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SECTORAL ACTIVITIES PROGRAMME

Democracy and public-private partnerships

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Foreword

A proper supply of water, gas and electricity plays a vital role in the life and development of societies. A sufficiently developed infrastructure and an efficient and easily accessible distribution of them constitute the base of the whole economic apparatus.

The past couple of decades have witnessed major changes in the utilities supply services and in their operating environment. Among them is a movement of restructuring and privatization rapidly diffusing worldwide in attempts to reduce pressure on public finance, improve service quality and service profitability, or merely to reduce the state's role in the economy. The forms this movement has taken vary, ranging from complete or partial sale of state assets, to contracting-out concession and leasing contracts, to the introduction of market concepts, concerns and work methods in public firms.

The main challenge in the utility supply services is to strike a balance between commercial and business concerns, calling for cost-efficient, profitable operations, and broader public service values, that emphasize the provision of affordable, reliable and widely accessible services (whether or not the ownership is public). This duality is found in all the problems and in all the solutions relating to these services, and makes it demanding to reconcile what are sometimes conflicting requirements. In view of this, public-private as well as public-public partnerships in the utilities services are now considered as very much viable alternatives.

Undoubtedly the key feature and challenge of this sector in the next few years is change. Change could be well-designed and the transition properly managed if workers, management, users and other stakeholders are involved in shaping it, and if the benefits along with the possible costs of the processes are equitably distributed among those actors and society at large. The authors of this study stress that in order for public-private partnerships to be successful, there must be key ingredients such as strong democratic regulation, transparency and tenacious NGOs with resources. Social dialogue can play a major role in the transformation of the sector. However in many cases, this requires capacity building for all parties involved.

ILO working papers, such as this, are a vehicle for disseminating information on topics related to the world of work and the evolution of social and labour policies and practices. The opinions expressed are nevertheless those of the authors and not necessarily those of the ILO.

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Contents

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1. Introduction

When it rains in the city of La Matanza, one of the poorest districts in the Buenos Aires metropolitan area, raw sewage seeps into the wells and the drinking water becomes cloudy and dangerous. Families boil it before drinking or cooking when they can, but many cannot afford the cost of gas to boil the water.

How did this essential public good – clean, affordable water – come to be so scarce in La Matanza?

In order to finance extension water and sewer services to low-income areas, in 1993 "the Government privatized the Buenos Aires water utility under pressure from the World Bank, the IMF, and the United States government". [1] The Government granted the right, under a public-private partnership agreement, to operate the water and sewer system for a 30-year period to a consortium called "Aguas Argentinas" controlled by two of the world's three largest water companies, Vivendi and Lyonnaise des Eaux (now Suez). The water concession cost the consortium nothing; all it had to do was promise to lower water rates and to improve and expand services. While service was expanded to those households that could pay the price, the consortium soon reneged on its promises to lower prices and to serve low-income districts. Even as these agreements were being broken, and high prices and reconnection fees were preventing many from getting any water at all, the Government abrogated its responsibility to regulate the private corporation. [2]

Commercialization of water is probably the most lethal component of the international programme to privatize essential services. For 17 years, until 1998, the residents of Ngwelezane, South Africa, enjoyed clean and free water straight from their taps, provided by the municipal Government. During 1998, pressure from the World Bank succeeded in imposing a flat fee of US4.50 per month for water and electricity, enforced by prepayment meters for which households had to pay another US$5.00 to be connected. Only 700 homes could afford the fees – 2000 lost access to clean water. People started going to the ponds and streams for their water. But the ponds and streams were contaminated with cholera. The cholera spread to the Eastern Cape and Johannesburg, and by January 2002 over 250,000 people had contracted the disease – just under 300 died. [3] At US$4.50 a month for 2,000 disconnected families over three years, that puts the World Bank's valuation of life at just over US$1,000 each – although the health catastrophe cost South Africa millions.

The tragedies of La Matanza and Ngwelezane mirror those in developing countries all over the world. The World Bank and other funding agencies push commercialization or privatization of public services as a condition of loans; services that were free or low cost

[1] The Centre for Public Integrity, *The Water Barons: A Handful of Corporations Seek to Privatize the World's Water*, "Argentina – The 'Aguas' Tango: Cashing in on Buenos Aires' Privatization" (2003), www.icij.org/dtaweb/water/.

[2] The Centre for Public Integrity, *The Water Barons: A Handful of Corporations Seek to Privatize the World's Water*, "Argentina – The 'Aguas' Tango: Cashing in on Buenos Aires' Privatization" (2003), www.icij.org/dtaweb/water/.

[3] The Centre for Public Integrity, *The Water Barons: A Handful of Corporations Seek to Privatize the World's Water*, "Metered to Death: How a Water Experiment Caused Riots and a Cholera Epidemic" (2003), www.icij.org/dtaweb/water/.

and subsidized as a public good must suddenly be self-supporting; poor people cannot afford the increased cost; and disaster results.

There is another way: partnerships where the public has power equal to that of private interests. As we show in this paper, essential services can even become self-supporting democratically, without killing people.

Partnerships in the public interest can take several forms. This paper uses the examples of three public-private partnerships to:

1. Describe in detail a successful partnership among ten private utilities, 23 NGOs with a focus on low-income families, and six United States State and federal Government agencies (section 2, compared to a successful ILO project in Tanzania in section 3); and a successful partnership between an independent power producer, several utilities, a United States State Government agency, and two local Governments (section 4);

2. Illustrate why such partnerships are very difficult to achieve, especially in developing countries, because the usual incentives for the private partner make corruption, profit-siphoning, and abandonment almost inevitable (section 5);

3. Set out lessons about the conditions required to achieve successful partnerships (section 6);

4. Describe alternative arrangements that are more likely to achieve positive results for the public, such as those sometimes described as social control, public-public partnerships, and democratic regulation (section 7).

Leveraging private resources to provide public benefits is an increasingly popular tactic as public resources fall significantly short of public needs and private corporations perceive an opportunity for profit.[4] Public-private partnerships have been a particularly popular way to finance public infrastructure, such as road and water systems, and the UK has led the way in extending this technique to finance such essential public welfare services as schools, courts, and hospitals.[5] The usual arrangement is for the private entity to lease [6] or build the infrastructure, then operate it. The details of the exchange depend on the nature of the essential service – an independent power producer (IPP) might be paid by a long-term take-or-pay contract that is guaranteed in some way by Government; a building might be paid for by a guaranteed long-term rental agreement; a water system might receive user fees. Both the European Commission and the World Bank have been promoting the concession model, especially for the provision of water. [7]

[4] See for example, V. Shiva: *Water Wars: Privatization, Pollution, and Profit* (South End Press, 2002), pp. 89-92.

[5] D. Whitfield: "Impact of privatization and commercialization on municipal services in the UK", *8 Transfer*, (Summer 2002), pp. 234, 241-242.

[6] If existing state-owned infrastructure is leased, the state will receive lease payments from the lessee that are financed by the revenue streams noted. There may also be requirements that the private lessee make additional construction investments.

[7] European Commission Directorate-General: "Guidelines for Successful Public-Private Partnerships"(March 2003), *http://europa.eu.int/comm/regional_policy/sources/docgener/guides/ppp/ppp_en.pdf*; R. de la Motte and D. Hall: "The European Commission's *Guide to Successful*

Statistics from the World Bank [8] show the pattern of public-private partnerships (PPPs) (concessions, leases, management contracts, and build-operate-transfer agreements [9]), as compared to outright purchases. Between 1984 and 2002, 82 per cent of the investment in water projects has been in PPPs, [10] as compared to 9 per cent and 3 per cent, respectively, for energy and telecommunications projects. [11] 89 per cent of this PPP investment has been made in East Asia (including the Pacific), Latin America, and the Caribbean. [12]

Public-private partnerships are seen to work well in the United States, and they sometimes do. However, this is true only when certain conditions prevail:

- strong regulation;
- transparency;
- tenacious NGOs with resources.

> "Privatization cannot be a substitute for the State's responsibility for ensuring basic services, whether they be public or private. Also, public accountability is necessary for restructuring or privatization, to strengthen public utility services and prevent deterioration in quality of and in access to services."
>
> "Effective regulation includes four key elements – transparency, affordable costs for consumers, consultation and profitability. Utility and Government information and methods must be open for review by industry, workers' representatives and the public. When utilities are privatized, the State should still retain a responsibility in ensuring universal access to water, electricity and gas services at affordable prices."
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> Source: Unanimous conclusions of the Tripartite Meeting on Managing the Privatization and Restructuring of Public Utilities, Geneva April 1999 (International Labour Organization, TMPU/1999/7(Rev.), pars. 6, 25

Public-Private Partnerships – A critique (PSIRU, May 2003); D. Hall: "EC Internal market strategy – Implications for water and other public services" (PSIRU, May 2003).

[8] Computed from World Bank, Private Participation in Infrastructure Project database, http://rru.worldbank.org/PPI/.

[9] Database definitions are in World Bank, *Private Participation in Infrastructure: Trends in Developing Countries 1990-2001* at Overview, pp. 1, 7, http://rru.worldbank.org/PPIbook/. So-called "Greenfield" projects are new construction projects that are a mix of Build-Operate-Own or Build-Operate-Transfer. Since they are reported by the World Bank without distinguishing between private and public-private projects, they are not included here.

[10] 92 per cent of transport investment is in PPPs.

[11] On the other hand, 46 per cent of total investment has been in telecommunications, 27 per cent in energy (electricity and gas), 19 per cent in transport (for example, toll roads), and only 8 per cent in water. The World Bank reports that "Private activity in water and sewerage grew significantly in 1990-2001," though annual investments fluctuated sharply. "Concessions dominated private activity in water and sewerage, reflecting the focus on transferring management of existing assets to the private sector while keeping legal ownership of those assets in the public sector." World Bank, *Private Participation in Infrastructure: Trends in Developing Countries 1990-2001*, Ch. 12, Water and Sewerage, p. 144, http://rru.worldbank.org/PPIbook/.

[12] Divided almost equally, 40 per cent and 49 per cent, respectively, in East Asia (including the Pacific) and Latin America (including the Caribbean). The balance of PPP investments are in Europe, Central Asia, the Middle East, and North Africa. Sub-Saharan African got less than 1 per cent and South Asia got no investment at all. Most dollars were invested in upper-middle-income countries, according to the World Bank (*Private Participation in Infrastructure: Trends in Developing Countries 1990-2001* at Overview, p. 1, http://rru.worldbank.org/PPIbook/).

Not only is privatization alone no substitute for state responsibility for basic services, but as noted in the Report for the Tripartite Meeting on Challenges and Opportunities Facing Public Utilities,[13] "Public-private partnerships are no substitute for the state's responsibility for ensuring basic services." ILO Social Dialogue Sector Executive Director Sally Paxton opened the Tripartite Meeting with this point: [14]

> Commercial and business concerns call for cost-efficient and profitable operations. Public service requirements are broader, emphasizing the provision of affordable, reliable and widely accessible services. The challenge of balancing these interests is before you today whether your operation is public or private. The benefits along with the costs of the provision of these essential services must be equitably distributed among all stakeholders and society at large.

The European Commission and World Bank agree:

> Successful PPPs require an effective legislative and control framework and for each partner to recognize the objectives and needs of the other.
>
> * * *
>
> Along with the development of an effective public sector management and monitoring capability, it is necessary to promote the development of consumer "watchdog" associations and allow for public consultation. [15]
>
> * * *
>
> Without appropriate government stewardship and regulation, there is a risk that informal private markets may provide low-quality services. [16]

These factors undoubtedly explain why a relatively small fraction of private utility investment (8 per cent [17]) has been devoted to water systems. They probably also explain why private investors in water systems have rarely opted for conventional private ownership. Instead, private investors have preferred various types of public-private partnerships, presumably to reduce the political and commercial risks to their investments. This underscores the importance of assuring full representation of public interests as public-private partnerships are considered.

[13] J. Beaulieu: *Challenges and opportunities facing public utilities*, at 64 (International Labour Organization, Sector Activities Programme, Report for discussion at the Tripartite Meeting on Challenges and Opportunities Facing Public Utilities, Geneva, TMCOPU/2003).

[14] Opening Address at 2-3 (May 19, 2003).

[15] European Commission Directorate-General: "Guidelines for Successful Public-Private Partnerships," at p. 6, 54 (March 2003), http://europa.eu.int/comm/regional_policy/sources/docgener/guides/ppp/ppp_en.pdf

[16] World Bank: *Private Sector Development (PSD) Strategy* at par. 49 (Dec. 2001) *in* K. Bayliss and D. Hall: "Glimpses of an alternative – the possibility of public ownership in the World Bank's latest [Dec. 2001] PSD strategy paper" at section 5 (PSIRU, January 2002)

[17] Note 11, above.

2. The low-income energy affordability network (LEAN)

In addition to water, access to affordable electricity and natural gas and to a warm, safe, comfortable home, is essential to the health and well-being of families. The Low-Income Energy Affordability Network (LEAN)[1] in Massachusetts is a successful example of NGOs pursuing public interests, in partnership with Government agencies and private utilities, to reduce utility bills in low-income homes[2] by weatherizing them and installing efficient appliances. Partners in these efforts include:

- ten privately owned public utilities, serving virtually the entire state: two that provide electricity,[3] four that provide natural gas,[4] and two that provide both;[5] in addition, some municipally owned utilities participate in certain LEAN programmes;[6]
- six Government agencies: three that provide funding,[7] two that regulate rates[8] and efficiency services,[9] and the independently elected Attorney-General, who has a statutory mandate to represent utility consumers;[10]
- representatives of four other interests, including customer sectors (industrial, commercial, and residential/environmental) and energy efficiency contractors;
- twenty-three community-based non-profit agencies (comprising LEAN) dedicated to serving low-income families in various ways (for example, early childhood education, job training, and distribution of public benefits).

LEAN agencies implement weatherization and energy efficiency programmes through a network of installation contractors. LEAN operates as something of a mutual aid

[1] Descriptions of LEAN are based on one of the authors' personal experience as LEAN counsel, as well as personal communications with Elliott Jacobson, chair of LEAN, and Ken Rauseo, Deputy Director, Community Services, Massachusetts Department of Housing and Community Development (DHCD).

[2] Priority is given to households with elderly or disabled residents.

[3] Massachusetts Electric Co. (National Grid): Western Massachusetts Electric Co. (Northeast Utilities).

[4] KeySpan Gas Delivery Services: Bay State Gas Co. (Northern Indiana Public Service Co.), Berkshire Gas Co. (Energy East), New England Gas Co.

[5] NStar Electric (Boston Edison Co., Cambridge Electric Light Co., Commonwealth Electric) and NStar Gas (formerly Commonwealth Gas Co.): Fitchburg Gas & Electric Co. (Unitil).

[6] As is typical in the United States, municipals serve about 15 per cent of the residential electric load and a lesser fraction of natural gas demand.

[7] United States Department of Energy (DOE), United States Department of Health and Human Services (HHS), Massachusetts DHCD.

[8] Massachusetts Department of Telecommunications and Energy (DTE).

[9] Massachusetts Division of Energy Resources (DOER).

[10] G.L. c. 12, section 11E (Mass.).

society in which lead agencies provide back-up and advice to other member agencies when needed.

The development of LEAN

LEAN was established as a result of legislation that, for the first time in Massachusetts, established secure funding for low-income utility efficiency programmes. The statute[11] provides: "The low-income residential demand-side management and education programmes shall be implemented through the low-income weatherization and fuel assistance programme network and shall be coordinated with all gas distribution companies in the Commonwealth with the objective of standardizing implementation."

Utility efficiency programmes in Massachusetts, including low-income programmes, grew out of the Integrated Resource Planning (IRP) process of the mid-1980s,[12] which was itself a response to federal law[13] and to price shocks due to nuclear power cost overruns. National policy at the time met price spikes with a new emphasis on least-cost planning, including energy efficiency. Utility low-income efficiency and assistance programmes were significantly expanded as a result of the state's electricity restructuring statute enacted in 1997. The statute set a permanent floor under electric utility funding of low-income efficiency programmes and required coordination with gas utility programmes. From their beginning in the federal weatherization programmes of the 1970s, low-income efficiency programmes had been coordinated by the Commonwealth's administering agency, the Commonwealth of Massachusetts Department of Housing and Community Development (DHCD), by an association of the community action programmes that implemented most of them, and by an association of community-based programmes delivering low-income energy services. LEAN was created in 1998 to focus and expand the scope of coordination of the vastly expanded programmes.

Prior to this time, smaller electric and natural gas utility low-income programmes were negotiated, one at a time, between individual utilities and the low-income agencies in each service territory. State-wide support was provided by the Association of Community Action Program Directors (MASSCAP) and the Massachusetts Energy Directors Association (MEDA), and by state-wide multi-party collaboratives of interested parties from all customer sectors with respect to each utility, all of which continue. An agreement negotiated by the collaborative with KeySpan Energy Delivery New England and approved by the Department of Telecommunications and Energy (DTE)[14] established the model for other gas utility programmes.

The LEAN programmes

The services provided by LEAN include the following:

- coordination among electric and gas utilities and their collaboratives with the objective of standardizing implementation (as directed by the above statute);

[11] G.L. c. 25, section 19; St. 1997, c. 164, sec 37 (Mass.).

[12] Former 220 CMR section 10.00 et seq. (Mass.)

[13] Public Utility Regulatory Policy Act of 1978 (PURPA), 16 United States C. §2601, P.L. 95-617 (1978); see, for example, 220 CMR section 8.00 et seq. (Mass.).

[14] Boston Gas. Co*:* [predecessor to KeySpan], D.P.U. [predecessor to DTE}, (Mass. 1996) 96-50.

- coordination within the low-income weatherization and fuel-assistance programme network, including among lead vendors and between lead vendors and sub-vendors;

- coordination with potential vendors outside the low-income weatherization and fuel assistance programme network for certain segments of the low-income residential market – for example, large multi-family buildings;

- assistance in the development of the comprehensive low-income residential demand-side management and education programmes required by statute;

- assistance in monitoring and evaluating existing programmes to improve cost-effectiveness and develop new programme features, including development of evaluation strategies, coordination with evaluators, and synthesizing state-wide lessons from programme evaluations;.

- support for the training of the low-income weatherization and fuel assistance programme network with the objectives of quality, cost-effectiveness and consistency;

- regulatory support in negotiations with and proceedings before the DTE and the Division of Energy Resources (DOER).

LEAN is composed of representatives of each lead agency among the low-income agencies; DHCD; experts and attorneys from Action for Boston Community Development (ABCD), National Consumer Law Centre (NCLC), and South Middlesex Opportunity Council (SMOC); and appointed experts and attorneys. LEAN negotiates programme agreements among the low-income agencies in each utility service territory, each of the ten gas and electric utilities,[15] and the two regulators. LEAN also meets periodically as a group and with utility representatives to coordinate standardization and establish best practices, to work out issues that may arise, and to oversee quality control. Ultimate responsibility for each programme remains the subject of contracts between each utility and lead agency and between DHCD and each lead agency. Based on those contracts, lead agencies sub-contract implementation to other agencies in the relevant territory. Operating agencies generally hire sub-sub-contractors for measure installation.

The programmes implemented by LEAN are currently funded at a level of about US$29 Million annually. The funding in Massachusetts now derives primarily from electric and natural gas utility rates. Such funding by the investor-owned utility companies is supported by the utility regulator (the DTE) and the Attorney-General of the Commonwealth, the official consumer advocate. The balance of the funding comes from federal taxes.[16] The programmes are decentralized and operate through a complex of about 90 contracts, agreements, and regulatory filings (not counting contracts with implementation sub-sub-contractors).

A comprehensive set of services is provided to households served by LEAN's coordinated programmes to address residential heating systems, building shell improvements, appliances, and health and safety checks. Funding is coordinated among sources, as appropriate, including the gas utility (in the case of KeySpan, for example, up to US$4,500 per home), electric utility, United States Department of Energy (DOE), and

[15] As a result of mergers, the ten utilities operate in 14 separately identified territories. In addition, a gas utility that serves one small town and part of another has no low-income efficiency programme. To date, the full set of programmes has not been adopted by municipal utilities.

[16] The federal programmes are administered by the state.

United States Department of Health and Human Services (HHS), the latter two administered by the DHCD, and a Ford Foundation pilot grant to combine energy efficiency and home renovation programmes.

All measures are directly installed at no charge to the low-income consumer and include:

- a comprehensive whole-house energy audit, which includes customer education;
- weatherization, including wall, attic, floor, and pipe and duct insulation,[17] as well as air sealing (caulking, weatherstripping, door and window hardware, window parting beads and stops);
- turn-down thermostats;
- water heater blankets;
- blower door analysis;
- tune-up, repair, and replacement of faulty heating systems;
- low-flow showerheads and faucet aerators;
- minor building repairs, including glass replacement and adjustment of window meeting rails;
- replacement of inefficient appliances, including refrigerators and clothes washers;
- water bed covers;
- installation of compact fluorescent lamps (CFLs);
- CFL torchieres and desk lamps;
- health and safety measures such as wire inspection, ventilation, and DOE-approved testing for lead paint;
- additional multi-family-building-specific measures such as common area lighting fixtures, and HVAC motors and controls, particularly in publicly-funded housing.

Special efforts are made with respect to new construction and comprehensive rehabilitation projects. In addition, other services that are coordinated with energy efficiency measures include:

- budget counselling where appropriate and available;
- referral to other social services, where appropriate and available;
- arrearage management, including some arrearage forgiveness, where there is a utility programme in place.

[17] About a third of Massachusetts low-income homes are heated by oil. Weatherization of these homes, as well as those heated by other non-utility fuels (chiefly propane and wood) is funded by DOE and electric utility funds. Thus the integrated programme operates in a fuel-neutral manner.

Starting January 1, 2004, the KeySpan natural gas energy efficiency programme for one utility will be coordinated with its innovative OnTrack programme, which provides budget counselling, arrearage management, and other social services to a small number of low-income customers with the objective of increasing their ability to pay their bills. NStar Electric operates a similar programme in parts of its territory, also in coordination with the LEAN agencies. In addition, a pilot project supported by a United States Department of Health and Human Services (HHS) grant provides case management services in certain parts of the Commonwealth, including budget counselling and, where available, utility arrearage management. In a small part of the KeySpan territory, a Ford Foundation grant supports pilot efforts to combine energy efficiency and home renovation programmes.

In almost all cases, customers become eligible for low-income efficiency services through the federal fuel assistance programme (LIHEAP), which is administered by community action programmes (CAPs) and other community-based organizations. Although eligibility levels differ slightly among the programmes, in general the fuel assistance application process automatically enrols clients for all utility-related programmes for which they are eligible. These can include, in addition to LIHEAP:

- energy efficiency programmes;
- gas, electric, and telephone rate discounts;
- case management services;
- utility arrearage management programmes.

Customers not eligible for other low-income energy programmes are nevertheless screened by fuel assistance agencies for eligibility for low-income energy efficiency services.

Establishing support for the LEAN partnership

In order to receive approval from the DTE, the energy efficiency programmes implemented through LEAN must be cost-effective; that is, their benefits to recipients and to society must outweigh their costs to ratepayers and taxpayers. When analyzing the cost-effectiveness of the programmes, both energy and non-energy benefits are taken into account. Benefits of the programmes are more than 2.5 times their costs, including energy and water savings; benefits to utilities and other ratepayers such as reductions in payment arrearages, and the costs to disconnect and reconnect customers in debt; and some participant benefits such as improved health, safety and comfort.[18] Consumption reductions are about 25 per cent for participating households that receive weatherization measures, and about 15 per cent for those receiving electricity-saving measures only. The

[18] For example, *Massachusetts Electric Co.*, D.T.E. 03-02 at Table 1, p. 21 (Mass. 2003) (benefit: cost ratio 2.56). Environmental, taxpayer, economic development, and other benefits are not included in this calculation. If all benefits were included, the benefit: cost ratio would be about 7.0, J. Oppenheim & T. MacGregor: "The Economics of Low-Income Energy Efficiency Investment" (Entergy Corp. 2002), http://www.democracyandregulation.com/attachments/14/Economics_of_L-I_efficiency_-_rev_final_rpt_010802.doc

programmes create more than 400 permanent jobs[19] and, altogether, about 30,000 low-income homes are served each year.

In order to gain support from the utility companies for this structure of programme implementation, in addition to providing benefits to the communities, utilities receive a direct performance incentive of a total of about US$1 million per year, conditioned on energy savings achieved and specified programmatic benchmarks.

The programmes are built on the foundation of a federal weatherization programme that has its roots in the 1970s, when the price of oil rose dramatically and poor people were having trouble paying their heating bills. Most of the privately owned utilities in Massachusetts, however, did not become involved in weatherization and efficiency programmes until the late 1990s. And it took considerable public action over an extended period to develop into the programme being implemented today.

Some of the steps along the way are important to note:

- the Attorney-General (then represented by one of the authors) intervened with the regulator in a case that resulted in exclusion from electricity rates of the investment in one large and costly generator, because the electric company did not assess alternative strategies (such as energy efficiency) to provide the needed resource;[20]
- plans for another utility plant were scrapped altogether for similar reasons (the Edgar plant; see picture, below);[21]
- after litigation, the regulator found that regional electric utility supply and demand forecasting was severely flawed.[22]

The Edgar plant, Weymouth, Massachusetts United States

[19] Personal communications, Dr. Meg Power: Economic Opportunity Research Institute, Washington, D.C. (May 15, 2003); Joel Eisenberg: Oak Ridge National Laboratory (May 16, 2003).

[20] *Western Massachusetts Electric Co.,* D.P.U. 85-270 (Mass. 1986).

[21] Edgar (Boston Edison Co.): A plant was approved on the site about 14 years later. *Sithe Edgar Development LLC,* EFSB 98-7 (Mass. 2000).

[22] *Boston Edison Co. et al. reliable service,* D.P.U. 87-169-A (Mass. 1988).

A broad public campaign for investments in energy efficiency in place of power plants – led by environmentalists, low-income advocates, and energy service businesses – ultimately resulted in a statute establishing an electric utility's obligation to fund efficiency programmes. [23] The statute includes a dedicated fund set-aside for low-income households. Similar results were obtained for natural gas utilities through the regulatory process. [24]

The success of LEAN in expanding and coordinating utility low-income programmes is a result of countless factors that mix idealism, politics, and good management. The base for development of the programmes has been, as it is in many states, a federally funded weatherization programme administered by the state and implemented by a network of community-based agencies, together with a core of support in the state for utility efficiency services. While all situations are unique, the organizers of LEAN believe their successful leverage of that base into comprehensive and well-funded, low-income energy efficiency programmes can be replicated over time by developing these principal conditions:

- adequate funding to implement and administer the programmes, including support services necessary to provide operational assistance, factual information, negotiation of agreements, and advocacy for those agreements with regulators;
- development and maintenance of a broad base of political support for all efficiency programmes and especially for low-income programmes;
- incremental expansion of programmes by developing consensus support for them;
- identification of key personnel working for success of the programmes at utilities, regulators, and agencies, as well as at coalition partners, and development of constant communication and strong working relationships among those people;
- strong support from the state agency, DHCD, that administers the federal weatherization programmes;
- close attention to volume and quality control and immediate response to any problems.

Some keys to success

- 11 years
- Very strong regulator
- Very strong statute
- Supportive public officials
- Strong and persistent NGOs
- Funding for NGOs
- Performance incentive for private utilities

From the first litigation to the enactment of statute in 1997 took 11 years. In addition to this length of time, LEAN's success has required these key elements:

[23] Electric Industry Restructuring Act, St. 1997, Chap. 164 (Mass.).

[24] For example, *Boston Gas Co.*, D.P.U. 96-50 (Mass. 1996).

- strong regulatory oversight and direction; [25]
- backing of the regulator by strong legislative direction from a statute that establishes a funding floor for low-income programmes and includes a mandate that the low-income efficiency programmes be implemented through the network of low-income agencies;
- strong and persistent NGOs, able to take advantage of the regulatory and statutory opportunities provided;
- support of the NGOs by a stable funding stream;
- support of public officials, such as legislative champions and the Attorney-General;
- support of private utilities, secured in part by the creation of incentives conditioned on provision of specified public benefits;
- transparency of utility and NGO information to determine the effectiveness of the partnership.

LEAN's results

An example of LEAN programme performance is its first large-scale gas utility programme, with KeySpan Energy Delivery New England, beginning in 1997. The programme has been formally evaluated "to be operating in a high quality and cost-effective manner," with more than 95 per cent of participants extremely or very satisfied, and the consistent "opinion of programme staff, managers, and planners that the programme is very successful." Evaluation further found that, in addition to the therm savings the programme produces for the system, the low-income efficiency programme produces significant benefits to customers in the form of comfort, improved condition of homes, bill savings and, for 60 per cent of those in arrears, an easier time paying their bills. Indeed, 30 per cent of those in arrears found themselves able to pay their bills in full after participating in the efficiency programme. (These non-energy benefits translate further into such public goods as health benefits to participants and reduced utility costs of carrying and collecting debt and terminating and reconnecting service. There are also water resource savings. Except for water, the value of such additional benefits has not been formally computed for this programme, but they are estimated to be worth at least 50 per cent of the energy benefits. [26]) Concluded one contractor quoted in the evaluation: "This Programme is the best one I've seen out there, and I've seen a lot!"

[25] Regulation must be distinguished from the issue of privatization. In the United States, most electricity and natural gas is already produced and distributed by private companies. What has evolved over more than 100 years is a statutory and regulatory framework that manages private capital in order to serve the public interest (at least most of the time). This framework is explained in detail in G. Palast, J. Oppenheim, and T. MacGregor, *Democracy And Regulation* (Pluto Press, 2003), as well as in . G. Palast, J. Oppenheim, and T. MacGregor, *Democratic regulation: A guide to the control of privatized public services through social dialogue,* Sectoral Activities Programme Working Paper, WP.166, Geneva, May 2000, http://www.ilo.org/public/english/dialogue/sector/papers/pubserv/demreg.pdf

[26] Eleven Massachusetts gas and electric utilities agreed that these non-energy low-income benefits amounted in value to at least 50 per cent of the energy benefits. The Department of Telecommunications and Energy declined to adopt one 50 per cent adder across the board to

Results at KeySpan include these for the six completed years of the ongoing programme:

	Lifetime, May 1997-April 2003	Last full year, 2002-03
Participants	7 180	1 103
Therms saved	20 168 800	3 098 400
Cost	$16 100 000	$3 400 000
Cost/therm	$0.80	$1.09

The particular success of the KeySpan low-income efficiency programme is based on ad hoc design alterations, creative management, production management, and high implementation standards of the programme managers at the agency and at the utility, using LEAN as a sounding board. Ongoing training by the utility and the agency, based on DHCD and utility practices, also plays a key role in the programme's success. This includes the requirement that all auditors have DHCD training and certification.

LEAN's performance of its functions in a consistent manner across the state eliminates duplication of effort and makes the administration and coordination of utilities' low-income programmes both more efficient and more effective. Among the benefits achieved from the approach taken by LEAN are the following:

- The statutory goal of standardizing implementation is achieved, while retaining individual electric and gas distribution utility flexibility.
- Repetitive functions are more efficiently performed through elimination of duplicative services.
- Problem-solving is administratively simplified and benefits from experience elsewhere in the state.
- Lessons are synthesized for state-wide application, where appropriate.
- State-wide issues need only be addressed once.
- Electric and gas utility service territories partially overlap in many places. Electric and gas territories partially overlap with low-income agency territories. Thus one agency can be working in the territories of several utilities. Coordination among overlapping service territories is simplified.
- Representation in proceedings before the Department of Telecommunications and Energy, and the Division of Energy Resources is simplified.

represent these benefits , but it ruled that most of the benefits enumerated should be set out on a utility-by-utility basis. DTE 98-100 (1999). The 11 Massachusetts utilities that agreed to the 50 per cent "adder" also agreed that environmental and economic development benefits amount in value to an additional 25 per cent of the energy benefits, for a total benefit from low-income efficiency programmes of 1.75 times the energy savings. Twenty parties (Action, Inc. et al.), Joint Motion for approval of Proposed Guidelines Regarding Cost Effectiveness, Monitoring and Evaluation Issues and Shareholder Incentives, filed in Mass. DTE Docket 98-100, April 14, 1999. For more detail, see section on Cost-Effectiveness And Benefits To Utilities And Non-Participants in J. Oppenheim and T. MacGregor, "Low-Income Consumer Utility Issues: A National Perspective" (Oct. 2000), http://www.democracyandregulation.com/attachments/22/National_Survey_2d_ed._10-00.doc

3. United Republic of Tanzania

The LEAN programme is strikingly similar in many ways to the ILO SEED Programme's[1] small-scale enterprise waste management programme in Dar es Salaam, Tanzania. The programme developed out of the need for the Dar es Salaam City Commission (the governing body of the city) to deal with the growing problem of solid waste in densely populated urban areas. Only a small fraction of the generated waste was being collected and properly disposed of from the city, creating a dangerous and unhealthy situation – and there was no collection at all in low-income neighbourhoods. At the same time, the city was growing at a rate of 8-10 per cent per year, and unemployment – especially among women and youth – was rampant.[2] The City Commission had hired private firms in the past, but without much success. As pointed out in a study by the Citizens' Network on Essential Services, "corporations have little incentive to invest in 'unprofitable people', and those who most need the services are the least likely to be served by corporations looking to make a profit."[3]

The primary purpose of this public-private partnership programme in Dar es Salaam was to create and sustain jobs for low-income residents of the city while enhancing the quality of life for poor people where the programme operated. Formerly unskilled women and youth were particularly targeted for jobs in their local communities, providing not only income but also recognition for their contributions and a sense of belonging not easily attainable otherwise.[4]

In Tanzania, local authorities are responsible for solid waste collection and disposal. However, they are empowered by statute to contract out this responsibility and set fees for performance.[5] The basic premise of the solid-waste SEED Programme was that local authorities could hire small, community-based organizations (CBOs), using competitive procurement practices, to create employment and income among poor residents of their communities. These small enterprises would be responsible for collecting solid waste from community residents (as well as sweeping the city streets) instead of relying on municipal service providers. Before the programme began, less than 5 per cent of the solid waste generated in Dar es Salaam was being collected and disposed of in the authorized city dump. Within three months of the partnership's formal beginning in 1999, 40 per cent of

[1] ILO SEED Programmes are designed to stimulate public-private partnerships to promote and create urban employment in low-income areas of cities by linking local Governments with community-based organizations to deliver public services. ILO Job Creation & Enterprise Development web site, www.ilo.org/dyn/empent.portal.

[2] S. Bakker, et al.: "Both Sides of the Bridge: Public-Private Partnership for Sustainable Employment Creation in Waste Management, Dar es Salaam" pp. 1-2 (Workshop, "Planning for Sustainable and Integrated Solid Waste Management," Manila; ILO, 2000).

[3] T. Kessler & N. Alexander: "Assessing the Risks in the Private Provision of Essential Services" at 12 (Discussion Paper for G-24 Technical Group, Geneva, Switzerland, Sept. 15-16, 2003).

[4] K. Toole et al.: "Social aspects of partnerships" (Workshop on "Waste collection that benefits the poor," p. 1, Dar es Salaam; ILO, 2003).

[5] Tanzania Act No. 8 of 1982, K. Toole et al.: "Social aspects of partnerships" (Workshop on "Waste collection that benefits the poor," at 7, Dar es Salaam; ILO, 2003).

the waste was collected and properly disposed of.[6] Like LEAN, the waste management model in Tanzania built on existing systems in the communities. By using local people, the work was also more easily monitored.[7]

One other similarity must be noted: the need to formalize the partnerships with contracts in order to ensure transparent accounting and procurement procedures, rights and obligations of all parties, safe working conditions, and access to opportunities and benefits for the targeted population. LEAN accomplishes these goals through its organizational structure and regular meetings among the partners, as well as through a complex network of contracts. In the waste management programme, in 1999, the Dar es Salaam Waste Management Association was formed to represent the interests of 70 CBOs and other waste collection enterprises. However, because this organization did not incorporate transparent and democratic policies, many members abandoned it.[8] There is a growing need for a strong association that can set health and safety standards, monitor compliance, train workers, and provide other support services to these small enterprises.

Another important element of public-private partnerships that must be recognized is that they are political. For waste management, the appearance and reality of a clean, healthy city reflects well on city Government; therefore, there is an incentive to make the partnerships work. On the other hand, with pressures on city administration personnel, and with lucrative contracts at stake, there may be an attempt to reward friends with contracts, rather than operating a transparent, competitive system and monitoring quality of performance. Thus, a strong voice by citizen activists and representation for those affected by the service provision (every waste-generating household and business, in this case) is critical to the success of public-private partnerships performing essential services.

Thus, while public-private partnerships can yield tremendous public good, care must be taken to ensure that they are operated in the public interest, and not in the sole interest of the private enterprises that perform the services and earn the profits.

In both the LEAN and the ILO SEED Programmes, the implementers:

- identified a necessary public service not ordinarily extended to the poor;
- developed a large network of community-based contractors to keep benefits in the community, improve access to the community, and enhance accountability to the community;
- provided training, financing, guidance and back-up;
- provided oversight; and
- thereby created a public-private partnership that produces service (affordable energy or waste management), community development, and jobs – all hitherto unavailable to the targeted low-income communities.

[6] S. Bakker, et al.: "Both Sides of the Bridge: Public-Private Partnership for Sustainable Employment Creation in Waste Management, Dar es Salaam" pp. 4, 9 (Workshop, "Planning for Sustainable and Integrated Solid Waste Management," Manila; ILO, 2000).

[7] K. Toole et al.: "Social aspects of partnerships" (Workshop on "Waste collection that benefits the poor," Dar es Salaam; ILO, 2003), S. Bakker, et al., "Both Sides of the Bridge: Public-Private Partnership for Sustainable Employment Creation in Waste Management, Dar es Salaam" (Workshop, "Planning for Sustainable and Integrated Solid Waste Management," Manila; ILO, 2000).

[8] K. Toole et al.: "Social aspects of partnerships" at 4 (Workshop on "Waste collection that benefits the poor," Dar es Salaam; ILO, 2003).

4. American national power company and CO_2 mitigation

American National Power, Inc. (ANP), a unit of International Power plc (United Kingdom)[1] doing business in Massachusetts as ANP Bellingham Energy Company and ANP Blackstone Energy Company, planned to build two natural gas-fired power plants – one in Bellingham and one in Blackstone, Massachusetts. ANP was required to go before the Energy Facilities Siting Board (Siting Board or EFSB) for permits to build. The EFSB is a nine-member review board charged with ensuring a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost.[2] The Siting Board's primary function is to license the construction of major energy infrastructure in Massachusetts, including large power plants, electric transmission lines, natural gas pipelines and natural gas storage facilities.

A partnership between ANP and the Siting Board was made possible only because of the years of effort by NGOs and other advocates that had come before. As described above in the section on LEAN, consumer, environmental, and low-income advocates had been working for many years to codify a requirement that the electric and natural gas utilities in Massachusetts provide comprehensive energy efficiency services to all customer sectors and sub-sectors. Through the process of Integrated Resource Planning (IRP), individual rate-setting cases, and a collaborative process involving several state agencies, the Attorney-General, and advocates, each of the investor-owned electric utilities and most of the natural gas utilities had developed energy efficiency programmes to serve their customers. Funding and oversight of the electric company programmes was built into law with the Electricity Industry Restructuring Act. The Siting Board adopted practices to mitigate climate change.

As one condition of its permits to build the Bellingham and Blackstone plants, among others, the EFSB directed ANP to spend just over US$1 Million within the first five years of commercial operation to mitigate carbon dioxide (CO_2) emissions from the power plants that were not captured by the best available control technology.[3] The EFSB set out several conditions that had to be met in order for the reduction in CO_2 to count toward fulfilling the mitigation requirement:

- reduction in emissions had to be real;
- emission reductions had to be quantifiable, or measurable;
- reductions had to be incremental to what would have happened under another regulatory requirement or programme;
- they had to be cost-effective under the EFSB definition, compared to identified alternatives or to US$1.50 per ton of CO_2 reduced;
- they had to be timely; that is, likely to provide offsets during the same time that the power plants would emit CO_2;

[1] A product of the de-merger of National Power plc (UK).

[2] G.L. c. 164, Section 69H (Mass.).

[3] *ANP Bellingham Energy Company*, 7 DOMSB 39, p. 223 (Mass. 1998); *ANP Blackstone Energy Company*, 8 DOMSB 1, pp. 240-241 (Mass. 1999).

- they were to provide benefits to the towns in which the plants were to be built, or at least to Massachusetts or the New England region, in the form of environmental or economic benefits in addition to the pollution reduction.

ANP explored several mitigation methods before hiring one of the authors to build a public-private partnership between ANP, the local electric and natural gas utilities, and the towns of Bellingham and Blackstone. This partnership was designed to conduct energy audits of the towns' public buildings, including all of the schools, in order to determine where energy savings could be achieved through the installation of efficient boilers, lighting, heating, ventilation and cooling (HVAC) systems, motors, or any other energy-using system. ANP and the utilities agreed to share the cost of the audits and of any measures installed to save energy. The towns would reap all of the energy and bill-saving benefits, and ANP would receive credit for the CO_2 saved by the utilities' not burning the fossil fuel needed to power inefficient motors, lights or boilers.

This partnership was made possible only because of the years of effort that had come before. As described above in the section on LEAN, consumer, environmental, and low-income advocates had been working for many years to codify a requirement that the electric and natural gas utilities in Massachusetts provide comprehensive energy efficiency services to all customer sectors and sub-sectors. Through the process of Integrated Resource Planning (IRP), individual rate-setting cases, and a collaborative process involving several state agencies, the Attorney-General, and advocates, each of the investor-owned electric utilities and most of the natural gas utilities had developed energy efficiency programmes to serve their customers. Funding and oversight of the electric company programmes was built into law with the Electricity Industry Restructuring Act.

To that time, the electric and gas companies serving Bellingham and Blackstone had installed few measures in the towns' buildings or schools. This was due to both limited utility budgets and many competing customers, and the requirement for the municipalities to pay part of the cost of the energy-saving measures. With ANP proposing to pay the towns' shares of the cost, as well as to contribute to the costs of the audits, the utilities and towns were both willing to cooperate on the project.

While the municipal Governments-ANP-utility partnership evolved smoothly, engaging the town officials in the process and actually settling on projects took over three years. New and efficient lights and lighting control systems have been installed in two schools; a new, dual-fuel (oil and natural gas) boiler system is ready to heat another school; and a town administration building has a new HVAC system. There are more projects on the drawing board as this is written, and all involved agree that the partnership has been successful. However, without all of the NGO effort that had gone into developing good working relationships with the utilities, and without strong oversight of the energy efficiency programmes by two state regulators (the DTE and DOER), as well as a mandate from a third state agency (the EFSB), these projects would never have happened.

5. Unsuccessful public-private partnerships in the United States and across the world

Unfortunately, the successes of the prior three sections of this paper are aberrations. Too often, even in the economically developed world, public-private partnerships combine public money and resources to produce private profit and disproportionately small public benefit. "Private sector builds the project – the public bears the risk" is too often the guiding principle. As the examples that follow illustrate, at least one of the critical elements described above is usually missing.

Bechtel

The Bechtel Group, Inc., gave US$1.3 million in campaign contributions during 1999-2002, mostly to Republicans. The current national Republican Administration recently awarded Bechtel, in secret, contracts totalling US$1.03 billion [1] for reconstruction in Iraq. There was no request for proposals to determine the most appropriate and cost-effective contractor; no public notice or opportunity for public involvement in the decision; no transparency. [2] Just Bechtel courting a high return for its largesse at election time.

But perhaps the most breathtaking Republican nod to Bechtel came in connection with Boston's so-called "Big Dig". The nation's largest public works project ever is replacing an elevated highway that slices through Downtown Boston with a tunnel under the Central Business District, followed by the Zakim Bridge over the bordering Charles River.

It is a stunning engineering marvel (although one Congressman famously opined it would have been easier to raise the city than dig this tunnel under it). Bechtel is General Manager of the Big Dig. Over the course of the 14 years (thus far) the project has taken, there have been multiple errors (such as failing to include the city's major sports arena on its construction map), and years of delays (the original completion date was some time in 1998, [3] and the project has yet to be finished). The original cost to the public was estimated to be US$2.5 billion; that staggering price has in reality inflated 5.8 times to US$14.6 billion! But, ten years ago, Bechtel tried to give the real estimate of cost overruns to the Republican Governor of Massachusetts. He is said (in sworn testimony by a Bechtel official) to have literally handed back the two-inch binder explaining the overrun. In this way, Bechtel and state governors kept the true cost secret for ten years. So far,

[1] We use the American convention in which one billion is equal to one thousand million.

[2] Centre for Responsive Politics in S. Glain, "Bechtel wins pact to help rebuild Iraq/Closed-bid deal could total US$680 Million," *Boston Globe* at A1 (April 18, 2003); N. King et al.: "United States to Boost Bechtel's Funding To Rebuild Iraqi Electricity Grid," *Wall St. Journal* at A1 (Aug. 28, 2003); A. Buffa et al.: "Bechtel: Profiting from Destruction," (CorpWatch, Public Citizen, and Global Exchange, June 2003). The illustrations presented here should be understood as concrete examples of systemic problems.

[3] "Denucci Says Big Dig Can Cut US$58 Million By Using Excess Insurance Payments" (Mass. State Auditor, Oct. 1998), http://www.state.ma.us/sao/big%20dig%20insurance.doc

Government investigators have recovered just US$35,000 of the cost overruns from contractors.[4] It is difficult to find an advocate for the public interest in this saga.

Leonard Zakim Bunker Hill Bridge, Boston, Massachusetts United States

Bechtel bought the water company in Cochabamba, Bolivia, in 1999 and promptly raised prices about 50 per cent. There were no hearings; the World Bank pressured Bolivia to accept the increases; and two people were killed in public protests against the price increases – protests that lasted 13 days. Only then were both the sale and the price increases reversed. Bechtel continues to claim that rates went up as little as 10 per cent.[5]

Bechtel's other exploits in the water business include:[6]

- San Francisco, California phased-out a management contract after charges of unnecessary and overpriced work as well as padded expense accounts.
- A Bechtel joint venture with the water concession for Sofia, Bulgaria, attempted to raise rates, despite a contractual prohibition against doing so at that time, let water quality drop, and apparently failed to make 88 per cent of the contractually required investment in the network. Meanwhile, the venture's CEO admitted that it had

[4] For example, J. Vennochi, "Boston, Baghdad, and Bechtel," *Boston Globe* at A15 (April 22, 2003).

[5] The Democracy Centre, "Bechtel vs. Bolivia/The Water Rake Hikes by Bechtel's Bolivian Company (Aguas del Tunari)/The Real Numbers", www.democracyctr.org/bechtel/waterbills-global.htm; G. Palast, J. Oppenheim, and T. MacGregor, *Democracy And Regulation* pp. 125, 176 (Pluto Press, 2003).

[6] A. Buffa et al.: "Bechtel: Profiting from Destruction" at section C (CorpWatch, Public Citizen, and Global Exchange, June 2003).

transferred abroad a substantial fraction of a loan from the European Bank for Reconstruction and Development (EBRD) that was designated for the Sofia system.[7]

- The same joint venture backed out of its promise to hire a majority of the workers of the former public system in Guayaquil, Ecuador, after winning a 30-year contract there.

- A different Bechtel joint venture pulled out of a 25-year lease after only five years when it was not allowed to raise its rates 75 per cent after first tripling them. (The total effect would have been to raise rates by 5.4 times in five years.) The venture had nevertheless not met its contractual commitments for investment and to decrease unaccounted-for water. [8]

Many transnational private utilities are larger than most national economies. [9] Bechtel books more business in some years than the entire annual foreign direct investment in Switzerland, Ireland, Sweden, Belgium, or Australia. [10] Can a company this size really be controlled by Government?

Enron

Bechtel is one of the co-owners with Enron in the infamous Dabhol plant in India, which failed after attempting to extort a price for electricity of almost double the average available in the market and more than triple the cheapest alternative – at a rate of return of 30 per cent. This rate can be compared to the 3 per cent return state-owned power agencies aim for in India. United States Administrations of both parties pressed the deal, which many Indians (in and out of Government) think was greased by bribery. [11]

Enron was the main partner in Dabhol, but this was just one energy project among many, all over the world, financed by United States and other Government loans totalling more than US$6.5 billion. [12] It is probably no coincidence that Enron's federal political contributions and lobbying expenditures were US$10.2 million in 1998-2000 alone,

[7] A. Buffa et al. : "Bechtel: Profiting from Destruction" at section C (CorpWatch, Public Citizen, and Global Exchange, June 2003); D. Hall *et al*.: "Water privatization and restructuring in Central and Eastern Europe and NIS countries, 2002," at section A.i (PSIRU, March 2003).

[8] Public Citizen, "Water Privatization Fiascos", www.citizen.org/print_article.cfm?ID=9209

[9] J. Beaulieu, *Challenges and opportunities facing public utilities,* at 10 (International Labour Organization, Sector Activities Programme, Report for discussion at the Tripartite Meeting on Challenges and Opportunities Facing Public Utilities, Geneva, International Labour Organization, TMCOPU/2003).

[10] Bechtel Group, Inc., "The Bechtel Report 2003" at 4; The World Bank, *World Development Indicators 2002* at Table 6.7 (World Bank 2002)

[11] For example, G. Palast, J. Oppenheim, and T. MacGregor,: *Democracy And Regulation* pp. 21-22, 171 (Pluto Press, 2003). See Human Rights Watch, "Enron: History of Human Rights Abuse in India" (press release, Jan. 2002); Human Rights Watch, *The Enron Corp./Corporate Complicity in Human Rights Violations* (Human Rights Watch, 1999).

[12] J. Vallette et al.: *Enron's Pawns* (Sustainable Energy and Economy Network, Institute for Policy Studies, 2002).

without counting activities in the states or of Enron's accountants, Arthur Andersen (at least another US$5.2 million in federal contributions from 1989 through 2001). [13]

The Edgar Plant, Weymouth, Massachusetts United States

United States Capital, Washington, District of Columbia

[13] A. Wheat, "System Failure/Deregulation, Political Corruption, Corporate Fraud and the Enron Debacle," *Multinational Monitor* (Jan./Feb. 2002).

Enron's most breathtaking political derring-do involved the Grahams of Texas. Enron gave United States Senator Philip Graham more than US$100,000 (making Enron his largest contributor) between 1989 and 2001. Senator Graham helped enact legislation (in 2000) that deregulated commodities trading – one of Enron's biggest money-makers. Before that, Senator Graham's wife Wendy, as chair of the Commodities Futures Trading Commission (CFTC), oversaw the exemption from regulation of Enron's futures trading, around which occurred much of Enron's chicanery and profiteering. Five weeks after she left the CFTC, Enron appointed Wendy Graham to its Board of Directors and, between 1993 and 2001, paid her more than US$900,000. [14]

Enron was in the water business for only three years, through an entity called Azurix that it created in 1998. In less than three years, Azurix' second-largest operation, a concession in Buenos Aires province, was fined more than US$1 million for several days-long service interruptions, releasing untreated effluent, and exceeding allowed effluent levels. In some places, Azurix ultimately had to truck the water in. In Ghana, the World Bank backed out of a loan after acknowledging "suspicions of corruption, and a draft schedule of payments by Azurix showed a US$5 [million] upfront payment" that were alleged to be political kickbacks. Azurix denied the charges of bribery, of course, but the award to Azurix was cancelled. In Ontario, Canada, Azurix admitted to 19 violations of environmental law and was fined C$168,000. [15]

Bechtel and Enron grew this powerful in one of the most developed and democratic countries in the world. It took more than 100 years to develop the United States system of democratic and transparent utility regulation. It required substantial investments of resources and political will to evolve this far, and regulation still often fails. As India's unhappy experience with Enron and Bechtel illustrates, the odds are much longer in the developing world that public-private partnerships will result in benefits to the public.

Many other examples

India is far from unique. Independent Power Producer (IPP) contracts have been a problem in many parts of the world. Even a World Bank report concedes "IPPs have often inflated supply prices" – for example, prices have risen 33 per cent in the Philippines, [16] and 51 per cent in the Dominican Republic (where generators pulled the plug on a hospital when the Government could not pay). [17] Reports of corruption in the private power sector surfaced in Indonesia, Pakistan, Uganda, and Peru.

And, just as the Tripartite Meeting on Challenges and Opportunities Facing Public Utilities was assembling, the Financial Times reported its finding that Enron and AES

[14] For example, G. Palast, J. Oppenheim, and T. MacGregor,: *Democracy And Regulation* pp. 141, 152-159 (Pluto Press, 2003).

[15] Public Citizen, "Liquid Assets: Enron's Dip into Water Business Highlights Pitfalls of Privatization" (March 2002).

[16] Y. Albony et al.: "The Impact of IPPs in Developing Countries – Out of the Crisis and into the Future," *Private Sector* at 4 (World Bank, Dec. 1998).

[17] G. Palast, J. Oppenheim, and T. MacGregor,: *Democracy And Regulation* at 175 (Pluto Press, 2003).

rigged the bidding in the 1998 auction of the São Paulo electricity distribution system, costing that State US$500 million. [18]

> "Recent studies have documented how several Government privatization programmes have resulted in massive retrenchments, decreased services and increased prices, and have failed in improving overall economic efficiency. Outsourcing and restructuring are one of the core problems experienced by workers that undermine the delivery of public services to communities."
>
> Source: Declaration of the workers group at the International Labour Organization Meeting on the Key Challenges and Opportunities Facing the Utilities Sector, Geneva (23 May 2003)

Rio Light Company in Rio De Janeiro, Brazil, in 1996 became a joint venture of AES, Reliant, EDF, and the Brazilian State. Thereupon:

- rates rose 19 per cent;
- jobs were cut 40 per cent;
- blackouts became widespread and hard to repair because so many knowledgeable employees had been fired;
- complaints rose 500 per cent.

Nevertheless, share prices jumped 34 per cent in one year. Finally, a regulator was established and held hearings (although some of these hearings were interrupted by a blackout). The company became known as Rio Dark. [19]

And it is not just IPPs that fail to meet the public interest. In the southern African State of Lesotho, the CEO of a Government water project was sentenced to 18 years in prison for accepting about US$3.5 Million in bribes from foreign contractors, at least one of which has also been convicted. [20] Five executives of the German bank WestLB paid only £1,925 for shares in Mid-Kent Water (UK), the buyout of which WestLB financed; the shares have an estimated value of £20,000,000. [21]

[18] D. Sevastopulo, "AES colluded with Enron to rig bid for Latin American energy group," at 1, "Secret deal that kept Brazil in the dark," at 20 (May 21, 2003); J. Wheatley, "Brazil asks United States to help probe Enron auction-rigging claims, " at 17 (May 28, 2003).

[19] R. Simpson, "Decentralization and privatization of municipal services: The perspectives of consumers and their organizations" at section 11.2 (International Labour Office Sectoral Activities Programme Working Paper WP.176, August 2001); G. Palast, J. Oppenheim, and T. MacGregor,: *Democracy And Regulation* at 9-10 (Pluto Press, 2003).

[20] For example, PSIRU corruption database news IDs 3796 ("Acres Found Guilty Of Bribery In Lesotho Case"), 5039 ("Tractabel bribery: fuel to the privatisation fire [Peru]"), 5060 ("Further set backs for Bujagali [Uganda]: World Bank criticism and a hint of corruption"); D. Palluster, "Canadian company fined £1.6m for Lesotho bribes," *The Guardian* (29 Oct., 2002); K. MacGregor, "Acres Int'l convicted in African bribery case," Toronto Globe and Mail at B1 (18 Sept., 2002); D. Hall, personal communication (May 2, 18, 2003).

[21] C. Harris, "Bankers may net £20m from client stake," *Financial Times* at 1 (23 May, 2000).

Other similarities with the purchased power industry can be found with water concessions. When formerly state-owned and operated water systems were privatized in a number of nations, without accompanying democratic regulation being put into place at the same time, the results were predictable:

- Cochabamba's 50 per cent rate increase;
- Nicaragua's 18 per cent increase;
- the Czech Republic's 140 per cent increase;
- Argentina's 68 per cent price increase along with worse water quality;
- the Philippines' (industrial prices) 400 per cent price increase.

G. Palast, J. Oppenheim, and T. MacGregor, *Democracy And Regulation* at 177 (Pluto Press, 2003).

Guinea's ten-year water lease with a group led by Saur was not renewed because prices had jumped to unaffordable levels – almost seven times what they had been – and even Guinea's wealthy had difficulty paying their water bills. The regulator did not enforce financial reporting requirements. As a result, for example, maintenance and construction transactions with affiliates were not properly accounted for and could have disguised additional financial abuses.[22] Further, a World Bank audit discovered that the agreed pricing formula was applied incorrectly, resulting in prices twice as high as anticipated.[23]

Suez threatened to stop construction under its Buenos Aires water concession, and suspend certain services, after a 19 per cent rate of return over seven years was followed by heavy losses. Suez cut 50 per cent of the water system's employees, raised prices 20 per cent after promising to cut them 27 per cent, and dumped 95 per cent of the city's sewerage directly into the river after ignoring a contractual requirement to build a new treatment plant. In one five-and-a-half year period, Suez made only 42 per cent of the investments it had agreed upon.[24]

In 1992, after Suez signed a 30-year contract to manage the water around Buenos Aires, it expanded water service to millions who had never had it before. But Suez neglected to install the sewers needed to remove the water. All the excess water caused the water table to rise and streams of sewage to course down the streets and into cellars. The stench became unbearable.

J. Tagliabue, "As Multinationals Run the TapsAnger Rises Over Water in Profit", NY Times (August 26, 2002).

[22] Inflating costs by subcontracting with affiliates is often used to boost profits. Additional examples are set out *in* E. Lobina and D. Hall, "Problems with water concessions: a review of experience" at Part 2 (PSIRU, June 2003).

[23] K. Bayliss, "Water privatization in SSA [Sub-Saharan Africa]: Progress, problems and policy implications" at secs. 3.4, 4, 4.2 (PSIRU, Nov. 2002).

[24] Public Citizen, "Water Privatization Fiascos", www.citizen.org/print_article.cfm?ID=9207; D. Azpiasu and K. Forcinito, "Privatization of the water and sanitation systems in the Buenos Aires Metropolitan Area: regulatory discontinuity, corporate non-performance, extraordinary profits and distributive inequality," at 44-45 (First PRINWASS Project Workshop, University of Oxford, 2002), www.geog.ox.ac.uk/~prinwass/Azpiazu_Forcinito.PDF; E. Lobina and D. Hall, "Problems with water concessions: a review of experience" at Part 1, Tables 2, 5, 6, Fig. 3 (PSIRU, June 2003); The Centre for Public Integrity, *The Water Barons: A Handful of Corporations Seek to Privatize the World's Water,* "Argentina – The 'Aguas' Tango: Cashing in on Buenos Aires' Privatization" (2003), www.icij.org/dtaweb/water/. Additional examples of breach of investment agreements are collected in the Lobina-Hall paper, including: Suez invested 56 per cent of the agreed amount for the first two years under its 30-year agreement with Cordoba Argentina; and Suez invested 70 per cent of the originally agreed amount in the first six years of its 30-year agreement with Santa Fe province, Argentina (also at Table 3).

After a joint venture which included the British multinational Biwater obtained a 30-year water concession in Nelspruit, South Africa, rates nearly tripled – including charges for as much as 90 minutes of air that was metered when a water tap was opened. Access to water was not improved and customers in some black townships were charged more than whites in Nelspruit while receiving service for as little as three hours a day. Biwater ignored South African laws requiring specified amounts of free water and notice to households before disconnection. [25]

Twenty-two months into a 25-year contract to supply water to Rostock, Germany, Suez hiked water prices 24 per cent in 1996 because it had over-estimated consumption. [26]

After three-and-a-half years of a 30-year concession to Vivendi by the province of Tucuman, Argentina, rates doubled, the water turned brown, and the province terminated the concession. [27]

Experience has been similar with both electricity and water privatization without democratic regulation. Turkey has relied heavily on "Build-Operate-Transfer" (BOT) public-private partnerships to develop electricity generation. The result has been private returns on equity of 320 per cent (instead of the 16 per cent agreed upon), take-or-pay contracts for electricity from hydro units built on rivers without enough flow to produce the electricity charged for, and an Enron gas-fired plant that took six years to build – perhaps because its price escalated 5 per cent for each year of non-completion. "[C]ontracts were signed taking into account water flows physically impossible to materialize," according to a report of the State Supervision Agency. [28] In similar fashion, a 15-year BOT take-or-pay water contract for Istanbul, now 48 per cent-owned by RWE, has cost the Turkish Government hundreds of millions of dollars. Under the take-or-pay arrangement, the Government must pay for water that cannot be sold because the plant's intended customers, industrials and municipalities, found the price too high when plant construction costs doubled. [29]

In England and Wales, ten 25-year water concessions were created from existing publicly owned water authorities in 1988 with public subsidies of US$10.6 billion in debt and other relief plus a tax break. The concessions were then floated on the stock market at a price that turned out to be 22 per cent of the value placed by the stock market on the shares a week later. In the next nine years, prices leapt 46 per cent adjusted for inflation; profits rose 147 per cent (1997 vs. 1990); and the UK's Environmental Agency brought 260 prosecutions (1989-97). The disconnection rate tripled in the first five years, resulting

[25] Public Citizen, "Water Privatization Fiascos", www.citizen.org/print_article.cfm?ID=92010.

[26] E. Lobina and D. Hall,: "Problems with water concessions: a review of experience" at Part 1 (PSIRU, June 2003).

[27] E. Lobina and D. Hall, "Problems with water concessions: a review of experience" at Part 1 (PSIRU, June 2003).

[28] M. Munir, "A tangle of serious problems," *Financial Times Special Report Turkey* at 3 (17 Nov., 2003).

[29] D. Hall,: "Water Multinationals – no longer business as usual," at section 3.1.1 (PSIRU, Mar. 2003).

in increased rates of dysentery and a subsequent prohibition of disconnection for non-payment. [30]

A survey of seven water concessions in the Czech Republic, Hungary and Poland found jobs had been cut by 28 per cent from their level before privatization. [31] Executives of Suez and Vivendi, two of the three largest water companies, operating around the world [32] were caught paying bribes. [33] The partnership contracts themselves are often secret. Suez company policy is to keep all contracts secret. Thus, for example, its contract to provide water to Fort Beaufort, South Africa, prohibits any member of the public from seeing the contract without Company approval. Vivendi's sewerage contract is even kept secret from Budapest City Council officials and is only debated in closed sessions. [34]

One shudders at the thought that Enron's ultimate plan saw water as a gold mine.

"Partner" implies equality

The World Bank delicately calls all this "state capture". [35] The pattern includes private benefits but often few public benefits, especially when the private benefits run out. The public is left with increased prices – often sharply increased prices; limited access to essential services; and decreased quality – interruptions in service, unhealthy water, and polluted rivers – when promised investments are not made. Arrangements are often secret and sometimes corrupt and there is little effective public or Government oversight over either the agreements or their implementation. The final indignity is the trend to withdrawal of the private "partner" altogether. Political and legal structures to enforce "partnership" agreements often do not exist. [36]

The lesson to be learned is that states should be cautious about any cession of control to private for-profit interests, including by privatization. If a state chooses to privatize, it must at the same time establish strong regulation to maintain public benefits. The

[30] Public Citizen, "Water Privatization Fiascos", www.citizen.org/print_article.cfm?ID=9212.

[31] D. Hall,: "Public partnership and private control – ownership, control and regulation in water concessions in central Europe," computed from table 4.1 (PSIRU, May 1997).

[32] The third is a British firm, Thames Water, now owned by RWE AG. See, for example, Public Citizen, "Who are the major water companies?" www.citizen.org/cmep/Water/general/majorwater

[33] D. Hall, "Water in Public Hands" at section 2.I. (PSIRU, June 2001). Even in the developed countries of Italy and France, executives of Suez and Vivendi have been convicted of bribery. And United States Municipal officials have pled guilty of bribery in connection with a Vivendi effort to obtain a wastewater contract. E. Lobina and D. Hall, "Problems with water concessions: a review of experience" at Part 1, Table 4 (PSIRU, June 2003).

[34] K. Bayliss et al., "Has Liberalisation Gone Too Far? – A Review of the Issues in Water and Energy" at section 6.2 (PSIRU, March 2001). Accord, The Centre for Public Integrity, *The Water Barons: A Handful of Corporations Seek to Privatize the World's Water,* "Metered to Death: How a Water Experiment Caused Riots and a Cholera Epidemic" (2003), www.icij.org/dtaweb/water/.

[35] J. Hellman et al.,: "'Seize the State, Seize the Day': State Capture, Corruption and Influence in Transition" (World Bank Policy Research Working Paper 2444, Sept. 2000); H, Sutch et al.,: Rapporteurs, "International State Capture: Workshop Report" (8 Oct, 2001).

[36] For example, E. Lobina and D. Hall, "Problems with water concessions: A review of experience" at Part 1 (PSIRU, June 2003).

American experience shows a way but it is a very difficult path that requires very strong public, labour, and other NGOs [37] to advance public interests of quality, safety, reasonable and affordable price, transparency and democracy. [38]

The excuse for privatizing the essential services once owned and controlled by nation-states is that those states cannot be trusted to effectively administer such complex systems that are critical to the economic development of a nation. If the World Bank feels developing countries' Governments are too weak or corrupt to operate a public service, [39] it is a mystery how the World Bank believes the same weak or corrupt Governments can be any better at contracting with and regulating private multinational corporations that may be bigger than they are. The World Bank and other international agencies should support and build public capacity in developing nations, rather than allow corporate punishment of citizens of those nations because of the lack of public capacity.

[37] Of course, NGOs themselves need to be democratically accountable also. S. Kamat, "NGOs and the New Democracy: The False Saviors of International Development," *Harvard International Review* 65 (Spring 2003).

[38] G. Palast, J. Oppenheim, and T. MacGregor,: *Democracy And Regulation* (Pluto Press, 2003).

[39] For example, D. Boys, "World Bank to PSI: Corruption is the Reason," World News No. 20 (Public Services International 2000).

6. Lessons learned

Several requirements need to be met in order to enable the public side of a public-private partnership to bargain on equal footing with private interests and to enforce the bargain agreed upon. They are similar to the necessary conditions for Social Dialogue set out by Marleen Rueda-Catry at the Tripartite Meeting on Challenges and Opportunities Facing Public Utilities. [1] Power must be balanced to achieve a stable agreement that all can accept.

- Public must be able to bargain on equal terms
  - Forum
  - Funding
  - Organized, persistent, trained
- Bargain must reflect public interest
  - Enforceable Rules
  - Enforceable private rewards for public benefits
  - Regulation: Participatory, Transparent

1. There needs to be a **forum** where the bargaining can take place, where the public interest has the same status at the table as private interests.

2. Government, labour, and community-based NGOs must have **resource support** for participating.

3. Labour and other NGOs at the table must be in for the long haul and learn the procedural and technical aspects of the matter and its regulation. This may require **training**.

4. The bargaining must reflect the public interest and result in enforceable **rules** for the partnership that includes codification of the public's part of any deal.

5. The bargain should include **enforceable performance incentives** for the private partner to provide the public goods (private rewards for public benefits).

[1] Report of the Discussion at par 53 (ILO, TMCOPU/2003/7); M. Rueda (ILO InFocus Programme on Social Dialogue, Labour Law and Labour Administration), "Social Dialgoue in the Provision of Utility Services, slide 11 (May 19, 2003). The conditions set out by Ms. Rueda are:

- democratic foundation;
- worker and employer organizations that are representative, transparent, accountable, strong, broad, and cohesive;
- commitment by all to social dialogue;
- capacity and willingness to deliver as agreed.

6. The bargain must be supervised by a regulator whose processes and rules are participatory and transparent.

Our phrase for this system of transparent and participatory public-private partnership development is: democratic regulation.

7. Alternatives to public-private partnerships

The experiences of success and failure recounted here show that the key ingredient for attaining public benefits is democracy. Whether called public control, democratic regulation, social control, or public-public partnerships, the institutional framework must promote public participation.

As the long (but partial) list of failures demonstrates, public-private partnerships depend on private incentives that may not be in the public interest. For example: [1]

- The temptation to corruption of a Governmental bidding process can be irresistible.
- Private foreign corporations are more likely to take revenues and profits out of a country and reinvest them elsewhere than are native Governments.
- In a less than maximally profitable situation, private corporations may owe a duty to their shareholders to abandon a service that is essential to its customers or to raise prices to unaffordable levels.

The World Bank puts it this way: "Introducing private participation has been more difficult in water and sewerage than in other infrastructure sectors because of broad resistance to raising tariffs to cost-recovering levels, which increases the risk of long-term [private] investment in sector assets. " [2]

Indeed, the CEO of the French water multinational Saur International, J. F. Talbot, told the World Bank that there is a "marked increase in risk for the private operators, particularly in developing countries" because of an "emphasis on realistic service levels." He concluded that "Service users can't pay for the level of investments required, not for social projects … The scale of the need far out-reaches the financial and risk taking capabilities of the private sector." [3]

In fact, most of the major internationals are shrinking their water operations. Suez is retreating from a third of its investments in developing countries in addition to some operations in North America (not always voluntarily, as in Atlanta, Georgia and Halifax, Nova Scotia) and the UK. Bechtel's joint venture, International Water Limited, is leaving the business altogether. Saur left Mozambique and put its UK operations up for sale. [4] It

[1] See for example, D. Hall, "Public Services Work!," secs. 4.2.3-4.2.5 (PSIRU, Sep. 2003).

[2] World Bank, *Private Participation in Infrastructure: Trends in Developing Countries 1990-2001* at Ch. 12, Water and Sewerage, p. 144, http://rru.worldbank.org/PPIbook/. The World Bank has also recognized that private participation is not appropriate where commercial risks cannot be transferred to the private entity or where competition is not possible or beneficial. K. Bayliss and D. Hall, "Glimpses of an alternative – the possibility of public ownership in the World Bank's latest [Dec. 2001] PSD strategy paper" (PSIRU, January 2002).

[3] "Is the Water Business Really a Business?" at World Bank Water and Sanitation Lecture Series (Feb. 13, 2002), www.worldbank.org/wbi/B-SPAN/docs/SAUR.pdf in T. Kessler et al.,: Assessing the Risks in the Private Provision of Essential Services" (Citizens' Network on Essential Services, Sept. 2003), at n.13, www.servicesforall.org/html/tools/assessing_risks_print.shtml

[4] D. Hall et al.: "Public solutions for private problems? – responding to the shortfall in water infrastructure investment" (PSIRU, Sept. 2003); D. Hall, "Water Multinationals – no longer business as usual" (PSIRU, March 2003).

may be that the drive for public-private partnerships – at least in water – will fall of its own financial weight.

The World Bank has, at least, acknowledged the need to talk about democracy, regulation, and affordability. "To stimulate private investment there is a need to develop a more collaborative public-private partnership approach," including investing in public goods, "[a]ssigning and managing risks," and establishing regulatory frameworks. [5]

Nevertheless, where the World Bank deems local Government incapable of operating infrastructure such as a water system, its solutions have included privatization, public-private partnerships, schemes that empower community groups at the expense of Governments (so-called "community-driven development"), and even establishing substitute institutions ("independent service authorities") under its Low-Income Countries Under Stress (LICUS) programme. Anything but democracy seems to be the operating motto. [6] Instead of providing financial, technical, and political support for democratic Governments, the World Bank's approach is to insert private entities despite their track record of failure.

Appropriately, the European Commission, although promoting public-private partnerships, cautions: [7]

> such relationships should not be seen as the only possible course of action and are indeed complex to design, implement and operate. Many alternative systems of financing are available, including "public-public" institutional arrangements which should not be discounted in the hope that PPPs offer a miracle solution. Therefore PPPs should be carefully assessed in the context of the project, the public benefit and the relative gains to be achieved under various approaches.

Providing the resources for democracy is the most effective public policy for meeting social needs. An oft-cited model for an alternative is the publicly owned water company of Porto Alegre, the capital of Rio Grande do Sul province in southern Brazil. [8] Departamento Municipal do Aqua Esgoto (DMAE) is a democratically controlled not-for-profit company that reinvests its profits in the water system. It is financially independent from Government and self-financing. Its democratic structure has allowed it to achieve virtually 100 per cent access to clean water for its community (the greatest level of access in Brazil) at one of the lowest prices in the country. An inverted rate structure – higher prices for discretionary uses such as filling swimming pools, subsidies for the poor – has contributed to a reduction in total consumption despite the broader access to water.

[5] World Bank, *Water Resources Sector Strategy: Strategic Directions for World Bank Engagement,* at par. 127, see for example, pars. 162, 187, 190, 217, 220 (Feb. 2003).

[6] T. Kessler et al.,: Assessing the Risks in the Private Provision of Essential Services," at section 3 (Citizens' Network on Essential Services, Sept. 2003), www.servicesforall.org/html/tools /assessing_risks_print.shtml

[7] European Commission Directorate-General, "Guidelines for Successful Public-Private Partnerships," at p. 6 (March 2003), http://europa.eu.int/comm/regional_policy/sources/docgener/ guides/ppp/ppp_en.pdf.

[8] D. Hall et al.,: "Water in Porto Alegre, Brazil – accountable, effective, sustainable and democratic," (PSIRU and DMAE, Aug. 2002); Corporate Europe Observatory, "Alternatives to Privatization: The Power of Participation," www.corporateeurope.org/water/infobrief4.htm; Daniel Chavez, "Cities for People," Red Pepper (June 1999), http://www.redpepper.org.uk/ intarch/xcities.html.

In a structure that has been called social control, DMAE is governed to achieve accountability, transparency, and public participation. To achieve accountability, the Director General is appointed by the Mayor; a board of directors called the Deliberative Council is composed of representatives of civil society who are nominated by the NGOs and appointed by the mayor; and local commissions are established to monitor implementation.

To achieve transparency and public participation, weekly Participatory Budgeting meetings are open to the public and its minutes are published along with those of the Council. The Participatory Budgeting meetings are the heart of the process of public participation. Each of the city's 16 neighbourhoods meet to vote on their investment priorities – any citizen can participate – which are then analysed for technical feasibility by DMAE, using criteria set by the Participatory Budget Council. The latter Council must also approve the final overall investment plan.

In this way, citizens and NGOs can exert social control over the governance of this essential service. Democracy is attained by the need for citizens, NGOs, and other stakeholders (including the DMAE itself) to negotiate with each other in order to reach a consensus that satisfies their various objectives.

The results include reducing water leakage from half to a third in ten years, reducing total consumption by ten per cent in four years, restoring safe bathing in Lake Guaiba, and extending the sewage system to 84 per cent of the community. Worker training includes literacy and technical training, including computer training.

DMAE provides capacity building and technical assistance to other municipal water companies in Rio Grande do Sul, in an example of another alternative to public-private partnerships: Public-public partnerships. A similar structure has also been established in the northern Brazilian city of Recife. A consumer cooperative in Santa Cruz, Bolivia, increased household water connections from 70 per cent to 94 per cent in 11 years. Across the oceans in India are local participatory budgeting councils, similar to those in Brazil, called panchayats. Such governance is sometimes also allocated to village councils or other more traditional authorities. [9]

Similar public-public capacity-building has developed in north-east Europe with the support of municipal water operators from Sweden and Finland. [10] For example, the European Bank for Reconstruction and Development (EBRD) made substantial infrastructure improvement loans to Riga (Latvia) Water Co. and to Kaunas (Lithuania) Water Co., both without municipal guarantees in light of the systems' ability to self-finance and both supported by "twinning agreements" with Stockholm Vatten (Stockholm Water) for technical and operating assistance. EBRD made a similar loan to the water company in St. Petersburg, Russia, which was "twinned" with Stockholm Vatten and Helsinki Water and Wastewater Works.

In the United States, municipal water systems in places such as Phoenix, Arizona; metropolitan San Diego, California; Dade County, Florida; and King County, Washington

[9] D. Hall, "Financing water for the world – an alternative to guaranteed profits" at section 8.1 (PSIRU, Mar. 2003).

[10] D. Hall and E. Lobina, "International Solidarity in Water: Public-Public Partnerships in North-East Europe" (PSIRU Mar. 2003).

(State) have found that building partnerships with their labour unions is a more effective way to achieve efficiencies than privatization. [11]

By whatever name – social control, public participation, public-public partnership, democratically regulated public-private partnership – democracy is the path to lower prices for essential services, higher quality, secure employment, equitable access, support for the poor, and investment to meet public needs. Even more important, the openness, freedom, and public consensus of democracy is itself a vital achievement.

[11] Public Citizen, Critical Mass Energy and Environment Programme, "Public-public partnerships: A backgrounder on successful water/wastewater reengineering programmes" (Nov. 2002), http://www.citizen.org/documents/waterreengineering.pdf. The most famous failure of privatization of water systems in the United States is Atlanta's 20-year contract, signed in 1998 with a subsidiary of Suez:

Water corporations touted their 20-year contract in Atlanta as the privatization model that would show the rest of the country how privatization works. They were absolutely right. United Water, the French-owned private company, slashed its workforce. Service and maintenance backlogs ballooned. Poor water quality prompted orders that citizens boil their water before using it. And while the company was cutting corners to save money, savings the company had promised to the public never materialized [sewer rates rose an average of about 12 per cent a year] and the company was even trying to charge the city more [including for work it had not done]. The city cancelled the contract in January 2003.

Public Citizen, "Water privatization is a problem, not a solution" (Feb. 2003), http://www.citizen.org/documents/privateproblems.pdf. See Public Citizen, "Water Privatization Fiascos," www.citizen.org/print_article.cfm?ID=9211.