

Multi-Utility Deregulation Report Global 2008

Ed 4 2008



The Multi-Utility Deregulation Report Ed 3 2008

Introduction

This report contains up-dated information on deregulation and privatisation of the energy and water industries, each sector up-dated to 2008. Progress continues in deregulating most markets around the world but it is a mixed picture, with some successes but generally the situation in 2008 is less satisfactory than initially hoped for. In July 2007, the final stage of market opening according to the EU Directive was reached. Almost all of the original EU 15 countries and most of the new entrants opened their markets 100%. As a region, only the EU is moving systematically in a co-ordinated manner, while other markets are developing new structures on an individual country basis. The EU Commission has been monitoring progress and in February 2006 published a critical report drawing attention to a number of aspects in which progress towards liberalisation is considered unsatisfactory and new rules are being implemented against strong resistance from the European Energy Giants. It may be many years before the optimum situation is reached. This comes at a time when the European energy sector is at a crossroads, with ever increasing demand and some uncertainties about supply, especially from Russia.

A development in the global market in recent years has seen the emergence of a second generation of global investors, regional companies looking outside their immediate sphere of influence. The first generation of global investors were European and American companies, notably E.ON, RWE, Suez, Vivendi, Endesa, Iberdrola, EDF, Enel, Tracetebel and other large European companies. The American investors included TXU, AES, PSEG, AEP, CMS, Duke, Mirant and others. Many of the American companies have withdrawn or reduced their overseas investment. Among the new regional groupings are several large Asian companies, which are now looking outside their national markets.

There has also been a trend for utilities to withdraw from non-core business; for example, RWE is in the process of divesting its water interests, which included Thames Water, now the third largest global water company, to concentrate on its energy business. There has also been an increasing number of reversals of privatisation or concession contracts, especially in Latin America and Africa, where there have been some high profile cancellations of private management contracts in the water and waste sector and some criticism of privatised industry in the electricity sector. These have mostly focused on price rises.

141 PPI projects have been cancelled or were in distress, totalling \$46.4 billion by the end of 2006. 62% of the cancelled investment (\$28,659 million) was for projects in Latin America and 27% (\$12.5 million) in Asia Pacific. The cancellations have not all been one sided, they have been instigated either by governments, by popular opposition or by the concessionaires. There is an escalating degree of opposition, mainly regarding privatisation in the developing countries.

Outline of the report

- The Multi-Utility Deregulation Report outlines the progress of market deregulation and privatisation in every continent and the situation of each of the countries
- The report provides an essential guide for those needing to understand the progress, the changes that have occurred and the future impact of deregulation and privatisation in the global energy and water markets

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2. World Survey of Privatisation and Deregulation, October 2007

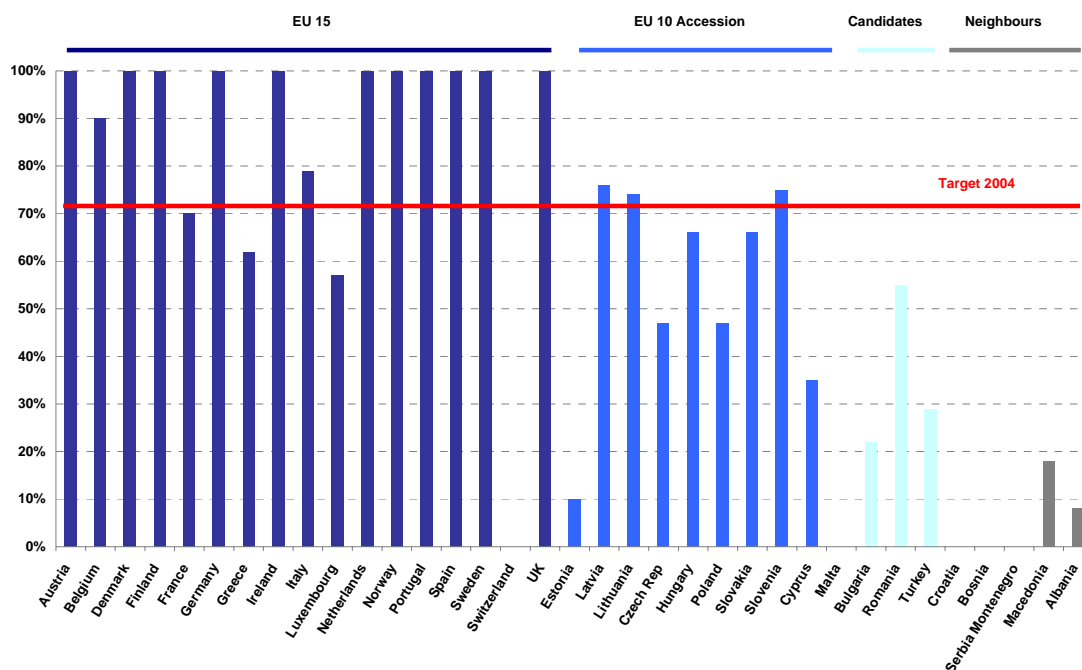
	Ownership			Degree of Market Opening		
	State / Municipal	Mixed	Private	100%	Partial	Retail Prices Set
Western Europe						
Austria		✓			100%	
Belgium		✓			87%	
Cyprus	✓				35%	
France		✓			100%	
Germany		✓			100%	
Greece		✓			100%	
Ireland		✓			100%	
Italy		✓			100%	
Luxembourg		✓			100%	
Malta	✓				0%	✓
Netherlands		✓			100%	
Portugal		✓			100%	
Spain			✓		100%	
Switzerland		✓			0%	✓
United Kingdom			✓		100%	
The Nordel Market						
Denmark		✓			100%	
Finland		✓			100%	
Iceland	✓				0%	✓
Norway		✓			100%	
Sweden		✓			100%	
Eastern Europe and CIS						
The Baltic Countries						
Estonia		✓			12%	
Latvia		✓			76%	
Lithuania	✓				74%	
The Balkans						
Albania	✓				8%	✓
Bosnia-Herzegovina	✓				100%	
Bulgaria		✓			100%	
Croatia		✓			7%	✓
Macedonia	✓				18%	✓
Serbia Montenegro	✓				16%	✓
Central Europe						
Czech Republic		✓			100%	
Hungary		✓			66%	
Poland		✓			100%	
Romania		✓			100%	✓
Slovakia		✓			100%	
Slovenia		✓			100%	

3. Europe

Overview

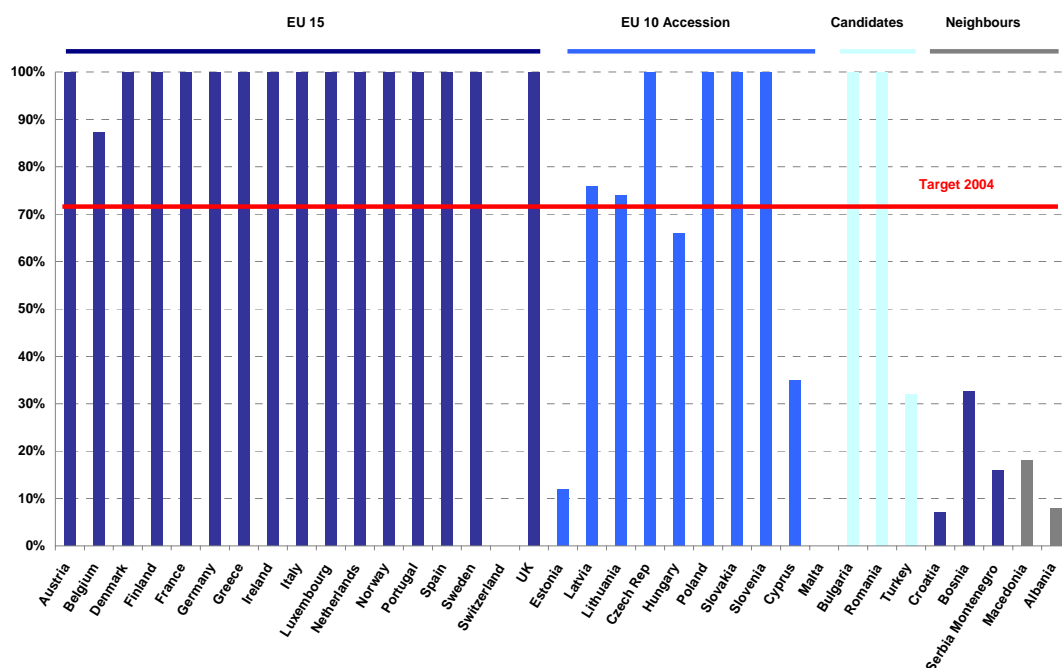
In July 2007, the final stage of market opening according to the EU Directive was reached. All of the original EU 15 countries opened their markets 100% except for Belgium which was 87% open. Norway, Poland, Slovakia, Slovenia, Bulgaria and Romania were fully opened. Switzerland and Malta have not opened their markets at all and the degree of opening in the other countries of Europe ranged from Albania with only 8% open to the highest, Latvia with 76% open. Comparison of the two charts below demonstrates the rate of progress, comparing the situations in 2006 and October 2007.

Table 3.1: The extent of market opening in the EU and neighbouring countries, May 2006



Source: Regulators 2006

Table 3.2: The extent of market opening in the EU and neighbouring countries, October 2007

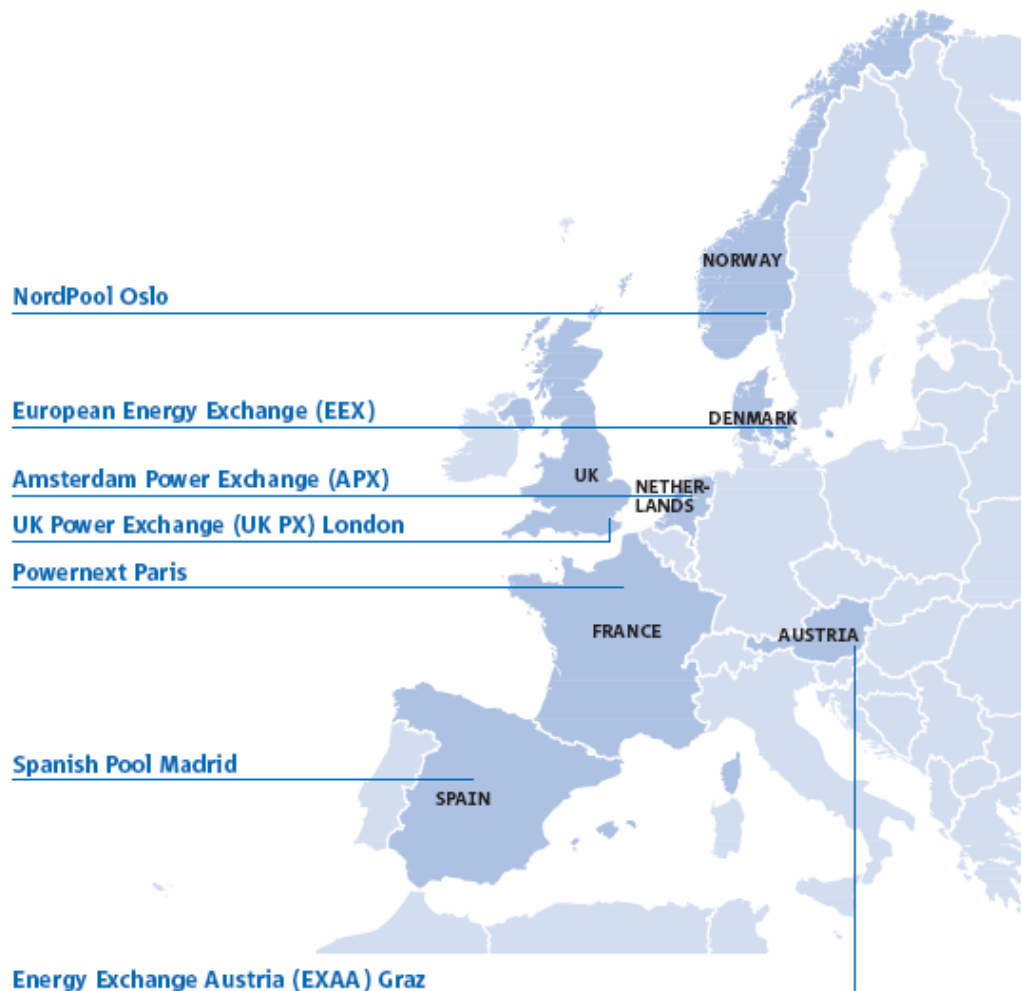


Source: Regulators 2007

European energy exchanges

There are seven major electricity exchanges in Europe; in Scandinavia (Norway and Denmark), the UK, the Netherlands, France, Austria and Spain.

Figure 3.1: Major electricity exchanges in Europe



Source: RWE

NordPool

- Launched: 1996 (Norway commenced in 1992)
- Participants: over 330 participants worldwide (including producers, distributors, industrial companies, brokers and clearing customers)
- Trading nature: balancing market, day-ahead, financial futures, forwards and options, CO₂
- OTC clearing

European Energy Exchange (EEX)

- Launched: merger of LPX and EEX in 2002
- Participants: 133 companies from 16 countries
- Trading nature: day-ahead, hourly contracts, blocks (base and peak), futures, auction market for spot contracts, CO₂, options, physical futures for Germany and France
- OTC clearing

The provincial companies supply power to a large proportion of final customers and operate regional distribution networks.

The provincial electricity companies supply a large number of small local distribution companies.

Table 3.3: ESI characteristics in Austria

<p>Largest generator by capacity - 45%</p> <p>Top 3 producers by capacity - 75%</p> <p>VEG, Verbund Elektrizität-serzeugung GmbH - 45%</p> <p>EVN Energie Versorgung Niederösterreichische - 13%</p> <p>STEWAG-STEG, EAG OÖ, KELAG, TIWAG, Vorarlberger Kraftwerke AG, BEWAG and Linz AG</p> <p>Large numbers of cross-holdings are a feature of the Austrian electricity industry. The generation sector is (from a national point of view) highly concentrated</p>
<p>Large companies present in market</p> <p>Largest - Verbund</p> <p>Other significant - RWE, E.ON, EDF</p>
<p>TSOs - 3</p> <p>Legally unbundled</p> <p>Verbund-Austrian Power Grid GmbH (APG) - 220/380 kV</p> <p>TIRAG, Powergrid-Tiroler Wasserkraftwerke AG</p> <p>VKW - Netz and TIRAG are in the German not the Austrian control block</p>
<p>Network access - Regulated third party access</p>
<p>Monitoring of wholesale / balancing market - Regulator</p>
<p>Import capacity as % of installed capacity - n/i</p>
<p>Number of DNOs - 137</p> <p>Legally unbundled</p>
<p>Regulator:</p> <p>E-Control, Elektrizitäts-Control GmbH</p> <p>Ex-ante</p>
<p>Clearing and settlement companies</p> <p>APCS, Austrian Power Clearing and Settlement Co, (responsible for Verbund sector, 90% of market)</p> <p>A&B Ausgleichsenergie und Bilanzgruppenmanagement (responsible for TITAG and VKG UNG sector)</p>
<p>First market opening 100% - 2001</p> <p>Market opening 2007 - 100%</p>
<p>Wholesale market relies on bilateral negotiation, the Austrian Energy Exchange (EXAA) and the German Power Exchange (EEX). The Austrian and German electricity wholesale markets are closely interlinked and can be perceived as one price region</p>
<p>How charges are set - Market</p>
<p>Dominant single generator within balancing area - Yes</p>
<p>Number of active licensed suppliers - 144</p>
<p>Number of suppliers independent of DNO - 19</p>
<p>Top 3 suppliers' share - 67%</p>
<p>Number of suppliers with share > 5% - 4</p> <p>In 2001 five of them joined their trading and retail business into the Energieallianz Austria GmbH (EAA) and now dominate the end customer market</p>
<p>Switching since market opening</p> <p>Large eligible industrial customers - 22%</p> <p>Small commercial customers - 3%</p>
<p>Eligible customers 2007 - All</p>
<p>Number of customers 2007 - 3,849,800</p>
<p>Exchange - EXAA Austrian Energy Exchange, Graz (full electronic trading platform via Internet)</p>
<p>Generating capacity 2007 - 19,711 MW</p>
<p>Transmission line length (110 kV) - 9,664 km</p> <p>Distribution line length - 173,361 km</p>

3.0 World survey of gas privatisation and deregulation

Table 3.1: World survey of gas privatisation and deregulation

	Gas industry ownership	Degree of gas market opening
North America / NAFTA		
United States	Private	Partially deregulated
Canada	Mixed Crown, Province, private	Partially deregulated
Mexico	Mixed state and private	Partially deregulated
Western Europe		
Austria	Mixed state, municipal, private	100% to retail customers
Belgium	Mixed municipal, private	100% to retail customers
Cyprus	No consumption of natural gas, only LPG	
France	Mixed state and private	100% to retail customers
Germany	Mixed municipal, private	100% to retail customers
Greece	State owned	60% open, 100% in 2009
Ireland	Mixed state and private	100% to retail customers
Italy	State company has been unbundled and privatised	100% to retail customers
Malta	No consumption of natural gas, only LPG	
Netherlands	Unbundled and privatised	100% to retail customers
Portugal	Partial privatisation	Has not met EU Directive
Spain	Private	100% to retail customers
Switzerland	Private , municipal	Prices se by discos
United Kingdom	Private	100% to retail customers

Continued on next page

10.0 Indian Sub-Continent

Bangladesh

Overview

Bangladesh has small reserves of oil and coal but potentially very large natural gas resources. Twenty two gas fields have been discovered in Bangladesh. Fifteen of these have been brought into production. Natural gas is Bangladesh's only significant source of commercial energy. Natural gas exports are controversial within Bangladesh as many people feel that the gas resources should first be used for domestic purposes.

Major foreign energy companies active in gas exploration and development in Bangladesh include Shell, and Unocal, which operates in Bangladesh through its wholly owned subsidiary, Unocal Bangladesh, Ltd.

Bangladesh does not export natural gas. Some private companies in Bangladesh import LPG in cylinders. These companies have their own LPG storage facilities in their bottling plants. There is currently no LNG import or LNG storage facilities.

Besides foreign energy companies, natural gas in Bangladesh is being produced by two subsidiaries of state energy company Petrobangla Sylhet Gas Fields Ltd. and Bangladesh Gas Fields Co. Ltd. These two companies produce gas for domestic consumption. More than 80% of gas is consumed for power and fertiliser production, and the remainder by industry and households.

Transmission and distribution

Gas is supplied by state-owned distribution companies. Titas Gas Transmission and Distribution Company Limited (TGTDC), Bakhrabad Gas Systems Limited (BGSL), Jalalabad Gas Transmission and Distribution Systems Limited (JGTDSL) are the major gas distribution companies and Paschimanchal Gas Company Limited (RPGCL) has commenced CNG supply in Bangladesh. At present there is no private sector company operating gas distribution pipeline systems. IOCs supply gas to the domestic grid. The distribution companies are currently supplying gas in franchise areas granted by the Government, Petrobangla or BERC.

Petrobangla distributes gas to various customers through its marketing companies. At present there are 4 marketing companies operating in their respective franchise areas.

Deregulation and reform

The Bangladesh Energy Regulatory Commission, BERC, is the regulator.

Bangladesh's natural gas demand is expected by some independent analysts to grow by around 6% annually over the next two decades. Potential uses for natural gas in Bangladesh include petrochemicals, compressed natural gas (CNG) for vehicles, power generation, and fertiliser.

While the majority of large enterprises remain under state control, Bangladesh has been moving towards a market-oriented economy since the mid-1970s. In an attempt to diversify its economy away from agriculture, industrial development has been made a priority.

Bangladesh is attempting to attract foreign investment, and has established export processing zones (EPZs) in Chittagong (the country's major port), Dhaka and Comilla. Exports of natural gas could provide an additional revenue source, but the issue remains controversial, and no final decision has been made. Although cotton textiles and garments account for about 80% of Bangladeshi exports, the impact of the end of textile quotas under the Multi-Fiber Arrangement in January 2005 has been moderate.

Continued on next page

Bangladesh, Continued

Deregulation and reform (continued)

Bangladesh's Ministry of Energy and Mineral Resources (MEMR) has overall responsibility for the country's energy sector, with policy formation and investment decisions under its control. Within MEMR, the "Power Cell" acts as a single point of contact to facilitate the electricity reform and restructuring process, such as development of Independent Power Projects (IPPs).

There are no statutory regimes prescribing terms of service for transportation of gas. The transportation of natural gas is usually covered under the terms of the PSC or subsequently fixed by the government.

Prices for distribution services are regulated under the gas supply contracts signed between a gas distribution company and the consumer. The prices are capped by the government.

The gas companies under Petrobangla operate practical monopolies. There is hardly any competition between the companies and therefore no requirement for laws to regulate anti-competitive practices.

Any company or individual with the required license or permission can engage in the business of supply and trading of gas.

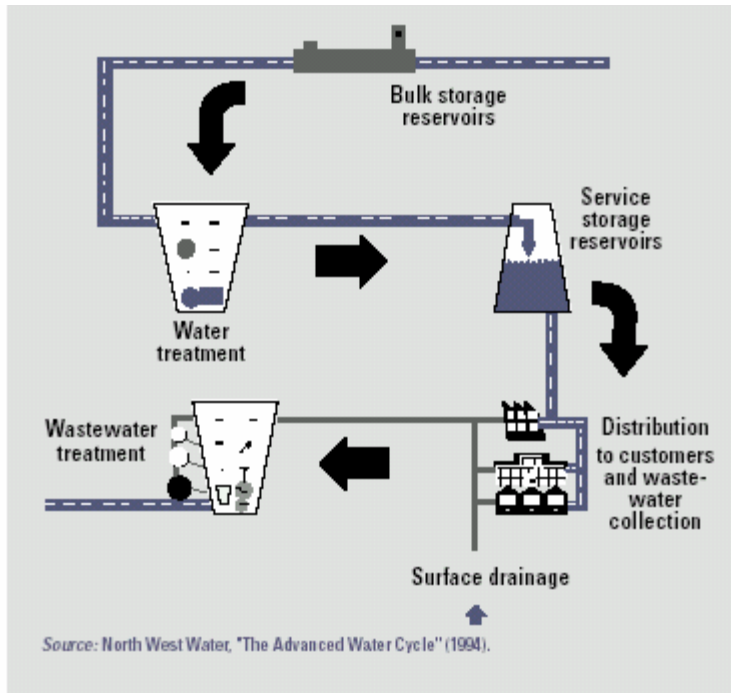
2.4 PUPs - Public-public partnerships and ‘twinning’ in water and sanitation, Continued

Main components of water and sewage systems

In some industries in which networks are important; gas, electricity, and telecommunications, governments have put limits on the natural monopoly by separating production from transmission through the network. Competing electricity generators, for example, can send power to consumers using one network.

In the water sector the problem is complicated by the absence of a national water grid. Nevertheless, the stages in delivery of water and sewage include a number which are contestable and where competition can be introduced, such as engineering services, metering, connecting new users and other activities.

In 1998 the UK government addressed this with the Competition Act, which took effect on 1 March, 2000. This covered areas in which competition is enforced by the regulator, including pricing, common carriage, contestable services, access to water resources, connections to water mains, laying of mains and anti-competitive agreements. Customers can appeal to the regulator against infringements of competition in these areas.



Industry fragmentation

The water industries around the world vary greatly in their degree of concentration. The United States has 55,000 water companies and in Europe the average numbers of companies per million inhabitants ranges from 0.13 in France to 88 in Germany.

Country	Number
Germany	88.0
Netherlands	4.4
Italy	2.3
England and Wales	0.7
France	0.13

Continued on next page

World survey of water & waste deregulation, Continued

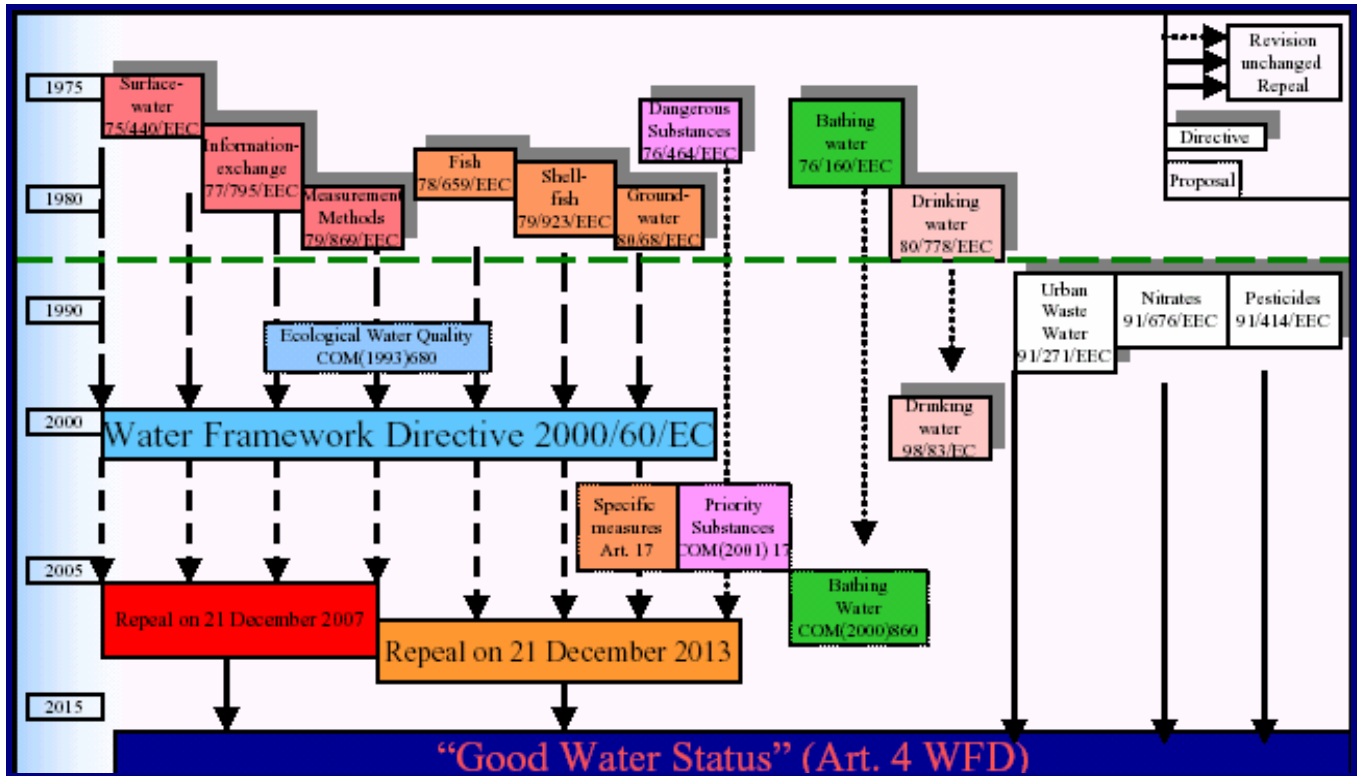
The failures of privatisation (continued)

	Assets	Operational Model
Guinea	Publicly owned.	Africa's first PSP concession, but terminated.
Guinea-Bissau	Publicly owned.	PSP exists.
Liberia	Publicly owned.	Public.
Mali	55% state, 45% private owned. Independent regulator exists.	PSP exists.
Niger	Publicly owned. Independent regulatory authority.	PSP exists.
Nigeria	Publicly and provincially owned.	Some private suppliers used.
Senegal	Publicly owned.	PSP introduced.
Sierra Leone	Publicly owned.	PSP exists.
Togo	Publicly owned.	Public.
SADC Southern Africa		
South Africa	Public and municipal ownership.	PSP exists.
Angola	Publicly owned.	EDP PUP.
Botswana	Publicly owned.	Possible privatisation.
Lesotho	Public provision.	PSP under consideration.
Madagascar	Public- ownership.	Ondeo have a concession.
Malawi	Publicly owned.	PSP exists.
Mozambique	Publicly owned. Independent regulatory authority.	Informal water provision. First PSP concession awarded.
Namibia	Public company.	Private distribution company.
Zambia	Publicly owned. Independent regulatory authority.	Public.
Zimbabwe	Municipally owned.	Privatised but private contractor withdrew.
South America		
Argentina	Mixed public, provincial, municipal and private. Independent regulatory authority.	A lot of privatisation, serving 60% of the population.
Bolivia	Municipally owned. Independent regulatory authority.	PSP exists but many problems occurred. Often cited by activists as example against PSP.
Brazil	27 state companies, 4,974 municipals. Active small private sector providers, 63 small companies in urban areas.	32 private concessionaires. Privatisation to be increased.
Chile	53 regional public and mixed public-private companies. Independent regulatory authority.	All types of PSP. The private sector has 70% of sector income.
Colombia	A free market economy. Independent regulatory authority.	All types of PSP.
Ecuador	Publicly owned.	PSP exists.
Paraguay	Mixed public and private. Independent regulatory authority.	Public and private. Aguateros, small private water companies.
Peru	Publicly owned. Independent regulatory authority.	The industry is still municipally owned although there has been some contentious discussion of PSP. Opposition remains.
Uruguay	Publicly owned. Independent regulatory authority.	Privatisation is now illegal.
Venezuela	Publicly owned.	Some PSP concessions.

Continued on next page

4.1 EU water and waste directives and investment, Continued

Figure 4.1.1: Revision of EU Water Policy



Source: EU Report

Investment

This will not be cheap. A study was conducted for the EU Commission between 1998 - 2000 to estimate the costs and employment linked to the investments necessary for compliance with the EU directives.

Annual expenditures for the directives examined are estimated at €40 billion, equivalent to 0.5% of EU-15 GDP. The investments between 1990 - 2010 will total €260 billion, plus associated operating costs of €15 billion per year.

Over and above these environmental benefits, however, the expenditures are estimated to provide half a million job opportunities per annum, equivalent to 3% of Europe's unemployed.

The study also reached two important conclusions about both the cost and the employment opportunities: There is no simple explanation of cost differences between member states. Higher expenditures occur in the developed parts of the EU, reflecting the extent of environmental pressures, opportunity costs, demand for environmental quality and a variety of country specific factors.

The pattern of job opportunities provided by the directives does not match the distribution of European unemployment. It is unfortunate that areas where unemployment is now highest will attract the lowest level of linked employment opportunities.

Continued on next page

Jamaica

Overview

In January 1999, the Ministry of Water adopted a Water Sector Policy. This policy outlines the current situation and problems within the water sector, defines the objectives of the government to address the issues and sets out the mode of implementation.

Jamaica has made significant progress in providing water services to its people. Across the country, as a whole, the percentage of households with piped water rose from 61% in 1990 to 66% in 1997. Over the same period, the percentage of households relying on water from rivers, springs and ponds fell from 5.7% down to 3.8%, while the use of pit latrines and other types of sanitation declined commensurately.

Unfortunately, the poorest 20% of the population did not share in these improvements. One third of the poorest households rely on standpipes for their water, and 30% obtain their water from untreated sources such as rivers. Only 21% of the poorest households have flush toilets.

The great majority of urban residents have access to safe piped potable water. In the KMA, 97% of households have piped water and in other towns 79% of households have this facility. Urban households without piped water rely predominantly on standpipes. About half the standpipe users in urban areas travel 50 yards or less to fetch water. While coverage is good, reliability of supply to urban households and industrial users is often erratic.

In recent years the National Water Commission has been incurring losses. Currently, it comes close to covering its operating costs but does not generate any surplus which could be used to finance investment and relies on the government to finance new infrastructure. However, competing demands on the government budget mean that this source has not been adequate to provide for the water infrastructure needs of the country.

The Water Policy lays down a series of improvements. Among these the Office of Utilities Regulation (OUR) has responsibility for the approval of fees and tariffs based on prescribed / agreed water quality and service quality standards, minimum standards of sewerage services coverage and other appropriate parameters.

Financing capital costs and private participation

Up to now, most finance for expansion of infrastructure has been provided to NWC by grants from the government. However, the government now intends the sector to access a wider range of sources of finance in the future, which will include:

- Millage (charges levied on consumers in addition to the tariff to fund new projects from which they will benefit)
- Finance provided by the private sector
- Government grants for specific works with high social or environmental value

To relieve the government of the full burden of financing the sector, private investment in new infrastructure and private operation of water services will be encouraged. However, the government will continue to own and/or control, directly or through designated entities such as the NWC, the natural resources and existing infrastructure assets.

Privatisation is regarded as a part of government strategies to secure economic benefits for Jamaica and not an end in itself. Private participation in the Water and Sewerage Sector is expected to bring improvements in the availability, quality and cost effectiveness of services being delivered. The government is investigating the complete range of private options open to it.

Overview, Continued

Figure 12.1: Canadian and US Natural Gas Pipelines



Trans-continental gas transport (continued)

The local distribution companies (LDCs) are regulated by state and provincial regulatory boards or commissions or directly by a provincial government. Gas storage is an important element of the gas transportation system and is located in both producing and consuming regions of North America. When production exceeds demand, usually in the summer season, producers will deliver the excess gas to storage sites and will withdraw it to supplement production when demand is high, usually in the winter heating season. Storage facilities are also used for pipeline load balancing, supply security (e.g. in the event of pipeline rupture) and price risk management.

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