

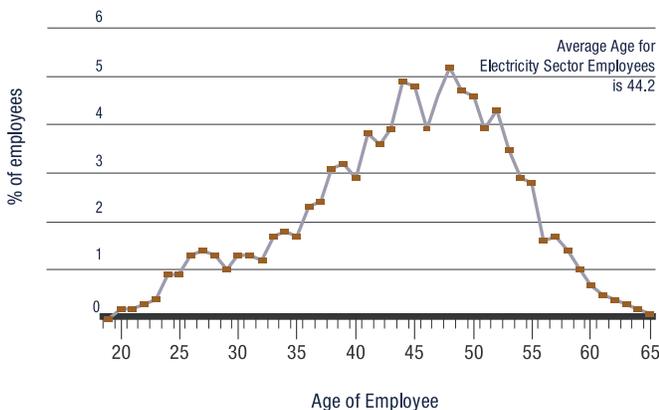
## The Human Resource Crisis in the Canadian Electricity Sector



The need for an adequate, skilled workforce to ensure a reliable supply of electricity in Canada has reached a critical stage as pending retirements, new training requirements and competition for key skills pose significant challenges to the industry as a whole. Considering the central role electricity plays in fueling our economy and maintaining our quality of life, it is clear governments and industry must work together with labour groups and educational institutions to ensure a strong, sustainable electricity workforce.

According to the Canadian Electricity Association's (CEA) 2004 *Canadian Electricity Human Resource Study* (HR Study) funded in part by the Government of Canada's Sector Council Program, retirement estimates show that over 17% of the 75,000 existing workforce will be eligible for retirement by 2010, and 37% by 2014. Based on retirement estimates, the sector

### Age of Employees in Electricity Sector



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

will need 9,000 people in technical positions in the next three years and more than 17,000 over the next eight years. Over a third of the retirees will be trades related positions. Given that it takes on average four years to develop an apprentice and a

### Eligibility to Retire by Business Line

Business Line	Now	Next 5 Years	Next 10 Years
Generation	3.1%	16.7%	36.3%
Transmission	7.6%	28.6%	50.1%
Distribution	4.5%	9.5%	28.1%
Integrated	12.3%	17.9%	37.6%
<b>Total*</b>	<b>8.7%</b>	<b>17.3%</b>	<b>37.3%</b>

Source: Primary Producer and Associate Producer Survey (n=63) — non-support staff only. Twenty-three producers did not provide data as to number of staff eligible to retire. \* Too few employees were reported for the "other" business line to report this figure.

further four years to achieve competency, the industry has reached a turning point in workforce development. Dedicated support to this issue is of strategic importance to the industry's ability to sustain and grow the electricity supply.

Other industry realities such as the need to build and replace infrastructure, and the development of emerging renewables are placing additional strains on the sector's workforce. Training and "re-skilling" requirements are on the rise as technological needs evolve and increase within the electricity sector. The ability of educational and training institutions to adequately prepare the future electricity workforce and to support and engage new Canadians in foreign credential recognition is a fundamental necessity, and appropriate programs such as co-op/apprentice/internship opportunities are essential.



# The Human Resource Crisis in the Canadian Electricity Sector

A shortage of skilled labour could have serious repercussions for the electricity sector in a number of ways:

- Reduced reliability;
- Increased cost of production;
- Infrastructure projects delayed;
- Decreased safety and productivity due to less experienced employees and worker shortages.

In response to the pressing human resource needs facing the sector, CEA has identified a series of urgent policy issues that need to be addressed by industry and government:

- Promotion of the electricity industry as a viable employment option to youth;
- Standardization/certification across Canada of electricity sector occupations;
- Development of an industry-funded training centre;
- Improved and accelerated process for foreign trained worker certification;
- Strategies for keeping older workers employed in the industry; and
- Strategies for recruiting workers from targeted equity communities.

CEA monitors and reports on these and other emerging human resource issues that affect the electricity industry. It also supports the work of the Electricity Sector Council, conceived by CEA and whose establishment was sponsored by the Association in 2005. Supported by the Government of Canada, the Electricity Sector Council's mission is to develop "sector based initiatives which strengthen the ability of stakeholders in the Canadian electricity industry to meet current and future needs for a skilled, safety-focused, and internationally competitive work force."

Through the work of the CEA HR Committee and the Electricity Sector Council, the critical issues facing the electricity workforce are gaining greater prominence within industry, government, labour groups and educational institutions. Indeed, the need for collaboration between these communities is vital to ensure a viable, sustainable, safe and secure electricity workforce.

## Estimated Supply and Demand Gap for Engineers and Other Non-Support Positions — High Growth Scenario

Group/Period	Average Annual Estimates	
	2005–2009	2010–2014
Current Total Workforce <sup>1</sup>	58,648	58,668
Engineers	11,525	11,529
Trades/other non-support	47,123	47,139
Estimated Demand — High Growth Scenario <sup>2</sup>		
Engineers	702	767
Trades/other non-support	2,871	3,136
<b>Total</b>	<b>3,573</b>	<b>3,903</b>
Estimated Supply <sup>3</sup>		
Engineers	65	70
Trades/other non-support	293	291
<b>Total</b>	<b>358</b>	<b>361</b>
Supply-Demand Gap <sup>4</sup> (per year)		
Engineers	(637)	(697)
Trades/other non-support	(2,577)	(2,845)
<b>Total</b>	<b>(3,214)</b>	<b>(3,542)</b>
Total Projected Deficit (total for period)		
Engineers	3,185	3,485
Trades/other non-support	12,885	14,225
<b>Total</b>	<b>16,070</b>	<b>17,710</b>

1 Total estimated workforce in electrical occupations — primary producers and associate producers, plus approximately 1.8% increase in required workforce year-over-year.

2 Additional employment growth estimated for demand increases and infrastructure replacement requirements and eligible retirements.

3 Portion of graduates who secure employment in electricity sector upon graduation as discussed in Part Four.

4 Difference between estimated demand and current education supply capacity.

Source: 2004 Canadian Electricity Sector Study



## INFORMATION

For more information or to obtain a copy of the **2004 Canadian Electricity Human Resource Sector Study**, visit the CEA Web site at [www.canelect.ca](http://www.canelect.ca) or contact:

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Visit the Electricity Sector Council initiative at [www.brightfutures.ca](http://www.brightfutures.ca).

