30 Years of Technical and Organisational Development in the UK Water Sector

Thames Water’s Experiences of moving from Public to Private Sector

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Outline of Presentation

- Learning from history
- Globalisation
- Future water issues
2000 years ago Public Taxes Funded Roman Water Supply Aqueduct in Spain
>500 years ago Private Suppliers Deliver Water to Customers in Urban England

Price 1p per pail = bottled water at 2006 prices!
1613 Private New River Water Company finances major water project for London

50km acqueduct + wood pipes to houses

King of England given shares

Share dividends 300 years…

1904 Public purchase

1989 Private again! (Thames Water Plc)

Legislation sets river water abstraction to upstream of London + sand filtration. Early example of Quality Regulation

Monster Soup!
1858 “Great Stink” in London leads to Government Public funding for Sewerage

UK wastewater projects public ownership until ... 1989 privatisation
1974 10 Public, Regional Water Authorities
Integrated River Basin Management

Thames Water Sewerage Region
Thames Water - Water Region
Other Water Company Region

Thames Water Authority
13 m customers
Efficiency of scale

London
1974-89 Integrated River Basin Management
Public Water Authorities set policies & pricing within each river basin

Regulation, navigation, flood control, fisheries & recreation

Water treatment

River basin quality standards & pollution control

Wastewater treatment
1989 All Water Authorities in England & Wales Privatised on London Stockmarket

- 10 new private water and wastewater companies formed
- Shares sold to the public
- Government receives £££s
- Capital investment increases
- Share prices increase 300% in 10 years
- 3 New Regulators
The current UK regulatory model
1989-2006 UK Private Water Utility Stakeholders

- Drinking Water Quality Regulation (DWI)
- Environmental Regulation (EA)
- Economic & Customer Regulation (OFWAT)
- Shareholder
- Customers

RPI = Inflation
X = Efficiency
Q = Quality improvement
1989-2006 UK Post Privatisation Price Rises
Water & Wastewater (@2006 prices)

AMP = 5 year Asset Management Plan
Investment & price review by OFWAT regulator

Real term average increase of 2% pa
£55 billion private capital invested
1989-2000 £0.5bn Private Capital investment in advanced water treatment at all Thames Water Plants = 99.8% EU stds

Key
- **Existing / conventional**
- **Advanced Water Treatment**

**Surface Water (Thames Valley)**
- **Source**
- **Pre-Ozone**
- **Flotation / Clarification**
- **Main Ozone**
- **Filtration**
- **GAC**
- **Disinfection**

uF membranes *Cryptosporidium* removal
2006 Customer’s Bill Variation in England

Average usage 165 litres per day @ £1/m³ water & £0.9/m³ wastewater

South West Water
Average Household Bill = £450pa

Thames Water
Average Household Bill = £260pa

Private Water Company
1989-2006 OFWAT Regulator Private Co’s Benchmark Levels of Customer Service

- DG2 Pressure
- DG3 Interruptions
- DG4 Restrictions
- DG5 Flooding
- DG6 Billing
- DG7 Complaints
- DG8 Metered Bills
- DG9 Telephone service

Poor service = fines ££
Good service = higher return on capital

Late appointment = £10 fine
Customers & Media have lower trust & expect better service from Private Water companies?

Customer: "Is it safe?"

Operator: "What should I do?"

Regulator: "What is safe?"

Media: "Is there a story?"

Price increases seen as for profit growth not investment.
1989-2006 Major Investment in Customer Call & Operational Centres, Web sites, Media Communication & Advertising (not TV) for Water Conservation in Droughts
1990-2000 UK Water Utilities - international growth

2000-2005 Exit from international projects

2006 Growth in foreign ownership of UK Utilities

1974 Thames Water (TW) public ownership
1989 Private company UK Stock-market
1999 TW operates in 20 countries
2000 RWE German energy co. buys TW & American Water
2006 Australian bank buys TW

Out-source or in-source?
Water focus v multi-utility?
Planning for the future....
UK Now - £multi-billion renewal of networks

Future - Competition for network access
- Road pricing for street-works
- Multi-utility collaboration for 3D GPS/GIS mapping
2006-2012 Public or Private Ownership of Sustainable Urban Drainage Schemes?

Berlin-Public 2006, London Olympics 2012 ?
2006 Trials in London of Smart Meters
Hourly usage finds leakage & enables variable tariffs

Wireless Web revolution for customers
2000-2020 Major investment in new water resources
....climate & population changes

2000 Water Reuse project
At London’s Millennium Dome

2007 - 09 150,000m³/d brackish desalination plant

2020 - 25 New reservoirs - public v private finance
2030 Off-shore wind powered desalination & H₂ production?

Fresh water and hydrogen for Euro Grid storage & E-bay!
Water Utility – Public v Private Issues

Major long life infrastructure?

Public Issue

Public v Private Issue?

Private Solutions?

Public v Private Issue?

Private Solutions?

Public Issue?

Project Delivery & Operational Control

Private Solutions?
“Learn from the past when planning for the future”

...... thank you for listening!

The opinions expressed are those of the author (tonyrachwal@tiscali.co.uk) and are not necessarily the same as Thames Water’s views