

Davidson County Solar Farm

Lexington, North Carolina

Keller used a high-frequency variable moment vibratory hammer to complete the first 4-MW phase of a new single-axis tracking solar energy farm that would provide clean, renewable energy to the Duke Energy grid.



The project

The first 4-MW phase of a new single-axis tracking solar energy farm that would provide clean, renewable energy to the Duke Energy grid covered approximately 55 acres of the ultimately 17.2-MW, 200-acre site. Driven pipe piles installed to a stringent vertical height and location tolerance of 1/16-in. were specified to support the solar tracking panel modules.

The challenge

The tight pile tolerances and a 200/day pile driving schedule through hard, residual soils while working near solar module installation crews required a streamlined work effort and high attention to detail.

The solution

Keller used a high-frequency variable moment vibratory hammer to meet the installation schedule in the hard, residual soils. A skid-steer equipped with a grapple allowed for immediate placement of the galvanized pipes in front of the installation rig for continuous production. Laser level quality control measures verified that pile tolerances were met. Approximately 5,800 12-ft-long piles spaced at 20 ft on center were installed for the project.

Project facts

Owner(s)

SunEdison

Keller business unit(s)

Keller

Main contractor(s)

Confidential

Engineer(s)

Confidential

Solutions

Deep foundations

Markets

Power

Techniques

Driven piles

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