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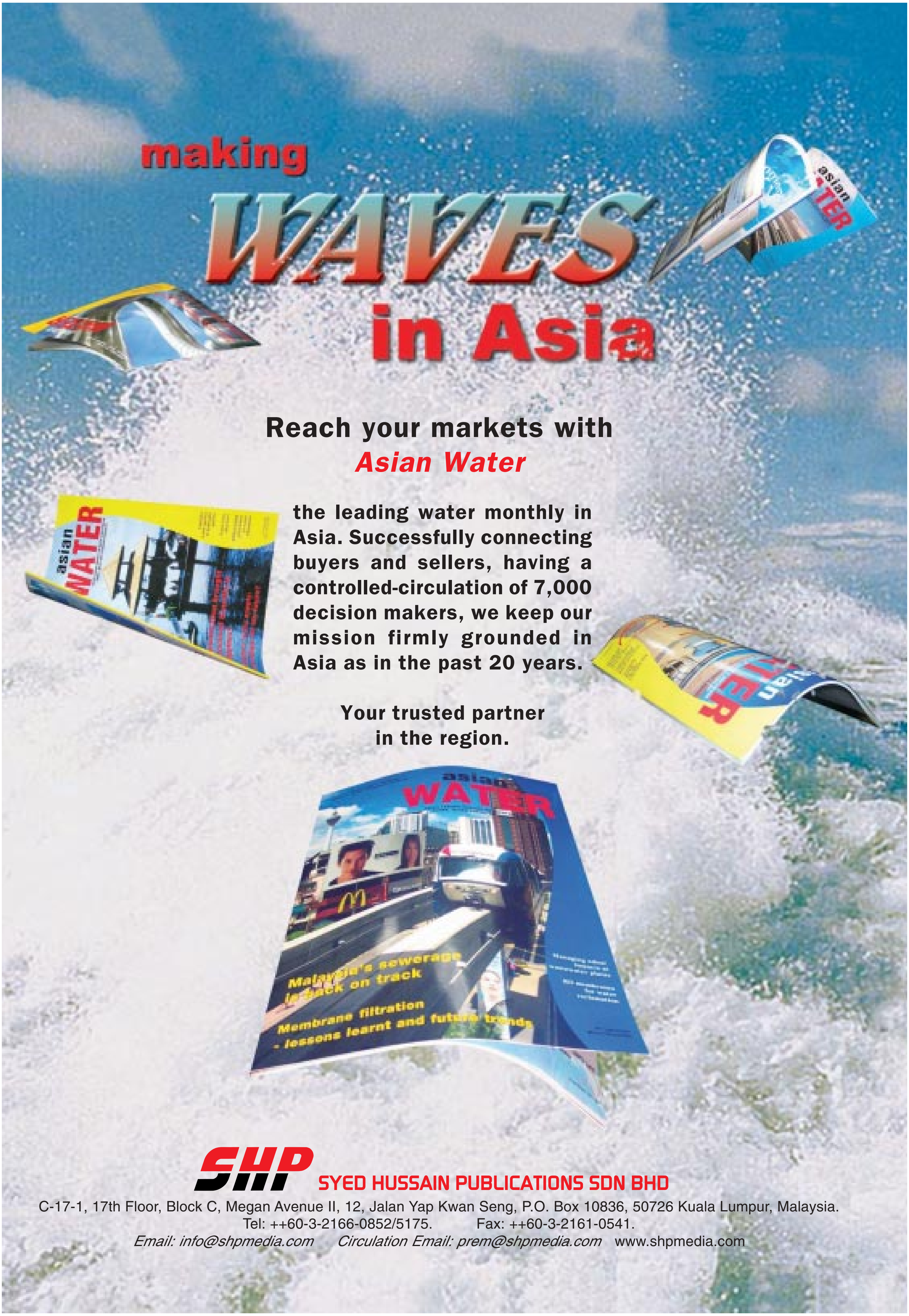
Global Water Intelligence

MARKET LEADING ANALYSIS OF PRIVATE WATER PROJECTS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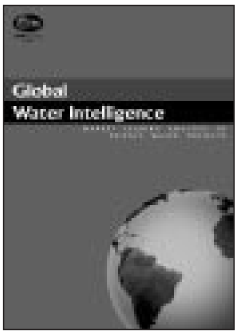


The BOOT in the door

Investment in the water sector is becoming unavoidable. BOOT is booming.

Half our readers will probably open this month's GWI and flick over pages 8, 9 and 10 saying, "Oh no, not more on desalination". The other half – who have some direct interest in the sector – will probably find our coverage essential reading. If you are in that first half of readers, don't skip the preview of our report, Desalination Markets 2005-2015. It has got an important message for everyone involved in the water sector, the world over.

The message is that the marginal cost of producing potable water is rising at an accelerating pace. In some parts of the world this, together with the greater price competitiveness of desalination, creates the conditions for explosive growth of the desalination sector. But for everywhere in the world, higher marginal costs of water production mean more investment in production.

This investment is non-negotiable. It is the same for municipally controlled utilities and privately run utilities; for socialist countries and capitalist countries. It has been put off in the past, but it cannot be deferred any longer. All countries are going to have to spend a greater proportion of their GDP on water infrastructure in the future than they have in the past.

This is the underlying trend against which the retrenchment of the private water sector should be set. Politics has swung against private water as the global economic slow down has put the emphasis on low tariffs and saving jobs. However, as the need for investment becomes unavoidable, the only way to hold tariffs down is by increasing efficiency. That is the opportunity for the private sector.

The foot in the door is the BOOT model for new water production facilities. It guarantees the best price for the utility, it doesn't threaten existing jobs and it doesn't involve direct contact with the end user. In times of stretched public finances, it has the advantage of being off-balance sheet.

We are seeing explosive growth in the water BOOT sector right across the world, with local currency financing models opening up emerging markets such as India (*see p16*), Mexico (*see p19*), and China.

The emergence of a secondary market for BOOT investments (*see p15*) is also spurring the project finance sector ahead, as it enables developers to recycle their investment into new projects.

In time, the foot in the door will provide the way in to participation in the rest of the water distribution system as the rising tariffs required to fund a BOOT scheme lead to greater emphasis on operational efficiency.

After three years of bad news from the water sector, things are looking up. As if to underline the new sense of optimism about the sector, Nomura in Japan has just closed a €180 million specialist water investment fund. The Nomura Global Water Fund will be a mirror fund of Pictet's Global Water Fund, managed by Pictet's Swiss team. We wish it well.

Levantine finance

Algerian risks are a specialists taste.

It must be galling for Lebanon's EBD Group, Black & Veatch, Severn Trent Services and CAT to have an Algerian public body question the colour of their money (*see story p17*). "We were not happy with the fragile [financial] composition of the EBD grouping", commented AEC project manager Badis Derradji, rejecting the consortium's bid for the Skikda desalination project. "It is possible [for a developer] to outsource the project's EPC and O&M functions but not the responsibility for providing equity", he added. While Derradji may not have liked the sound of the consortium's unnamed Lebanese investors, his sentiment is becoming outdated. Technical expertise and the stomach for exotic political and currency risk do not come together so much these days.

And they don't have to. Perhaps AEC should take a look at the structure the IL&FS has used for local currency financings in India (*see story p16*), where the SPV project company is established first, the EPC and O&M contracts are tendered and then money is raised into the company every which way. It might be a more realistic approach than expecting technical experts to take risks that don't suit their balance sheets.

Wish you were here

Is it healthy to want to work in Iraq?

In accordance with company policy, British contractor AMEC has been compiling a database of staff who have expressed interest in working in Iraq (*see story p18*). The decision to go is entirely voluntary, but according to a company spokesman, there has been a "fairly healthy" response to date.

You don't have to be crazy to work at AMEC, but it helps.

Kandahar, CA

The Taliban tendency in California.

California's Coastal Commission says seawater is a public resource that should not be used for private profit. Governor Schwarzenegger is unhappy (*see p21*). He should be glad the Commission can't issue fatwas to protect other public resources. An awful lot of fresh air is breathed in for private gain.

All the news that matters from GWI's correspondents around the world

CHINESE DEALS

China's water sector has been brought into focus after the country's 2003 GDP figures were released. With year-on-year growth of 9.1% reported, economists are concerned that shortages of basic resources – water in particular – could cause an inflationary blow-out.

The pace of investment in China's water sector continues. **Shanghai Industrial Holdings** reported that it had won two of the BOT tenders it was bidding for at its full year results conference. The water treatment plant contracts in **Nanjing** and **Wuxi** are part of the company's $240 million investment programme earmarked for spending in 2004.

Thames' negotiations to take an interest in one of Shanghai's four water companies, **Shanghai Waterworks Shibei Co,** are continuing despite the company's ongoing reassessment of its international strategy. A local magazine reported that the two sides had yet to agree the size of Thames' investment and the share of the equity it would be allocated.

EUROPEAN RESTRUCTURING

Elsewhere within **Thames**, the company's offices in Paris, Milan and Rome have been closed, as the company focuses on its US, UK, German and East European operations. Observers of the restructuring have raised the question of **Pridesa**, the Spanish desalination specialist, and its sister company **Ondagua**.

Thames bought a 75% interest in the two companies from Iberdrola for €94.5 million in 2002. Iberdrola can exercise a put option to sell the remaining 25% at the end of this year.

Will Thames want to put more money into a business that might no longer fit its international strategy well?

The **Spanish water sector** continues to shimmer with uncertainty. After **Esther Klopowitz** indicated that her family company was interested in buying back **Veolia's** interest in **FCC**, **Acciona** increased its interest in the company to 14%. FCC is Spain's second largest water company as well as its second largest construction company. Acciona is the fourth largest construction company.

It will be a complex takeover battle. Veolia owns a 49% interest in B-1998, which in turn owns 52.5% of FCC. The remaining 51% of B-1988 is owned by Klopowitz.

The original link-up with Veolia in 1998 was motivated by FCC's need to strengthen its water and waste operations as part of a strategy of diversifying out of its core cyclical construction business. Spain's largest construction group ACS has expressed interest in taking half of **Endesa's** 11.6% interest in **Agbar**, Spain's largest water company.

Outside Spain, **Agbar** has been locked in negotiations to salvage its Latin American interests. The good news is that **Aguas Guariroba** (AG), the **Brazilian water company** in which Agbar has a leading stake, has resumed its operating concession in the city of Campo Grande, state capital of Mato Grosso do Sul.

The concession was suspended in mid-December after the company failed to meet investment benchmarks for 2003. Aguas Guariroba has now agreed to pay compensation of R$7.062 million (US$2.5 million) to the state regulatory body for irregular expenditure, meet investment benchmarks for 2003 and 2004 (R$17.4 million), restructure its board and it will henceforth be continually overseen by an economic control committee ('Conselho Fiscal').

Manuel Navarro, an Agbar representative said these rulings made by the mayor "will improve how the company operated". During the three-month intervention period, concession services and investment projects proceeded without interruption. There is no progress to report on Agbar's other Latin American headache – its interest in **Aguas Argentinas**.

Suez Environnement, which owns a controlling interest in Agbar, has been lying low in the international water market for much of this year. With the continuing uncertainty over **Aguas Argentinas** (in which it had invested alongside Agbar), the loss of its Puerto Rico contract as well as the departure of its chief executive, the company has not had a strong appetite for acquisitions.

Last month, its US subsidy, **United Water**, announced one of its biggest deals of the year: the **Terra Grande Water System** in Boise Idaho. Serving 117 households, the deal cost $47,000.

AMERICAN WRANGLING

The Terra Grande deal won't do much to make up for the potential loss of its $8 million a year **Jersey City** contract. It is one of **United's** poster deals, allegedly delivering the city savings of $30 million in its first two and a half years, since it was signed in 1996. The relationship is now falling apart.

The **Municipal Utilities Authority** has served a notice of unsatisfactory performance on United, citing two main grievances. The first grievance is that billing revenues in 2003 were $2 million below 2002, despite an 8.8% increase in the water rates and an increase in the water being drawn by United (United continues to receive a $1.2 million-$1.7 million "billing collection incentive").

The second grievance is that United provided erroneous information about water withdrawals to the **New Jersey Department of Environmental Protection**, which led to the department withdrawing water extension permits from the city for two months, bringing new development to a halt.

United is disputing the charges, but it is still pushing the city to change the status of seven million gallons United draws from the city's reservoir to supply to its customers outside Jersey City so that it is supplied on a guaranteed basis rather than surplus basis. The contract runs until 2008, but United wants an extension. It looks set to be a bitter fight.

Suez's compatriot, Veolia, is also wrangling with its US contract operations customers. The **City of Angleton** in Texas removed Veolia from a small wastewater and street maintenance contract, and wants to go to court to get some of its money back. "We just feel like this situation is extremely unfortunate", Christie Kaluza, a US Filter spokeswoman told the local paper. "We feel we have maintained a stellar record in Angleton".

GERMAN COMMUNALISM

More worrying from a strategic point of view was **Veolia's** failure to secure an interest in Germany's **Gelsenwasser**. The company, which is owned by the municipalities of **Dortmund** and **Bochum**, was looking for a strategic partner to back its expansion. It has decided to go with two communally owned associations rather than Veolia (*see story p14*).

The news comes after it was revealed that Dresden didn't even consider Veolia's offer before selecting Gelsenwasser as minority stakeholder in its wastewater business last year.

All three European majors, **Suez**, **Veolia** and **RWE/Thames,** have made Germany and eastern Europe a key part of their European strategy. It looks as if German communally owned water companies will be putting up stiff competition. It is a compelling model in the German market because of the robust level of tariffs and the tax breaks. It has also been given a boost by the **European Parliament** this month, with a vote to ensure that water services are not included in the Internal Market (*see p13*).

GOOD DEALS

On the positive side, **Veolia** did report a $123 million 20-year DBO deal in the **US Virgin Islands** for two 15,000m^3/d wastewater treatment plants.

Elsewhere in the Caribbean, bids were opened in the tender for the Blue Hills 22,500m^3/d BOO desalination plant in the **Bahamas**. **Consolidated Water** is in pole position (*see Tracker*). Cayman-based Consolidated has had a good year, with revenues up 57% to $19 million, and net income up 64% to a record $4.2 million in the 12 months to end December 2003, mainly as a result of acquisitions.

The Blue Hills project in the Bahamas is one of the few to have kept to its timetable in April. GWI's Tracker (*starts p22*) reports timetables being put back in **Tuscany**, **Romania**, **Australia**, and **Peru**. **Saudi Arabia's** Shoaiba project has also gone ominously quiet.

On the plus side, the Disi-Amman conveyor project in **Jordan** has been awarded to the **Black & Veatch/Saudi Oger** consortium. The question now is whether the price is right. The project could yet be scrapped because the cost of water is still too high.

INVESTMENT REQUIREMENT

Paying more for water is going to be a fact of life in the Arab world over the next two decades. Ninety percent of Arab countries will be threatened by water shortage by 2025, according to **Egyptian Minister of Irrigation and Water Resources Mahmoud Abu Zed**. Announcing the establishment of the Arab Council for Water, Zed stressed the necessity of combining all efforts of the Arab countries to carry out a unified strategy to find solutions to the problem of water scarcity. He pointed out that the crisis "required management of the available water resources in the Arab countries and using modern irrigation programmes and technology for solving this problem".

More detail on the mismatch between supply and demand for water around the world is given in **GWI's** report *Desalination Markets: 2005 – 2015*, published this month. A summary of its findings is on pages 8 and 9. The report forecasts nearly $100 million of expenditure on desalination over the next decade. That figure is dwarfed by the amount that needs to be spent on wastewater in **Europe** over the same period.

Italy's water and wastewater infrastructure requires investment in the region of €53 billion within the next 25 years, according to the chairman of a parliamentary committee in charge of monitoring water services. Speaking at a conference in Padua, Gilberto Muraro pointed out that tariffs may have to increase by an average 50%, with peaks of 100%, to help pay for the necessary investment. Only 84% of Italian households are connected to sewage networks, and up to 30% of the country's territory is not covered by wastewater treatment services (*see story p11*). Andrea Lolli of the municipal utilities association Federgasacqua confirmed at the same conference that no serious water services policy in Italy could develop unless significant tariff increases took place. "No real investment can take place unless investors know when and how they can expect a return on their capital".

THE UK SCENE

In **Britain,** the government warned of "significant real price rises" to enable water companies to meet their quality targets. The battle in government between those wanting more spending to protect the environment and those wanting lower bills raged on a little longer than the regulator, Philip Fletcher of **Ofwat,** had wanted. He has had to put the timetable for the price review back one month so that the draft price limits will now be issued in August, and the final determinations in December.

The publicly quoted English water companies came to the end of their financial year in March quietly with **AWG** promising results in line with expectations and **Severn Trent** claiming "a good overall performance" while announcing that it was looking for a new chairman and chief executive. **Northumbrian Water Group** had some good news from rating agency **S&P**, which has given its regulated business, Northumbrian Water Limited, an investment grade Baa1 rating and stable outlook.

The demerger of **South Staffordshire Water** from the **South Staffordshire Group** has provided a sparkle of interest in the UK regulated water sector, with some speculation about possible buyers (*see story p14*). But the real action seems to be happening in the **Scottish PFI sector**, where specialist private equity funds are taking an interest in buying out the original investors in the wastewater BOT schemes. The first to sell out is **AWG** (*see p15*), but there is a lot more to come.

IONICS RESULTS

Results for 2003 from **Ionics** showed revenues up 8.8% to $347m, but the loss from continuing operations before interest and tax rising from $1.9 million to $39.4 million. $12.7 million of goodwill impairment and $7 million of restructuring costs partly explained the divergence of sales and profit. Higher sales, general and admin costs (up $9.7 million) also played a part as weaker margins at the equipment business group (which saw sales fall by $10.3 million, while cost of sales fell by only $472,000). The fastest growing revenue line was "Affiliated Companies" – i.e., its BOO project firms, which saw revenues rise from $12.2 million to $49.7 million. The biggest item related to the sale of capital equipment to its Kuwaiti wastewater joint venture, Utilities Development Company WLL. Chief executive William J McMahon, who has headed the firm since April 1993, believes he has made substantial progress in turning the business round through the divestment of consumer water businesses in the US and Europe; the acquisition of Ecolochem; reduction of staff costs; focusing on repeat revenue streams, and; the restructuring of operations. This last aspect was completed with the merger of the equipment business group into the Ultrapure Water Group to create a Water Systems Division headed by Lyman Dickerson, president of Ecolochem. Markets were cheered by the results, marking Ionics shares up $3.08 by close on the day they were released.

Desalination primed for take-off

A new market report looks at the outlook for the fastest growing sector of the water industry.

GWI's Desalination Markets 2005 - 2015 report published this month forecasts a 101% increase in the installed capacity for desalination around the world over the next decade, creating a market worth $95 billion over the period.

The largest market will continue to be the Gulf area, where the combination of rapidly growing populations, depleted groundwater resources and the retirement of capacity built during the oil boom years of the 1970s and early 1980s will require a near doubling of the total capacity. Growth in the region would be stronger but for concerns about Saudi Arabia's ability to finance its required capacity within the timeframe.

The fastest growing market will be the Mediterranean Rim, where Algeria, Libya, and Israel are anticipating capacity increases in excess of 300%. With desalination back on the political agenda in Spain (*see story, p10*), the total increase in capacity in the Mediterranean region will be 179%.

The report is more negative about the outlook for seawater desalination in the United States. Although there is nearly two million cubic metres per day of seawater desalination capacity currently on the drawing board in the US, the report suggests that only half of this is likely to be commissioned during the period. The regulatory process and the financial weakness of the US water sector are to blame.

China and India are also set to enter the large-scale seawater desalination market. Both have large populations in water-stressed regions and political backing for higher water tariffs. The 650,000m^3/d additional capacity these two countries are each expected to bring on line by 2015 could be the start of a massive move into desalination in the longer run (*see p16 for details of new projects in the Chennai region of India*).

The membrane process, particularly reverse osmosis, will continue to take market share from thermal desalination, with 59% of the total new build capacity being membrane-based (compared with around 45% at the moment).

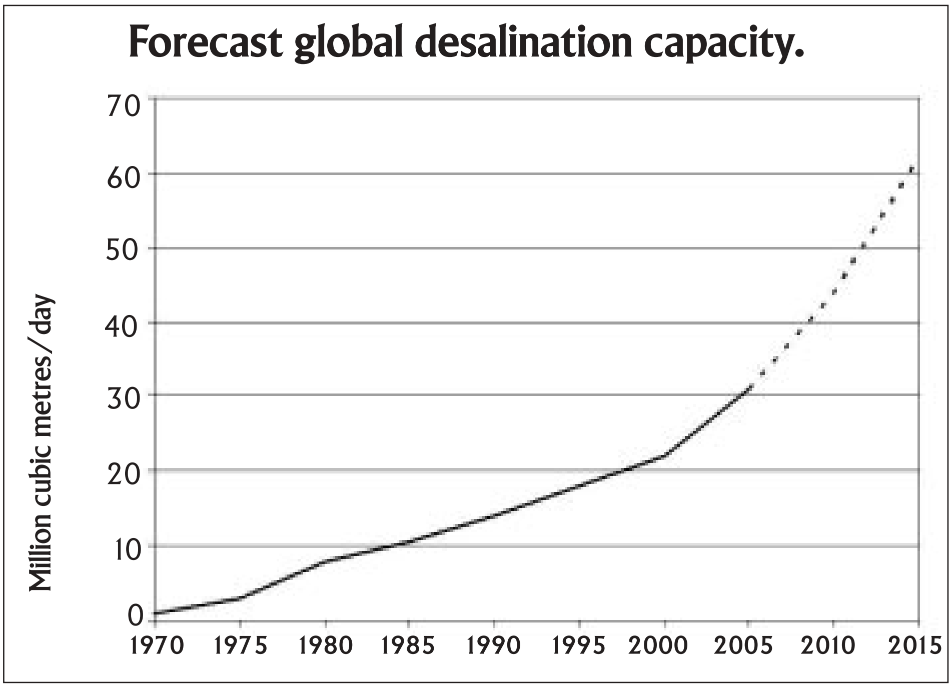
This reflects growth of the market outside the Gulf region (the traditional heartland of the multi stage flash thermal process), as well as increased use of RO technology to supplement MSF in the Gulf.

The report is based on original research by the GWI editorial team and outside contributors. It bases its assessments on local supply and demand data, information about tariffs, the structure of local industry, projects in the pipeline and an analysis of the financing options.

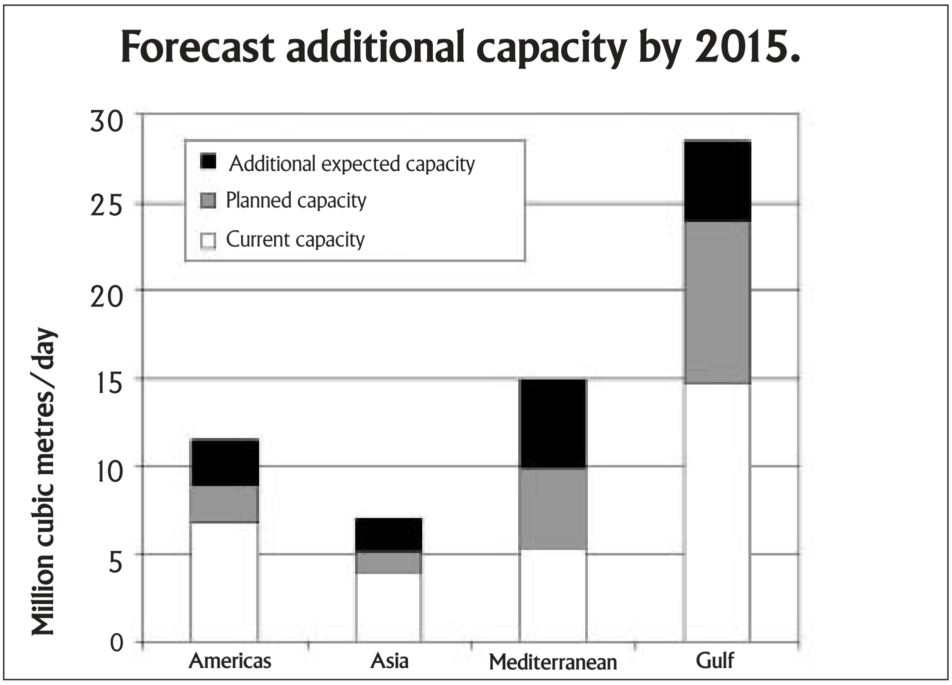
The fundamental driver of the desalination industry is rising demand for water and a fixed or dwindling supply accessible at a low cost.

Additional demand can only be met from higher cost sources. While alternatives such as water transfer are becoming more expensive, desalination is becoming more competitive in price, making it the next cheapest option for an increasing number of water utilities.

* *Desalination Markets 2005 - 2015* is published this month by Media Analytics Ltd, priced £625. Call +44 1865 204208 or visit our website *www.globalwaterintel.com* for details.



Source: Desalination Markets 2005 - 2015 / Wangnick



Source: Desalination Markets 2005 - 2015

Desalination market forecast by 2015.

Country	Current planned capacity (m³/d)	Est total new capacity (m³/d)	Seawater (%)	Capital cost ($ million)	Operating cost ($ million)
Americas					
Antigua	13,000	20,000	100%	$36	$14
Bahamas	36,300	50,000	100%	$60	$15
Barbados	0	15,000	100%	$23	$9
Bermuda	0	12,000	100%	$22	$8
Cayman Islands	8,000	15,000	100%	$23	$10
Chile	52,000	110,000	60%	$99	$19
Dutch Antilles	18,000	70,000	100%	$91	$24
Mexico	20,000	400,000	70%	$360	$66
Trinidad & Tobago	0	80,000	100%	$72	$18
United States	1,963,400	3,750,000	25%	$2,813	$616
US Virgin Islands	0	20,000	100%	$38	$13
Other Americas	NA	140,000	50%	$112	$23
Total Americas	**2,110,700**	**4,682,000**	**35%**	**$3,747**	**$834**
Asia					
Australia	9,600	165,000	75%	$157	$29
China	165,500	650,000	60%	$520	$100
India	433,300	650,000	55%	$520	$95
Pakistan	395,000	210,000	70%	$179	$32
Singapore	160,000	210,000	15%	$147	$28
Other Asia	NA	1,150,000	10%	$690	$147
Total Asia	**1,163,400**	**3,035,000**	**38%**	**$2,212**	**$431**
Mediterranean					
Algeria	886,000	2,000,000	70%	$2,520	$491
Cyprus	82,000	115,000	100%	$104	$20
Egypt	305,000	410,000	80%	$369	$72
Israel	1,071,000	1,350,000	100%	$1,215	$237
Italy	275,500	950,000	35%	$855	$166
Libya	1,133,440	1,950,000	90%	$2,145	$463
Morocco	125,000	200,000	70%	$270	$53
Palestine	185,000	70,000	90%	$63	$11
Spain	380,000	1,300,000	80%	$1,170	$228
Tunisia	60,000	150,000	20%	$135	$22
Other Africa	NA	75,000	85%	$68	$17
Other East Mediterranean	NA	29,000	80%	$26	$5
Other Europe	NA	1,040,000	20%	$780	$144
Total Mediterranean	**4,502,940**	**9,639,000**	**90%**	**$9,740**	**$1,925**
Gulf					
Bahrain	286,900	400,000	100%	$440	$102
Iraq	18,500	600,000	25%	$570	$120
Jordan	50,000	500,000	25%	$350	$69
Kuwait	1,136,000	1,750,000	90%	$1,925	$447
Oman	370,000	450,000	80%	$495	$115
Qatar	298,000	396,000	90%	$436	$101
Saudi Arabia	4,161,000	5,400,000	75%	$5,940	$1,380
United Arab Emirates	2,948,900	4,130,000	95%	$4,543	$1,055
Yemen	0	55,000	45%	$41	$9
Other Gulf	NA	200,000	55%	$90	$16
Total Gulf	**9,269,300**	**13,881,000**	**80%**	**$14,830**	**$3,416**
Total world market	**17,046,340**	**31,237,000**	**71%**	**$30,529**	**$6,606**

Desal wins out in Spanish elections

The Ebro water transfer scheme looks dead in the water after the socialist victory in Spain. GWI's Richard Weydling talks to the new environment minister.

The surprise victory of the socialist party (PSOE) in Spain's general election last month has major implications for the water sector, since the PSOE's declared intention to scrap the previous administration's massive north-south water transfer plan will entail a significant boost for Spain's already buoyant desalination market.

The €4.2 billion plan to transfer 1.053 billion cubic metres annually from the Ebro river to Spain's dry but economically dynamic south-east was unveiled by the Popular Party government in 2000. It claimed that the massive infrastructure project (which included the construction of 119 new dams) would solve the country's "water deficit".

After initial indecision, the then-opposition socialist party aligned itself with critics both in Spain and the EC which argued that desalination would provide a cheaper and less environmentally damaging alternative solution to the problem.

In their alternative national water management plan published in 2001, the PSOE proposed replacing the water transfer to the deficit region with an extra 390 million cubic metres annually from desalination within a five-year period. This would be on top of the extra 336 million cubic metres from desalination (12 new plants) already included in the existing water plan. If the alternative plan is implemented, the desalination plant-building programme in the south-east region alone will more than double.

According to the 2001 plan, the remainder of the perceived deficit would be made up by improved water saving measures including the reform of Spain's antiquated and ineffective system of water regulation, the setting up of publicly-administered water banks and the inclusion of treatment and distribution costs in the price paid for water by farmers "in order to rationalise demand".

Currently, irrigated agriculture represents 80% of Spain's water consumption, and only 10% of this consumption is considered fully modernised and efficient.

Speaking to GWI on the day after the election victory, Cristina Narbona, environment minister-designate, confirmed that the transfer "has passed away" and that the desalination plant building would be boosted as a result.

Questioned about the environmental impact of an expanded desalination industry, she indicated that the future government plans to invest heavily in renewably-powered desalination technology which is being developed in the Canary Islands. Representatives of the PSOE in the Valencia region have subsequently suggested that the existing transfer from the river Tagus to the heavily over-exploited Segura basin could also be expanded.

Spain's desalination sector has not publicly welcomed the prospect of a major boost for their market. This is understandable given the fact that the majority of the large players in the sector are owned by Spanish construction companies which are licking their wounds from the loss of the billion euro contracts which would have stemmed from the transfer plan.

Jose Antonio Medina of the Spanish desalination association AEDYR told GWI it was "too early to be able to assess with accuracy the implications for the desalination sector of the change of government".

The reaction from the regional administrations and business associations in the south-east has not been so slow. Miguel del Toro of the Mediterranean Area Business Association described the desalination option as "not sufficient by a long way" and Joaquin Rocamora of the Employer's Confederation of Alicante warned that "water from the desalination plants will price our agriculture and food sector out of the market". ■

Israel's desal plans "shaky"

The National Desalination Plan is being held up by money worries. Israel correspondent Aaron Priel reports.

The stand-off between the Israeli government and the consortia which won the tenders to build and operate four additional desalination plants may be resolved soon. David Waxman, chairman of the Water Forum at the Manufacturers Association of Israel, predicts that the construction of the four plants will "start within a few months".

The Ministry of Finance refuses to be of assistance to the four consortia, which are currently confronted with difficulties to secure financial guarantees. It will not allow the project companies to increase the output of the plants by 50% from 82,200m³/d to 123,290m³/d.

A plan to merge the four projects into two larger ones has come to nothing.

The deadlock is a threat to Israel's National Desalination Plan, which involves producing an additional 863,000m³/d of desalinated water a year. Sources at the Water Commission admit that the National Desalination Plan is "somewhat shaky", not only because of the delays, "but also due to the plan, formulated by the government, to shut down several desalination facilities for a period of four months during above average rainfall years". This will cost the operators $20 million a year.

The consortia that won the tenders to build the four plants are Ionics, comprising Carmel Desalination, Baran and Dor Chemicals. This enterprise, which recently set up two small plants, one in Kibbutz Ma'agan Michael and one in Nitzanim, on the Mediterranean coastline, won two bids to establish two larger plants with the capacity to desalinate 82,200m³/d, one to be built in Ashdod and the other in Haifa.

The Via Maris consortium, which won the tender to build the desalination plant in Palmahim, comprises Tahal Consulting Engineers, Granite Hacarmel, Middle East Tubes, Ocif Investments and Oceana.

The delay in the construction of the Palmahim plant stems from difficulties in obtaining the necessary permits and the problem of securing financial guarantees, in view of the recent changes in the country's economy.

Sources at Via Maris said that they expect to start the construction of the Palmahim plant "in the very near future", with the aim of producing 41,100m³/d at the end of 2005, and doubling this output in mid-2006. ■

Italy: survey exposes wastewater woes

Sewage treatment in Italy is below par. A large number of plants do not treat wastewater to EU standards and compliance with a 2005 European Commission deadline remains a distant prospect.

Figures released towards the end of the last quarter by the National Institute of Statistics (Istat) show just how far Italy has to go to achieve compliance with the European Commission's Urban Wastewater Treatment Directive (UWWTD).

The Istat figures show that 1,053 Italian local authorities (comuni), or 13%, still discharge wastewater to a receiving water course with no form of treatment (*see table below*). The biggest culprit is Calabria where 113 comuni out of 409, or 27.6%, fail to treat wastewater prior to discharge.

Other badly performing regions are Sicily where 96 out of 369 comuni, or 26%, do not treat wastewater prior to discharge and Lazio where 95 out of 376 comuni, or 25.3%, fail to do so.

On a numbers basis, Lombardy, with 308 local authorities failing to provide treatment, is the worst performer, although this figure only accounts for 20% of the total comuni.

In the positive column, 3,084 comuni, or 48% of the total, treat 100% of their wastewater before it is discharged. Puglia (94.5%), Valle d'Aosta (77%) and Sardinia (71.9%) are the regions with the highest percentage of comuni providing complete wastewater treatment. Marche (23.8%), Tuscany (24.4%) and Calabria (25.2%) are bottom of the list.

On a regional basis, the north-east of Italy has the best levels of service. More than 55% of its 1,459 comuni provide total treatment; only 50 comuni, or 3.4%, do not provide services.

The situation is worst in central Italy

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Regional and geographical breakdown of wastewater treatment.

Region/area	Total treatment Number	Total treatment %	Partial treatment Number	Partial treatment %	No treatment Number	No treatment %	Total Number	Without public sewerage system	Total comuni
	Number of comuni treating wastewater								
Piedmont	658	54.7	453	37.6	93	7.7	1,204	2	1,206
Valle d'Aosta	57	77	14	18.9	3	4.1	74	0	74
Lombardy	721	46.7	514	33.3	308	20	1,543	3	1,546
Trentino Alto Adige	181	53.9	138	41.1	17	5.1	336	3	339
Bolzano-Bozen	*62*	*53.9*	*51*	*44.3*	*2*	*1.7*	*115*	*1*	*116*
Trento	*119*	*53.8*	*87*	*39.4*	*15*	*6.8*	*221*	*2*	*223*
Veneto	371	65.4	178	31.4	18	3.2	567	14	581
Friuli-Venezia Giulia	111	51.6	93	43.3	11	5.1	215	4	219
Liguria	127	54.3	91	38.9	16	6.8	234	1	235
Emilia Romagna	151	44.3	186	54.5	4	1.2	341	0	341
Tuscany	70	24.4	171	59.6	46	16	287	0	287
Umbria	33	35.9	55	59.8	4	4.3	92	0	92
Marche	58	23.8	157	64.3	29	11.9	244	2	246
Lazio	145	38.6	136	36.2	95	25.3	376	1	377
Abruzzo	105	34.4	166	54.4	34	11.1	305	0	305
Molise	78	57.4	44	32.4	14	10.3	136	0	136
Campania	206	37.5	238	43.4	105	19.1	549	2	551
Puglia	188	94.5	7	3.5	4	2	199	59	258
Basilicata	47	35.9	61	46.6	23	17.6	131	0	131
Calabria	103	25.2	193	47.2	113	27.6	409	0	409
Sicily	123	33.3	150	40.7	96	26	369	21	390
Sardinia	271	71.9	86	22.8	20	5.3	377	0	377
Total Italy	**3,084**	**47.6**	**3,131**	**39.2**	**1,053**	**13.2**	**7,988**	**112**	**8,100**
North-west	1,563	51.2	1,072	35.1	420	13.7	3,055	6	3,061
North-east	814	55.8	595	40.8	50	3.4	1,459	21	1,480
Central	306	30.6	519	52	174	17.4	999	3	1,002
South	727	42	709	41	293	16.9	1,729	61	1,790
Islands	394	52.8	236	31.6	116	15.5	746	21	767

Source: Istat 2004 – wastewater survey 1999

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Treatment of wastewater by comuni ranked by population.

Population	Number of comuni treating wastewater: Total treatment	Partial treatment	No treatment	Total	Without public sewerage system	Total
Up to 2,000	1,662	1,376	575	3,613	27	3,640
2,001-10,000	1,559	1,340	410	3,309	65	3,374
10,001-80,000	548	384	67	999	20	1,019
80,001-500,000	34	27	0	61	0	61
Over 500,000	1	4	1	6	0	6
Total	**3,804**	**3,131**	**1,053**	**7,988**	**112**	**8,100**

Source: Istat 2004 – wastewater survey 1999

where just 306 out of 999 comuni, or 30.6%, treat all their wastewater and 174, or 17.4%, provide no treatment.

In total, Istat estimates that Italy's existing WwTPs serve around 64 million population equivalent (p.e.), compared with an estimated demand of 111.2 million p.e., comprising sewage (domestic and commercial) and industrial waste discharged into the public sewer system.

Of more interest, however, is service coverage by size of comune, says Laura Campanini, who follows water and local public services for Milan-based Banca Intesa.

According to the statistics, one Italian city with more than 500,000 inhabitants (Milan) had no wastewater treatment in 1999. Milan was subsequently named and shamed by the European Commission during a series of seminars in 2001.

The city now treats part of its wastewater following construction of the Nosedo WwTP and will treat all of its domestic sewage by later this year.

However, further analysis of wastewater treatment by comuni ranked by population makes for grim reading (*see table above*).

Services are completely absent in 67 medium-sized comuni (10,001-80,000 population) and 410 small ones (2,001-10,000 population).

In addition, four large cities (more than 500,000 population) only treat part of their wastewater, as do 27 cities in the 80,001-500,000 population range, 384 in the 10,001-80,000 category and 1,340 in the 2,001-10,000 bracket.

The UWWTD requires towns and villages with a population of 2,001-10,000 to have adequate (secondary) treatment by 31 December 2005.

"The situation is critical", says Ms Campanini. "There are more than 2,000 local authorities which must establish adequate treatment facilities by improving existing ones or starting from scratch. The necessary investment remaining is enormous".

A European Commission spokesperson declined to comment on Italy's situation when asked by GWI. "The Commission will invite member states to make a report [on compliance with the UWWTD] only after the 2005 deadline has expired. We cannot comment on an individual member state before then".

However, the spokesperson added that the Commission's main concern was still with some of the EU's larger cities rather than small agglomerations of 2,001-10,000 inhabitants. "There are a higher number of smaller towns and villages but the big cities contribute a larger pollution load", she stated.

The Istat survey also lists the total number of WwTPs in Italy (12,065), of which 95% (11,509) are fully operational. A further 403 are under construction.

Secondary (biological) treatment plants serve 58% of the total population equivalent. Tertiary treatment plants, which remove nitrates and phosphates, serve 34.6% of the total p.e., while plants providing basic primary treatment serve 7.4%.

"Generally, those areas with a population over 100,000 observe the law", notes Renato Drusiani, general director of Federgasacqua, the trade association for municipally owned water and gas utilities. "The larger plants provide tertiary treatment but this is not necessarily the case for smaller ones".

According to Istat, tertiary treatment plants are the largest, serving an average 27,000 p.e., followed by plants providing secondary treatment (7,700 p.e.) and primary treatment plants (778 p.e.). ■

ATOs get to grips with Galli Law

Progress is being made but recent legislative changes have resulted in more court cases and disputes at the local level.

By 10 February this year, 40 Italian ATOs (optimal territorial areas) had assigned integrated water services to an operator as required by the Galli Law. That figure is still less than half the target number.

On a regional basis, central Italy (Tuscany, Umbria, Marche and Lazio) has made the best progress. Out of 19 ATOs, 17 had selected a water services operator and the remaining two were about to make assignments, according to a Banca Intesa research paper.

In southern Italy (Campania, Abruzzo, Molise, Puglia, Basilicata, Calabria, Sicily and Sardinia), only seven ATOs had selected an operator.

However, Banca Intesa notes that all ATOs in the south and the islands had finished surveying water infrastructure, and all southern regions, with the exception of Molise, had approved ATO plans.

In the north (Piedmont, Valle d'Aosta, Liguria, Lombardy, Trentino alto Adige, Veneto, Friuli-Venezia Giulia and Emilia-Romagna), 16 out of 39 ATOs had appointed an operator.

In eight cases, the operator receiving the assignment had sold a minority shareholding to a private partner (*see GWI, October 2003, pp18-19*) following a public call for bids.

The most recent cases were the three Tuscan areas of Florence, Siena-Grosseto and Pisa. A tendering process for ASA S.p.A, which has received the assignment for Tuscany ATO 5, is currently in progress. Bids for a 40% share of the company are due on 19 April (*see Tracker, p22*).

Recent legal changes, designed to harmonise Italian and EU laws, have changed the way in which water service assignments are made. Amendments incorporated in the 2004 finance law provide local authorities with three ways of delegating services: through an open tender; directly to a public-private company but only where the private partner is chosen by public tender, or; via in-house contracting (that is, to a company wholly owned by the local authorities, which carries out the majority of its activities for the public authorities that control it).

To date, only one ATO (Lazio ATO 5/Frosinone) has opted for the first route and offered a 30-year concession directly via public tender. The contract was awarded to a group led by Acea.

Sicily ATO 1 (Palermo) invited bids for a 30-year contract to run water and wastewater services in the second half of 2003. However, after the bid deadline was pushed back to 4 February and then to 15 March, only Veolia submitted an offer.

The decision to award the contract via public tender has since been challenged by the municipal operator Amap, which is seeking the assignment itself via the in-house contracting route.

Sicily is not the only region to have experienced problems in awarding contracts for integrated water services under the finance law amendments. Another case from Sardinia shows just how tricky the process can be.

In March, the court of Sassari handed over full ownership of municipal water company Siinos back to the local authority, after ruling that shares could only be transferred to a different owner via a public tender, not through a simple financial transaction.

The case originated in 2003 when Siinos, which was 99% owned by the municipality of Sassari and 1% by a company called Zir, ran into financial difficulties, accumulating losses in excess of €0.5 million.

While the municipality was completing the administrative procedures needed to cover the debt, a local privately-owned company, Prolat, deposited the missing amount in Siinos' coffers and then claimed ownership of a significant share in the water company.

This move was immediately opposed by the municipality of Sassari in the courts, but an initial interim order in February 2003 gave the green light to Prolat's acquisition.

The court's judgement now reverses the situation and returns Siinos to the municipality. Sassari's mayor, Nanni Campus, welcomed the court's decision and pledged that Siinos would swiftly move ahead with defining its plans to run water and wastewater services for the area. ■

MEPs reject water liberalisation strategy

It looks as if the private sector will not be able to rely on the EU to force water privatisation across the continent. The decision is welcomed in Germany.

The European Parliament has passed a resolution rejecting the liberalisation of the European water sector, despite the European Commission's support for the idea. Internal Markets commissioner Frits Bolkestein had proposed opening water services to competition in his report on Internal Market Strategy Priorities 2003-2006, arguing that while water itself was a public good, water services were not and should be open to competition.

However, MEPs passed a resolution put forward by Scottish Labour MEP Bill Miller, confirming that water is a special good and that control of water activities should not be subject to internal market rules.

The vote does not kill off liberalisation of the European water sector, but it will make it difficult for the Commission to push ahead with its plan to include water services in its internal markets strategy. It is a blow to the private water companies which were hoping to see the EU forcing municipal authorities to open their water sector to competitive tender. The European Federation of Public Service Unions had campaigned vigorously against liberalisation.

The vote is most relevant in northern Europe, particularly Germany, where municipal water authorities are well funded and, in the absence of European directives, have little incentive to consider private sector participation. It was welcomed by Germany's federal water and gas association (BGW). "The German water industry's basic positions on water have won the day. Since parliament's decision, scenarios propagated from Brussels for enforced privatisation or liberalisation of water have no further foundation", says the BGW.

The German position is built on a "modernisation strategy" still being formulated at the federal economy ministry following a German parliamentary resolution back in March 2002. A ministry working group with several subgroups is working on aspects that include benchmarking mechanisms to encourage efficient operations in the water sector and the need for equal fiscal treatment of public and private firms in the water and wastewater sectors, said a ministry spokesman. He said that general guidelines for communes on public-private partnerships were released in mid-March, with more detailed information on, amongst other areas, the water and wastewater sectors, to be released in the autumn.

At grass roots level, the association of towns and parishes (DStGB) supports private initiatives. It forecasts investment of some €75 billion in water and wastewater over the next 10 years at a time when towns and parishes are confronted with "spectacular financial difficulties". Even so, water and wastewater charges remain stable, says Gerd Landsberg, the DStGB's managing director – at the same time highlighting the growing significance of public-private partnerships (PPPs). In individual cases, latent efficiencies can be mobilised that enable projects to be brought forward, or even allow them to be tackled in the first place, he says.

The DStGB warns against ideological opposition to privatisation and explicitly supports PPPs, although conceding that long-term contracts must be drawn up with care. "It is all about combining experience from the private economy with public services in the citizens' interest", he says.

Real PPPs are relatively rare, however. Parishes and towns still seem happier to hand over their water enterprises to municipal rather than private companies. For instance, in southern Germany, the people of the parish of Tiefenbach recently voted in a referendum to sell their water supply to Stadtwerke Passau for about €1 million under guarantee that water prices remain stable for five years.

Nevertheless, some parishes do have confidence in private participation. An initiative group in Neukirch is urging for municipal drinking water activities to be placed in a separate enterprise so that a competent private partner can be hired to shoulder technical and commercial management.

But, at the other end of the spectrum, a protest group in Stuttgart is appealing to local politicians to find a way for the city to buy back its water supply pipelines after these were sold, along with the electricity and gas networks, back in 2002, to energy company EnBW, which in turn is minority owned (34.5%) by French electricity giant Electricitè de France. ■

Veolia squeezed by German communal model

It has been a bad year so far for Veolia in Germany: its Dresden bid wasn't even considered and now it has lost Gelsenwasser. What has gone wrong?

Veolia Water Deutschland remains determinedly optimistic in the face of two major disappointments in Germany during the past few months.

It is now completely out of the running in the bidding to take a minority stake in Gelsenwasser. And it has abandoned legal proceedings after losing a case challenging the city of Dresden's choice of Gelsenwasser as minority stakeholder in Dresden's wastewater business last year.

Frustratingly, Veolia's court defeat confirms that its battle for the Dresden wastewater stake was lost due to a procedural error – its offer was not even compared with that of Gelsenwasser's.

With gritty fortitude, Helmut Lölhöffel, spokesman for Veolia Water Deutschland, says that despite the rebuffs, "we will stay in the German market and continue to establish ourselves further, and we will remain a reliable partner for communes and industry".

After losing out to Gelsenwasser in Dresden late last year, all may have been forgiven if Veolia could have got a foot in the door of the company with a 25.1% minority stake. But Gelsenwasser owners Dortmunder Stadtwerke (DSW) and Stadtwerke Bochum (WSB) decided in March to "speedily conclude" negotiations with two communally-owned associations, the wastewater enterprise Emschergenossenschaft and the water enterprise Ruhrverband, each to get an equal stake in their holding company for Gelsenwasser, named Wasser und Gas Westfalen.

The size of the stake is not revealed and perhaps depends on another set of ongoing talks with a group of local municipal utilities known as the Hellweg Group. DSW and WSB await from the Hellweg group "a binding concept that will lead to significant value-added in the Gelsenwasser group".

The "communal solution" chosen by the communal shareholders in Gelsenwasser mirrors the spirit of the decision taken in Dresden. Although Veolia seems to have lost due to sloppy procedures, if a strong desire for a private partner had existed in Dresden, a different outcome may have resulted.

In the tender procedure for a 49% stake in the wastewater firm Stadtentwässerung Dresden, Veolia Water Deutschland's bid was not taken into consideration due to a "formal error" in which, it seems, 20 pages of documentation were not delivered by the deadline.

On these grounds, the city of Dresden's advisers did not accept the bid and Gelsenwasser subsequently won the contest. Veolia appealed to the state of Saxony's Vergabekammer, the supervisory office for such deals, but the authority decided procedures were correct.

In mid-March, Veolia disputed the Vergabekammer decision before the Dresden Intermediate Court of Appeals. It claimed that the content and not merely the formalities of its bid should have been examined and, at the same time, applied for an injunction to stop completion of the Gelsenwasser acquisition before a final court ruling had been handed down. On 31 March, the court turned down this application, whereupon Veolia decided to end its action.

"We respect the court's decision and have withdrawn our appeal. We regret that the approach that won the day was one focused on formalities rather than on content. We wish the city of Dresden and Gelsenwasser all the best in dealing with the tasks that lie ahead", said Lölhöffel.

Meanwhile, Gelsenwasser achieved net profits of €47.2 million in 2003, up €7.5 million on the previous year and will pay a dividend of €7.50/share as in 2002. Water sales rose 4.7% to 163.4 million cubic metres, of which 97.9 million cubic metres went to power stations and the steel industry and 65.5 million cubic metres to households. "We can and will expand in the water, wastewater and gas markets", said chairman Hartmut Griepentrog, who will leave his post at the end of June.

Underlining the communal orientation of the company, he continued: "In the medium term there will be additional opportunities for sustainable growth since through cooperation with our majority stakeholders we are in a position to use synergy effects that allow efficiency improvements and generate growth".

The company has earmarked €337 million for investment at home and abroad over the period to end-2008. ■

Demerger puts South Staffs in play

The options for the water-only firm seem to be more leverage or Severn Trent.

The de-merger of the South Staffordshire water-only company from its holding group in the first week of April will make the company a takeover target, some industry executives and analysts believe.

"In separating it out, I suspect they will put it into play", said Keith Tozzi, the former chief executive of another of the small water companies, Mid Kent Water.

Neil Beddall, utilities analyst at Barclays Capital, agreed that South Staffs was a more inviting prospect as a stand-alone entity. "It's much cleaner for a potential acquirer, now that it has been de-merged".

The South Staffordshire Group drew up the final plan to separate South Staffs from the Homeserve household repair services operation on March 11, and shareholders approved the proposal at an EGM on April 5. The water company acquired its separate stockmarket listing the next day.

South Staffs, which supplies drinking water to 1.2 million people, mostly in the area to the north of Birmingham, is one of the water sector's leading performers. It has the lowest bills in the industry and is ranked second in terms of efficiency by the regulator Ofwat. The obvious and most logical buyer would be Severn Trent, the water and sewerage company whose franchise surrounds South Staffs and which provides wastewater services for its customers.

"I have always though it would make total sense for Severn Trent to acquire it," said Beddall at Barclays Capital. "You could close down the South Staffs head office in its entirety".

Any such move, however, would bring Severn Trent into conflict with Ofwat – which remains opposed to consolidation in the sector – at the Competition Commission, and the company is unlikely to risk such a confrontation before the regulator determines the next five-year pricing regime at the end of this year.

"Whether they want to incur anyone's

Financial buyers queue for PFI stakes

The secondary market for investments in Scotland's wastewater BOOT projects has come alive. UK correspondent Andrew Cavenagh looks at who is trading.

Secondary investment is set to flood into Scottish Water's nine PFI projects over the next 18 months, following the sale of AWG's one-third holding in the £100 million wastewater scheme that serves the Dundee, Carnoustie and Arbroath areas.

AWG Project Investments completed the sale of the Catchment Tay stake to Henderson Private Capital's PFI Secondary Fund for a reported £12 million on March 22. AWG was construction contractor for the project, having inherited the interest in the Catchment PFI venture with United Utilities and International Water when it acquired Morrison Construction in September 2000.

The Anglian Water parent had previously unloaded its holding in PFI venture's initial Highland project to its two partners in 2002, and it intends to dispose of its stake in the third Moray scheme in the near future.

"It is our policy not to retain long-term equity investments in projects where we do not have a long-term facilities management or operations contract", explained John McFadzean, managing director of AWG Project Investments.

He declined to comment on the price AWG realised from the Tay sale other than to say that it "certainly represented a profit rather than a loss".

John Telfer, the head of PFI projects at Scottish Water, said he expected to see more stakes in the nine schemes sold over the next year and a half as they progressively completed their first two years of operation – up to which point the contracted parties are obliged to retain their interests.

"I would certainly expect that the construction companies in these projects would not be long-term equity partners", he said. "I would expect to see a bit more activity in the coming financial year than we've seen to date".

MJ Gleeson, which has a 41% stake in the Sterling Water (Seafield) PFI company, is another contractor that has indicated it will dispose of its equity holding in the not-too-distant future. Furthermore, it is not only the construction companies that are looking to sell.

International Water, the joint venture between Bechtel of US and Italy's Edison that acted as project manager for the Catchment consortium, has engaged NM Rothschild to advise it on the sale of its interests in all three of the group's projects.

"There is a sale process underway", Steve DeAtley, chief financial officer at IW, confirmed. He added that Rothschild was expecting to receive indicative bids before the end of April.

Secondary funds

It seems likely that financial buyers such as Henderson Fund are likely to snap up most of the stakes that are offered for sale.

Several such secondary investment funds have been set up for the purpose within the last year as large numbers of PFI schemes throughout the UK – including the Scottish Water projects – approach operational maturity.

"It is really only in the last six to eight months that they have started to appear", said McFadzean.

DeAtley said he understood that most of the interest Rothschild had received for the IW stakes in the Catchment projects had come from such secondary financial investors.

Once PFI projects are built and have established an operational track record, they are attractive investments for such funds because they offer reliable and secure revenue streams.

They should also be able to boost the profitability of the projects enhanced by refinancing the bank loans that met their construction costs with longer-term debt, probably through the capital markets.

Guy Pigache, partner at Henderson Private Capital, said the Catchment Tay project, for example, had had a "very good operating history" so far, meeting all the stipulated standards for bathing water and effluent treatment.

Despite the premium that Henderson paid AWG for its stake, Pigache said he expected to see an impressive yield from the investment.

"We are looking to try to produce returns for our investors of 15% plus per annum over the next 10 years". However, he acknowledged that the final exit price – when the fund is wrapped up in 10 years – would be a big contributor to that return.

Performance risk

There is an element of performance risk, because the payments Catchment Tay receives are partly related to the volume of wastewater treated.

The region is also expected to experience a decline in population over the next decade, but this would only affect the project economics if the fall exceeds current projections.

Scottish Water has to approve the sale of any interests in its PFI schemes, and Telfer said the utility needed to be sure that the change of ownership would not have any detrimental impact on the project's operation. However, he agreed this was unlikely to be an issue with long-term financial investors.

One of the more recently established funds, Star Capital Partners PFI Secondary Fund, said at the beginning of the year that it was in discussions with seven contractors regarding acquiring equity stakes with a total value of £100 million.

Despite the interest of funds such as Star and Henderson in the secondary PFI sector, PricewaterhouseCoopers believes that there is a shortfall in the amount of money available for secondary funding, which could be as high as £750 million.

"With the government's commitment to PFI, the shortfall is likely to increase in the future. This shortfall means that there is a lack of competition for secondary investment opportunities in PFI", reports PWC's John Hindleys. ■

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wrath at the moment, I would rather doubt", observed Tozzi.

That would appear to leave financial buyers, but some doubt that South Staffs – which refinanced itself with an £85 million index linked bond in September 2002 – now offers sufficient leverage opportunities for private equity firms.

"Some of the value that a private equity buyer would get out of it has already been extracted", said Robert Miller-Bakewell, an analyst at Merrill Lynch.

However, an increase in the company's regulated asset value (RAV) to an estimated £165 million in 2005 from the figure of £138 million in 2003 would see its gearing drop from 69% to 63% – a level that would allow a financial buyer some latitude.

"There is some room to gear it up some more", maintained Tozzi. ■

PPP solution to Chennai water crisis

After the Tirupur deal, India's Infrastructure Leasing and Financial Services is moving on to bigger things in the water sector. Can it pull off a $300 million desalination plant financing?

The team behind the $222 million local currency financing of the New Tirupur Area Development Corporation's (NTADC) water and wastewater projects is pushing ahead with a still more ambitious public-private partnership.

It is currently in the process of appointing engineering consultants for a 300,000m³/d seawater reverse osmosis plant planned by the state of Tamil Nadu to serve the city of Chennai (formerly Madras).

The project looks set to replace a similar proposal tendered by the Chennai Metropolitan Water Supply and Sewerage Board (CMWSSB) last year.

That proposal has since run into legal difficulties (*see GWI, February 2004, p22*) and the state of Tamil Nadu has backed the NTADC management to push ahead with an alternative.

The state has set up the Tamil Nadu Water Investment Company Ltd (TWICL), a joint venture between it and development bank Infrastructure Leasing and Financial Services (IL&FS) to develop a desalination plant for Chennai.

TWICL is headed by Sameer Vyas, a veteran of the New Tirupur Area Development Corporation – the company which closed the rupee-denominated financing of a water treatment plant, distribution network and related wastewater infrastructure last year. The Tirupur deal was listed in GWI's Deals of the Year in 2003 (*see GWI, December 2003, p8*) and was arranged by IL&FS.

Vyas admits that the Tirupur deal took a long time to complete (eight years), but he is optimistic that the TWICL deal will happen much more quickly.

"We have got the New Tirupur project under our belt and the learning curve in infrastructure projects is very very steep". He cites the example of how the first private sector participation toll road project financed by the IL&FS took seven years to close, while the second took 17 months.

"The delay to the New Tirupur project was not because of finance. There were other problems, starting with the sense of cynicism that projects cannot happen in India. I think that we can look at this second project with a greater sense of optimism, and I think that we know how to go about the business, and how to get this off the ground.

"People complain about not enough projects being bankable, but you have to get down on your hands and knees to make sure that the project is bankable".

Desalination projects in Chennai.

Customer	Capacity (m³/d)	Status
Kalpakkam Atomic Plant	1,800 - 45,000	In progress
EID Parry (expansion)	est 7,000	Proposed
TWAD Board near Madurai	3,800	Proposed
Chennai Metro, Minjur, Chennai	Up to 600,000	Stalled
TWIC, Chennai	Up to 300,000	Appointing consultants
CPCL, Manali, Chennai	26,000	Appointing consultants

Other industrials considering new desalination plants include Chemplast, Madras Fertilisers and the Manali Industrial Association.

The main challenge in making TWICL a bankable project is its reliance on domestic customers. Unlike New Tirupur, where the main customers were garment manufacturers who were prepared to pay more than $1/m³ for reliable water, TWICL's main customer will be the CMWSSB, which will sell the water on to its domestic customers.

CMWSSB has a reputation of being one of the best run municipal water authorities in India. It has one of the lowest levels of unaccounted for water, and a reputation for balancing its books.

However, fewer than 10% of its connections are metered, and tariffs will have to rise substantially before CMWSSB is in a position to buy desalinated water at cost price.

Vyas is undaunted by this obstacle, although his job might be a little easier if Chennai's largest industrial water customer wasn't separately tendering for a desalination plant. Chennai Petroleum (CPCL) is looking to build a 26,000m³/d (5.8MIGD) desalination plant on a DBOOT basis for its Manali refinery. It is now in the process of appointing engineering consultants for the projects.

CPCL has also been operating a pilot ultrafiltration plant for recycling wastewater at its Manali refinery. It has now decided to move ahead with an 11,400m³/d sewage reclamation plant and is currently in the process of tendering a design and build contract.

It is yet to be seen whether TWICL will be able to strike a deal with CPCL. In the meantime Vyas has issued a request for proposals from 10 prequalified consulting engineers to advise on the project.

Those responding include CH2M Hill, Fichtner, Halcrow Group, King Engineering, Malcolm Pirnie, Montgomery Watson Harza, Mott MacDonald, Black & Veatch, Boyle Engineering, Camp Dresser & McKee International and Tahal Consultants.

The contract is expected to be awarded at the beginning of May, and the consultant will work on a request for proposals document for publication by the end of September.

It is likely that the structure of the project will be similar to that used in Tirupur, where the New Tirupur Area Development Corporation acted as the project company, taking responsibility for appointing EPC and O&M contractors as well as raising debt and equity finance.

A credit guarantee from USAID ensured that the project company was able to issue debt to local institutions without a punitive risk premium.

Chennai's water problems have been exacerbated by a three-year drought related to the failure of the monsoon and by the over-exploitation of groundwater.

CMWSSB has had to tanker water into the city. Water usage per head is currently around 60 litres per head per day, compared with the Indian national average of between 200 and 250 litres per head per day. ■

Spaniards claim Skikda desal project

The Geida consortium was the low bidder last month. Its offer was based on a price of \$0.74/m³ of desalinated water.

Spain's Geida consortium has been selected by the Algerian Energy Company (AEC) to implement the 25-year Skikda seawater desalination BOO project. The winning consortium comprises Sadyt, Grupo Cobra, Codesa and Befesa (formerly Abensur). The project covers the design, construction, financing and operation of a 100,000m³/d RO desalination plant.

The opening of commercial offers for the project took place on 31 March in Algiers. Geida submitted a low bid of \$0.74/m³, which narrowly beat an offer of \$0.765/m³ proposed by a group of Spain's Barna Investment and Lemna International of the US. A third bid from a pairing of Ionics and SNC Lavalin was off the pace (*see table*).

A consortium of Lebanon's EBD Group, Black & Veatch of the US, the UK's Severn Trent Services and CAT, also of Lebanon, submitted a technical offer for the project in December 2003 (*see GWI, January 2004, p14*). However, AEC was not satisfied with the group's financial position and disqualified it from submitting a commercial proposal.

"The most important aspect of this project is bringing the finance to the table", said AEC project manager Badis Derradji. "We were not happy with the fragile [financial] composition of the EBD grouping".

Under the BOO structure, the successful bidder is required to own 70% of a special purpose company (SPC) which will manage the project. The remaining 30% will be held by AEC and Algérienne des Eaux. The Skikda project's total costs are \$110 million; funds will be provided by a mix of debt and equity in a 70:30 split. This puts the equity portion at \$33 million and the winning bidder's equity commitment at \$23 million.

EBD's financial adviser Middle East Capital Group (MECG) was proposing to raise the equity from a number of undisclosed, possibly Lebanese, sources. "Their financing plan was not convincing", said Derradji. "We were not sure they could secure the necessary funds for the project's equity component.

"It is possible [for a developer] to outsource the project's EPC and O&M functions but not the responsibility for providing equity", he added.

The Geida consortium will spend the next month establishing the SPC and registering it under Algerian law. A period of 12 months has been allowed for structuring the debt package.

Algerian BOOs to date have been financed by export credit agencies rather than commercial banks. The Black & Veatch/AEC-owned Kahrama consortium is using OPIC, Coface and Proparco funds to finance a 314MW and 86,000m³/d power and desalination plant at Arzew. Another BOO project at Hamma, which is being implemented by Ionics, is also likely to be financed with ECA funds.

The Skikda project is a notable achievement for Geida consortium member Sadyt. It is the company's first large desalination project outside of its native Spain; previously it had constructed a small plant in Jordan in 1998. Civils group Cobra has been more active internationally, carrying out turnkey projects and BOTs in a number of different countries, mostly in the energy sector. The gas and water segment of its business reported net sales of €119 million in 2002.

Skikda is the first of a group of four projects being tendered by AEC. Next on its list is a 100,000m³/d SWRO plant for the Oran region. AEC has identified a site for the plant at Beni-Saf and will invite commercial offers in May. The same three companies that submitted economic offers for Skikda are in the running for the Oran project. ■

Skikda project commercial bids.

Position	Bidders		
	Barna Investment/ Lemna International	Geida (Cobra-Befesa-Codesa-Sadyt)	Ionics/ SNC Lavalin
Water price (US\$/m³)	0.7650	0.7398	1.3322
Water price (DZD/m³)	54.6514	52.8478	95.1658
Rank	2	1	3

Source: AEC

Taweelah experiences small delay

But things should be back on track by June.

ADWEA and the Veolia Water/Mitsui consortium are working to a revised deadline of mid-June to finalise project agreements for the Taweelah RO independent water project (IWP). The two parties had hoped to sign the agreements this month. The target date for financial close has also been pushed back from the end of July to 30 September.

The delay is due to a number of minor modifications which have been proposed to the RO plant's configuration. These must be incorporated into a pilot plant testing schedule before any design changes are agreed with the project company.

ADWEA's technical adviser Mott MacDonald has established a test rig to determine how the RO plant copes with seasonal water conditions in the Persian Gulf (*see GWI, October 2003, p12*).

The current round of pilot plant testing, which runs until March 2005, is split into four cycles. The first is based on a series of reliability tests and is designed to give an early indication of plant performance. Certain criteria need to be met before the project agreements can be signed.

The second cycle is based on a further three-month test period. Satisfying the terms of this phase is a condition for the project's financial close. Phases three and four will be used to further determine seasonality effects and to test membrane performance.

Veolia Water and Mitsui are understood to have lined up four firms as potential membrane suppliers for the project. They are Hydranautics, Dow and Koch Membrane Systems, all of the US, and Japan's Toray Industries.

The project consortium is free to use different membranes during pilot plant testing to help select a preferred supplier.

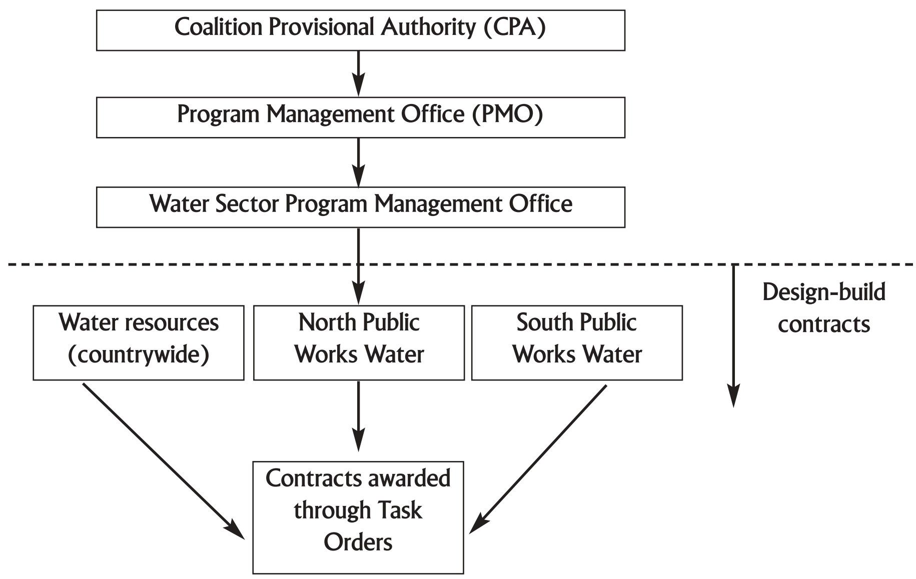
The \$250-300 million project is Abu Dhabi's first IWP. It is also the first major standalone SWRO plant in the Gulf and one of the largest desalination plants in the world based on RO technology. ■

Global Water Intelligence

Iraq awards water/wastewater contracts

The CPA has appointed a series of contractors to handle its reconstruction programme.

Organisational structure of Iraq's reconstruction programme.



Source: Halcrow

The US Department of Defence acting on behalf of the US/UK-led Coalition Provisional Authority (CPA) awarded three major construction contracts last month for the restoration of Iraq's water infrastructure, although with the worsening security situation, there is likely to be a hiatus before the work is carried out.

The contracts have a combined value of $1.7 billion. The design-build contractors selected for the work are: Washington Group International, Black & Veatch and Fluor Group, all of the US, and the UK's AMEC.

A separate $28.5 million contract was also awarded to a joint team of CH2M Hill and Parsons Water for the provision of support services to the Public Works & Water Sector Program Management Office. This reports to the CPA's Program Management Office (PMO) which is implementing Iraq's infrastructure reconstruction programme (*see organisation chart*).

The Public Works & Water Sector Program Management Office has a budget of around $4.4 billion for expenditure on design-build projects in the water sector. The three design and construction contracts cover water resources projects, and water supply and wastewater projects in the north and south of Iraq.

A team of Washington Group International and Black & Veatch will provide design-build services to repair or construct water resource systems throughout Iraq. The indefinite delivery/indefinite quantity (ID/IQ) contract covers rivers, dams and wells and is for two years with three one-year options. It is worth $600 million.

A joint venture of AMEC and Fluor will restore water and wastewater infrastructure in the northern and southern regions of Iraq under two contracts covering WTPs, water storage, distribution, WwTPs, pumping stations and sewerage networks. The combined value of the contracts is $1.1 billion ($600 million and $500 million).

GWI understands that water supply projects covered by the AMEC/Fluor contracts will include: large traditional WTPs and small package units such as RO plants; storage infrastructure such as reservoirs and water towers; distribution systems including primary and secondary pipework, network distribution, house connections and leakage control systems, and; pumping stations including those on the primary distribution systems and reservoirs.

Wastewater projects are expected to include: traditional large capacity treatment works using mechanical operation and producing effluent to acceptable standards; stabilisation ponds using the aeration process; pumping stations for primary mains and pumping effluent for treatment; sewerage networks consisting of a variety of pipe materials, and; house connections to the sewer network (or septic tanks where no network is available).

"The reconstruction programme in the water and wastewater sectors will generate a massive amount of work", said David Plowman, technical director of the UK's Halcrow Group. He expected there would be a large procurement programme for all types of plant, materials and equipment although a limited supply would be available in Iraq.

"Local Iraqi contractors have the potential to execute civil works but might need to associate with foreign contractors for more specialised services and supplies", he said.

Halcrow Group is sub-consultant to the CH2M Hill/Parsons Water team.

A spokesman for AMEC could not confirm the exact scope of the work as specific task orders from the client had yet to be received. Equipment and services would be procured from a mix of US, international and local companies, he said.

On the issue of security, AMEC stated that it was aware of the "uncertain environment in Iraq". In accordance with company policy, it was compiling a database of staff who had expressed interest in working in Iraq. The decision was an entirely voluntary one, but there had been a "fairly healthy" response to date.

Desalination

The CH2M Hill/Parsons Water contract includes plans for 14 WTPs with capacities estimated to range from 2MGD (7,575m^3/d) to 5MGD (18,500m^3/d) to be installed over the next three years. Some of these are expected to require salinity reduction.

Salinity is a major concern in southern Iraq. The salinity in total dissolved solids (TDS) of its two most important surface water sources (the Tigris and Euphrates rivers) is between 280mg/l and 600mg/l at the Syrian or Turkish border. However, at Amara the salinity content of the Tigris is 1,500mg/l and at Nasiriyah the salinity content of the Euphrates is 3,000mg/l. The Shatt al-Arab, which is formed by the confluence of the Tigris and Euphrates, has a TDS content of 3,500mg/l.

Iraq's first desalination project under the reconstruction programme is likely to be a 5MGD (18,500m^3/d) brackish water RO plant delivered on a design-build basis; the project will also include 20km of piping. The BWRO plant is intended to treat water with a TDS content between 2,500mg/l and 5,000mg/l. ■

Dexia unlocks Mexican debt market

The New York branch of the French bank has been leading the way in innovative finance for the Mexican municipal sector. A local currency pooled fund is its latest big idea.

Dexia Local Credit is "moving right ahead" on a $120 million deal for a group of Mexican municipalities, Dexia's David Vetter told GWI last month. The French-based bank will back bonds issued on behalf of several local town halls by a regional bank for improvements in water supply infrastructure in the federal state of Mexico, outside Mexico City. The deal is slated for completion in the second quarter of this year, but may run over into the third, according to Vetter.

The idea is to have all the prospective infrastructure projects tendered at the same time, taking advantage of economies of scale. But the sheer volume of data, the need to run through contractual and analytical detail with each municipal beneficiary, has caused delays. "It is a slow process because the Mexican bond market is still in relative infancy, but the basic demand from the municipalities is very high", Vetter said.

So is local investor interest, Vetter claims, and pooling recipients is an effective means of bringing the two sides together. "Local pension funds and insurers are keen to diversify out of federal bonds, so other bonds with a good credit rating backed by a major bank will find a response". Analysts estimate that Mexican pension funds looking for a home currently run to about $32 billion.

This deal is a follow-on from Dexia's pioneering loan to a regional trust on behalf of bonds for the Tlalnepantla municipal water utility last year. That deal, though relatively small, broke new ground by negotiating directly with a municipal water body in the local currency via a regional bank. This one, to benefit the same Mexican state, is a similar model on a much larger scale.

Mexican constitutional law prohibits state and municipal bodies from borrowing either in foreign currency or from foreign banks, so a regional subsidiary or trust provides the necessary liaison. Vetter thinks the foreign currency clause is not really a handicap. "After Argentina, no one can borrow or lend in dollars", he said. He estimates that about two billion pesos had been borrowed by Mexican municipal governments at the end of 2003.

Foreign, specifically US, pension fund interest in the Mexican market has turned around since President Fox took over from the old PRI government in 2001. "Before that, US institutions would not have felt comfortable".

Although laws haven't changed much and fundamental change is slow, the climate is now much more sympathetic and investors feel more at ease, analysts say. Major US fund managers are opening offices in Mexico City. "This is particularly interesting for the water industry as federal and state governments retreat in favour of the municipalities, which are left to raise their own capital", one analyst said.

Mexico's 32 state governments preside over almost 3,000 local municipalities. Central government is progressively granting them more autonomous control over local utilities. ■

Sabesp returns to profit in 2003

Lower foreign currency debt and stronger customer revenues make the difference for Latin America's largest water company.

São Paulo State Water Company (Sabesp) registered net profits of US$306 million (R$886 million) on a net turnover of US$1.42 billion (R$4.1 billion) in 2003, making a strong recovery from a US$225.7 million (R$651 million) loss last year. Turnover was also higher by 9.1%.

Sabesp's board attributes the company's recovering fortunes to the rising value of the Brazilian real against the US dollar, which cut foreign debt repayments and water price increases since August 29 – 18.75% for most consumers and 9% for 1.9 million very low income customers. Other factors contributing to Sabesp's positive results were falling inflation and increased operational productivity.

Its staff numbers stood at 18,546 and attended 566 water and sewage connections per employee, a 2.7% improvement on 2002. Sabesp gained 165,000 new water and 171,000 new sewage customers during 2003.

Sabesp is Latin America's largest water company and supplies water and sewage services to 25 million people. It provides services to 368 of the state's 645 municipalities. In its operating area, 78% of its clients have piped water supplies and 60% sewage collected. It is responsible for 57,000 km of water pipelines and 36,000 km of sewerage pipelines.

A key event in 2003 was Sabesp taking on the services for São Bernardo do Campo in December in exchange for an unpaid debt of US$144 million (R$415 million). This is the fourth largest municipality in São Paulo State, with a population of more than 700,000 people. Apart from enlarging Sabesp's customer base by 5% in the metropolitan region, it will dilute costs and also contribute to water quality of the state's main river, the Tietê.

São Bernardo has been sluggish in connecting its sewage networks to the adjacent ABC WwTP ($3.3m^3/s$ capacity) opened by Sabesp in June 1998 to treat sewage in the south of the São Paulo Metropolitan Region. Sabesp is expected to accelerate work on these connections, which it has long demanded, as they have prejudiced its US$1.5 billion River Tietê clean-up project initiated in 1991.

Sabesp will also now be able to act more effectively in protecting water catchment areas and São Paulo's major reservoirs (Billings and Guarapiranga), which are located on the southern edge of São Bernardo. Both reservoirs' water quality is threatened by urban encroachment. São Paulo City has suffered from lower than average rainfall during the past three years and this has made these water sources even more precious. Sabesp's volume of water supplied fell by 0.8% because of this drought in 2003.

In May, Sabesp is scheduled to sign a R$300 million soft finance deal with Japan Bank for International Cooperation. The Japanese bank will provide R$160 million and Sabesp R$140 million for sewerage infrastructure and water supplies in the Santos coastal region of São Paulo State.

Sabesp has also formally presented detailed proposals requesting federal government credits totalling R$714.2 million for 40 new projects. The Ministry for Cities is considering the projects and will make its decision this month. ■

New directions in California

The Golden State is home to some of the fiercest critics of private water. Larry Chertoff looks at how two investor-owned utilities have innovated to find growth.

Recently, two small California water companies have been attracting investors' interest by their widespread use of reverse osmosis through groundwater purification and in-home filtration. These modest innovations come from two of the better-run water companies in the country so their ideas bear watching.

When San José Water (SJW) learned that the majority of its customers were already filtering the tap water and buying bottled drinking water, SJW reasoned it could profit from selling and servicing high-end, in-home, water purifiers.

Vice president of Water Quality, Scott Yoo, said: "This type of service saves customers the time and hassle of shopping around for alternatives [to San José tap water] and they felt a level of trust with regard to the utility's ability to service [the RO units] for many years to come".

SJW created an unregulated company called Crystal Choice Water Service and offered a minority interest to Kinetico Incorporated to rent or sell and service Waterplant reverse osmosis units for homes. These appliance-sized systems soften the water and remove chlorine from the company's water piped to the same homeowners.

Crystal Choice Water turned its first profit this year, three years on from its start-up in January 2001.

SJW became comfortable with microfiltration after retrofitting its Saratoga water treatment plant with membrane filters in 1994.

San José was the first regulated water company in the US to use microfiltration in routine water filtration. The membrane filters from US Filter (now Veolia) effectively removed suspended particles – a serious problem during the rainy season.

While the turbidity presented no health problems, customers were dissatisfied with the taste and appearance of the water. San José learned how critical appearance and taste are to its customers and how well membrane filters work.

The company now sees opportunity in new communities to use in-home RO units as the last step in water purification. Homeowners can process as much water as they need for quality consumption such as cooking and washing and lower quality, less costly water for lawn care, laundry, toilets and so on.

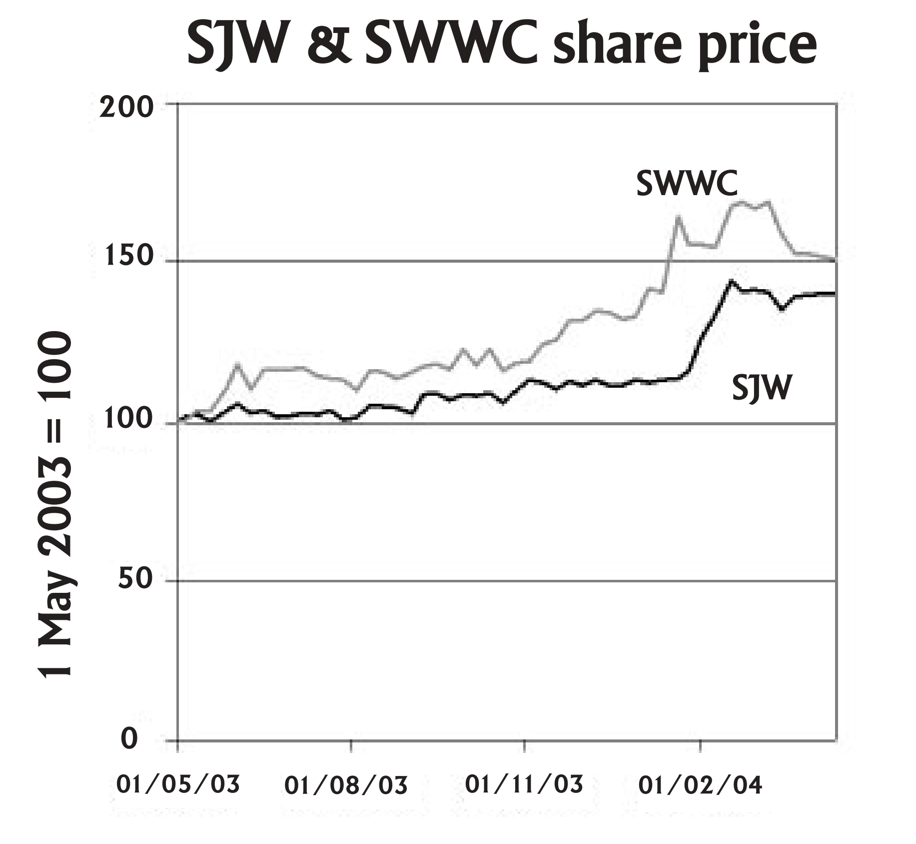
SJW has prospered in recent years, especially in contrast to the tech, dot com and telecom industries that populate its service territory. It succeeds through tight management control. It has given its investors a 100% return on their money in the past five years while growing annual revenue at a compounded rate of 7.3%. To do this, SJW had a return on equity, assets and invested capital about 45% higher than the industry.

A clue to how SJW achieved these returns is its $62,000 income per employee. This compares with $24,000 for both California Water Services and American States Water, two similar small cap investor-owned water utilities in California.

SJW has had a strong run-up in share price in 2004 – greater than 25%. But the company still has among the lowest price/earnings ratios – about 17 compared with 32 for American States Water, 24 for California Water Service Group and 29 for Southwest Water. The industry average is close to 28.

Meanwhile, down the Pacific coast in Los Angeles, Southwest Water is close to completion of a five million gallon per day, $25 million, reverse osmosis system in the southern coastal city of San Juan Capistrano. The facility will supply approximately half the city's water needs, turning brackish groundwater into highest quality drinking water.

Their ECO division will operate the plant for the Metropolitan Water District of Southern California under a 20-year, $20 million contract. The company is actively looking for other sites for small RO facilities for less challenging filtration than seawater. This conservative approach to progressive concepts has propelled the hybrid water company – 35% regulated water provider, 65% contract operator – to the top spot in industry growth.



Although SJW has done very well for its investors, Southwest Water leads the industry in share price and revenue growth. Since 1998, SWWC has grown revenue at 16% compounded yearly. During this time, share value leaped 200%.

The company, based in Los Angeles, earns 65% of its income from its non-regulated services. This compares with about 9% for SJW, and less than 5% for California Water Services and American States Water.

From a traditional investor-owned utility, SWWC expanded into major contract operations after acquiring Texas-based ECO Resources in 1985. ECO specialised in operating small municipal utilities' districts with short-term contracts that have been routinely renewed without the expense of open competitive bidding.

This once quiet, family-controlled company blossomed after 1995 when chairman Anton Garnier hired Peter Moerbeek as chief financial officer of SWWC and chief executive officer of ECO. Moerbeek, fresh from a variety of financial leadership positions in energy and high-tech companies, expanded ECO from a Houston area operating company to a multi-service contractor in New Mexico, Mississippi and California.

Through acquisition of OpTech in 2001, a family-owned contract operator in the old south, SWWC got a foothold in Georgia and Alabama. The company added a substantial portfolio of operating contracts two years later with the $10 million purchase of contracts from AquaSource, a failed start-up owned by Duquesne Light. Moerbeek valued the contracts at $18 million.

AquaSource contracts added to SWWC's portfolio of projects in the fast-growing and profitable sunbelt, but it also saddled the company with small projects in Colorado, Wyoming and South Dakota. Recently SWWC won its first Department of Defense contract to service Fort Dix, New Jersey – a long stretch from the Los Angeles home office and their sunbelt businesses.

Management pressures from these diverse holdings are beginning to show. SWWC's income per employee is the lowest of the water utility group, only $5,000 per employee compared with $24,000 for California Water Services and American States Water. In fairness to the hybrid SWWC, Suez, the multinational owner of United Water, which also owns regulated utilities and operates non-regulated operations, reports $12,000 income per employee. The flip-side is the company's higher than average return on equity and invested capital. Its contract operations side does not own significant assets.

Contract operations is labour intensive; water utilities are capital intensive. In an expected environment of controlled inflation, rising salary rates and rising interest rates will be SWWC's greatest challenge and greatest strength.

Moerbeek, who was recently appointed president and CEO of SWWC, acknowledges that the company must contain costs and tightly manage the growing service area. The company has girded itself against rising interest rates by floating two secondary offerings in one year, netting the company about $32 million which is earmarked for further acquisitions.

However, finding water companies to buy or operate in the much sought-after market of high-growth, affluent new communities is an increasingly difficult job. The coastal area from Florida to San Diego is being combed through for likely candidate acquisitions by most of the aggressive water companies. Moerbeek has turned to a new source of contract operations, the US military. Fort Dix was SWWC's first military contract and the company plans to follow up with more.

Moerbeek expects interest rates to rise. In anticipation, he secured long-term debt at favourable rates for SWWC's regulated utility business and seeks short-term contracts that can outpace operating cost increases for its non-regulated management businesses.

Southwest Water and San José Water are companies quick to see opportunity and experienced enough to protect their companies and their investors through a time that may not be as favourable to small cap water utilities as the past few years. ■

San Diego threatens to block desal cash

Poseidon's private desalination plants are meeting tough opposition from Californian public bodies. Will the governor's support be enough to win through?

Poseidon Resources' immediate business prospects have been pared down to two projects in California: a 189,000 m^3/d desalination facility at the Encina Power plant in Carlsbad and a 189,00 m^3/d facility in Huntington Beach, Orange County (the Freeport project in Texas is less well advanced).

The Huntington Beach project is in hiatus while an environmental review studies possible damage to aquatic life from the proposed facility. To a great degree, the Carlsbad project will determine Poseidon's future. And, the Carlsbad project is looking shaky.

After the San Diego County Water Authority suspended negotiations with Poseidon to explore its own desal facility at the Encina site, Carlsbad started direct negotiations with the company for 95,000 m^3/d of desalinated water. Nearby Oceanside is interested in 56,000 m^3/d and three water districts are also exploring water purchase agreements.

None of these water contracts can be consummated without a subsidy from the Metropolitan Water District. The MWD is prepared to fund $250 per annual acre-foot ($0.20/$m^3$), equal to about one-third of the water's cost.

The MWD has only two simple conditions: 1) the facility's Environmental Impact Review is approved and 2) the local water authority – San Diego County Water Authority – issues a letter approving the project.

Poseidon is paying about $500,000 to fund the Environmental Impact Review, including legal advisers and Carlsbad city staff time. That study should be complete by December 2004.

The San Diego County Water Authority, however, informed Carlsbad that it would not approve the MWD subsidy until "we determine how to best meet the regional need for desalinated seawater". The SDCWA also announced that it is studying two other projects and that the city "should consider the economics . . . with and without an incentive from Metropolitan [Water District]".

The California Coastal Commission must also approve the project. The Coastal Commission, a politically active body, has expressed concern that a private company would be responsible for water needed by the public. It did, however, suggest that if it gives its approval, it would like a continuing donation equal to 5% of the water sales.

The mayor of Carlsbad and the state's Resources Agency are vocal supporters of the project and governor Arnold Schwarzenegger has encouraged public-private partnering for desalination.

GWI's monthly monitoring service charting the progress of public-private partnerships in the international water industry.

EUROPE

Belgrade, Serbia

Purpose of project: Provide technical assistance (TA) support to aid the city in the development of a PPP project for water and wastewater treatment.

Relevant companies: Mott MacDonald, ING, KPMG Belgrade and Gide Loyrette Nouel.

Financing: The €2.6m TA contract is being funded by the European Agency for Reconstruction (EAR) with supplementary involvement, but not financing, from EBRD.

Worth: The city of Belgrade has identified investments of €750m to remedy environmental damage caused by inadequate sanitation and a further €100m to improve water supply levels of service.

Contract type: n/a

Project status and schedule: The TA contract is split into various phases. The initial phase is due for completion in May and involves the Mott MacDonald-led team undertaking a technical, legal, accounting and financial review of the existing water and wastewater operations. The review will aim to identify potential efficiency savings and include a draft CAPEX programme. It will also propose a recommended structure for the PPP which will be jointly prepared by the Mott MacDonald team and IFC, appointed by the city to act as transaction advisers. Subsequent phases of the contract will entail procurement of the PPP through an international tender managed by IFC. The target date for the appointment of a partner for the city is September 2005.

NO CHANGE ◀

GB, Ministry of Defence (Project Aquatrine)

All three contract packages have now been awarded. Brey Utilities commenced work on Package A in December 2003. Nevis Water is the preferred bidder for Package B and C2C the preferred bidder for Package C. Package A is being financed by shareholders' equity without recourse to a project finance loan. Funding for Packages B & C is currently being arranged although both are likely to be financed in a different way. Package C is scheduled to go live in September. Package B will go live in November.

Italy (Tuscany coast-Livorno)

Purpose of project: Acquire 40% of ASA S.p.A, the operator which received the assignment to provide integrated water services to Tuscany ATO 5. The ATO covers 33 comuni with a combined population of 356,000. The largest urban area is the city of Livorno with a population of 164,000.

Relevant companies: Four groups have prequalified. They are: 1. Gas Natural of Spain with Aguas de Barcelona 2. Acea in partnership with Italgas 3. Severn Trent Italia backed by the venture capitalist Roberto Colaninno 4. A group of Genoa's AMGA, Acegas of Trieste & Milan's Metropolitane Milanesi.
Deloitte & Touche is advising the authorities in Livorno.

Financing: Likely to be a cash acquisition. ASA's equity value is only €30m, putting the minimum bid price at €12m.

Worth: CAPEX requirements of around €350m.

Contract type: Share purchase.

Project status and schedule: Bids for ASA were originally due on 1 March. This was pushed back to 15 March and then 2 April. The new date for offers is now 19 April.

UPDATE ▲

Romania (Constanta)

Purpose of project: Manage, operate and maintain the water supply and wastewater collection and treatment systems in Constanta and six neighbouring municipalities. The population served is around 500,000 and increases in the tourist season to 1.5 million.

Relevant companies: Five groups have prequalified. They are: 1. Cascal 2. Gelsenwasser 3. Veolia with Greece's Eydap 4. Berlinwasser 5. A consortium of Canal de Isabel II, Grupo Sacyr and IW Wabag (a VA Tech Wabag subsidiary).

Financing: Private sector financing of €40m-€50m. Investments then to be financed from cash flow.

Worth: The financial model includes a number of investment scenarios ranging from €101m to over €600m. Something in the range of €250m over the contract term is most likely.

Contract type: 20-year concession.

Project status and schedule: The transaction cannot move forward until the County Council of Constanta gives its consent. Council approval will not be granted until after local elections at the end of June. This is not as bad as it sounds, as all political parties in Constanta want to go ahead with the concession. A new council might decide to reopen the prequalification process and modify the transaction slightly to accommodate different political views. However, while this might delay the process, it is not expected to derail it completely.

UPDATE ▲

Romania (Craiova)

Purpose of project: Provision of water & sewerage services to the municipality of Craiova (280,000 population). Craiova is in the southwest of Romania.

Relevant companies: Spain's Grupo Eptisa and Dutch management consulting firm BDO have completed an EU ISPA-financed study of PSP options.

Financing: n/a

Worth: n/a

Contract type: The consultants' report set out three options for the level of PSP. The municipality is thought to favour a long-term lease contract (20-30 years).

UPDATE ▲

Project status and schedule: The municipality of Craiova has approved the ISPA-funded options study (the study was completed six months ago). Following extensive consultation, the municipality is expected to make a decision on the way ahead – possibly by the summer. The Eptisa-led team would then prepare the documentation required to select a transaction adviser.

Romania (Salaj county)

Purpose of project: Provide potable water to the localities of Zalau, Simleu, Silvaniei, Jibou and Cehu Silvaniei in Salaj country (total population 120,000) from a source at Gilau in the neighbouring Cluj county. The main project component is a 65-70km pipeline. The contract also covers a water pumping station and associated equipment.

Relevant companies: The preferred bidder is a consortium led by InfraMan/Amiantit.

Financing: An InfraMan/Amiantit-led company is likely to provide 30% of the total investment in the form of equity. The remaining costs will be financed by external debt.

Worth: Estimated €25m

Contract type: Proposed 49-year DBOT. The contract would include an off-take agreement with the company which supplies water in each locality and an abstraction agreement with the water company in Cluj, from where drinking water would be transported to Salaj county.

Project status and schedule: The InfraMan/Amiantit consortium submitted letters of intent for the project in March 2003. The tender commission of Salaj county subsequently accepted the consortium's offer. A project agreement was signed at the end of September 2003. At the same time, the county commissioned a feasibility study from the local Consilier Construct Bucharest. The feasibility study was completed at the end of 2003. The next stage is to finalise the commercial aspects of the project including financing arrangements and the affordability of the tariff. The consortium is in permanent contact with Salaj county and hopes to complete negotiations in the first half of 2004.

NO CHANGE ◀

MIDDLE EAST & NORTH AFRICA

Algeria (East Algiers)

Purpose of project: Design, finance, build, own and operate a 100,000m^3/d SWRO desalination plant.

Relevant companies: Three groups have submitted technical proposals: 1. A consortium of Barna Investment, Lemna International and Pridesa 2. Ionics in partnership with SNC Lavalin 3. A team of Grupo Cobra, Befesa (formerly Abensur), Codesa and Sadyt.

Financing: The project company will be responsible for financing the plant.

Worth: \$100m-\$140m

Contract type: BOO. The successful bidder will create a project company with the Algerian Energy Company (AEC) and Algérienne des Eaux (AdE) and sell desalinated water to Sonatrach (the Algerian national oil company) and AdE.

Project status and schedule: The East Algiers and West Algiers projects are lagging behind Skikda and Oran. The Geida consortium has been selected to implement the Skikda project and commercial offers for Oran are due in May (see below). It is expected that economic offers for East Algiers and West Algiers will be invited at a later stage, probably in the second half of the year.

NO CHANGE ◀

Algeria (West Algiers)

Purpose of project: Design, finance, build, own and operate a 100,000m^3/d SWRO desalination plant.

Relevant companies: Technical proposals have been received from the same three consortia which submitted offers for the East Algiers plant (above).

Financing: The project company will be responsible for financing the plant.

Worth: \$100m-\$140m

Contract type: BOO. The successful bidder will create a project company with AEC and AdE and sell desalinated water to Sonatrach and AdE.

Project status and schedule: See comments for East Algiers above.

NO CHANGE ◀

Algeria (Oran)

Purpose of project: Design, finance, build, own & operate a 100,000m^3/d SWRO desalination plant.

Relevant companies: Technical proposals have been received from the same three consortia which submitted offers for the West Algiers and East Algiers plants.

Financing: The project company will be responsible for financing the plant.

Worth: \$100m-\$140m

Contract type: BOO. The successful bidder will create a project company with AEC and AdE and sell desalinated water to Sonatrach and AdE.

Project status and schedule: AEC has identified a site for the plant at Beni-Saf in the Oran region. Commercial offers for the project will be invited in May.

UPDATE ▲

Algeria (Skikda)

Purpose of project: Design, finance, build, own & operate a 100,000m^3/d SWRO desalination plant.

Relevant companies: The Geida consortium has been selected to implement the project. It is comprised of Sadyt, Grupo Cobra, Codesa and Befesa, all of Spain.

Financing: The project will be financed by a mix of debt and equity in a 70:30 ratio.

Worth: $110m

Contract type: 25-year BOO. A project company will be formed in which Geida will take 70% equity while AEC and AdE will hold the balance of 30%. The project company will sell desalinated water to Sonatrach and AdE.

Project status and schedule: The Geida consortium submitted a low bid of $0.74/m^3 at the end of March narrowly beating an offer of $0.765/m^3 from a consortium of Barna Investment and Lemna International. Geida will establish a project company by the end of May. The consortium has been given a period of 12 months to arrange finance for the project.

UPDATE ▲

Disi-Amman conveyor, Jordan

Purpose of project: Supply 100 million m^3/year of additional urban water to the Greater Amman area from the Disi aquifer in southern Jordan, a distance of 325km. Work involves financing, design, construction, operation & maintenance of the project.

Relevant companies: The Ministry of Water & Irrigation (MWI) has named its preferred bidder as the consortium of Saudi Oger and Black & Veatch with Tekfen/CCC as the EPC contractor.

Financing: A combination of Jordanian government funds ($200m) and a World Bank partial risk guarantee (up to 25% of the project value). The US government's Overseas Private Investment Corporation (OPIC) could also support the project.

Worth: Estimated $600m

Contract type: 40-year BOT

Project status and schedule: Following its evaluation of revised bids, MWI has selected the Saudi Oger group as preferred bidder for the project. Clarification meetings will be held with the consortium over the next two weeks to fine tune the details and to discuss a timetable for the signature of project agreements.

UPDATE ▲

Jubail & Ras Al-Zour, Saudi Arabia

Purpose of project: Build, own, operate and finance dual-purpose power and water plants. The Jubail IWPP has a planned capacity of 340,000m^3/d and will supply eastern region cities including Khobar. Ras Al-Zour will serve Riyadh and has a planned capacity of 800,000m^3/d.

Relevant companies: The client is a joint team of the Saline Water Conversion Corporation (SWCC) and the Saudi Electricity Company (SEC).

Financing: n/a

Worth: n/a

Contract type: IWPP project structure based on a 20-year BOT agreement.

Project status and schedule: Jubail and Ras Al-Zour are both greenfield projects and form the second phase of the Kingdom's IWPP programme. The timing is dependent on what happens at Shoaiba – the first plant in the programme (see below). One possibility for the Jubail project is that developers are invited to acquire brownfield assets at the complex and then add the new capacity at a later stage.

NO CHANGE ◀

Marafiq, Saudi Arabia

Purpose of project: Build, own, operate and finance a cogeneration plant producing 2,400MW of power and up to 400,000m^3/d of water.

Relevant companies: The client is Marafiq, the utility company for Jubail and Yanbu. Its advisers are Shearman & Sterling (legal), Citibank (financial) and Kuljian Corporation (technical).

Financing: n/a

Worth: n/a

Contract type: IWPP project structure. The successful bidder will create a project company with Marafiq to build, own and operate the plant.

Project status and schedule: A number of developers, including the main industry figures, have submitted tentative expressions of interest. The provisional date for publication of RFP documents is April. The timing of the project is such that it could end up competing with the Shoaiba IWPP (below). In this case, it would do well to attract three serious bidding groups.

NO CHANGE ◀

Qidfa, Fujairah Phase 1

Purpose of project: Purchase an equity stake in a power generation, desalination and transmission project at Qidfa. The power and desalination plant has a capacity of 656MW and 454,000m^3/d. It is capable of exporting up to 500MW of power to the planned Emirates National Grid and 454,000m^3/d of water to Abu Dhabi and the northern emirates.

Relevant companies: The client is the Union Water & Electricity Company (UWEC).

Financing: The project is being financed by a five-year, $950m bridging facility provided by 13 banks led by the National Bank of Abu Dhabi (NBAD). Through its ownership of UWEC, the Abu Dhabi government has provided an equity commitment of $409m.

Worth: $1.3bn

Contract type: Procured on an EPC basis and built by Doosan Heavy Industries and Ondeo Degrémont. The project is now being converted to an IWPP. Developers are being invited to purchase up to 49% of the equity. At the same time, the bridging facility will be converted into a project finance loan.

Project status and schedule: UWEC is seeking an advisory team for the IWPP process – investing in the Phase 1 plant and the development of Phase 2. The proposed Phase 2 station will produce in the region of 1,000MW of power and 454,000m^3/d of water. Fichtner has submitted design studies for the Phase 2 plant. UWEC has already sought expressions of interest for the project from potential investors.

UPDATE ▲

Shoaiba, Saudi Arabia

Purpose of project: Build, own, operate and finance a crude-oil fired power and desalination plant with an envisaged power capacity of 850MW and water capacity of 880,000m^3/d. The Shoaiba site is 120km south of Jeddah on the Kingdom's Red Sea coast.

Relevant companies: The original 11 prequalifiers have come together to form five prospective bidding groups. At this stage the first two in the list below are considered serious contenders: 1. A consortium of International Power, Saudi Oger, Xenel, Mitsui, Sumitomo and National Power Company 2. Tenaga Nasional Berhad with ACWA Power, Black & Veatch, Mada, Malakoff and Itochu Corporation 3. A venture of AES Oasis, Mubadala Development Company and the Union Water & Electricity Company 4. Tractebel with the local Al-Bugshan Group 5. A pairing of Power & Integrated Projects Company and SNC Lavalin.

Financing: Funds will be provided through a mix of debt and sponsors' equity in a likely 75:25 ratio.

Worth: Estimated $1.8bn

Contract type: The successful developer will own 60% of the project company. The remaining 40% will be held by the Saudi government through the Public Investment Fund (32%) and SEC (8%). The project company will sell its entire capacity and output to the Water & Electricity Company (WEC), a jointly-owned subsidiary of SWCC and SEC, under the terms of a 20-year power and water purchase agreement.

Project status and schedule: A decision on the form of government guarantee for the off-taker is imminent. Once this is known, RFP documents will be issued to the bidders.

NO CHANGE ◀

Shuqaiq, Saudi Arabia

Purpose of project: Build, own, operate and finance a power and desalination plant producing 113,000m^3/d of water and 700MW of power. The plant will serve the Kingdom's Aseer region.

Relevant companies: WEC is being advised by HSBC Investment Bank (financial), Fichtner (technical), Clifford Chance (international legal) and The Law Firm of Yousef & Mohammed Al-Jadaan (local legal).

Financing: n/a

Worth: Estimated $1bn

Contract type: A similar project structure to that planned for Shoaiba.

Project status and schedule: This project is running several months behind the Shoaiba IWPP. More details are likely to emerge once the Shoaiba structure has been finalised.

NO CHANGE ◀

Sohar, Oman

Purpose of project: Construction of a 480-550MW and 5,700m^3/hr (136,800m^3/d) combined power and water plant.

Relevant companies: Four groups have submitted bids for the project: 1. AES Oasis with the local Multitech. The group's nominated EPC contractors are Ishikawajima-Harima Heavy Industries (power) and Fisia Italimpianti (desalination). 2. A consortium of SembCorp, Nissho Iwai and Kansai Electric Power Co. with Siemens (power) and Hitachi Zosen (desalination) as EPC contractors. 3. A group led by Tractebel including the local Sogex Oman. Doosan Heavy Industries is the nominated EPC contractor. 4. A consortium of Total, CCC and Gulf Investment Corporation with Ansaldo Energia (power) and Sidem (desalination) as EPC contractors. The client is the Ministry of National Economy (MNE).

Financing: Non-recourse project finance.

Worth: $450m-$500m

Contract type: IWPP with a 15-year power and water purchase agreement.

Project status and schedule: Offers were submitted on 22 March. MNE's strategy is to conduct a rigorous technical evaluation of the bids. Two preferred groups will then be shortlisted. Key dates are 24 April for final bid clarifications and 24 May for selection of shortlisted bidders. Financial offers are likely to be opened at the end of May. Based on technical proposals only, the AES group is thought to be in the lead closely followed by the Sembcorp consortium. Project documents specify that a minimum four distiller units are supplied for the desalination phase. The desalination process is open to bidders.

UPDATE ▲

Taweelah B-C, Abu Dhabi

Purpose of project: Acquisition of the existing Taweelah B1 and B2 power and desalination plants and addition of new capacity (1,000MW of power and up to 400,000m^3/d of water)

Relevant companies: Around 20 international developers have prequalified for the project. Of these, International Power has expressed an intention to bid. Other prequalifiers include Marubeni, Mitsui & Co., Total, Tractebel and Sumitomo.

Financing: Project finance.

Worth: Estimated $2bn

Contract type: IWPP. The model used in Abu Dhabi to date involves the successful bidder taking a 40% stake in a project company which owns the plant. The Abu Dhabi Water & Electricity Authority (ADWEA) holds the remaining 60% equity interest.

Project status and schedule: The deadline for receipt of offers is 20 June. Other milestones are December for the signing of project agreements, June 2005 for financial close and May 2008 for full commercial operation.

NO CHANGE ◀

Taweelah RO, Abu Dhabi

Purpose of project: Finance, procure, construct, own and operate a 227,500m³/d SWRO plant.

Relevant companies: A consortium of Veolia Water & Mitsui & Co will implement the project.

Financing: ANZ Investment Bank and Credit Lyonnais are the mandated lead arrangers.

Worth: $250m-$300m

Contract type: Independent Water Project (IWP). In line with Abu Dhabi's strategy for IWPPs, a special purpose company will be formed in which ADWEA will take 60% equity while the consortium will hold the balance of 40%.

Project status and schedule: There is a revised deadline of mid-June for signing the water purchase agreement (WPA). The target date for financial close is 30 September (it had previously been the end of July). The delay is the result of minor modifications which have been proposed to the plant configuration. These need to be incorporated into the pilot plant testing schedule and verified before a design change is agreed with the project company.

UPDATE ▲

AFRICA

Ghana

Purpose of project: Restructuring of Ghana Water Company (GWC) into new business units.

Relevant companies: In theory there are four prequalified bidders for the project, namely Saur International, Ondeo, Veolia Water and a joint team of Biwater & AquaMundo. In practice, it is hard to say which of these companies are still interested. Prequalification may be reviewed this year.

Financing: Donors have continued to express interest in the project. Currently $150m has been secured from the World Bank for a civil works programme scheduled to start this year.

Worth: Estimated $1.8bn over 10 years.

Contract type: Short-term management contracts.

Project status and schedule: The Ghanaian government remains committed to the restructuring process despite the project's somewhat chequered history (it has suffered allegations of corruption and attracted widespread opposition from anti-privatisation groups). The Ghana Water Sector Restructuring Secretariat is now pursuing a short-term management contract (three years) followed by a lease. The original plan envisaged 10-year lease contracts for two separate business units (A & B) created by the restructuring of GWC. The actual number of business units will be determined when the transaction document is redrafted.

NO CHANGE ◀

ASIA PACIFIC

Ballarat & Creswick, Vic, Australia

Purpose of project: Upgrade and operate the Ballarat North and Creswick WwTPs as part of a land-based effluent reuse programme known as SmartCycle. The client is Central Highlands Water (CHW).

Relevant companies: Two bidding groups: United Utilities Australia and Earth Tech.

Financing: Private sector financing.

Worth: A$30m (US$23m)

Contract type: 25-year DBFO. The project is being implemented within the Partnerships Victoria Policy.

Project status and schedule: There is no decision yet on a preferred bidder. Preliminary recommendations will be made at the next Partnerships Victoria board meeting on 27 April. A further two weeks will then be needed to secure additional government approvals. On this schedule, a preferred bidder could be announced by mid-May.

UPDATE ▲

Beijing No.10, China

Purpose of project: Design, build and operate a 500,000m³/d WTP to provide water for two million Beijing residents.

Relevant companies: Beijing Anling Water Technology Co.

Financing: Likely to be renminbi (RMB) based financing with no international commercial banks or multilateral institutions.

Worth: $200m

Contract type: 20-year BOT (23-year concession management agreement).

Project status and schedule: AWG is in the process of selling its international water business and has completed the disposal of its stakes in Chile's Esval and the Czech SmVaK, VaK JC & VaK Beroun. However, it is not clear at this stage if, or when, a buyer will be found for the B. 10 project.

NO CHANGE ◀

Chennai, India

Purpose of project: Build, operate and maintain a 300,000m^3/d seawater desalination plant.

Relevant companies: A number of firms have responded to a letter of invitation to provide consultancy services. They are: CH2M Hill, Fichtner, Halcrow Group, King Engineering, Malcolm Pirnie, Montgomery Watson Harza, Mott MacDonald, Black & Veatch, Boyle Engineering, Camp Dresser & McKee International, and Tahal.

Financing: The government of Tamil Nadu has appointed the Tamilnadu Water Investment Company (TWICL) to develop and finance the project.

Worth: Estimated $400m

Contract type: TWICL is the project company with turnkey responsibility for developing, designing, financing, constructing, operating and maintaining the plant. It will appoint EPC and O&M contractors as well as raise the debt and equity finance for the project.

Project status and schedule: TWICL invited consultants to submit technical and financial proposals in March. The scope of the work includes providing estimates for capital and O&M costs, preparing contract documentation for construction and O&M, and evaluating techno-commercial bids for construction and O&M. A contract for consultancy services is expected to be awarded at the start of May. The successful consultant will work on a RFP document for publication by the end of September.

NEW

Kathmandu, Nepal

Purpose of project: Manage, operate & maintain water supply and wastewater services in the urban areas of Kathmandu Valley. The population served is around 1.5 million.

Relevant companies: Five companies have submitted expressions of interest (EOIs) for the project. They are: 1. Gelsenwasser 2. Biwater International with Germany's Gauff Ingenieure 3. Severn Trent Water International in association with Halcrow Group 4. Saur 5. Technoconsult International (Bangladesh) with Devtec Nepal.

Financing: The Kingdom of Nepal has obtained two loans from ADB (combined value $15m) to support institutional reforms including the restructuring of the Nepal Water Supply Corporation (NWSC) which is responsible for water supply and wastewater services in Kathmandu Valley. The loans will also help establish three key institutions – a water authority, a water utility operator and a national regulatory board – as well as part fund the management contract.

Worth: Estimated $100m of CAPEX

Contract type: Management contract with a fixed fee and performance incentives. The duration of the contract has yet to be finalised but is expected to be between four and 10 years.

Project status and schedule: The consultants have yet to release a shortlist of prequalifiers as they are waiting on clarification of a number of issues from some of the interested parties. RFPs were due to be released in April but the date has been put back to the end of May or early June. The transaction remains on track and has not been derailed by the deteriorating political situation in Nepal.

UPDATE ▲

Manila, Philippines/East Zone

Purpose of project: Provision of water and sewerage services to 4.7 million people in the city's east zone.

Relevant companies: Manila Water Company (MWC), comprising Ayala Corporation, United Utilities and BPI Capital Corporation.

Financing: Around 70% of MWC's CAPEX plan over the next 20 years will be funded out of operating cash flow while the balance of around 30% will be financed through borrowings. MWC's cumulative borrowings to date are $130m.

Worth: $1bn CAPEX programme for the period 2003-2022. Around 60% of this will be invested in the next seven to eight years.

Contract type: 25-year concession.

Project status and schedule: Manila Water announced net income of P1.2bn ($21.5m) for 2003. This represents an increase of 116% on net income earned in 2002 (P553m).

NO CHANGE ◀

Manila, Philippines/West Zone

Purpose of project: Financing, development, operation and maintenance of the facilities in the Metropolitan Waterworks & Sewerage System (MWSS) west zone.

Relevant companies: Maynilad Water Services (a consortium of Ondeo and Benpres Holdings).

Financing: n/a

Worth: $4.5bn over the duration of the contract.

Contract type: 25-year concession

Project status and schedule: Maynilad Water Services and MWSS have provisionally agreed a compromise deal based on the reorganisation of Maynilad and the restructuring of its debt. The deal has two parts. The first part involves a reorganisation of the concessionaire under which the sponsors would write-off $134m of their original investment and P1bn of advances. At the same time, a portion of Maynilad's debt would be converted to equity (provided its creditors agree). The second part of the plan involves a draw of $50m on the $120m performance bond and the restructuring of all remaining Maynilad debt for seven to eight years. The write-off of $134m of equity and P1bn in advances by Benpres and Ondeo would eliminate Maynilad's accumulated losses caused by the depreciation of the peso against the dollar. The conversion of some debt to equity would transfer majority ownership to the government and significantly reduce Maynilad's debt. This gives the government a free hand to reconfigure the concession. The majority of Maynilad's creditors are thought to have agreed in-principle to the compromise. However, a number of its banks including Citigroup, BNP Paribas and Barclays, are refusing to sanction the deal on the grounds that it does not provide any security for the restructured loans.

UPDATE ▲

Melbourne, Australia

Purpose of project: Upgrade the 370,000m^3/d Eastern WwTP and increase the volume of effluent going to reuse. The plant treats sewage from Melbourne's eastern and south-eastern suburbs.

Relevant companies: The client is Melbourne Water.

Financing: n/a

Worth: Estimated Aus$200m (US$155m)

Contract type: Possible DBOT although the project could be implemented on a conventional design & construct basis.

Project status and schedule: Melbourne Water has received approval from the Victoria EPA and is currently studying a number of project delivery methods. It could decide to proceed on a DBOT basis; if it does, the project will come under the framework of the Partnership's Victoria Policy. A decision on the project structure is expected towards the end of the year.

NO CHANGE ◀

Thailand

Purpose of project: Restructuring and privatisation of the Metropolitan Water Authority (MWA) and the Provincial Waterworks Authority (PWA)

Relevant companies: Siam Commercial Bank Securities (SCB Securities) is leading a consortium of financial and legal advisers acting for MWA.

Financing: An IPO is planned for MWA.

Worth: Estimated $1bn for PWA

Contract type: Under the most likely scenario, MWA will be partially floated to form an MWA company which will be granted a concession. The new company might then seek a strategic partner to undertake O&M. The options for PWA include unbundling the authority into five separate companies. Concession agreements would then be let for each region with PWA acting as contract manager.

Project status and schedule: The MWA corporatisation process is ongoing although detailed work on the IPO timing cannot be done until final government approval is given. PWA is working with local consultants who will produce a report by mid-year on corporatisation proposals. Once the PWA is happy with these it will proceed with getting the Ministry of Interior to set up the corporatisation process. It is likely that the final details of the MWA corporatisation will need to be concluded first. On the regulatory front, the Ministry of Interior has set up a regulatory office to serve a commission to be established through Section 26 of the Corporatisation Act for the MWA Company.

NO CHANGE ◀

Ulu Pandan, Singapore

Purpose of project: Design, build, own and operate a 160,000m^3/d facility producing potable quality water from secondary treated effluent.

Relevant companies: A number of companies have informally expressed interest in the project. They include Dayen Environmental, SembCorp Utilities and Hyflux. The client is Singapore's Public Utilities Board (PUB).

Financing: Private finance.

Worth: Estimated $90m-$100m

Contract type: Proposed DBOO.

Project status and schedule: PUB is studying the project. There have been some general policy announcements but it is yet to publish anything concrete about how the project will be implemented.

UPDATE ▲

NORTH AMERICA

New Orleans, Louisiana

Purpose of project: O&M of the city's water and wastewater systems.

Relevant companies: The Sewerage and Water Board of New Orleans (SWBNO) received price proposals from three groups in 3Q 2002. The three were: MCEC (a group comprised of SWBNO employees), US Filter, and United Water. A group of OMI and Thames Water did not submit an offer. SWBNO rejected all three proposals and abandoned the original deal in October 2002. The RFP has since been revised but not formally re-issued. Of the original bidders, the employee group and US Filter are the only two interested parties.

Financing: Tariff revenues and a municipal bond issue. No private financing.

Worth: Estimated $1.5bn of cumulative revenues.

Contract type: 20-year O&M comtract.

Project status and schedule: The attempt to restart a bidding process for this transaction has been stalled for over six months as the city's financial advisory team prepares a study to determine the cost of splitting the project into two components (one covering water and the other wastewater). Local press reports now indicate that New Orleans mayor Ray Nagin is losing patience and will give interested parties a deadline to say whether they will submit bids. If the privatisation fails, Nagin has put forward two restructuring plans for SWBNO. One would depoliticise the organisation by removing a number of City Council members from its 13-member board. The other would make SWBNO part of the city's Public Works Department.

UPDATE ▲

Encina (Carlsbad), California

Purpose of project: Construction of a 189,000m^3/d (50MGD) desalination plant.

Relevant companies: Poseidon Resources is the developer.

Financing: Poseidon is a private equity backed company; the project company will issue debt to finance construction.

Worth: $270m

Contract type: DBOO with 30-year water supply agreements.

Project status and schedule: The project is becoming increasingly mired in local politics. The San Diego County Water Authority (SDCWA) has suspended negotiations with Poseidon. Undaunted, Poseidon has started negotiating directly with the cities of Carlsbad and Oceanside and three other water districts. However, individual water contracts can only be consummated with a subsidy from the Metropolitan Water District (MWD). SDCWA has informed the city of Carlsbad that it would not approve the MWD subsidy until a regional desalination strategy had been determined. The politically active California Coastal Commission also needs to approve the project.

UPDATE ▲

Huntington Beach, California

Purpose of project: Construction of a 189,000m³/d (50 MGD) desalination plant.

Relevant companies: Poseidon Resources is the developer.

Financing: Poseidon is backed by private equity. The project company will issue debt to finance construction.

Worth: $240m

Contract type: DBOO with 30-year water supply agreements.

Project status and schedule: The project is awaiting the results of an Environmental Impact Review of possible damage to aquatic life from the proposal.

NO CHANGE ◀

Freeport, Texas

Purpose of project: Construction of a 95,000m³/d (25MGD) desalination plant. There is an option to extend capacity to 380,000m³/d (100MGD).

Relevant companies: Poseidon Resources is the developer.

Financing: Poseidon is backed by private equity. The project company will issue debt to finance construction.

Worth: $125m

Contract type: DBOO with 30-year water supply agreement. The principal wholesale water purchaser will be the Brazos River Authority (BRA).

Project status and schedule: BRA and Poseidon gave a project update and status report on 25 March at a Texas Water Development Board workshop on desalination. So far, water-use projections by communities along the Brazos river have been defined together with areas likely to experience deficits. The next stage is to consider delivery options including a comparison of desalination with other alternatives. Poseidon has performed source water sampling and preliminary permit scoping at the proposed site with a view to submitting proposals to BRA.

UPDATE ▲

LATIN & CENTRAL AMERICA & THE CARIBBEAN

Essat, Essar, Esmag, Chile

Purpose of project: Provision of water and sewerage services in the 1st, 9th and 12th regions of Chile.

Relevant companies: **The following companies have prequalified to bid for Essat:** 1. Cascal 2. Aguas y Gestión de Servicios Ambientales 3. Inima 4. Inmobiliaria Punta de Rieles 5. Saur 6. JP Morgan Partners (BHCA) 7. Grupo Solari. **Those to have prequalified for Essar are:** 1. Cascal 2. Aguas y Gestión de Servicios Ambientales 3. Proactiva 4. Inmobilaria Pocuro 5. Inversiones Iberaguas (Iberdrola) 6. JP Morgan (BHCA) 7. Grupo Solari. **The prequalified groups for Esmag are:** 1. Cascal 2. Aguas y Gestión de Servicios Ambientales 3. Consorcio Aguas Patagonia de Magallanes (Icafal/Vecta/Hidrosan) 4. LarrainVial 5. JP Morgan Partners (BHCA) 6. Grupo Solari

Financing: n/a

Worth: In the next 15 years, Essar expects to invest close to $188m mainly on the construction of new water treatment infrastructure. Essat plans to spend $51.7m in the next seven to eight years.

Contract type: 30-year concessions.

Project status and schedule: Bidding rules went on sale on 5 April. According to the transaction schedule, offers are due in mid-June and the sale process is expected to be completed by the end of June or start of July.

UPDATE ▲

Nassau, Bahamas

Purpose of project: Build, own and operate a 22,500m³/d SWRO desalination plant. The contract includes an option to extend the plant's capacity to 27,300m³/d. The client is the Bahamas Water & Sewerage Corporation (BWSC).

Relevant companies: Bids were received from five groups by the 31 March deadline: 1. Biwater International 2. IDE Technologies with Inima 3. Consolidated Water 4. Enerserve (Veolia) 5. A partnership of Ionics and Aqua Design Bahamas.

Financing: n/a

Worth: Estimated $20m-$30m

Contract type: 20-year BOO contract.

Project status and schedule: The low bidder is Consolidated Water with a price in the region of $0.53/m³ of desalinated water. Bid evaluation will be completed by the end of April. BWSC plans to appoint a preferred bidder by mid- to late-May.

UPDATE ▲

Piura (Eps Grau) & Tumbes (Emfapa Tumbes), Peru

Purpose of project: Provision of water and sewerage services in the northern municipalities of Tumbes and Piura. The population served is around one million.

Relevant companies: Transaction adviser Hytsa has approached a number of regional and international operators with a view to compiling a shortlist of potential bidders. Canal de Isabel II and Saur have informally expressed interest in the project through local partners in Colombia and Argentina respectively.

UPDATE ▲

Financing: Development agency funds are available in both cases. For Eps Grau, the government has entered into a loan agreement with JBIC for $70m and will contribute $25m of its own funds. For Emfapa Tumbes, the government has secured a credit of €8.1m from Germany's KfW plus a donation of €9.5m and will contribute €3.2m of its own funds. The balance will be made up by the private sector.

Worth: Estimated total investment: Eps Grau $274m, Emfapa Tumbes $80m.

Contract type: 30-year concession for Piura. The transaction design for Tumbes envisages a five-year management contract followed by a 25-year concession.

Project status and schedule: According to Peru's investment promotion agency Proinversion, a tender process might be launched at the end of May. This replaces a March/April deadline for launching the project. Other new dates are July/August for start of a PQ process and November/December for receipt of offers.

May

10 - 28

IDS Water 2004
Online conference and exhibition
Web: **www.idswater.com**

25 - 27

Water & Wastewater Europe
Barcelona, Spain
Web: **www.wweurope.com**

30 - 2 June

EuroMed 2004: Desalination Strategies in South Mediterranean Countries
Agadir, Morocco
Web: **www.edsoc.com**

June

8

Investing in the Water Industry
New York, US
Web: **www.twst.com/conferences/gateway/WATER04.html**

21 - 22

3rd Annual National Water Resources Symposium
Houston, US
Web: **www.waterexchange.com/docs/2004agenda.pdf**

September

13 - 15

Water Middle East - International Exhibition & Conferences for Water Technology
Bahrain
Web: **www.watermiddleeast2003.com**

19 - 24

IWA World Water Congress & Exhibition
Marrakech, Morocco
Web: **www.iwa2004marrakech.com**

October

5 - 6

Water Projects in the Middle East
Abu Dhabi, UAE
Web: **www.theenergyexchange.co.uk/viewactiveeventstee.asp?eve_id=44**

November

22 - 24

Saudi Power & Water 2004
Jeddah, Saudi Arabia
Web: **www.thecwcgroup.com/exhib_home.asp**

David Lloyd Owen

Iraq needs to build up its capacity before looking for private sector involvement.

Years ago, my mother told me how the cockroaches would enter the bathroom of our house in Baghdad through the septic tank. It was one of the few irritants for expatriate academics under the old monarchy. Subsequent events justified their decision to leave the country just before I was born. It is also evident that war or no war, adequate water and sewerage services remain an exotic concept in Iraq.

Access to potable piped water has decreased from 60% in March 2003 to 50% today, while just 9% are connected to the sewerage system. According to the United Nations, water and sewerage systems repair and enhancement costs will be $7 billion, including providing "universal" (in other words, for those living in urban areas) access to potable water and 27% of the population with sewerage. Three major contracts have been signed, along with a series of smaller projects worth a total of about $3.1 billion. This work is expected to take two to three years after the signing of the new constitution, expected in June.

The first contract was awarded to Bechtel (US) and Parsons (US) and was financed by USAID in 2003. As part of the Iraq Infrastructure Reconstruction - Phase II, Bechtel's $1,030 million contract covers Baghdad and eight other cities. Bechtel will repair or upgrade a total of 19 water treatment facilities and restore 85% of Iraq's total sewage treatment capacity. The project started in January and runs to December 2005. CH2M Hill (US) & Parsons Water Infrastructure, Inc. also has a contract to provide support to the Public Works and Water Sector Program Management Office.

In March, a series of water and sanitation contracts were announced, financed by the $18.6 billion appropriated by Congress to rebuild Iraq's infrastructure. A joint venture between Washington International Inc (US, 90%) and Black & Veatch (US, 10%) was awarded a contract with a ceiling of $600 million to rebuild the water sector.

FluorAMEC (Fluor of the US, 51% and AMEC of the UK, 49%) gained a $1.1 billion contract to rehabilitate water systems and build new treatment and distribution plants. The contract also involves sewerage rehabilitation and constructing solid waste management systems in the north and south of Iraq. Secondary contracts worth up to a further $400 million were also signed.

In addition, Japan has committed $55 million for 30 small-scale water treatment works in the Baghdad area and water and sewerage projects are expected to feature prominently in its $3.5 billion loan package.

In 2000, 77% of Iraqis lived in urban areas and 2002 data points to 22.5 million people in Iraq. The only reliable water services assessment was carried out in 1996.

Water and wastewater services in Iraq.

	Water	Sanitation	WWTW
Urban	96%	93%	27%
Rural	48%	31%	n/a

Sources: WHO, USAID. WTW data is for 2003, adapted by the author.

Access in these cases means public standpipes and wells as well as household piped water. There are 13 major sewage treatment works in Iraq, capable in theory of serving five million people, including three facilities that serve 3.8 million people in Baghdad. In practice, a shortage of parts, chemicals and power means they are operating at well below capacity.

In one way this is a low-risk business. USAID guarantees dollar payment for its work, while the rest of the programme is likely to be financed through hard currency grants and loans. Carrying out the work could be a different matter. Last year, there were bomb attacks on water mains, as this was seen as a way of disrupting services by opponents of the occupation, as well as stirring up resentment.

With continued resistance by Saddam loyalists in the "Sunni Triangle" and an upsurge in anti-occupation sentiment, Iraq is now a dangerous place for expatriate staff.

Yet apart from reconnecting Iraqis to badly needed services, this work has other merits. Projects of this nature have a relatively low dependence on imported technology and staff, and thus create jobs and stimulate the local economy.

Privatising some water services within a year is being considered by the authorities. This may be where accusations of "colonial exploitation" arise, especially since perhaps 20% of running costs are met by users. Iraq needs to boost capacity before private sector participation can be considered. ■

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