

# The ELECTRICAL TRADE

## Connecting With The Future

## A National Labour Market Study Summary 1997





## ACKNOWLEDGEMENTS

This study was conducted under the guidance of the CECA/IBEW National IAS Committee. Funding for the study was provided jointly by the Electrical industry and Human Resources Development Canada.

Appreciation is expressed to those individuals and organizations that participated in this study. Refer to the complete listing included in the Appendices. Special thanks is extended to the members of the IAS Committee for their support, dedication, expertise and ongoing commitment to the project. The Committee members are:

|                   |      |                  |
|-------------------|------|------------------|
| Doug Bacon        | CECA | New Brunswick    |
| Don Case          | IBEW | Manitoba         |
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| Paul Stoll        | HRDC |                  |
| Bob Porter        | HRDC |                  |

Although the main focus of the committee's work was this study, they also addressed time sensitive issues such as the changes to the Apprenticeship System. As it became apparent through this process, that apprenticeship was a critical issue for the Electrical trade as well as the other Construction trades, the Committee took on the additional role of catalyst for joint Construction IAS Committee meetings to discuss apprenticeship across trades at a national level. This afforded the construction industry an opportunity to exchange ideas and share concerns with the Canadian Council of Directors of Apprenticeship and other government officials. This process assisted the Electrical committee in developing and refining its vision and model of Apprenticeship. Appreciation is extended to all who participated in the joint meetings.

Thanks is also extended to the government representatives from HRDC, who provided guidance and advice throughout the project and to John Butcher for facilitating the group through the process.

This study was conducted by Traurig & Sparks Incorporated with support from WGW Services Limited.

Cover photographs were provided courtesy of the K-Line Group of Companies, the Electrical Contractors Association of Ontario, and the Scarborough Sub-station.

**Published November 1997**

## THE NEW ELECTRICIANS' MARKETPLACE

### **A Life Time of Change**

*In 1963 James Sparks retired after thirty years as a journeyman electrician. Although most of his working days had been physically gruelling, spent climbing ladders and fishing three-conductor through the nooks and crannies of old buildings he was sure he would miss the work and his working buddies.*

*As he hung up his badge above the workbench he glanced at his toolbox still filled with the tools that he had accumulated over the years, the tools any electrician of his day would have needed: the side cutters, the needle-nose pliers, a wire stripper, a good knife, a tester, a lamp in a pigtail, and a clutter of screw drivers.*

*There were some things he would never forget, like the day he was up a pole and got his arm draped over a live wire. His buddy Billy Grocer had scrambled up the ladder and used his big floppy hat to knock the limp arm clear of the line. A good friend had saved his life.*

*Being an electrician had allowed him to build a good life for himself : to marry, buy a home, raise two children and now, to be a grandfather to six grandchildren.*

*But the world had already begun to change in some very important ways. Television had become a part of James Spark's life and the invention of the transistor had made possible the portable radio he kept beside the bed. The world of electronics was about to boom as a North American invention became the heart of a host of Japanese products destined to make their economy one of the strongest in the world. And by the time James Spark's grandchildren had finished high school the computer revolution would be under way launching new industries that had names like software development and technical support.*

*If James Sparks were still around to meet the electricians of the 1990s he would have some difficulty recognizing his modern counterparts. While some of them still climb ladders and pull wire others work on modern construction sites using electronic line tracers to sort out the routing of great masses of colour-coded communication cables while others use sophisticated instruments with digital displays to troubleshoot problems in a complex alarm system. Still others program digital control systems or install standby power units to keep sensitive computers running twenty-four hours a day.*

*By the year 1997 the digital revolution has brought the development of "smart house" technology, the widespread marketing of personal computers, the installation of hi-tech alarm systems, the development of intelligent security systems, widespread reliance on computer aided manufacturing, new opportunities through wireless communication and digital telecommunication systems, the invasion of digital home entertainment, sophisticated monitoring applications, and the opening of the international highways for high speed data communications.*

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## EXECUTIVE SUMMARY

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### **EXECUTIVE SUMMARY**

**Changes In The Marketplace**

**Threats And Opportunities**

**Getting Focused On The Future**

**A National Approach**

**Industry Strategies**

### CHANGES IN THE MARKETPLACE

#### *A Shift From Work Energy to Information Energy*

##### **“Work Energy”**

In the early part of the century the drive to electrify North America's major cities was fuelled by a need to find easier, more cost effective ways to perform routine tasks both at home and in industry. In short, electricity was the new work saver. It turned the bigger and bigger wheels of factories, propelled trolley cars, fuelled the growth of auto manufacturing, and led to the development of a steady stream of work-saving home appliances.

Electricity had established itself as the “*work energy*” for an increasingly industrialized society. It quickly became indispensable and so an elaborate network of generating stations and high voltage transmission lines was developed to eventually ensure that no part of the country was left unconnected.

With so many homes, offices, and factories to be wired the need for qualified electricians grew rapidly. Standards of safe practice were developed to ensure that the risks of using the new energy were minimized. Electricians began to enjoy a special status among tradespeople because of their ability to work in a potentially dangerous environment and to ensure that installations were done in conformity with wiring codes and practices.

But the arrival of the information age has created new uses for electricity.

##### **“Information Energy”**

It was just prior to World War II that scientists devised a way to represent numeric data using Electrical circuits in what came to be the first computers. By the 1950s computers were establishing their usefulness in businesses and other organizations with large volumes of data to process. By the 1960s integrated circuits made computing technology accessible to medium-size businesses and by the seventies the first of the desktop computers had arrived, soon to unleash the Personal Computer revolution. At the same time the digital technology of computers was sweeping the electronics industry. Electronics applications from home stereos to cellular phones to graphic imaging systems were converted to this new method of processing information. The extensive use of digital computers led inevitably to the networking of computing power and of databases, locally and globally.

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The entire digital world became dependent on the ability to represent information, in its many forms, as patterns of Electrical energy. And the corollary of this development was, of course, the need to establish high-speed data transmission highways connecting sites across the country and the world.

Now, even copper wire is beginning to seem inadequate for the transmission of very high data volumes. In fibre optic networks light replaces electricity as the transmission vehicle and raises to new orders of magnitude the volume of information that can pass reliably throughout a network.

The world's information networks have grown at exponential rates. It is as though, from the beginning, we were determined to connect everyone in the world to everyone else. And this goal has already been largely achieved.

We are no longer confining our data transmission to numbers and text. Modern networks carry graphic and video information as well as voice and sound. Current network speeds permit networking in real time: people carry on voice conversations over the Internet or order products and get an immediate confirmation from the retailer. This same Internet technology is poised to become the standard for all networking local and global.

By the year 2000 it will be a rare home or office that is not fully integrated into the world's data networks.

### **The Opportunity**

We are told that the one constant in life is change. Electricians, as the millennium approaches, will continue to be the maintainers of the power grid. They will continue to ensure that electricity gets from the power plant to the home, the factory, and the office; they will install the branch circuits that deliver electricity to every workbench, every machine, every desk, and every kitchen and bedroom.

But just as energy has a new role as the vehicle for modern information so the electrician has an opportunity to play an important role in creating and maintaining the *information* grid.

### ***Solar Energy***

In addition to the traditional source of energy, we are now seeing the introduction of solar powered energy. Harnessing the power of the sun has long been thought about and in some cases utilized on a small scale. New technology has now made this a more feasible proposition.

This technology is a method of generating electricity using solar energy captured through photovoltaic panels installed on buildings, in windows, roof panels and curtain walls. Photovoltaic (solar power) technology is moving at a rapid pace. The motivation for the use of photovoltaics is the provision of power using local resources to provide self-sustaining energy. Changes to the National Building Code will include requirements for energy savings and these changes will impact positively on the current use of photovoltaics.

In conjunction with a growing use of solar energy, there is also new thin film technology which is facilitating the manufacture of photovoltaic panels in windows, new fuel cell battery technology using hydrogen solar cells, and photo cell driven power cells.

There are and will be jurisdictional issues related to photovoltaics and the challenge for the Electrical trade is to capture a larger market share of this work by ensuring a qualified workforce early on in the development of the technology. Currently other trades are getting a significant share of this market. These include roofers, glaziers and curtain wallers. For example, during the Atlanta Olympic Games there were 2,900 photovoltaic panels installed on the roof and the installation was done by roofers. Because jurisdiction has historically been based on who puts in what, there is a blurring of jurisdictional lines when one looks at technology such as photovoltaics.

### ***Do-It-Yourself Economy***

Electricity is one of our newer forms of energy. As it has become a necessary companion in our home and working life we have become more comfortable with it. Home, commercial, and industrial consumers no longer fear electricity the way they once did. While it is understood by most electricity users that a special expertise is required to work safely with this invisible energy, more and more consumers are finding that they can perform certain kinds of installation on their own.

Global marketing, with the aid of catalogues, mail, telephone, Internet, and credit card have fuelled a drive to develop products which are user-installable. A new pot light

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marketed on a television infommercial appeals to a consumer's need for convenience. He wants the product in his hands right away and he doesn't want to wait around to have it installed. New product designers are investing substantial research and development dollars in creating products which the end user can install him/herself. This challenges designers to anticipate the typical installation problems associated with a new product, to solve these problems, and to communicate to the user in clearly worded instructions how the installation should be done. As the product designers' expertise has steadily improved in these areas the need for the expertise of the electrician has diminished.

In support of this trend is the rapid proliferation of television programs aimed at the do-it-yourselfer. Home renovation is a popular focus of these programs and it is not uncommon to see the co-hosts swaggering around with electricians' tools dangling from their toolbelts.

Also attacking the traditional market of the electrician is the "*fly-by-night*" tradesperson. Operating from a van and offering a wide variety of services from landscaping to Electrical work, he may or may not be fully qualified. But he is readily available and likely less expensive than his qualified competitor.

### ***Made-to-Measure Building***

The new residential and industrial development of the 1990's may, in many ways, resemble its predecessors. But inside these homes, offices, and factories there are now many more options available to the buyer.

While the electrician may never have met the owner or end user in the past, it is increasingly likely that the buyer will be on the site ensuring that all of her specific requirements are being met.

In the industrial environment this may mean flexible branch distribution systems that permit the easy relocation of manufacturing equipment. In the office world, the widespread use of computers and networking equipment mean that electricity must be readily available at more locations and that communication cabling must be just as extensive. With modular office partitioning comes a new wiring technology that makes use of raceways, channels, and snap-in receptacles. In addition, many installations require standby and power conditioning equipment to guarantee that computer and communication systems will not fail.



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The home office and the home entertainment centre are integral parts of many modern homes. This increases the likelihood that the home buyer will be wanting to make changes to the original blueprints. An environment that encourages change and flexibility will require that the electrician be better able to understand the impact of each change on the overall design and be able to communicate this to the client.

### ***Modularization***

In a drive to cut costs the construction industry has progressively modularized more of the basic construction elements. Since modular elements must be designed to install and interconnect easily there is a major reduction in the time and expertise required to construct using these elements. We can expect that future construction sites will require fewer tradespeople and, of these, fewer will need to be qualified electricians.

### ***Retrofit***

With little new construction taking place and the technological advances described earlier impacting every aspect of our lives, the need for retrofitting existing buildings has become a growth market for the construction sector. In order to retrofit a building the craftsperson must be familiar with both traditional and new Electrical equipment, techniques, and systems. The skill sets of the electrician must encompass the full range allowing her to remove existing inadequate wiring and Electrical services and replace them with new higher capacity cabling and systems with greater flexibility to accommodate the diverse needs for Electrical power in industrial, commercial, institutional and residential structures.

### ***Complexity***

The heating and air conditioning, lighting, fire alarm and security systems of today are often controlled by sophisticated computer programs. This brings together in one important system, complex mechanical, Electrical, and digital electronic components. More and more this blending of mechanical and Electrical processes, and electronic and Electrical equipment is changing the world in which the electrician must function. The electrician of the future will need to have the skills to bridge these two worlds. Currently we are seeing the emergence of training that blends the concepts, skills and knowledge into one training program, mecha-electronics. This training is being made available to individuals employed in plants who may or may not possess traditional trades qualifications of any type, as well as to tradespersons who are certified in the mechanical trades.

### ***Training***

At the same time as the work connected with electricity and information flow is changing and expanding, the infrastructure that is responsible for creating the skilled Electrical workers of today and tomorrow is undergoing significant changes. These changes may threaten the ability of the industry to provide the required labour supply. The recently announced changes to the apprenticeship system, specifically the transfer of the federal responsibility for training to the provinces may negatively impact national standards, funding for training, and mobility of Apprentices and certified journeypersons.

In addition to these changes to the training infrastructure, changes to the traditional funding support (Employment Insurance) may impact the trade's ability to attract new Apprentices, and retain them throughout the duration of their apprenticeship. Regardless of what changes are imposed on the apprenticeship system, it is clear that an effective, workable Apprenticeship system must be in place and it must be built upon the understanding that:

- this is a unique method of training that begins and ends with the employment relationship;
- it is the combination of theoretical training and on-the-job practical experience that makes a successful training system;
- consumer protection and worker safety are of paramount concern;
- protection and safety can only be achieved through compulsory certification and rigorous enforcement.

## **THREATS AND OPPORTUNITIES**

This constant and rapidly changing environment creates both threats and opportunities for the Electrical trade. The key to the future of the trade will depend on its ability to minimize the threats and capitalize on the opportunities.

### ***Threats***

#### **Increasing competition for traditional Electrical work**

The Electrical trade is becoming increasingly fragmented. Competition is growing from other trades, uncertified workers, and from other occupations such as technicians/specialists. Technicians/specialists are taking much of the work in

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new technologies particularly in the communications sector. In addition, these technicians are often trained and certified by the manufacturer to install their specific product.

### **Reduced labour requirements due to technological advances**

Much of the new technology being used in Electrical work is reducing the amount of labour required. Today it takes far fewer electricians to complete a large industrial or commercial building than it did in the past. Some of this is due to modular components which require less installation work. The effect is that in some cases the electrician's role becomes one of simply connecting to the power with the end result being fewer hours of work going to Electrical workers.

### **Demand for constantly escalating skill requirements**

With the introduction of new technologies, more sophisticated systems, and increased linkages between systems, we see a higher degree of complexity. The electrician must not only have a greater breadth of skills but the skills and knowledge are of a higher level and require upgrading on a more frequent basis.

### **Federal leadership withdrawal from apprenticeship**

At the same time as the requirement for highly skilled Electrical workers is becoming critical to the success of the trade, the Federal government is withdrawing support for apprenticeship and transferring responsibility to the provinces. As the major component of the trades training infrastructure and the feeder source for new electricians, the apprenticeship system is a critical element in the management of the Electrical industry's human resources. This transfer of responsibility has the potential to challenge the industry's ability to continue to supply highly skilled labour and to create and enforce national standards.

### **Reduction in funding for apprenticeship**

Along with the transfer of responsibility, there is a reduction in funding for apprenticeship and a tightening of the eligibility for Employment Insurance. These reductions in direct funding and in support for those taking training, may have a negative impact on the Apprentice's ability to complete his/her apprenticeship program, and on the electrician's ability to afford to take training on an ongoing basis while unemployed.

### *Opportunities*

#### **Expansion into new work areas**

The creation of the information/communication industry and the introduction of new energy sources such as photovoltaics open the door for an expansion of the work of electricians. Even though the more traditional Electrical work will continue as the main source of work over the next 10 years, the information/communication and solar energy fields will grow steadily creating new opportunities for those trades prepared to enter the market.

#### **Recapture lost work areas**

With less new construction taking place, more complex equipment being installed, and more specialists performing "Electrical" work, there will be an increased need for qualified people to service existing systems. To do this will require skills and knowledge of the entire system to facilitate the tracing of problems. Specialists/technicians are generally trained in one specific area, and as such may not be able to troubleshoot a problem and fix it. Electricians have this ability and need to market this to the consumer.

#### **Increased Electrical industry influence and control in apprenticeship**

In any period of change where responsibility is being transferred from one authority to another, there is an opportunity to influence direction. This is the case with the changes to apprenticeship. As the individual provinces struggle with their new responsibilities, they will be looking for cost effective ways to administer apprenticeship. Industry, as a partner in apprenticeship, is well positioned to provide advice and options on how to reform and administer the program to better meet its needs.

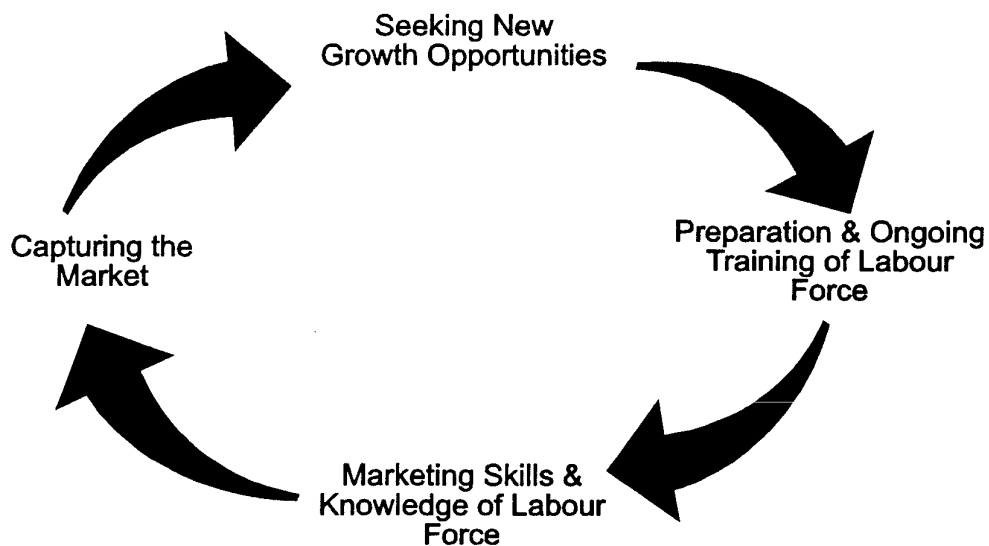
#### **Control of new specialized markets**

Through strategic alliances with manufacturers, suppliers, and designers, electricians can position themselves as a ready and qualified labour force for new markets opening up as the result of technological advances. The Electrical industry needs to be aware of new products coming into the market so that it can train its workers and market their ability to install, repair and maintain whatever the new system, product or equipment may be. To capture the market means being first in with the necessary skills.

## **GETTING FOCUSED ON THE FUTURE**

The results of the labour market study lead us to the conclusion that the projected supply of Electrical workers overall will be sufficient to meet the projected demand over the next 10 years. Currently the market is saturated with Electrical workers and Electrical contractors. Over the next 10 years the natural attrition rate will be offset by new Apprentices coming into the system, enabling the trade to maintain an adequate number of Electrical workers.

With the continuing fragmentation of the trade, the issue facing the industry is whether there will be sufficient work to keep Electrical workers fully employed, as more and more work that might traditionally fall to electricians is taken on by technicians and other trades. To create a strong vibrant Electrical trade with full employment for all electricians will require the Electrical trade to capture emerging growth areas being created by new technologies in communications and in energy generation. In addition, the Electrical trade will have to re-establish itself in the service area. Accomplishing this, will require a strategic approach that encompasses the following:





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More specifically, the Electrical trade could establish itself as the master of the new Electrical distribution network that extends down from high voltage power distribution through local sub-stations, to internal wiring, to low voltage data distribution networks, by:

- ⇒ Ensuring a workable apprenticeship structure is in place to produce the level and type of skills required for the future.
- ⇒ Promoting national standards to facilitate worker mobility.
- ⇒ Building a strong industry consensus on the importance of lifelong learning to maintain the currency of the labour force skills.
- ⇒ Supporting a training infrastructure that makes upgrading readily accessible.
- ⇒ Recognizing that the definition of the Electrical trade encompasses communication/information flow and new sources of energy.
- ⇒ Increasing consumer awareness of the need for Electrical expertise in all stages from design to installation to servicing/troubleshooting.
- ⇒ Increasing Electrical worker awareness of the growth opportunities and the corresponding skill requirements.
- ⇒ Forming strategic alliances with manufacturers, suppliers, designers and owners to market the availability of a highly skilled labour force.
- ⇒ Developing and implementing active strategies to market the skills of the trade to a new, shifting and redefined market.

## INDUSTRY STRATEGIES

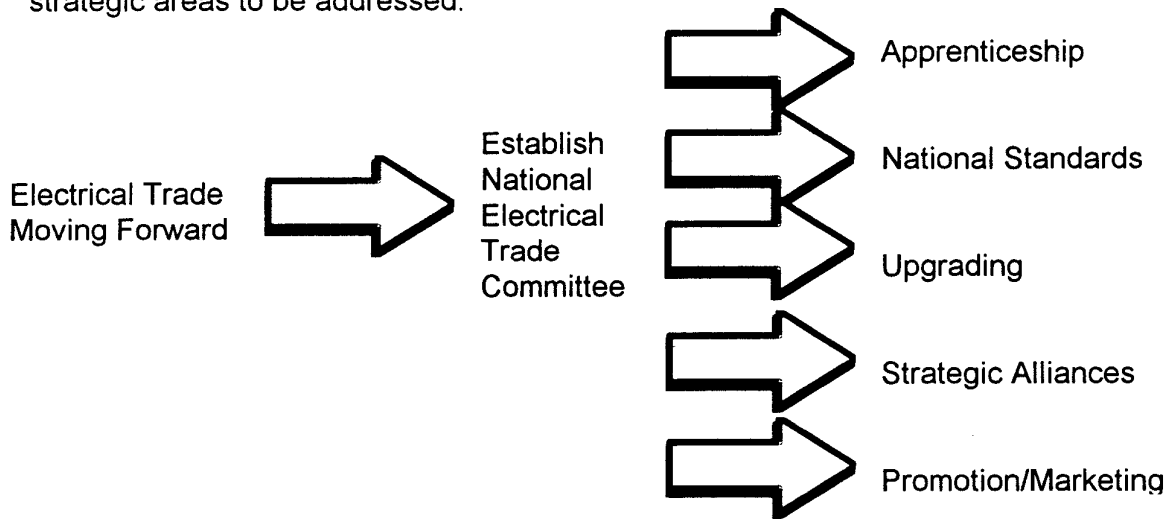
This study is calling for a shift in leadership to enable the industry to address its changing environment. The shift described in the report is from external control to internal control, from a purely regional approach to a combination of national, regional and local approaches.

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Initially, this report has identified the need for a national approach to work in conjunction with existing provincial/territorial structures, and has focused in on five key strategic areas to be addressed:



### ***National Electrical Trade Committee***

To begin with, this report recommends a new structure, introducing a national Electrical trade committee to work with the existing structures such as PACs, LACs, the CCDA, etc. The intent of a national structure would be to support the provincial/territorial organizations, providing a national perspective when appropriate while at the same time respecting provincial/territorial jurisdiction. Although this committee would focus primarily on the apprenticeship system, the environmental scan revealed many issues that could be better addressed through multi-level strategies.

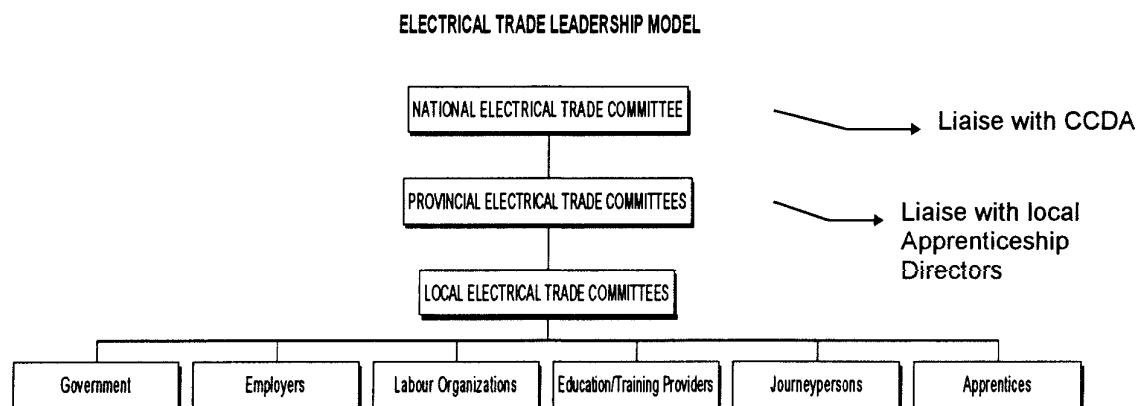
The National Trade Committee would have broad industry regional representation including contractors (union and non-union) and labour. The representatives would have direct ties to the Electrical trade but more importantly would have direct involvement in the Provincial Trade Advisory Committees or comparable provincial/territorial organizations, and would have some influence back in their home province/territory. This representation is critical to facilitate the national and provincial structures working together.

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The following trade structure is being proposed to address existing as well as new and emerging industry issues. The inclusion of a national body would be effective in addressing all trade related issues that require or could be better served through a national approach.



### Proposed Roles and Responsibilities

The following roles and responsibilities represent a sample model. It is understood that individual provincial/territorial structures vary, and as such the roles and responsibilities at each level may vary as well.

#### National Electrical Trade Committee

- promote a common framework, guidelines in which provincial/territorial committees can operate
- support quality assurance
- increase public awareness
- promote national standards
- liaise with national and provincial/territorial licensing/enforcement bodies
- promote the need for enforcement of registration and licensing

#### Provincial/Territorial Electrical Trade Committees

- assist in the development of national standards within provincial/territorial legal and training framework
- link with Local Training Committees
- "lobby" provincial/territorial authorities
- delegate some responsibilities to Local Trade Committees (where required)

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- provide direct input into curriculum development
- increase public awareness
- promote the need for enforcement of registration and licensing

### Local Electrical Trade Committees

- recruit new apprentices
- monitor Apprentice progress
- ensure Apprentice is exposed to full range of on-the-job experience
- identify system shortfalls
- administer standard entry requirements
- maintain working relationship with educators/trainers and government

### Government

- maintain working relationship with industry through provincial/territorial and national structures
- finance curriculum development
- enforce legislative and regulatory framework
- recognize industry standards
- accredit training providers

### Labour Organizations

- monitor Apprentice progress
- counsel apprentices
- upgrading of journeypersons
- participate on industry committees

### Employers

- participate in apprenticeship program
- provide work exposure to Apprentices
- cooperate with local trade committees and other employers re: Apprentice experience
- indenture Apprentices
- provide input into apprentice's final examination/Red Seal results

### Education/Training Providers

- maintain supportive role to industry
- encourage math and science subject in early education levels
- be aware and knowledgeable about the trades as a career

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- provide curriculum development expertise
- provide training
- maintain direct contact with hands-on and end users

### Journeypersons

- mentor apprentices
- teach apprentices
- open mindedness
- be good role models
- stay current/up-to-date
- understand productivity vs. learning curve of apprentices

### Apprentices

- have representation on industry committees
- understand role as a student trying to learn
- be motivated
- be prepared to evaluate own progress
- be willing to be an “instructor”
- be both worker and learner

Once a national Electrical trade committee is established, it is recommended that the following strategies be undertaken:

| <i><b>Strategy</b></i>   | <i><b>Lead Responsibility</b></i>   | <i><b>Outcomes</b></i>  |
|--|-------------------------------------|---|
| <b>Apprenticeship</b>  |                                     |   |
| 1. Share the proposed model with the industry through Electrical Contractor Associations, PACs, IBEW, and other organizations to gain the support and buy-in of the entire industry. | National Electrical Trade Committee | Industry support  |
| 2. Explore apprenticeship funding approaches and sources to address the gaps in funding created by recent changes resulting from the Federal   | National Electrical Trade Committee | A fair, equitable funding strategy tailored to, and supported by the industry |



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| <i><b>Strategy</b></i>   | <i><b>Lead Responsibility</b></i>   | <i><b>Outcomes</b></i>   |
|--|-------------------------------------|--|
| Government withdrawal from apprenticeship and transfer to the provinces.   |                                     |  |
| 3. Develop a process for linking with the CCDA Industry Relations Committee.   | National Electrical Trade Committee | Mechanism for two-way communication with decision-makers   |
| <b>National Standards</b>  |                                     |  |
| 4. Establish a national curriculum committee to work with the PACs to promote national core outcomes/ curriculum to form the basis of the Electrical apprenticeship program. This process would look at the content, pre-requisites, scope, sequencing and hours of training.  | National Electrical Trade Committee | Increased worker mobility.<br>Higher quality training  |
| 5. Promote standards with respect to the on-the-job training component of Apprenticeship. This would go beyond record books to look at:<br>a) how to enable the transfer of Apprentices from employer to employer to ensure exposure to the full spectrum of Electrical work.<br>b) an on-the-job component as a portion of the exam mark.<br>c) three-way evaluation involving the Apprentice.<br>d) re-education of employers and journeypersons regarding their role as trainers. | National Electrical Trade Committee | Quality on-the-job training that reflects the full spectrum of skills and knowledge covered in the in-school portion of apprenticeship |

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| <i><b>Strategy</b></i>  | <i><b>Lead Responsibility</b></i>  | <i><b>Outcomes</b></i>  |
|---|--|---|
| <b>Upgrading</b>  |  |   |
| 6. Share specialty training developed provincially or nationally, in an attempt to standardize the training provided, to capture the "best" training available and to be cost effective.  | National Electrical Trade Committee<br><br>PACs  | Standardized training provided that reflects the highest quality<br><br>Financial savings in the development of training programs   |
| 7. Educate the workers and the contractors on the need for constant upgrading of skills.  | National Electrical Trade Committee<br><br>Union locals<br><br>Industry Associations             | Workers maintain skills and knowledge to meet ever changing demand  |
| <b>Strategic Alliances</b>  |  |   |
| 8. Form strategic alliances with manufacturers, suppliers, owners and designers.  | National Electrical Trade Committee<br><br>PACs<br><br>Union locals<br><br>Industry Associations | Through these alliances the industry can gain information on new directions and trends that will impact the skill requirements of electricians. In addition, the industry can position itself as the logical installer in the minds of the manufacturers, suppliers, etc. |
| 9. Develop a process for the early identification of industry trends and the resulting labour and skill requirements. The national body could become a repository of current information (provided by local industry) about new trends, technologies, etc. This information would then be | National Electrical Trade Committee<br><br>PACs<br><br>Industry Associations                     | The industry would be able to anticipate new products, methods, equipment, etc. in sufficient time to prepare the labour force required.<br><br>Industry being proactive rather than reactive   |

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| <i><b>Strategy</b></i>  | <i><b>Lead Responsibility</b></i>          | <i><b>Outcomes</b></i>  |
|---|--|---|
| available to anyone interested, perhaps through an Internet web-site. In this way information is constantly being updated, compiled and made available to the entire industry.  | Union locals<br><br>Individual Contractors |   |
| <b>Promotion and Marketing</b>  |  |   |
| 10. Develop marketing material for use with a broad range of audiences, to promote the benefits of using a qualified electrician. Material could be used to promote electricians to the consumer, the manufacturer, the designer, etc. and could be tailored for local use. | National Electrical Trade Committee        | Increased awareness amongst consumers about the importance of using qualified electricians<br><br>Electrical workers seen by manufacturers and suppliers as a ready supply of labour that can easily be taught the new technologies in a short period of time |