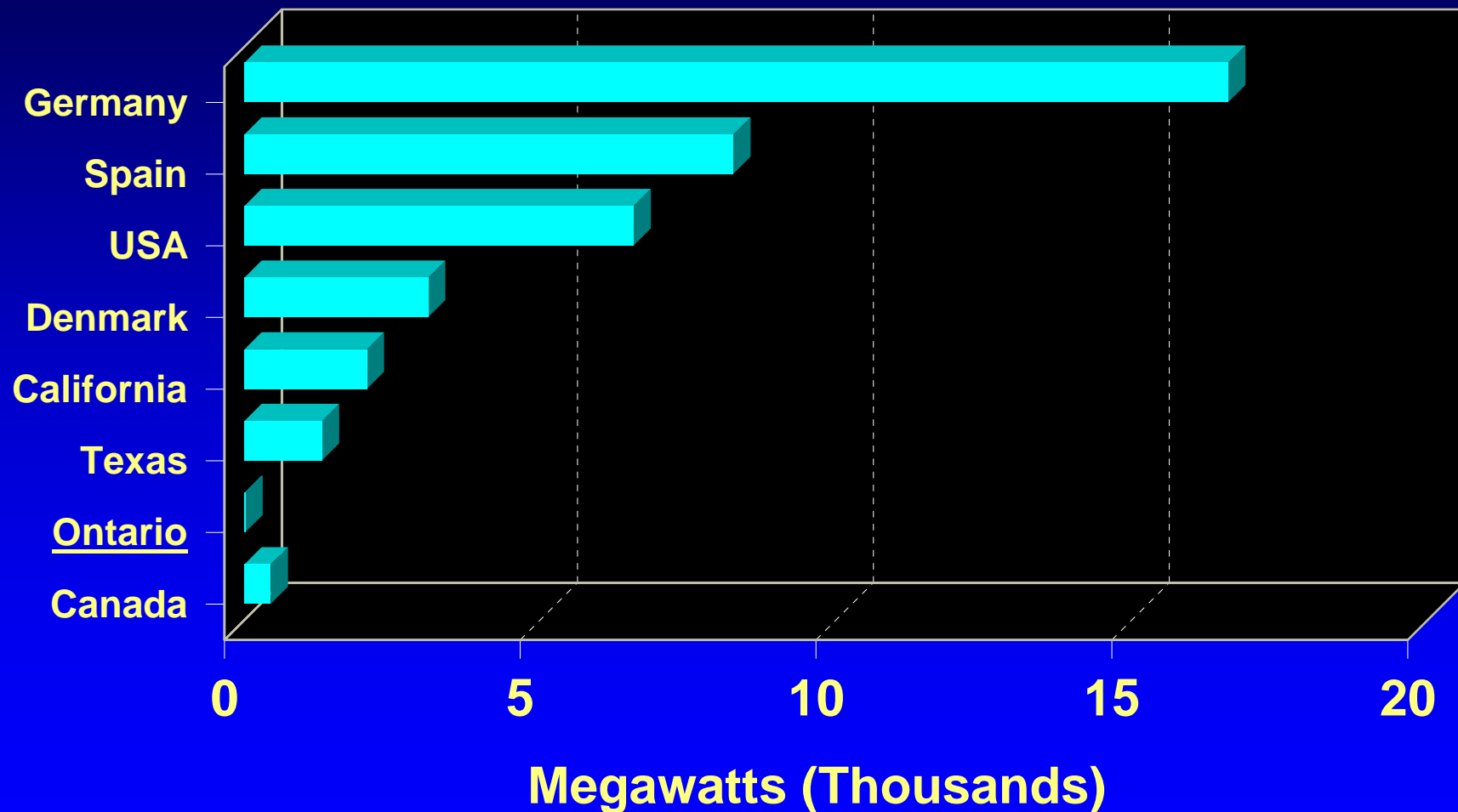


Ontario's Renewable Potential

- 3000+ MW of wind power
- 500 MW of untapped small-hydro
- 260 MW farm methan digesters
- In a typical year, hot water heating accounts for 20% of a homes energy usage, a solar hot water system could supply about 50% of this energy

2004 Installed Wind Capacity Where Ontario Stands



Southern Ontario & Wind Energy

- **More Like Germany than Alberta**

 - Population Density

 - Farm Size

 - Settlement Patterns

- **Projects Will be More Like Germany**

 - Smaller Projects

 - Clusters of Turbines

 - Single Turbines

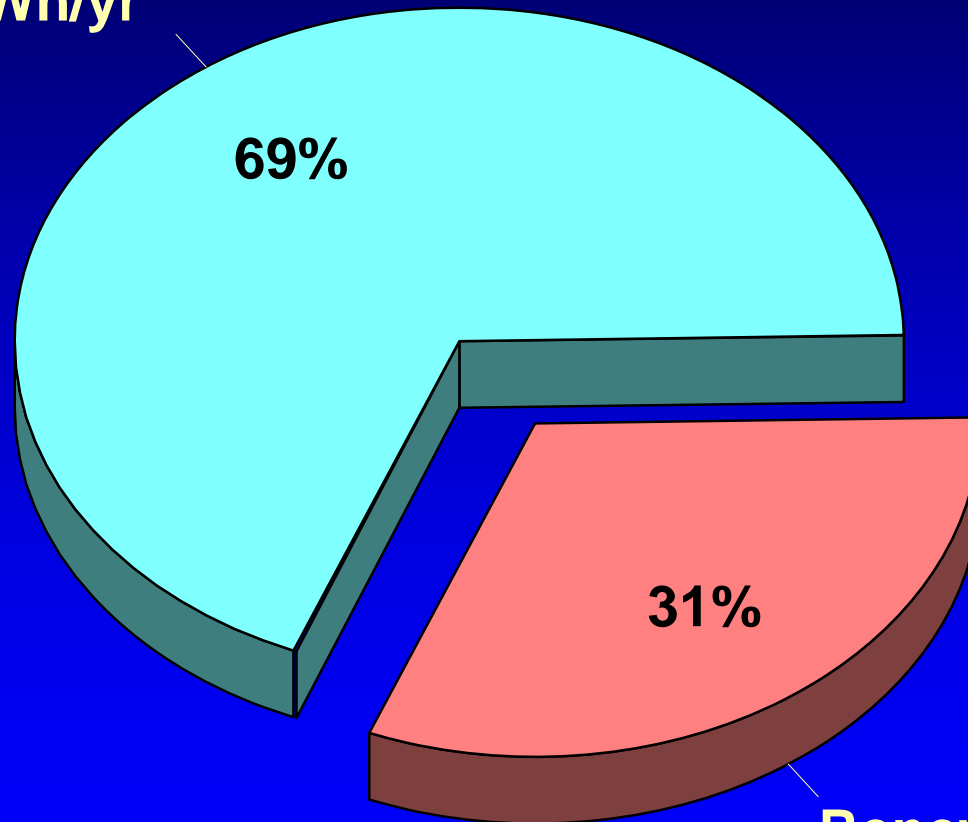
Ontario

- **More Like Germany than Texas**
 - Population Density
 - Farm Size
 - Settlement Patterns
- **Projects More Like Germany than Texas?**
 - Smaller Projects
 - Clusters of Turbines
 - Single Turbines



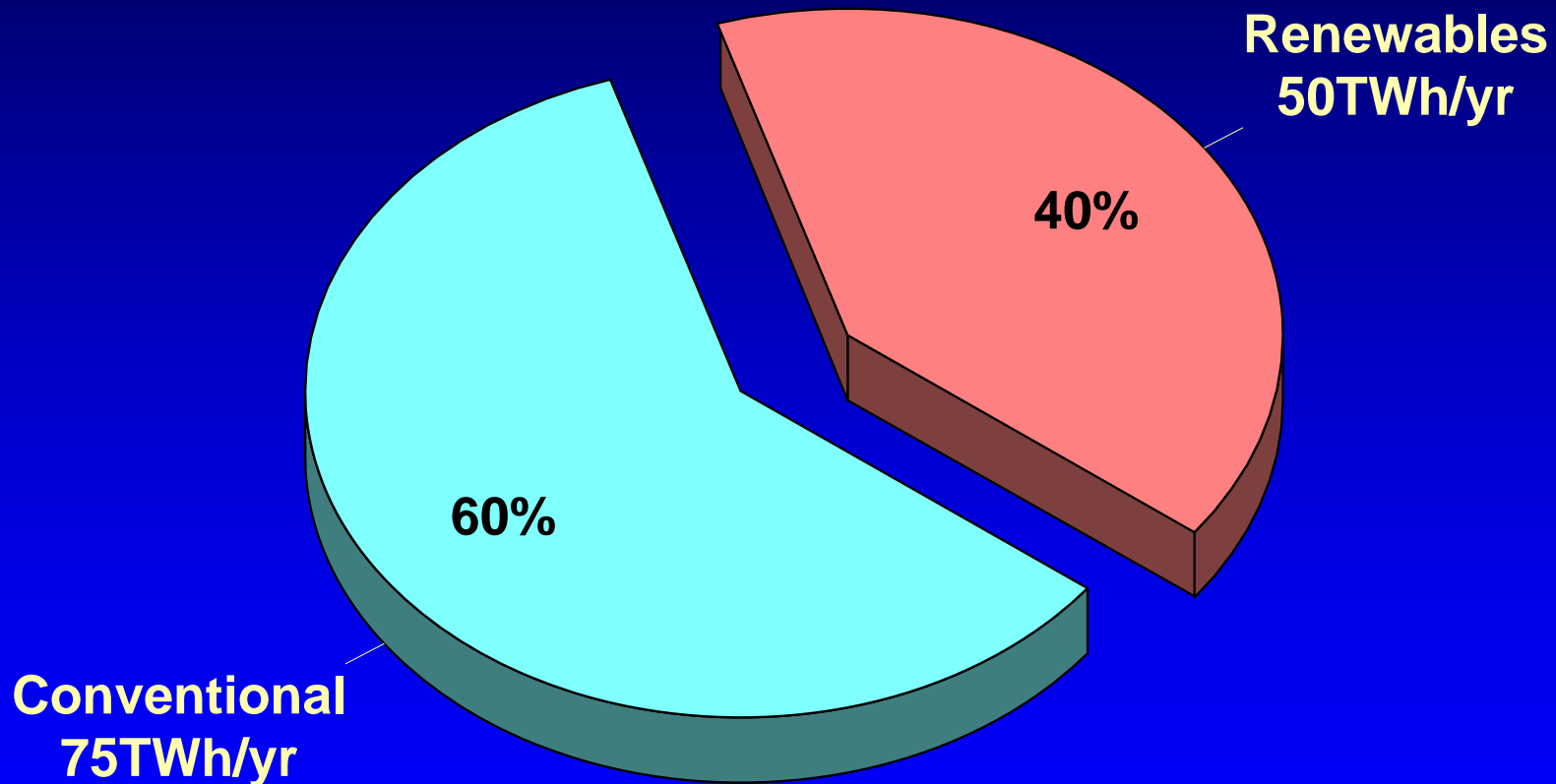
What ~50 TWh of German Renewables Would do in Ontario Today

Conventional
110TWh/yr



Renewables
50TWh/yr

What ~50 TWh of German Renewables Would do in Ontario with Conservation



What is OSEA?

(Ontario Sustainable Energy Association)

- **A Non-Governmental Organization**
- **An Association of Member Groups
Across the Province
Windsor-Kingston, Thunder Bay-Toronto**

What Does OSEA Do?

- We Aid Our Member Groups
- We Provide Workshops
- We Help Build Renewable Coops
- We Develop Policy to Make it Happen
- We Support Community Wind



Wind Coop Meeting,
Copenhagen, Denmark

What is Community Wind?

- **Wind turbines locally-owned: individually, co-operatively or collectively through a number of mechanisms (wind power co-ops and limited liability corps most common)**
- **The key is for the community to identify the turbines as their own**
- **The key is for the community to have a sense of control and stake in their future**

- **Improves Grid Stability/Security –Smaller scale, localized generation helps avoid massive 'Blackouts' of 14th, 2003.**
- **More Renewable Energy – Community investment drives incremental new project development.**
- **Strengthens Rural Communities – Generates new income for farmers and rural landowners.**

- **Increases Local Acceptance – Democratic ownership, community involvement and member education creates more positive support.**
- **Conserves Energy – Member education/ awareness leads to reduced consumption.**
- **Saves Money – Generating energy closer to where used reduces transmission and distribution costs and the need for major grid upgrades.**

- **local control and benefits means a healthier, wealthier community**

- **Many banks and financial institutions provided 10 year loans for 60-80% of the installed cost**
- **Denmark's "Farmers' Bank" (Ringkøbing's Landbobank) have financed so many wind turbines they've been dubbed the "wind farmers' bank"**

- **Minnesota – MinWind I & II**

Farmer initiative

**Motivated by need for extra income,
preserving their farms and communities**

2 partnerships with 2 turbines each

**Structured to open membership to folks
from the community who are not
farmers**

**Partnerships are managed essentially as a co-
operative**

**Financial support from federal tax credit and
state WPPI of \$0.015 per kilowatt-hour for wind**

- **Economic Effects**

Cost to Ontario hospitals to treat the victims of air pollution = \$580,000,000 per year

- **Health Effects**

The MOE reports coal-fired electricity generation is responsible for

**23% of SO₂ emissions,
23% of mercury emissions, and
20% of GHG emissions**

Air pollution is responsible for an estimated 1900 premature deaths in Ontario each year

- Demand 2002
 - May ~ 16,000 MW
 - August ~21,000

Community Power is locally owned and sited green power generation (e.g. ExPlace turbine).

- It is sustainable energy at a human scale, both rooted in and responsible to the local community.

- **150 MW of new, renewable, distributed energy generation within the next 2-6 years**
- **~ 75,000 Ontario constituents directly participating in renewable energy development and production**
- **Up to \$200 million in new investment, along with skilled employment during development, construction and operations phases of the projects**

Royalties & Land Rent

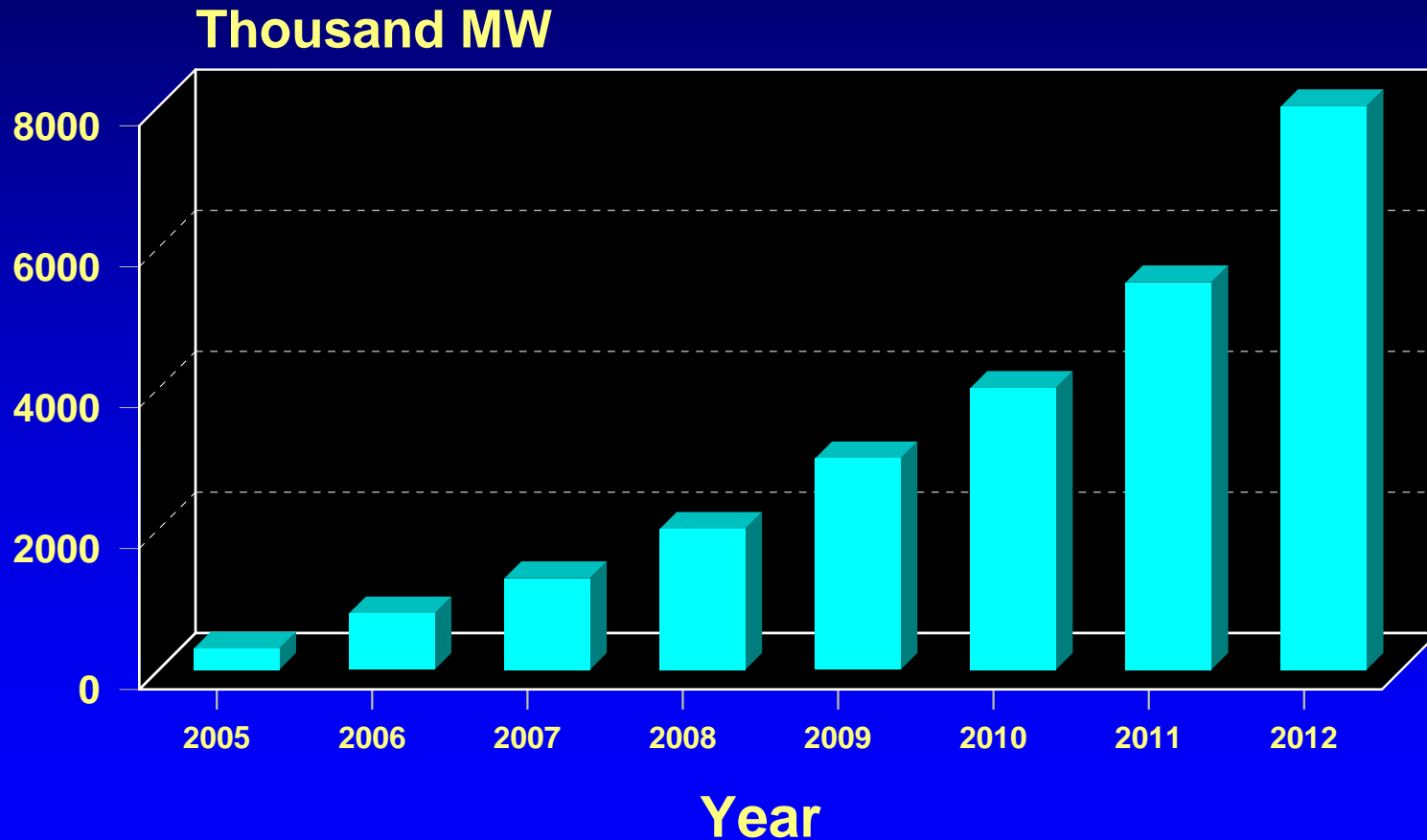
- **Signing Options (\$1,000 CAD)**
- **Installation Bonus (\$2,500 CAD/MW)**
- **Royalties Increase over Time**
 - 1st 10 Years, 2nd 10 Years, 3rd 10 Years?
- **Royalties on All Revenue Sources**
 - Green Tags, RECs, CO₂
- **Security Deposit & Removal Bonds**

Potential per Farm

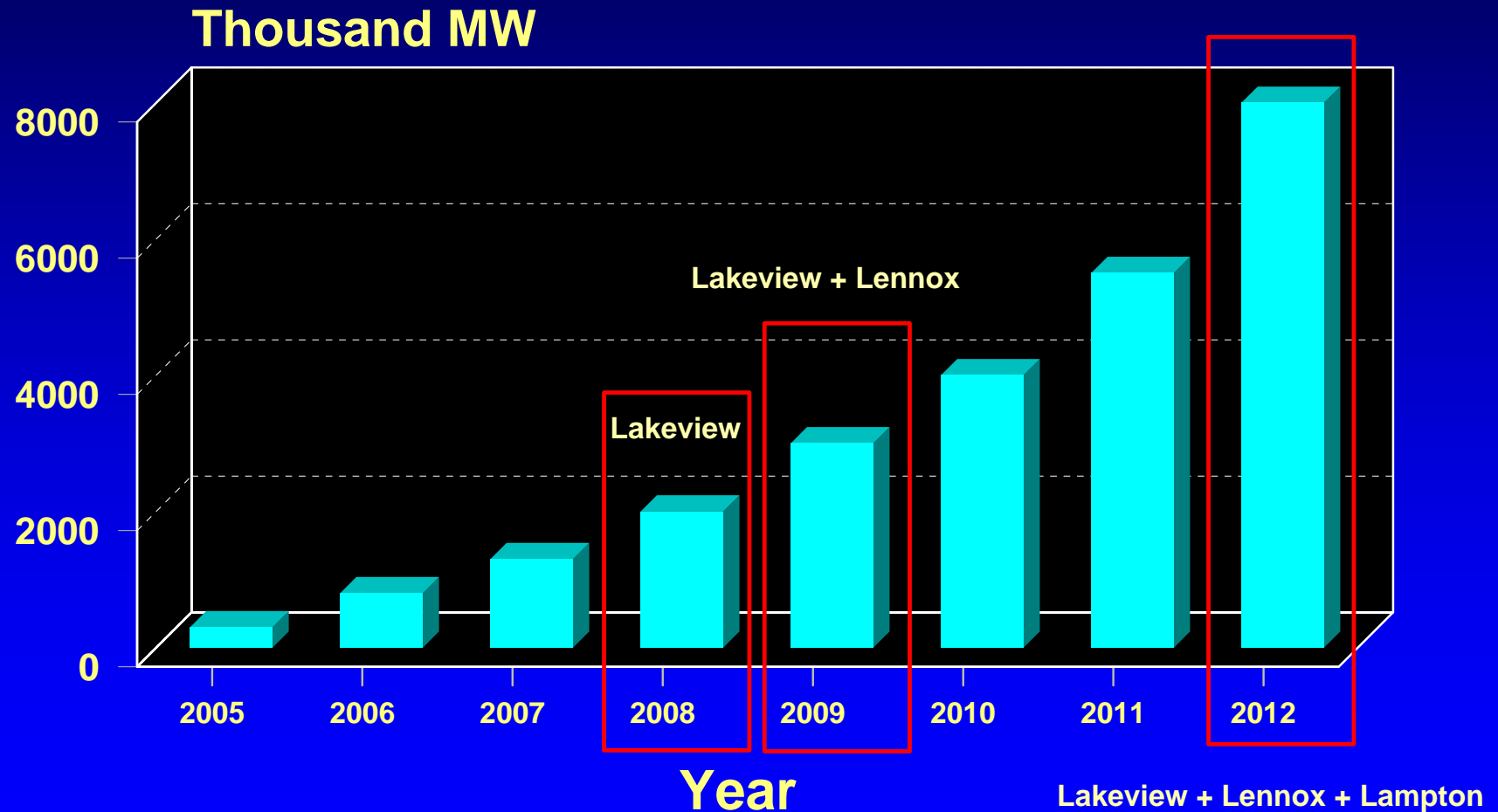
- Turbines Use Only ~5-10%!
- Potential to Double Farm Income
For 1/2 of Ontario Farmers



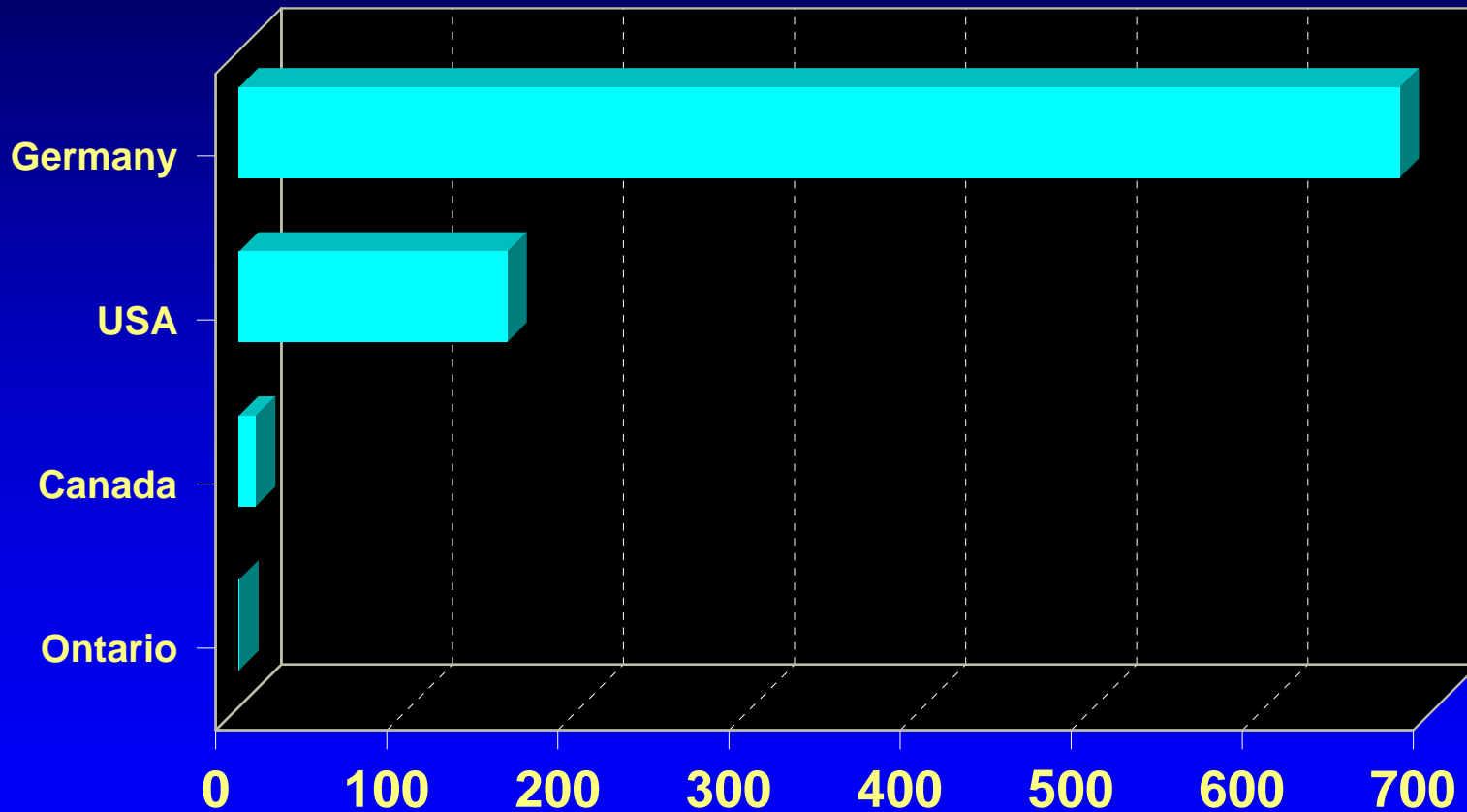
Wind Energy in Ontario OSEA's Proposal



OSEA's ARTs Proposal for Wind Energy

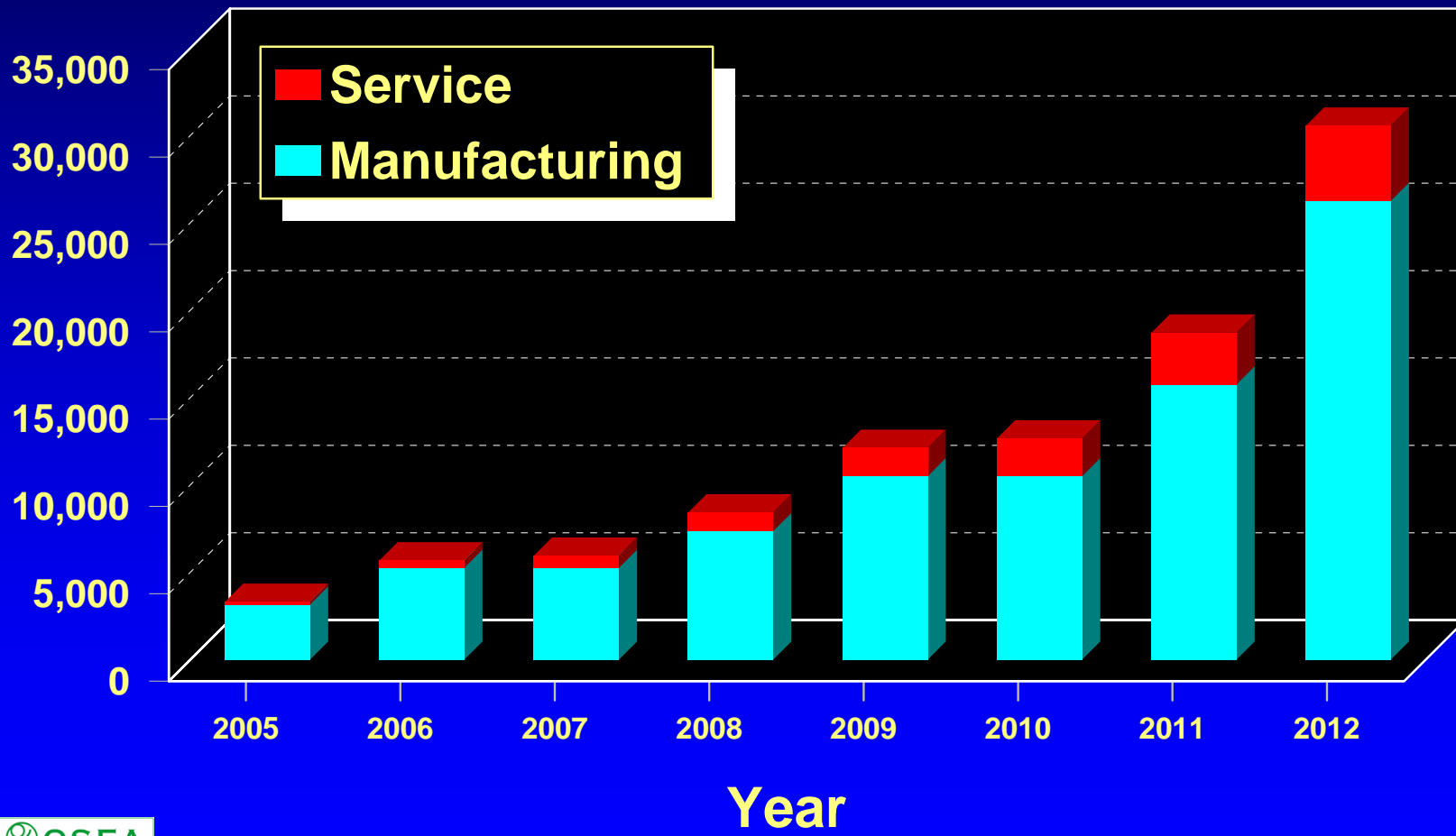


Installed Solar PV Capacity 2004 Where Ontario Stands



Ontario Job Growth from Wind with ARTs

Person-Years of Employment

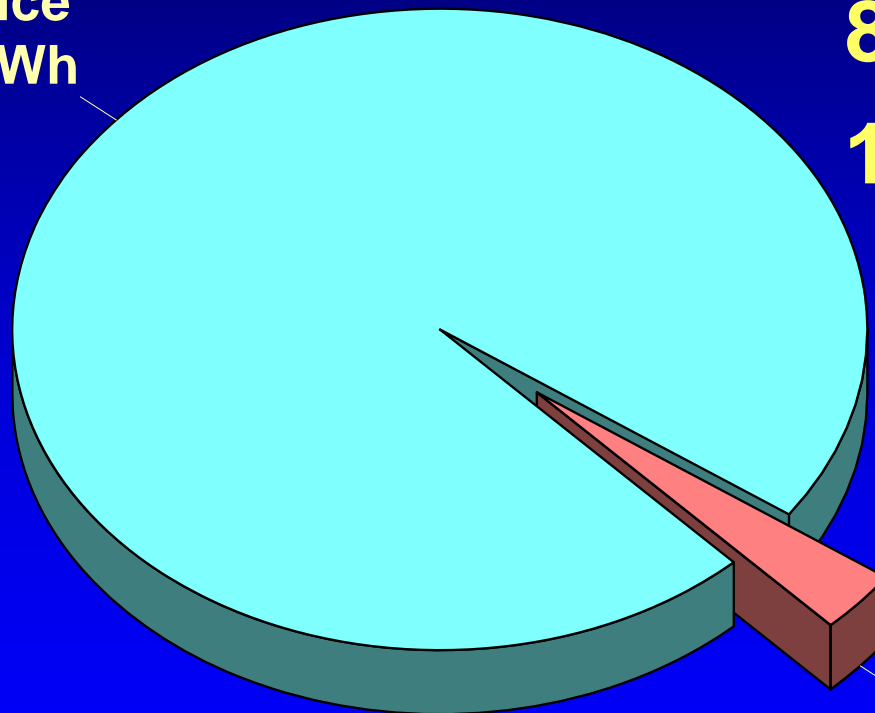


Premium Cost for Wind Energy with OSEA's ARTs in 2012

Total Price
\$0.120/kWh

8,000 MW

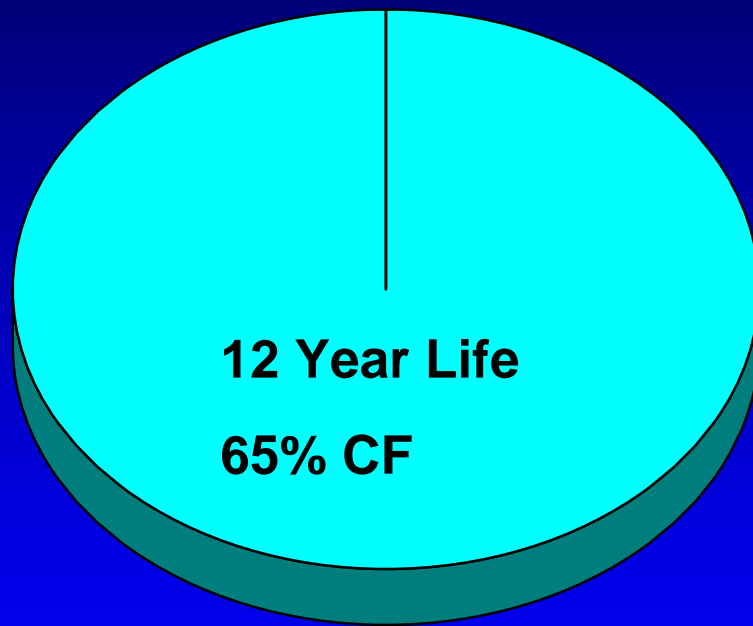
10% of Supply



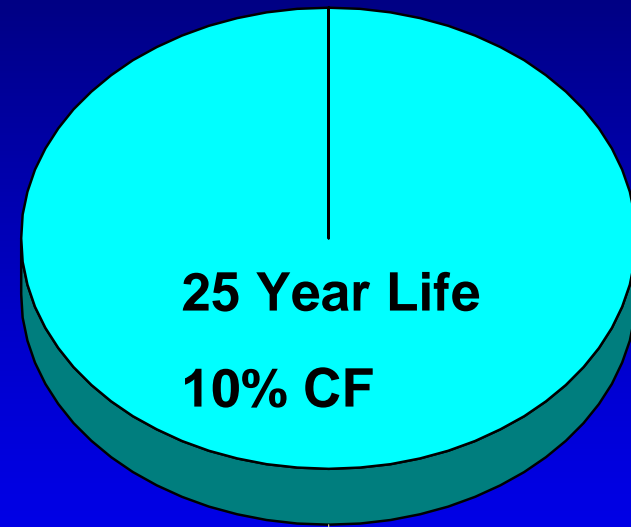
OSEA Tariff Cost
\$0.004/kWh

Comparable Investments*

\$1 Billion CAD



Pickering A1
47TWh/Lifetime



Ontario Wind
36TWh/Lifetime

*Pickering A1 Plant Costs Already Sunk

Bruce Contract Negotiations

- **MoE Enters Negotiations with Bruce**
- **Long-Term, Fixed-Price Contract**
- **Differs Little from Renewable Tariff**
Long-term, Fixed-Price Contract
- **We're Happy to Begin Negotiations**
Committee of Renewables Advocates
Wind, Solar PV, Biomass, Low-Impact Hydro