



Case Study
Engineering Innovations
December 1, 2009

Space Jam

Project managers face many challenges when deciding how best to complete an assignment. Equipment costs, labor rates, site locations, and deadlines all must be considered when faced with crucial project assessments. Real estate size can also impact decisions. When the available property is relatively small, innovative ideas and creative thinking are required for finding solutions that meet customer needs. As an original equipment manufacturer, NSG has the necessary insight to solve today's complex problems and offer solutions in a timely manner.

Conoco Phillips knows from personal experience that constructing new equipment on a small piece of land can be challenging. In October 2007, the company decided to expand their pump station in Lysite, Wyoming. Necessary equipment included new compressors, transformers, motors, motor starters, and switchgear, as well as new buildings to house the equipment. However, there were two significant challenges – a limited power supply and a requirement that the switchgear line-up be less than 45 feet in length.

National Switchgear (NSG) was one of several switchgear manufacturers that Conoco Phillips requested bids. Because of the limited power supply, Conoco specified the use of soft-start motor starters. However, NSG engineers realized that if the soft-starts were used in their standard position, the switchgear line-up would not meet the size restrictions specified by Conoco.

NSG's team of experienced engineers began working towards a solution. After analyzing the equipment and housing design, the NSG team decided to create a switchgear-style arrangement of the soft-starts that included installing the power electronics on a roll-out cart. By rotating the soft-starts, they were able to reduce their widths by 3 ½ feet. This modification reduced the length of the switchgear line-up by 14 feet, allowing for a size reduction of the building in which the gear would be installed.

NSG offered a complete package to Conoco Phillips that included low voltage motor control, medium voltage switchgear, and soft-starts all installed in a pre-fabricated metal building. Additionally, NSG estimated an equipment delivery 12 weeks earlier than the competition.

After reviewing the NSG plans, Conoco Phillips promptly awarded the bid to NSG and later called upon the company's field service department to provide the necessary start-up services.

Due to extensive experience in the power industry, NSG found a solution to Conoco's dilemma, provided them with the required equipment and services, and fostered a healthy business relationship that continues today.