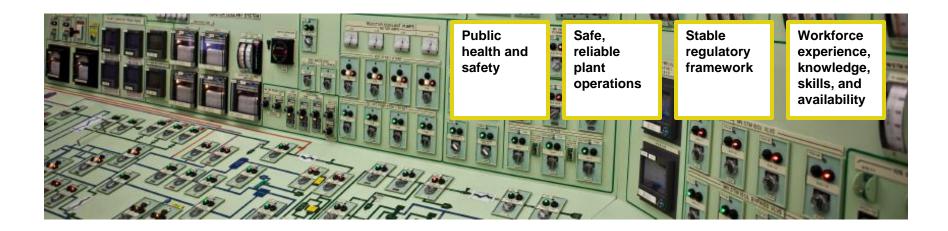


An Evolving Industry



Complex issues challenge the efficient licensing and oversight of nuclear power plants.

Ensuring the safe use of radioactive materials for the generation of electric power is an objective shared by nuclear regulators. New technologies, aging infrastructures, specialized talent shortages, and shrinking budgets combine to challenge government leaders seeking to create the regulatory framework necessary to promote a safe and robust nuclear industry.

To meet these challenges, nuclear industry regulators must find cost effective ways to certify new technologies, approve changes to existing designs, license new operators, and oversee nuclear facility operations while building for themselves a workforce steeped in the knowledge of and respect for the uniqueness of nuclear power operations.

StrategyDriven advisors <u>are</u> seasoned nuclear professionals. As such, we have tailored our tools and methods to meet the unique needs of the nuclear industry and are committed to being exceptional teammates in your pursuit of excellence.

The StrategyDriven Difference

StrategyDriven advisors possess 'stood the watch' nuclear power generation experience:

- leading day-to-day nuclear plant operations,
- supervising refueling and maintenance activities, and
- overseeing infrequently performed tests and evolutions
- conducting nuclear plant operational inspections worldwide

Our nuclear professionals have been awarded top industry licenses, certifications, and qualifications:

- U.S. Nuclear Regulatory Commission Senior Reactor Operator License
- U.S. Navy Chief Nuclear Engineer Officer Qualification
- U.S. Navy Nuclear Engineering Officer of the Watch Qualification
- U.S. Navy, Level 400 Incident Commander FEMA Incident Command System
- Institute of Nuclear Power Operations / World Association of Nuclear Operators Plant Operations Evaluator Qualification
- National Academy for Nuclear Training Event Investigator Certification
- National Academy for Nuclear Training Instructor and Facilitator Certification
- Project Management Institute Project Management Professional Certification

StrategyDriven uniquely combines decades of nuclear industry regulatory and plant operating experience, deep business acumen, and industry specific methods and tools to provide solutions that enhance the effective oversight of nuclear electric generating stations.

StrategyDriven advisors serve the global Power & Utilities industry...

United States

- AEP
- Ameren
- Con Edison
- Constellation Energy
- Duke Energy
- Entergy
- Exelon
- FirstEnergy
- Luminant
- Nebraska Public Power District
- NextEra Energy
- Omaha Public Power District
- Pinnacle West
- PSEG
- Southern California Edison
- Southern Company
- Tennessee Valley Authority
- Xcel Energy

Canada

- AECL
- Bruce Power
- New Brunswick Power
- OPG

Other Nuclear Organizations

- Institute of Nuclear Power Operations
- Nuclear Energy Institute
- United States Navy
- World Association of Nuclear Operators

Brazil, El Salvador, Peru

Duke Energy

Great Britain

Centrica Energy

Japan

Tokyo Electric Power



What We Offer

StrategyDriven can help you accelerate the development and implementation of a regulatory framework through the application of our deep hands-on nuclear regulatory and operational experience and leveraging our nuclear industry specific tools and methods in the areas of:

Regulatory Policies

- New Nuclear Plant Licensing
- Nuclear, Radiological, Industrial, and Environmental Safety
- Nuclear Plant Operational Oversight
- Quality Assurance
- Safety Culture

Institutional Performance

- Strategic Planning
- Program / Project Development, Management, and Improvement
- Enterprise Performance Measurement
- Process Optimization
- Succession and Workforce Planning

International Engagement

Domestic and International Benchmarking



Nuclear, Radiological, Industrial, and Environmental Safety

How We Serve

We help reduce nuclear, radiological, industrial, and environmental risk exposure through development of a regulatory policy framework focused on effectively managing your nuclear industry-specific risk profile. The framework is benchmarked against international peers, assessed for policy gaps, and used to develop a risk-based multiyear oversight strategy.



A *StrategyDriven* advisor mapped a large Midwestern utility's corporate risks to their nuclear business unit risks and then to the processes from which those risks could be manifest. Oversight mechanisms for these programs were identified including gaps; providing a basis for a multiyear internal audit assessment schedule.

Our advisor worked with the utility's corporate managers and staff to capture the existing internal audit framework and developed a gap analysis of their risk profile; identifying risks not currently categorized or audited and opportunities for further program enhancement based on industry leading practices.

Only seventy-five percent of the utility's nuclear-related high-risk programs were routinely assessed by either the utility's nuclear quality assurance or its corporate internal audit programs. Addressing the twenty-five percent gap will enable the utility to considerably reduce its safety, reliability, and efficiency risk exposure.

The **StrategyDriven** Difference

Decades of operational 'stood the watch' nuclear risk management and mitigation experience. Co-authored the nuclear industry's operational risk management guidelines and evaluation methods. Proprietary risk to process to oversight mapping tool.



Nuclear Plant Operational Oversight

How We Serve

We assist in the development of regulatory oversight policies and performance standards against which nuclear facility operational performance is assessed. Additionally, we can help you devise and implement the evaluation protocols and procedures necessary to independently audit and enforce these policies.



A *StrategyDriven* advisor participated in the updating of the Institute of Nuclear Power Operations' (INPO) nuclear plant evaluation process and performance objectives and criteria to more specifically focus on the assessment of an organization's cross-functional performance and nuclear safety culture. Our advisor was specifically responsible for the development of the risk management, high-risk decision management, organizational alignment, and normal and emergency plant operations standards and significantly contributed to the development of the nuclear safety culture evaluation process.

Our advisor worked with nuclear industry executives and senior managers to codify those performance standards most critical to safe and reliable operations. The supporting evaluation methodology included direct observation of management meetings and workforce activities, interviews with personnel at all organization levels, reviews of self-assessment and corrective action documents, and the conduct of employee surveys. Information gathered was analyzed using performance models, analytical tools, and personal experience to identify compliance issues and derive opportunities for improvement and recommended corrective actions.

The revised operational standards and evaluation findings provided industry executives with previously unidentified nuclear safety culture and performance issues. Each finding was accompanied by substantiating facts, actual and potential consequences, underlying causes and contributors, and industry performance improvement and best practices insights. This process underlies the nuclear industry's safety culture performance framework.

The **StrategyDriven** Difference

Decades of hands-on nuclear operations, maintenance, engineering, supply chain, work management, and regulatory experience. **Developed the U.S. nuclear industry's plant operations and operational focus guidelines and evaluation methods.**



Safety Culture

How We Serve

We can assist in the assessment of your organization's safety culture and the improvement or development of your safety culture guidelines, focused on desired leadership behaviors, management decisions, and corporate safety program statutes. We can then help translate these safety-first values into day-to-day operating guidelines that are further enhanced with industry best practices, including OSHA's Voluntary Protection Program (VPP) requirements.



A *StrategyDriven* advisor led project management teams of highly experienced industrial personnel in the implementation of the OSHA Voluntary Protection Program (VPP). While in management of ongoing project operations at a \$1.4B, 10,000 employee Regional Maintenance Center, he directly managed and implemented VPP process improvement initiatives..

Our advisor worked with bargaining unit employees and supervisors as a member of management to identify personnel safety concerns, hazards, and organizational climate to foster and develop near and long term improvement plans. Weekly project team meetings, daily safety concerns discussions, and worksite personal involvement facilitated continued process improvement and accountability.

Unambiguous, visible safety improvement plans were developed to increase organizational safety awareness, encourage active employee participation, and instill a positive social safety atmosphere between employees and management. Through added program improvements, employees greatly reduced cultural 'fears' of reprisal when voicing safety concerns to supervisors and management while improving operational efficiencies in cost , schedule, and quality. Organization is now an OSHA 'STAR' site due to its safety improvements.

The **StrategyDriven** Difference

Decades of hands-on industrial operations, maintenance, engineering, work management, training, and regulatory experience. Substantial relational experience working vertically at all levels within organizations to improve operational safety.



Enterprise Performance Measurement

How We Serve

We can work with you to assess and improve your performance measurement system; yielding metrics and reports that are operationally relevant, organizationally consistent, and economically implemented. The resulting system helps improve managerial decision-making, organizational alignment, and individual accountability.



A **StrategyDriven** professional advised a Fortune 200 nuclear utility management team in assessing their organizational performance measurement system; identifying monitoring and communication gaps and developing an improvement plan that included supporting system configuration upgrades.

Through a series of workshops and interviews, our advisor worked with senior station managers to catalog existing performance metrics and reports, recognize gaps to industry leading practices, identify additional measures needed, and develop a phased approach to upgrading the utility's measurement system. A fleet-wide metrics and reports governance program was also developed.

An actionable performance monitoring system upgrade plan was created that, once implemented, will provide executives and managers with the accurate and timely information needed to support effective decision-making. This comprehensive roadmap contained a step-by-step plan for establishing a fully integrated performance monitoring system supported by data collection and processing procedures, application configuration, program governance, and management and employee training.

The **StrategyDriven** Difference

Comprehensive, proprietary collection of U.S. NRC, INPO, WANO, and NEI performance metrics enhanced by broadly benchmarked industry leading practice performance measures. Extensive experience implementing measurement systems.



Succession and Workforce Planning

How We Serve

We help clients enhance their succession and workforce planning programs through pipeline and capability projection, training and development program assessment, and improvement plan design and implementation assistance. Our evaluations identify retention, replacement, productivity, and quality risks while providing leading practice strategies for maintaining full staffing including temporarily filling vacancies with highly qualified personnel.



A *StrategyDriven* advisor supported a Fortune 200 utility's internal audit team assess the succession and workforce planning of key nuclear plant management and employee positions.

Our advisor worked with senior plant leaders to identify management and workforce staffing and experience shortfalls, including the underlying drivers, for positions within the online work management and outage planning organizations. Senior utility manager briefings were conducted on the fundamentals of succession and workforce planning programs and potential near-term solutions to fill existing vacancies.

Our client received foundational insights on how to establish a robust management succession and workforce planning program, including key program elements and execution effectiveness measurement. Recommendations to close positional and programmatic gaps were provided to temporarily alleviate the plant's near-term staffing shortfalls.

The **StrategyDriven** Difference

Responsible for a management rotational program. **Ground-up experience building a nuclear organization's workforce planning program.** Proprietary collection of succession and workforce planning program implementation and evaluation tools.



Domestic and International Benchmarking

How We Serve

We assist clients in the comparative analysis of their operational performance to that of domestic and international peers. Our assessment approach enhances available industry and government data with *StrategyDriven*'s proprietary collection of operational data, metrics, process maps, and organizational charts and further benefits from our advisors' decades of direction performance observations at dozens of domestic and international utilities. The resulting analysis informs integrated future state performance target-setting and outcome achievement monitoring.



A *StrategyDriven* advisor supported a United Kingdom based power generation utility in the comparative operational assessment of its natural gas fired generating stations operations, maintenance, work management, engineering, and supply chain programs against North American and European industry performance and protocols.

Our advisor worked with senior utility leaders, functional area managers, and line organization staff to compare operational program processes and results with those of leading power generation utilities and European program standards. The resulting analysis identified programmatic and performance shortfalls, specified improvement opportunities, and defined future state operational goals.

Client executives and managers gained foundational insights on their generating stations' operational performance compared with that of industry peers. Additionally, they received a three-year resource-loaded performance improvement roadmap specifying the execution, program, and technology enhancements needed to achieve their benchmarking-informed future state goals.

The **StrategyDriven** Difference

Robust, proprietary domestic and international utility performance information enhanced by experienced onsite analysis and evaluation at dozens of utilities. Improvement opportunities tied directly to increased employee efficiencies and operational cost savings.

StrategyDriven's Nuclear Professionals

Nathan Ives



Nathan Ives Principal StrategyDriven Enterprises, LLC

+1 678 313 0150 NathanIves@StrategyDriven.com Nathan Ives is a StrategyDriven Advisory Services Principal with over 20 years of Nuclear industry and consulting experience. His experience includes 12 years of advisory work within the Nuclear industry specializing in strategic planning, resource management, project management, managerial decision-making, operational risk management, organizational alignment, nuclear safety culture, and operator performance. Nathan has advised executives and senior managers at numerous utilities on improving generation fleet and individual plant operating performance. He authored the nuclear industry's risk management, high-risk decision management, and operations performance guidelines and evaluation methods.

Nathan also has 8 years of experience managing and supervising (military and commercial) nuclear plant operations, online and outage work management, and maintenance and held the U.S. Nuclear Regulatory Commission's Senior Reactor Operator license and U.S. Navy's Chief Nuclear Engineer Officer qualification.

Selected Professional Experience

- Domestic and International Nuclear Plant Operations Assessments – led teams of highly experienced nuclear utility personnel in the performance and nuclear safety culture evaluation of over two dozen domestic and international nuclear plants. Partnered with executives and senior plant managers to devise and implement performance improvement plans
- Nuclear Utility Internal Audit Lead Auditor served as an audit leader at two of the largest U.S. nuclear utilities; assessing performance of online work management, supply chain, preventive maintenance, outage planning, and configuration management programs. Also supported mapping enterprise risks to core nuclear business processes including the identification of internal and external oversight organizations and their activities
- U.S. Nuclear Industry Operations Performance Standards
 Development led the U.S. nuclear industry's effort to redefine
 its operational and nuclear safety culture performance standards;
 significantly contributing to several publications against which
 nuclear power plant performance is evaluated including: INPO's
 Performance Objectives and Criteria, Principles for Effective
 Operational Decision-Making, Guidelines for the Conduct of
 Operations at Nuclear Power Stations, and Nuclear Safety and
 Decision-Making in Changing Times
- U.S. Nuclear Industry New Nuclear Plant Construction Board Member – served as a member of NEI's New Nuclear Plant Executive Taskforce and Nuclear Industry Infrastructure Committee in 2005. Worked with industry leaders to develop and implement programs supporting new plant construction

Education

- MBA, Kennesaw State University, 2004
- BS (Physics), United States Naval Academy, 1992

Professional Certifications

- U.S. Nuclear Regulatory Commission, Senior Reactor Operator License
- Project Management Institute, Project Management Professional Certification

StrategyDriven's Nuclear Professionals

Greg Gaskey



Greg GaskeyPrincipal
StrategyDriven Enterprises, LLC

+1 360 340 6540 GregGaskey@StrategyDriven.com Greg Gaskey is a StrategyDriven Advisory Services Principal with over 20 years of Energy Industry operations, maintenance, and large-scale program and project management experience. An experienced Operations Manager, he oversaw critical Department of Defense programs, projects, and business lines spanning multiple engineering maintenance disciplines including mechanical, electrical, hydraulic, and instrumentation and controls systems. He possesses extensive knowledge of initial system design development, lifecycle maintenance planning and optimization, existing system modification and modernization, and end-of-life disposal. As a Lean Champion, Greg has extensive experience in Lean Six Sigma program introduction, implementation, and principles use in process analysis and improvement.

Greg has over 10 years experience in power generation and environmental Emergency Management Operations, including environmental and terrorism incident response coordination and Emergency Operation Center (EOC) oversight for the U.S. Navy's largest regional maintenance facility.

Selected Professional Experience

Major Projects Superintendent – led 1800 personnel in the \$325 million maintenance and modernization overhaul of a NIMITZ Class aircraft carrier and 500 personnel in the \$90 million overhaul of a second NIMITZ Class aircraft carrier on location in Japan. Responsible for the safe, on-time, on-schedule execution of the projects, from planning phases through completion and delivery to the customer. Proactively led personnel in the adaptation and implementation of OSHA VPP principles characteristic of a VPP STAR site rated organization. Managed all aspects of quality assurance and quality control oversight and trade skill worker safety programs.

Education

- Master of Engineering Management, Old Dominion University, 2008
- Master of Science (Electrical Engineering), Naval Postgraduate School, 2000
- BS (System Engineering), United States Naval Academy, 1992

- Deputy Operations Officer, Puget Sound Naval Shipyard Led over 5000 personnel in the safe oversight and direction of all major projects across a \$1B industrial maintenance organization; included on-sight and direct supervision of maintenance and modernization projects on aircraft carriers and submarines
- Regional Maintenance Manager Operations Manager Directly led trade skill level teams in the safe execution of hundreds of nuclear maintenance jobs across 18 different nuclear submarine platforms over a 15 year period; ensuring all work was completed safely, within regulatory compliance, on time, and within budgetary constraints.

Professional Certifications

- U.S. Navy, Industrial Project Superintendent
- U.S. Navy, Lean Six Sigma Green Belt Certification
- U.S. Navy, Level 400 Incident Commander FEMA Incident Command System

Nuclear Oversight Development Accelerators

Developed by StrategyDriven's nuclear professionals and validated against industry regulations, standards, guidelines, and best practices, these assessment tools enable a qualified and quantified assessment of an organization's safety culture:



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- Strategies for Evaluating Operational Safety
- Strategies for Evaluating High-Risk Decision Management Programs
- Strategies for Evaluating Operational Alignment

- Strategies for Evaluating Management's Establishment of a Safety Culture
- Strategies for Evaluating Management's Emphasis of Safety Focused Behaviors and Decision-Making
- Strategies for Evaluating an Organization's Problem Identification and Correction Culture
- Strategies for Evaluating the Control of Operational Risks
- Strategies for Evaluating Operational Decision-Making

Nuclear Industry Thought Leadership

StrategyDriven's nuclear professionals have long supported the nuclear industry through co-authorship of performance improvement articles and nuclear industry standards and guidelines documents.



Responding to a Black Swan, Ernst & Young LLP, August 2011

Principles and protocols for responding to unexpected, catastrophic events.



INPO 03-004, *Performance Objectives and Criteria*Publication documenting the standards for corporate and station performance in the operation and maintenance of nuclear electric generating plants.



Nuclear Renaissance and the Global Supply Chain, Public Utilities Fortnightly, December 2010

Co-authored by a StrategyDriven Principal, this article explains to to avoid the pitfalls and realize the benefits arising from an increasingly global nuclear supply chain.



Principles for Effective Operational Decision-Making, INPO 2001

Principles-based document on risk informed managerial decision-making; published in six languages and serving as the performance model at nuclear plants worldwide.



Reducing Lifecycle Expenditures, Public Utilities Fortnightly, May 2009

Total cost of ownership accounting optimizes long-term costs



INPO 01-002, Guidelines for the Conduct of Operations at Nuclear Power Stations

Document establishing the operational performance standards, based on industry leading practices, for nuclear electric generating stations.

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StrategyDriven refers to the family of organizations comprising StrategyDriven Enterprises, LLC. For more information about our company, please visit www.StrategyDriven.com.

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