



## Project Summary

### Organization

NuStart Energy Development, LLC

### Solution

Power Generation

### Location

Washington, D.C.

### Project Objectives

- Utilize the new Nuclear Regulatory Commission (NRC) combined construction and operating license (COL) application to generate the first-ever COL for a nuclear power plant. The COL will then become a template for future licensing and construction by NuStart members
- Manage the information associated with licensing and designing a new nuclear power plant across multiple organizations

### Products Used

- eB Insight
- eB Nuclear applications

## Fast Facts

- The NuStart consortium is made up of the 10 utilities and two reactor vendors
- A NuStart member, Southern Company, obtained the first-ever COL in 2012
- eB provided NuStart with an information management system with configurable applications, granular security, and embedded version control

## ROI

- eB Nuclear supported complex data security requirements that allowed members to collaborate while protecting technologies from two reactor vendors
- DOE and NRC regulations were modeled and linked directly to inter-related documents in eB Nuclear for streamlined compliance
- eB Nuclear has permitted NuStart professionals to meet stringent application demands to help obtain the first-ever COL

# NuStart Collaborates to Obtain the First-ever Nuclear Combined License

Bentley's eB Insight Enables Efficient Management of Information Assets, Providing Data Security, Control, and Configurability

## Securely Managing Information across Multiple Offices and Organizations

NuStart Energy Development, LLC was formed in 2004 by six member companies with a shared vision of promoting nuclear energy development. NuStart's membership soon grew to include ten utilities, which formed the NuStart consortium along with two reactor vendors, which was created with the goal of obtaining the first combined construction permit and operating license (COL) from the Nuclear Regulatory Commission (NRC). This first COL, once obtained, would then become a template for the other consortium members to use moving forward, ultimately saving all members time and money. The consortium's second goal was to complete the design engineering for the two selected reactor technologies. Through its use of Bentley's eB Nuclear applications, NuStart was able to collaborate more effectively, speeding regulatory compliance to enable it to meet application demands and obtain, in 2012, the first-ever COL license.

NuStart management understood it needed a reliable and efficient way to manage the tremendous amount of information associated with licensing and designing a new nuclear power plant. With ten member companies as well as two reactor vendors, NuStart knew it needed a solution that would enable it to connect multiple offices and organizations. In addition, NuStart knew a web-based platform would facilitate the anticipated travel demands. In 2004, NuStart began with an online collaboration tool that housed databases and provided document management. This system, however, lacked the necessary security, comprehensive records management capabilities and configuration control features for a project of this scope.

NuStart quickly realized that it needed a more robust solution. Richard Grumbir, AP1000 R-COLA manager at NuStart, explained: "Because of our infrastructure and the fact that we are very geographically diverse, we really needed a system that supported a virtual office environment."

## The Need for Comprehensive and Configurable Document Control

NuStart knew it needed comprehensive document control features to enable its executives and engineers to search,

review, sort, and store information. NuStart's Project Support Lead Joshua Higby explained: "We wanted something with robust capabilities for performing document reviews and a solution that offered security features at a variety of levels.

We liked the superior level of detail eB Nuclear offered with regard to document changes, as well as the configurability of the application. We looked at a number of solutions and found that eB Nuclear suited our particular needs the best."

By implementing eB Nuclear, NuStart also gained automated version control, including the ability to track details such as who reviewed a given document, what changes were made, and what notes were added. "Before eB Nuclear, documents were just emailed around. This created the potential for versions to get out of synch or that versions would be lost. eB Nuclear automatically enforced version control. It kept users from losing changes or overwriting important information by accident, and preserved older versions for later retrieval. Basically, it really cut down on the human error factor," said Higby.

## Flexible, Granular Security

The consortium's data security requirements were also particularly complex, requiring complete control over security access. In addition to the traditional security demands of a nuclear facility, NuStart had two nuclear reactor vendor participants whose proprietary technologies were competitive at some levels. NuStart also needed to stay compliant with the U.S. Department of Energy (DOE) regulations.

eB Nuclear enabled NuStart to easily restrict access at a very detailed level without sacrificing security. It was able to protect vendors' sensitive information, and comply with NRC regulations, while maintaining productivity and collaboration. "We had various levels of security that we had to impose, so we needed a flexible system that would configure granular levels of security access based on the user role. We needed security between the owner members and between the reactor vendors," said Higby.

## Improved Information Accessibility

Shortly after deployment of the eB Nuclear there was a tremendous amount of work proceeding with the COL application. NuStart began managing both the revisions of the license

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*This module has worked out great for us and we are very happy with it."*

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applications that the organization was submitting as well as changes to the design control documents for one of the reactor vendors. "Filing the COL application for NRC review involved more than just a single document. There were literally hundreds of documents with thousands of comments that were made and reviewed in order to improve the document before filing with the NRC. We needed to ensure that the results of all of our collaborative work were included in the final application. We also needed to manage and respond to hundreds of requests for information from the NRC," said Grumbir.

eB Nuclear has also become NuStart's records management system and the organization's platform for working collaboratively. All of the organization's document reviews, NRC applications, and licensing information are handled by eB Nuclear.

Added Higby, "The design control elements are very large files with many associated components. These large structured documents had to be placed in eB Nuclear in a way that would maintain the hyperlinks built into the files to facilitate navigation through the documents. We also needed to easily import and export information and upload and download various versions of these documents into and out of eB Nuclear. This had to be done quickly and easily, so our people could review the documents efficiently."

eB Nuclear provided the needed efficient information accessibility, enabling users to quickly and easily import and export

files and folders while retaining their documents, structure, and internal links.

### **Quick and Easy Configuration and Customization**

NuStart was impressed by the flexibility of eB Nuclear. The system could be easily configured to match their business processes, which allowed it to start using the software right away without custom coding. Yet it was also easy to customize when necessary. NuStart needed additional document review functionality that was not part of the eB Nuclear system. NuStart designed a custom review application to add this functionality and commissioned Bentley to create a custom plug-in, which became a significant part of NuStart's use of eB Nuclear. "With eB Nuclear and Bentley's help, we actually created our own document review application. This module has worked out great for us and we are very happy with it," Higby added, "Of course, we designed it, so we would expect it to meet our needs!"

### **Moving Forward**

In February 2012, NuStart member Southern Company's COL application was approved and construction is proceeding on the first new nuclear units in 30 years. With NuStart's goal complete, personnel are beginning to shift from an operations mode to a close out and transfer mode. NuStart will continue to use eB Nuclear until final wrap up in 2012.