

# Thunderbird Advisors Establishes Real-Time Mobile Construction Experience for Wind Energy Farm; Sets New Baselines for Data Transparency and Access



THUNDERBIRD ADVISORS

## AT-A-GLANCE

“The geo-tagged signature capabilities alone are so much more powerful than a regular sheet of paper.”

“Using GoFormz, the owner’s teams can track balance of plant contractors’ progress and compliance in real time, eliminating the need for weekly review meetings.”

### INDUSTRY

Wind Energy

### CUSTOMER SINCE

2015

### FORMS

Civil forms, Foundation forms, Collection System forms, Turbine Delivery forms, Assembly Completion Verification forms

### WHY GOFORMZ?

- Wanted greater visibility into daily turbine construction and off-site maintenance operations.
- Wanted to save time and increase accuracy of documentation by adding pictures and GPS locations to paperwork.
- Wanted instant access to project details for global management.

### BENEFITS

- Eliminated the need for large quantities of paper, book shelves, binders, copy machines, supplies and admin support at construction site for the duration of the project.
- Enhanced visibility of daily processes, repairs and procedures with geo-tagging and signature capabilities.
- Sped up Q/A processes with seamless back-and-forth of turbine documentation.

## THE FULL STORY

Until GoFormz, wind energy construction sites involved significant infrastructure in the form of a copy machine, shelving, reams of paper, binders and an on-site admin to manage the project level quality assurance program. Today, that trailer—and the data contained within it—is captured in real-time on tablets carried by site crew and quality management, and transmitted to their Box.com account, where the project owner, the construction company, project managers, investment partners and engineers all can access vital information in real time.

“GoFormz has helped us take great strides with data mobility,” says Thomas J. Ross, President of Thunderbird Advisors. “That entire infrastructure—along with hiring a very specific type of admin, is unnecessary. Today, all of those folders exist as a Box integration vs. binders sitting on shelves.”

The change in infrastructure is an immediate and long-term cost savings to the owner, which no longer has to house and store volumes of paper files in perpetuity. Even better, the contractor, which facilitates the official quality analysis program for this project, is able to submit project specifications, drawings and inspections to the owner’s site managers, all of which can be verified electronically—a faster and more efficient solution as compared to paper.

“Using GoFormz, the owner’s teams can track balance of plant contractors’ progress and compliance in real time and eliminate the need for weekly review meetings.”

“The site team is responsible for a great deal of documentation,” Ross explains. “It is then cross-checked to ensure that it was installed correctly following proper procedures and codes. This is a contractual obligation and all of these documents become part of the financial transaction. With GoFormz, the data is input electronically and stored in various company databases, providing staggering time efficiencies.”

With the ability to run reports and other documentation in real time, the turbine supplier, construction site staff, investment parties and engineers—all of whom are located in varying time zones worldwide—can easily and immediately access information and assess construction progress at their convenience.

“Using GoFormz the owner’s teams can track balance of plant contractors’ progress and compliance in real time, eliminating the need for weekly review meetings,” Ross adds.

In addition to the obvious convenience factors, GoFormz has enabled new levels of job site transparency to site managers, investment partners and third party engineers.

“GPS tracking in the forms also shows exactly where the inspector was when the work was done—and exactly what time it was performed,” says Ross.

Each crew foreman, quality manager, turbine OEM leader and commissioner is provided with a tablet. GPS tracking creates data pins, shaving time off the reporting the technician needs to provide and while also providing instantaneous documentation.

“We are able to capture GPS coordinates for every 500 feet of new road installed,” adds Ross. “Now, building 45,000 feet of new road for an 81 turbine wind farm without any transpositions is quick work. Additionally, inspectors can use their tablets to take a picture, insert it into the form and even draw on it, which enhances the level of documentation provided by the field.”

Once uploaded, the data can travel through the field level to the construction management and onward through the chain of command—quickly flying through multiple approval levels.

“From the quality side, GoFormz also enables us to capture an actual signature with a geo tag, date, time and user account,” adds Ross. “This enables the team to see exactly where the tech was and time stamps the event. The signature capabilities alone are so much more powerful than a regular sheet of paper.”

More than 50 forms, many of which are filled out once per turbine, are required on the job site, including a set of civil forms, a set of foundation forms, collection system forms, turbine delivery forms, and a set of assembly completion verification form for each turbine. With more than 80 turbines in the field, the paperwork adds up fast.

“That’s at least 81 binders, plus a binder for all civil improvements and the collection system,” says Ross. “Add in two to three substation binders and at least two copies of the books and you’re looking at a massive amount of paper.”

Additionally, Ross explains, a specifically skilled admin is required to manage the entire process. By using GoFormz, offices across the globe are able to instantly access data and perform their own due diligence.

“The savings in work time, an admin and storage is at least \$50,000,” Ross estimates. “While that’s not a massive line item for projects that measure in the hundreds of millions, it’s a healthy cost savings for investors.”

The increased visibility, ease of access, and signature capabilities can also assist in many warranty and insurance issues for the company.

“With the paper process, it was difficult to see what was going on—off-site teams didn’t have visibility to what was happening at the site”, Ross explains. “Not only has GoFormz added a level of searchability to our documents, it also has eliminated any issues with copies, potentially missing pages—and all of the data is easily audited.”