



**ONTARIO
SUSTAINABLE
ENERGY
ASSOCIATION**



Advanced Renewables Tariffs in Ontario

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Overview

- Thank you Dan, Jack, TAF, GTA-CAP, Diane, Site and Rob
- OSEA
- OSEA's ART/SOCs proposal
- Specificities for Solar (grid connected) PV
- Current Status
- Next Steps





Ontario Sustainable Energy Association

- NGO representing over 30 community organizations developing renewable energy projects
- Develop Policy for community based wind, solar, biogas, small hydro
- Provide Training and technical support for community power
- Develop financing mechanisms for community power

OSEA Vision

- **Mission:** To facilitate the transition to a renewable energy economy through the development and support of community based green power projects.
- **Vision:** An energy economy whereby local ownership, control and development of green power projects work to the benefit of the local people: economically, socially and environmentally.



Community Power

Core Description:

- Locally owned (wholly or significantly)
- *Commercial-scale
- Optimizes local benefits (social, economic and environmental)
- Low Impact Renewable Energy
- Accessible, open participation
- Democratically controlled (1 member, 1 vote)
- Financially viable

Broader definition includes:

- Municipalities, individuals, schools, universities etc.

Community Power Potential

Germany

- Largest installed capacity in the world (18,400 MW of Wind)
- Supplies 6% of country's electricity
- 35% wind projects are owned by local residents and communities

Denmark

- 4th largest installed capacity worldwide (3,100 MW of Wind)
- Supplies 20% of country's electricity
- 85% wind projects owned by local residents and communities



OSEA's Accomplishments 2005/2006

- **Commissioning of "Powering Ontario Communities: Policy Recommendations for Projects up to 10 MW"**
- **The announcement of Standard Offer Contracts (Thanks TAF!)**
- **Incorporation of the Cooperative Fund for Community Power**
- **Bid winner to host the 2008 World Wind Energy Association Conference**
- **Recipient of the Ontario Ministry of Culture's "Great Grants Award"**
- **CanSIA's "Solar Advocate of the Year" award**
- **Hosted Canada's first Community Power Conference (Thanks GTA-CAP!)**
- **Completed Landowner's Guide to Wind Development and the just-released Community Power Guidebook**
- **Membership reached 30 community power organizations (Thanks Dan and Jack and TAF re: TREC)**





OSEA's 3 Program Objectives

- ARTS/ Standard Offer Contracts
- Community Power Innovation Fund
- Community Power Capacity Building Program



Ontario's Energy Market - a brief history

- 1998 - Re-regulation presented opportunities for new green energy development
- 2002 - Price cap prevented sale of green power
- 2003 – Renewable Portfolio Standard
 - 5% (1,350 megawatts) by 2007
 - 10% (2,700 megawatts) by 2010
- 2004/5 - RFPs offered contracts to build green power – to some
- Community Power precluded from participating in RFP 1, 2 and 3 process

Why SOCs/ARTs

- Profound Need to increase public acceptance of RETs
- ARTs allow municipalities, farmers, co-operatives, community groups, small businesses and members of the public to participate in green power generation
- Simplified administrative process for government and suppliers
- Markets with ARTs have more players, stronger local economies, more manufacturing, more jobs, more renewable energy generation
- ARTs have been successful – Denmark, Germany, Spain, France, California
- Gained efficiencies through distributed generation



OSEA's ARTs campaign

- 2004 - Paul Gipe joins OSEA, spearheaded campaign for Advanced Renewable Tariffs
- Widespread support built throughout Province – Nov 2004 On Liberal Party Endorsement
- Dec 2004 - Gov't of Ontario hired OSEA to prepare a policy report – mechanisms for Community Power
- ARTS now called SOC in Ontario



OSEA's ARTs Proposal

Key components:

- Size (0 up to 10 MW) suggested cap
- Open to all players
- Includes embedded generators and homeowners
- 20 year contract between generator and OPA
- Proposed Prices :
 - Wind (13.3 - 6.9 cents/kWh) (Avg. program price 10.6)
 - Biogas and small hydro (13.3 cents/kWh)
 - Solar (63-87 cents/kWh) (CanSIA 42 cents/kWh)
- Guaranteed (within reason and established safety guidelines) access to the distribution grid (< 44 kV)
- Pilot 2005-2010 (no cap), review in 2007



Specificities for Grid Connected Solar PV

- Assumptions in the price model
 - Installed cost (3 kW roof top PV system) \$10,000
 - Annual generation of 1,400 kWh/kW of installed capacity (assumes solar radiation exposure typical of Ottawa)
 - 60-80 % Inflation
 - Profitability index of 0.1 (benefit:cost) ratio
 - = 83 cents per kWh with commercial loans
 - = 67 cents per kWh with soft loans

SOCs/ARTs Today

- Fall 2005 - Ministry of Energy issued directive to OPA to develop recommendations on a SOC program for Ontario
- March 2006 - OPA/OEB completed recommendations for a SOC Policy for Ontario
- March 2006 - Premier, Minister of Energy and Dr. Suzuki announced details of SOC program for Ontario
- March-October 2006 – OSEA will work with OPA and OEB on implementation of SOC (Thanks TAF!)
- Fall 2006 - Implementation of SOC program
- Ongoing evaluation/Review - during first 2 years





OPA's SOC recommendations

Key components:

- Size (0 up to 10 MW) cap
- Open to all players
- Not a pilot program – no cap on program capacity
- 20 year contract between generator and OPA
- Price specific to technology
 - 11 cents/kWh wind
 - 42 cents/kWh solar PV
 - 11 cents/kWh biogas and small hydro +possible 3cents for dispatchability
- Guaranteed (within reason and established safety guidelines) access to the distribution grid (< 44 kV) – many interconnection and metering issues to be worked out



Issues with SOC Program

- Embedded generation excluded - rationale “too complex”
- GHG credits stay with the Province
- Prices too low
- Tiered pricing for wind absent (undue profits to high wind sites, too low profits for moderate wind sites (5.6 m/s)
- Proponents not entitled to WPPI
- Required direct connection to distribution grid limits access for Northern projects
- No limits on numbers of connection agreements at any one time opens up program to gaming (Hydro 1 already received over 200 applications - for 2000 MW)
- Fund not announced



Implications for Munis, ExPlace Project and Residential Solar

- Solar price insufficient, however, better than net-metering
- Will encourage early adopters
- OPA/OEB resistant to facilitating homeowner participation despite Minister's wishes (likely due to LDC response)
- GHG emissions credits stay with Province
- Embedded generation explicitly precluded

**Present situation
(submetering)**

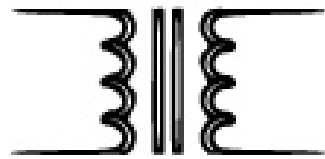
Strachan Avenue /
distribution

13.8 kV

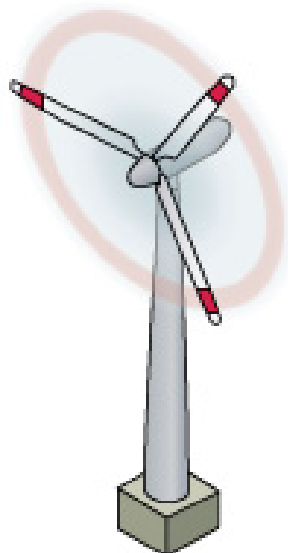


meter determining
turbine output

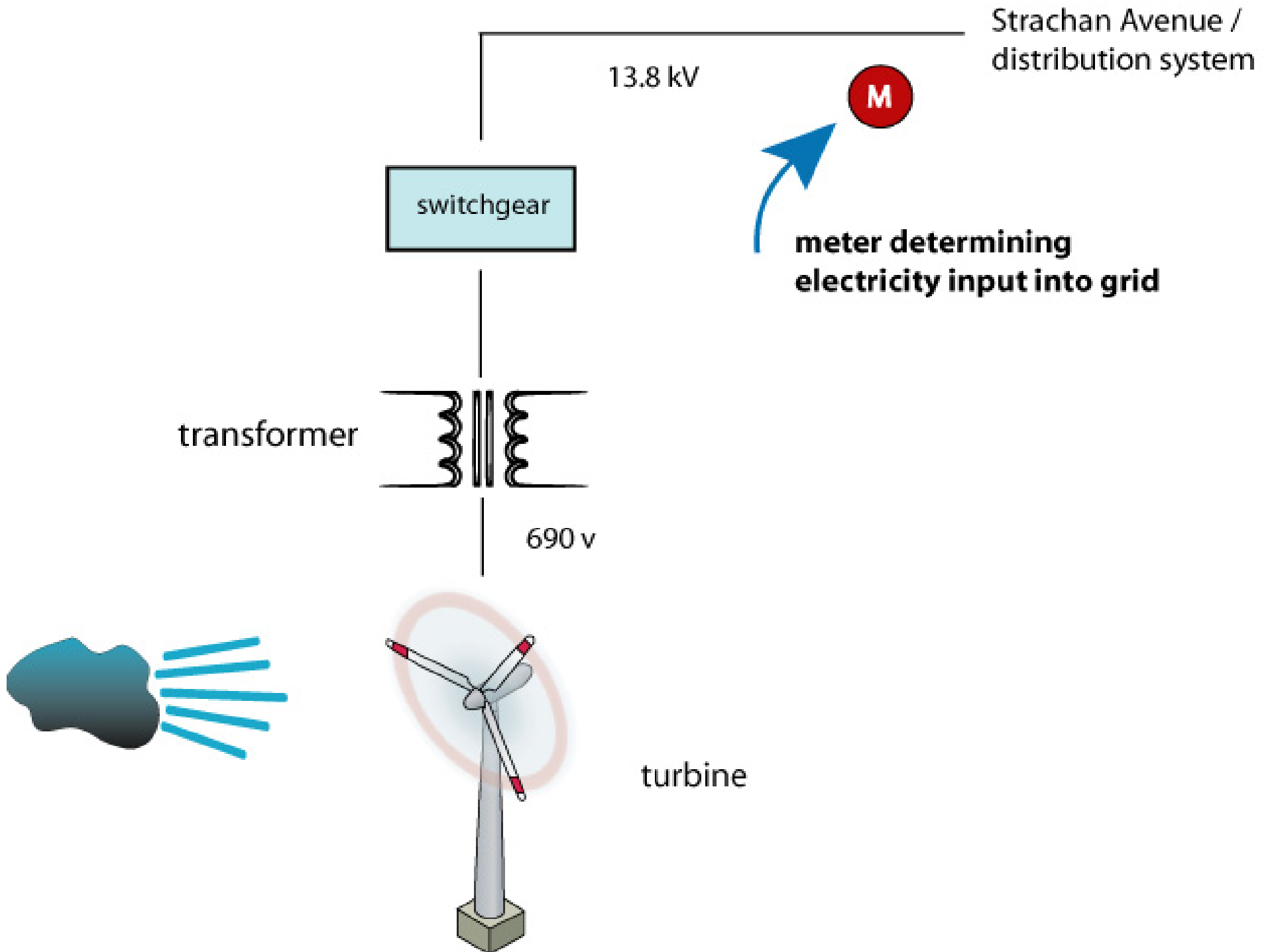
transformer



690 v



turbine



Next Steps

- Options for ExPlace Project and Other City of Toronto Projects:
 - Seek exception to submeter from Toronto Hydro for solar project and other projects at ExPlace (TREC turbine is already a precedent)
 - Cable to Toronto Hydro substation on Strachan Avenue
 - Overhead wires (\$100,000/ km)
 - Underground (TREC \$10,000 for 80m)
- Insist to the OPA/OEB/Ministry/LDCs:
 - Emmissions credits stay with Municipality to retire
 - Municipalities, like all community power projects, cannot move around the province to capture best winds - prices must be set accordingly
 - Embedded Generation must be allowed

Contact OSEA

Please visit www.communitygreenpower.ca for more info or contact Deborah Doncaster at 416.977.4441 or deb@ontario-sea.org





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