

# Brookfield Renewable Power



Presentation to Smart Grid Forum, September 22<sup>nd</sup>, 2008



# Forward Looking Statement

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Note: This corporate presentation contains forward looking information within the meaning of Canadian provincial securities laws, and other “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. The words “build”, “increase”, “expend”, “sustain”, and other expressions which are predictions of or indicate future events, trends or prospects and which do not relate to historical matters identify forward-looking statements. Although Brookfield Renewable Power, a wholly owned subsidiary of Brookfield Asset Management (“Brookfield”), believes that the anticipated future achievements expressed or implied by the forward-looking statements and information are based upon reasonable assumptions and expectations, the reader should not place undue reliance on forward-looking statements and information because they involve known and unknown risks, uncertainties and other factors which may cause the actual results or achievements of the company to differ materially from those that are expressed or implied by such forward-looking statements and information. Factors that could cause actual achievements to differ materially from those contemplated or implied by forward-looking statements include: general economic conditions; interest; availability of equity and debt financing; the ability to effectively acquire high quality assets for value and integrate acquisitions into existing operations; continued demand by institutional investors for Brookfield’s asset classes; recognition in the capital markets of Brookfield’s value as an asset manager relative to comparative asset managers; equipment failures, and other risks and factors described from time to time in the documents filed by the company with the securities regulators in Canada and the United States including in the Annual Information Form under the heading “Business Environment and Risks.” The company undertakes no obligation to publicly update or revise any forward-looking statements or information, whether as a result of new information, future events or otherwise.



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# Brookfield Asset Management

## *A global asset management company*

- **Brookfield Asset Management is an asset management company, focused on property, power and infrastructure assets**
- **Approximately US\$95 billion of assets owned and under management**
- **Approximately 10,000 employees in the Americas, Europe and Australia**



▶ **120 million sq. ft. office and retail space**



▶ **162 hydroelectric power plants**



▶ **2.5 million acres of timberlands**



▶ **11,000 km of transmission lines**

# Brookfield Renewable Power

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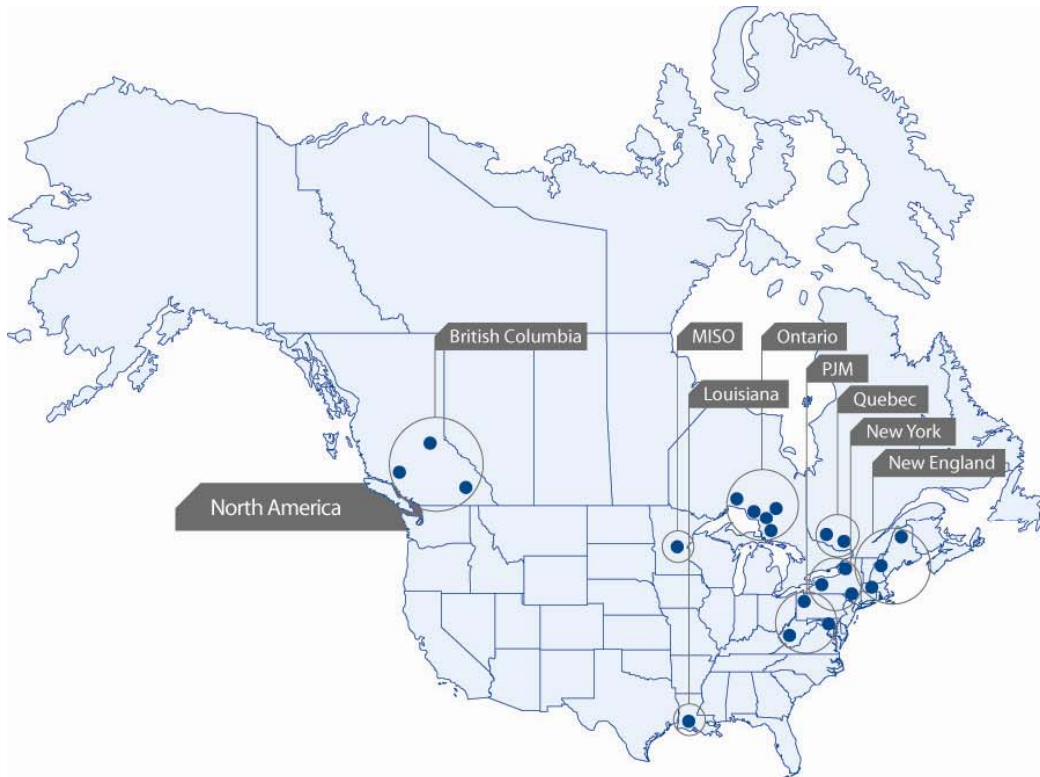
*Unique power operations focused on renewable energy*

- **Brookfield Renewable Power is a leading producer and developer of renewable power focused on hydroelectric and wind technologies**
- **Over US\$10 billion of assets owned and under management**
- **Approximately 1,000 employees in North America and Brazil**



# Brookfield Renewable Power

## *Geographically diverse operations*



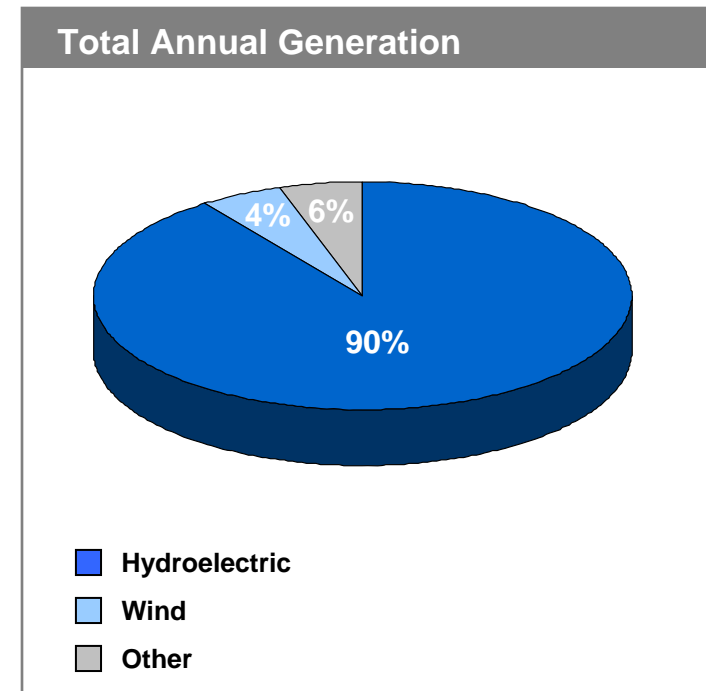
- **3 countries: United States, Canada and Brazil**
- **9 markets**
- **63 river systems**



# Brookfield Renewable Power

## *Leader in hydroelectric power in North America and Brazil*

Hydroelectric Portfolio		
Markets	Stations	MW
<b>United States</b>		
New England	20	841
New York	75	702
PJM/MISO	4	150
Louisiana	1	192
<b>Canada</b>		
Quebec	6	282
Ontario	21	897
British Columbia	5	135
<b>Brazil</b>	29	470
	<b>161</b>	<b>3,687</b>



- **Over 90% of annual generation is hydroelectric**
- **Generating assets on 63 river systems**
- **Over 100 years of power generating experience**

# Brookfield Renewable Power

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## *Leader in wind development in Canada*

- **Wind energy is integral to Brookfield Renewable Power's business strategy**
- **Prince Wind Project**
  - Largest wind project in Canada
  - Located northwest of Sault Ste. Marie, ON
  - Total capacity of 189 MW
    - enough to power 40,000 homes annually
  - 126 wind turbines
  - Commissioned November 2006
- **Over 1000 MW under development**



# Brookfield Renewable Power in Ontario

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*Invested almost \$700 million in recent greenfield development projects in Ontario*

- **High Falls Revelopment Project (Dunford) - 2003**
  - 45 MW hydro project
  - Michipicoten River, Northern Ontario
  - \$90 million
- **Major transmission system replacement project - 2006**
  - 115 kV and 230 kV
  - Algoma District, Northern Ontario
  - \$85 million
- **Shikwamkwa Replacement Dam - 2006**
  - Wawa, Northern Ontario
  - \$100 million
- **Prince Wind Farm 126 WTG - 2006**
  - 189 MW (Canada's largest)
  - Algoma District, Northern Ontario
  - \$400 million

# Approvals for Power Development in Ontario

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## *Obtaining Approvals – General Observations*

- **Brookfield has had mixed experience obtaining approvals for energy infrastructure projects - generally satisfactory**
- **Most approvals were straightforward - main concerns relate to risks of delay or unreasonable requirements**
- **Complications and delays due to:**
  - inconsistent interpretation or application of regulations
  - misunderstanding of requirements for construction and operation
  - inefficiency or failure of co-ordination between the agencies
  - scope creep during the Environmental Assessment process

# Approvals for Power Development in Ontario

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## *Obtaining Approvals – General Observations (cont'd)*

- **The approval process needs to keep pace with changes relating to:**
  - the electricity system (from monopoly to competitive market)
  - shifting public policy (climate change, diversity of supply sources, scarcity of resources, First Nations and “nimbyism”)
  - evolving technologies (micro turbines, large scale wind)
  - broader universe of developers (public versus private, financing requirements)
  - new methods of development and project execution (Request for Proposal projects, Engineer Procure Construct contracts)



# Approvals for Power Development in Ontario

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## *Areas of Concern*

- Inadequate or conflicting policy for approvals
- Inadequate or inefficient processes, including approvals for new or refurbished facilities, and for operations (e.g., water management planning)
- Conflicting policy application amongst the ministries and between regions
- Proliferation and duplication of approval processes
- Uncertainty with respect to timelines
- Scope creep

# Other Challenges to Power Development in Ontario

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## *Other Challenges to Development*

- Current Electricity Market and Prices
- New Business Models for Development
- Slow Acceptance and Adoption of Technology
- Equipment Supply
- Economies of Scale
- Geography
- Lack of Transmission

# Case Study: Prince Wind Farm

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## *Lessons Learned*

### Overview

- **Awarded 2 wind power projects**
  - Sault Saint Marie, Ontario
- **99 MW + 90 MW = 189 MW**
  - Largest operational windfarm in Canada
  - GE 1.5 MW sle turbines
- **20 year PPA's with OPA**
- **First of OPA RES II contract awards commissioned:**
  - Commissioned Phase 1 – Sept. 21, 2006
  - Commissioned Phase II – Nov. 19, 2006
- **Total capital cost approximately \$400 million**



# Case Study: Prince Wind Farm

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## *Lessons learned*

- **Significant coordination between federal, provincial and municipal approval processes, possibility of:**
  - 6 Federal
  - 16 Provincial
  - 10 Municipal
- **Prince - 40 approvals from 13 agencies**
- **Strong need for close communication between developer and regulator**
- **Timing is critical and the approval process lengthy**
- **Develop strong community and First Nations relationships**



# Conclusion

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## *Keys to success*

- **Strong corporate values combined with operational excellence**
  - High safety standards
  - Environmentally responsible
  - Strong sustainable development practices
  - Cooperate and contribute to long-term planning and policy
  - Healthy First Nations and community relations
  - Responsible corporate citizens

