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SOFTWARE

A better way to **manage wind-farm payments**

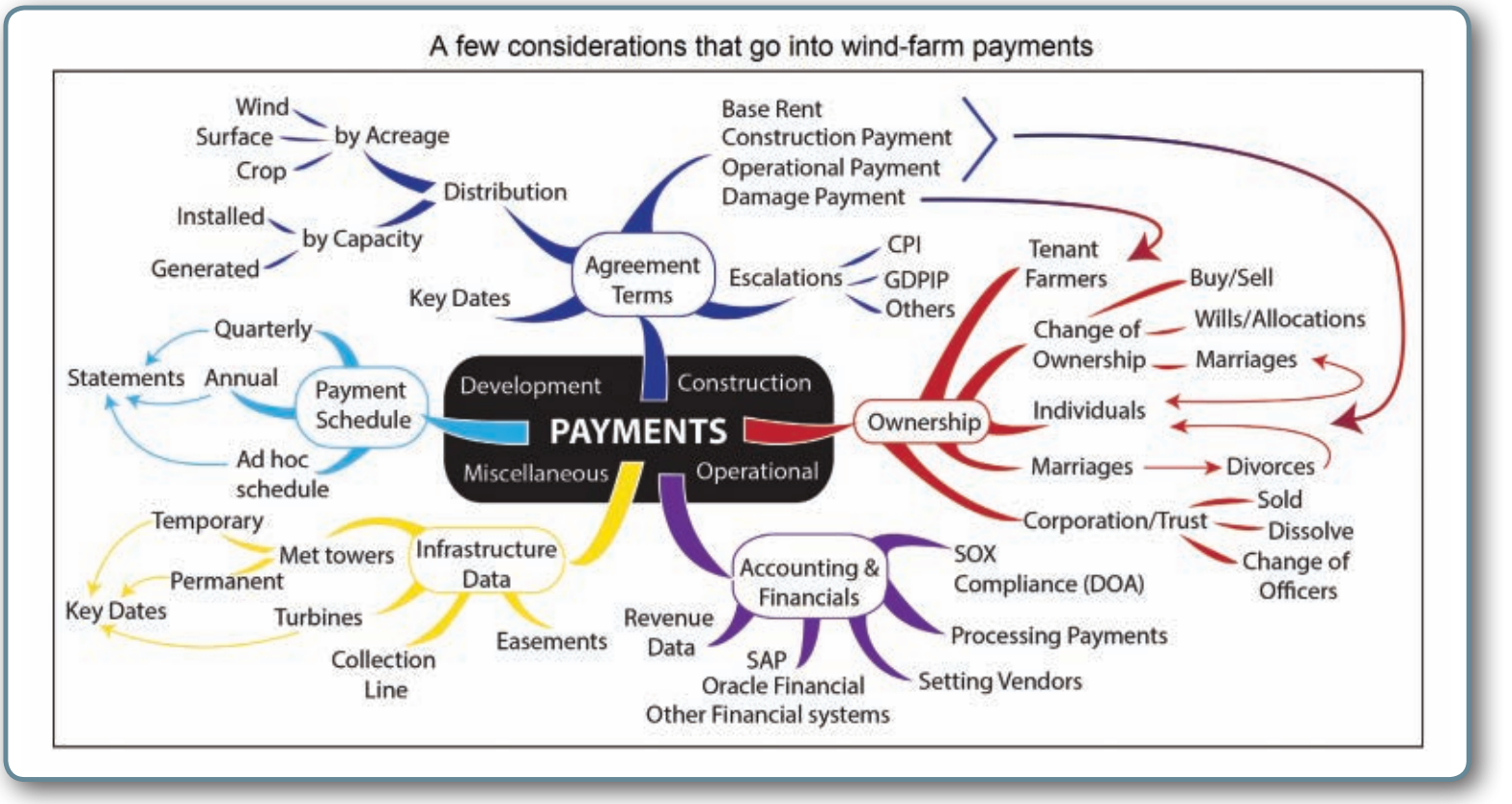
Developing and managing a wind farm involves more than erecting turbines and hoping the wind blows. There are many complex tasks associated with such a project. Costs and financial risks are high. Plenty can go wrong, and it often does.

Professionals in the wind-energy industry say one big pain point in managing a wind farm is dealing with payment obligations. As individuals who manage household budgets, we can relate. Bills arrive on different days each month and are due on a varied schedule. With the advent of online banking, people found that writing checks and manually balancing the checkbook is less than ideal.

Wind companies need a version of online banking. Without such effective technology, wind companies face manual calculations that require at least two weeks of staff time, with multiple staff members involved each month. Still, payments can be late or wrong.

As the accompanying illustration shows, there are many variables in meeting ongoing payments for a wind farm. Lease and royalty payments go out to multiple landowners. The amounts might have to be divided into percentages for the multiple owners of one parcel. Some payments are adjusted by the Consumer Price Index, others by the Gross Domestic Product Implicit Price. Some payments are adjusted by simple interest, others compounded annually.

The chart shows the many variables to meeting ongoing payments that keep wind farms working. Payment software altAMPS improves an organization's efficiency by completing a large volume of payments while considering the many variables and payment adjustments.

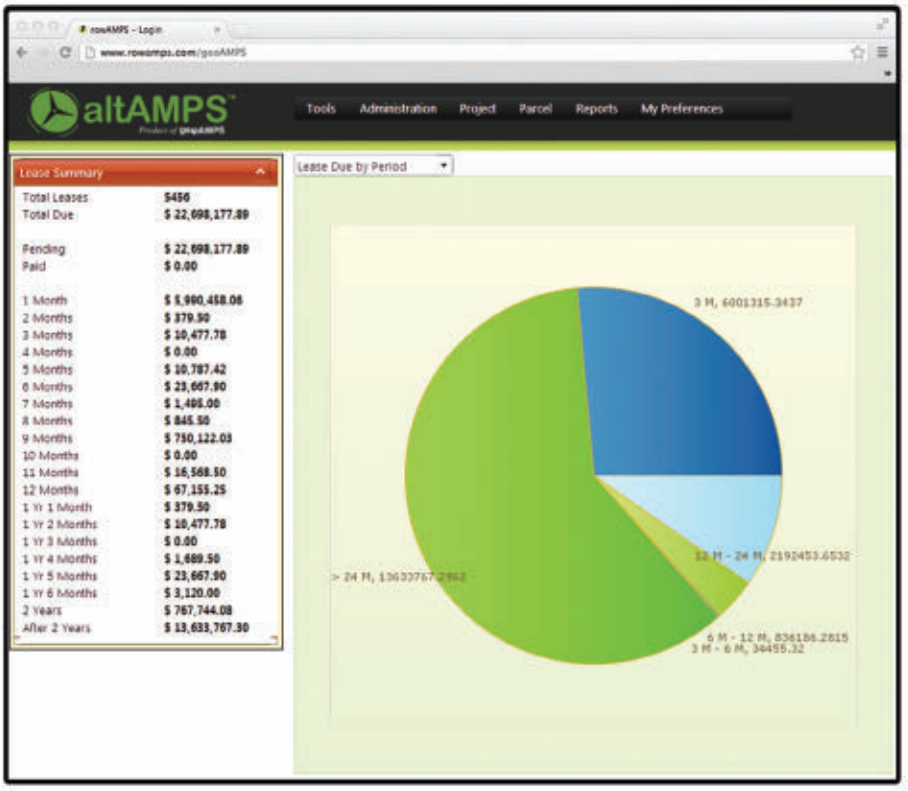


Landowners can be individuals, married couples, corporations, or trusts. Little is static in this field.

Landowners change their address, married couples get divorced, while ownerships often change by reverting to estates or going into probate upon a landowner's death. And corporations are bought out or closed.

To address these and many other conditions that ebb and flow in business, wind companies have resorted to various means with varying degrees of success. Many work from spreadsheets while some still work from paper. In either case, the information must be input manually through each payment cycle.

Many calculations must be done quickly, but the information on spreadsheets can be erroneous or



The list and pie chart from the lease dashboard in geoAMPS provides a sample of its output. The amounts are owed on leases that might comprise the several wind farms owned by one company. Such information would let owners and finance officers plan disbursements in a more orderly manner.

inconsistent. It is complicated and time-consuming to track all the triggers that determine the timeline for individual payments.

Manual tweaking of so many adjustments can result in errors or slow the payment process. Missing payments or issuing incorrect amounts mean major headaches for the wind company. Neighboring landowners talk to one another so if one learns his neighbor got a check but he has not, he's on the phone to the wind company. A landowner may find an underpayment upsetting, but so is an overpayment which means a lower payment on the next check. It's a lose-lose scenario for the wind company.

Oil and natural gas development companies entering the wind arena face unique challenges. Their existing software worked fine for oil and gas projects, but, due to the variables in leasing, not so well for wind farms.

The good news is that a comprehensive and flexible payment program is available with software that automates the process of meeting payment schedules, such as lease and royalty obligations. The altAMPS program automates this essential aspect of operating a wind farm. Its capability is one function that technology company geoAMPS has developed as part of the end-to-end management functions that altAMPS performs for wind and other alternative-energy projects.

In much the same way that online banking has made it easier to manage household budgets, software such as altAMPS automates the process of meeting wind-farm payments. The software includes lease management, automatic reminders, a payment tracker, and scheduler capabilities. It features a royalty-payment calculator that automates development, construction, royalty, and other types of payments based on complex calculations and varied timelines. After updating payment data, the software picks up where it left off.

Despite its many functions, the learning curve for new altAMPS users is shallow. Only a half-day's training is necessary for a wind-project developer or agent in the field.

New clients often remark they are surprised the software is so intuitive and easy to learn. They expect it to be capable of automating ongoing payments and other aspects of wind farm development and management, but the overall ease of use is an added benefit.

A "power user" – a data manager who will use the software extensively – can be proficient with three to four days of training. Then with webinars, ongoing support from the developer, and daily system use, a power user can obtain expertise in about three months.

Clients also say they are pleased with how the software helps meet compliance with audits and other organizational policies.

Operating a wind farm is far more complex than making sure the rotors are turning. Meeting ongoing payments is understandably a major challenge. The right technology can help meet that challenge. WPE

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World's largest rotor 20% lighter than "traditional" design

Wind turbine manufacturer, Siemens (*www.siemens.com*), has developed the SWT-6.0 with a rotor diameter of 154m to meet the demanding conditions of offshore wind. Unique to the model is the B75 rotor blade, which is 75-m long making it the world's largest fiberglass component cast in one piece. These IntegralBlades have no adhesive joints and are 20% lighter than traditional blades, says the company. One of these turbines could supply up to 6,000 European households with clean energy. The SWT-6.0-154 also has special aerodynamic profiles to deliver optimum performance at a wide range of wind speeds which helps lower the cost of wind energy.

The B75 blade is the world's largest fiberglass component cast in one piece. Manufacturing it posed several challenges for the project team. In particular, the mold had to consist of two parts so that it could be transported.