Energy's Felix and Oscar: Can Oil and Solar Share Space in West Texas?

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West Texas may be the next big area for solar power. But first the solar industry needs to figure out how to grow alongside the oil industry.

Here's the problem: Solar developers need to blanket large areas with solar panels. But some of the best areas in the United States for large-scale solar farms are atop the Permian Basin, a prolific oil region. Oil companies own a lot of mineral rights in the area, which gives them the right under Texas law to set up drilling rigs and punch a few holes.

Both industries are interested in growing in West Texas. The state's power grid expects several gigawatt's worth of solar installations in the next 15 years. And oil output in West Texas shows few signs of letting up.

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Given this mutual interest, it's worth considering a recent land deal in Pecos County, Texas. Recurrent Energy, a subsidiary of Canadian Solar Inc., plans to develop a 157.5-megawatt solar farm. Apache Corp., a Houston oil company, owns the mineral rights underneath most of the property and has drilled about a dozen wells in the vicinity.

According to both companies, a deal has been struck that will allow the solar farm to be built, but preserves Apache's ability to construct needed roads, drill wells, lay pipes and install tank batteries.

Tim Custer, Apache's vice president of land and government affairs, said negotiations were difficult. "At one point we almost agreed to disagree," he said. Seth Israel, Recurrent's vice president of land acquisitions and permitting, said the sides needed to understand each other's needs. "We're not an expert in oil and as they are not an expert in solar. So a lot of time was spent educating each other," he said.

Ultimately, Recurrent agreed not to develop 300 acres for future oil development. Custer also said Apache was "compensated nominally" for agreeing to not develop oil infrastructure on an additional 980 acres, allowing Recurrent to put solar panels there.

Neither Apache nor Recurrent would disclose the financial terms and details weren't spelled out in the press release. Recurrent said that its agreement was specific to the Pecos County site and shouldn't be seen a template for future oil-solar land deals.

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These kinds of surface accommodation agreements have cropped up before to balance oil exploration with agricultural development or wind farms. Sharing space could be a bigger problem for solar developers than oil drillers, in large part because in Texas and most other states, minerals are the dominant estate and decades of legal precedence give the oil company the right to utilize the surface to drill its wells.

Overall, the Roserock solar farm will spread across 1,300 acres and hold 700,000 solar modules mounted on stanchions. That's large enough to hold the National Mall plus the Lincoln Memorial, the Capitol and Washington Monument grounds. Apache plans to utilize horizontal drilling from centralized pads; this allows them to send wells down and then out, up to a mile and a half from the drilling pad. If the oil prospect, known at Apache as the Lobo Hueso, pans out, Apache will literally be extracting oil from underneath the solar farm. Construction has already begun and the facility is expected to be up and running by the end of next year.

The next challenge may arise if and when Apache begins to drill wells in the dusty landscape. The truck traffic could kick up considerable dust, which could interfere with solar collection. That issue – and any Apache obligation to water the roads to keep dust levels down – was not including in the surface accommodation agreement.

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