

# Wind energy at Michelin Dundee

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# Michelin Group

- One of the “Big Three” worldwide tyre manufacturers
- 17.2 % share of world market
- 15.6 billion Euro turnover (2005)
- 129 000 employees
- 70 factories in 19 countries
- 197 million tyres, 20 million maps & guides per year
- 500 M Euro spend on energy



# Michelin and sustainable development

## ■ Business approach:

### Performance *and* Responsibility

- ◆ Social: working conditions, safety, employee diversity, etc.
- ◆ Environmental: reduce risks and impacts of whole life of tyre
  - *Reduce emissions from manufacturing*
  - *Promote lower rolling resistance products*
  - *Stimulate used tyre recycling*



# Michelin and sustainable development

- **Reduce energy consumption *and* favour “clean” sourcing**
  - ◆ As an industrialist my priority has to be to reduce consumption.
  - ◆ In Dundee we have reduced our consumption of energy per production unit by approximately 40% over 7 years.
  - ◆ Cogeneration, renewable energy, waste energy recovery, ...
  - ◆ Real benefit for the environment not just “labelling”
  - ◆ Durable contribution not just “one shot” communication hit



# Michelin and sustainable development

## ■ Renewables

- ◆ 10 MW solar in Germany, 4 MW wind at Dundee
- ◆ Opportunity studies in hand at several sites in the Group
- ◆ Actively pursuing biomass in several European countries



# Michelin's approach to energy projects

- 18 BOO contracts across Europe, 370 MWe installed capacity
- We understand the fundamentals – “a contest of equals”
- Benchmark BOO contract against own investment
- “De-risk” opportunities before bringing them to market
  - ◆ On-site wind measurement
  - ◆ Generic planning permission
- Long term contracts – cover all eventualities up front
- Each to his own speciality:
  - ◆ Surer, faster implementation
  - ◆ Better risk management
  - ◆ Increased value creation



# Michelin wind project at Dundee

## The project

- 2 x 2 MW Enercon E70
- Initial opportunity study 2002
- Wind measurement 2003 – 4
- Initial planning permission January 05
- ecotricity chosen as partner to BOO
- Contract signature September 2005
- First generation May 06



# Michelin wind project at Dundee

## Key requirements for success

- Communication
- Confidence building (internal & external)
- Commitment!



# Dundee experience – win-win

## Michelin “wins”:

- Outsourced solution from experts
- Guaranteed savings and visible engagement to reduce emissions
- Rapid construction without incident
- Reinforced relationships with local community

## ecotricity “wins”:

- Ready-made project at minimal commercial cost
- Rapid implementation at known risk
- Long-term business with blue-chip counterpart



**Thank you for  
your attention**

