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The UK chemical industry experience of energy efficiency initiatives

You can't live without us

Experience to-date



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- Chemical sector Voluntary Energy Efficiency agreement (VEEA) with UK Government
- UK Climate Change Levy (CCL) / Climate Change Agreements package (CCA)
 - Working with The Carbon Trust
 - North West Chemicals Carbon Saving Project
 - CIA Energy Efficiency Network activities
- Outlook – the challenges ahead

Voluntary energy efficiency agreement (VEEA)



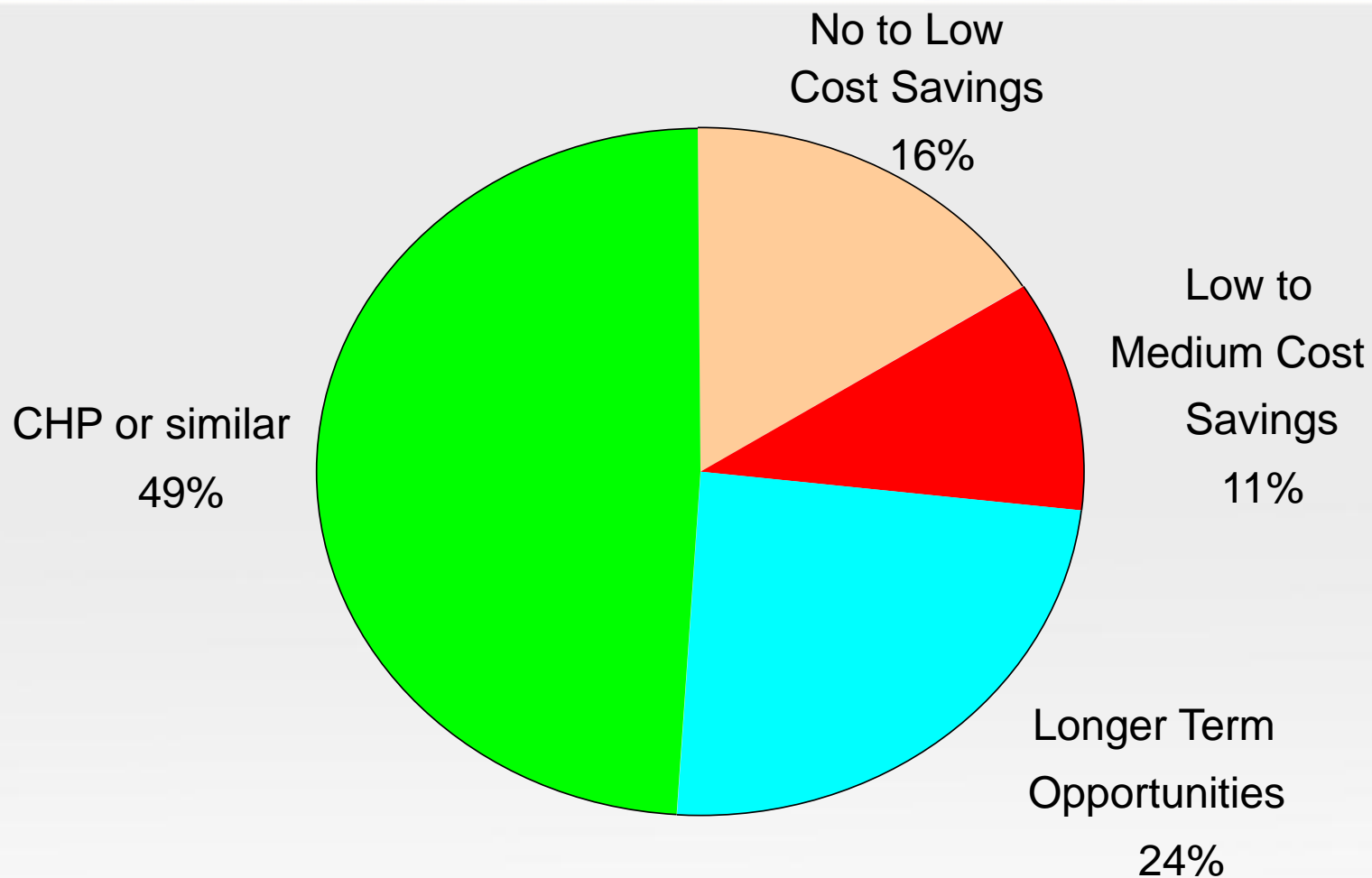
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- CIA signed-up to a 20% efficiency improvement 1990-2005
- In exchange for:
 - Assistance with data verification.
 - SME energy audits by consultants working for the Energy Efficiency Best Practice Programme (EEBPP)

VEEA SME audits - breakdown of potential savings



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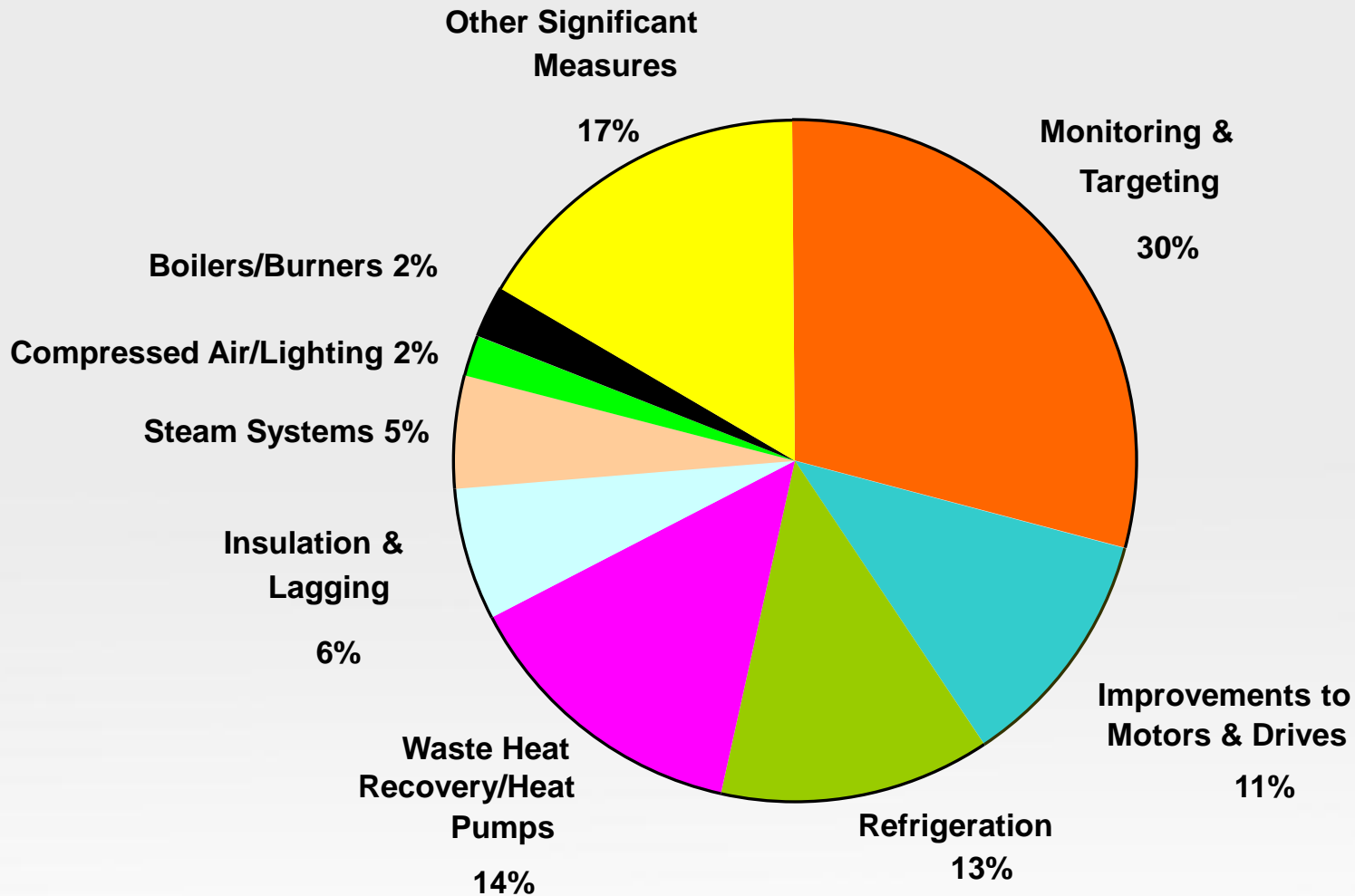


Site Energy Costs: £62m / Total Savings Potential £9.5m

VEEA SME audits - key identified energy saving measures



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VEEA SME audits – experience summary



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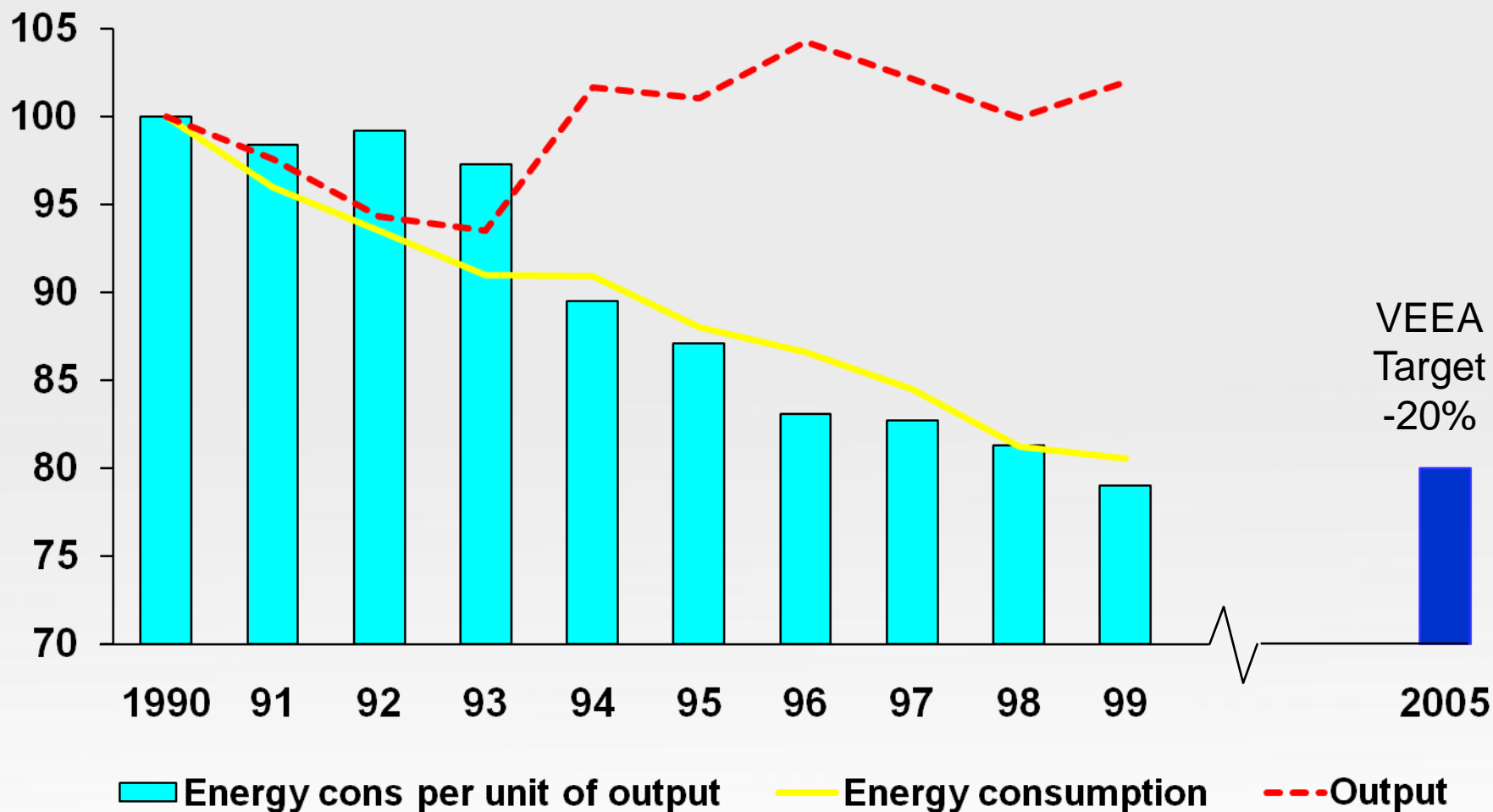
- Average energy saving potential of some 15%,
 - 5% having a less than 3 year payback
 - 7% realisable with CHP investment
- Helped to get energy efficiency onto the board's agenda
- “Best practice on legs” approach effective in getting knowledge from EEBPP publications to sites
- But based on a day's walk-round

Energy efficiency - CIA membership



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1990=100



UK Climate Change Levy (CCL) / Climate Change Agreements package (CCA)



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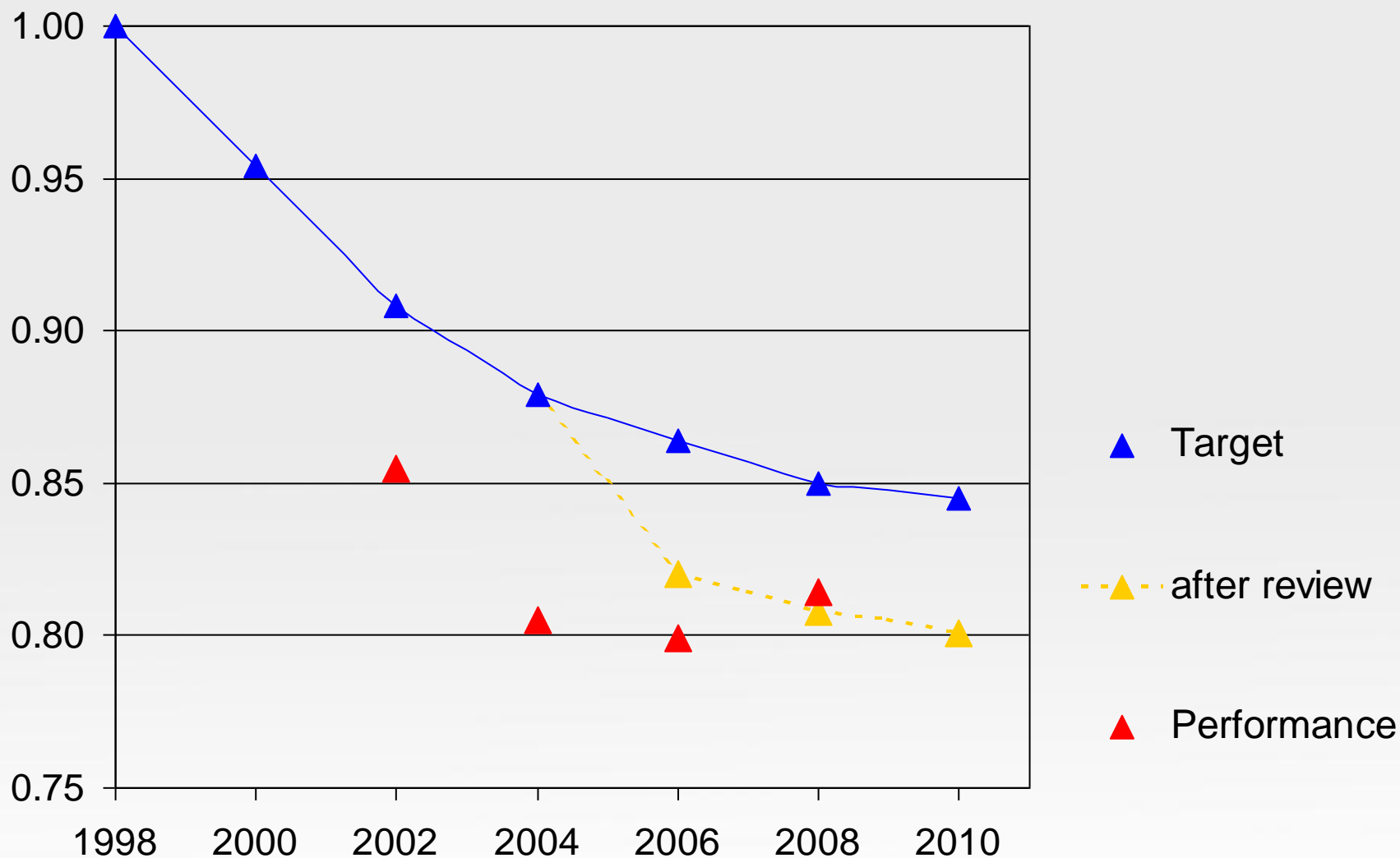
- CCL is a tax on the business use of energy (satisfies the energy tax directive):
 - Electricity - 0.47p/kWh
 - Gas - 0.164p/kWh
 - Coal - 1.281p/Kg
 - LPG - 1.05p/Kg
- CCA participants get 80% relief from CCL
 - Challenging site energy efficiency targets 2002-2010
 - Implement formal management systems (policy plan)
 - Link to UK Emissions Trading Scheme

Chemical sector CCA target

Relative energy ratio – review every 4 yrs



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Help from The Carbon Trust (funded by CCL revenue)



The Carbon Trust mission:

- *to accelerate the move to a low carbon economy by working with organisations to reduce carbon emissions and develop commercial low carbon technologies*
- FREE consultancy
 - Site audits (1 day – as piloted under VEEA)
 - Specific measures assessments (longer and deeper)
- Carbon management partnerships (larger companies)
- Enhanced Capital Allowances, www.eca.org.uk

Site audits (one day) – experience



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- Lots of good feedback on benefits
- But follow-up visits (a useful addition from VEEA) identified issues in some cases:
 - Consultant needs the right expertise, eg: a lighting expert not so useful for chemical processes!
 - Challenge to appreciate complexities and trade-offs / constraints on a one day walk-around
 - Number of recommendations made should reflect site resource

Specific measures assessments



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- More consultancy days spent on a single site
- Focussing on one technology project with more external help is a more certain way of driving improvement
- Where taken, a cluster approach has also helped shared learning (see over)

North West Chemicals Carbon Saving Project



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- Provide tailored and targeted support in:
 - Energy management
 - Monitoring & targeting
 - Boilers and heat distribution systems
 - Process measurement and control
- 16 Chemical Companies signed up to the project
 - Launch Seminar
 - Workshops during the project
 - Newsletters

CIA Energy Efficiency Network activities



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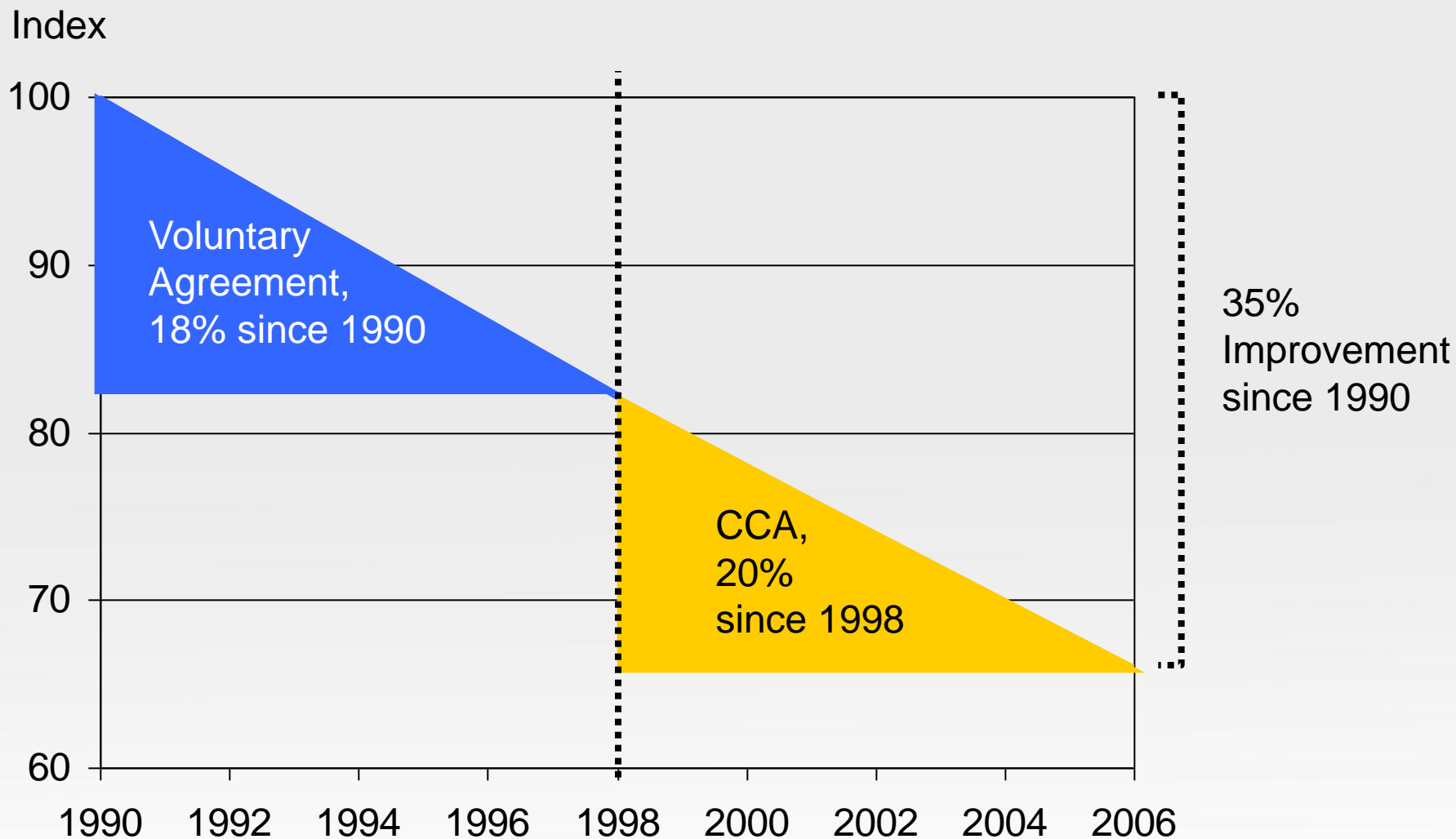
- Responsible Energy events – national best practice sharing
- Consultancy boiler study with The Carbon Trust
- Specific technology networking (eg: teleconference)
 - Wind turbines
 - Renewables
- Chemical Industry Awards
 - Low Carbon Award



UK chemical sector energy efficiency



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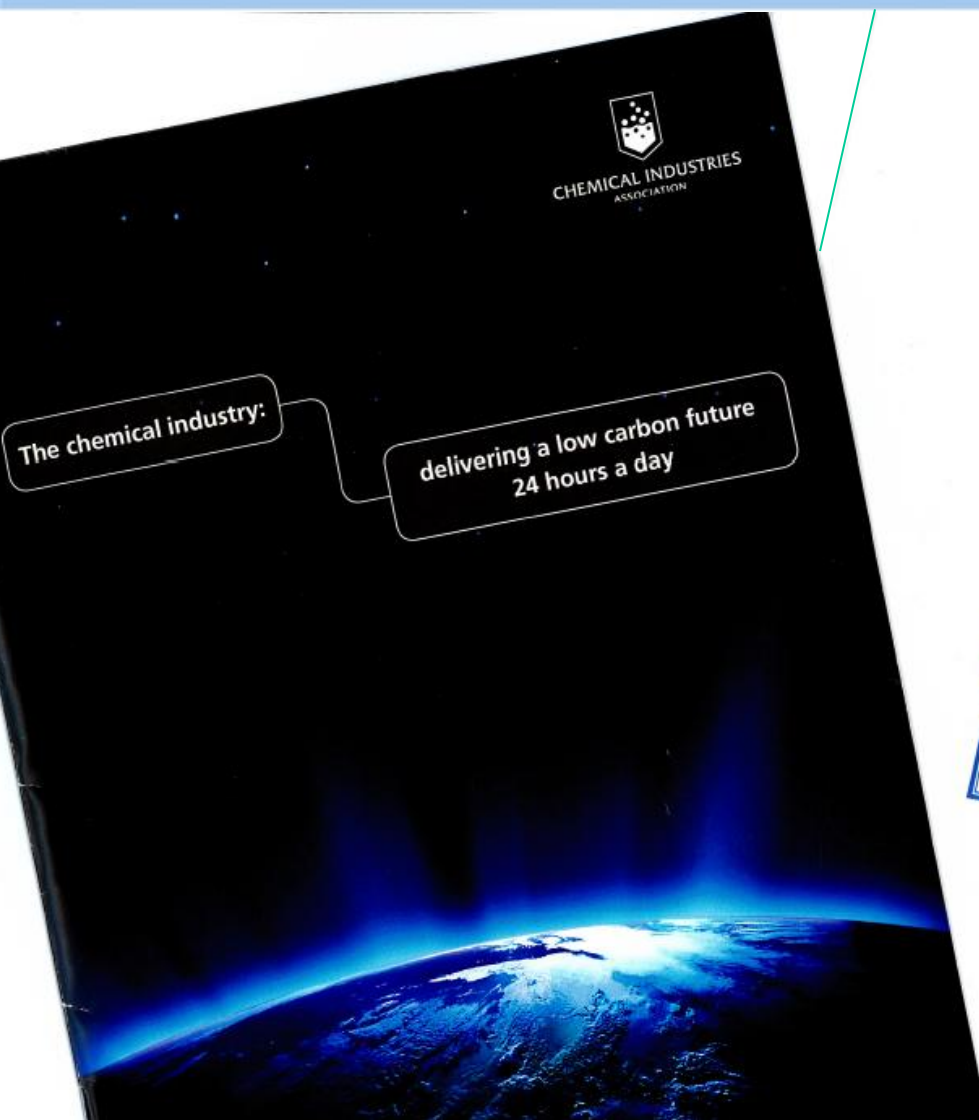
Outlook – the challenges ahead

- After many years work, abatement potential on existing production assets is diminished
- Sites increasingly looking at alternative energy, eg: energy from waste, wind turbines but there are limits on potential contributions and feasibility issues
- UK climate change policies overlap and need simplification (EU ETS, CCAs, Carbon Reduction Commitment).
- Unrelieved costs from energy and climate change policies – cumulative impact could double energy costs by 2020

Key CIA evidence on cumulative impacts and chemical industry solutions to green the economy



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Waters Wye Associates 

The Cumulative Impact of Climate Change Policies on UK Energy Intensive Industries – Are Policies Effectively Focussed?
A summary report for
The Energy Intensive Users Group
and the Trades Union Congress
Prepared by Waters Wye Associates
July 2010