### RENEWABLE ENERGY OPPORTUNITIES

Vermeer







## FOR LAND-CLEARING



Clearing the land to make way for a new solar farm can be quite the process of removing obstacles such as trees, stumps, brush and other objects that may prohibit the land from being used to create alternative energy. For this type of work, Vermeer offers a complete lineup of wood processing equipment.

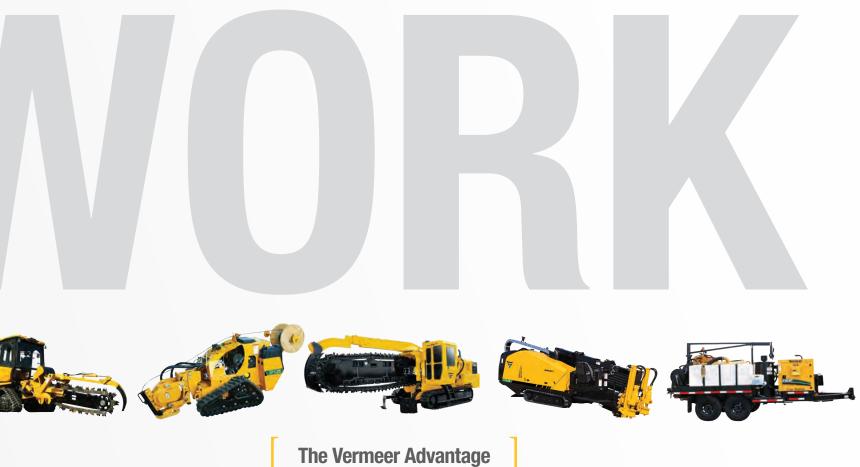
• Vermeer tub grinders are designed to handle stumps, regrind, and high-volume wood recycling and mulch operation.

### The Vermeer Advantage

- If trees need to be removed, Vermeer whole tree chippers offer you a mobile, maneuverable, whole-tree solution to chip wood efficiently.
- Vermeer horizontal grinders are designed to tackle large-scale land-clearing, right-ofway and composting projects and are built to power through tough materials.



Utility installation is critical to the development of solar farm installations. To link these new sites to the nearest overhead and underground electrical grids, you need to be able to work in the most rural, remote areas and in a range of ground conditions — from hard rock to clay and cobble. Vermeer offers a full range of utility installation equipment.



• Built hard-nosed to power through a variety of ground conditions, from soft soils to abrasive rock, Vermeer trenchers vary in size and are chosen based on ground conditions and required depth of line installation.

• Specialized models, like Vermeer cable plows, can help make efficient work of utility installations with minimal ground disturbance.

• Vermeer rockwheel trenchers are specifically engineered to cut through rock, concrete and other tough surfaces.

• Vermeer offers a wide range of horizontal directional drills (HDDs) well-suited for electrical installations on solar farm sites in tight spaces and challenging soil types — including small-diameter bores in rocky ground conditions.

• If site requirements dictate no hand digging, Vermeer trailer- and truck-mounted vacuum excavators and hydro vacuum equipment are designed to soft dig and pothole in a variety of soil conditions.

## FOR INSTALLATION



Constructing the actual solar panels is a multi-step process: First, the piles need to be laid and driven into the ground. Second, the racking needs to be assembled to the piles. And finally, the solar panels can be installed on the racking. Precision and efficiency are extremely important in the equipment installation phase, and Vermeer installation equipment meets the challenges of these jobsites.  Vermeer mini skid steers and compact articulated loaders (ATX) are a "jack of all trades" tool to have onsite, thanks to their compact maneuverability and material handling capabilities.

### The Vermeer Advantage

 Vermeer pile drivers are engineered with specialty features like GPS and the capability to auto plumb so you can move from pile to pile accurately and efficiently. An optional point-to-point system on the PD10R pile driver can also help improve jobsite efficiency and reduce the number of steps needed from the operator to complete the install. • With Vermeer mini skid steers and ATX, crews can efficiently spread out the rackings and begin bolting them together, completing the rest of the equipment installation steps needed to get the solar panels ready for operation.

## FOR SITE MANAGEMENT

During the construction process, an incredible amount of wood waste, particularly from equipment pallets, is created, which then needs to be cleaned up and managed. A considerable amount of equipment muscle is required to handle processing and recycling the organic waste into useable material.



 Designed to handle stumps, regrind and high-volume wood recycling and mulch operations, Vermeer tub grinders are loaded with innovative features to help improve efficiency.

### The Vermeer Advantage

- Vermeer horizontal grinders are offered in a variety of configurations to efficiently process logs and other organic materials into valuable end products.
- Once the mulch is produced, Vermeer mini skid steers and ATX can be used to spread bedding underneath the solar panels, helping with erosion control and contributing to the farm's green efforts by reusing woody materials for landscaping. If not used for landscaping, the mulch materials could also be hauled away for disposal.

ATX720 COMPACT ARTICULATED LOADER (ATX)

ATX720 / //

## **INCREASING OUR WIND**



Wind turbines are needed to capture the kinetic energy produced by the wind and turn it into electricity. Construction of wind farms requires a variety of equipment to develop these sites, connect them to the grid and to keep them up and running. Vermeer offers reliable equipment solutions that allow you to efficiently work in this application.

 With a range of size and power offerings, Vermeer HDDs help utility contractors tackle jobs in tight spaces and challenging soil types.











### The Vermeer Advantage

- Vermeer vibratory plows are versatile machines that meet the needs of underground utility contractors installing electrical services onsite.
- Cut through some of the world's toughest landscapes with Vermeer trenchers, designed to take on large-scale utility installations and other heavy-duty trenching tasks.
- When working in heavy brush or where trees need to be removed, Vermeer horizontal and tub grinders and whole tree chippers can efficiently clear the way.



16 RENEWABLE ENERGY OPPORTUNITIES

# THE EARTH'S

Geothermal energy is used for heating and cooling purposes, harnessing the earth's energy to generate clean electricity. The Vermeer lineup of equipment and solutions continues to evolve in order to meet the demands and challenges of these sites.



### **The Vermeer Advantage**

• Conquer difficult road and river crossings, as well as tough ground conditions, with the Vermeer lineup of HDDs, purpose built for the

• Vermeer has the right trencher for the wide range of trenching jobs needed on these sites, and these machines are field proven to cut through a variety of ground conditions, even difficult landscape.

### **POWERING FROM ORGANIC**



Biomass energy is energy produced by burning living or once-living organisms, like plants and trees, to convert them into various forms of energy. The Vermeer portfolio of biomass equipment and support solutions will help you be more productive.

 Vermeer horizontal grinders are built tough and offered in a varie of configurations including a

18 RENEWABLE ENERGY OPPORTUNITIES

## OURCES



The Vermeer Advantage

- Vermeer horizontal grinders are built tough and offered in a variety of configurations including a grinding drum as well as a chip drum to suit large land-clearing and municipal-waste operations.
- Vermeer tub grinders are loaded with innovative features to efficiently pass organic materials through the grinder without deteriorating the end product.
- Vermeer trommel screens offer an industrial wood screening solution designed to fit your production needs.
- Using the advantages of wood chips as a source for power generation, Vermeer whole tree chippers offers you a powerful, whole-tree solution for producing wood chips.





22 RENEWABLE ENERGY OPPORTUNITIES

### **Vermeer Corporation**

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### **RENEWABLE ENERGY OPPORTUNITIES**