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PRIVATIZATION OPTIONS FOR THE POWER INDUSTRY

Final Report

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APPENDIX
FIRMS CONTACTED FOR PRIVATIZATION SURVEY

Strategic Investors	AES
	CEA
	CINERGY
	CMS
	Cogentrix Energy
	Electricite de France (France)
	Enron
	Houston Industries
	IVO (Finland)
	KMR Power
	Leucadia National Corporation
	National Power PLC (UK)
	New England Electric System
	Pennsylvania Power & Light
	Ontario Hydro (Canada)
	Otter Tail Power
	Tractebel (Belgium)
Institutional Investors	CS First Boston
	Industrial Bank of Japan
	Merrill Lynch
Other	Arthur Anderson
	Bechtel
	Deloitte & Touche
	Piper & Marbury
	Price Waterhouse
	Latham & Watkins

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PRIVATIZATION OPTIONS FOR THE POWER INDUSTRY

Many countries have divested their ownership in both large and small enterprises in favor of private sector control and management The transfer of public businesses to private ownership has been one of the most important changes in these nations economic structures The most recent wave of privatizations began in Chile and the United Kingdom in the late 1970s-early 1980s Following on the success of these efforts many other countries particularly in Latin America and Europe, have adopted their own privatization programs

Today, the privatization of portions of the economy is a major political objective of a large number of developed and developing countries that are seeking to reduce state control over the economy In fact, privatization has become one of the cornerstones of the economic reform programs in Eastern Europe and the New Independent States (NIS) of Eurasia as they make the transition from a state-dominated command-and-control structure to a free market system

The electric power sector has typically been one of the last industries to be considered for privatization because its function is often considered to be vital to the interests of the state However, because the massive investment needs of the power industry produce heavy financial burdens the prospects of continuing state-supported electricity subsidies have led many governments to consider privatizing their state-owned electric utilities

The underlying reasons (political economic social) for implementing privatization programs vary among countries Whether they stem from a change in government the economic burden of maintaining state enterprises or the desire to distribute wealth directly to private citizens these underlying factors shape the goals that a country hopes to achieve through privatization Such goals may include

- attracting private capital for the rehabilitation/expansion of the enterprise or industry
- raising money for the government budget through the sale of state assets
- reducing government expenditures on owning and operating certain enterprises
- increasing operating efficiency and enterprise management
- eliminating subsidies
- promoting free market principles through private ownership

The privatization process may encompass transferring ownership in existing facilities to private citizens or investors, allowing private investors to build and operate new facilities, and/or contracting for private supply services But the simple transfer of ownership or responsibilities

does not in itself guarantee that the expected results will be achieved or that privatization will be a cure-all for the ailments of an industry or enterprise For privatization to succeed a government must set realistic expectations and goals for its privatization program and in designing a program adopt a privatization model that will meet these goals Political opposition by government officials and special interest groups must be considered and diffused Legal and financial institutions and statutes must also be put in place that will create a stable foundation for the privatized companies

Successful privatizations in the power sector are often preceded by a restructuring of the industry in order to create an environment favorable to attracting private sector activity Power sector restructuring may be necessary to establish corporatized entities, competition, an independent regulatory body, and other institutions and structures that can bring private investors to the sector This study examines the power sector at the point where it has already been prepared for privatization following restructuring, corporatization and other reforms It thus focuses only on the privatization options for the power industry, not on the broader aspect of restructuring

Although some privatization principles can be universally applied, each country must be viewed individually, taking local circumstances and conditions into account This study examines the methods and models used in recent attempts to privatize the electric power industry in countries with a variety of political and economic backgrounds

The study begins by outlining different types of privatization methods for the power sector along with a discussion of the benefits and drawbacks of each Other sections examine government and investor perspectives in terms of the methods and models used in privatization These sections address the concerns of each group in the privatization process and how their concerns influence the process and its eventual success or failure

Accompanying case studies illustrate both successful and unsuccessful experiences in power sector restructuring examining the way in which countries have used a privatization method, or a combination of methods to construct an ownership model for power generation, transmission, and distribution While in some cases the privatization model allows for 100% ownership by private investors there are many instances in which the government employees and others control varying shares of the enterprise The case studies highlight countries that have either implemented power sector privatization programs (Argentina, Australia (Victoria), Bolivia, Chile Hungary, and the United Kingdom) or are in the process of designing a privatization model and method (the Czech Republic, Norway, Poland, and Russia)

PRIVATIZATION METHODS

A number of methods can be used to privatize a power sector, including sales to strategic investors initial public offerings vouchers, employee ownership, management buyout,

municipalization cooperatives debt-equity swaps and joint ventures A combination of methods has typically been employed to create an overall ownership model for the generation transmission and distribution sectors For each privatization method this section examines the procedures used the reasons for employing a particular method and the method s benefits and drawbacks from the point of view of the government and investors

For almost any privatization program but especially for initial public offerings or strategic investor sales the government should work with an experienced and reputable financial advisor Investment banks such as Merrill Lynch, Rothchilds CS First Boston or Schroeder s have served as financial advisors for state-owned enterprises seeking to privatize Besides arranging the necessary details and paperwork for the actual share sale or distribution the association of a credible financial advisor with a privatization program will heighten the confidence of prospective investors in the share offering and can potentially increase the asking price of the stocks

Sales to Strategic Investors

A strategic investor is large corporate investor with the experience to manage the power sector enterprise as well as the capital to rehabilitate modernize, and/or expand the enterprise s existing operations and facilities Strategic investors are typically other electric utilities or independent power producers with experience in the power sector

The sale to a strategic investor can be made through a public auction in which qualified bidders submit bids based on predetermined requirements and standards set by the government The government then chooses the best conforming bid for each enterprise as determined by their qualification requirements and price However the sale could also take place through direct negotiations between the government and potential buyers

As in the initial public offering, the value of the shares will depend in part on whether the government relinquishes control over the enterprise A strategic investor will usually require some form of control of the privatized company s management and operations These investors bring both capital and management expertise to the privatized enterprise, and must be able to influence its management decisions in order to maximize the value of their investment This can be accomplished by giving the investor either a controlling share of the enterprise, or a long-term management contract or other guarantees that provide management responsibility and control Sometimes a consortium of strategic and other investors will submit a bid in order to spread the risk and financial burden

Chile, Argentina, Hungary, and Australia used the strategic investor approach in the privatization of many of their power sector assets Bolivia used this method coupled with capitalization to both privatize and capitalize its power sector enterprises

Advantages The primary advantages of sales to strategic investors include

- *The sale of a power sector enterprise to a strategic investor whether by auction or negotiation, can usually be made more quickly than a sale using an IPO*

- *Negotiated price or tender offers increase the chances of success of the sale as long as the buyer meets all the necessary requirements* The ability to negotiate both the price per share and the number of shares to be sold before the sale gives this form of privatization a better chance of being successfully completed than a public offering In a public offering the success or failure of the sale is determined after the share price is announced but in a sale to a strategic investor the share price will be agreed during the negotiations If the strategic investor is sought through a tender, then the asset is sold to the highest bidder or the bidder that meets all the government's requirements (e g , guarantees for future investment in the facility and community labor concessions)

- *Strategic investors bring management experience along with capital resources and their control over management may greatly improve efficiency and reduce costs*

- *Revenues from the sale can be applied to the state budget or re-invested in the enterprise in order to promote rehabilitation/expansion of the power system* The government can increase the value of the privatization agreement with the strategic investor and further the goal of providing capital for the power sector s rehabilitation or expansion by agreeing to capitalize the enterprise through re-investing the revenues from the privatization sale back into the company By capitalizing the enterprise through the sale to the strategic investor the government trades revenues for capital to be employed in rehabilitation/expansion coupled with the management expertise brought in by the strategic investor

Disadvantages There are four primary disadvantages of the strategic investor approach

- *The shares may be valued too low*

- *The government could agree to a bad deal in negotiating with a strategic investor as a result of its inexperience*

- *The state may have to give up control of the enterprise*

- *There could be strong political backlash against selling strategic enterprises to foreign companies*

Initial Public Offering

In an initial public offering (IPO) the government and its financial advisor agree on a valuation of the enterprise to be sold Shares are then created representing the value of the company Next the percentage of shares the government wishes to sell are offered on the capital market to individuals companies, or institutions at the predetermined price The United Kingdom and Chile used IPOs in the privatizations of certain assets in their power sectors

Advantages Through an IPO, the enterprise has the potential to reach a large number of institutional and other investors in the capital market If the enterprise and its financial advisor are able to generate enough interest in the company such that all of the shares on an offer are sold, the government will obtain its desired revenue The shares could be offered to the foreign capital markets as well as the domestic market Other advantages include

- tremendous revenue possibilities for the government by tapping either domestic or foreign capital markets
- the competitive nature of the market increases the chances that the maximum share value will be attained
- revenues from the sale can be applied to the state budget
- investor control over management may improve management efficiency

Disadvantages The primary disadvantages of IPOs include

- *Considerable time and effort are needed to prepare an IPO* An IPO requires a great deal of time and effort to arrange and implement often up to a year or more A detailed valuation of the enterprise must be performed as well as an analysis of the demand for such investments on the capital market in order to correctly price the shares
- *If the share price is too high if there is insufficient capital in the market to support the sale or if there is considerable financial uncertainty in the country, the IPO may be unsuccessful* The choice of the capital market domestic or foreign in which to launch the IPO has a direct impact on the potential share valuation and the resulting revenues from the sale of the stock An IPO generally works best in an efficient capital market where the value of the assets to be sold can be readily determined and where there is sufficient capital for the purchase of such shares However, even in an efficient capital market, all the work leading up to the IPO may be in vain if the market finds the share price to be too high This could lead to a situation in which only part, or even none, of the shares are sold

Emerging capital markets may not have the capital resources to support an IPO particularly for power sector assets valued in the hundreds of millions or even billions of dollars Even if there is enough capital in the economy to purchase the shares unstable macroeconomic conditions (e g , high inflation financial instability) may drive investors away from financial assets and toward more durable goods or commodities

- *The government has no ability to choose the investors in the share offering* Ownership is spread over many investors in an IPO because a broad range of individuals and institutions are able to participate in the share sale Because the IPO does not limit participation in the share offering the government does not have the ability to choose which specific investors will be allowed to participate

- *Managers may not act in the interest of the shareholders* The new stockholders elect a board of directors who oversee the management of the enterprise in the interest of the shareholders Shareholders must be ensured that the board truly represents their interests rather than those of management Thus the board must be independent from the managers of the enterprise because the interests of the managers may conflict with those of the shareholders

- *The limitations a government places on a share offering may also limit revenues* An IPO gives the government the ability to attain several privatization goals in addition to maximizing potential revenues by tapping the capital markets It can still exert direct control over the privatized industry by limiting the number of shares offered for sale Limits can also be imposed on foreign ownership by restricting the amount of shares offered to foreigners

However investors will not be as interested in placing their capital in an enterprise that will still be under government control They will seek to invest in enterprises in which they believe that the company s management decisions will be in their best interest, not in the interest of the government Thus when the government seeks to retain majority control of the shares in an enterprise investor interest will diminish share values will be discounted and the potential revenues from the share offering will be reduced Similarly, by limiting foreign participation in the IPO the pool of investors is reduced and the share price may not be at the maximum possible level In both cases, the government must weigh the benefits of share price maximization against the perceived social benefits of retaining majority control over a strategic industry or of appeasing nationalistic demands that foreigners not be allowed to own large blocs of shares in such enterprises

Vouchers

In this method of privatization the government issues vouchers or privatization certificates to individual citizens who can then convert them into shares in companies through privatization auctions The vouchers may be distributed to citizens free of charge or offered at a reduced price This method of privatization is based on the belief that public enterprises belong to the community and that property should be generally distributed using principles of equity

The Czech Republic and Russia have used vouchers to privatize portions of their power sectors

Advantages The primary advantages of this system include

- *Vouchers do not rely on the existence of capital markets* This system can be used when the capital market cannot provide the funds for the purchase of shares because the country lacks sufficient savings
- *Voucher privatization can be implemented relatively quickly*
- *The use of vouchers creates a shareholder community where possibly none existed before*
- *This method is politically popular because it puts the ownership of state enterprises in the hands of the general population and spreads wealth directly among the country's citizens*

Disadvantages There are several disadvantages with voucher privatizations

- *They bring little if any capital to the enterprise for reconstruction or upgrading*
- *Voucher privatizations raise little revenue for the state budget*
- *This method does not bring management expertise to the enterprise* Because of the potential fragmentation of ownership the control of management will be difficult, making it harder to motivate managers to increase the enterprise's efficiency Thus, voucher privatizations have limited ability to improve an enterprise's management

Employee Ownership

The government can decide to transfer some portion of a public company to its employees and managers The shares may be transferred free or at prices that are discounted from the share's market price

Bolivia, Hungary, the Czech Republic and Chile used employee ownership as one of their privatization methods However in each case employee privatization was only a small part of the overall privatization model for these countries' power sector assets

Advantages This form of privatization has three main advantages

- *It gives employees a direct stake in improving the enterprise* One reason behind employee ownership is the idea that employee-owners will be interested in improving the efficiency of the operation controlling wage increases and increasing the profitability of the enterprise if they have a direct stake in its future

- *Employee ownership reduces labor opposition to privatization* Labor unions are typically one of the strongest interest groups to perceive privatization as a threat but by including labor in the privatization process this opposition is often diffused

- *It is a fast and relatively simple way to begin the privatization process* Employee ownership could be a first step in reducing opposition in order to launch a more sophisticated privatization method

Disadvantages There are five problems with this form of privatization

- *It brings little if any capital investment to the enterprise* Because shares are distributed to employees for free or at favorable prices the government gathers little revenue from this form of privatization

- *Employee ownership creates equity problems* This form of privatization distributes national assets at reduced rates to a select group of citizens who happen to work at the enterprise

- *Employees could sell their shares in the enterprise* There is no assurance that employees will not sell their shares which would destroy the long-term incentive for their special treatment in the first place This effect could be lessened by requiring employees who receive shares free or at privileged rates to retain them for a stipulated period of time

- *Such ownership brings no management expertise to the enterprise* The focus and direction of the enterprise is unlikely to change under employee ownership

- *There could be political opposition to such a privatization* The problems concerning equity in the distribution of valuable state assets to a small group of citizens could lead to increased public opposition to the government's privatization program

Recently an innovative approach to employee ownership was made part of the privatization of the Canadian railway A bloc of shares in the railway was set aside in escrow for railway workers Shares are to be distributed over time from the escrow account as certain performance targets are met by the employees The quantity of shares distributed depends directly on the number of targets met This method of share distribution is designed to motivate employees to improve their performance and the performance of the company

Management Buyout

A management buyout is similar to privatization through employee ownership except that in this case a select group of employees (those in control of the enterprise) receive ownership of the enterprise In the management buyout method of privatization, managers are typically able to purchase shares in the enterprise at a discount to their face value In some cases managers may receive some shares at no cost in order to win their support for the sale of the formerly state-owned enterprise

Advantages This method of privatization has one main advantage

- *Privatization will be supported by the power sector enterprise s management* This group often wields considerable political power because they are the backbone of one of the nation s strategic industries If management strongly opposes the privatization of the industry, then the entire privatization process could be jeopardized

Disadvantages This method of privatization shares many of the same problems faced by employee ownership with some notable additions

- *It does not bring much if any capital to the enterprise* The management of a power sector enterprise typically do not have the collective resources to purchase the shares of a multi-million dollar, or even billion dollar utility for the actual share value

- *This method of privatization does not bring in any new management expertise* A management buyout may cause a stagnation in the enterprise's management because managers answer only to themselves and are likely to rule out any attempt by outside investors to bring in new management

- *If managers control the ownership of the enterprise they could then veto further privatization attempts* This would leave the ownership concentrated in the hands of a few individuals, and would defeat the goal of privatization aimed at promoting free market principles by spreading private ownership among a large number of investors and citizens

- *Managers could take actions that would reduce the estimated value of the enterprise during the privatization phase in order to lower the share price below its real value* This would allow the management to purchase a large number of shares and then reap windfall profits once the real value of the enterprise becomes apparent

- *Management ownership creates an equity problem* This method of privatization distributes national assets at reduced prices to a small group of people who run the enterprise

- *There could be political opposition to such a privatization* The problems of equity the potential for corruption in the sale of assets, and the disincentives to managers to continue any further privatization reforms once they have control of the enterprise could increase public opposition to the government s privatization program

In Russia where enterprise directors and managers are particularly powerful, many large industries were partially privatized in this manner The resulting allegations of improprieties by enterprise managers in the purchasing of shares and hoarding of wealth have marred the Russian large-scale privatization program

Municipalization

Municipalization is the divestiture of state-owned enterprises to local municipal governments It is not actually a type of privatization, rather it is the decentralization of government ownership For the power sector this may mean restructuring the local generation or distribution portion of the state utility and transferring ownership to the municipal government

The Czech Republic and Hungary have used municipalization as one of the methods employed in their overall privatization models

Advantages This option has four main advantages

- *Municipal governments may support overall privatization if they are given a piece of the privatized enterprise* If the municipal government were creating strong resistance to the state s privatization plans the divestiture of part of the utility to the municipal government would diffuse that resistance

- *Municipal governments may be better equipped to collect payments owed to the utility, thus improving its financial health* If the state is having trouble with collections, it may find that the municipal government is more effective in this capacity

- *Revenues received from the municipal government are merely a transfer of resources from one governmental budget to another* Payment to the state for this transfer of assets could be made through a bond issue arranged by the municipality and paid off with a tax on municipal electricity rates

- *Municipalization leads to a decentralization of state control over the power industry* Regions and regional governments are given more control over major industrial/service industries that directly affect them

Disadvantages Municipalization has four primary disadvantages

- *The question of actual privatization will remain* Privatization must still be addressed because municipalization is simply the transfer of ownership between state entities not between the public sector and the private sector

- *Municipalization may promote politically beneficial inefficiencies* The municipal government may actually perpetuate or even implement its own electricity subsidies and other inefficiencies in order to serve local political goals at the expense of the power sector enterprise

- *There are no inherent management improvements with the change in ownership* Management improvements cannot be expected any more under municipal ownership than they can under state ownership

- *The privatization process and the way in which the municipal utility is operated can be politically manipulated*

Cooperatives

In a cooperative as with municipalization the state transfers ownership to the local rate-paying customers of the utility Unlike municipalization where the local government owns the utility the rate-payers themselves are the shareholders of the utility in a cooperative

While cooperatives are popular in the United States and Canada, Norway was the only country examined in this report to have cooperatives and these existed prior to any large-scale privatization effort

Advantages Cooperatives have political and economic advantages similar to those of municipalities They have one additional advantage

- *Customers have a strong incentive to pay their bills because they own the utility* Because the individual rate payer is a shareholder the peer pressure to pay will be the strongest among the ownership methods Thus in an area in which the state has particular problems in collecting electric bills this form of privatization may be attractive The payment the state receives for the transfer of ownership to the cooperative could be in the form of a loan whose payments would be made from the future profits of the electricity sales

Disadvantages Cooperatives have two primary disadvantages

- *In conditions of economic instability cooperatives may be difficult to organize*
- *In impoverished areas the rate payers may not have enough collective resources to purchase the power sector enterprise*

Debt-Equity Swaps

A country debt-equity swap is a transaction that converts a country s currency obligation to commercial banks into an equity investment (either direct or portfolio) in a domestic private or privatized company The investor may be the bank holding the loan or a company that buys the loan in a secondary market at a discount The investor receives local currency in exchange from the central bank of the debtor country and invests the local currency in a business venture

Debt-equity conversions generally fall into three categories

- a sovereign or public-sector debt is exchanged for equity in a private sector enterprise
- the debt of a private company is exchanged for an equity investment in the same company
- a sovereign or public sector debt is exchanged for equity as part of a program of privatizing public sector enterprises

In a typical debt-equity conversion an investor will purchase the debt of the country in which it wants to invest at a discount on a secondary debt market The discount on the face value of the debt depends on the creditworthiness of the country Discounts are typically between 20-60%, but can be even higher for countries with exceptionally high credit risk The debt obligation can then be converted into local currency or directly into a domestic asset in the debtor country, provided that the central bank of the debtor country has adopted an appropriate debt conversion program

Chile, Argentina, Brazil the Philippines Russia (loans for equity) and Nigeria are among the countries that have employed debt-equity conversions However debt-equity swaps have not yet been employed for power sector privatization

Advantages In properly structured debt-equity conversions all parties involved stand to benefit

- *Favorable rates are available for investors* The investor acquiring a foreign debt obligation obtains the local currency or asset at a favorable rate reflecting the discount at which it bought the loan This enables the investor either to acquire new equity or expanded equity in a company in the debtor country, or to finance the local currency portion of projects in the debtor country at much lower cost

- *The government is able to retire some of its debt liabilities while it divests its ownership in state-owned enterprises* A debt-equity conversion entails the simultaneous removal of assets and obligations from the books of the government The government is able to encourage the privatization of formerly state-owned entities at the same time that it reduces its foreign debt exposure The country substitutes the steady outflow of principal and interest payments on its debt for the occasional outflow associated with investment The bank originally holding the debt is able to sell the debt receiving money for a loan that may have been in jeopardy

- *Debt-equity swaps allow attractive entry into a domestic market for a foreign investor particularly a strategic investor*

- *Management may be improved if investors are given controlling ownership*

- *Swaps can be used to stem capital flight* Chile launched a special debt-equity swap program in which citizens could buy and redeem large amounts of the government's foreign debt and exchange them for equity in privatized enterprises This encouraged citizens with hard currency accounts abroad to re-invest their money at home through debt purchases and conversions

Disadvantages This method of privatization has three main disadvantages

- *Debt-equity conversions are potentially inflationary* The volume of debt-equity conversions must be controlled because the redemption of foreign debt for local currency through the central bank can be inflationary if it is allowed to increase the debtor nation's money supply Countries implementing successful debt-equity conversions, such as Chile, have limited the volume of these transactions so that they can effectively "sterilize" the domestic currency added to the local market

- *Such swaps allow investors to purchase national assets at discounted prices* Domestic investors and citizens may be opposed to the fact the foreign investors are given preferential prices on domestic assets through debt-equity swaps Some of this opposition can be diffused by allowing domestic investors to also buy the country s foreign debt and convert it into equity in their home country Chile implemented this practice in the 1980s and was able to stem much of the capital flight from the domestic economy albeit by allowing investors to buy national assets at discounted prices

- *Swaps can be politically explosive if people feel that foreign investors are taking advantage of the nation to buy strategic assets at a significant discount*

Joint Ventures

In some cases an enterprise will be privatized by allowing a joint venture between domestic and foreign partners (generally strategic investors) to buy the asset either in part or entirely from the government

Joint ventures have been formed in Argentina Australia, and Chile, and have been proposed in Central and Eastern Europe

Advantages Joint ventures have three main advantages

- *They diffuse some opposition to foreign ownership* A joint venture can create an entity that is separate from either the domestic or the foreign parent company It may register as a local company thus lessening some of the opposition to the foreign ownership of domestic power sector assets

- *Having foreign partners spreads the risks of legal and environmental liabilities* Foreign investors may be interested in working with domestic enterprises but hesitant about assuming all of the environmental or legal liabilities of the enterprise through direct ownership in the parent company A joint venture allows the foreign investor to spread the risks of these liabilities

- *The joint venture privatization of a power sector enterprise will generate revenues from the sale of shares*

- *A foreign strategic investor can bring about increased capital investment and management improvements depending on its level of participation*

Disadvantages There are two primary disadvantages with this method

- *The strategic foreign investor s capital and influence may be reduced* However this disadvantage is offset by the political and geographic advantages of the domestic partner

- *In such an arrangement it is often unclear as to who is in charge* This confusion in the management of a joint venture could destroy any of the possible benefits that private sector participation might bring to the formerly state-owned enterprise

THE ROLE OF GOVERNMENT

When the government decides to privatize an industry it is extremely important that it first complete a detailed plan of the privatization process *The first step in developing this plan is to determine the goals and objectives that the government hopes to achieve by privatization* There will no doubt be a list of such goals These items on the list should be ordered according to their importance to the government because some goals may be in conflict with each other

Each goal must have associated with it a method of privatization that best achieves the results of that goal The methods that best support the high-priority goals should be those upon which the privatization plan is based Each method has certain advantages and disadvantages for the government and investors and these must be carefully evaluated to assure that the desired result is obtained When this is done, the government can take the critical steps in restructuring and reform that the privatization methods require If the goal is to attract capital to repair and expand the utility for example regulations must be written to emphasize profitability over consumer protection or the achievement of such public policy aims as employment and welfare

Issues of Ownership Control

Even when there are strong motives for privatization the government may be reluctant to relinquish control of the enterprise to be privatized This desire to retain control can lead the government to try to achieve some of the advantages of privatization without giving up ownership This could be accomplished by selling a minority share to the public or a strategic investor However, this is not really full privatization and it is unlikely that a strategic investor would buy into this situation unless the government has an exit plan to relinquish its control by selling more of its shares in the near future (for example, the government could give the investor an option to buy additional state shares in a given number of years) Any sales that would be concluded with the government remaining in control of the enterprise would in all probability bring a lower price than they would if the government were not in control

A second way in which a government can maintain control of the privatized utility is to retain ownership of shares with special voting rights that give it the power to veto actions that it does not approve of These shares are the so-called "golden shares " Because they are special shares,

the government may be able to maintain the rights of a controlling shareholder without assuming any of the financial risks of ownership This method of control will cause real problems in attracting strategic investors However the UK, Argentina, and Hungary all had golden shares in their privatization programs, retaining either majority control over some privatized power sector enterprises or special voting rights

The government could also privatize yet still maintain control over the enterprise by retaining ownership in the utility, but buying services and output from private firms These private firms could raise capital, build new generating plants and sell their output to the government-owned utility The government could even contract for a private firm to run the power sector enterprise In this case the government maintains the ownership and the appearance of control but private firms actually account for much of the output and services This form of privatization goes only part way toward achieving the usual goals of privatization because the ownership of the enterprise is not transferred to private investors

Issues of Regulatory Control

A government s attempt to control the privatized utilities through shareholding, whether by majority or through special voting rights is a misguided form of control The government does not need to retain ownership to control the industry Its most powerful form of control over the power sector is its ability to determine the rules under which the privatized industry will operate and put in place an independent regulatory process to enforce the rules This regulator will be independent of the ministry but it will still be a government agency staffed by people who are independent of both the ministry and the industry being regulated

The rules of regulation should be in the form of statutes so that the government cannot change them for expeditious political reasons The government and regulatory body must also establish the rules of operation for the industry before the privatization process begins If the rules are created or changed drastically during the privatization process, potential investors could be scared away

There are other areas in which regulations must be developed to govern the way the privatized utility is run Because at least part of the utility may be either a regional or natural monopoly, rules must be developed to protect the consumer These rules must assure that the prices charged are not too high or discriminate against certain groups, and will set minimum standards of service Environmental and safety standards must also be determined and controlled by the regulator

Investors will evaluate all of the regulations in determining what they can afford to pay for shares in the utility but they must know what the rules are and be assured that they will not be changed

by any political wind that blows through the government Investors need consistency and the government needs to develop a reputation for consistency to attract them

The role of the government in the privatized utility industry will be changed by the privatization process but it will not be diminished It must give up ownership control but not control of the industry Parts of the industry will remain a monopoly and so must be regulated by the government This regulation must be performed by an independent regulatory body with rules that have the power of statutes After privatization the regulator will enforce the regulations and act as the arbiter in resolving conflicts between the new owners of the utility and its customers

INVESTOR PERSPECTIVE

Power sector privatization is often carried out with the aim of attracting private sector capital to rehabilitate and/or expand the electricity infrastructure of a country To attract foreign or domestic investment the government launching the privatization program must understand the needs and perspectives of potential investors This section details the findings of a 1996 survey of 26 power sector investors worldwide concerning the major factors these companies consider when analyzing investment opportunities The appendix contains a list of these companies

One requirement for investment in the power sector that was cited unanimously by all investors and investment advisors interviewed is the presence of an independent regulatory agency The rules and regulations under which the industry will operate must be known so that future economic behavior can be reasonably predicted It is important that the regulatory body be independent so that it will not be directly influenced by the political requirements of the ministries All investors said that they would prefer and some said they would require a stable regulatory track record At the least they want to see a long-term regulatory policy in place with the strength of a statute

Investor Roles

The survey includes the perspectives of both strategic and institutional investors Strategic investors typically power utilities or independent power producers (IPPs), play a key role in the privatization process because they bring both financial resources and technical and managerial expertise to a newly privatized power sector enterprise These investors seek to enhance the value of the privatized company by actively improving the enterprise's management and the facility's technical staff, to restructure the enterprise into a private market-oriented business Through their private sector experience strategic investors bring an understanding of the pressures of managing in a competitive market where they must purchase fuel, control operating costs, sell power at a price that will produce profits for shareholders, and provide satisfactory service to their consumers

Institutional investors, such as investment banks and funds are important players in the privatization process because they are often the source of the substantial financial resources required in the privatization of power sector assets In many cases, investors will form a consortium, including at least one strategic investor to spread project risk and financing burdens The inclusion of a strategic investor is important for a consortium that wants to increase the value of its newly privatized asset

Investment Targets

In the main the investors interviewed for this report favored investment in either generation or distribution assets, or both Very few expressed an interest in investing in transmission enterprises which tend to offer lower rates of return because governments tend to maintain involvement in transmission (a natural monopoly) operation through ownership or strict regulation Investors tend to view distribution as slightly less regulated than transmission and therefore able to earn greater returns The recent examples of highly profitable distribution companies in the UK testify to this point Most investors see generation as offering the lightest amount of regulation and consequently the greatest potential returns especially in a competitive generation structure

Ownership

Investors face many key ownership issues with respect to privatizations including the investor s percentage ownership in an asset the timing of the privatization and the equity role for management and workers Investors were generally willing to be flexible with respect to many ownership issues as long as they were treated fairly and were able to maintain control over issues affecting the long-term value of their asset

Some investors said that they could accept a minority share of a privatized asset However all of them required the ability to control important managerial and financial decisions that affect the asset s long-term profitability especially when they are key factors influencing the investor's plan to improve the asset's operation and value This control could take one or more of several forms 1) majority control over the asset s operation and maintenance, 2) veto power over key management decisions and/or 3) majority control by a consortium that shares the investor's interests and background (usually an investor from the same country) None of the investors were willing to take a passive role to the government in the privatized enterprise Investors universally expected to be able to make important decisions concerning the operation of the utility

Some investors said that they would accept a minority position with respect to government ownership of the enterprise temporarily, as long as the government publicly proposed a plan to exit the project in the near term This was the situation in the privatization of generation in Chile

Many investors did not oppose a gradual privatization of a state-owned enterprise over a period of a few years However in exchange for this delay investors would want the guarantee of an option to increase their ownership stake by buying additional shares divested by the government as has occurred in Hungary or to take a controlling interest in the asset as the government divests its shares or distributes them to other investors, as in Chile A few investors said that they would not require a controlling bloc of shares at all if certain voting privileges were arranged on such key issues as management of the enterprise

Risk and Risk Management

All investors require stability and a reasonable amount of certainty in any investment opportunity In a stable environment where the future is reasonably predictable an investor can accurately assess an asset's potential viability and therefore is able to determine the risks it faces The way in which investors view and manage these risks will largely dictate their investment decisions

Political risk Political risk includes issues such as the stability of the government the prevalence of corruption the amount of civil military, or labor unrest and the chance that the state will once again expropriate privatized firms Also some political risks are particularly associated with energy projects, these include contract abrogation regulatory risks creeping expropriation and the sanctity of the dispute resolution mechanisms Many investors surveyed said that the form of government (democratic communist dictatorship etc) was not a major concern so long as that government was stable and had a clearly defined succession process

Investors can mitigate certain types of political risk by purchasing investment risk insurance from agencies such as the Overseas Private Investment Corporation (OPIC) the US Government's investment insurance agency or from the Multilateral Investment Guarantee Agency (MIGA), the counterpart organization at the World Bank These agencies offer insurance against political risks for certain methods of privatization it is normally available only for foreign direct investment (e g strategic investors, joint ventures debt-equity swaps) The definition of investment is broad and can include equity, debt management contracts and contingent liabilities

IPOs are probably not insurable because political risk insurance benefits the owner and in an IPO, the owner is frequently changing Employee ownership and vouchers have no foreign ownership and do not qualify for political risk insurance, but they do offer some insurance on their own against expropriation when combined with foreign direct investment

Financial risk Financial risk covers a broad spectrum of issues, including potential payment guarantees, the country's macroeconomic situation, currency repatriation, exchange rate risks, and market risks

- *Payment guarantees* The guarantee of payment is a major financial risk concern for any investor These guarantees depend on the contract law of the country Investors who commented on this point said that they would require a legal structure that would allow contract disputes to be settled through international arbitration

- *Macroeconomic situation* The country s macroeconomic situation is important because potential investors need to discern whether a country has enough money to provide for an investor s hurdle rate of return (i e the rate of return below which the investor has no interest) In the power sector the key macroeconomic issue is generally whether the government has the political will to charge a tariff that provides the investor s hurdle rate This can only be accomplished if the government and/or energy consumers have sufficient economic wealth to pay the tariff Several investors who were considering the NIS cited this as a concern

- *Profit repatriation* Most investors expressed major concerns over the ability to convert local money to hard currency and then to repatriate profits from an asset Power sector investments are inherently riskier in this respect than those in many other business sectors for two reasons First while investors typically receive payments for electricity assets in local currency they must often import fuel or efficient Western-designed equipment using hard currency If a country lacks strong foreign currency reserves, this issue is problematic Some investors interested specifically in power generation said that a strong stable domestic fuel market could mitigate this problem because it would alleviate the need to convert local currency in order to buy foreign coal gas or other fuels

  Currency repatriation can also be more difficult for power projects than for oil, gas or other energy projects because it is usually difficult to export power in order to earn hard currency In some CEE countries independent power developers expressed some optimism that they may be able to export power in order to mitigate potential currency convertibility problems

- *Exchange rate risks* In addition to the ability to collect, convert, and repatriate earnings from the project all of the investors interviewed expressed concerns over potential exchange rate risks (the risk that local currency earnings from an asset would depreciate relative to the cost of items that may be imported, such as fuel) Those interviewed were more willing to invest if they believe that a local currency is stable

- *Market risks* In many countries, investors also face market risks, especially in "spot electricity markets " where prices are set by market forces rather than through long-term supply contracts between generators and customers Most independent power and many other generation construction projects receive project financing based on pre-arranged long-term electricity supply contracts between the generator and a customer(s) In a spot

market electricity prices are determined by demand and generators run based on a merit order system

This market price system increases an investment s uncertainty Prices may not be high enough to cover costs, and a generation project may not operate enough under a country s dispatch to earn sufficient revenues All lenders interviewed said that they are still adjusting to project finance in such a situation However several tools are now being developed to address this risk The ability to hedge (to operate in the electricity pool but to still make arrangements with certain customers for a price based on the future pool price) is one way to mitigate some of the risks inherent in a spot market Such a system called ' contracts for differences ' has already developed in the UK market A few investors said that they try to get a mix of contracts and spot market sales preferably 70% contracts and 30% spot sales

- ***Environmental concerns*** These were listed by several investors as a major concern particularly in CEE and the NIS where many of the power sector entities to be privatized are several decades old and have high levels of emissions and associated pollutants Investors stressed a consistent environmental policy as an important factor because environmental laws that would be strengthened after an investment was made may suddenly make the investment unviable

Technical risk Every power sector project has associated technical risks These risks vary by power industry sector as well as by individual power sector project Some technical risks include constraints on the transmission system that may favor certain generators or distribution networks over others, the ability of different plants within the generation system to be dispatched the age and design of the enterprise's capital assets, and the emissions levels of generating plants For the strategic investors interviewed in the survey technical risks do not provide an impossible hurdle but they do affect the price

Rate of Return

In general, the principal mitigating factor for risk is the corresponding rate of return on the investment A high rate of return decreases the time investors need to recover their original investment A project with a real rate of return (the amount by which the required rate of return exceeds the expected rate of inflation) of 25% will return the initial investment in four years, limiting the amount of time investors are exposed to losing their initial capital Thus, the riskier the investment is perceived to be, the greater the return must be in order to entice investors

The specific rate of return will vary by project, location, and a number of other important factors However, many of the investors surveyed for this study were able to indicate the general rates of return that they would require on power sector investments in different geographic regions

Country/Region	Rate of Return
United States	greater than 10%
United Kingdom	greater than 10%
Asia	greater than 14%
South America	greater than 16%
Central and Eastern Europe	greater than 18%
New Independent States	25 to 50%

However several sources cautioned against taking the rates of return given by investors at face value In many regions investors are looking for investments with the returns shown above but are often settling for projects with slightly lower returns

For power sector investment opportunities in CEE and the NIS the rate of return expected by U S and U K investors was higher than that expected by continental European investors There are several reasons that the latter investors cite for this difference

Many continental European electric utilities are still largely state owned Because these firms are financially backed by the state they are often willing to make riskier investments because they can take a longer view on the investment instead of having to be concerned about the short-term return to shareholders As one of these investors said they will accept a lower return in investing in certain regions to suit the geographic interests of their business or the political interests of their government Many major Western European governments have made greater political and economic integration with CEE and the NIS a top political priority The countries in CEE and the western countries of the NIS also have political and economic aspirations in Western Europe One investor said that this gives the latter countries some leverage over their eastern neighbors if payments are not made

Interest in Central and Eastern Europe and NIS Markets

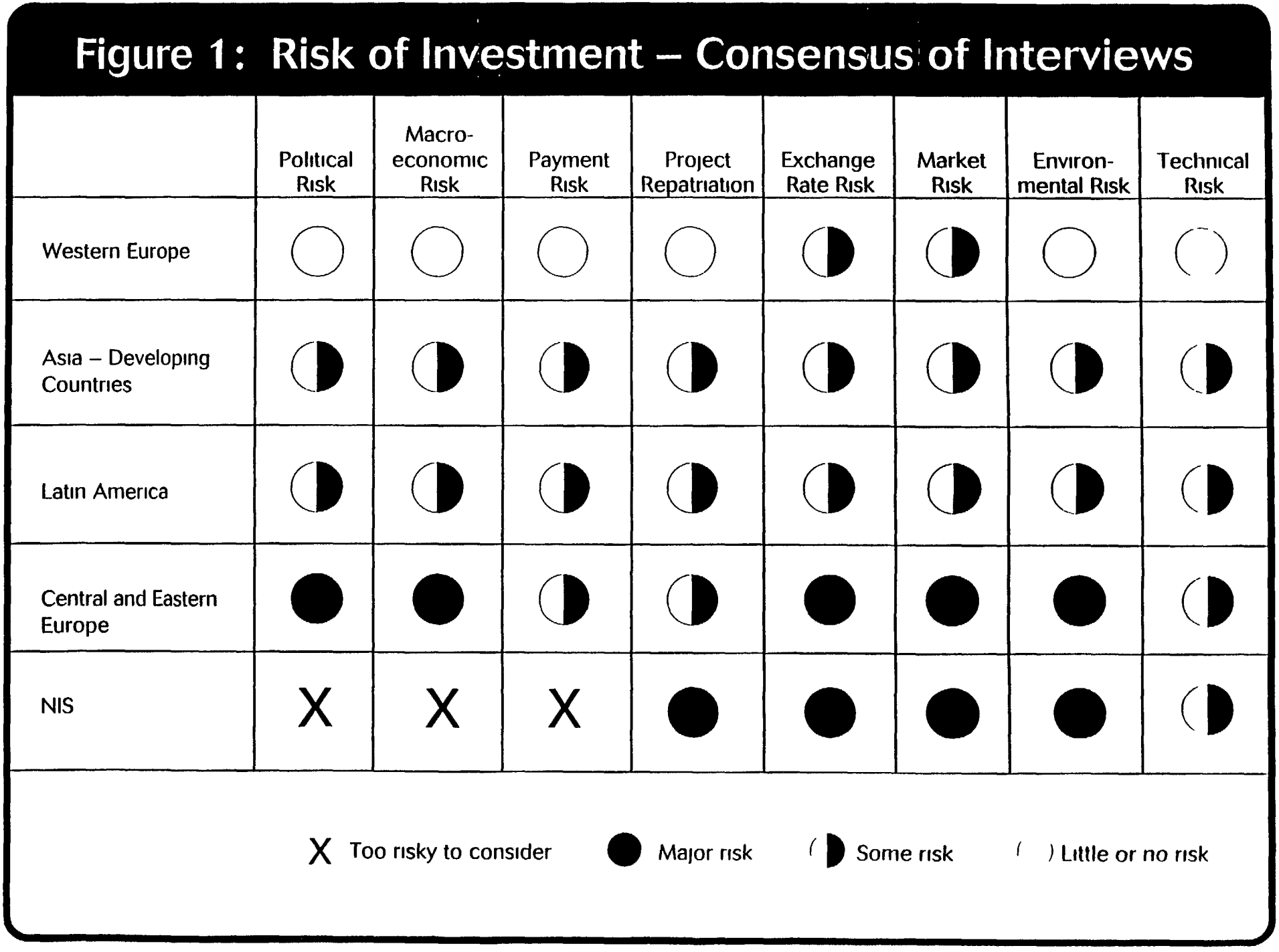
While many strategic and other investors are not currently interested in investments in CEE and, in particular the NIS two groups among the investors interviewed see the opportunities in the region as fitting their investment profile The first group of strategic investors viewed their market niche as investments in existing utilities in need of considerable rehabilitation and managerial restructuring They see excellent potential returns on these assets after an intensive period of equipment rehabilitation and managerial reform Among these investors are the equipment suppliers and service companies as well as the nationalized utilities that want to support their national industries

The second group that sees a niche market is the independent power developers seeking opportunities in small, specialized markets where they believe they have a better control of risks than if they had to work with the whole system They may work within a single industry under a barter agreement with a multinational company within the industry

Risk of Investment by Region

Each investor interviewed had his own criteria for investment and each had different views on the risk of investing in the regions we examined However we have been able to compile an overall picture of their views and present it as the consensus or general agreement of investor views on the risk of investing in the different regions The results are shown in Figure 1

Figure 1: Risk of Investment – Consensus of Interviews



ARGENTINA

Argentina's power sector with a capacity of 15 700 MW, was entirely state-owned until 1991 when the newly-elected Menem government began restructuring the sector based on the British and Chilean models The state power monopoly was vertically unbundled into generation transmission and distribution The generation and distribution units were then horizontally broken into smaller entities, creating more than 30 generating and 22 distribution companies A national electricity pool and a wholesale power market were created to encourage competition among generators An independent regulatory body was created and given the authority to set tariffs for the distribution companies, to award licences, and to protect consumer rights

One of the primary objectives of Argentina's power sector restructuring is to promote the privatization of the electricity industry The privatization program's main goals are to

- improve power plant availability and efficiency, and reduce power shortages by attracting private capital and management to the industry
- reduce the extremely high losses in the distribution subsector, particularly in the capital by subjecting it to the financial rigors of the private sector
- reduce project and construction delays and cost overruns through greater competition and private sector management

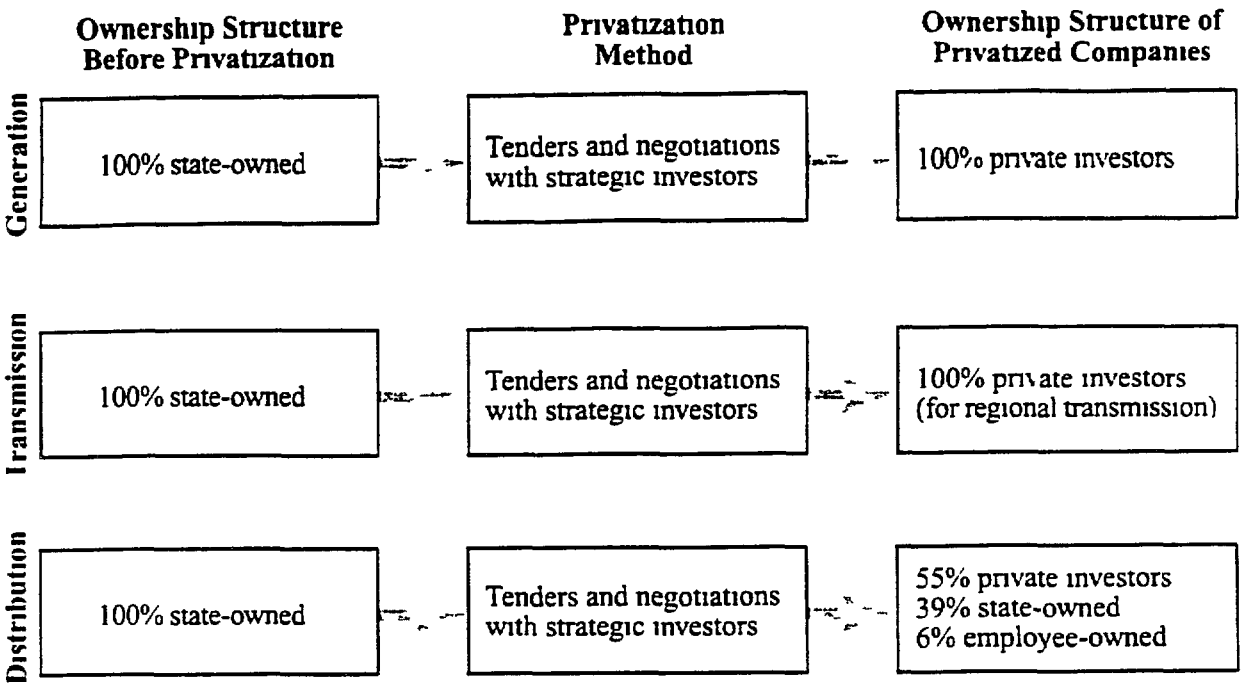
Shortly after restructuring, the government began to privatize the power industry s subsectors

Generation About 50% of Argentina's generating plants are thermal units fueled by coal lignite oil or gas Almost all of these plants have been fully privatized using direct negotiations and tenders to attract strategic investors This method was used to create a straightforward privatization model in which 100% of the enterprise is sold to strategic investors Nearly 40% of the nation s generating plants are hydroelectric plants, 90% of them have also been privatized The remaining 10% are nuclear plants, they have not yet been privatized

Transmission The transmission system consists of one large national transmission company and five small regional companies The national company has not been privatized, but four of the five regional companies were sold to strategic investors In a model similar to that used in generation, the strategic investor owns 100% of the privatized regional transmission company

Distribution Three of the largest distribution companies, constituting 50% of the market, have been privatized through negotiations and tenders with strategic investors In the privatization of these three companies the Government of Argentina adopted a model in which the state retains 39% ownership and the employees 6% the remaining 55% was sold to strategic investors, both domestic and foreign The other 19 distribution companies are still owned by national state or municipal governments Some or all of them may be subjects for future privatization

Argentina Power Sector Privatization



Strategic Investors in Argentina

Argentina	Perez Company	*France*	EdF
	Polledo		
	Acindar	*Italy*	Gamuzzi Gazometri
	Malvicino		
	Iate	*Spain*	Iberdrola
	Eleprint		
	Argon	*United States*	PSI Resources
	FATLyF		Dominion Resources
	Steag A G		Duke Power
			AES
Canada	Transalta		CEA
			CMS
Chile	Chilgener		Southern Electric
	Chilquinta		BEA
	Endesa		Dominion Resources

AUSTRALIA

Regional structures control generation, transmission and distribution within each of Australia s seven states In 1991 the Industry Commission, a federal statutory body formed to improve the efficiency of the Australian economy, recommended reforms for the power industry The core of these reforms was the restructuring and privatization of the electric supply industry

The reforms called for the unbundling of generation, transmission and distribution, and the creation of multiple distribution and generation companies Following the vertical and horizontal unbundling of the industry, the reforms call for all of the newly created companies to be privatized The proposed reforms have been implemented very slowly in most states with the exception of Victoria Victoria has already completed the restructuring and unbundling of its power industry and is well on its way to completing the privatization process

Victoria s power sector has a total capacity of 6 500 MW Following the election of a conservative government in the state, the restructuring of the industry proceeded rapidly All generation transmission, and most distribution functions were formerly under the vertically integrated state-owned State Electricity Commission of Victoria (SECV) Prior to reform SECV was organized into three business units 1) Production Group - consisting of power stations and coal mines 2) Power Grid Group - operating the high-voltage transmission system and hydroelectric generation, and 3) Customer Service Group - responsible for the low-voltage distribution system and retail electricity sales and services In addition to SECV s distribution network there were eleven Municipal Electricity Undertakings (MEUs) responsible for about 15% of the state s electricity distribution

As part of the restructuring process five generating companies were created for the state's generating plants The high-voltage transmission system is now owned by Power Net Victoria and VicPool has been formed to create a wholesale electricity market Both of these companies are state-owned Victoria Power Exchange was created to monitor and regulate the wholesale market and to ensure the security of supply for the system The distribution network was also divided into five companies primarily radiating out from the state s capital of Melbourne

After the restructuring the power industry began to be privatized The privatization goals of Victoria s government include

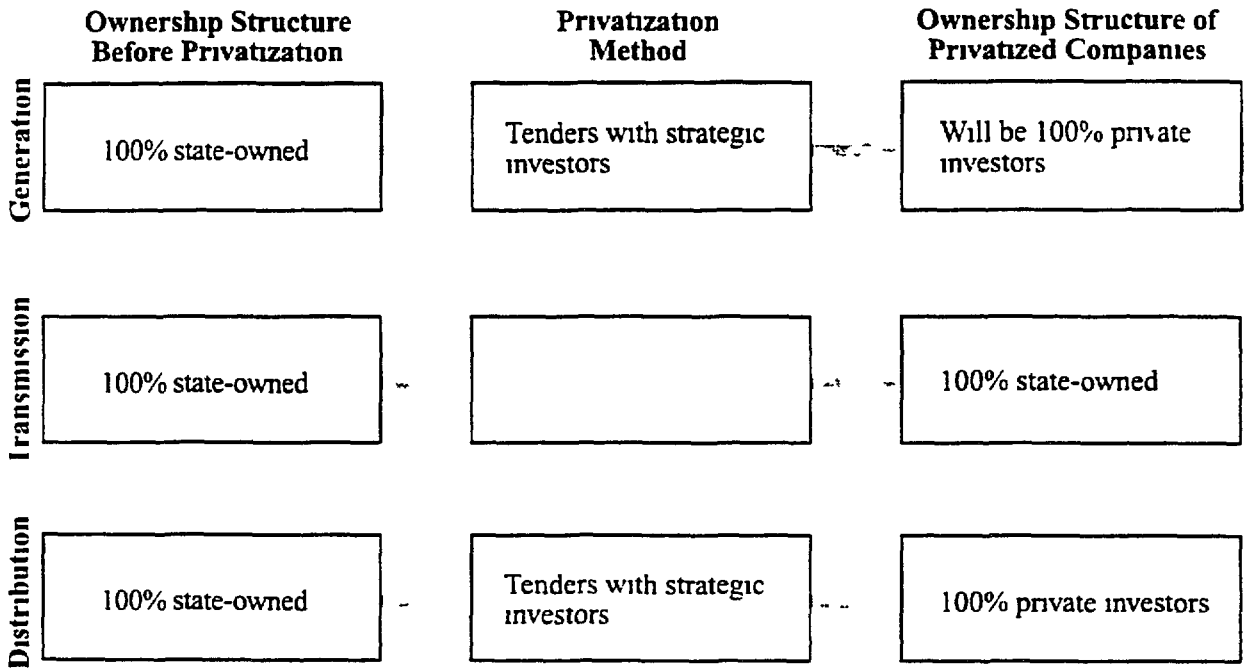
- increasing revenues through the sale of state-owned enterprises in order to reduce the state s multi-billion dollar debt
- improving efficiency within the industry and promoting private ownership and free market competition

Generation Plans to privatize these companies are underway using tenders to attract strategic investors Bids have already been received from strategic investors for one of the plants, and the sale of the other four is expected to be completed this year

Transmission The transmission company has not been privatized at this time

Distribution The former distribution and retail sales services of SECV along with the 11 MEUs, have been consolidated into 5 distribution companies Their privatization was completed by the end of 1995 All five were bought by strategic foreign investors or consortiums of these investors and domestic firms In every case a U S -based utility was the sole investor or a member of the winning consortium The sale price of each utility was much higher than anticipated Some observers speculated that the timing of Victoria s privatization combined with the likelihood of greater competition in the United States has sent many U S utilities actively looking for foreign investments

Australia Power Sector Privatization



STRATEGIC INVESTORS IN VICTORIA, AUSTRALIA

Australia	Australian Gas Light Co	***United States***	Utilitcorp
			Entergy Corp
United States	Texas Utilities		Pacificorp
			Energy Initiatives Inc

BOLIVIA

The electricity industry in Bolivia with a capacity of 849 MW consisted of a mixture of investor-, cooperative-, and government-owned (national and regional) electric systems The largest of these was the national government-owned Empresa Nacional de Elecatricidad (ENDE) ENDE was a vertically integrated utility that owned about 70% of the country s generating capacity, all of its high-voltage transmission and much of its distribution COBEE a vertically integrated utility serving the capital of La Paz was already privately owned ELFEC the third-largest distribution company was owned by ENDE, private investors, and the municipal government There are more than 100 rural electricity cooperatives engaged in distribution some of which also have generation capacity

A 1994 study by the World Bank recommended a restructuring of the electricity industry the aim of which was to

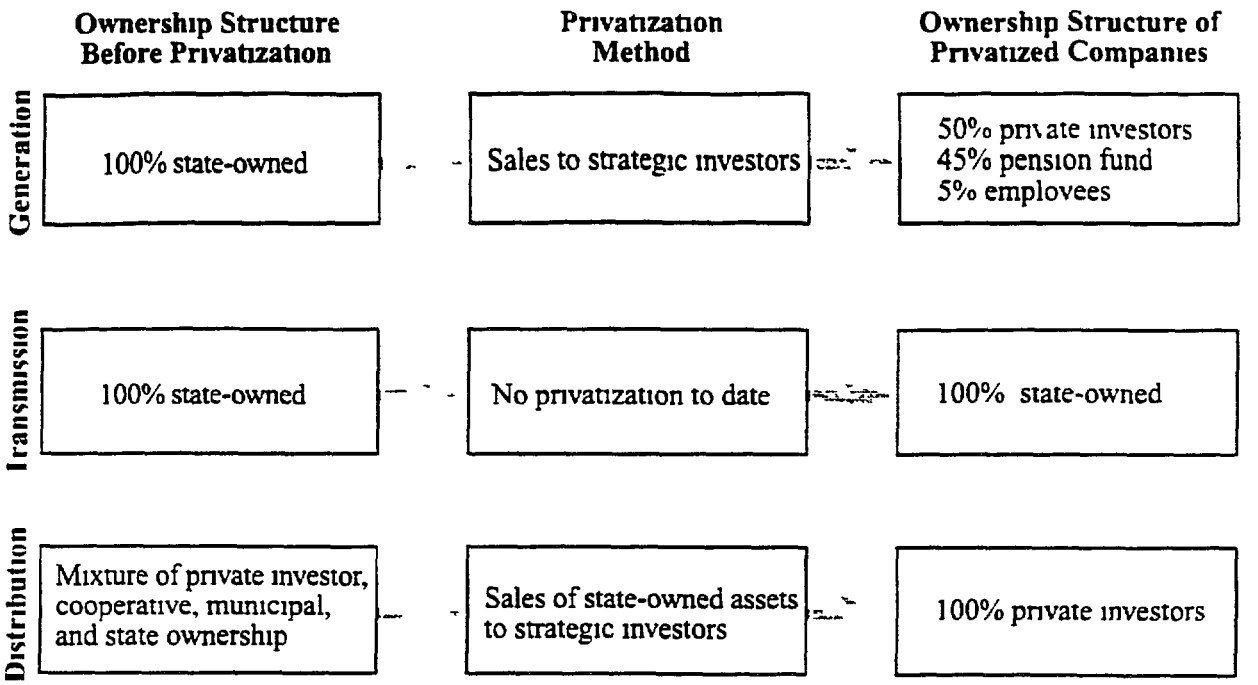
- create a transparent settlements system for electricity payments
- unbundle generation transmission and distribution
- promote competition in generation based on marginal costing
- create open access in the transmission system
- privatize the new generation transmission and distribution companies

Generation In late 1994 final legislation was passed which incorporated the reforms clearing the way for the privatization of ENDE s generation assets These assets were split into three companies and were sold to strategic foreign investors through tenders and negotiations The investors received 50% ownership in the generating companies plus exclusive management contracts for 40 years The remaining ownership will be divided among the company s employees (about 5% of the shares) and a national pension fund (45% of the shares) The pension fund will provide for all Bolivian citizens

Transmission Bolivia's transmission assets continue to be managed by ENDE for the time being Their future disposition is still undecided The 1994 legislation created an independent regulatory office for the electricity sector whose responsibilities are to regulate the distribution tariffs assure that monopoly power is not exercised to the detriment of the consumer, and to provide for the general oversight of the industry

Distribution Under the new electricity law the owners of distribution assets are not allowed to own generation as well Privately owned COBEE is planning to sell off its distribution assets so that it can participate in the new open generation market Also the distribution company ELFEC, once scheduled to be Bolivia s first IPO was sold through a private sale to a strategic investor in 1995 The ELFEC IPO was scrapped due to the turmoil in the South American financial markets following the massive devaluations of the Mexican peso in late 1994 There are no plans at present to sell the distribution assets of ENDE but this could change in the future

Bolivia. Power Sector Privatization



STRATEGIC INVESTORS IN BOLIVIA

Chile	EMEL S A	*United States*	Dominion Energy Energy Initiatives Constellation

CHILE

Chile's electric power sector, with an installed capacity of 4 340 MW, was the first power sector to be privatized in the 1970s The restructuring and divestiture of the state-owned system through the separation of the generation, transmission and distribution systems and subsequent privatization, occurred between 1978 and 1990 An autonomous regulatory body was created that coordinates and regulates the power sector

The Chilean Government s main goals in the privatization of the power sector are to

- redefine the role of government from that as an owner of the power sector to one as its regulator
- introduce popular capitalism by providing for widespread citizen stock ownership
- increase efficiency in the use of capital and labor resources
- facilitate the flow of investments into the power sector

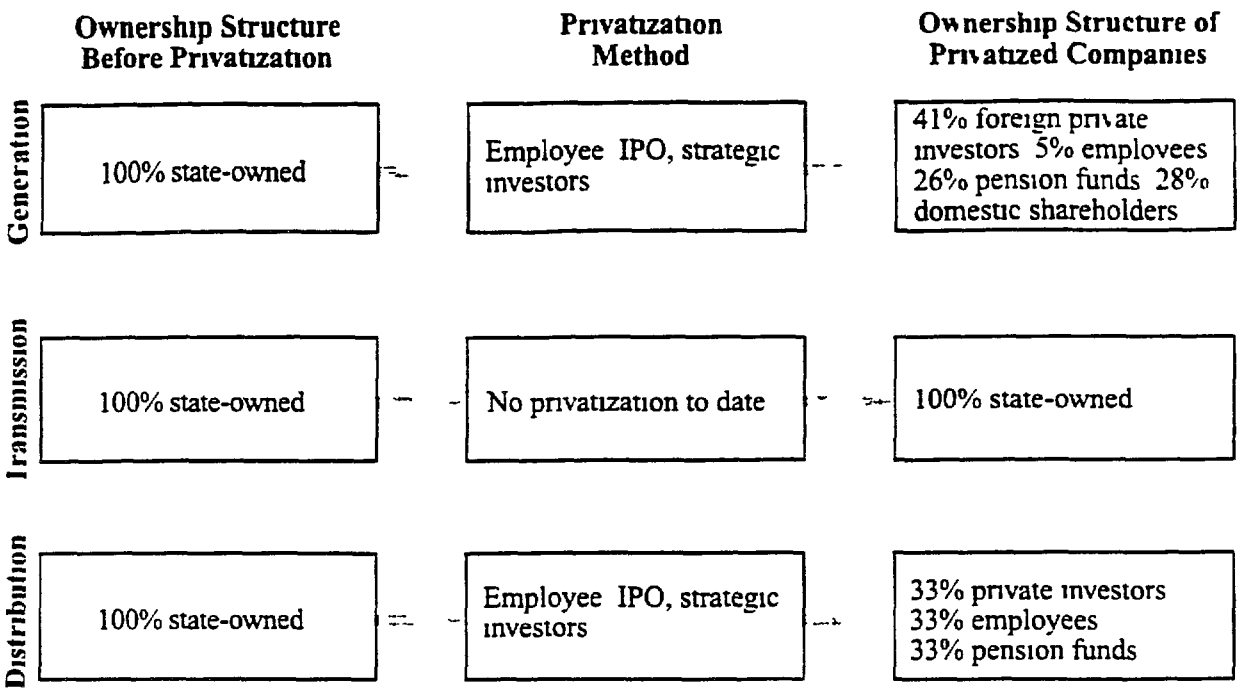
Before the restructuring, most of Chile s generation, transmission and distribution assets were held by two state-owned, vertically integrated utilities ENDESA with 70% of the generation and all of the transmission except in the metropolitan area of Santiago and Chilectra with almost all of the remaining 30% of generation and the rest of the transmission Today there are 11 power generating companies 25 electricity distribution companies, and 2 integrated companies Most of these companies are traded on the Chilean stock exchange

Generation Generation companies were privatized using a combination of methods including employee ownership, pension funds sales to strategic investors and an IPO in the case of ENDESA The ownership of the generating companies is 5% percent by employees 26% by pension funds 28% by other domestic shareholders, and 41% by foreign private investors

Transmission Transmission has not been privatized

Distribution Distribution companies were also privatized using a combination of employee ownership IPOs, sales to strategic investors, and a national pension fund The ownership of the distribution companies is roughly 33% employee, 33% national pension funds, and 33% private companies financial institutions and individuals

Chile Power Sector Privatization



STRATEGIC INVESTORS IN CHILE

Belgium	Powerfin (a subsidiary of Tractabel)	*Spain*	Iderdrola
Canada	Transalta	*United States*	Entergy
Chile	Angelini Group		Southern Electric International
	Enagas SA		U S Generating
	Enersis		

CZECH REPUBLIC

Until recently, the electricity industry in the former Czechoslovakia was operated as a vertically integrated, state-owned enterprise In 1990 the government decided to restructure the industry with the goal of eventually privatizing certain power sector enterprises As part of the restructuring, distribution was unbundled from transmission and generation, and eight distribution companies were created A joint stock company, CEZ was created to own all generation and transmission assets Following the split of Czechoslovakia in 1993 the new Czech Republic continued with the plans to privatize the electricity industry

The total generation capacity in the Czech Republic is 14 200 MW CEZ owns approximately 80% of the generation, with independent power producers, industrial cogenerators and combined heat and power plants making up the remainder

The primary goal of privatization was to

- transfer state-owned assets to the general public

The government instituted a voucher program in which privatization certificates were distributed to all adult citizens These vouchers could be traded for shares in CEZ, or any other Czech company going through privatization during privatization auctions

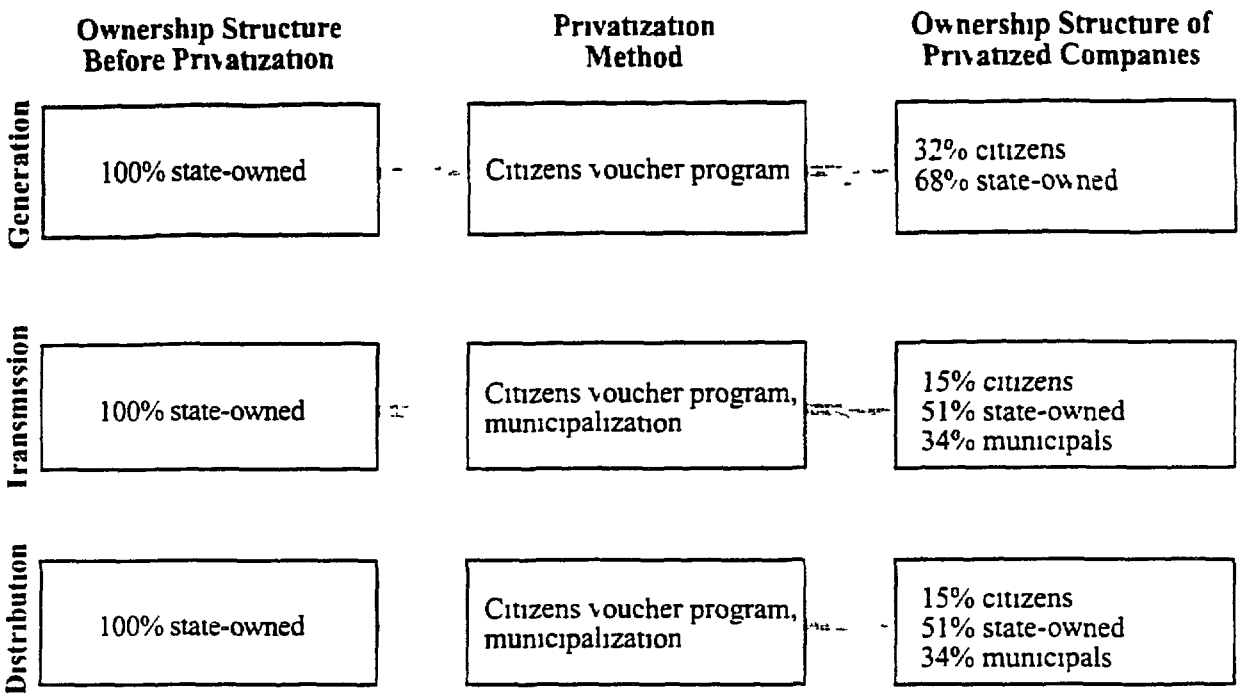
Generation/Transmission In 1994 27% of CEZ was sold to private citizens through the voucher privatization program An additional 5% of CEZ was sold through a second wave of voucher privatizations in 1994-95

Distribution In 1994, the eight distribution companies were made into joint stock companies, preparing them for privatization Fifteen percent of the distribution companies were sold through voucher privatization in 1994-95 During this same period, 34% of the distribution companies were transferred to municipals, in a non-monetary transaction

The government plans to privatize another 20-34% of the distribution companies This next step was scheduled for late 1995, but with elections now set for mid-1996, it has been delayed indefinitely The government currently plans to retain at least a 50% ownership in CEZ, with a possible future sale of 15 to 18% on the Prague stock exchange using an IPO

No independent agency has been created to regulate the electric industry The retail price of electricity is still set by the Ministry of Finance The price is not based on the cost of operation, but rather is premised on a set of economic social and political factors The inefficient pricing perpetuates the subsidies that plague the industry Retail prices will have to increase to make the industry financially self-sufficient, and this is one of the problems which has caused additional asset sales to be delayed until after the next elections

Czech Republic Power Sector Privatization



HUNGARY

The Hungarian power sector, with an installed capacity of 6 600 MW, was owned in its entirety by the government prior to 1992, through Magyar Villamos Muvek (MVM) The reforms of 1992 unbundled and corporatized generation transmission and distribution A new Electricity Law in 1994 created an independent power sector regulatory body, The Hungarian Energy Office (MEH) Its duties include the establishment of tariffs, general oversight of the power sector the granting of licenses for the production transmission and distribution of electricity and the protection of consumer interests The 1994 Electricity Law also demonopolized the power industry by including provisions for self-generators and independent private producers

The objectives of the privatization have been to

- reduce the government's subsidies to the electricity industry
- obtain revenue for the state budget
- create a competitive market for generation so that private power producers will be permitted and encouraged to sell power to the grid

Hungarian electricity rates were significantly below market rates Price reform was instituted to create a schedule of tariffs that will bring electricity rates up to international levels, so that adequate revenues are obtained to cover depreciation insurance and dividends to shareholders

In 1992 MVM was reorganized into a two-tier joint stock company The first tier consisted of eight generating companies organized by fuel type and region plus six regional electricity distribution companies The second tier is a holding company for the group, and is the owner and operator of the transmission grid and the national dispatch center

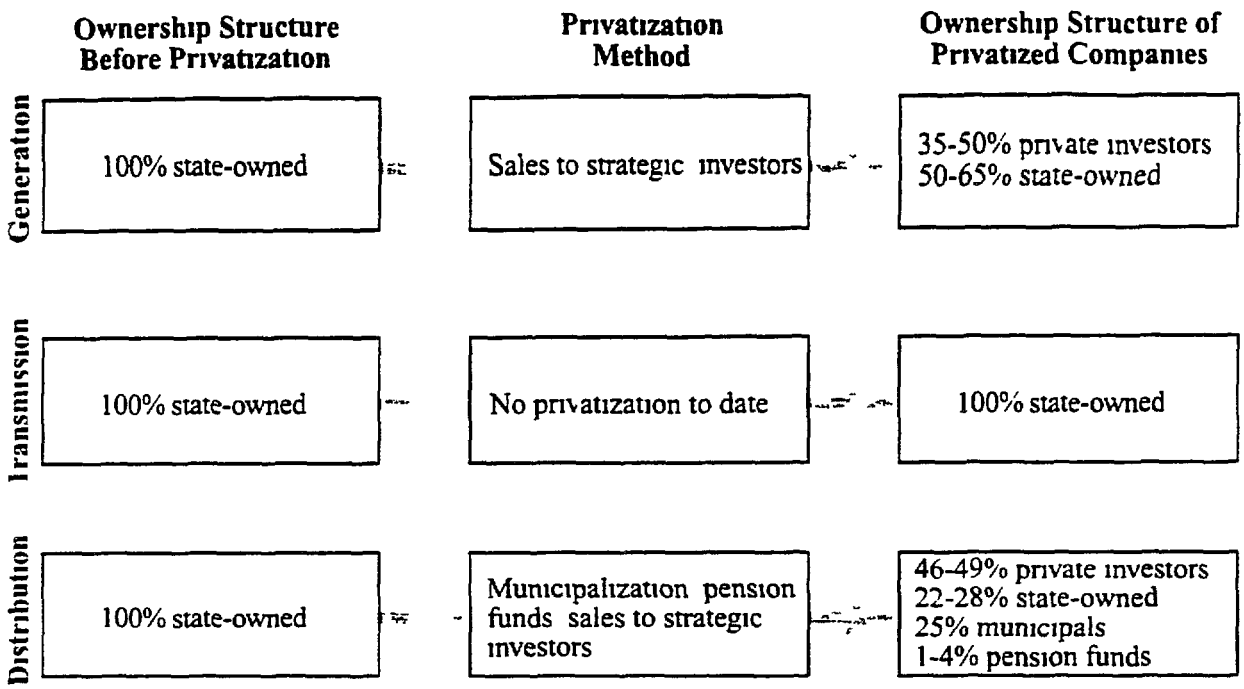
Generation As part of the privatization program the government decided to sell majority ownership in the non-nuclear generation and distribution companies During 1995 between 35-50% of two of the generation companies were sold to strategic foreign investors using tenders Bids for the other generating companies were rejected but offers will be requested again in 1996 The private sector owners of the minority shareholdings in the two privatized companies will have an option to purchase additional shares in two years in order to give them majority ownership The state retains the remainder of the shares but is considering future share sales

Transmission The government decided to retain majority ownership of the national grid company Bids were requested in 1995 for a minority share of the high-voltage transmission company, MVM but no successful bids were received

Distribution Between 46 and 49% of the shares of the six distribution companies were also sold through tenders to strategic foreign investors in 1995 Again the purchasers have the option to increase their shareholdings to majority ownership in two years Pension funds own 1-4% of the distribution companies, municipals hold 25% and the state retains the remaining 22 to 28% On

February 12th the state offered another 8% of the distribution companies for privatization using compensation coupons These coupons were given to Czech citizens who lost property or suffered political persecution in the communist era

Hungary Power Sector Privatization



STRATEGIC INVESTORS IN HUNGARY

Belgium	Powerfin (a subsidiary of Tractebel)	***Germany***	Isaar-Amperwerke Bayernwerk RWE Energie
France	EdF		

NORWAY

The electricity sector in Norway has a capacity of 27 300 MW, most of which (27 000 MW) is supplied by 845 hydroelectric power plants Even before restructuring, the ownership of Norway's power sector was a mixture of state municipal and private ownership In 1991 legislation was passed to restructure the electric power industry in order to

- create a competitive market in generation
- create open access to transmission
- create a competitive market in local electricity supply

The distribution companies can purchase electricity on the spot market from any electricity generator Consumers can also buy power directly from any supplier or from their local distributor These two features of the restructuring have created competitive markets in both power generation and distribution However the 1991 legislation did not incorporate any provision for privatization or the change of property rights in any of the state-owned power enterprises

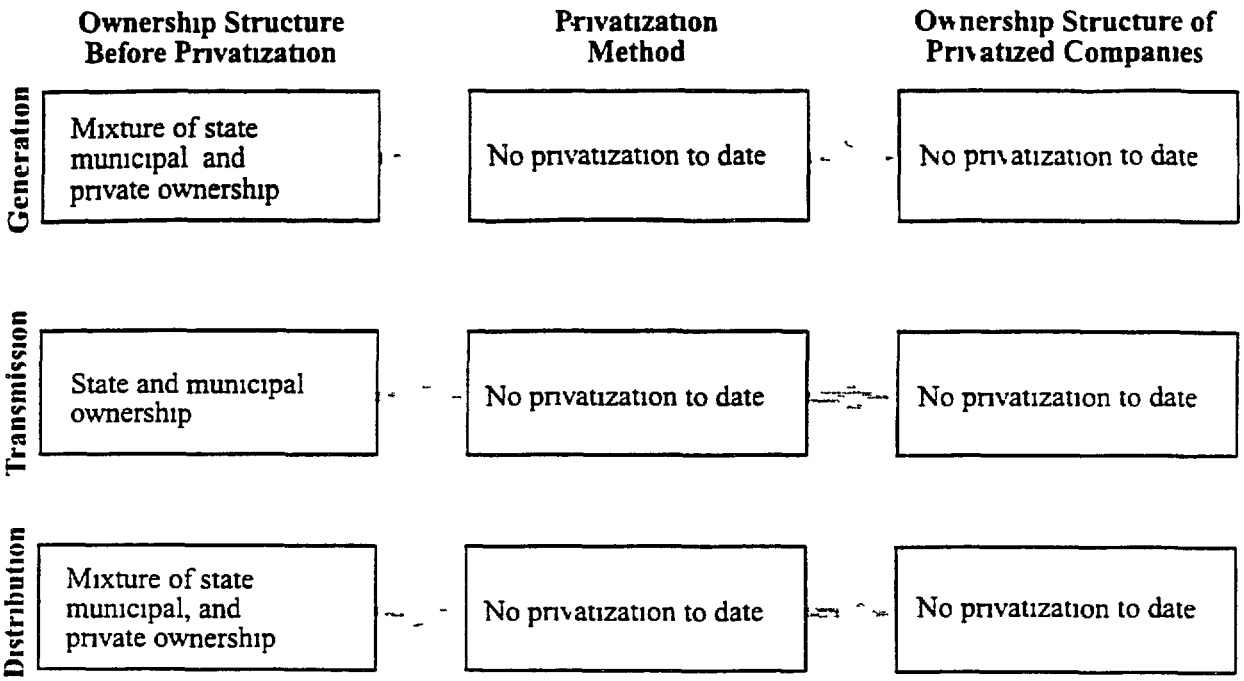
Generation Most of the generation is owned by companies that are strictly electricity generators There are 129 such companies 72 of which are owned by the state or municipalities and 57 of which are privately owned by industrial companies that supply power for their own use Municipal generation companies account for about 55% of Norway's total generating capacity Statkraft a state-owned power holding company controls 30% of the generating capacity and the remaining 15% is provided by the 57 small private industrial producers There are currently plans to privatize the third-largest generation company, Oslo Energi AS, which is owned by the city of Oslo No other privatization is planned to date

Transmission In 1992, a new state-owned company Statnett, was created The ownership of much of the high-voltage transmission grid was transferred to it from Statkraft at that time Statnett also owns and operates 80% of the national grid The remaining 20% of the grid is owned by municipal distribution companies

Distribution Norway s 101 distribution companies own the local distribution grid but do not own any generation Most of these distribution companies are owned by municipals and the rest are state-owned

Vertically integrated companies also exist that own both generation and distribution They may also own regional grids which are part of the national transmission grid There are 98 of these vertically integrated companies and most of them are owned by municipals, although a few are limited companies that have partial private ownership

Norway · Power Sector Privatization



POLAND

Poland's electricity sector, with a total capacity of 32,200 MW is owned and operated by the Polish Power and Lignite Board Ninety-six percent of Poland s electricity generation is from coal 57% from hard coal and 39% from brown coal or lignite Only 6% of generation is owned by industry for autogeneration The remainder of the country's generation is owned by the government Many of the generating plants produce heat for district heating systems as well as power

In 1989, the government launched a restructuring of the power industry The goals of the restructuring are to

- create a competitive generation market
- introduce private ownership
- increase sector efficiency
- facilitate necessary sector investment
- ease pollution problems caused by burning coal

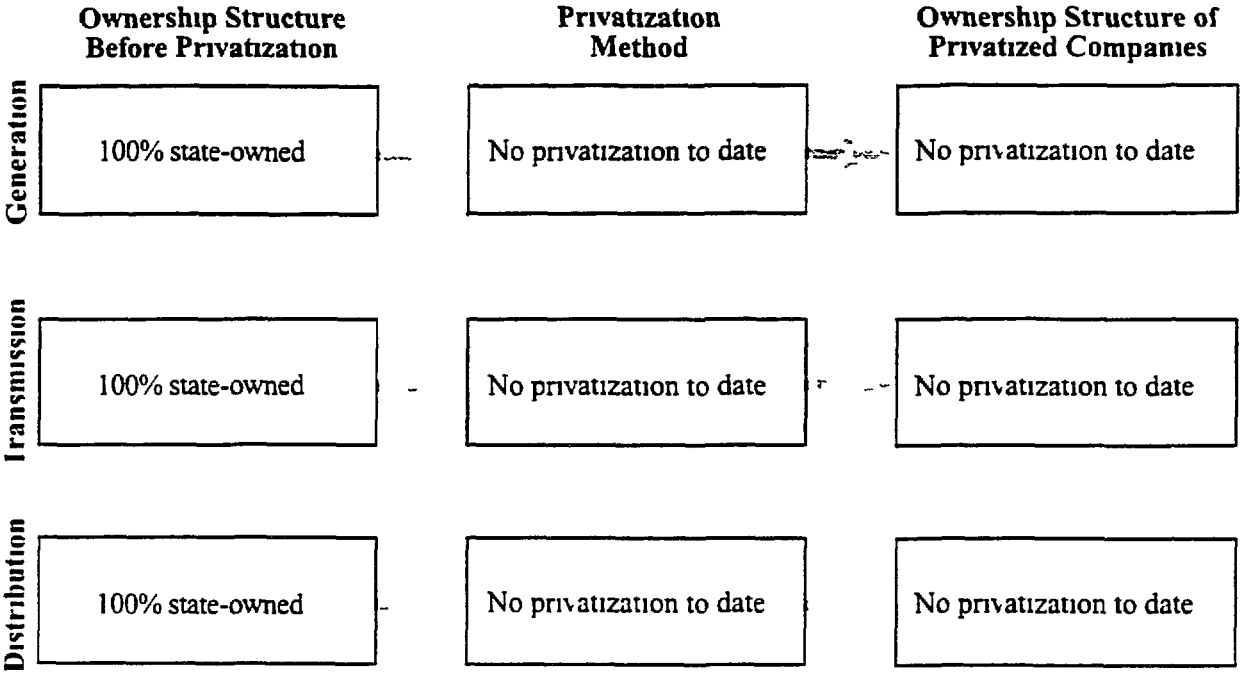
In 1989 32 separate generating companies were formed and local distribution was divided into 33 separate enterprises In 1990 the Polish Power Grid Company (PSA) was created to control the national transmission grid to operate the dispatch system and to manage international connections

In 1992 the government created the Energy Restructuring Group to facilitate the reform of the electricity sector (and the other energy sectors) But considerable debate over the appropriate Energy Law has led to prolonged delays Opposition from both the management and employees of power sector enterprises has also caused delays in the reform of Poland's power sector Significant opposition from the Solidarity trade union has delayed the break-up of Poland's large mining and power generation complexes Further resistance has come from other institutions that have had difficulty in adjusting to the new market orientation of the industry

Despite the delays some progress has been made The 33 distribution companies were incorporated as joint stock companies and the large hydroelectric plants, and the combined heat and power plants have also been established as separate joint stock companies In 1993 the ownership of transmission systems over 110 kV was transferred to PSA PSA also become the main shareholder in the newly created joint stock company that owns all of the pumped storage plants Currently there are no plans to privatize PSA The government plans to transfer ownership and management of the generating companies to seven different holding companies The state would continue to maintain ownership for the present time, with privatization a possibility for the future

The Polish Ministry of Industry and Trade (MoIT) has been responsible for energy policy since 1987 and since the formation of the joint stock companies it has acted on behalf of the single shareholder the State Treasury The MoIT is also responsible for power sector expansion planning The Ministry of Finance is responsible for setting electricity prices to final consumers

Poland Power Sector Privatization



RUSSIA

The Integrated Power System (IPS) of Russia was developed owned and operated as a vertically integrated national monopoly by the Russian Government The total capacity of the system is 213,000 MW from more than 430 power plants Approximately one-third of these plants are combined heat and power plants The IPS is composed of seven regional power systems and within the regions, 65 local electricity administrations operate in parallel Another seven systems are in remote regions that are not interconnected The IPS provided centralized management for all planning investment and operation of the power sector throughout the country through a vertical state ministry-run enterprise

Political changes in the country in the early 1990s threatened the IPS's continued reliable operation as a result of the following developments

- the regulation of electricity and heat prices (40% of heat power is supplied in Russia by combined heat and power plants) was delegated to the regional governments
- authority to control power plant generation began shifting from the federal level to the regions
- significant price disparities began to appear between regions
- movements toward regional autonomy emerged
- movements toward privatization emerged
- requirements for non-government financing became acute

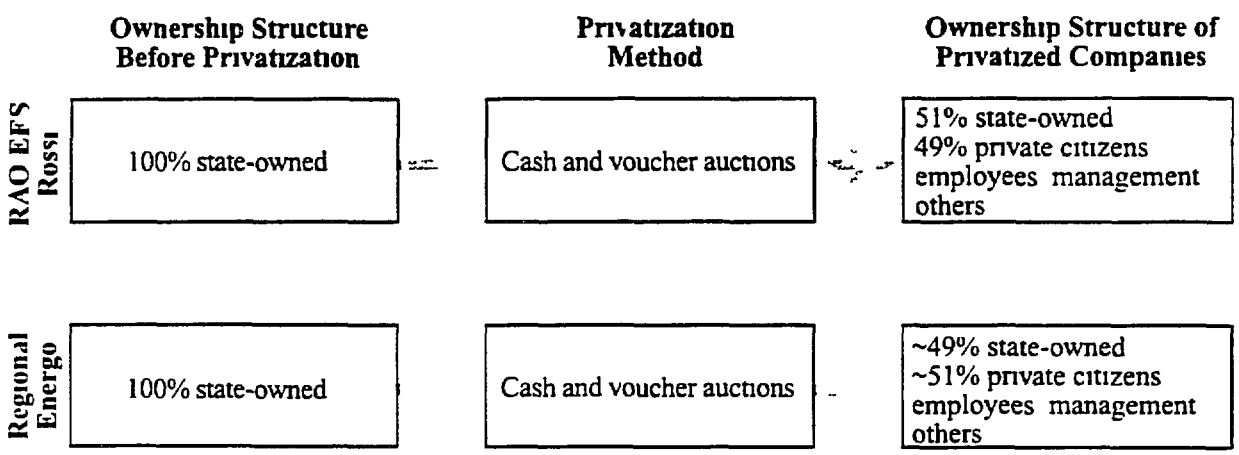
Generation, Transmission, and Distribution In 1992 the restructuring and privatization of the power sector began A new joint stock holding company RAO EES Rossi was formed to be responsible for the reliability of power supply and for the management of power sector enterprises The assets of the IPS were split between various power sector enterprises RAO EES Rossi maintained ownership of high-voltage transmission lines as well as thermal plants over 1,000 MW and hydroelectric plants over 300 MW These plants which were previously operated by the local electricity administrations were scheduled to form a national wholesale electricity market RAO EES Rossi also retained ownership and control of the Central Dispatch Office in Moscow and the seven regional dispatch offices

Small electricity generators staved within the 72 joint stock companies that were formed from the former local electricity administrations (Energos) The Energos also retained the local electricity and heat distribution networks and low-voltage transmission facilities The Energos operate as vertically integrated utilities within their regions RAO EES Rossi owns 49% of each of the Energos with much of the remaining stock sold through voucher privatizations or distributed to employees and management The charter capital of RAO EES Rossi included, on average, a 49% interest in the Energos

The first steps in the privatization of the power industry have been taken RAO EES Rossi has sold 49% of its shares to employees management and the public through a combination of cash and voucher auctions Many of the Energos have gone through similar privatizations The shares of RAO EES Rossi and a number of the Energos are now traded on the Moscow stock exchange

The next step in the privatization program calls for RAO EES Rossi and the Energos to sell their ownership in the generators to private investors This step is necessary in order to remove the potential interference of RAO EES Rossi and the Energos when competition begins among generators in the wholesale market However, given the political instabilities in the country the timing of this step is uncertain

Russia Power Sector Privatization



UNITED KINGDOM

The power sector in the United Kingdom is divided into three systems for England and Wales Scotland, and Northern Ireland All three have recently been restructured and privatized This summary focuses on England and Wales, which is the largest segment of the UK system and the first to be restructured and privatized

The total capacity in England and Wales at the time of restructuring was approximately 65 000 MW The state-owned Central Electricity Generating Board (CEGB) carried out all generation and transmission activities, and twelve Area Boards distributed the electricity to local consumers A government agency, the Electricity Council, provided oversight to the industry coordinating planning setting standards, and pricing bulk supplies

The Electricity Act of 1989 led to the restructuring and privatization of the industry
As part of the restructuring, generation transmission, and distribution were unbundled The CEGB was separated into three generating companies and a transmission company the National Grid Company (NGC) A national power pool, operated by NGC was created to promote competition among the new generation companies Access to the transmission system was opened to all generators to promote competition through electricity wheeling The twelve Area Boards which were the local distribution entities were corporatized as Regional Electric Companies An independent regulatory body the Office of Electricity Regulation was created to monitor the operation of the sector enhance competition establish standards for performance, grant licenses and set tariffs

Following the restructuring, the government moved forward with a privatization program for the power sector which was part of a larger privatization program under the conservative Thatcher government of the 1980s The objectives of the power sector privatizations include

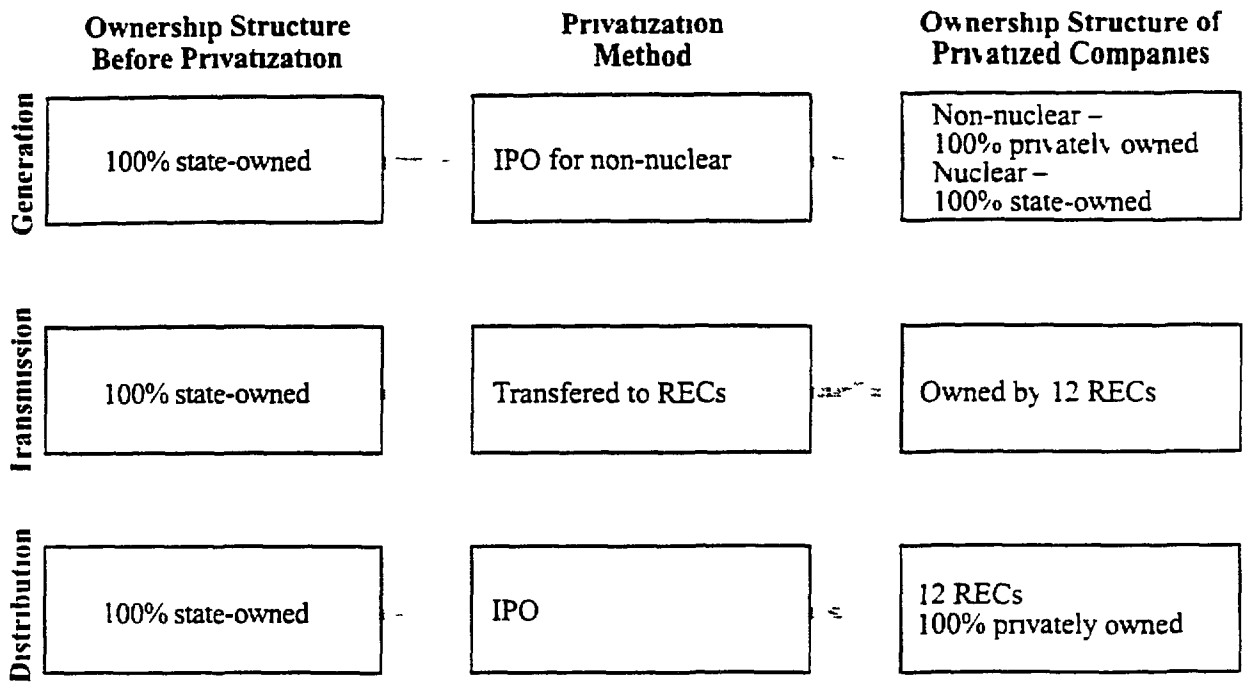
- promoting private sector ownership and free market principles
- reducing the role of the government in the economy
- raising revenues for the state budget

Generation The two non-nuclear generating companies National Power and PowerGen, were privatized in two steps using IPOs In 1990 60% of the shares in each company were sold The remaining 40% was sold through a second public offering in 1995 Ownership of the nuclear plants was retained by the government through the Nuclear Electric Company, but the government also plans to privatize these in the near future

Transmission The NGC is owned by the RECs in proportion to their pro rata share of energy sales at the time of their privatization The RECs plan to spin off the NGC as a separate company in 1996

Distribution The RECs were completely sold in a single step through an IPO in 1990

United Kingdom Power Sector Privatization



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