management, risk-informed capital planning, affordability and cost-effective operations, AI-enabled analytics, and enterprise-scale risk program strategy and delivery.

Mr. Dow served as an executive at Southern California Edison where he most recently held the position of director in wildfire risk and analytics. In that role, he not only led the wildfire modeling improvement response following the January 2025 LA wildfires but set enterprise strategy for wildfire risk analytics supporting a \$2B+ annual capital wildfire risk mitigation portfolio at the nearly \$30B utility. His work translated climate, hazard, and asset risk science into decision-ready insights that inform mitigation investment, system planning, insurance positioning, regulatory filings, and operational decision-making.

Mr. Dow had the privilege of leading and shaping wildfire mitigation strategy for California utilities since the nascent stages in 2018/2019 following the Camp, Thomas, Woosley and other catastrophic wildfires since. He has led the development and governance of advanced wildfire risk models across both probability and consequence including AI/machine learning, fragility/physics-based, probabilistic risk assessment (including Monte Carlo analysis), and simulation-based models. His responsibilities included oversight of data pipelines, ML operations, validation, benchmarking, independent review, model risk management standards, QA/QC, documentation, and change control. Most importantly, he also integrated wildfire risk outputs into Public Safety Power Shutoff operations, grid hardening, inspection prioritization, benefit-cost analysis, capital planning, and external stakeholder engagement with regulators, vendors, academia, and national labs.

Previously at Southern California Edison, Mr. Dow held leadership roles in operational risk management, enterprise cost reduction, SAP S/4HANA ERP program management, and digital and process transformation. He led operational risk management for the utility portfolio across wildfire, public safety, PSPS, information technology and cybersecurity, generation, transmission and distribution infrastructure, environmental matters, and nuclear decommissioning. He also led affordability initiatives resulting in \$300M+ in annual O&M savings and supported restructuring of integrated grid planning and execution for \$6B+ in capital deployment.

Mr. Dow's digital transformation experience includes leading large cross-functional projects involving robotic process automation, mobile applications, and applied data analytics across Google Cloud Platform, BigQuery, AI platforms, image tagging, object detection, condition severity modeling, and asset-centric predictive analytics. His pivotal work here included the 2018 wildfire response efforts to fundamentally redesign the transmission and distribution (T&D) overhead inspection processes across \$100M+ in annual program spend ultimately helping transition the programs from compliance-based to risk-informed.

Before joining Southern California Edison, Mr. Dow was a management consultant at MCR Performance Solutions, where he supported utility and nuclear generation clients in portfolio optimization, zero-based budgeting, lifecycle management planning, process improvement, merger integration, business case evaluation, and equipment reliability. Earlier in his career, he worked as a nuclear thermal hydraulic engineer at GE Hitachi Nuclear Energy, performing and verifying technical engineering analyses for nuclear asset enhancement projects, extended power uprates, new fuel introductions, nuclear safety analysis, process automation, root-cause analysis, and software quality assurance.

Academic Credentials & Professional Honors

M.S.E., Materials Science and Engineering, North Carolina State University, 2010

M.S.E., Nuclear Engineering and Radiological Sciences, University of Michigan, Ann Arbor, 2007

B.S.E., Nuclear Engineering and Radiological Sciences, University of Michigan, Ann Arbor, 2006

Edison Award Nominee, 2022

Prior Experience

Director, Wildfire Risk & Analytics, Southern California Edison (SCE), Rosemead, CA, February 2025-July 2026

Director, Program Management — SAP S/4HANA ERP Implementation, Southern California Edison (SCE), Rosemead, CA, December 2023-February 2025

Principal Manager, Operational Strategy — Enterprise Cost Reduction, Southern California Edison (SCE), Rosemead, CA, June 2023-December 2023

Principal Manager, Operational Risk Management & Public Safety — Enterprise Risk Management, Southern California Edison (SCE), Rosemead, CA, July 2020-Present

Senior Process Manager / Senior Advisor, Digital & Process Transformation, Southern California Edison (SCE), Rosemead, CA, March 2019-July 2020

Manager, Nuclear Generation Practice, MCR Performance Solutions, Deerfield, IL, January 2017-March 2019

Lead Consultant, Nuclear Generation Practice, MCR Performance Solutions, Deerfield, IL, January 2013-January 2017

Consultant, Nuclear Generation Practice, MCR Performance Solutions, Deerfield, IL, August 2011-January 2013

Nuclear Thermal Hydraulic Engineer, Nuclear Safety Analysis, GE Hitachi Nuclear Energy, Wilmington, NC, July 2009-August 2011

Edison Engineering Development Program, GE Energy, July 2007-July 2009

Community Service

Board Member, Spectrum Psych LA Foundation for Inclusion & Empowerment (supporting education and access for individuals with autism spectrum disorder)

Professional Affiliations

Industry Advisory Board Member, Wildfire Interdisciplinary Research Center, 2025-2026

Industry Advisory Board Member, Cal Poly WUI Fire Institute, 2025-2026

International Wildfire Risk Management Consortium (IWRMC) Executive 2024-2026

American Nuclear Society (ANS) Utility Working Conference (UWC) — Speaker and Planning Committee Track Leader

GE Hitachi North American Young Generation Nuclear Chair

Publications

["SCE 2026 RAMP Wildfire Power Law White Paper."](#) November 2025.

"Advanced Life Cycle Management Planning: Building Confidence in the Future." January 2016.

"Nuclear Staffing Optimization: A Foundational Approach for the Most Important Utility Assets." July 2016.

"Achieving Significant O&M Reduction with Zero Base Budgeting." August 2015.

Project Experience

Wildfire Risk Modeling, Analytics & Operational Risk

- **Enterprise Wildfire Strategy & Governance:** Set enterprise strategy and risk analytics roadmap supporting SCE's \$2B+ annual wildfire mitigation capital portfolio (~\$30B utility). Established model risk management standards, QA/QC, and change control for advanced models (probabilistic, fragility, PRA, AI/ML, simulation) to support regulatory defensibility, mitigate model volatility, and support board oversight.
- **Wildfire Exposure and Consequence Modeling:** On the SCE, Operations Wildfire Task Force (OWTF), led development of SCE's Wildfire Integrated Model (WIM), the first scaled hybrid wildfire risk model in the utility industry to fuse deterministic fire-spread simulation with catastrophe-model stochastics at asset-level resolution. Integrated Technosylva FireSight 8 with Moody's RMS U.S. Wildfire HD 2.0 stochastic ignition data (16.5M simulations) via hexagonal spatial aggregation and Extreme Value Theory scaling, producing full consequence distributions at every asset — preserving the granularity needed for mitigation prioritization while capturing tail risk absent from the historical record. This work resulted in the supporting white paper establishing the methodology as a formal alternative to CPUC-designated best practice under D.24-05-064, filed ahead of SCE's 2026 RAMP.
- **Operational Risk Management:** Led operational risk across a \$6B+ capital portfolio spanning wildfire, PSPS, public/worker safety, cybersecurity, T&D infrastructure, and nuclear decommissioning. Built and managed a federated "Hub and Spoke" network across 13,000 employees with a direct team of eight senior risk advisors.
- **Enterprise Risk Management Process:** Led design, maintenance and operations of core enterprise risk and GRC tools ultimately aggregating, quantifying, challenging and reporting key

enterprise risks to the Board and subsequent SEC-related filings (10K, 10Q, etc.). Routinely was the lead reviewer on all proposed spending reductions to ensure risk was adequately reflected and considered.

- **Operational & Cloud Analytics:** Integrated risk outputs directly into PSPS operations, grid hardening, inspection prioritization, and benefit-cost analyses. Led next-gen post-ignition analytics on Google Cloud Platform (BigQuery), combining fire propagation, geospatial, weather, and asset data to optimize maintenance programs and root-cause workflows.

Enterprise Programs, Transformation & Digital Strategy

- **\$1.3B SAP S/4HANA ERP Leadership:** Executed executive program governance over SCE's ERP planning and solution analysis for SCE's 5.1M customers. Managed 40+ employees/consultants overseeing project management, controls and compliance, value management, and vendor management space. Identified, scoped, and oversaw what may be a first-of-a-kind quantitative project risk analysis applied to an SAP S/4HANA ERP program; and led value management of \$2.3B in capital/O&M benefits (1.8x benefit-cost ratio).
- **Enterprise Cost Optimization and Organizational Redesign:** Co-created a modernized operating model restructuring integrated grid planning across \$6B+ in capital deployment. Led company-wide affordability initiatives yielding \$300M+ in annual repeatable O&M savings.
- **AI & Inspection Transformation:** Directed the digital redesign of T&D inspection programs (\$100M+ annual spend), shifting operations from compliance-based to risk-informed execution using mobile applications, predictive models, and RPA. Spearheaded enterprise AI initiatives including democratized image tagging platforms, object detection, and condition severity models from cloud to edge devices.
- **Data Strategy & Architecture:** Stood up and/or co-led multiple asset data and information initiatives, developing data stewardship models and data quality playbooks. Implemented initial MVP delivery on Salesforce Digital Platforms.

Equipment Reliability, Capital Planning & Efficiency (Management Consulting work)

- **Zero-Based Budgeting (ZBB):** Executed ZBB and cost-reduction programs driving \$15M in repeatable annual O&M savings for a major municipal utility and \$9M in verified non-labor

savings for a two-unit nuclear station. Performed multiple other budget reduction projects reliably resulting in 15% O&M savings or more

- **Nuclear Lifecycle Management (LCM):** Developed 32 Lifecycle Management Plans across safety and non-safety systems for major utilities, representing \$1.4B+ in long-range capital and O&M planning integrating equipment reliability and economics.
- **Process Improvement & Merger Integration:** Designed diagnostic scoring algorithms and analyzed stakeholder process-tagged feedback for a two-unit station, mapping \$71.1M–\$81.8M in savings opportunities. Orchestrated utility accounting merger integration, optimizing the Unit of Property catalog by 80% (16,000 to 3,200 units) with less than 0.25% capital shift across a \$5B budget.
- **Fleet Reliability & Long-Range Benchmarking:** Coordinated full-scale failure modes and effects analysis (FMEA) across a nearly 100-unit gas turbine fleet including full reconstructing of piping and instrumentation diagrams.
- **Long-Range Benchmarking:** Built predictive regression models analyzing nuclear operating costs, staffing trends, and international capital benchmarks.

Nuclear Engineering & Early Career Development

- **GE Hitachi Nuclear Energy:** Performed and verified 60+ technical engineering analyses (extended power uprates, thermal power output increases of 10-15%, nuclear safety analysis) supporting 30+ boiling water reactors. Avoided plant outage costs exceeding \$1M/day.
- **Lean & Direct Material Productivity:** Served as direct material productivity leader for the Nuclear Safety Center of Excellence, delivering \$1.4M in savings (175% of goal). Led 3+ full-scope Six Sigma/DFSS projects.
- **GE Edison Engineering Development Program (EEDP):** Designed ABWR core fuel cycles (\$8B UAE bid), executed software design in nuclear stability analysis, and created business-wide regulatory tracking processes.

Additional Education & Training

Executive Certification in Risk Management, Stanford University 2022

Executive Certification in Project Management, Villanova University, 2013

Design for Six Sigma (DFSS) Certified, Project: TCL/TK Broad Automation for Nuclear Safety Analysis, 2010

Six Sigma Greenbelt Certified, Project: Business-Wide Regulatory and Operational Experience Tracking, 2009

Edison Engineering Development Program (EEDP), GE Energy, July 2007-July 2009

Advisory Appointments

Industry Advisory Board Member, Wildfire Interdisciplinary Research Center, 2025-2026

Industry Advisory Board Member, Cal Poly WUI Fire Institute, 2025-2026

International Wildfire Risk Management Consortium (IWRMC) Executive 2024-2026