

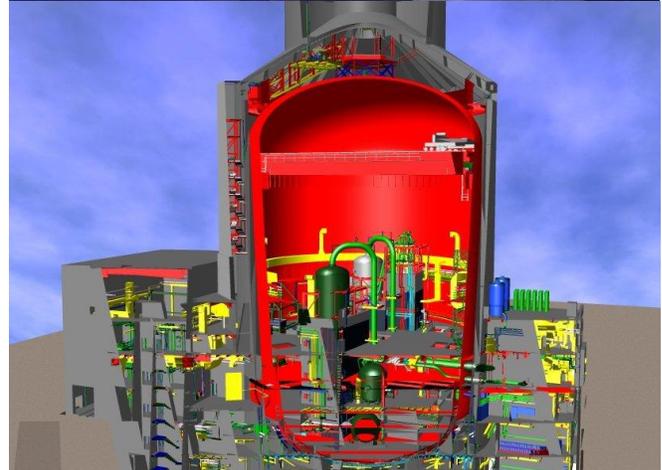


ENGINEERING

HukariAscendent has a network of personnel with substantial experience in providing engineering support to the commercial nuclear industry. Our personnel have worked in a variety of nuclear industry settings, from construction to facility operations to decommissioning activities, providing HukariAscendent clients with exceptional value through innovative, cost-effective solutions. The HukariAscendent network provides access to over 3000 engineers and industry professionals while maintaining the efficient, low overhead of a small veteran-owned business.

HukariAscendent's extensive engineering support for commercial facilities includes:

- Project Engineering
- Systems Engineering
- Design Engineering
- Project Management
- Radiological Engineering
- Maintenance Engineering
- Nuclear Engineering
- Reliability Engineering
- Environmental Engineering
- Field Engineering
- Electrical Engineering
- Chemical Engineering
- Civil/Structural Engineering
- Fire Protection Engineering
- Configuration Management
- Project Controls
- Instrumentation and Controls
- D&D Engineering
- Facility Condition Assessments



Project Performance and Customer Satisfaction

At **HukariAscendent**, we recognize that it is not only our reputation that is on the line, but that of our clients as well. Our corporate mission is to provide only the highest quality service and long-term value to our customers through well-defined, proven methodologies and experienced, dedicated, and innovative staff. Our mission success is affirmed by the satisfaction expressed by our customers (sites and companies).

Black & Veatch · URENCO · Duke Energy ·
Shaw–AREVA MOX · AREVA NP
CH2M Hill International Limited
Arizona Public Service · Xcel Energy
Energy Northwest · Shine Medical Technologies
MNES

Technology Assessment

HukariAscendent has performed detailed reviews of each new reactor system being offered in the United States (AP-1000, ABWR, ESBWR, EPR, APWR) as part of our involvement in the emergence of next generation of commercial nuclear power. These reviews included both the assessment of each new design on its own merits and a technical comparison of the competing designs.

HukariAscendent helped develop the comprehensive approach for performing the evaluation which included a weighting and scoring structure of numerous related technical attributes. Other technology areas assessed included each reactor project team, project risks, manufacturing, and regulatory acceptance and review. Specific examples of technology review facets include:

- Design margins
- Safety margins
- Status of design completeness and certification
- Radiation exposure
- Staffing levels
- Technology and design uncertainties
- Robustness of project controls
- Materials
- Technical Specification flexibility
- Information management
- Schedule credibility
- Equipment lead times
- Construction simplicity
- Safety risk
- Maintenance implications
- Site development factors
- Fuel cycle and fuel storage

A total of approximately 36 technical attribute areas were formally reviewed, and consensus scores established regarding the absolute and relative merit of each technology. The client utility has characterized the effort as the most detailed evaluation of new reactor technology yet undertaken by a nuclear utility.

Site Development, Engineering, and Management

HukariAscendent provided a Project Engineering Manager as part of an Owner's Engineer organization. Responsibilities included:

- Development of site information to support the design details for nuclear infrastructure and reactor systems
- Conceptual design development
- Site Feasibility Study
- Development of a specific site configuration including new security protected areas, laydown and parking for construction, permanent warehouses and administration buildings
- Development and design of balance of plant systems
- Wetlands relocation planning
- Structural engineering, instrumentation and control, electrical, and mechanical engineering
- Cost estimating
- Optional construction techniques available for deployment
- Site Development Plan, planning, long lead time procurements
- Development of the overall site Construction Plan and integrated schedule
- Quality assurance

Engineering, Nuclear Safety, and Licensing Support – URENCO National Enrichment Facility

HukariAscendent engineering support includes:

- Developed the Fundamental Nuclear Material Control Plan
- Developed implementing procedures (nuclear material physical inventories, nuclear material shipments and receipts, nuclear material measurements and measurement control, and statistical data analysis to ensure compliance with NRC regulations)
- Helped develop the Criticality Safety Program in compliance with regulatory requirements and license
- Assisted in the design of measurement facilities and equipment
- Supervised the construction of the Technical Services Building from site preparation to building completion
- Prepared Quality Level-1 nuclear safety calculations in air dispersion modeling, source term development, and derived postulated post-accident leak rates from natural phenomena events such as seismic, tornado, tornado missile, and high winds
- Assumed a lead/supervisory role in the Licensing Department