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Business Information by Sector

Electrical Power Equipment and Services

Author - industry Canada-Manufacturing and Processing Technologies Branch/Direction générale des technologies de fabrication et de transformation

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## Canada and Independent Power Producers

Proceedings of a workshop on the Canadian capability of meeting the needs of independent power producers. held January 26 and 27, 1998, in Washington, D.C.

## **Executive Summary**

U.S. and international power develop⊙rs and engineering contractors, together with representatives of Cariada's electric power industry, gathered in Washington on January 26 and 27, 1998, to discuss the Canadian capability to participate in projects undertaken by independent power producers (IPPs). The following major conclusions emerged from the workshop:

- The power industry is dramatically restructuring because of the trend toward privatization, deregulation and the resultant growth of IPPs. This phenomenon is creating an entirely new set of dynamics with respect to asset ownership and the development of greenfield generation.
- Canada has a well-rounded capability in the power industry as a result of the development of its own advanced electric power infrastructure. This capability extends from engineering and engineer-procure-construct (EPC) activities to hydro, thermal and nuclear generation and transmission as well as distribution equipment and services. Canadian power developers are becoming increasingly active in International markets.
- A key catalytic force behind Canadian export success has been the financial support provided by Export Development Corporation (EDC), which has shown flexibility in adapting to world forces, especially with the dramatic changes resulting from privatization and deregulation. EDC's capabilities are complemented by those of a number of Canadian bank and non-bank financial institutions with excellent project financing capabilities.
- IPP developers seeking partners, financing, engineering, procurement and construction services and equipment supply would do well to consider what Canada has to offer. The Canadian advantage consists of a highly skilled work force, innovative export financing, an attractive exchange rate, adaptable companies, and proven international savvy and experience.

## introduction

A two-day workshop was held in Washington, D.C., co-hosted by the Canadian Embassy and Industry Canada in cooperation with the National Electricity Roundtable of Canada. The main purpose of the workshop was to stimulate dialogue between major power developers and representatives of the Canadian electric power industry. Discussion centered on the experience and capability of Canadian companies, including both equipment and services suppliers, and on means of financial structuring through EDC, Canada's official export credit agency (ECA), and other Canadian financial institutions. Approximately 100 people attended, representing U.S. and European IPPs, Canadian equipment manufacturers and financial institutions, and EPC companies from both sides of the Canada-U.S. border. The workshop program consisted of a number of panels and several keynote speakers from Canadian and international firms (see workshop program for details).

•The decision to hold the workshop was prompted by evidence of enormous potential growth in the market for IPPs. Wido Hoville, Vice-President for International Sales of Asea Brown Boveri (ABB) Canada reminded the

participants that currently known build-own-transfer/build-own-operate-transfer (BOT/BOOT) projects are only the "tip of the iceberg." Government interest in the privatization of infrastructure, reflecting resistance to higher taxes and deficits, appears certain to propel the development of major projects with private capital.

•As Canadian co-chair **Bill Pearson** told the workshop, Canada has an installed capacity of 116 000 MW, making it the sixth largest generator of electric power in the world. Canada is the largest producer of hydro-electric power and, because of its enormous size, has developed huge long-distance AC and DC transmission systems. For many years, Canadian firms have participated extensively in worldwide power developments as owners of foreign utilities, exporters of equipment and services, engineers and currently as developers. In sum, there is a rich store of experience on which the Canadian industry can draw.

### **Recent Trends in IPPs**

A key focus of the workshop was the changing landscape in international electric power markets. The following main points were raised:

- There is evidence of a decrease in firms power purchase agreements (PPAs) and a concomitant increase in the number of merchant plants. This is particularly the case in North America, but Southern Energy, Inc. (one of the top IPPs in the world, operating 10 000 MW, with 8 000 MW under development) has operations that share some of the characteristics of merchant plants in the more mature markets of South America such as Chile and Argentina.
- Developing IPPs in most of the world (even developed countries) can be very complex, as regulatory and currency risks, for example, are extremely difficult to evaluate and change constantly. In his keynote address, U.S. co-chair **Tom Boren** focussed on the challenge of managing risk.
- The international financial institutions (IFIs) will play an increasingly crucial role by providing equity financing and risk assumption in emerging markets. The IFIs can put a stamp of credibility on risky projects that ECAs and commercial banks would not otherwise consider.
- Availability of financing, however, is often not the main stumbling block. A more difficult hurdle to overcome is that of finding economically sound projects (i.e. with a satisfactory return on investment) that are strongly backed by governments and governed by laws and regulations that are fair, transparent and applied consistently.
- The roles of project sponsors, EPC contractors, equipment manufacturers and financiers are converging. At the same time, there is a trend toward vertical integration among fuel suppliers and generation and transmission companies.
- Whether Canadian industry will get a substantial piece of the action depends on price. "You have to be the best buy," **Tom Boren** warned the participants.

## **Project Financing for IPPs: The Canadian Connection**

A major theme of the workshop was the breadth and sophistication of financial support available from EDC, complemented by the project financing capabilities of some Canadian bank and non-bank financiers.

## **Export Development Corporation**

EDC is unique among the export credit agencies of member countries of the Organisation for Economic Cooperation and Development (OECD) in that it offers a full range of financial services, including export financing, project financing, commercial and political risk insurance, foreign investment insurance, equity and bonding. EDC's project financing team can originate, structure, negotiate and close limited-recourse transactions. In project financing, EDC has been most active in the telecommunications, energy, mining, and pulp and paper industrial sectors. EDC has participated in approximately 40 project financings, the majority since the start of 1995, and has provided about US\$2.3 billion in project financing since 1995.

A number of features distinguish EDC from most other export credit agencies. The following distinctive features relate to project financing for international IPPs:

- Environmental Standards: EDC conducts an environmental review of projects and requires, at a minimum, that the environmental guidelines of the host country are met. The Government of Canada is actively seeking multilateral agreements on environmental standards as a way to avoid bilateral imposition of rules by lending agencies.
- Canadian Benefits Policy: EDC's policy has moved away from focussing strictly on specific Canadian content to a more flexible approach that takes into account both direct and indirect Canadian benefits. EDC looks for a combination of benefits that includes Canadian content, global product mandates, transfers to Canada, enhanced future prospects, research and development, highly skilled jobs, etc. EDC's approach is user friendly, helping IPP sponsors and advisors identify Canadian benefits, and allowing a best-efforts approach at an early stage of project financial structuring.
- EDC and Political Risk: EDC offers political risk insurance to lenders, both Canadian and foreign, for IPP and other projects.
- EDC and Equity: EDC can take up to the lesser of 25 percent of the total equity or \$10 million. EDC's equity involvement is subject to the following guidelines: overail transaction risks must be deemed acceptable, return on investment must be commensurate with transactions risk, and a clear exit strategy must be articulated up-front and achieved less than four years from the time of the investment.
- EDC Financing Origination Approach: EDC has taken a pro-active role in projects by offering financing capacity to project sponsors and EPC contractors in order to facilitate sourcing from Canadian suppliers. This has been done by targeting certain markets, sectors and players and buying into a project on condition that there are benefits for Canada. This origination approach adds value to the project's syndication process in that EDC is a neutral partner that can provide a significant financial hold capacity. EDC is flexible on the syndication amount, but seeks a hold amount commensurate with the expected Canadian benefits. Other advantages include the comfort level associated with having an ECA involved as well as the availability of political risk coverage and competitive fees.

With respect to the power sector, EDC has been a very active supporter of Canadian suppliers. On the financing side, 80 transactions representing over \$3.6 billion have been closed by EDC in the power sector since 1990. EDC has extensive experience as a direct lender to power projects in Egypt, India, Indonesia, Thailand, China, Argentina, Venezuela, Colombia and Brazil. In Chile, EDC participated in the financing of the Pangue hydro-electric project on a limited-recourse financing basis in cooperation with International Finance Corporation (IFC) and other lenders. More recently, EDC structured and participated in the Fauji Kabirwala 151 MW gas turbine IPP project in Pakistan with the Asian Development Bank and ABN Ambro Bank. EDC has about 40 active transactions in its power sector pipeline, representing a potential financing volume of more than \$2.5 billion. In 1997, EDC direct financing of limited-recourse transactions accounted for 42 percent of its total medium- and long-term financing activities.

## Canadian Bank and Non-bank Lenders

The workshop also highlighted the capabilities of Canadian banks and non-banks in project financing. The Canadian Imperial Bank of Commerce (represented among the workshop speakers by **David Clee** of CIBC World Markets) and the Bank of Nova Scotia are particularly active in project financing, participating in numerous projects in advisory and lending roles. Other major banks in Canada active in this field are the Royal Bank of Canada, the Bank of Montreal and the Toronto-Dominion Bank.

Daniel M. Morash of the Newcourt Credit Group, the second largest non-bank lender in North America (after GE Capital) due to the recent acquisition of AT&T Capital Corp., described his company's capabilities in project finance. In particular, the Newcourt Capital Finance Fund, a \$500-million precommitment by major institutional investors for project finance transactions in North America and the United Kingdorn, provides for the delivery of long-term, non-recourse debt financing with up to 30-year term, or acquisition financing plus two-year construction. The fund is available for high-quality "merchant" projects including power plants. Non-bank lenders, which also offer asset-backed leasing on projects, clearly complement the roles of bank and ECA financing.

Other principal Canadian financing sources are institutional investors including major life insurance and pension funds. A recent newcomer to the scene is the Borealis Infrastructure Fund, a \$350-million pool established for the purpose of originating, structuring, funding and managing infrastructure assets.

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# **Canadian International Development Agency**

The Canadian International Development Agency (CIDA), Canada's official development aid agency, provides grant funding for feasibility studies related to private infrastructure investments. The funding is available to Canadian companies or affiliates pursuing projects in developing countries and can provide an important risk offset on risky international projects. The funding is generally up to a maximum of \$500 000 per project but, in special circumstances, can be higher. CIDA is developing a new instrument to broaden the support that is available to companies for the development phase of IPPs.

## **Canadian Supply Capability in the Global Power Market**

Another major theme of the workshop was the depth of manufacturing and engineering experience and capability available in Canada.

# **Engineering and EPC Capabilities**

Tony Rosato of SNC-Lavalin spoke of the important role played by EPC companies in the IPP market. He noted that more and more Canadian firms are being asked to provide fixed-price turnkey packages covering EPC activities. In some cases, they may be required to arrange financing and even to make equity investments in projects. The larger Canadian engineering and contracting firms active in the power sector are adjusting to a market in which they require greater financial strength in order to handle new risks.

The leading Canadian companies with significant international expertise in power are SNC-Lavalin, AGRA Monenco, Acres International, Klohn Crippen, RSW, Dessau and Tecsult. More than 8 000 employees work on the engineering side of the power business in Canada. Having honed their skills in building a substantial domestic infrastructure, Canadian engineering firms have leveraged their capabilities in hydro and thermal, getting involved in power projects in over 70 countries during the past 50 years. The leading firms have offices abroad and are allied with foreign companies. Several have joined forces to form internationally recognized joint ventures such as: CIWEC (Canadian International Water and Energy Consultants), formed by Acres and SNC-Lavalin to undertake projects in Nepal; CCPI (Canada China Power Inc.), formed by Acres, AGRA and SNC-Lavalin; CIPM (Canadian International Project Managers), formed by Acres and SNC-Lavalin; Canatom and NPM (Nuclear Project Managers Canada Inc.), formed by AGRA and SNC-Lavalin, with Atomic Energy of Canada Limited as a partner in the latter, to provide support for CANDU reactor sales; and PRP (Pacific Rim Power) formed by Klohn Crippen and SNC-Lavalin.

The main Canadian strengths are a combination of proven technical capabilities, strong project and construction management skills, significant hydro development experience and a long-term presence overseas with established networks. In addition, Canadians are very well accepted by people from other cultures, the firms can offer services and supplies at competitive prices, and they receive considerable government advocacy and financial support from EDC and CIDA. The following are examples of EPC projects undertaken by major Canadian firms:

- SNC-Lavalin: General Santos transmission line (Philippines); Raiwind 117 MW IPP diesel plant (Pakistan), 60 percent ownership; HinKrut 1400 MW coal-fired thermal plant (Thailand), balance of plant.
- Agra Monenco: Teeside, 1875 MW combined cycle (U.K.), EPC services; Cardinal 156 MW combined cycle (Ontario), EPC supply; Orissa power restructuring (India), management consulting, power system planning.
- Acres International: Alto Cachapoal 300 MW hydro (Chile), owner's engineer and EPC engineer; Bhandardara hydro project (India), lender's engineer; Rio Volcan hydro (Costa Rica), EPC engineer.

## **Equipment Supply and Packaging Capability**

Canada has world-class capabilities in hydro turbines and generators, gas turbines, large power boiler islands, nuclea, steam generators, transformers and switchgear and most balance-of-plant items. Large European and U.S. multinationals own most of the major manufacturers, such as ABB, Siemens, Westinghouse, General Electric Canada (GE), GEC Alsthom, Foster Wheeler and Sulzer. As Paul Koenderman of Babcock & Wilcox Canada pointed out, the access that these companies have to their parents' capital and technology amounts to a significant competitive advantage. Power equipment related sales are about \$3.2 billion per year, with an average of about 46 percent of this exported.

# Major Canadian Power Equipment Manufacturers

NAME CANADIAN PRODUCTS

ABB.....

Babcock & Wilcox Utility and industrial boilers, nuclear steam generators

CAE Electronics. Control systems and simulators

Ferrant ard Power transformers

Transformers, switchgear, industrial boilers

Foster Wheeler.. Heat exchangers, condensers, industrial boilers

GE Canada..... Hydro turbines and generators

GEC Alsthom.... Generators, hydro turbines and generators

Haefely Trench.. Instrument transformers

Westinghouse.... Gas and steam turbines

Several Canadian manufacturing companies have in-house power project engineering systems and packaging departments. A good example is ABB Canada, which is specialized in such areas as high-voltage direct current (HVDC) transmission, static var compensation, series compensation, interphase power controllers and high and low voltage substations. ABB Canada's expertise is one major reason that more than 65 percent of all the HVDC projects in the world have been carried out by ABB.

The equipment manufacturers in most cases have been granted mandates by their parents to produce in Canada and export abroad. The workshop learned from Haresh Ramchandani of GE Canada that, within the GE organization, his company possesses the global mandate for large-head hydro turbines and generators. Babcock & Wilcox has supplied a significant number of the world's utility boilers from Canada in the past 10 years. Westinghouse Canada now manufactures all of the company's gas turbine products in Hamilton, Ontario.

### Canadian Power Developers and Operations and Maintenance Capability

A number of Canadian companies are successfully operating and developing IPP projects both in Canada and around the world. Some of these are development arms of public utilities such as B.C. Hydro International, Ontario Hydro International and Hydro-Québec International. Others are private utilities such as CU Power (1 314 MW) and TransAlta Energy (2 448 MW). TransCanada Energy (726 MW) and Westcoast Energy (857 MW) are gas distributors. Northland Power, a private developer, has 538 MW. A number of other smaller private developers are also active.

Ontario Hydro International, Hydro-Québec International, Sask Power Commercial and TransAlta all offer operations and maintenance services on contract to international IPP customers.

### Hydro-Québec International

Henri-Paul Martel of Hydro-Québec International gave a luncheon address on plans for the international market of Hydro-Québec, one of the largest power utilities in North America, with 37 000 MW of installed capacity (94 percent hydro), 19 000 miles of transmission lines and annual revenues of US\$6 billion. Several recent moves show how Hydro-Québec is aggressively taking advantage of North American and international deregulation. The utility has, for example, set up a new division to conduct transport transactions, and has formed alliances and partnerships in the gas industry with players such as Noverco, IPL Energy, Enron, Trigen and Consumers Gas. Hydro-Québec has been granted a power marketer licence from the Federal Energy Regulatory Commission (FERC) in the United States and, in turn, Quebec has opened its wholesale market and allowed access to Hydro-Québec's transmission grid to electricity suppliers outside Ouebec.

Hydro-Québec International has been participating for over 20 years in more than 60 countries, providing a range of energy services including project planning, project management and exporting of operations know-how. Its current activities include a project with New Zealand's Asia Power Development, an agreement with the Tunisian electric and gas utility (STEG) and the creation of MEG International with Gaz de France. In future, Hydro-Québec International intends to play the role of developer in international markets, making equity investments of \$1.2 billion, as well as that of industrial partner, participating directly and actively in project operations.

### IPPs in China

Several interesting presentations were made highlighting the current environment in China for IPPs: speakers were John Hunter of Westcoast Energy (a Canadian power developer that has concluded several IPPs in China), Jonathan Robinson of EDC, Lawrence Wilde of Stikeman Elliott (a large Canadian law firm), and William Wild of the Bank of America Asia. The following salient points were raised:

- The legal infrastructure in China is now adapting to the new realities necessary to facilitate private projects. Recent initiatives include the 1995 Security Law, the first piece of national legislation on taking and enforcement of security, the BOT Circular of 1995, providing for foreign investment (and 100 percent foreign ownership, except in the case of nuclear or hydro projects over 250 MW) in China's infrastructure via BOT, and the Power and Project Finance Regulations issued in March 1997.
- Some IPPs are being concluded in China. Major deals in the past two years have been Rizhao Power (2 x 350 MW coal-fired plants worth \$625 million), a Siemens-led deal considered the first "project financing" in China; Zhuhai Power (2 x 660 MW coal-fired plants worth \$1.23 billion), a Hong Kong-led development project financing and the first JEXIM/MITI limited-recourse financing in China; Laibin B Power (2 x 350 MW coal-fired plants worth \$616 million), the first BOT project approved in China; and Tangshan Power (2 x 50 MW coal-fired plants worth \$128 million), the first project without ECA or IFI participation in China.
- The fact remains that the number of project financings so far is a small fraction of the market potential. Many deal closures have been delayed by bureaucratic hurdles, an attempt to cap rates of return on foreign investment at 15 percent in 1993 and the difficulties in coming to terms on risk

allocation. Moreover, there remains a lot of uncertainty about the rules and practices governing project finance.

• EDC is very active in China, with over \$2 billion in financings in that market. The Canadian ECA has not yet concluded a limited or non-recourse financing in China's power sector, but has a number of projects under consideration.

John Hunter shared several lessons learned from experience. Westcoast focusses only on small to medium-sized projects and captive (i.e. private company) power. Such projects tend to move much faster and avoid red tape. In addition, smaller projects allow pure equity financing, which would otherwise mean long delays, and the contracts for them are simpler. Workshop participants were advised to coordinate obtaining the approvals of the local power bureau and the local government, to build up a portfolio of projects in order to diversify the risks of not proceeding, to try to find negotiated deals as opposed to bidding for them, and to avoid acquisitions, if possible, because of the complexity and ficulty in closing.

#### IPPs in Chile

The workshop also featured two Canad an IPP success stories in Chile, focussing on legal, financial and negotiating issues related to doing business in that country.

Bruce McClennan of Acres International set out the history of the Alto Cachapoal 195 MW hydro project, situated 100 kilometres south of Santiago. This project started in 1991 with CODELCO calling for bids for a BOOT. Andrade Gutierrez (AG), a Chilean developer/contractor, wanted to work with Acres, and together they were awarded the development rights in 1994. Acres was able to obtain grant funding from CIDA to undertake a pre-feasibility study; its involvement has continued to the point where it is providing engineering and project management support under an arrangement with the EPC contractor (AG and Bechtel). Financial closing is expected in June 1998.

The other project, described by Gerry Rowe of GE Canada, was the Pangue 450 MW hydro-electric project located on the Biobio River, the developer/owner/operator being Empressa Electrica Pangue S.A., a subsidiary of ENDESA. The major equipment was sourced from a number of countries, with GE Hydro supplying the generators and exciters. The financing for the project (\$340 million) was done on 100-percent project risk with no government or state guarantees. Financing was provided by the International Finance Corporation, EDC, several European ECAs and commercial banks.

### Conclusions

The workshop permitted a detailed interchange between many of the dominant players in the international power development community and Canadian equipment and services suppliers, EDC, banks and non-banks and Canadian power developers and operators. The following is a summary of the major conclusions:

- Canada possesses a strong capability in both electric power equipment and services that can be employed in large-scale electric power development. In addition, Canada has international power developers of growing importance and large utilities offering operational capabilities abroad.
- Canada's EDC is one of the most innovative and flexible ECAs among OECD countries. EDC has taken a strong leadership role in structuring project finance, financing about US\$2.3 billion on a limited or non-recourse basis since 1995. In addition, there are a number of Canadian banks and non-banks that provide complementary and lead financing for major projects worldwide.
- The international IPP market promises to be an exceedingly attractive one, but it also has its pitfalls. Many of the speakers devoted particular attention to these pitfalls and there was a highly useful exchange of experiences, both successful and unsuccessful.
- Can Canadian industry hope to build a bridgehead in this market? Can it respond to the challenge, thrown out by Tom Boren, to join together to offer packages to developers and to match the lowest bid? Part of the answer lies surely in the energy and determination shown by the companies that worked together to put on the Washington workshop as a showcase of what they could do. Even more convincing is the Canadian record in the international power market. With undoubted expertise, long experience, high productivity, strong financing capability and the added advantage of a low Canadian dollar, Canadian firms are well positioned to participate in IPPs around the world.
- "Canadians and Americans trade more than \$1 billion every day. We are each other's best export market," said Doug Waddell,
  Minist & (Economic) at the Canadian Embassy, in his welcoming remarks. When the workshop concluded, there was general agreement that, as a result of information conveyed to the participants, opportunities uncovered and contacts made, the prospects for business deals across the border looked even more promising.

### Program

Monday, January 26

3 a.m. Registration

9 a.m. Opening of Workshop

Doug Waddell, Minister (Economic) and Deputy Head of Mission, Canadian Embassy

John Banigan, Assistant Deputy Minister, Industry Canada

Graham Williams, Co-Chair, Export Committee, National Electricity Roundtable

Keynote - Critical Issues Facing IPPs

Speaker: Tom Boren, President & CEO, Southern Energy, Inc.

Keynote - Integrating Canadian Capability to Meet the Needs of International IPPs

Speaker: H. William Pearson, President, AGRA Development Inc.

10:30 a.m.

Break

10:45 a.m.

Session 2 - Power Project Financing

An overview of Canadian sources of finance, their international experience to date, the principles governing their activities and the nature and extent of their commitment to the power sector.

Chair: S. A. Taubenblatt, Senior Executive Representative, Bechtel Enterprises Inc.

EDC's Role in the Changing IPP Financing Environment

Speaker: Eric Siegel, Executive Vice-President, EDC

Commercial Banks: A Canadian Perspective

Speaker: David Clee, Managing Director, Project Finance, CIBC World Markets

Non-bank Financial Institutions: An Overview

Speaker: Daniel M. Morash, Managing Director, Newcourt Capital

Noon Luncheon, sponsored by Babcock & Wilcox Canada

Deregulation of the Canadian Electric Power Market

Speaker: Henri-Paul Martel, Vice-President, Project Development, Hydro-Québec International Inc.

1:30 p.m. Session 3 - Canadian Supply/Services Capability and Experience

## Canada and Independent Power Producers - Work...

Resources, product portfolios and international experience in thermal and hydro-electric power, transmission and distribution and EPC projects.

Chair: Margaret McCuaig-Johnston, Director General, Manufacturing and Processing Technologies Branch, Industry Canada

### Thermal Power Capability

Speaker: Paul Koenderman, President, Babcock &Wilcox Canada, Nepal and Srí Lanka, GEHydro

### Hydro-electric Power Capability

Speaker: Haresh Ramchandani, Director, Marketing India, Nepal, and Sri Lanka, GE Hydro

### Transmission Capability

Speaker: Wido Hoville, Vice-President, International Sales, ABB

### EPC Capability

Speaker: Tony Rosato, Vice-President, Marketing and Hydro Projects, SNC-Lavalin Inc.

## 3 p.m. Break

3:15 p.m. Session 4 - "Shirt Sleeves" Session on EDC Project Financing

A detailed A to Z workshop on EDC's practices and procedures related to major projects in the  $\;$  power sector

Chair: John O'Sullivan, Partner, Chadbourne & Parke

John Balint, Vice-President and Co-Head, Project Finance Group of the EDC, and colleagues

5:30 - 7:30 p.m.

Reception, sponsored by the Export Development Corporation

### Tuesday, January 27

8 a.m. Continental Breakfast

9 a.m. Session 5 - IPPs in China

How the IPP market is evolving in China, the pitfalls encountered and developments expected in the future

Chair: Gerry Rowe, Vice-President, GECanada International Inc.

Speakers: John Hunter, President, Westcoast Energy (Asia) Inc.

Jonathan Robinson, Export Development Corporation

William Wild, Vice-President, BA Asia Limited

Lawrence Wilde, Senior Associate, Stikeman, Elliot

10:30 a.m. Break

10:45 a.m. Session 6 - Latin American Case Histories

Detailed accounts of projects in Which Canadian companies have played leading roles

Chair: Denys Turcotte, Vice-President, Marketing, GEC Alsthom Energies

The Pangue IPP Hydro Development in Chile

The Alto Cachapoal Project in Chile

Speaker: Bruce McClennan, Vice-President, Acres International

Noon Conclusion of the Workshop

### Workshop Follow-up

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The Electrical Team can be visited on the Internet at:

http://strategis.ic.gc.ca/electrical

Among the documents available at this site are Industry Canada's Sector Competitiveness Frameworks report on Electric Power Equipment and Services, Part 1 - Overview and Prospects, and Electric Power and

Services, Canadian Company Capabilities, also produced by Industry Canada.

### Acknowledgments

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