



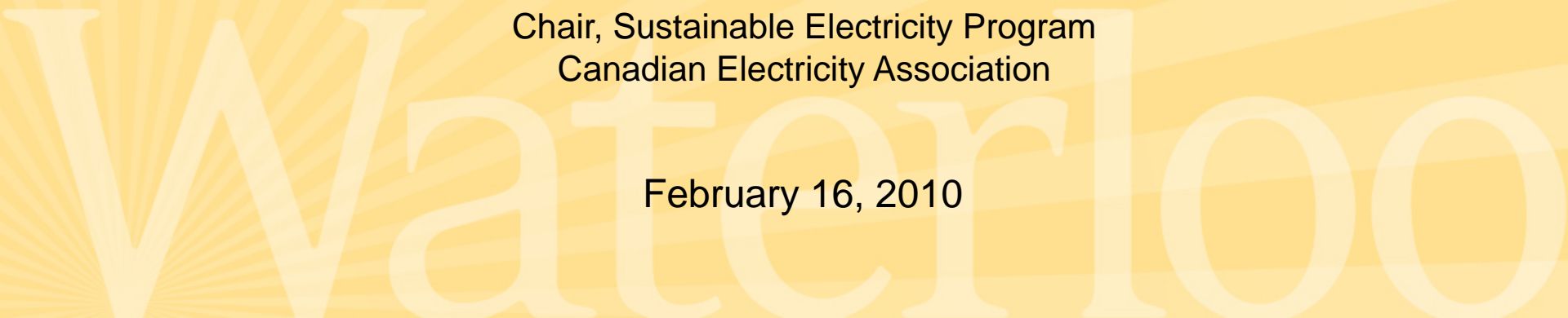
What will it Take to Get Businesses to Focus on Adaptation to CC?

**Climate Change and
Conservation Authorities in Northern Ontario
February 16, 2010**

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Agenda

The following limitations must be addressed if business is to embrace adaptation to CC:

1. Many business leaders are still not convinced that CC is real -- we need to “turn this view” around.
2. For business leaders who accept that CC is real, relative to adaptation, a key limitation is “adapt to what? What will the future look like?” -- we need to develop industry-specific CC adaptation guidance.
3. The business case vis-à-vis “CC adaptation” is not clear -- we must identify how CC adaptation will create value on an industry-specific basis. (lessons can be drawn from the Canadian Electricity Association’s Sustainable Electricity Program)
4. The Canadian Electricity Association – how should we be addressing adaptation to CC?

Convincing Business Leaders that CC is Real: Scientists must publish on the “Science of CC” in the business literature

- e.g., Globe and Mail, Report on Business, Canadian Business

- ❖ **Sea Level and Global Temperature:** sea level and global mean temperature have risen 1.6 and 1.3 times faster, respectively, than IPCC 2007 worst worst-case predictions
- ❖ **Arctic Ice Loss:** 1980-2007, Arctic Ocean sea ice coverage declined from 10 million km² (equal to size of USA) to 4 million km², with accompanying loss of sunlight reflectivity per unit area (0.8 reflection coefficient to 0.2)
- ❖ **Algal Free Ocean:** 1980-2007, the algal free area of the world’s oceans increased by 15% in response to higher surface water stability and lower nutrient cycling, thus affecting a reduction in the ocean’s CO₂ sink capacity
- ❖ **350 ppm CO₂:** 2010 global atmospheric CO₂ concentration 388 ppm, heading upwards to 450/550 ppm. A positive “feedback loop” (i.e., climate change driving climate change) occurs when atmospheric CO₂ persists above 350 ppm
- ❖ At a recent Next Generation Utilities conference in California, the majority of business leaders had no understanding/awareness of the above (or related) facts
- ❖ **CC messaging should be coming from scientists in “user-friendly” form**
- ❖ **currently, Eric Reguly and Margaret Wentz have greater “CC scientific influence” on business leaders than most scientists**

Relative to CC, What Will the Future “Look Like”? How can we plan for a future that is ill-defined?

(capital stock turnover challenge)

Niagara Tunnel – will power
160,000 homes



Little Jackfish River, Northwest
Ontario – will add 85 MW of capacity



Lower Mattagami River (Timmins) -
will add 450 MW. Will replace
Smoky Falls GS, and expand Little
Long GS and Kipling GS

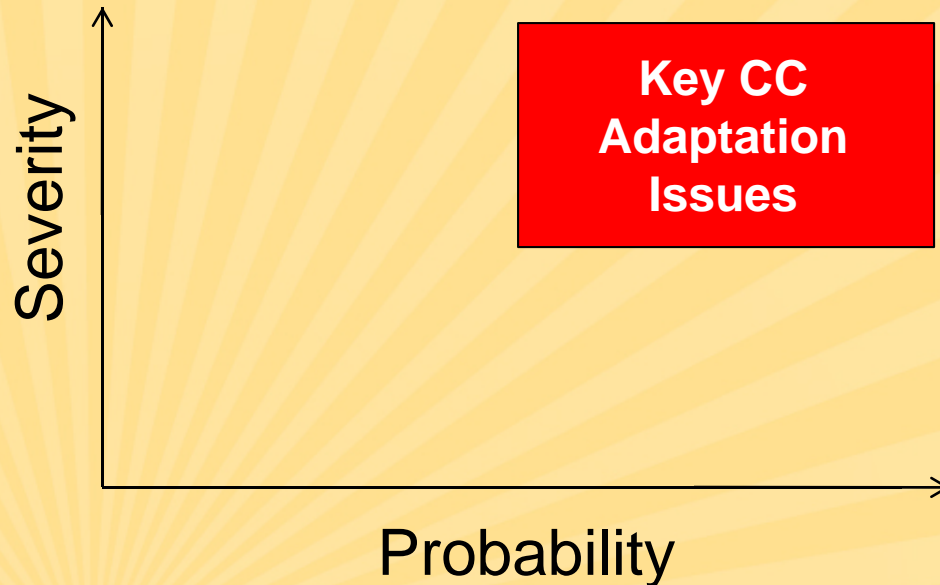


Stewartville GS, Madawaska River,
Arnprior – built 1948



Lowering Uncertainty Regarding CC

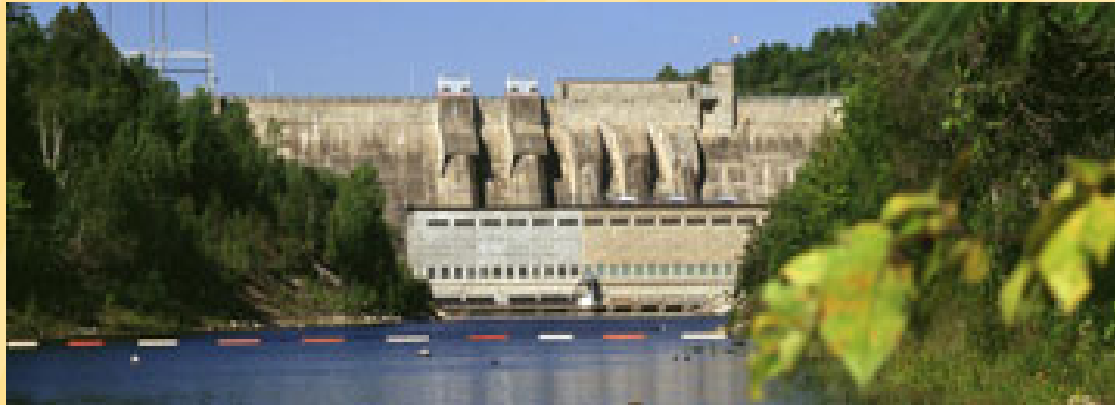
1. **Adaptation to Mitigation:** this can often be presented with certainty (e.g., coal electricity generation closure in Ontario)
2. **Adaptation to CC:** need to identify issues in the “upper right corner”



Calculate the CC severity/probability for:

- mining
- forestry
- petroleum
- utilities
- manufacturing
- hospitality
- banking
- insurance
- telecommunications
- media services
- automotive, etc.

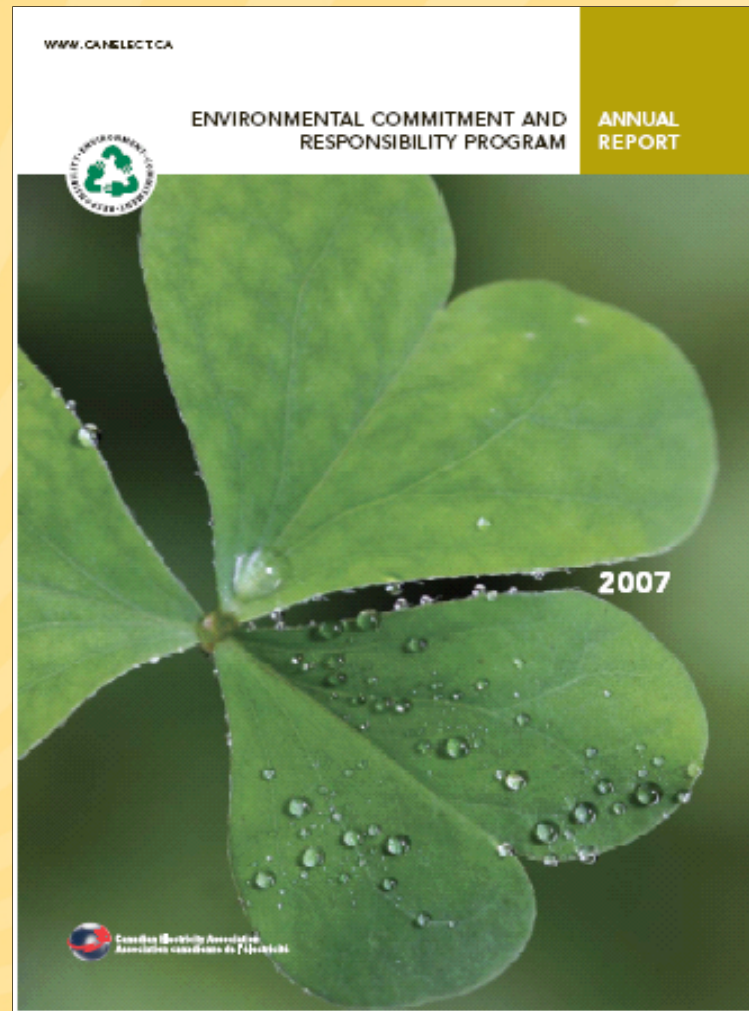
In addition to the Direct Impacts of CC, What are the High-Probability Cascading Impacts of CC?



e.g., relative to electricity generation, how will CC also impact...

- ❖ demand for electricity from forestry, auto, mining, hospitality...?
- ❖ how will demand/supply change the price for electricity?
- ❖ how might environmental regulations change -- Fisheries Act?
- ❖ e.g., more fish ladders, population loss offsets, etc.

The Business Case to Act on CC Adaptation: Lessons from the Canadian Electricity Association



Canadian Electricity Association (CEA)

- ❖ Founded in 1891
- ❖ Membership produces and transmits 90% of electricity in Canada
- ❖ Representative body for liaison with governments (national/international) and regulatory agencies, and a facilitator for inter-company dialogue

- Altalink Management
- ATCO Power
- BC Transmission Corp.
- City of Medicine Hat Electric Utility
- Brockfield Power
- EPCOR
- Fortis BC
- Hydro One
- Manicouagan Power Company
- Maritime Electric Power Company
- Newfoundland and Labrador Hydro
- Northwest Territories Power
- Ontario Power Generation
- Saskatoon Light & Power
- Toronto Hydro
- TransAlta
- ATCO Electric
- BC Hydro and Power Authority
- Burlington Hydro Inc.
- Columbia Power Corp.
- ENMAX Corp.
- Fortis Alberta
- Horizon Utilities Corp.
- Hydro Ottawa Holdings
- Manitoba Hydro
- New Brunswick Power Holding
- Newfoundland Power
- Nova Scotia Power
- Saint John Energy
- SaskPower
- TransCanada
- Yukon Energy

Making the “SD Business Case”: Winning Over Internal Working Groups and the Board of Directors

1) SD is good business

- ❖ Dow Jones Sustainability World Index (Aug. 1999 - Aug. 2008: DJSWI -7.70% vs. MSCI -9.57%)
- ❖ Research Network for Business Sustainability, 160 “SD” studies reviewed, 75% showed positive impact of SD, 25% neutral
- ❖ United Nations Environment Programme Finance Initiative – 20 “SD” studies reviewed, 50% showed positive impact of SD, 10% showed positive/neutral impact, 20% neutral relationship, 5% neutral negative, 15% negative effect
- ❖ sdEffect™

2) SD already “in practise” in many CEA member companies

- ❖ Many -- if not all -- CEA member companies already practised aspects of SD. Accordingly, potential positive “SD brand” was being under-utilized/valued.

Sustainable Development Benefits

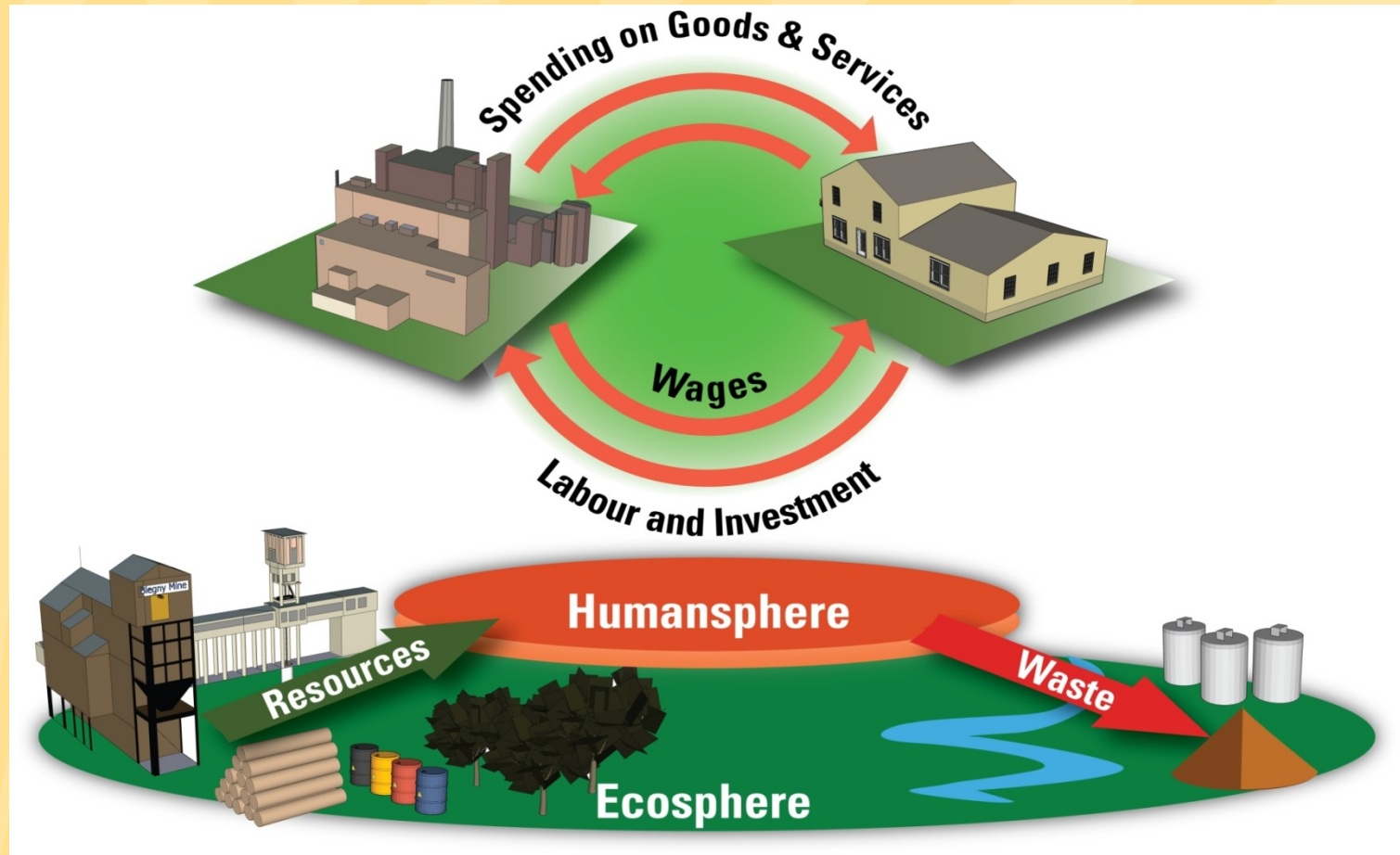
- **Secure “License to Operate” -- for new build and refurbishment**
 - build public support
 - build governmental support
- **Attract and retain a productive workforce**
- **Secure the confidence of investors**
- **Address media and activist pressures**
- **Build due diligence protection**
- **Minimize regulatory “overkill”**

3.

	Program Status	
Association	1997	2007
Canadian Chemical Producers Association (CCPA)	<i>“Responsible Care”</i> (environmental focus)	Expanded to a sustainability focus in 1998
Mining Association of Canada (MAC)	No program in place	<i>“Towards Sustainable Mining”</i> launched in 2004 (sustainability focus)
Canadian Association of Petroleum Producers (CAPP)	No program in place	<i>“Stewardship”</i> Program launched in 1999 (sustainability focus)
Forest Products Association of Canada (FPAC)	No program in place	<i>“FPAC Sustainability Initiative”</i> launched in 2005 (sustainability focus)
Canadian Bankers Association/ International Finance Corp.	No program in place	“Equator Principles” established 2001
Canadian Electricity Association (CEA)	“Environmental Commitment and Responsibility Program”	“Environmental Commitment and Responsibility Program”

With Business – Promote the Business Case

- Push the Bottom Line, not the Triple Bottom Line
- Push Fiduciary Responsibility, Not Corporate Social Responsibility



"Your position shows good taste but poor insight"

...John Muir 12

The Electricity Industry's Answer to the Question of a Sustainable Tomorrow...

SustainableElectricity
It's in our power™

Launched on February 19, 2009 by the CEA Board of Directors



THE POWER FROM WITHIN

SUSTAINABLE ELECTRICITY:
INAUGURAL ANNUAL REPORT, 2008

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- A Policy for Sustainable Development – Corporate Responsibility
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Building a Sustainable Electricity Future

CEA Member Performance: Environment

- Principle 1: Environment
- Principle 2: Stewardship and Biodiversity
- Principle 3: Climate Change

CEA Member Performance: Social

- Principle 4: Health and Safety
- Principle 5: Workplace
- Principle 6: Communication and Engagement
- Principle 7: Aboriginal Relations

CEA Member Performance: Economic

- Principle 8: Economic Value
- Principle 9: Energy Efficiency
- Principle 10: Security of Supply

Industry at a Glance

Sustainable Electricity Steering Committee Members

Public Advisory Council

The Honourable Mike Harcourt, Chair

- 30th premier of British Columbia
- Former chair of the Urban Sustainability Program, National Round Table on the Environment and the Economy

Dr. Frank Frantisak (OC)

- Former Senior Vice President, Noranda Inc. (world operations)
- Former Director, World Business Council on Sustainable Development

Mr. David Oulton

- Former Assistant Deputy Minister of Natural Resources Canada and Agriculture Canada.

Mr. Ken Ogilvie

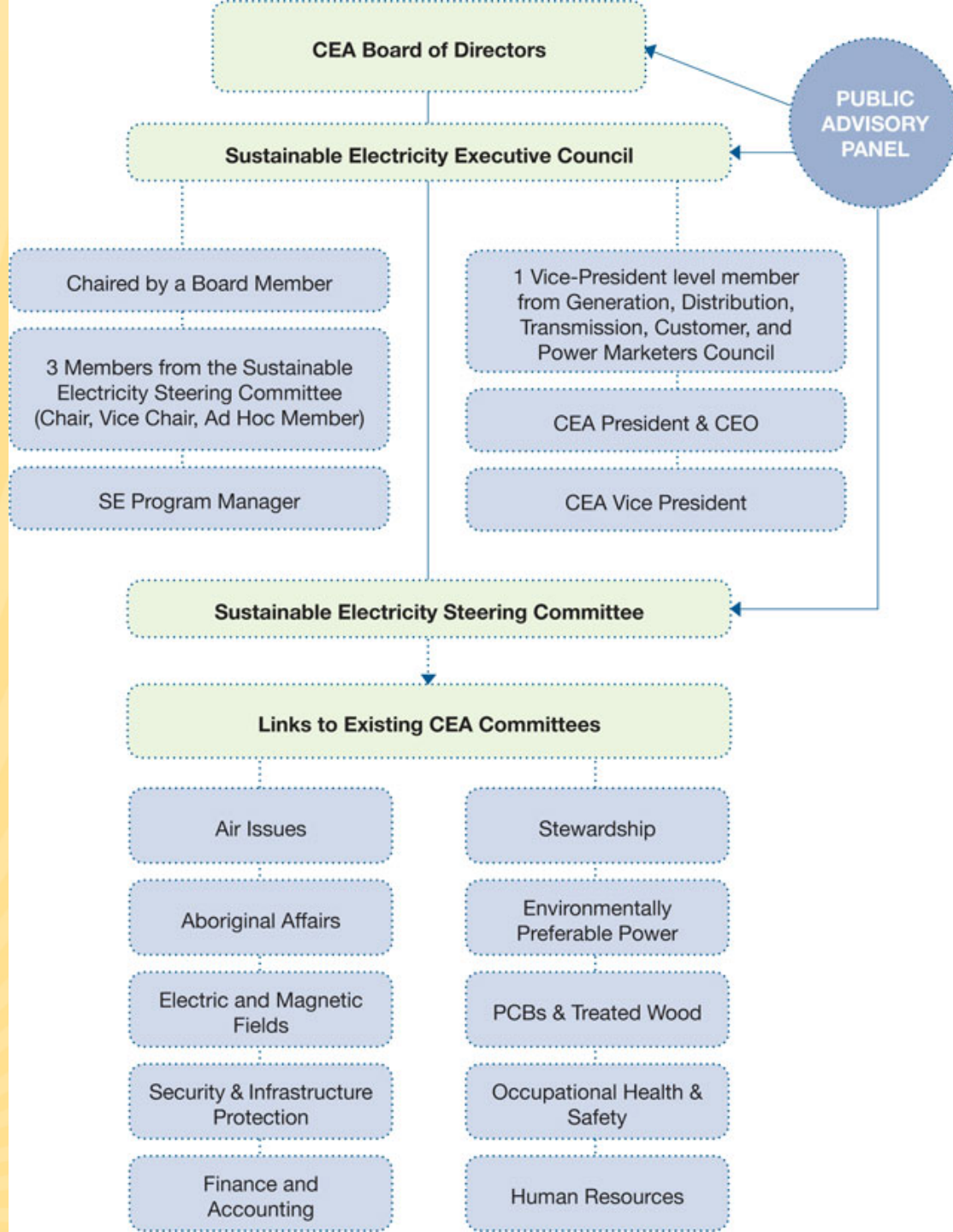
- Former Executive Director of Pollution Probe

Professor Yves Le Bouthillier

- Professor, Faculty of Law, University of Ottawa
- Specializes in international human rights law and environmental law

Dr. Judith Sayers

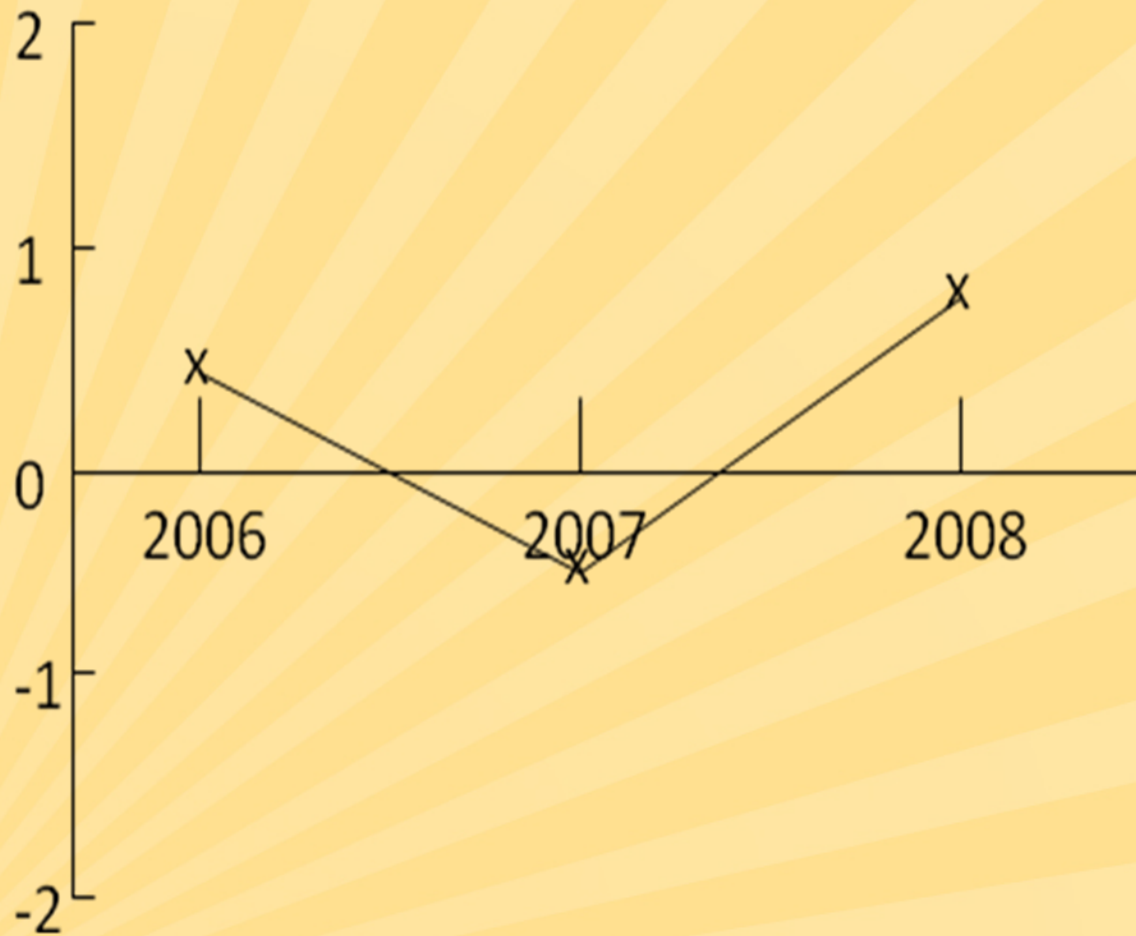
- Chief of the Hupacasath First Nation, Port Alberni, BC



Biodiversity Measure of Performance may be Similarly Applied to Assess CC Adaptation

Score		Criteria
1	0	
		1. Analyze corporate activities with regard to their impacts on biodiversity.
		2. Include the protection of biological diversity within their environmental management system, and develop biodiversity indicators.
		3. Appoint a responsible individual within the company to steer all activities in the biodiversity sector and report to the Management Board.
		4. Define realistic, measureable objectives that are monitored and adjusted every 2-3 years.
		5. Publish activities and achievements in the biodiversity sector in the company's annual, environment, and/or corporate social responsibility report.
		6. Inform suppliers about the company's biodiversity objectives and integrate them accordingly.
		7. Explore the potential for cooperation with scientific institutions, non-governmental organizations, and/or government institutions with the aim of deepening dialogue and continuously improving the corporate management system vis-a-vis the biodiversity domain.

Sustainable Development Index (SDI): 2006 - 2008



Conclusions

1. Messaging that CC is real must come from scientists, in user-friendly form, in the literature that business leaders read
2. CC must be presented to industry from a severity/probability perspective – this must be done on an industry-specific basis
3. Attempts should be made to identify not only the direct impacts of CC, but also the cascading impacts (e.g., tar sands and project financing for banks)
4. **Business must be presented with a strong business case to act on/ adapt to CC**