International Finance Corporation

Financing for Cogeneration Projects

SECOND INTERNATIONAL CHP SYMPOSIUM
May 9-10, 2001
Amsterdam, The Netherlands

Dana R. Younger
Environmental Projects Unit
Environment and Social Development Department

International Finance Corporation

- **About IFC**
- **IFC Power Department**
- **IFC Financing of Cogeneration, Energy Efficiency & Renewable Energy Projects**
- **IFC Strategy for Cogeneration Investments**

I - About the International Finance Corporation (IFC)

IFC - Basic Facts

MISSION:
To promote private sector investment in developing countries which will reduce poverty and improve people's lives

- **IFC only invests in private-sector projects which are both *commercially viable* and promote *sustainable development***
- **Member of World Bank Group - owned by 174 governments**
- **In FY 2000, IFC approved US$ 3.5 billion of investments in 259 projects**

IFC's Role

IFC acts as a catalyst to stimulate and mobilize private investment:

	IFC investments	**US$ 3.5 billion**
+	**IFC syndications**	**US$ 2.3 billion**
+	**Other funding sources**	**US$ 15.3 billion**
	Total project cost	**US$ 21.1 billion**

(FY 2000 approvals)

IFC

IFC Services

- Project finance - Loans, equity, etc.
- Mobilization of capital
- Financial advisory work
- Capital markets development
- Special development initiatives

IFC Investment Guidelines

- **IFC can invest equity & provide debt**
- **Maximum 25% (35%) of project cost**
  - **<u>Excludes</u> funds raised from other sources**
- **Market pricing of loans**
  - **But flexible on final maturity and grace period**
- **No Government guarantees**
- **Meet IFC and host country environmental guidelines**

IFC's Value Added

- **Direct funding with long-term staying power**
- **Catalyst for other investors and lenders**
- **Honest broker/neutral partner**
  - **Reassuring presence for joint venture partners and host Government**
- **Risk identification and mitigation**

II - IFC Power Department

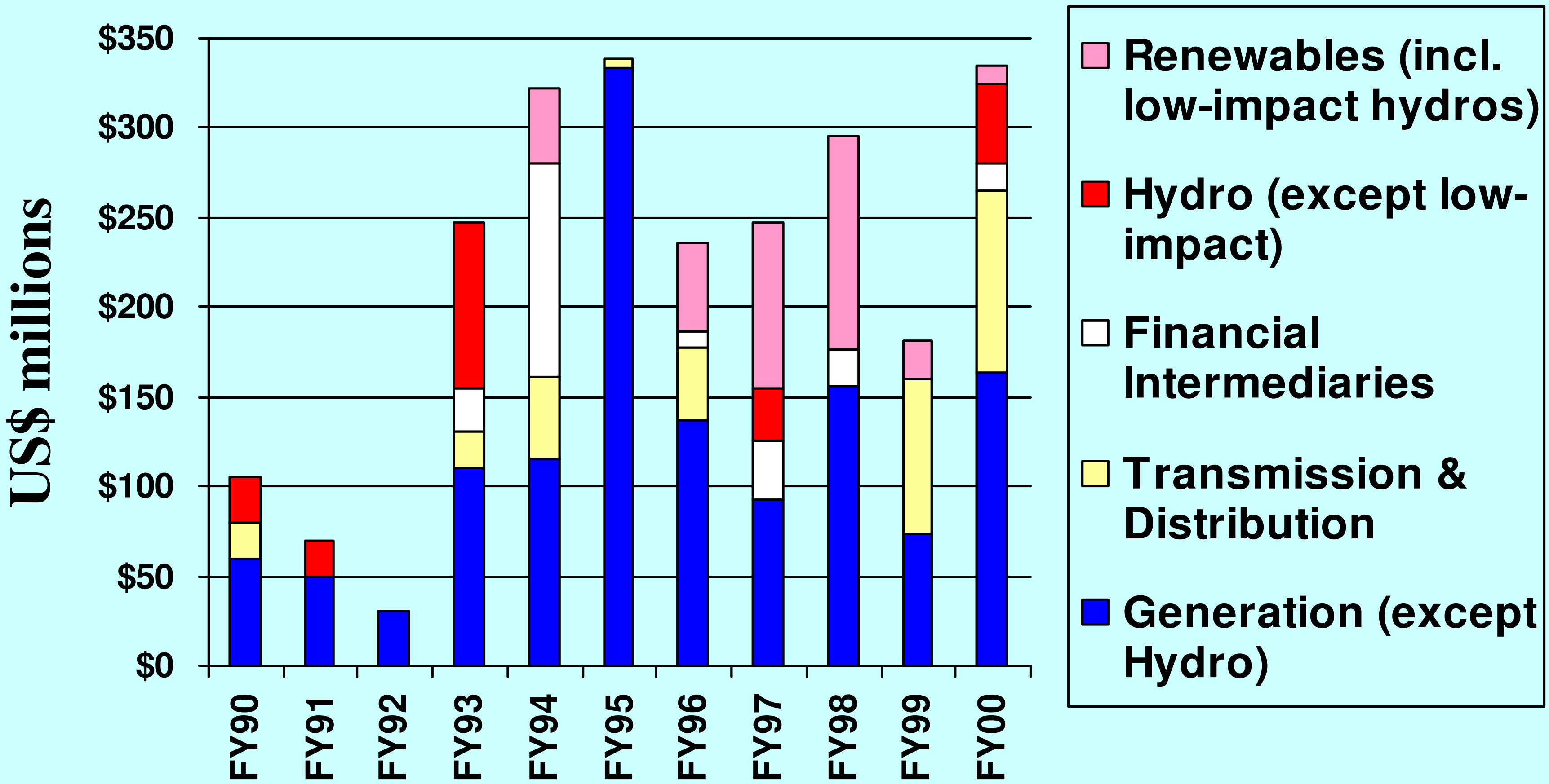
IFC - Power Department

- **Investments to date in more than 60 projects totaling over 10,000 MW**
- **Total Project Cost: Over US$ 17 billion**
- **IFC gross investment of Over $4 billion**
- **Sectors: Conventional generation and transmission & distribution**
- **New focus: energy efficiency - <u>including cogeneration</u>, renewable energy and rural electrification**

IFC

IFC Power Investments by Sector

(Approvals in US$ millions)



** SOURCE: IFC Approvals in power sector*

** FY: July 1 through June 30*

III - IFC's Portfolio of Cogeneration & Energy Efficiency Investments

IFC Cogeneration & Energy Efficiency Investments

- **IFC has invested in 3 <u>cogeneration</u> projects:**
  - **<u>Peru</u>: part of larger project to modernize the steel plant**
  - **<u>Guatemala</u>: stand-along project to produce steam & electricity from sugar cane waste**
  - **<u>Czech Republic</u>: Upgrade and expansion of the Energeticke Centrum Kladno district heating plant**

Why is IFC making a special effort to finance cogeneration projects?

Because accelerating market acceptance of environmentally beneficial technologies, products and services offers one of the best ways to meet IFC's mission of <u>improving people's lives</u> :

- **Local environmental benefits - cleaner air, water and land today; protection of natural heritage for future generations**
- **Global environmental benefits - reduced global warming**
- **Economic and security benefits - less variability in operating costs and dependence on imported fuels**

IFC

Trends in Cogeneration

- **Policymakers in Industrialized countries encourage cogeneration:**
  - **9% of electricity from cogeneration in EU countries; goal is to reach 18%**
  - **increasing commitment to Greenhouse Gas reduction in Western Europe; "Joint Implementation" is a market tool**
- **Technology improvement**
  - **costs for <u>smaller</u> units of cogeneration continues to fall**
  - **deregulation also driving need for smaller, cleaner generation**
- **Increasing competitiveness of cogeneration**
  - **expanding markets in Industrialized countries**
  - **commercial opportunities appearing in Central & Eastern European countries**

IFC

IV - IFC Strategy for Cogeneration Investments

Barriers to Small-scale Cogeneration in Emerging Markets

- **Cogeneration not competitive in some cases**
  - **high transactions cost for small-scale projects**
  - **cost of pollution of less efficient generators not part of market price**
- **Lack of Regulatory Framework**
  - **Pro-active regulation to encourage cogeneration**
  - **sale of excess electricity to network**
- **Moving Target**
  - **Network electricity prices have fallen**

IFC

Barriers to Small-scale Cogeneration *(CONTINUED)*

- **Higher ratio of Capital Costs to Operating Costs**
  - **need for long-term financing**
- **Concessional funds available**
  - **Commercial financing in viable projects tend to be displaced by non-market based funding**
- **Inexperienced sponsors**
  - **often not electric utilities**
  - **increases project completion and operating risk**

IFC Strategy

Barrier	Strategy to Overcome
Cogeneration not competitive in some cases	**Look for niche markets where cogeneration is competitive** **Use funds for Joint Implementation (Greenhouse Gas reduction)**
Lack of Regulatory Framework - especially for small projects	**Emphasize to policy-makers macro-economic benefits of avoiding rising fossil fuel prices**
Concessional aid funds available	**Demonstrate benefits of sustainable commercial market**

IFC Strategy

Barrier	Strategy To Overcome
▪ **Lack of regulatory framework**	▪ **Encourage targeted, transparent framework regulations**
▪ **Small project size** • **cannot bear transaction costs**	▪ **Simplify investment structure where possible (standardize)** ▪ **Use Financial Intermediaries**
▪ **Inexperienced sponsors**	▪ **IFC can give sponsors some assistance with structuring** ▪ **Target experienced sponsors**

IFC

International Finance Corporation

IFC is looking for high quality, private-sector cogeneration projects

International Finance Corporation

Contacts:

Peter A. Cook	Dana R. Younger
Investment Officer	Principal Project Officer
Power Department	Environmental Projects Unit
Phone: (202) 473-1749	(202) 473-4779
Fax: (202) 974-4307	(202) 974-4349
Email: pcook@ifc.org	dyounger@ifc.org