

Doug Duimering P.Eng.
Manager of Business Development - Canada
John Deere Wind Energy

Doug has a strong background in wind energy along with a strong technical experience in rotating electrical equipment.

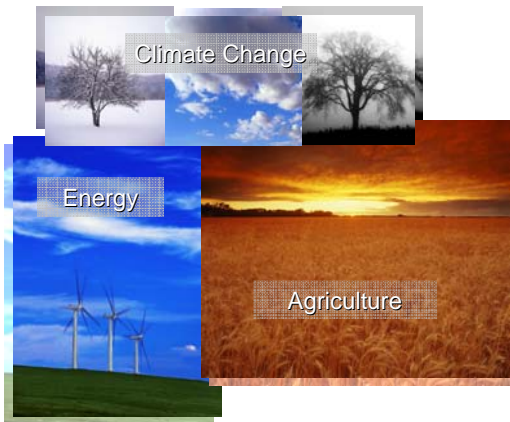
Doug is Manager of Business Development – Canada for John Deere Wind Energy, which is a unit of John Deere Renewables that is building, owning and operating Wind Farms. Previous to this Doug was the Director of Sales for Vestas – Canadian Wind Technology responsible Vestas Sales in Canada. Doug spent 5 years with Vestas, which is the world's largest manufacturer of utility scale wind turbine generators and has a strong leadership position in the developing Canadian market. Doug is active in several Canadian Wind Energy Association committees and has served on the board of directors the Canadian Wind Energy Association.

Before joining the wind industry Doug was Management Consultant with Bain & Company, an international management consultancy. Prior to Bain Doug spent 7 years with GE Large Motors in a variety of roles primarily focused on new product development of large rotating equipment.

Doug has a BAsC in Mechanical Engineering from the University of Waterloo, an MEng from the University of Toronto and an MBA from the Ivey School of Business at the University of Western Ontario.



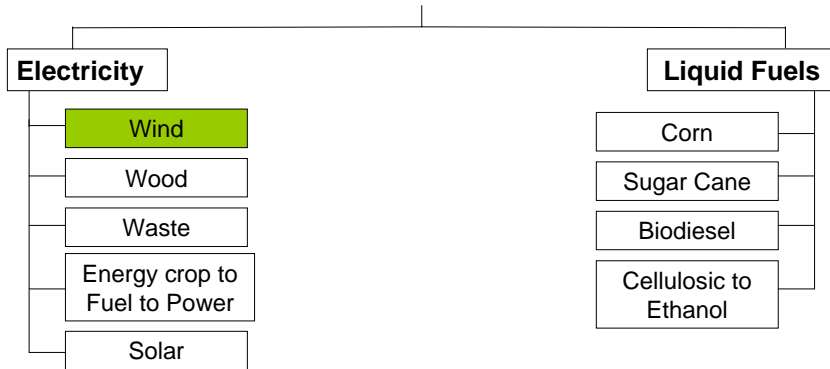
Over 170 Years of Rural Heritage



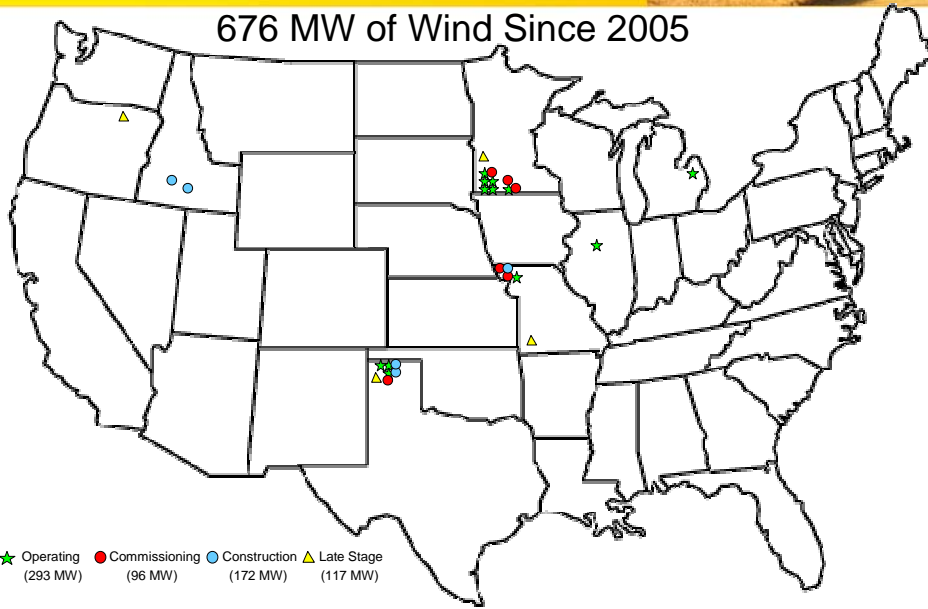
*Focused on those
who are close to
the land*



Renewable Energy Vision



676 MW of Wind Since 2005





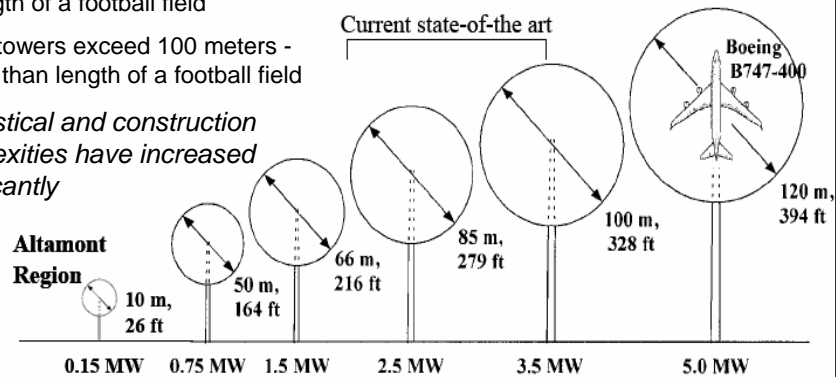
Deere's Activities Span the Development Value Chain

- Site selection
- **Land acquisition**
- Permitting
- Wind resource assessment
- Interconnection & PPA
- Turbine supply
- Construction
- **Flexible deal structuring**
- One-stop financing



Size of Wind Turbines is Increasing

- Today, the rotor diameter of an on-shore WTG has grown ten times from its inception – span is greater than the length of a football field
- New towers exceed 100 meters - greater than length of a football field
- *Logistical and construction complexities have increased significantly*





- Rotor diameter 88 meters (290 feet)
- Individual blades weigh over 17,000 lbs.
- Blades are more than 142 feet long
- Special transport trucks and escorts required
- Idaho Mountain passes are challenging!



Typical Wind Turbine Generator weights

79 tons - nacelle

39 tons - hub & rotor blades

200 tons - tower

318 TONS TOTAL (636,000 lbs)



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Who better to help you harvest the sky?

Spread Footing Foundation

- 80 foot wide excavation
- 54 foot wide foundation base
- 400 cubic yards of concrete
- 35 tons of reinforcing steel
- 16 million pounds of tension

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Who better to help you harvest the sky?

Not everything always goes as planned

- Delivery schedule slips
- Parts delivery sequence changes
- Contractor defaults
- Equipment damage or loss
- Government logistics, regulations

Interconnection Issues are Also Challenging

- MISO Queue
 - 55,000 MW of wind in interconnection queue
 - Queued projects exceed renewable requirements by 300%
 - 40 plus years to process existing requests
- ERCOT – 41,000 MW of proposed wind
- SPP – 13,000 MW of proposed wind
- Illinois
 - MISO queue – 11,000 MW
 - PJM queue – 9,000 MW

Michigan Interconnection Challenge

- 18 months after entering MISO queue, project stalled because of interconnection costs ranging from \$0 to \$27 million
- Deere worked with ITC Transmission and DTE Energy to work through variety of contingencies
- Paid for upgrades and started construction prior to completion of Facilities Study
- Project will be operating at full capacity in February '08



Idaho Interconnection Challenge

- Originally asked to pay for 100% of network upgrades – up to \$50 million for a 30 MW project - to secure **FIRM** service
- Worked out compromise
 - Transmission operator can interrupt in event of system emergency
 - Project only pays for 25% of upgrade costs, remainder of costs are socialized
 - Viewed as Win-Win by Idaho PUC



Deere's Model for Working With G&Ts

- Strategic vs. transactional relationship
- G&T purchaser identifies site
- John Deere secures land rights and permits
- John Deere develops and constructs
- G&T purchaser manages interconnection studies
- 20-year PPA with project company
- John Deere owns and operates for ~ 15 years and then transfers ownership to G&T
- John Deere provides 100% of equity – monetizes tax benefits
- John Deere provides or arranges debt financing
- Joint turbine selection with G&T

