

**Washington International Renewable Energy Conference (WIREC)  
March 4-6, 2008 Washington DC  
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Summary .....	1
Main Observations .....	3
Pledges .....	4
Conference Theme Conclusions .....	5
Canadian Participation .....	6
Session Summaries .....	7
WIREC Trade Show .....	10

**Summary**

From March 3-6, 2008 ministers from around the globe along with 9000 other delegates met in Washington to discuss ways of scaling up renewable energy. At the Washington Renewable Energy Conference (WIREC) – the largest renewable energy conference ever held - governments were invited to make pledges on new or strengthened policy initiatives that will accelerate renewable energy investment and deployment. A parallel renewable energy business conference and trade show illustrated the latest renewable energy technologies and global market that have risen to over \$100 billion per year. Investors love the low risk, fast pay back from renewable energy projects which can be installed quickly and do not depend on future fuel prices.

Key conclusions from WIREC included:

- Deployment of renewable energy is expanding globally much faster than expected, with 2007 investments topping \$100 Billion.
- Renewable energy technology can be deployed quickly and reduce greenhouse gases immediately, while alternatives like nuclear and carbon capture will take a decade.
- It is not the lack of capital that is holding renewable energy back. Investors are flocking to the sector because of its low risk relative to energy sources that depend on fuel prices or have long term waste problems.
- Long term stable policies and price signals are imperative for any significant renewable energy market to evolve.
- The most effective long term policy for the power and heat sectors is the guaranteed fixed price/priority grid access feed-in tariff policy.
- The food versus fuel land use concerns about bio-fuels are real but can be managed through enforcement of strict criteria and regulations.

Significant Pledges made at the conference included:

- Denmark: At least 30% renewable energy, 15% reduction in fossil fuel use, and 1.4 % energy efficiency per year, all by 2025.
- Germany: New laws to support renewable heat, 20-30% renewable power by 2020, 10% biogas by 2030, and financing for developing countries.
- New Zealand: 90% renewable electricity by 2025
- United States: \$10 billion in loan guarantees, making solar electricity competitive by 2015, 36 million gallons of bio-fuels by 2022, \$2 billion to new developing country clean energy trust fund.

The Canadian Renewable Energy Alliance (CanREA) called on Canada to announce new or strengthened renewable energy policies at the conference. Yet Canada did not even send a minister to WIREC and made no new pledges to support renewable energy, relying instead on describing existing programs.

Canada is lagging behind the rest of the world on the use of renewable energy, yet it has more renewable energy resources than most other countries. The lack of a strong Canadian commitment to renewable energy is a huge lost opportunity. We are missing out on the fastest growing energy source of the 21<sup>st</sup> century and one of the best ways to tackle global warming. Instead the Government of Canada chooses to support unreliable and environmentally problematic technologies like nuclear energy as well as unproven technologies like carbon capture and storage. It appears that Canada will continue to provide support for renewable energy but not as a priority. The federal government seems unaware of how much the rest of world is doing or how much bigger the global renewable energy market will be than carbon capture or nuclear.

WIREC consisted of four distinct parallel events:

1. A ministerial policy conference involving high level national delegations along with non-government and industry stakeholders. All nations and participating organizations were asked to make pledges to scale up support for renewable energy.  
Official web site: <http://www.wirec2008.gov/wps/portal/wirec2008>  
IISD web site: <http://www.iisd.ca/ymb/wirec2008/>
2. A business conference of mostly technical sessions: <http://www.americanrenewables.org/>
3. A trade show of the latest technology <http://www.americanrenewables.org/>
4. A series of officially approved side events and other activities run by government and non-government organizations on a variety of topics  
[http://www.americanrenewables.org/about\\_official\\_side\\_events.cfm](http://www.americanrenewables.org/about_official_side_events.cfm)

## Main Observations

### Attendance/Profile:

1. WIREC was attended by 9000 delegates (7000 expected). Almost all countries represented but the most visible countries were Germany, US, Spain, Brazil, China. Somewhat visible were UK, Italy, Japan, Australia, South Africa, Norway, Denmark. Virtually no profile: Canada, Russia, India, France.

### The Status of Renewable Energy:

2. Deployment of renewable energy is expanding globally much faster than expected, with 2007 investments topping \$100 Billion (20% more than predicted). See REN 21 Global Status Report. <http://www.ren21.net/>
3. Because of the rapid increase in investment, financial market analysts are taking a lot of interest and have produced good estimates of expected future market size as well as expected cost reductions from market scale up.
4. Technical advancements and cost reductions are occurring at a rapid rate because of the expanding market.
5. Given the rising price of fossil and other fuels, the expectation of full cost pricing (carbon first), and the reduction in renewable energy costs, there will be a cross over during the next decade.
6. Renewable energy technology can be deployed very quickly while alternatives like nuclear and carbon capture will take a decade.
7. The cross over date will depend on transitional policies that encourage priority investment in renewable energy and thereby reduce costs through economies of scale.
8. There is no shortage of capital or debt financing ready to invest but it will only go where there are long term stable investment and policy environments and renewable energy is given priority.
9. The food versus fuel land use concerns about bio-fuels are real but can be managed through enforcement of strict criteria and regulations.
10. Renewable energy may be the biggest rural development opportunity of the 21<sup>st</sup> century.

### Best Policy Environments:

11. Long term stable policies and price signals are imperative for any significant renewable energy market.
12. The most effective long term policy for the power sector (and maybe heat sector) is the guaranteed fixed price/priority grid access feed-in tariff policy which has been shown to provide the lowest cost of capital and lowest transaction cost – far better than stop and go policies like RFPs and tax credits, and far more efficient than quota/RPS and certificate approaches.

13. The most effective long term policies for biofuels is the use of strict criteria to prevent virgin or food land from being used for feedstock, and the linking of permanent incentives to those feedstock that meet the criteria.
14. Countries or states/provinces that do not move in these directions, or falter in their support, can expect to see a drop in investment [UK, US, Denmark]. Those that do put an effective set of policies in place can expect economic development in the form of jobs and manufacturing [Germany, Spain].

#### Barriers:

15. Many countries, even those with some support policies still do not perceive renewable energy as having the ability to be the primary solution to climate change or its multiple other benefits – air quality, local development, democratic ownership, energy security, geopolitics, water. Consequently they are jeopardizing their renewable energy industry. [Examples: US/Canada not extending tax credits or adopting targets]
16. Those that already use other policies to support renewable energy will need to make a careful transition to the above best practice, making changes to grid transmission, management, cost recovery, and regulation to make renewable power and CHP the primary sources of power. However there are good examples of this happening.
17. Lack of manufacturing, installation, and servicing capacity to deliver renewable energy at the rate it is demanded is a real barrier in both developed and developing countries.

## Pledges

Participating countries and other stakeholders were asked to make pledges of new policies or targets that would scale up renewable energy deployment. Here are a few examples. For a complete list see: <http://www.ren21.net/wiap/wirec.asp> and [http://www.usda.gov/documents/Pledge\\_Display\\_Web.pdf](http://www.usda.gov/documents/Pledge_Display_Web.pdf)

- Australia: 20% RE electricity by 2020 with regulated target
- Brazil: Bio-fuel legislation, maintain current 80% RE electricity, support biofuels in developing countries
- European Union: 20% share of RE in all sector final energy consumption by 2020. Minimum 10% in biofuels
- Denmark: At least 30% RE, 15% reduction in fossil fuels, 1.4 % EE per year, all by 2025
- Germany: New laws to support RE heat, 20-30% RE power by 2020, 10% biogas by 2030 through gas feed in law, promote international cooperation on feed in laws, double contribution to Special Facility to finance RE in developing countries
- Italy: Green certificate program for RE technologies
- Japan: 3% RE for primary energy by 2010, 16 TWh RE power by 2014

- Netherlands: 2% per year EE, 20% RE by 2020, 100% sustainable product government procurement by 2010
- New Zealand: 90% RE electricity by 2025
- Norway: Carbon neutrality by 2050
- Spain: 12% RE for total energy use by 2010, 30% RE power by 2010
- Sweden: 50% RE power by 2020
- United Kingdom: 10% RE by 2010 and 20% by 2020, 1 GW offshore wind by 2010 and 25 GW by 2020
- United States: \$10 billion in loan guarantees for RE and EE, make solar PV competitive by 2015, 36 million gallons of bio-fuels by 2022, contribute \$2 billion to new developing country clean energy trust fund, Government procurement: 20% EE, 10% bio-fuels, 7.5% RE power by 2015

Canada did not make a pledge to set targets, promise to increase public investment, or to put new policies in place. Canada only summarized current programs and initiatives: a new version of RETSCREEN, already existing EcoEnergy Programs, small GST tax changes in Budget 2008, and Energy-L - a database managed by the International Institute for Sustainable Development (IISD).

## Conference Theme Conclusions

Discussion among delegate came up with conclusions/recommendations on the four conference themes. The following are some of the most significant. For more information see <http://www.wirec2008.gov/wps/portal/wirec2008>

### Agriculture and Rural Development / Local and State Initiatives:

- Energy poverty and access to clean energy a global imperative – the cost of inaction is huge
- Renewable energies are the only real answer
- Essential that all countries address
- Food versus fuel issue is difficult and manageable – could provide hope for farmers in all countries

### Market Development and Financing:

- New market development and finance models are needed
- Government role to provide long term stable policies and leverage private and community investment
- Grid integration policies are key
- Untapped potential must be fostered – including solar, geothermal and ocean

- Capital is coming to the renewable energy market but long term policies needed to keep it growing

#### Research and Development/Capacity Building:

- Human resource development/training is crucial in all countries to meet the need for skill work force
- A new expanded infrastructure and centres of excellence is needed in all countries and regions
- New international funds and re-investment facilities for R&D are essential including 3% re-investment of all sales

## Canadian Participation

Canada kept a low profile throughout WIREC, sending only an ADM (Sue Kirby from Natural Resources Canada) as head of delegation for Day 1. Gary Pringle, Head, Energy Secretariat at Foreign Affairs acted as head for Days 2 and 3. Canada was one of the countries chosen to present pledges at the close of the conference, but unlike many other countries, nothing new was presented or targets committed to (see above). Delegation members include staff from Natural Resources Canada Environment Canada, the Canadian International Development Agency, and Foreign Affairs.

The Canadian Renewable Energy Alliance (CanREA) was represented by Roger Peters and Ian Philp (the Pembina Institute) and Gwen Glover (OSEA). Other OSEA staff worked on the OSEA booth promoting the June 2008 World Wind Energy Association (WWEA) conference to be held in Kingston, Ontario which will focus on community power <http://www.wwec2008.com/conference.htm>. Four students from the York University Environmental Studies program – Linda O'Malley, Lily Riahi, Julia Balabanwicz, Valerie Kitchell - attended as observer/volunteers.

Canadian NGOs met with the Canadian delegation March 5 and presented CanREA's expectations for Canada and warned how much Canada could lose by being so far behind the rest of the world. For example, Canada could see a loss of investment in wind within a year if the EcoEnergy for renewable power incentive program is not continued and expanded and no long term strategy is proposed. For a list of CanREA recommendations and analysis of how far Canada lags behind, see CanREA's media release and background paper at [www.canrea.ca](http://www.canrea.ca).

The response from the Canadian delegation was as follows:

- The current federal government does not view renewable energy as a high priority and views current programs as sufficient. The prospects of a Renewable Energy Act or national strategy in the near future are slim.
- The Canadian delegation had noted that long term policies and price signals are essential for renewable energy investments and will report this back to Ottawa.
- The delegation also noted the support for feed in tariffs as the preferred policy to support renewable power.
- Canada recognizes that developing countries need assistance in clean energy and energy policy and will be asking CIDA to do more in this area. Canada is in discussions with Norway as to how to divert energy royalties into development assistance. However, it is not clear that CIDA will focus on renewable energy – it may just focus on energy policy in general.
- Although it is not confirmed, Canada will probably pay its overdue contribution to the Renewable Energy and Energy Efficiency Partnership (REEEP), and actively participate in 2008 activities with other North American REEEP partners. [Roger Peters attended the REEEP partners meeting in DC on March 5 with Andy Boycott of Environment Canada]
- Canada considers sustainability criteria for biomass sources used for bio-fuels (and heat or power) are important, but has not yet taken action on this issue. Canada generally tries to align its regulations with those of the United States and is in discussions with the Environmental Protection Agency to gain lessons learned from their current policy initiatives - including the regulations that are to be introduced under the 2007 Energy Independence and Security Act.
- The delegation will forward the invitation to attend the World Wind Association Conference in Kingston in June 2008 to the Government of Canada.

The Government of Canada hosted a pavilion to highlight its current renewable energy programs. Other Canadian representation in the pavilion included the Wind Energy Institute of Canada (WEICan), Ontario Sustainable Energy Association (OSEA) and a few Canadian renewable energy technology providers.

## **Session Summaries**

The following is brief summary of some of the technical discussions at WIREC.

### ***Power Sector***

The huge increases in investment in renewable power, its potential, and the policies and other changes necessary for scale up was one of the main topics of the two conferences and side events. Here are a few of the key sessions:

### Feed-in tariffs workshop and side events

A workshop organized by the World Futures Council was held on March 2 and focused on a campaign to make feed-in laws and tariffs the preferred policy in North America. Feed-in tariffs provide priority access to the grid for renewable power and a guaranteed price based on the market prices of each technology. For more information on feed-in tariffs visit <http://www.pembina.org/pub/1599>. European experience in using feed-in tariffs from France, Germany and Spain was reviewed. States and provinces (Ontario) that have or are planning to use feed in tariffs described their plans and strategies. Transition strategies in jurisdictions that use other approaches to support renewable power such as Renewable Portfolio standards were also discussed.

At a complementary side event at WIREC, US Congressman Jay Inslee (WA) described a draft federal bill that would require all US utilities to give renewable power priority and unlimited access. The additional cost would be shared by all consumers through a national public benefits charge on every kWh of power sold. Other presenters from the financial sectors provided evidence that feed in tariffs are the most efficient, easily managed, and cost effective (lowest cost of capital) means of increasing investment in renewable power.

### Grid Integration of Renewable Power

Presenters from GE, Alberta, and Denmark provided evidence that with the right grid design, complementary flexible generation / storage, and regulation, integration of over 30% wind / solar is possible. [Application of these principals to Ontario, Alberta and other provinces could show that coal and nuclear are not necessary in Canada]

### Transmission for Renewable Power

Presenters from transmission consultants, Texas, and the UK described the types of policies needed to ensure grids are developed / refurbished to serve renewable energy and other distributed sources. Cost recovery and connection queuing are two of the key issues.

### Role of Power Storage

Sessions featured pumped storage, flywheel, and compressed air storage both as grid embedded power storage to increase generation flexibility and associated with variable power sources. Presenters stressed the need to take all of the benefits of storage into account when evaluating storage – not just making renewable power dispatchable. The Atlantic Wind Test Facility in PEI had a booth at the Trade Show and is interested in participating in testing and monitoring.



## ***Bio-Fuels***

There was universal agreement that strict life cycle environmental and land use limits and criteria are needed for bio-fuel feedstock selection. That said, biofuels were also seen as an opportunity for developing country farmers to increase income and finance food and fuel production.

- The EU has developed GHG footprint and land use criteria for all biofuels that would count towards the EU 10% by 2020 target. No new agricultural land or land cleared for biofuels (or food) would be eligible.
- The US EPA is developing environmental and natural resource criteria under the new Energy and Independence and Security Act which caps corn ethanol and requires all other fuels to meet strict criteria.
- Brazil has undertaken research that shows clearing forests and other land for biofuels releases so much carbon that it takes 20 years for even sugar derived ethanol to recover this through emissions reduction. Brazil will do its utmost to enforce laws against land clearing.

## ***Heat***

While not a high profile issue, the use of wood pellets from forest waste/kills and solar water heating were featured in several trade show booths.

## ***Financing***

There were several presentations that insisted that it was not the lack of capital that is holding renewable energy back. Investors are flocking to the sector because of its low risk relative to energy sources that depend on fuel prices or have long term waste problems. Renewable power also goes in fast and pays out fast. A long term predictable price provided by a feed in tariff regime is ideal.

It was suggested that one of the main roles of government should be loan guarantees for the debt portion of projects – a role government is familiar with (e.g. mortgages). This is also a very important role in developing countries along with micro credit.

## ***International Cooperation and Assistance***

Several countries including Germany and the United States pledged significant assistance to developing countries for renewable energy. Other countries including Australia, Norway and the UK plan to use the Renewable Energy and Energy Efficiency Partnership (REEEP) for this purpose.

Germany announced that it has agreed to establish and finance an International Renewable Energy Agency (IRENA) to exclusively promote renewable energy the way IEA and IAEA promotes other

energy sources. Twenty other countries have agreed to join and twenty others are considering. Ten (including Canada) have declined.

## **WIREC Trade Show**

Significant advances in renewable energy technology were showcased at WIREC. For more information see [http://www.americanrenewables.org/tradeshow\\_exhibition.cfm](http://www.americanrenewables.org/tradeshow_exhibition.cfm)

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