FUEL VENDOR-INDEPENDENT ENGINEERING SERVICES

Studsvik is the global leader in the development and support of fuel vendor-independent reactor analysis. We offer a full suite of software and engineering services to support operating utilities, fuel vendors, safety authorities, and research organizations.

Put Our Experience to Work

Studsvik offers a wide range of services to support nuclear fuel analysis efforts, such as independent core reload design, cycle length economic studies, multi-cycle optimization and verification services.

With over 30 years and 1000+ operating cycles of experience in nuclear fuel analysis, Studsvik software remains the industry standard for light water reactor analysis.

We have provided cycle design reviews, alternate core loading strategies, fuel bid evaluations and cask loading optimization for customers around the world.

Examples of our service capabilities include:
- Reactivity insertion analysis
- Uncertainty analysis methods for assessing criticality of spent fuel
- Independent startup analysis
- Independent fuel bid evaluation
- Cycle length and multi-cycle core design optimization
- S3K/System code linkage (RELAP, TRACE, etc.)
- AP1000, EPR reactor studies
- Secondary Source evaluation
- Fuel failure analysis
- Refueling optimization

Independent Fuel Bid Evaluation

With significant fuel costs and changing cycle strategies, it is important for you to know that your fuel investment will yield the most energy possible.

Our fuel vendor-independence allows us to perform fuel bid reviews that consistently compare each proposal using the same industry-leading methods.

Next-Generation Analysis

For organizations exploring new, advanced plant designs for future construction, Studsvik can provide engineering services and consultation at every phase of analysis.

We can build or review a fuel vendor-independent core model of the proposed core design, perform transient calculations to assess reactor dynamics, and even assist in design certification.

Software as a Service

We now offer many of our software products as "hosted solutions." Studsvik will remove the IT burden of managing software and provide secure connections to run our fuel analysis software on our servers.

Refueling Optimization

Studsvik has developed tools to optimize BWR refueling shuffles to shorten refueling outages.

We can help get the plant from shutdown to startup with fewer bridge moves, performing full shutdown margin calculations at every intermediate step.

Safety Analysis

Studsvik will perform reactor licensing and safety analysis calculations using our licensing-grade steady-state and transient core simulator software.

We can analyze anticipated operational occurrences (AOO) and plant transients. We can also address issues specific to BWR operations, such as stability and thermal margin calculations, including OLMCPR and SLMCPR.

Spent Fuel Analysis

Studsvik has performed several cask loading optimization studies for utilities concerned with minimizing partially loaded dry storage casks.

Our spent fuel analysis tools accurately calculate decay heat, radiation source terms, and full isotopic reports for fuel in the spent fuel pool using the actual operating history and full 3D description of the fuel.

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Reactivity Management

Studsvik services can help engineers analyze past events and plan for future maneuvering using real plant data.

Our reactivity management tools include advanced, 3D core models, and address emerging issues like SOER 07-01 and INPO's Zero-10 PCI initiative.

Our team of engineers has supported several plants by providing alternative power recovery schemes, alternative downpower paths, and alternative boration strategies, all of which can improve efficiency and increase revenue.

CMS Model Development

For utilities struggling with fewer available engineering resources, Studsvik can provide you the benefits of fuel vendor oversight while allowing your engineers to focus on analysis.

Studsvik will build, benchmark, and maintain your core model. The Studsvik core model can be used with S3R, our cycle-specific training simulator core model, or GARDEL, our automated reactivity management software.

We also offer a range of model review, benchmarking, and optimization solutions to customers who currently maintain their own independent core model for reactor analysis.

Unparalleled Training

Studsvik has extensive experience in helping our customers implement our products and get up and running quickly. Introductory, refresher and advanced training courses are offered throughout the year. Studsvik International User Group Meetings give our customers the opportunity to build relationships with Studsvik product developers and engineers while learning about new techniques and products.

Studsvik's technical support is built on putting the needs of our customers first. Our nuclear engineering staff are here to help.

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