



# Harvesting the Wind Canada's 1st windpower co-op

Wind Energy Summit  
Nottawasaga Inn & Convention Centre  
February 19, 2005

Presented by:

David Timm

Toronto Renewable Energy Co-op



# Overview

- The Project
- Early Lessons and Barriers
- Permits and Approvals
- The Deal
- The Co-op

- Lagerwey 750 kW
- Direct Drive
- Kick in speed of 2.8 m/s (11 km/h or 6.8 mph)
- Cost ~1.8M installed
- In Toronto's winds: power for 250 homes
- ~2,100,000 kWh delivered to grid





# The Waterfront Wind Project

## The Project:

- 1<sup>st</sup> urban wind turbine in North America
- Joint Venture between WindShare and Toronto Hydro Energy Services
- WindShare co-operative based on Danish success
- Dec 2003 construction, Jan 2004 power delivery
- First dividend paid out January 2005

# The Waterfront Wind Project

## The Benefits:

- \$1.8 million direct investment
  - All development local
  - 50% equipment local – blades, tower, foundation, etc
  - 15 local companies involved
- New jobs – project managers, bird studies, O&M, education program
- Broad ownership
- Province wide=>18 communities, OSEA (4 staff)
- High public approval – “new icon”



# The Co-op Model

- Best expressed community basis
- Fundamentally democratic
  - 1 member = 1 vote
- For-Profit
- First green power co-op in Canada



## Early Lessons

- Significant wind resources existed to warrant study
- Policymakers and public very unfamiliar with wind power technology
- Citizen and expert enthusiasm abundant
- Significant fundraising necessary to “build the model” and develop the project



# Unique Barriers

- “New” technology for most decision makers
- City land = more due diligence
- Highly visible project = more due diligence
- Struggle between Toronto Port Authority & City
- Awkward timing between two electricity markets
- First ever urban-based turbine
- First ever co-op





# Government Approvals

- Process at all levels was highly unclear and complex (lack of familiarity with technology)
- Transition period for Provincial rules created uncertainty
- Federal EA required for Federal \$\$
- Municipal approvals required for City lands

NavCan

Island Airport

Ward Councillors

Measurement Canada

Transport Canada

Environment Canada

City Council

Port Authority

Telesat Canada

OMB

Works Dept

WindShare & Toronto Hydro

Parks

ESA

Tor Hydro Electric System

OEB

CCFEW

AB Yacht Club

Committee of Adjustment

Friends of Spit

NRCan

Exhibition Place

TEDCO

TRCA

NLC & ICMC



# Unofficial Approvals

- Individual stakeholders with political sway
  - CCFEW, Telesat, ABYC, FON, TOC, local residents, individuals, etc...
- Neighbourhood Liaison Committees
- Ward Councilors
- Parks & Planning Departments
- Waterfront Regeneration Trust
- Toronto Region Conservation Authority
- Design and Management Committee
- Olympic Bid Committee



# Community Process

- Trio of concerns: Noise, Birds, Aesthetics
- Broad outreach process: stakeholder groups, nearby residents
- Community meetings, open houses, one-on-ones, trips to Kincardine turbine, door-to-door visits and video drops, 'petitions'
- Used ornithological experts, wind power developers, noted citizens at meetings



# The WindShare Offer

- 8,000 shares
- Shares sold in blocks of 5 X \$100
- Individuals purchase up to \$5,000
- Proceeds used to finance WindShare's 50% of turbine
- Members purchase \$1 membership share
  - Gives members right to vote (one member – one vote)
- Offering Statement available on web ([www.windshare.ca](http://www.windshare.ca))



## The Deal

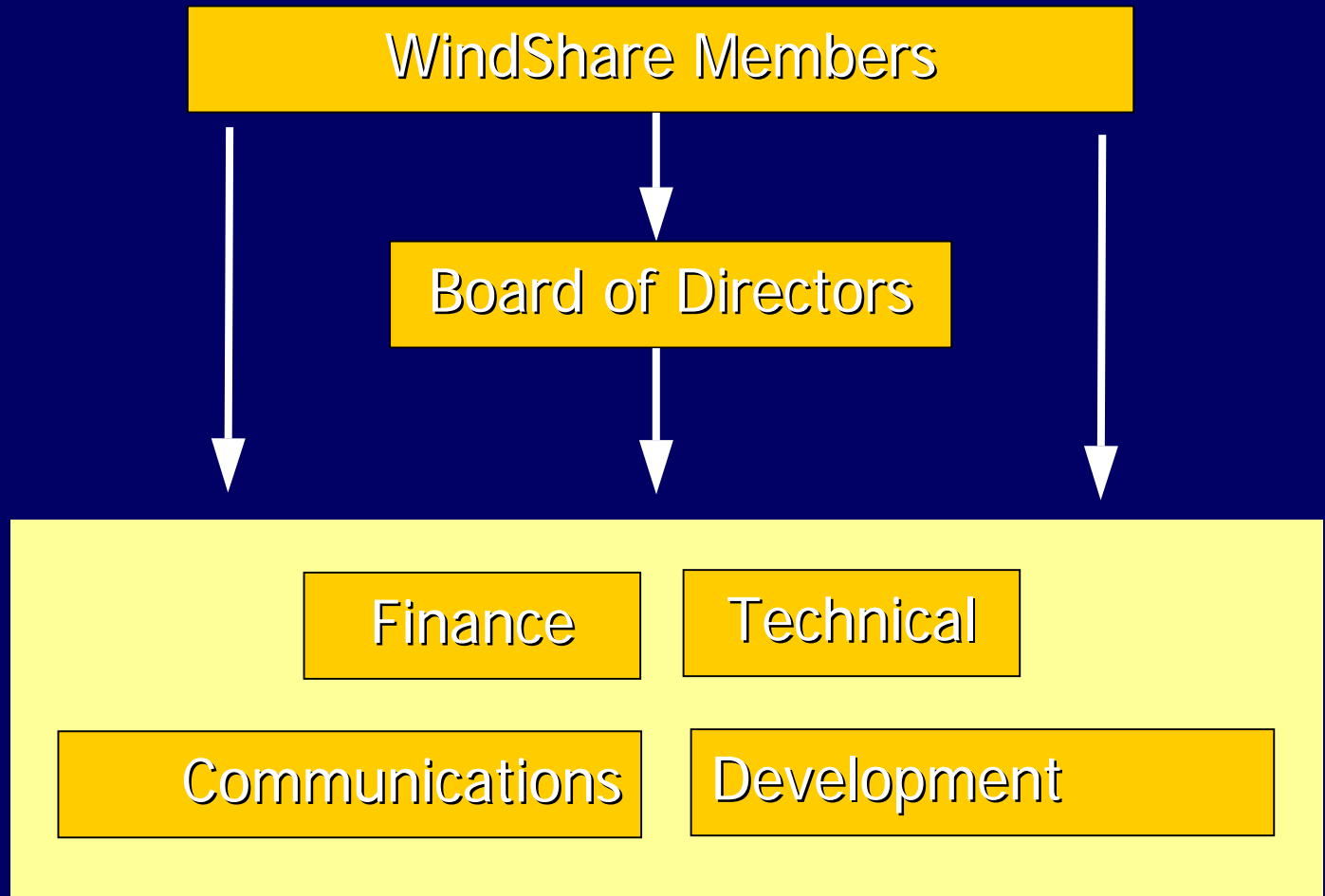
- Green power sold to Toronto Hydro Energy Services as part of 3 year contract
- Members receive net proceeds generated by co-op, minus operating costs
  - First dividend paid out January 2005
  - \$4.00 per \$100.00 share
- Original idea was to develop self-generation co-op whereby members would receive power through '*community net-billing*'



# Grassroots Marketing

- Years of data-basing contact info helped
- Started marketing in June 2002, sold out in December 2002
- Church basements, libraries, community centres
- Corporate vs. Individual response unexpected
- Unexpected number of high investors

# The WindShare Co-op







# Community Power Growing...

- Ontario Sustainable Energy Association formed in 2001 to expand Community Power across Ontario
  - 15 community organizations across Ontario currently pursuing green power projects
    - Perth, Kingston, Toronto, New Market, Hamilton, Lion's Head, Durham Region, Thunder Bay, Schreiber, Ottawa, Kitchener-Waterloo, Paris, Temagami
- Message is spreading outside of Ontario:
  - Peace River Energy Co-op – Peace River, BC
  - Scotian WindFields, Nova Scotia



# Other Emerging Co-ops

- Ontario Projects in development:
  - LakeWind – TREC
  - Georgina Island Wind - Chippewas of Georgina Island, in partnership with the Windfall Ecology Centre
  - Royal Road Wind Farm – Prince Edward County/Visionquest
  - Huron Perth Community Power Project

More Info:

[www.ontario-sea.org](http://www.ontario-sea.org)



# Next Steps

- Second Turbine Downtown
  - Currently conducting pre-feasibility study for a second turbine at Ex Place
- Continued Education Centre Program
- LakeWind
  - 10-15 MW co-op wind farm
- Continued advocacy for the implementation of *Advanced Renewable Tariffs* in the province of Ontario



**For More Info:**

**[www.windshare.ca](http://www.windshare.ca)**

**416.977.5093**

**David Timm**

**[dtimm@trec.on.ca](mailto:dtimm@trec.on.ca)**