When completed in 2013, the $2.2-billion Ivanpah project will be the largest solar thermal power tower system in the world. Located on 3,500 acres of desert near Ivanpah Dry Lake in California, the three-unit system will produce solar electricity for more than 140,000 homes in the Golden State (377 MW nominal, 392 MW gross). Domestic suppliers make up the majority of Ivanpah’s supply chain, covering 18 states.

DEKKER Provides Powerful Experience and Technology for Ivanpah

Although the Ivanpah Solar Electric Generating System is located just about in the middle of nowhere in the Mojave Desert, it is one of the most closely watched power generation projects in the country.

Ivanpah is drawing headlines not only because of its collaboration of high-profile developers – Google, NRG Energy and BrightSource Energy – but also because the project is aiming for the highest standards as a durable model of economic and environmental benefits.

As a result, Ivanpah is also casting a spotlight as bright as the desert sun on its team of world-class suppliers, including DEKKER Vacuum Technologies. DEKKER supplied six daytime condenser exhausters (model DVW1600) and three nighttime holding units (model DVW0300) for Ivanpah.
No Mistaking DEKKER Experience
“The project was a challenge,” admitted company president and CEO Rick Dekker. But through many years of experience with the power generation industry, the project management team was prepared and confident. The team included George Harding and Jim Freeman, well-respected veterans of vacuum technology. DEKKER responded to the Ivanpah bid with some innovative approaches.

One innovation was needed to counteract an unusual aspect of the harsh environment – not the heat of the desert, but the cold. The pumps would occasionally face freezing winter temperatures, which can drop below zero in the Mojave. Heat trace was proposed to prevent the water in the pumps from freezing, but the insulation would be exposed to the elements, creating maintenance problems. Also, insulation would create additional thermal load that would make the units less efficient.

DEKKER proposed instead a unique solution which eliminated the need for heat tracing. This eliminated both the “hot” and “cold” performance concerns.

The most significant surprise of the DEKKER proposal, however, was when the team came back with a bid to use a more efficient design than others due to a number of factors, including operation at altitude. The customer inquired how we were able to offer a more efficient design, which our engineering team clarified, resulting in reduced operating expenses for the equipment which is especially critical in solar thermal installations. The DEKKER team was able to save the customer money based on their years of expertise not only in the Power Industry, but in providing vacuum solutions for a wide variety of industries.

DEKKER proved with Ivanpah that when it comes to vacuum technology in the power generation industry, knowledge is power. For more information on how DEKKER can be the “Perfect Choice” for your power generation needs, including new construction, replacing obsolete pumps or replacing jet ejector technology, contact a DEKKER professional or visit www.DEKKERpower.com or www.DEKKERvacuum.com.