

***A CIWEM – Ofwat Conference
THE PR09 PRICE REVIEW
29 November 2007: SOAS, LONDON***

**The CIWEM conference view:
A sustainable water industry
– we can start in PR09**



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An increasing set of pressures for the sector

- The Water Framework Directive
- Flood Risk Management
- Tackling water security
- Climate Change
- Capital Maintenance

It's not just about *what*, it's about *how* we:

- Understand and meet the needs of the Water Framework Directive
- Approach flood management in an integrated manner
- Change our behaviours on water usage
- Achieve this, against a backdrop of Climate Change, *and*
- Innovate in strategy and regulation, to enable and encourage all of this.

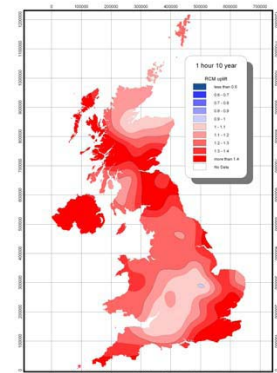
The Water Framework Directive

- Evidential & sound science based decision making
- The first Programme of Measures should include investigation and diffuse pollution action
- And solving the “blindingly obvious”
- Not just about hard engineering: is also about “softer” solutions
- Will involve working with new partnerships – Water Cos, EA, farmers, NGOs



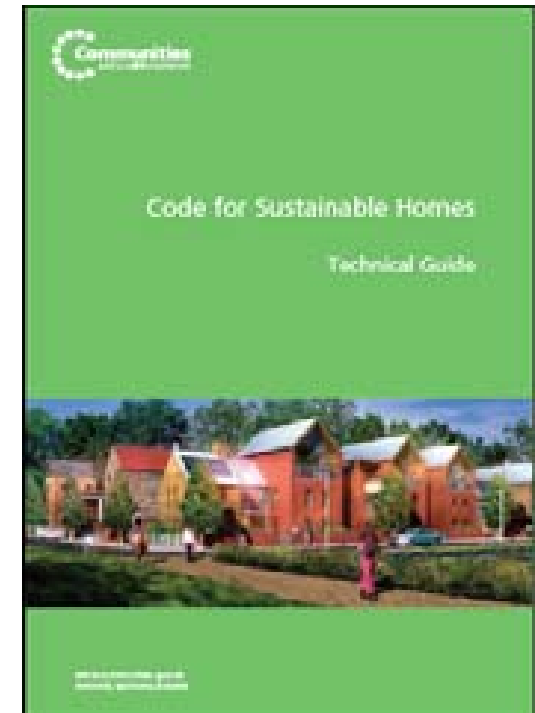
Flood Risk Management

- Public have new expectations
- PPS25
- Need for a strategic lead
- How to join up organisational thinking and responsibilities
- Positive planning and adaptation
- Insurance



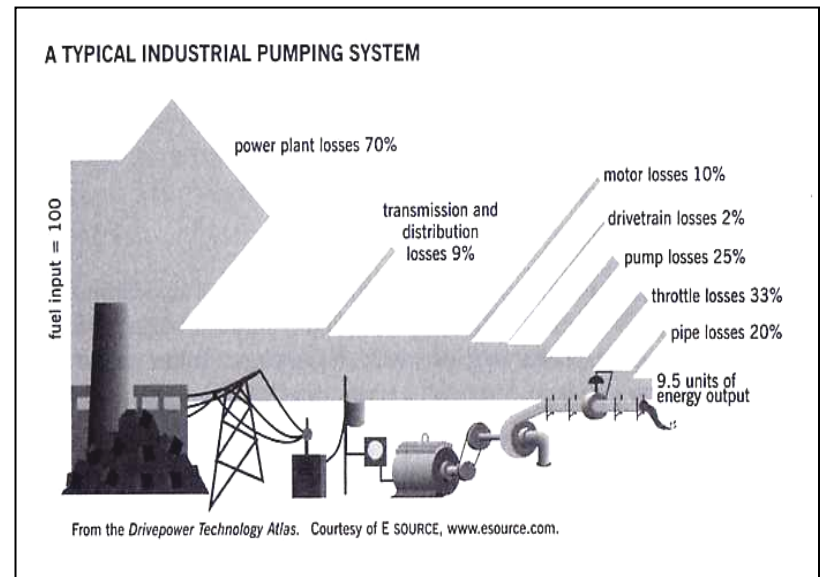
Tackling Water Security

- Water Demand Management
- Water Awareness
- Metering
- Leakage
- Affordability
- Efficiencies before competition

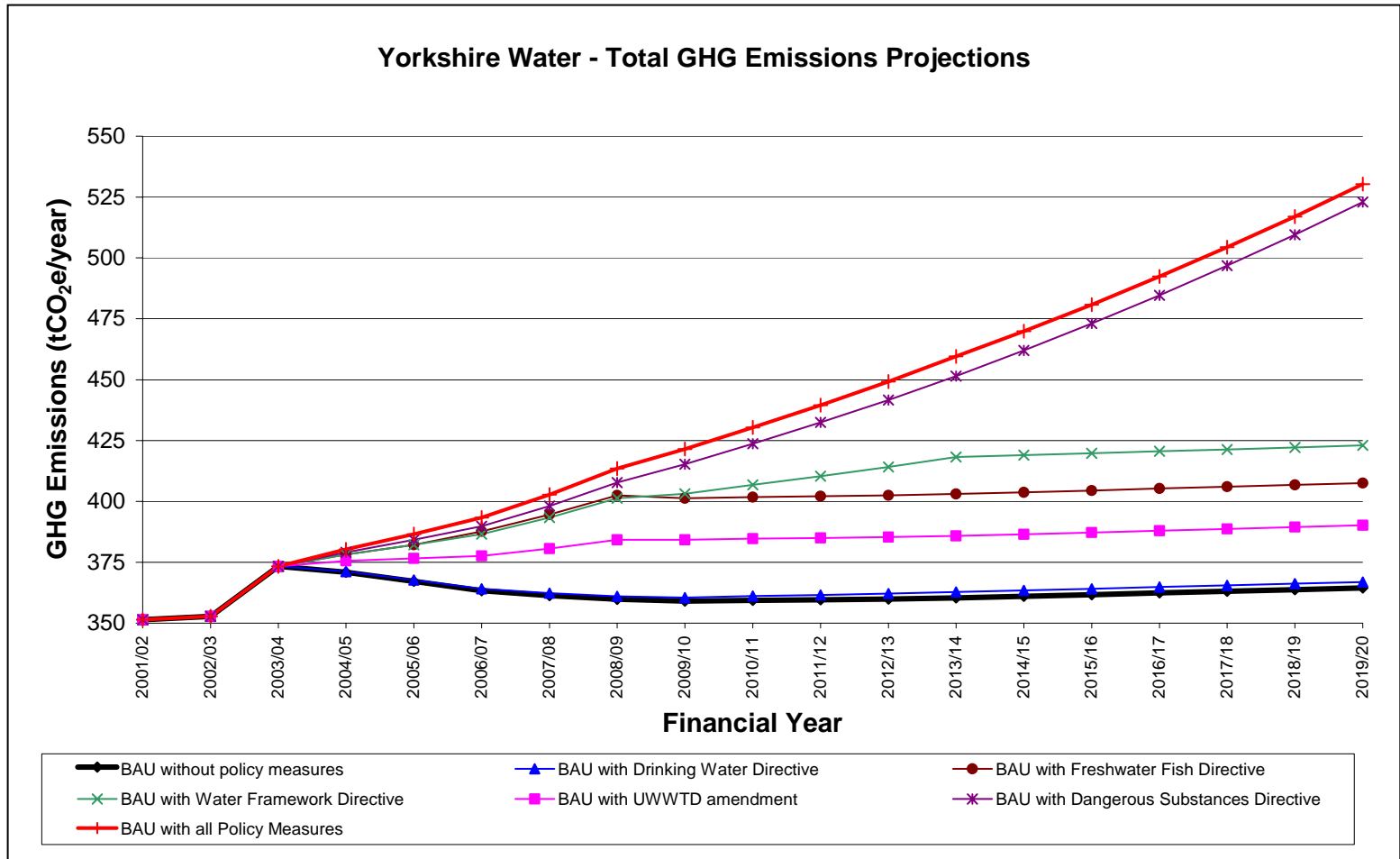


Climate Change

- The question is when and how much, not if
- Thinking on Climate Change must be included in all the topics highlighted – adaptation and CO₂e reduction
- Energy is the 2nd highest cost for companies
- Carbon is the new currency
- It needs a specific focus



Climate Change and 'BAU'



Integrating and costing Climate Change

Measuring embodied & operational CO₂e for water co assets:

Components of carbon emissions associated with construction



Components of carbon emissions associated with on-going operation



Water UK leads industry methodology development – regulators in steering groups; useable for reporting & investment planning

Industry and regulators must agree on how to integrate it

Regulatory context – Environment Agency

- Modern regulation
- Catchment based consenting
- Move from ‘product’ to ‘service’
- Holistic and collaborative
- Values and behaviours – Earned autonomy

Catchment based consenting: Product to *service* - the WFD opportunity

| Sources > 'Measures' v | Rural Diffuse | Urban Diffuse | Morphology damage | WatCos [Industry] |
|--|---|--|--|------------------------------------|
| Ban or reduce at source [WFD:'Origin'] | Alter agricultural subsidies (CAP) to favour less intensive practices | Reduce vehicle use e.g. by improved public transport | Control run-off better at source | Ban on detergents containing P |
| Manage it in use [WFD: 'Activity'] | Reduce fertiliser application through codes | Reduce vehicle emissions to reduce contaminant | Control velocities and scour in channels | Encourage use of P free detergents |
| End of pipe Treatment [WFD:'Pressure'] | Include buffer strips between agricultural land and watercourse | SUDS | Improved channel | Improved P, N, NH3 removal |
| Remediate after [WFD:'Remediate'] | Not easy? | Not easy? | Dredge and replace material | Clear algae; O2 bubblers |

WFD wants 'good ecological quality' = a '*service*' - other 'boxes' to work inand any intervention to be justified on a 'catchment outcomes' basis?

CO2e neutral
or -ve

CO2e +ve

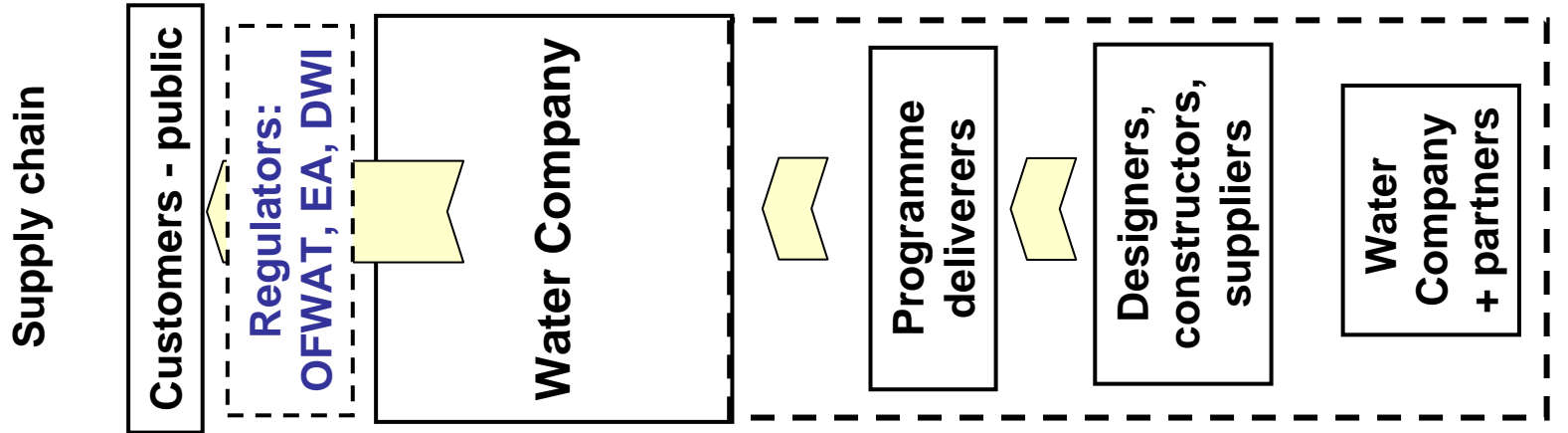
Regulatory context - OFWAT

- How to enable “soft” outputs and cross sector outputs
- Innovation with (not versus) efficiency
- Value versus cost
- How to fund innovation pilot programmes
- Using ‘menu regulation’ to enable innovation

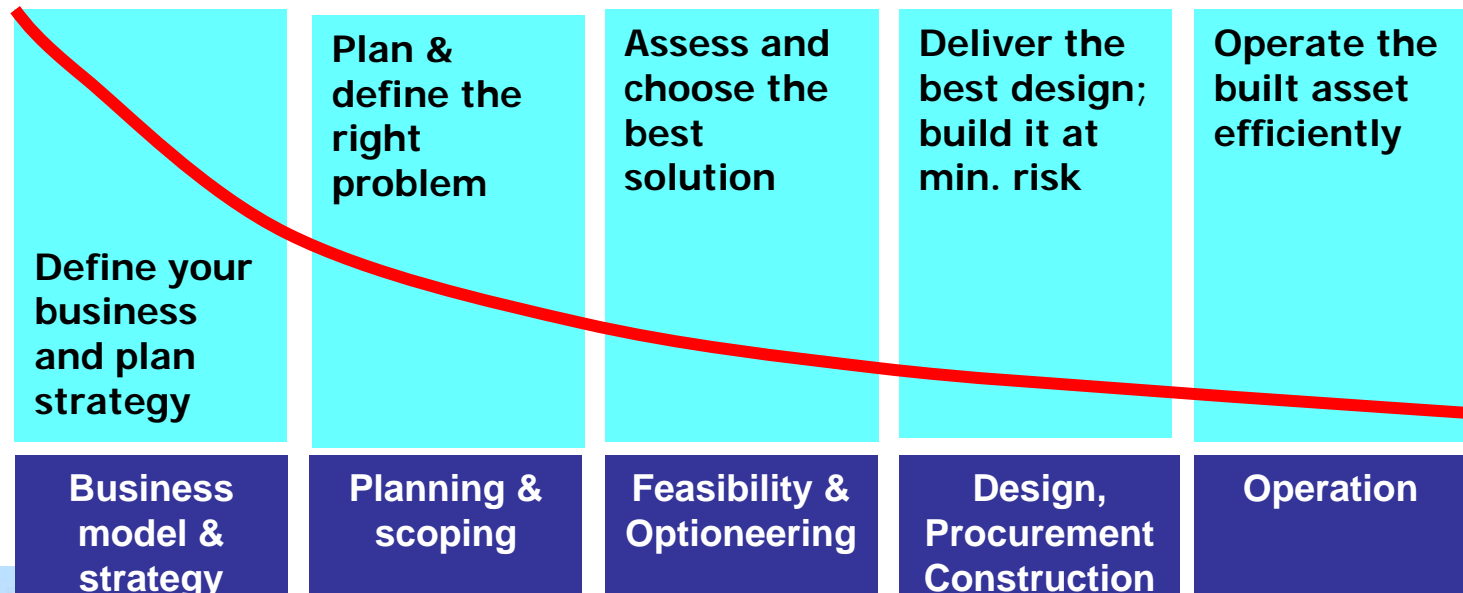
Water Company Strategy - how do we go forward?

- Water Companies have a real opportunity to lead
- Learn the innovative lessons of the last 15 years
- Develop understanding of benefits and barriers
- In a frame of support from the regulators
- Trial / pilot new approaches, with regulators and stakeholders

A sustainable framework - the 'Value Curve'



Opportunity to influence for sustainable outcomes



Conclusions and summary

- The next 15 years will be different for the sector
- With new sets of challenges
- And new approaches required
- In what, and how, we do things, and in behaviour
- We can start in PR09
- Start learning, through collaborative pilot work, *now*

