

Viridor

EfW working alongside recycling



About Viridor



- One of the UK's leading recycling, renewable energy and waste management companies
- Technology neutral – tailored local solutions
- Owned by Pennon Group – a FTSE 250 company
- Accredited to ISO14001, ISO 9001 & OHSAS18001 environmental, quality & health & safety standards

Our business



- Over 3000 employees
- 90 Local Authorities and 20,000 business contracts
- More than 310 recycling and waste facilities
- 22 Material Recycling Facilities
- 14 Composting / Bio-waste diversion facilities
- 3 Energy from Waste facilities, plus 2 under construction
- 23 landfill sites UK wide
- 127.5 Megawatts of renewable power generation

Viridor – Leading UK Recycling



- >1.9m tonnes recycled
- Viridor Resource Management
- HWRC operations with 80% recycling rates
- Viridor Glass, Electrical and Polymer recycling
- Materials Recycling and Composting/Organics facilities
- Recycling collection services



Viridor Energy from Waste



- **Lakeside, Slough (JV)**
410K tpa – 37 MW
- **Bolton**
100K tpa – 7 MW
- **Derriford, Plymouth**
High temperature clinical/specialist
- **Runcorn, Exeter, Cardiff**
Consented/under construction
- **Dunbar, Oxfordshire, New England, Avonmouth**
In development
- **Four Anaerobic Digestion developments and LFG**



New England EfW Development



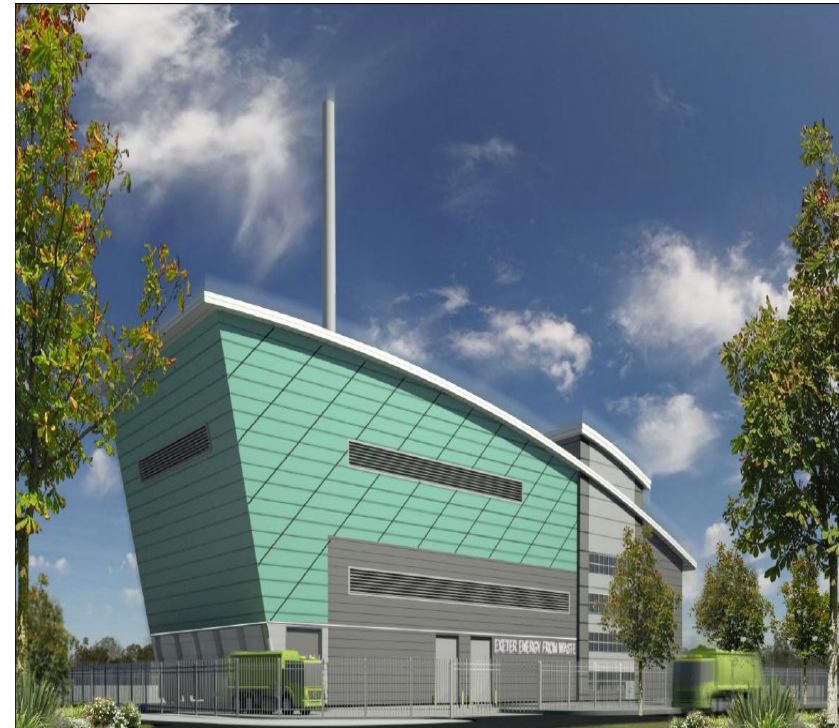
- 275,000 tpa capacity
- CHP potential
- Capable of generating 25MW
- Non hazardous landfill
- Bottom ash recycling plant producing secondary aggregate material
- Offices, weighbridges and parking
- Visitor and education centre



Exeter EfW



- Planning permission approved in July 2007
- Environmental permit approved December 2009
- Construction scheduled for end of 2010/beginning 2011
- 60,000 tpa capacity
- Will generate over 3MW



Why EfW?



- Challenging Government & local targets to recycle and compost >50% of waste arisings
- Landfill Tax Increases - £80 per tonne in 2014
- UK Energy Strategy and Requirements
- EfW in all its forms is viewed at the highest levels as a longer term approach to our waste and energy needs.
- Robust and cost effective

A tried and tested solution



- There are currently 21 EfW facilities in England and Wales with a total capacity of around 4 million tonnes.
- 420 EfW plants operating safely across Europe in urban and rural locations
- In the US, there are 87 EfW facilities in 25 States
- In Asia, countries such as Japan, Taiwan, and Singapore rely extensively on EfW for waste management

The role of EfW in the waste hierarchy



- '4Rs' Reduce, Reuse, Recycle and Recover



- The aim of waste management is to push waste up the hierarchy with landfill as a last resort
- EfW is the second bite of the cherry after practical recycling and composting/organic solutions
- Also plays a role in recovery via energy generation and delivering cost efficiencies

Recycling and recovery



- EfW plants recover between 500 – 750kWh of electricity per tonne of input waste
- More than 95% of inputs are converted to energy or recycled
- EfW has the potential to account for 6% of total UK electricity generation by 2015, up from 1.5% today

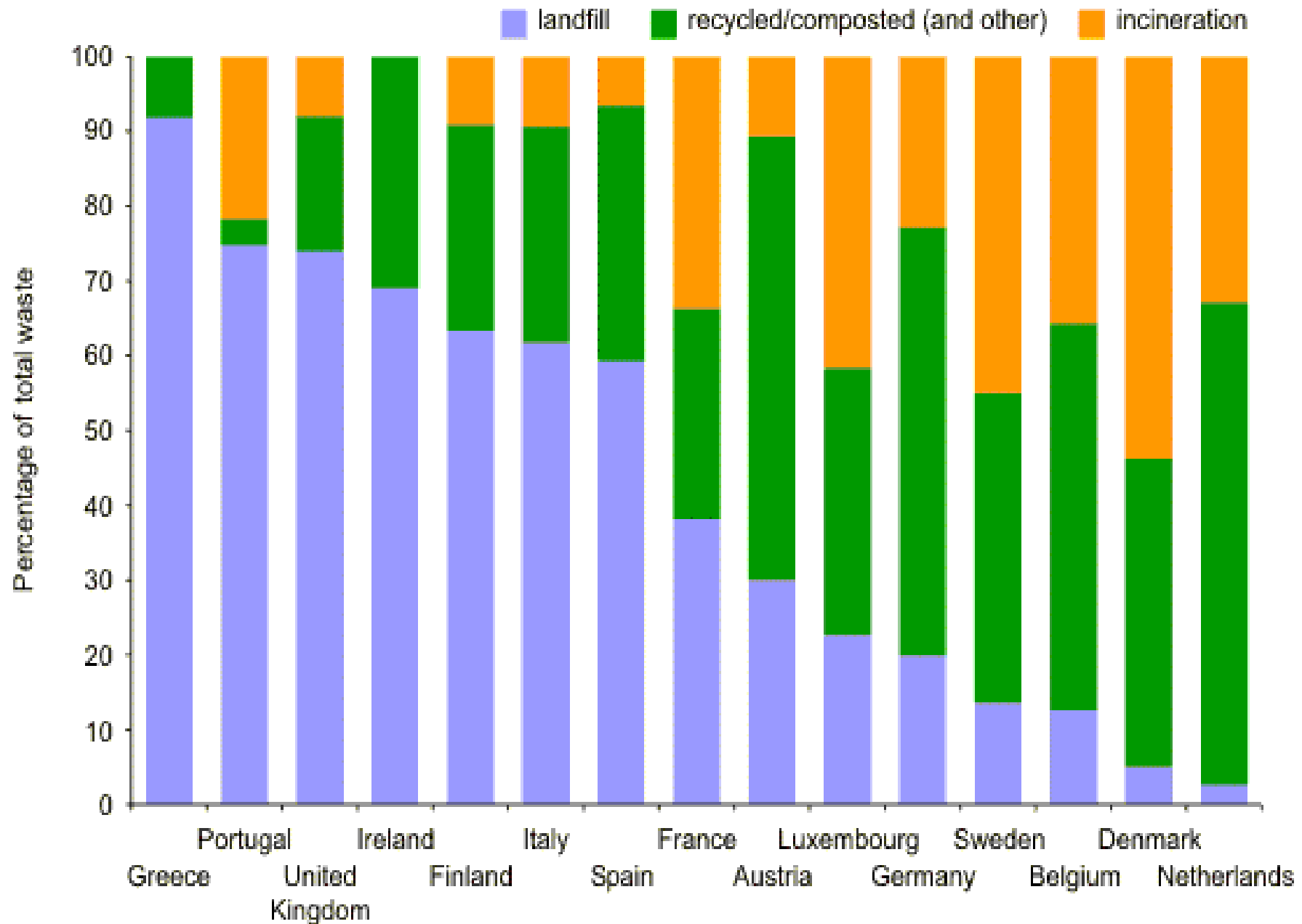
The European example



- The Netherlands has the highest recycling rate (64.4%), but incinerates 32.9% of its waste
- Denmark has a population of 6 million, has more than 30 EfW plants and a recycling rate of 41%
- The countries with the highest landfill rates (UK, Greece and Portugal) also have the lowest recycling rates



Municipal waste management in the European Union



Source: Eurostat

And finally...



- The message from Europe is clear: High levels of recycling are complimentary to appropriate EfW capacity
- Even when all materials that can be recycled have been removed from the waste stream, a significant amount of non-recyclable, residual waste remains
- It is common sense to use our residual waste for energy generation
- The Government has clearly signalled the need for increased EfW in all forms to meet UK energy and 'zero waste' goals