Why We Are Here Today
Why We Are Here Today . . .

To Find a Price/kWh that

Works for Renewables

in Ontario
Background
OSEA’s ARTs Campaign

• Launched February 2004
• Generated Interest by Farmers
• Premier’s Office Responds
• OSEA’s Renewables Tariff Forum
• Liberal Party Conference Endorses
• NFU & Others Endorse
• Ontario Ministry of Energy Request
Renewable Tariffs Launched

Elements of Success in Europe

- Fixed Price for Fixed Period
- Right of Interconnection
- By-Right Permitted Rural Use

Graph showing Thousand MW Total from 1980 to 2003, with distinct bars for Denmark, Spain, and Germany, indicating the growth in renewable energy capacity over time.
Advanced Renewable Tariffs

• What Are They?
  Political Price, Not Political Quota
  Simple Contracts

• How Do They Work?
  Simple & Comprehensible
  Little or No Administration

• Where?
<table>
<thead>
<tr>
<th>Existing</th>
<th>Proposed</th>
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<tbody>
<tr>
<td>Germany</td>
<td>Turkey (Wind)</td>
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<tr>
<td>France</td>
<td>Czech Republic</td>
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<tr>
<td>Spain</td>
<td>China</td>
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<tr>
<td>The Netherlands</td>
<td>India</td>
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<tr>
<td>Portugal</td>
<td>California (PV)</td>
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<td>Austria</td>
<td>Italy (PV)</td>
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<tr>
<td>Brazil</td>
<td>PEI, Canada?</td>
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<td>Greece</td>
<td>Ontario, Canada?</td>
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<tr>
<td>Luxembourg</td>
<td>Minnesota, USA?</td>
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Germany’s Renewable Tariffs
The Results

• Renewables from EEG 5% of Supply
• Renewables Generating 30 TWh/yr
• 45,000 Employed in Wind Industry
• 15,000 Employed in PV Industry
• 135,000 Employed in Renewables
• 110,000 Jobs in Wind by 2010
What ~30 TWh of German Renewables Would do in Ontario Today

Conventional
120TWh/yr

20%

Renewables
30TWh/yr

80%
Renewable Tariffs in Europe

- Wind: $0.11-$0.16/kWh
- Solar PV: $0.25-$0.92/kWh
- Hydro: $0.11-$0.13/kWh
- Biomass: $0.10-$0.19/kWh
Net Present Value of German Wind Tariffs

Year

$CAD/kWh

0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0

Low
Low NPV
High
High NPV

Year
What Price Works for Ontario?

- Small Distributed Projects <10 MW
- 20-year Contracts
- For Wind & Solar PV
- Possibly for Hydro & Biomass
  At Least as Place Holders
- RFP $0.08/kWh + WPPI = $0.09/kWh
  This is the Average Price!
Bernard CHABOT
ADEME, France
(Agence de l'Environnement et de la Maitrise de l'Energie)

• 30+ Years in Renewables
• Profitability Index Method
• Devised Prices for French Feed Law
• Assisted Irish Sustainable Energy Office
• Assisted Hydro Quebec