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SECTOR COUNCIL

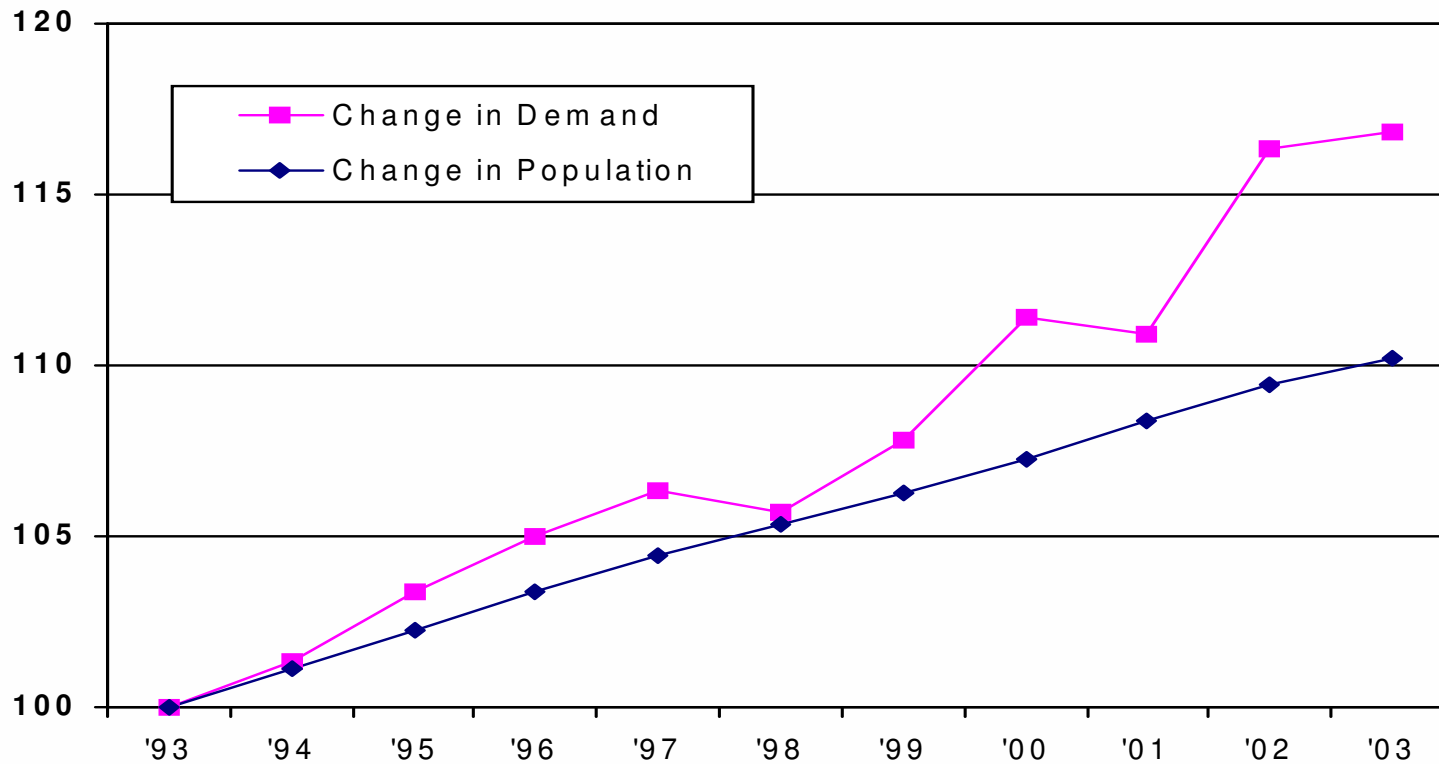
 **CONSEIL SECTORIEL DE**  
**l'électricité**

**CGC Business & Policy Conference December 2007**

**Canada**<sup>🇨🇦</sup>

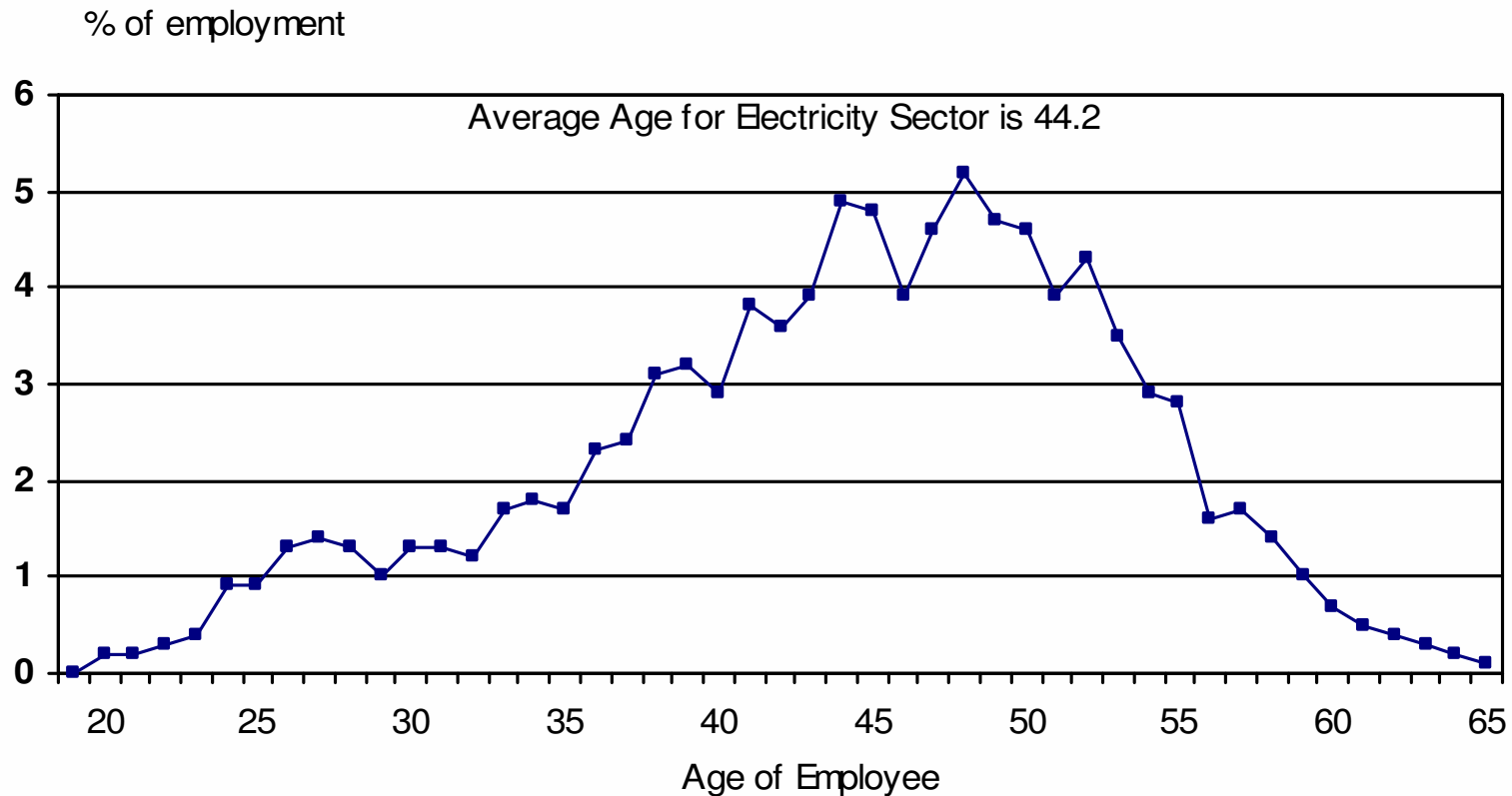
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## Increasing Electricity Demand



Change in Canadian Population and Electricity Demand From 1993 to 2003  
(Index- 1993 = 100)

## 2004 Study - Aging Canadian Workforce



Source: 2004 Canadian Electricity Sector Study Employee Survey (n=3,330)

## Workforce by key occupation

	Canada	
	Number	% Share
Managers/Supervisors	5,015	14.4%
Engineers		
Electrical/Electronic	4,755	13.7%
Mechanical	1,800	5.2%
Engineering Technologists/Technicians	2,700	7.8%
<b>Total – Engineers</b>	<b>9,255</b>	<b>26.6%</b>
Trades		
Power System Electrician	3,285	9.5%
Construction Millwright/Industrial Mechanic	1,715	4.9%
Stationary Engineers	1,230	3.5%
Industrial Instrument Tech/Mechanic	1,075	3.1%
Power Systems and Power Station Operator	5,600	16.1%
Power line Worker	7,565	21.8%
<b>Total Selected Trades</b>	<b>20,470</b>	<b>58.4%</b>
<b>Total</b>	<b>34,740</b>	<b>100.0%</b>

Note: Total excludes support/other positions.  
Source: Statistics Canada, 2001 Census

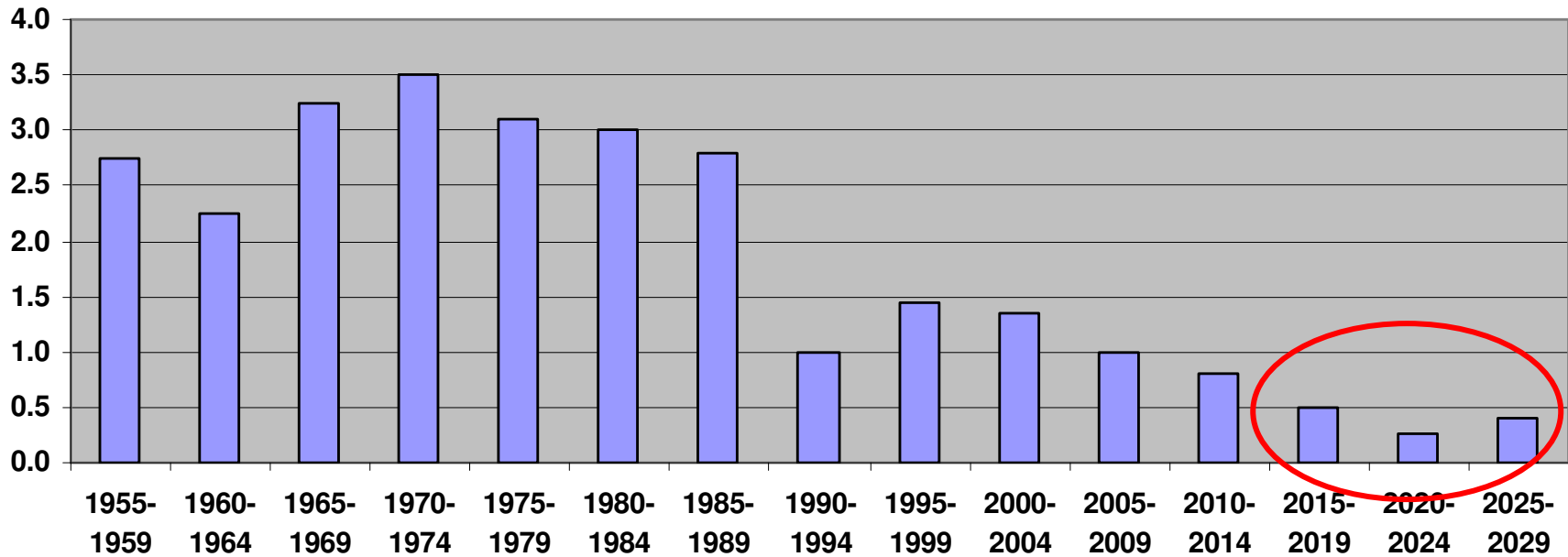
## 2004 Sector Study Retirements

Business Line	Estimated Current # of employees	Estimated # to Retire by 2009		Estimated # to Retire by 2014	
		Percentage	Number	Percentage	Number
Generation	16,343	12.3%	2,010	24.3%	3,971
Transmission	1,952	34.5%	673	55.1%	1,076
Distribution	4,244	8.3%	352	16.6%	705
Integrated	28,723	16.3%	4,682	35.4%	10,168
<b>Total*</b>	<b>57,657</b>	<b>15.5%</b>	<b>8,937</b>	<b>29.6%</b>	<b>17,066</b>

**One-third of employees are expected to retire in the next six years**

## Canadian Birth Rate Declining

Average Annual Growth Rate of the Domestic Labour Force



**Declining Youth Cohort**

## **Dependance on Immigrants for Labour Growth**

- By 2021 the Canadian population is expected to grow by 32%
- During that time the youth population is only growing 2%
- The Immigrant population will grow 77%

## Trades Intake Through Immigration Low

Landings by province in 2005 for electricity sector trades-related occupations were very low

- Power systems and power station operators (9)
- Electrical power line workers (55)
- Power system electricians (27)
- Utilities managers (10)

## Environmental Scan 2007

- Rising demand
- Change in technologies and energy mix
- 2 categories of energy talent support needed, residential/home owner, larger scale from run of river hydro to wind farms, commercial building support, transmission & distribution
- Competition for traditional talent sources
- Declining youth cohort, declining rural cohort
- Rising dependence on internationally trained worker
- Increased need for adult training support whether to re-skill or credential immigrants/foreign trained or support family members in settlement

## The Electricity Sector Council

- Federal program supporting workforce development, significant funding to develop a non profit corporation to undertake human resources development project work for key industry sectors
- Have to apply, must demonstrate stakeholder partnership and must engage industry, labour and, education
- Key partners: CGC, Canadian Electricity Association, Canadian Nuclear Association, Electrofederation, IBEW, CUPE, Power Workers Union, Society of Energy Professionals, Association of Canadian Community Colleges, Engineers Canada, Canadian Council of Directors of Apprenticeship, Natural Resources Canada, Human Resources & Social Development Canada
- Electricity Sector Council established December 2005

## The Electricity Sector Council – Projects

### Advanced Career and Workforce Training

- *Occupational Standards*
- *Foreign Trained Worker*
- *Succession Planning*
- *Knowledge Management*

*Labour Market Transition*  
*PLT situational analysis*  
*Renewable Energy Occupational Stds.*

### Youth and Education

- *First Work Project*
- *Aboriginal workforce participation*
- *Wind Energy Curriculum*

*Trade UP for Success*  
*Electricity First Work*

### New Technology & Industry Directions

- *Labour Market Information*
- *Ontario Labour Market Information*

*Skills for Sustainable Energy*

### Partnerships and Outreach

- *Building Connectivity*
- *Stakeholder Engagement*

*Improving Access to Under-represented*

## Occupational Standards

5 occupational standards currently in development:

- Project Manager (*with profiles for Planner, Construction Manager, and Wind Project Developer*)
- Operator (*with profiles for Power Systems Operator and Power Station Operator*)
- Electrical Technologists and Technicians
- Power Protection and Control Technicians and Technologists
- Wind Turbine Technician

PLT being revised in red seal next year, we have input

## Under Development: Renewable Occupational Stds

- NRCAN project
- Funding to work in tandem with the ESC's existing occupational standards project to fund a minimum two occupational standards, one for geoexchange and one for solar
- We will work to also seek funding for essential skills profiles for these roles to ensure effective applicant screening and support to under-represented communities



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## Background Slides

Canada 

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## ESC Board of Directors

- **Tom Goldie, Hydro One, Chair**
  - **Jerry Wilson, IBEW, Vice Chair**
  - **Deb Carey, PWU**
  - **Ani Gole, PhD, U of M**
  - **Leslie Forge, Soc. Of Energy Professionals**
  - **Robin Lucas, BC Line Ass'n**
  - **Steve Mauri, Canlyte**
  - **Gary Rodford, BC Hydro**
  - **Hydro Quebec Distribution**
  - **Doug Topping, EPCOR**
  - **Catherine Cottingham, ESC (ex-officio)**
  - **Canadian Nuclear Ass'n Rep**
  - **Deborah Wolfe, CCPE**
  - **Norm Fraser, Hydro Ottawa**
  - **Sam Giandomenico, OACETT**
  - **Joyce MacLean, Toronto Hydro**
  - **Dale Watts, Red River College**
  - **Carmen Dybwd, Energy Council (ex officio)**
- Permanent Observers:**
- **Jeff Vachon, HRSDC**
  - **Al Clark, NRCAN**
  - **Brigitte Hebert, CEA**
  - **Peter Woods, CCDA**
  - **Carole Proulx, CUPE**

## Labour Market Information

- Web-based primary data information system
- Align with HR metrics work ongoing by US electricity companies e.g. NHRG, Edison
- Drill down to sector specific information such as Nuclear
- Draft survey in development, seeking to confirm key occupations to include
- First pilot of survey this fall with results expected in early 08
- Goal is to provide information similar to 2004 study on an ongoing basis

## First Work

- Funding support to a 6-12 month internship for new graduates from technician/technology/engineering
- Provides about 1/3 of dollars for salary up to 12K maximum
- Some spots still available, must file application before candidate starts
- Program ending with government fiscal in March 08, Sector Council program has applied to continue

## Transition Project

- To assist employers to integrate experienced workers from sectors of declining workforce need
- Preliminary data indicates we have limited opportunity given the high level of training needed for workers in our industry – 76% of our workers have postsecondary
- Some possibilities but only in key regions and largely in the apprentice-able trades, very geographic specific
- Recommended: a database of available workers such as that maintained by Comm/paperworkers union, youth awareness initiatives, mentorship for youth and internal workers

## Lineworker Project

- Goal is to provide an overview of the lineworker occupation in Canada
- Includes training, qualifications, terms of work, compensation, barriers to recruitment
- Intent is to develop a matrix of jurisdictional differences, call together a national meeting of key players to review and discuss possible opportunities to increase the pool of this critically needed occupation
- Committee participants from MB Hydro, NB Power, BC Hydro, Hydro One, IBEW, PWU, ACCC, CCDA, NS Power, Line Contractors, invitations extended to NWT Power, Enmax & Horizon

## Connectivity

- Goal is to bring together leaders in the business: governments federal and provincial, unions, management, regulatory, educators into a national meeting to examine top 5 issues in the industry and define recommendations
- Those recommendations go to our regional working groups for review and input
- Outcomes of regional meetings back to another national meeting of key leaders for final industry strategy we will implement as a council
- Intent is to build relationships and partnerships where none previously existed to the benefit of informing ESC work

## Wind Turbine Technician Curriculum

- Funded by NRCAN to translate this curriculum
- Curriculum developed by CGEP de Gaspésie
- English translation available to any Canadian training organization free provided ESC and Government of Canada contributions referenced
- Workbooks and other materials remain the property of CGEP
- Memorandum of Understanding with ESC to use this

## Government of Ontario

- Contracted to provide Ontario specific labour market information
- To advise on HR Best Practices
- To review Ontario supply from educational institutions and match with anticipated provincial demand
- Project expected to end in early fall with results released by the Government by year end

## Succession Planning

- Goal is to promote the use of succession planning within the industry and to develop web based tools for the business to use
- Intent is to ensure that succession planning is done to the operational level i.e. for apprenticeships and line operations staff to ensure an effective labour force supply to the business on a continuing basis
- First round RFP received no bids, committee reposting RFP however timelines likely impacted

## Under Development: Career Awareness-Trade Up

- Would use [tradeup.ca](http://tradeup.ca) web and marketing materials
- Edu-kit folder
- BC interested in becoming first partner using the tag line 'bright futures' rather than the trades focus
- Could also do 'line of business' specific materials such as nuclear related materials
- Seeking industry support and interested in discussing what HRSDC can do in partnership

## Under Development: Aboriginal WF Development

- Seeking to build on the best practices identified in the 2004 sector study
- A youth camp based on the Manitoba Hydro model
- Additional best practice model to be determined by research
- Toolkit for aboriginal workforce development specific to our industry

## Under Development: Skills for Sustainable Energy

- Training/occupational standards needs/gap assessment for 5 renewable/sustainable energy technologies such as tidal or energy efficiency
- Prioritization of technologies and next steps by the steering committee reflecting a consensus understanding of what must be done first
- Creation of a renewable specific module to the ESC LMI survey recognizing differing occupational names/types and candidate sourcing



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**Thank you! Merci! Safe Journey!**

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