

Solar oil project debuts in Kern

John Cox, Bakersfield Californian, 2-25-11

Kern County's international reputation as a leader in the field of enhanced oil recovery took a step into the solar age Thursday with the unveiling of a McKittrick demonstration project that could anchor certain costs associated with producing thick, hard-to-get crude considered key to the industry's future.

Despite overhead clouds that threatened to obscure the project's potential, attendees from around the world marvelled at GlassPoint Solar's first solar steam generator, a greenhouse-looking installation that consists mainly of ultra-light parabolic mirrors continually tilting to focus the sun's rays on a tube of steam that is then injected underground to make heavy oil flow more easily.

Touted as the world's first commercial solar enhanced oil recovery project, the classroom-size installation on an oil field leased by Denver-based Berry Petroleum Co. is too small to fuel many local "steam flooding" oil operations, the largest of which generate as much as 85 times more heat than the new demonstration project.

Fremont-based GlassPoint plans to use the project as a test, monitoring the plant's efficiency as it ramps up to operational independence over the next few months. The company hopes to build similar but much larger steam generators to customers in Kern and around the world.

GlassPoint CEO Rod MacGregor said that by lowering production costs, the technology will allow companies to exploit oil fields whose remaining reserves are otherwise too expensive to tap.

"If you move the economics you can extract more oil," he said.

Other speakers at Thursday's event echoed that point. Rep. Kevin McCarthy, R-Bakersfield, additionally applauded GlassPoint's ability to develop the project without using government money. The CEO of the California Independent Petroleum Association, Rock Zierman, added that growing domestic oil production reduces need for imported fuel.

Most of the world's enhanced oil recovery projects -- including technologies pioneered in Kern County -- generate steam by burning natural gas or other fuels such as agriculture waste, all of which fluctuate in price and pollute the air to one degree or another.

GlassPoint's system requires no fuel other than the sun's rays, and has an estimated lifespan of about 30 years. Its glass housing protects the mirrors against wind and dust, and an automated window washer is expected to reduce if not eliminate the need for maintenance.

Two local companies -- TJ Cross Engineers Inc. and PCL Industrial Services Inc., a specialized construction firm -- were involved in helping design the installation and built it in less than six weeks.

PCL business development manager Mark Pittser said the company, which builds steam generators in and around Bakersfield, joined GlassPoint's project partly because it "wanted to be part of something that was green."

He added that TJ Cross and his team contributed innovations to the installation, such as the addition of moisture barriers to keep the surface of the glass free of vapor.

"It was a team effort," he said.

A technology advisor at Petroleum Development Oman LLC, Syham Bentouati, told GlassPoint's audience that solar steam generation was a "no-brainer" that nevertheless requires proper conditions.

GlassPoint estimated that its solar project can deliver up to 80 percent of a steam flooding oil production site's annual needs. The remaining 20 percent would continue to be fueled by natural gas or other fuel.

Taft oilman Fred Holmes, president of Holmes Western Oil Corp., complimented GlassPoint on its new plant, calling it simple, environmentally friendly and apparently maintenance free.

Holmes also said he was aware that "a lot" of local oil producers are watching to see whether the technology deserves to be scaled up to handle high-volume production. Holmes Western is among those watching, he said.