

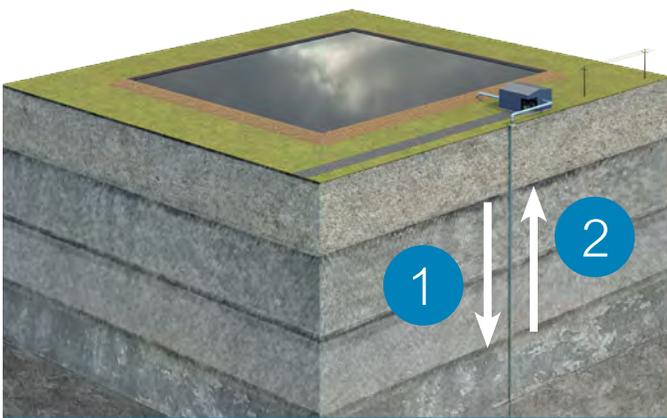
POWERING A RESILIENT AND RENEWABLE ELECTRIC GRID

Generating renewable energy is the key to ensuring a sufficient and sustainable long-term supply of electricity for generations to come. However, with renewable sources such as wind and solar, generation only occurs when high winds and solar radiation are available, which often does not coincide with electricity demand. Energy storage is critical for resolving this mismatch and balancing supply and demand on the grid.

Quidnet is developing a new approach to grid-scale energy storage, called geomechanical pumped storage, which will provide an extremely low-cost grid-scale energy storage solution. You can take part in this renewable energy transformation by partnering with Quidnet, and benefiting from a stable, long-term lease with minimal disruption to existing land and farming or grazing operations. This information sheet provides an overview of Quidnet technology and answers some common questions landowners have about our partnership.

GEOMECHANICAL PUMPED STORAGE DESIGN

Geomechanical pumped storage technology mimics conventional “pumped hydro” in its storage mechanism and efficiency, but doesn’t require large-scale dams and the expensive civil-works projects associated with them. Instead, geomechanical pumped storage relies on proven well drilling and construction technologies to pump water into subsurface storage geological systems at elevated pressure to store energy. The illustration below is an overview schematic of a geomechanical pumped storage facility.



FREQUENTLY ASKED QUESTIONS

Will Quidnet pay for access roads to/from the well site?

We will do so on an as-needed basis. We will first select locations that minimize access-road construction.

How many water trucks will be coming through to fill up the reservoir? How long will that take?

During the construction phase, we will bring in 20-30 standard trucks of water over a period of a few days.

What other major equipment will be brought in?

There will be a rig for drilling and well construction, and several pumps and/or generators.

What surface facilities will be built? What is the surface footprint?

There will be a small “pump house,” which is a 600-1,000 square-foot covered structure.

How is the storage facility connected to the grid?

Are any wires visible above ground? Is there any danger if land is leased for grazing or farming?

Farming and grazing operations can continue as usual. Connection to the grid will typically be accomplished with standard overhead wires on poles—similar to running power to a home, barn or shop.

What will happen to the site if the well is not successful?

Equipment and materials will be removed from the site and the well will be plugged.

What happens once the facility is up and running?

Once the facility is up and running, operations and controls will be done remotely. There will be occasional site visits for routine maintenance and monitoring purposes.

- 1 During charging, water is pumped down the well, compressing a body of rock. Energy is stored in the compression of the rock.
- 2 During discharge, the compression is released, which pushes the water back up the well and through a turbine to generate electricity.

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