



Trillium Power
Wind Corporation™

News from The Great Lakes: Ontario, Canada

Presented by: John Kourtoff, CEO

at the All Energy Conference in Aberdeen

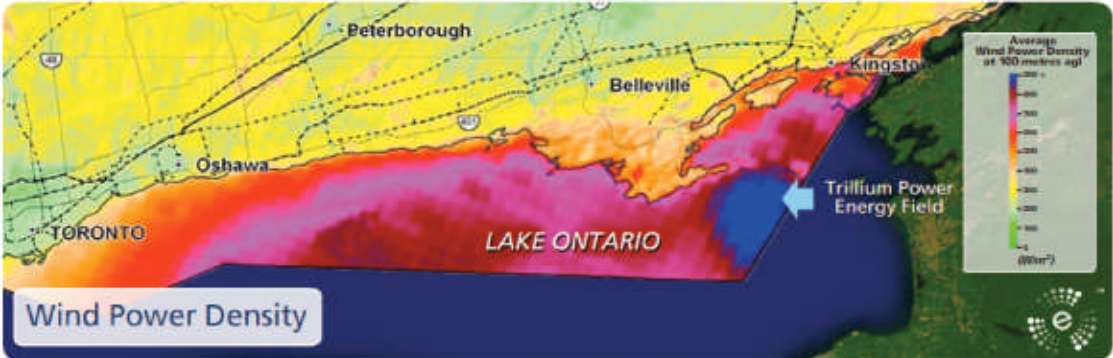
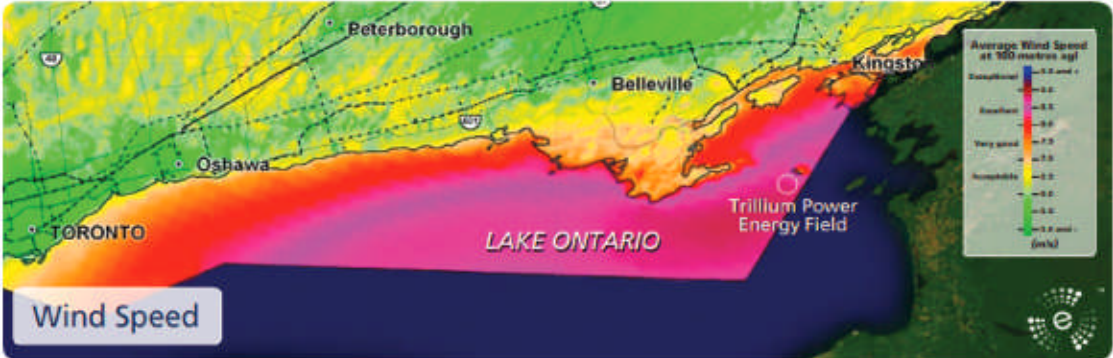
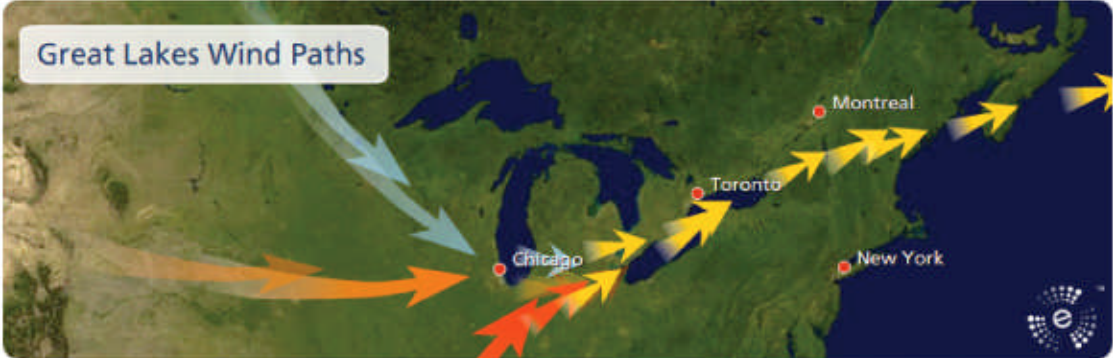
May 20, 2010

Trillium Power: Background

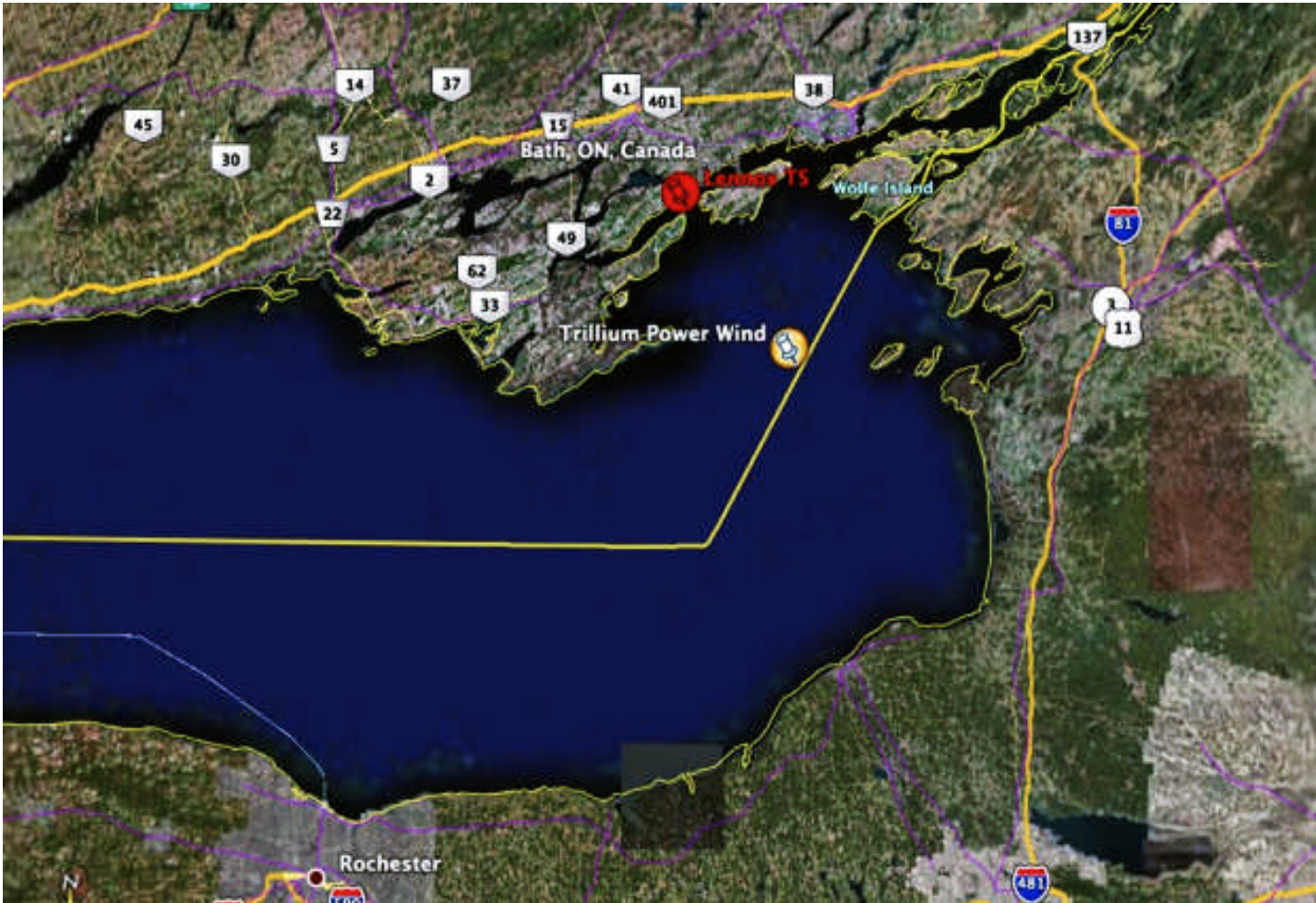
- Trillium Power Wind Corporation is a Toronto-based, privately owned company focused on the development of a diversified portfolio of offshore wind facilities in The Great Lakes according to a strict set of environmental, social and financial standards
- In 2006, Trillium Power formally announced Trillium Power Wind 1 (“TPW1”), the first ever offshore wind project in The Great Lakes
- TPW1 will tap powerful and consistent offshore winds to deliver approximately 420 MW of clean, reliable and economical electricity – enough to supply at least 175,000 Ontario homes
- In July 2009, Trillium Power announced the addition of 3 more offshore wind developments to its portfolio: Trillium Power Wind 2; The Great Lakes Array; and The Superior Array
- In February 2010, Trillium Power announced a strategic partnership with Vestas Offshore



TPW1: Wind Paths, Wind Speed and Power Density



Trillium Power Wind 1 Location

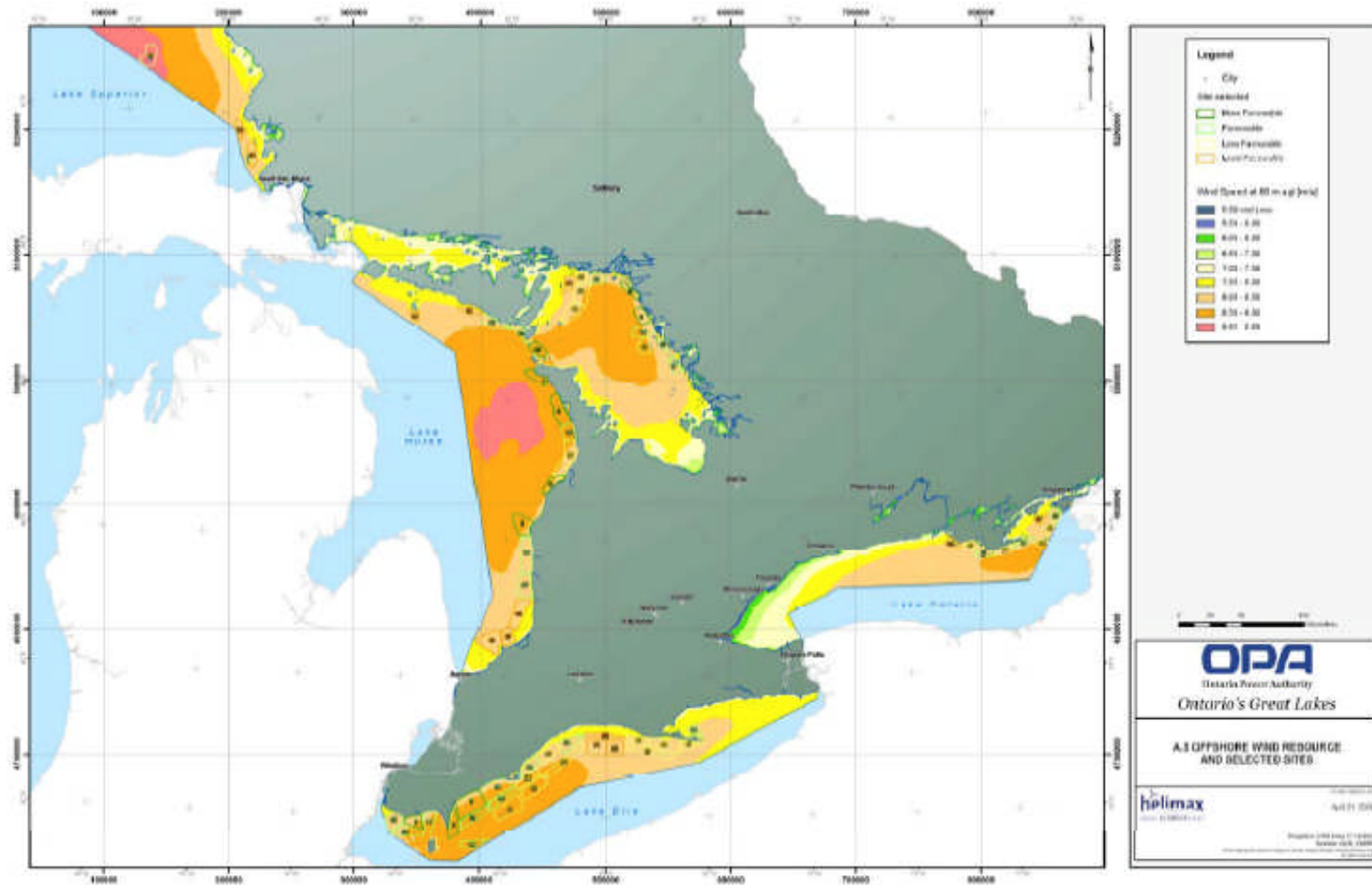


Ontario's Offshore Wind Potential

- Ontario's offshore wind potential in The Great Lakes is tremendous
- A report to the Ontario Power Authority by Helimax Energy Inc. identified nearly **35,000 MW** of offshore wind potential
- Currently reserved contiguous offshore areas (COAs) on the Ontario side of The Great Lakes = **20,790 MW** of "Reserved Offshore Potential"
- Biggest drivers are the Green Energy Act (GEA) and a C19¢/kWh FIT for offshore wind projects of any size
- Ontario is the first and only N.A. jurisdiction to offer such a FIT
- Asia and North America are anticipated to contribute nearly a quarter of the new offshore wind capacity installed globally over the next decade (*Emerging Energy Research, 2009*).



Ontario's Offshore Wind Potential



Offshore Wind in Freshwater

- All existing projects have been deployed in the ocean
- But – advantages of building in freshwater lakes are expected to be significant
 - Avoid saltwater exposure, thus will likely prolong component lifetimes
 - No tides and significantly smaller waves will facilitate design and construction
 - Avoid high costs associated with delays due to high seas and/or severe wave conditions common in the North and Baltic Seas
- Challenges facing offshore wind in The Great Lakes:
 - Ice floes (particularly in Lake Erie)
 - Vessel size restrictions due to St. Lawrence Seaway lock system



Ontario's Strong RE Policy Foundation

- ***Green Energy and Green Economy Act*** passed into law, May 2009
 - Establishes Offshore Wind as a separate development category from onshore wind
 - Guarantees a C19¢/kWh FIT for offshore wind projects of any size and a 20-year PPA (with full inflation protection for both contracts)
 - Obligates power purchase authority to grant priority and obligatory purchase of green energy
 - Obligates utilities to grant priority access and grid connection to green energy projects
 - Streamlines regulatory and approvals process – a unique 6-month approval guarantee once the Renewable Energy Approval has been submitted
 - Requires that objections to renewable energy projects be based on scientific studies and that complainants bear the cost of such studies
 - Any objections to Environmental Review Tribunal must have studies that prove that renewable energy project WILL cause permanent AND irrevocable harm



Environmental Benefits

- Developing Ontario's 'Reserved Offshore Potential' (20,790 MW) would erase the province's likely 23% GHG emission deficit
- It would position Ontario to surpass its GHG reductions by 56.3%
- The sale of emission credits at C\$65/t would generate C\$53.8bn over 15 years
- Currently 155 coal-fired plants in Great Lakes region discharge wastewater laced with contaminants and draw enormous amounts of water to create high-pressure steam (along with gas and nuclear plants)
- Trillium Power calculated that replacing current fossil fuel and nuclear capacity would save 148.5bn litres of fresh water per year – enough to fill the Burj Khalifa 106 times *per year*



Environmental Offsets

Environmental Offset Type	Environmental Offset Units	Environmental Offset Creation Ratios	Environmental Offset Emission Credits Generated
GHG Credits	(Oil Eq.)(kg/MWh)	758	55,218,905
NOx Credits	(Oil Eq.)(kg/MWh)	1.814	148,665
SOx Credits	(Oil Eq.)(kg/MWh)	5.443	446,077
Mercury Credits	(lbs/MWh)	0.000029608	2,426
			Total Water Savings (L)
Water NOT Removed from Great Lakes Basin	(L/MW)	6,901,408.45	143,480,281,676

Adapted from U.S. EPA Greenhouse Gas Equivalencies Calculator



A Quarter of a Billion Dollar Opportunity

- Developing Ontario's Reserved Offshore Potential would generate **C\$253.6bn in gross economic activity** over 15 years at a cost of C\$4,000,000/MW
- A 50% Domestic Content requirement = C\$126.8bn over 15 years or C\$16.9bn per year
- If the percentage of Domestic Content were to increase to 75%, this would increase Ontario's share of gross economic activity to over C\$190bn over 15 years
- Equivalent to roughly 3% and 1% of Ontario and Canada's GDPs respectively
- It would also add C\$114.1bn in provincial tax revenues over 15 years (C\$7.6bn/year)



Economic Benefit for The Great Lakes Region

- If Ontario were to receive only 50% of the total economic benefit, one can assume the remaining C\$126.8bn would be shared by other jurisdictions
- Of this, up to 2/3, or C\$84.9bn over 15 years, could provide stimulus for U.S. Great Lake States and Quebec
- The remaining 1/3, or C\$41.9bn over 15 years, could benefit international offshore wind suppliers and manufacturers predominantly in Asia and Europe



Job Creation Potential

	Number of MW	Manufacturing & Installation (54%)	Service Sector (25%)	Operations & Maintenance (12%)	RD&D, Engineering and Design (9%)	Total
BCG Base Case (low estimate)	66,000	81,000	37,500	18,000	13,500	150,000
Ontario Jobs	20,790	25,515	11,812.5	5,670	4,253	47,250
BCG Base Case (high estimate)	66,000	108,000	50,000	24,000	18,000	200,000
Ontario Jobs	20,790	34,020	15,750	7,560	5,670	63,000
GWEA	25,000	48,600	22,500	10,800	8,100	90,000
Ontario Jobs	20,790	40,416	18,711	8,981	6,736	74,844
REPP	100	209	97	46	35	387
Ontario Jobs	20,790	43391	20088	9642	7232	80353
Average Total for Ontario		35835	16590	7963	5973	66362
NREL	8000	52478	24295	11662	8746	97181
Ontario Jobs	20,790	136377	63137	30306	22729	252549
Average Total including NREL		55944	25900	12432	9324	103599

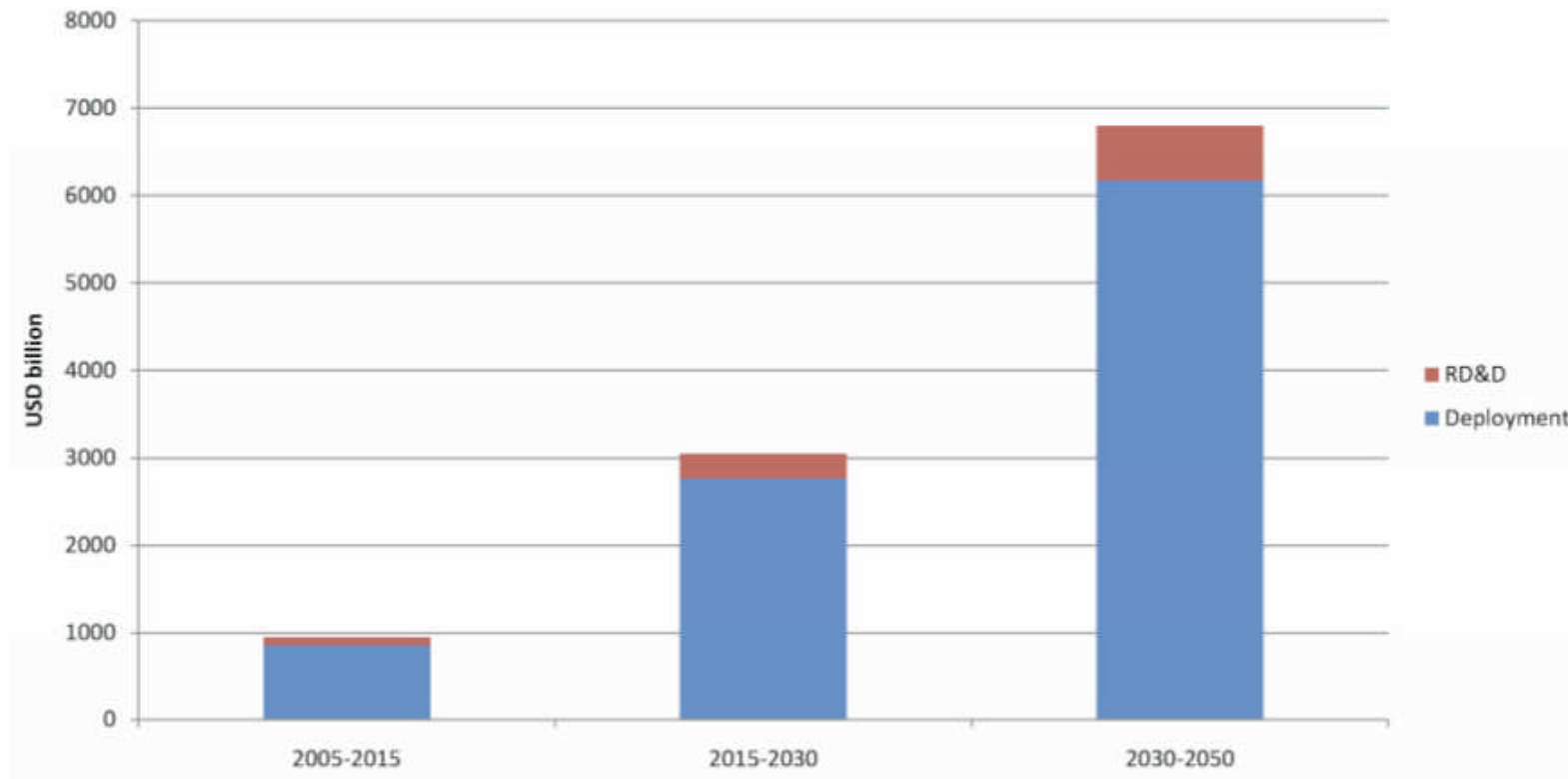


Deployment Capacity and Innovation Chain

- Ontario must focus on increasing its deployment capacity of renewable energy technologies if it is to fully benefit from the FIT program
- Domestic Content requirements help to achieve this
- While a Domestic Content rule for offshore wind has not yet been determined, it will likely be 50% - as for onshore wind projects
- The breakdown will be different due to offshore wind's unique requirements



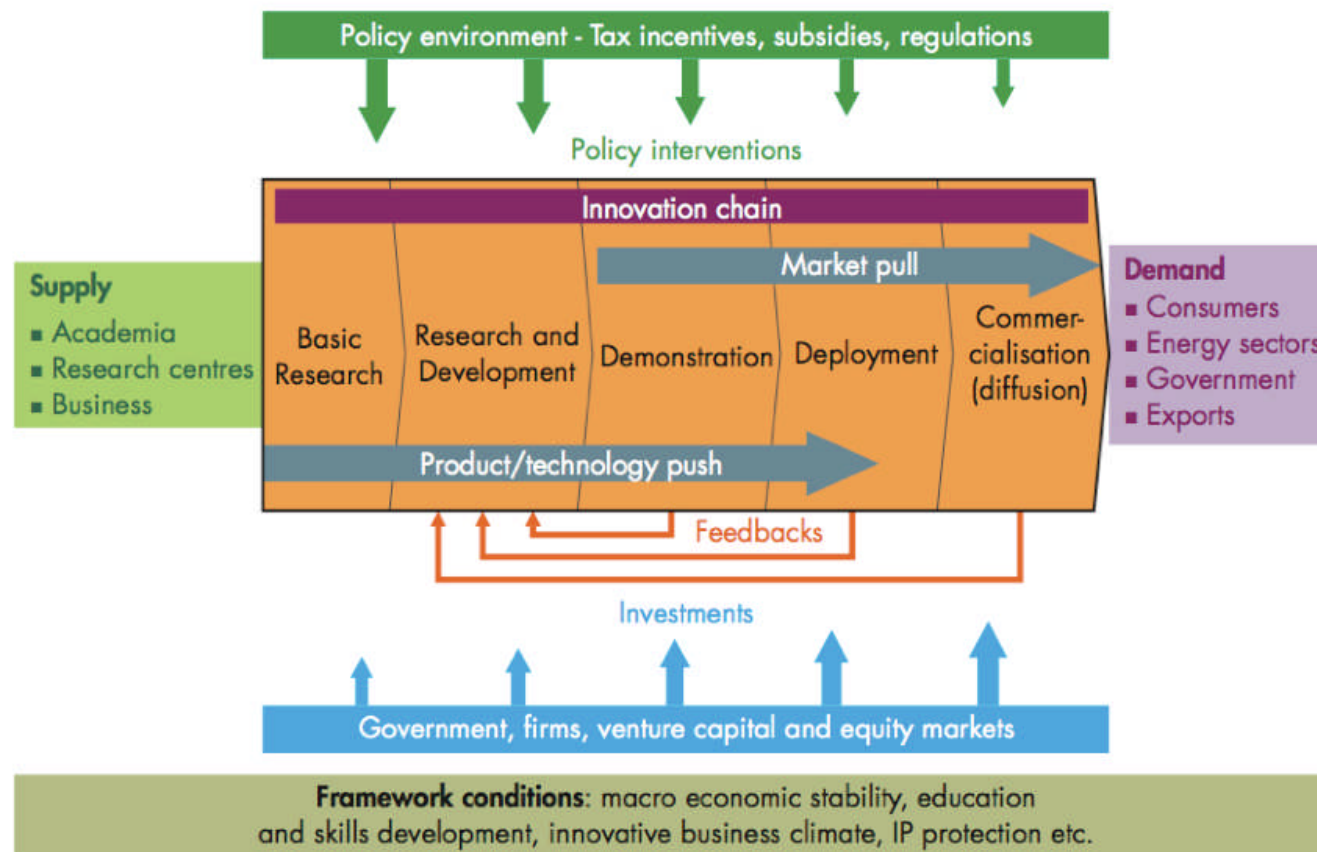
The Importance of Deployment Capacity



Source: International Energy Agency, G8 (Siracusa, Italy) *Ensuring Green Growth in a Time of Economic Crisis: The Role of Energy Technology*, Page 15.



Developing a Full 'Innovation Chain' (RDD&D)



Source: International Energy Agency, G8 (Siracusa, Italy) *Ensuring Green Growth in a Time of Economic Crisis: The Role of Energy Technology*, Page 7.



Ontario Offshore Wind Summary

- Winds prevail towards Ontario's shores
- 35GW of Offshore Wind potential independently identified in <30m of water
- Fresh water and low, or very low, waves and no tides
- Strong winds and power densities
- 95 million inhabitants around The Great Lakes provide high demand
- 6-month guaranteed regulatory and permitting approvals timeline
- 20-year guaranteed Feed-in-Tariff from a AAA jurisdiction
- Well-educated and diverse work force
- Strong engineering schools and R&D culture
- Renewable Energy Facilitation Office – single window approach
- Only jurisdiction that connects to all Great Lakes



Conclusions

- Ontario has taken important steps in terms of policy-making, but access to capital at the early development stage remains a major opportunity for international investors
- The German and British governments understand that big financial commitments, in addition to strong policies, are crucial to support and accelerate offshore wind development. The U.K. is investing £100 billion to develop 32 GW, which will generate several times that amount
- Every jurisdiction must balance its renewable energy portfolio on the unique mix of renewable energy resources within its borders
- Ontario has the high-quality offshore wind resources to become a sector leader, and the potential to serve as a catalyst to transform The Great Lakes region into a global offshore wind powerhouse and centre for innovation
- Ontario's GEA and Feed-In-Tariff are world-class drivers of Ontario's long-term economic prosperity and sustainable jobs





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Offshore Wind: Powerful. Perpetual. Reliable.™