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PRIVATISATION AND INFRASTRUCTURE

ABSTRACT

This paper describes three principal modes by which the private sector can play a larger than traditional role in the provision of public works at the municipal level of government. The three modes are (1) divestiture of a government enterprise, to be operated thenceforth on a commercial basis, but subject to regulation to the extent it possesses monopoly characteristics, (2) long-term infrastructure franchises or concessions, under which specific facilities are financed, built, and operated by private firms or consortia, charging their users for the services provided, and (3) competitive contracting, under which government serves as the purchasing agent for its citizens, selecting the most cost-effective provider of a given service for a specific time period. Economic advantages of each mode are discussed, followed by examples and discussion of their applicability to New Zealand, based on the experience of the United States, Canada, the United Kingdom, and other countries.

1 Overview of Privatisation

All over the world today governments are facing fiscal stress. The specifics differ from place to place, but the underlying reality is the same. Governments have grown beyond the means available to support them. Fiscal stress provides an opportunity to rethink and restructure government - and that is what privatisation is really all about.

The futurist John Naisbitt devotes a whole chapter of *Megatrends 2000* to privatisation, as one of the major worldwide trends of the 1990s.ⁱ As documented in a series of privatisation yearbooks from the Reason Foundation, over 100 countries now have organized privatisation programs. In 1995 alone, the sale of state-owned enterprises around the world totaled \$66 billion; that brought the 10-year total of such sales to \$535 billion.ⁱⁱ That's an unprecedented shift of resources from government to the private sector.

In addition, investors over the past decade have year financed some \$144 billion in privatised infrastructure projects worldwide. Another 690 such projects, worth \$750 billion, are in the planning stages in 95 countries.ⁱⁱⁱ The World Bank and the US Agency for International Development now recommend the privatised model as the best way for countries to develop and modernise large-scale infrastructure.

In fact it has become non-partisan and non-ideological. It is being embraced and practised by governments of all stripes - by socialist governments in Spain and Sweden, by populist governments in Argentina and Mexico, by both labour and conservative governments in Australia and New Zealand, by former communist governments in Hungary, Poland, and Russia, and even by the few remaining communist governments such as China, Cuba, and Vietnam.

ⁱ Naisbitt, John and Aburdene, Patricia, *Megatrends 2000*, New York, William Morrow and Company, 1990.

ⁱⁱ O'Leary, John (ed.), *Privatisation 1995*, Los Angeles, Reason Foundation, 1995.

ⁱⁱⁱ Reinhardt, William G (ed.), "1994 International Major Projects Survey", *Public Works Financing*, October 1994.

In the United States, Vice President Gore's National Performance Review has made privatisation a major theme of its Reinventing Government, Phase 2 effort. At the municipal level, big-city mayors such as Democrat Ed Rendell in Philadelphia, Rich Daley in Chicago, and John Norquist in Milwaukee, are contracting out city services alongside Republican mayors such as Rudy Giuliani in New York and Steve Goldsmith in Indianapolis. In the past five years, privatisation has become a non-partisan issue in the United States.

2 Why do Governments Privatise?

At the most fundamental level, governments are embracing privatisation because they have become over-extended. Much like major corporations in the '60s and '70s, which gobbled up dozens of unrelated businesses and became 'conglomerates', governments over the past 50 years have expanded into dozens of fields in which they have no real comparative advantage. The corporate restructuring of the '80s, though sometimes painful, has led to dramatic downsizing and productivity increases, with many of the spun-off divisions becoming far more successful on their own, and with the downsized parent firms greatly streamlined. The same type of restructuring is now under way in government, in the '90s.

David Osborne, co-author of the US best-seller *Reinventing Government*,^{iv} quotes privatisation pioneer E S Savas to the effect that government needs to learn to "steer rather than row". In other words, government should make policy about what public services need to be provided, or how to protect people from monopoly, but need not itself be the entity that provides those services.

As a practical matter, the proximate cause of most actual privatisation is simply the need for government to get its fiscal house in order. As we will see, privatisation in all its various forms generally permits government to save money and thereby to live within its means. Although there are many good policy reasons to opt for privatisation, without the pressing need to balance its budget, few governments are able to mobilise sufficient force to overcome the strong inertia of the status quo.

I would like to talk with you today about three main types of privatisation and how they can be applied to municipal infrastructure. The first is divestiture: the outright sale of government enterprises. The second is the long-term infrastructure franchise, under which government mobilises private capital and enterprise to develop and operate new public works facilities. And the third is competitive contracting (sometimes called outsourcing), in which government selects a service provider via competition, rather than simply providing the service itself as a perpetual monopoly.

3 Divestiture

In most of the world, privatisation is synonymous with the sale of state-owned assets. This form of privatisation typically begins with the sale of previously nationalised industries. The first countries to do this were Chile (in the '70s) and Britain (in the early '80s). Britain and several others have also sold off a portion of their public

^{iv} Osborne, David and Gaebler, Ted, *Reinventing Government*, Reading, MA, Addison Wesley, 1992.

housing; Britain's Right-to-Buy programme has allowed the tenants in 1.5 million units to become homeowners.

But asset sales in the '80s and early '90s soon moved beyond these initial targets and embraced major infrastructure such as gas and electric utilities (in Argentina, Britain, and Chile), telephone systems (in dozens of countries), railroads (Argentina, Britain, Japan, New Zealand), seaports (Britain, Malaysia, New Zealand), airports (Australia, Argentina, Britain, Denmark, Germany, Italy), and water and wastewater systems (Argentina, Britain, France, Mexico, Portugal).

In the United States, President Bush issued Executive Order #12803 in 1992 to remove federal barriers to the sale or lease of state and local infrastructure facilities funded in part with federal grants. A Reason Foundation study identified some \$227 billion worth of user-fee supported infrastructure owned by city and state governments for which there would likely be private-sector buyers.^v Included in this total are over 2,000 state and municipal electric utilities worth \$17 billion, 800 gas utilities worth \$2 billion, 35,000 water systems worth \$24 billion, and 15,000 wastewater systems worth \$31 billion.

In the past few years US local governments have begun putting such assets on the market. For example, Milwaukee County recently sold a municipal power plant to a local investor-owned utility. Michigan sold its Accident Fund to Blue Cross after a spirited bidding war. Franklin, Ohio sold its wastewater treatment plant last summer, and Wilmington, Delaware is now in the process of doing likewise. Several Texas cities are considering the sale of municipal electric utilities, and St. Louis is considering the sale of its wastewater system. Even New York City has sold a city-owned hotel, TV station, and two radio stations. Its Port Authority is considering the sale of the World Trade Center. At the federal level, the past year has seen the sale of the smallest of five federal electric power marketing administrations, government reserves of oil and helium, the federal uranium enrichment corporation, and considerable amounts of electromagnetic spectrum. Many other privatisation proposals are on congressional or Administration drawing boards.

Critics often charge that asset sales are a foolish, short-sighted policy akin to "selling the family silver". But this view fails to appreciate the many benefits of such transactions. First of all, the one-time windfall from the sale merely represents the conversion of a physical asset to a financial asset; the asset remains on the government's balance sheet. How the asset is *used* determines whether the policy is wise or foolish. If the sales proceeds are used to cover current revenue shortfalls, it may well be a short-sighted policy (what do you do when you run out of assets to sell?). But if the proceeds are used for other capital purposes - to pay off debt and save interest charges, or to invest in other needed infrastructure - then divestiture can be a fiscally sound policy move.

Moreover, the benefits do not stop with the sales proceeds. Shifting an enterprise from government to investor-ownership means replacing politicised management with true business management. That is likely to lead to a more efficient, higher-productivity operation (as we have seen in this type of privatisation all over

^v Poole, Robert W Jr., Haarmeyer, David and Scarlett, Lynn, "Mining the Government Balance Sheet: What Cities and States Have to Sell", Policy Study No 139, Los Angeles, Reason Foundation, April 1992.

the world). It also means the elimination of any current or future subsidies, which is a long-term benefit to taxpayers. In addition, these valuable enterprises now go on the tax rolls, paying local property tax as well as state and federal corporate income taxes. Hence, they provide ongoing, permanent fiscal relief.

4 Infrastructure Franchises

The second major type of privatisation is a long-term franchise under which the private sector provides infrastructure that would otherwise be provided by government. The basic idea is that a long-term franchise - to provide, say, an airport terminal or a wastewater treatment plant or a toll bridge - enables an investor to go to the capital markets and raise the funds to build the facility, with the revenues from user charges paying off the bonds and (if the developers have done their homework) providing a return to the equity investors.

This type of project is spreading like wildfire. The \$14 billion Channel Tunnel between England and France is a private project of this type. So are the major toll-road systems in France, Italy, and Spain. Recent converts to privatised infrastructure include Argentina, Brazil, Chile, and Mexico in Latin America; Australia, China, Hong Kong, and Malaysia in the Pacific Rim; Britain, Germany, Greece, and Portugal in Europe; and Hungary, Poland, and Slovakia in the former Eastern Europe.

Huge water-supply modernisation projects are under way in a number of countries, via long-term franchises. For example, an international consortium has committed to invest \$4 billion to expand and modernise the water system of Buenos Aires, including the addition of water meters in many parts of the city that have never had them. We are beginning to see serious interest in privately financed and operated additions to water and wastewater systems in the United States as well.

Once again we need to ask: Does this type of privatisation make good sense as public policy? There are a number of benefits from substituting private capital and expertise for business-as-usual in the public sector. First, obtaining new infrastructure this way requires no capital outlay by the public sector. That means not using up limited bonding capacity on projects which the private capital markets are willing to fund, and there is no requirement for voter approval to issue bonds. This also means that government indebtedness will be less than it otherwise would be.

It's been pretty well demonstrated that a private consortium can develop a large infrastructure project in less time than governments' traditional procurement processes permit. Private teams typically use the design-build approach, under which a single team works together throughout the project, rather than the typical public process of separate competitions for the design stage and the construction stage. Design-build compresses the overall schedule, and it reduces change-orders during construction, both of which reduce overall development costs. Toronto's innovative international airport terminal was developed in just 30 months, compared with the estimated seven years it would have taken the government to do the job.

Another potential benefit is innovation. California's first private toll road of the twentieth century, which opened last winter in Orange County, is the world's first toll road with no toll booths whatsoever - all toll collection is done via radio-frequency electronic 'toll-tags'. Moreover, this is also the world's first toll road to charge time-varying market prices - the greater the demand for using the road, the higher the price at that hour of the day, so as to guarantee users the promised time savings by limiting the demand to the maximum number of cars consistent with the road's design speed.

Finally, one of the major benefits of the private franchise approach is the transfer of risk from taxpayers to investors. Governments all too often build large, costly public works projects that end up losing money. Perhaps a politician wanted a monument that would carry his name, or perhaps it was considered important to build a project that would 'create jobs' in a particular region. But all too often, taxpayers get stuck holding the bag for a project that is too large for the actual demand - consider the \$4 billion Denver Airport. A private consortium cannot get financing for an infrastructure project that does not 'pencil out' as making sense economically. And if the investors end up guessing wrong despite all the built-in cautions, it is they who end up bearing the risks and costs, not the taxpayers.

5 Competitive Contracting (Outsourcing)

The third major type of privatisation is for government to do just as every business does when it comes to various services - namely, to decide whether it is more cost-effective to produce the service in-house or to outsource it to somebody who specialises in that field. Competitive contracting is becoming an established way of doing business among US state and local governments, especially with regard to in-house services such as maintenance, many public works services, and the operation and management of various types of facilities.

Competitive contracting is the one area of privatisation in which the United States leads the world (though it is also found in Britain, Denmark, France, Japan, and a number of other countries). Britain, in particular, has moved most rapidly to institutionalise the practice. Its Local Government Act of 1988 mandated that local governments use a competitive process to obtain six basic services: garbage collection, street cleaning, food services, janitorial services, grounds maintenance, and fleet maintenance. It has since been expanded to various types of professional services. The law does not require that the private sector get the job; only that genuine competitions be held (putting in-house workforces against outside bidders) at regular intervals. This type of competition has now been institutionalised in Phoenix, Arizona and Indianapolis, Indiana.

Competitive contracting saves money for two main reasons. First, there are often economies of scale in producing public services. But the size of a particular city or county is seldom the optimum scale for most of the services it needs. If a city or state is so large that a single provider has dis-economies of scale, the answer is to use a number of smaller, lower overhead providers. On the other hand, if a city is too small for cost-effective operation of, say, a wastewater plant, the answer can be to contract with a plant that serves a number of jurisdictions.

Even more important is the second reason that outsourcing saves money: competition works better than monopoly. Any organisation that has a permanent, guaranteed monopoly on providing a service tends to take the job for granted. It simply does not have the incentives for continually rethinking how to best mix people, procedures, and technologies to do the work more productively. That kind of incentive is ever-present in a system in which the organisation must regularly compete to be the service provider.

We now have some two decades worth of empirical evidence in the United States and Canada that competitive contracting saves money, proving the validity of the theory I have just presented. We routinely see cost savings of 20 to 30 percent, and sometimes 40 to 50 percent. These savings have been documented by academic researchers, think tank researchers, and government researchers in numerous studies, in all types of public services, from ambulance operations to wastewater treatment plants.

One of the most dramatic examples, in fact, concerns wastewater treatment plant operations. Two years ago Indianapolis asked a Big 6 accounting firm to assess the potential savings if they were to privatise the operations of their two advanced wastewater treatment plants. The firm's report concluded that these were among the best-run plants in the nation, and estimated that the cost savings from private operation would probably be no more than 5 percent - hardly enough to justify the time and cost of holding a competition.

But Mayor Steve Goldsmith, having already saved tens of millions of dollars a year via competition, decided to proceed anyway. And the winning bid promised over 40 percent annual savings. Many people were sceptical of that promise, but we recently reviewed the first year report on this, the largest-yet wastewater operations and maintenance contract in the United States. The firm succeeded in reducing the workforce from 328 to just 176, which cut the budget from \$30 million to just \$17.6 million. That's a savings of 42 percent.

Now you might expect that running the plants with half the staff would lead to cutting corners. Not so! The number of times effluent standards were exceeded was seven during the final year of city operation - but only one during the first year of contract operation. The number of accidents was 54 the previous year - but only 18 after the transition. And the number of grievances plummeted from 38 during the final year of city operation to just one during the first year of private operation.

Nor was this success achieved on the backs of the employees. First of all, virtually the entire workforce now running the plants (except for two top managers) are former city plant operators - and their pay is comparable to what they were getting before. Of the 126 displaced workers, 53 percent were placed in vacancies in other city jobs and 34 percent took advantage of generous outplacement assistance to find private-sector jobs within eight months. Another 8 percent found private jobs on their own, and 4 percent retired. Bottom line: nobody was made jobless by this dramatic instance of cost saving.^{vi}

One footnote to this story concerns the union that represented the city workers. The AFSCME affiliate, of course, argued against the privatisation. But once it was an accomplished fact, they set about organising the newly private workers and gained acceptance by the company as their bargaining agent. As far as we know, this is the first time AFSCME has agreed to represent private-sector employees. As such, it may represent an important indication that times really are changing.

6 Applying Privatisation to Municipal Infrastructure

^{vi} "Indianapolis Advanced Wastewater Treatment Facilities: White River Environmental Partnership One-Year Summary", Indianapolis, February 1995.

We have seen that there are three principal modes of privatisation: divestiture, long-term franchises, and competitive contracting. How might municipal officials assess their current infrastructure responsibilities and determine which mode (if any) is most suitable for improving that function? A useful principle to keep in mind here is Professor E S Savas's aforementioned distinction between 'steering' and 'rowing'. All municipal infrastructure is concerned with the public interest, but that fact alone does not decide the issue. Securing the public's interest requires that government make policy for municipal infrastructure, but does not, *per se*, require that government finance, build, or operate it. The latter depends more on pragmatic considerations of cost, effectiveness, and political and economic feasibility.

(a) *Transportation Infrastructure*

Roads

Municipal governments have clear responsibilities for urban mobility, generally implemented via the provision of roads and bridges on the one hand and some form of transit system on the other. But the exact role of government varies greatly from country to country and from city to city.

We have no examples of a fully privatised (i.e. privately owned) municipal road system. The apparent impracticality of charging all users and excluding those who do not pay has precluded consideration of this form of privatisation. Privately financed and owned roadways have been confined to major bridges (e.g. Detroit's Ambassador Bridge), tunnels (Hong Kong's Western Harbour Crossing), and major urban and inter-city expressways (Melbourne's CityLink). Interestingly, the technology of electronic toll collection is fast removing the barriers to a fully privatised municipal roadway system. Cambridge, England, for example, has been experimenting with a road-pricing technology that employs meters in each vehicle that charge continually, with rates depending on traffic conditions. Road access presumably would be limited to vehicles making use of such meters. Toronto's Highway 407, now under construction, will be the world's first toll road to employ 'open-road' electronic tolling. Vehicles with electronic tags will pay a discounted rate and all others will pay the standard rate, billed to them based on a video recording of their licence plate number. This approach was selected because the urban expressway design required numerous exits and entrances, making the cost prohibitive if toll booths had been constructed at each one. These two examples suggest the potentially wider applicability of direct pricing (and therefore) private ownership for urban roads in the twenty-first century.

Current practice suggests that more cities could follow the example of the small but growing number which are choosing to contract competitively for various roadway services. For example, the Canadian province of British Columbia in 1988 decided to contract out all maintenance on its 29,000 miles of highways and over 2,600 bridges. The transport agency encouraged managers and workers in each of its 28 districts to form companies and bid for the initial three-year contracts. Ten of the 28 contracts were won by such firms. Of the province's 2,900 maintenance workers, 200 took early retirement, 200 remained with the department in other functions, and the balance were either part of the newly created firms or were hired by the other winning

bidders. Savings averaged 7.5 percent over the first three years.^{vii} More recently the state of Massachusetts achieved 35 percent savings via contracting out highway maintenance.^{viii}

Another example of competitive contracting occurred last year in Florida. The Orlando-Orange County Expressway Authority contracted out all toll-collection operations on its 80-mile tollway system. The contract is expected to save 25 percent of the agency's previous operating costs for this function.^{ix}

Urban Transit

New Zealand is well ahead of the United States in making use of competitive contracting in urban transit, thanks to a 1990 Act of Parliament that requires such a policy. Competitive transit contracting is also being implemented in most of the major urban areas in Australia, including Adelaide, Brisbane, Melbourne, Perth, and Sydney. In Europe, 45 percent of Copenhagen's and 50 percent of Stockholm's bus service is now contracted competitively, with plans to increase this to 100 percent in both countries.^x

The most extensive transit privatisation has occurred in England. All bus services outside of London were deregulated in 1986 by an Act of Parliament, and local authorities were encouraged to divest these operations. Today, more than 75 percent of these bus services are provided without subsidy, by both public and private operators. Non-commercial services are competitively contracted, based on the least amount of subsidy required. Operating costs per vehicle mile have been reduced by 45 percent. Within London, more than half of all bus services are now competitively contracted, and the farebox recovery ratio has climbed from 60 percent in 1985 to 89 percent in 1995.

Obviously, the degree to which urban transit can be provided commercially depends upon such factors as land-use patterns and per-capita auto ownership. New Zealand more closely resembles the United States than the United Kingdom in these respects, hence outright divestiture of transit systems may not be feasible in all countries. The present policy of competitive contracting would appear to be the best privatisation mode in this sector.

(b) Solid Waste Collection and Disposal

The cost-effectiveness of garbage collection is one of the most-researched issues in municipal policy. The largest and most sophisticated study was funded by the US National Science Foundation in the 1970s. Surveying nearly 1,400 communities, the

^{vii} White, Andrew G, "Different Road to the Same Place", *Engineering News-Record*, 5 October 1992.

^{viii} "Doing More with Less", Boston, Massachusetts Department of Transportation, January 1994.

^{ix} Worrall, Harold, "Toll Collection Privatisation: Orlando-Orange County Expressway Authority", and Reinhardt, William G, "Public Owner Needs Private Flexibility", in *Public Works Financing*, September 1995.

^x Cox, Wendell, Love, Jean and Newton, Nick, "The Expansion of Competitive Tendering in International Urban Transport", *The Public Purpose, Internet Public Policy Journal*, 10 May 1996.

Columbia University researchers found that the most cost-effective arrangements were competitive contracting and franchises - as opposed to municipal collection or competing private collectors.^{xi} These results were subsequently confirmed in a number of other North American studies, including a similar nationwide study in Canada. In both the United States and Canada, the fraction of the population served by privately contracted garbage collection increased steadily during the 1980s and early 1990s, with a majority of the US population now being served by such firms. During the 1980s, competitive contracting of garbage collection also advanced significantly in England, thanks to the aforementioned Local Government Act of 1988, which included it as one of the services for which local authorities must use competition.

The United States has also seen a significant move toward private development, ownership, and operation of solid waste disposal facilities. The National Solid Wastes Management Association estimated that as of 1995 the private sector accounted for at least 50 percent of US landfill capacity. The two largest nationwide garbage collection firms own three-fourths of these landfills, and they and the other seven landfill owners also operate some municipally owned landfills under contract.^{xii}

The other principal waste-disposal alternatives in the United States are materials recovery facilities (MRFs) and waste-to-energy (WTE) plants. Some 68 percent of MRFs are owned by private firms and 78 percent are operated by such firms, according to Government Advisory Associates.^{xiii} The private sector owned 44 percent of WTE plants and operated 66 percent as of 1994, but this tendency toward privatisation will increase over time, since 62 percent of planned WTE facilities are to be privately owned and 92 percent privately operated.^{xiv} The majority of the (expensive, high-tech) privately owned WTE plants have been developed under long-term franchise or concession arrangements with municipalities. To make it easier to finance such projects, cities frequently enacted measures requiring all garbage collected within their jurisdiction to be disposed of in the plant - a measure which was ruled unconstitutional by the US Supreme Court in 1994. Subsequent congressional efforts to partially overturn this decision failed in 1995.

(c) Water and Wastewater

A number of factors will drive the market for privatising water and wastewater over the next decade in most developed and rapidly developing countries, including fiscal stress; stricter environmental compliance standards, which will require substantial additional capital investment over the next decade; a growing privatisation industry, which offers management and technical expertise, as well as access to capital; and growing experience in implementing privatisation, in both the public and private sectors.

^{xi} Savas, E S and Stevens, Barbara J, *Evaluating the Organisation of Service Delivery: Solid Waste Collection and Disposal*, New York, Columbia University Graduate School of Business, 1977.

^{xii} Scarlett, Lynn, "Solid Waste and Recycling", in *Privatization 1995*, Los Angeles, Reason Foundation, 1995.

^{xiii} Government Advisory Associates. "The Materials Recycling and Processing Industry in the United States", Washington DC, 1995.

^{xiv} Scarlett, Lynn, "Solid Waste", in *Privatization 1994*, Los Angeles, Reason Foundation, 1994.

From our vantage point as the leading US research center and clearinghouse on privatisation, we see six important trends in water and wastewater privatisation, all of which provide evidence of an expanding market.

The first of these is the growth in contracts to operate and maintain existing facilities. In the United States over the past decade, the number of these operations and maintenance (O & M) contracts has grown tenfold, from around 62 to over 600. Of these contracts, about 85 percent have been to operate wastewater facilities, with the balance for water-supply facilities. Industry projections show a doubling of the number of contracts between 1994 and 1998. Also significant is the fact that major cities such as Houston and New Orleans have joined the trend, and even New York City is considering contracting out the operation of several of its wastewater plants.

A second factor is the increased scope of O & M contracts. Until several years ago, virtually all O & M agreements encompassed the operation of a single plant. Increasingly, however, many of today's contracts go well beyond that. Several dozen smaller US communities have contracted out the operation and maintenance of their entire water and wastewater systems, including plants, lines, and meter reading. Until 1995, this trend was confined to communities of 50,000 or less, but last year the Puerto Rico Aqueduct and Sewer Authority signed a five-year O & M contract for its entire water and wastewater system, encompassing 200 water plants, 75 wastewater plants, and 12,000 miles of distribution lines.

Another recent trend, especially applicable to small communities, is the outsourcing of the entire public works function to a single firm. Contracts in small midwestern and southern communities encompass not merely water and wastewater but street maintenance and garbage collection. Yet another development, in those cases where federal tax regulations can be gotten around, is longer-term O & M contracts. We are beginning to see 10 and 20-year contracts in certain cases, rather than the standard five-year contract.

The sale of water and wastewater systems is also now on the agenda of a number of cities. Last summer Franklin, Ohio became the first US community to sell a wastewater plant that had been funded in part with federal grants, making use of the provisions of Executive Order #12803. Now Wilmington, Delaware is in the final stages of doing likewise, seeking \$52 million for its 90 mgd wastewater plant. Last summer the proposed buyout of the Santa Margarita Water District's operations by an investor-owned utility became politically controversial and was voted down by the local body with jurisdiction over the issue, but the idea continues to spread. Other communities which have begun to consider selling water or sewer systems include Kansas City, Milwaukee, and St Louis.

Another very important trend, not confined to the United States, is the entry of major British and French water firms into the world market. France's Lyonnaise des Eaux and Compagnie Generale des Eaux are the world's two largest and most sophisticated water/wastewater service providers. The world's third, fourth, and fifth largest providers are the leading UK firms, which have become major players worldwide since their privatisation in 1989. Today, of the seven largest US water and wastewater firms, five are either owned by or are involved in joint ventures with a major British or French firm. The major British and French firms have taken the lead in going after

major long-term concessions in South America, Southeast Asia, Australia, and Eastern and Central Europe. What this means for the future is a considerably broader range of experience, technological sophistication, and access to capital than has been typical of most countries' water and wastewater industries.

One other, very recent, US trend is the creation by the US Conference of Mayors of a new organisation devoted to expansion of public-private partnerships in water and wastewater, called the Urban Water Institute. Its two principal functions are to educate local officials on the available privatisation options, and to remove federal barriers to increased use of public-private partnerships by municipalities.

7 Conclusion: New Options for Municipal Infrastructure

This brief survey has reviewed privatisation options available to municipal governments in several main-mission areas of public works. There is now ample worldwide experience to demonstrate that some of these functions (such as water supply) can be carried out as investor-owned utilities, subject to whatever regulatory oversight is normally applied to such utility monopolies. Many kinds of costly new public works, if they can generate a healthy revenue stream (toll bridge, wastewater treatment plant, waste-to-energy plant) can be financed, developed, and operated by the private sector, under a long-term concession arrangement. And nearly every kind of public works service can be delivered by private firms selected via competitive contracting.

These various privatisation modes give municipal officials important new tools for doing their jobs. The evidence suggests that these techniques produce strong incentives for both economic efficiency and responsiveness to users - incentives that are seldom as strong in traditional municipal service provision. In nearly every case, by the very nature of public works, there remains a role for government under any of these alternatives: as the regulator of a utility monopoly, as the overseer of a long-term franchise, or as the contract administrator of outsourced service delivery. In each case, the role of government shifts from that of direct service provider to that of policymaker and regulator. Thus, in the field of public works, privatisation is not the equivalent of laissez-faire. Rather, it is a means for reinventing the role of government.