



Welcome to WEEE2

Chaired by

Peter Hunt

Managing Director of the WasteCare Group



WEEE recycling in Britain and beyond

Margaret Bates

Head of Sustainable Waste Management
Northampton University

WEEE Arisings

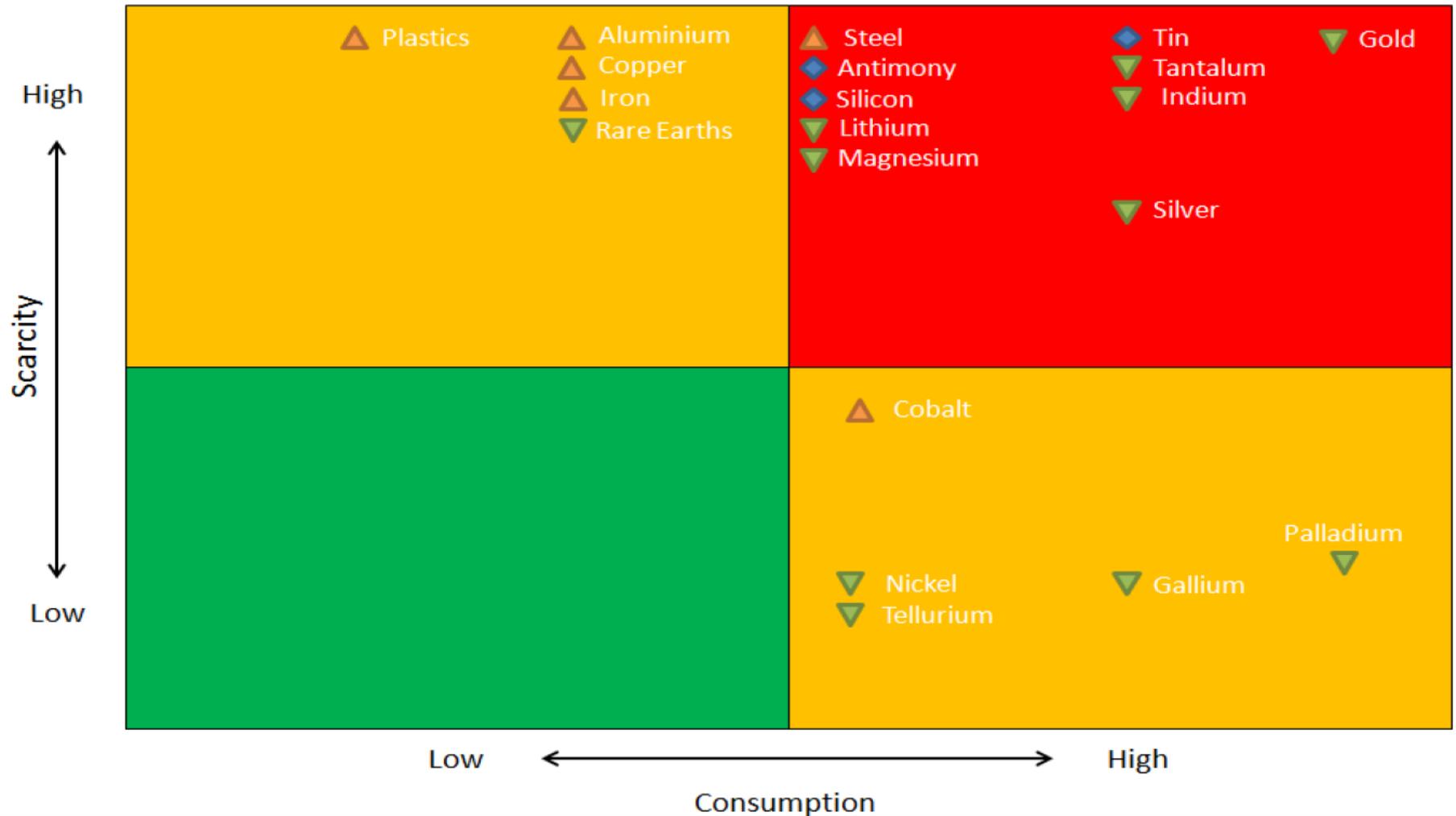
- WEEE is one of the fastest growing waste streams in the EU and makes up approximately 4% of municipal waste
 - In 2011, 1.3 million tonnes of new EEE were purchased by UK households
 - 8.4% of used equipment was evidenced as being recycled, estimated that some 37% of all used equipment (590,000 tonnes) still goes to landfill.
 - Expected growth rates are between 3 and 5% each year.
 - In 5 years 16-28% more WEEE will be generated, in 12 years amount is expected to double.
 - Rapid growth rate is due to fast pace of technological development resulting in frequent replacement of EEE.
- 

WEEE Recycling - Drivers

- Raw material supply risk
 - Water issues
 - WEEE Directive (and recast)
 - Low recovery / recycling rates
 - Increasing waste stream
 - Lost value
 - Hazardous components
- 

Water scarcity vs consumption for key material extraction

Water consumption vs water scarcity



The aim of the original WEEE Directive and the recast is to ensure that EU Member States prevent or minimise the levels of discarded electrical and electronic equipment (EEE) within the general waste stream and reduce the environmental impact of EEE at end-of-life.



WEEE Directive

Article 1 Objectives:

- **Prevention of waste** electrical and electronic equipment;
- **increasing re-use;**
- **increasing recycling;**
- **improve environmental performance of:**
 - producers;
 - distributors;
 - consumers; and
 - treatment operators

Changes to the UK WEEE system brought about by the recast of the WEEE Directive will commence on the 1 January 2014.



WEEE Recast

The key changes are:

- Target system by 2016, 45% of the annual average of what is placed on the market (B2C + B2B) in the previous 3 years must be collected. Rises to 65% in 2019 or 85% of WEEE arising.
- Any EEE placed on the market that is the same specification for B2B as it is for B2C will be considered to be B2C.
- Reuse targets are not included, but this will be reviewed in 2016.
- Retailers above 400m² of floor space must take back items smaller than 25cm regardless of whether they sell that type of product to the person bringing it back.
- Feb 2014, new EU standards will be applied to treatment facilities (WEEELABEX).

B2C WEEE Collection - UK

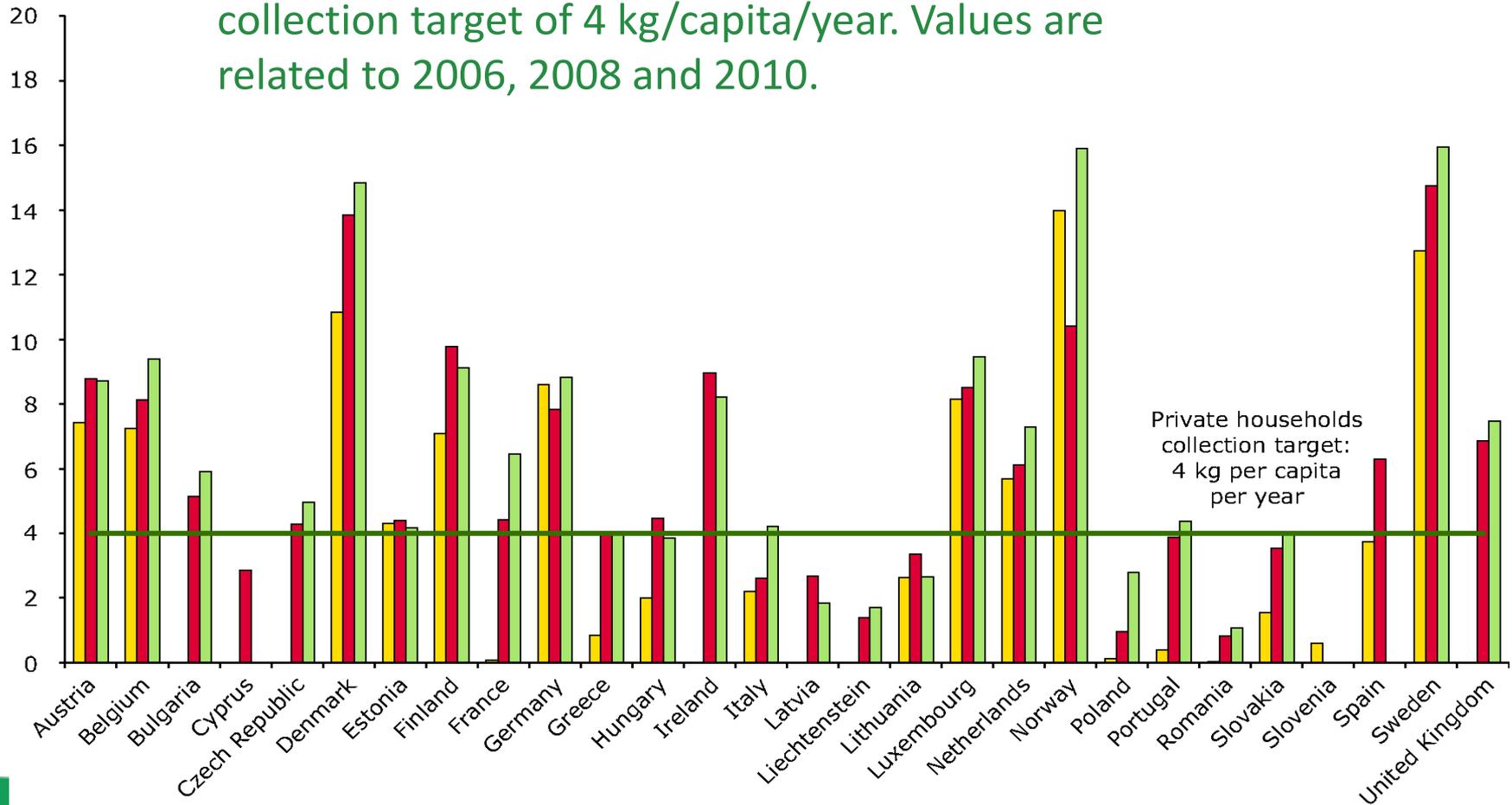
- The total collection rate for household and non-household WEEE reached 35.37% for 2012 compared to 34.41% in 2011
- Actual tonnage of material collected falling, from 517,142 tonnes in 2011, to 504,563 tonnes 2012.
- Collection rate has remained higher as the tonnage of new products placed onto the market has also fallen, from 1,502,748 in 2011 to 1,426,243 tonnes in 2012.

	EEE Placed on Market	WEEE Collected	Collection Rate
2009	1,546,565	469,126	30.33%
2010	1,534,575	478,826	31.20%
2011	1,502,749	517,142	34.41%
2012	1,426,244	504,563	35.37%

*Data provided by Environment Agency, figures are in tonnes

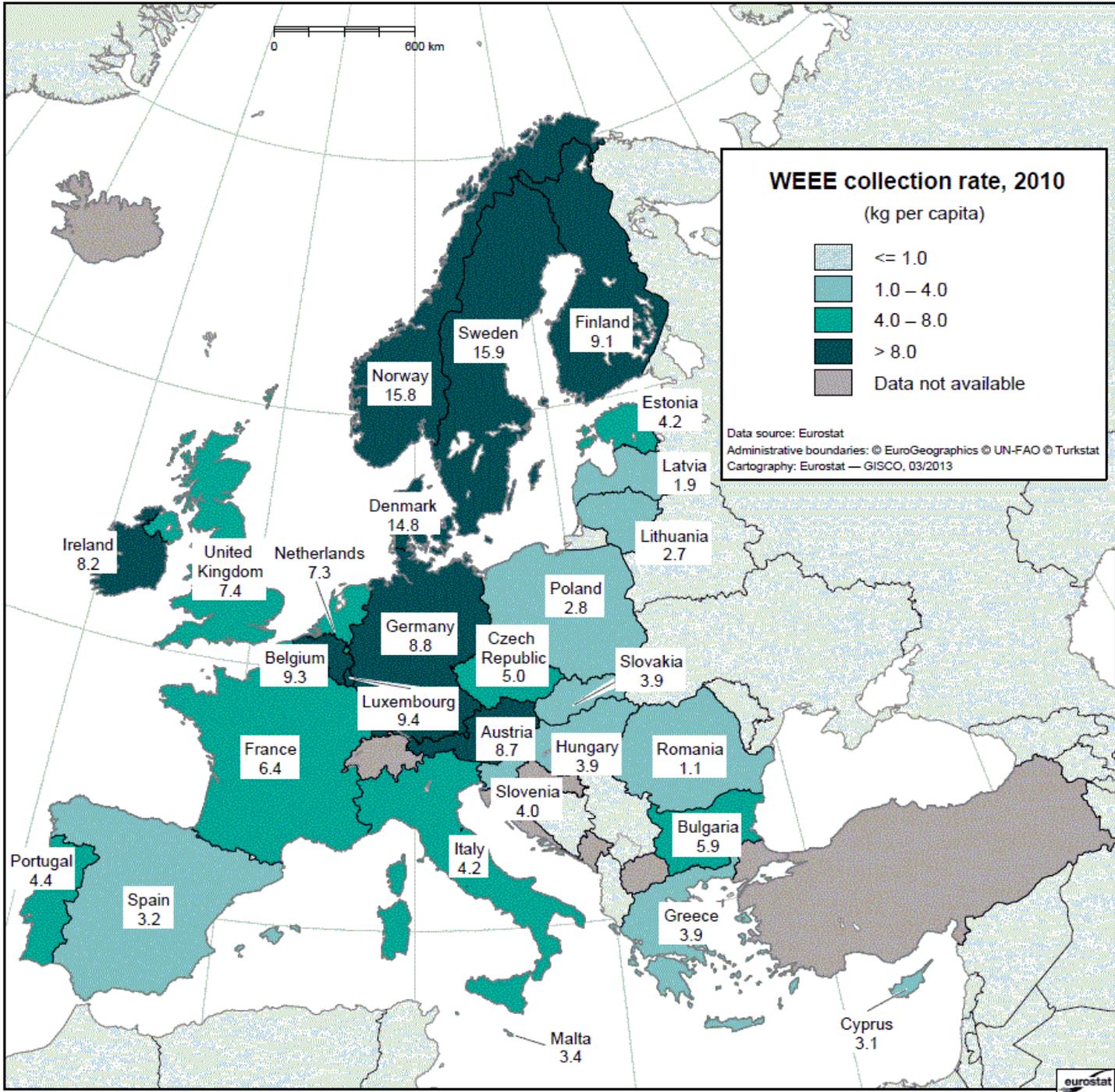
Amount of Waste Electrical and Electronic Equipment (WEEE) that has been collected from private households in European countries, stated in kg/capita. The figures are related to the EU collection target of 4 kg/capita/year. Values are related to 2006, 2008 and 2010.

Kg per capita

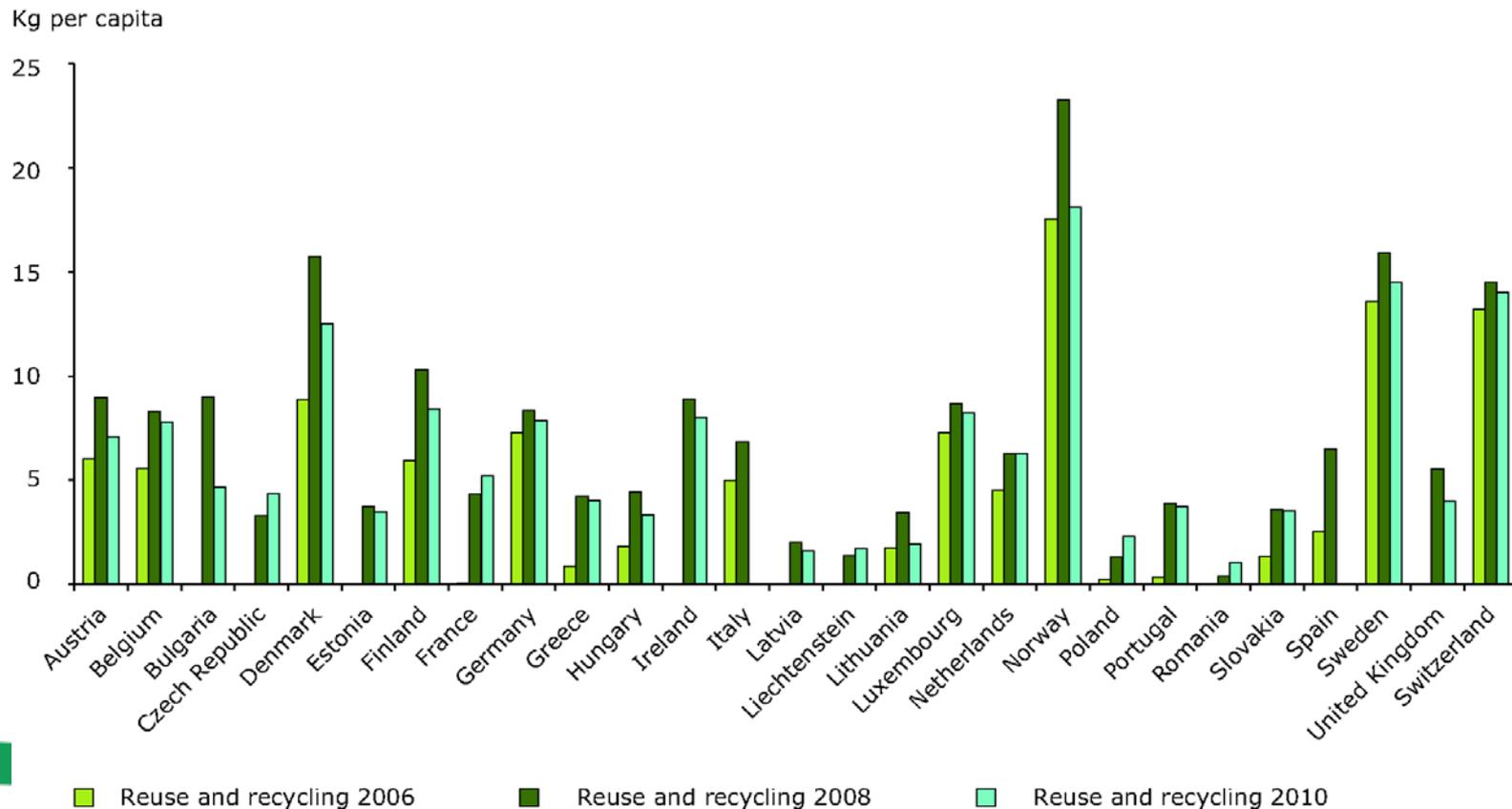


Private households collection target:
4 kg per capita per year

- Collected from private households 2006
- Collected from private households 2008
- Collected from private households 2010
- Collected target kg/capita



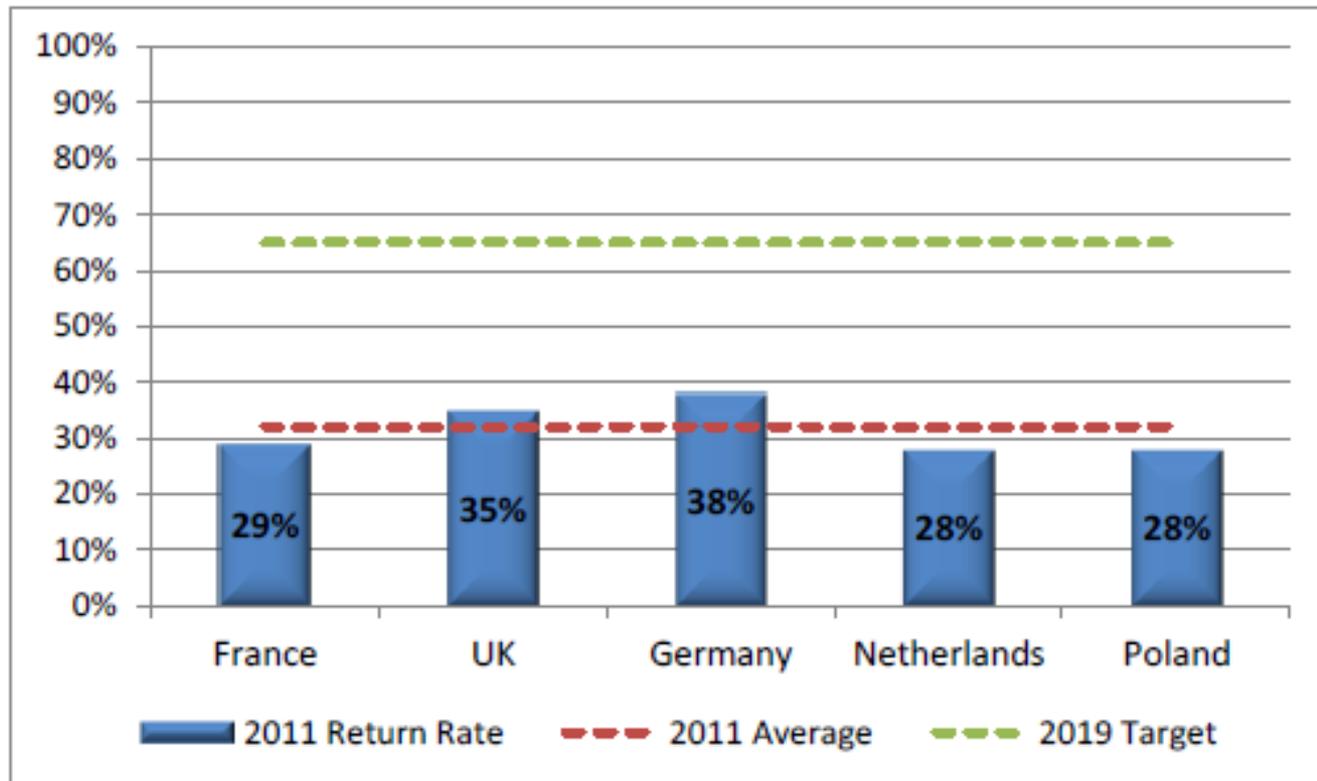
Trend in the amount of WEEE that has been reused and recycled in European countries, stated in kg/capita.



WEEE Collection - future

- Despite falling short of the 45% target (2016) set out in the Recast of the WEEE Directive, UK could meet the target if 'non-obligated' WEEE received from outside of the PCS is counted towards recycling targets.
 - WEEE generated by businesses (B2B) had collection rate of 4.98% throughout 2012
 - A total of 158,039 tonnes of non-obligated WEEE was collected in 2012, more than double that received in 2011.
 - If both obligated and non-obligated' WEEE are counted, the overall collection rate would rise to around 46% (target rate of 45% by 2016)
- 

Official collection rates for some EU countries based on put on the market



WEEE Component Value

- WRAP has shown that the material value of WEEE disposed of in the UK is more than £1.3 billion, equivalent to approximately £22/head of population.
- Nearly £400 million of material replacement value is either hoarded or landfilled, while the majority of the rest is treated through recycling.
- Treatment process does not recover the maximum material value from products.
- The amount of precious metals in the WEEE stream is estimated at about 50 tonnes, at an average concentration of 30g/tonne.

	g/tonne WEEE	g/tonne mined
Silver	21.41	850
Gold	6.45	5
Platinum Group Metals	2.14	<2

Reuse Value

- WRAP estimates that almost a quarter of WEEE brought by householders to HWRCs across the UK has a reuse value,
- 23% of all WEEE separately collected at HWRCs is immediately resalable or resalable following repair and refurbishment
- Estimated maximum of £220 million in resale value
- Once the cost of purchasing and repairing the items has been accounted for, the net value of this equipment is around £106 million, (not including transport and handling).
- The equivalent gross resale value for equipment from bulky waste collections is £77 million.

Figures are based on an annual total of 348,000 tonnes of WEEE arising at HWRCs, and 149,000 tonnes from bulky waste collections.



- Small WEEE typically has lower levels of reuse potential, but the proportion that is reusable has a higher value compared to other categories.
 - Certain WEEE streams have a far lower resale value compared to other categories. CRT TVs, for example, have nil or negative value.
 - Large domestic appliances also offer good potential value, from reuse, use of parts, or scrap, making up 61% of the resale value from bulky collected WEEE.
 - 89,000 tonnes of WEEE estimated as disposed of in residual waste at HWRCs, suggested potential resale value of £28 million.
 - Estimated 160,000 tonnes of WEEE are disposed of via residual household waste collections, could have a resale value of up to £56 million.
- 

Eco Design

WRAP investigated opportunities where product re-design could improve profit, reduce costs and reduce environmental impact.

Opportunities for improvement focus on:

- **Durability to reduce product returns** - Investigating the components that may fail and lead to product returns, and their causes;
- **Direct material savings** - Reducing the quantity of material used in product and packaging, and increasing recycled content through design simplification or component substitution; and
- **Design for assembly and repair** - Improving manufacturing or repair efficiencies through design changes.

Design reviews have identified savings (per 100,000 units) of:

- Television model: **£180,000** and 600 t of CO₂e
- Microwave: **£320,000** and 300 t of CO₂e
- Washing machine: **£550,000** and 740 t of CO₂e
- Vending machine: **£140,000** and 600 t of CO₂e

Use of Recycled Plastics

WRAP study established that recycled plastics can perform to the standards required in premium audio products, and in some components better than virgin materials;

- Cost saving of 13% per tonne could be achieved using recycled High Impact Polystyrene (HIPS) in loudspeaker grills;
- Saving of 72% CO₂eq per tonne using recycled HIPS in place of virgin material (947kg CO₂ compared to 3,400kg CO₂);
- Saving of 50% CO₂eq could be achieved by producing the speaker grills with recycled HIPS; and
- A reduction in blowing agent was possible in the speaker mouldings using recycled HIPS.

Technologies

Technology	Separation method	Treated product/material	Recovered material
TITECH Polysort	Near infra-red processing	Mixed plastics	Plastic polymers
TITECH X-tract	X-ray	Shredded ferrous scrap	Copper. Can also be configured to sort panel / funnel glass.
Wet Shaking Tables	Vibration/water flow	Copper-rich WEEE derived plastic	Copper
AllMineral Wet Stratification Jig	Jigging	WEEE plastic	Fine copper
Flat Panel Display Recycling	Manual disassembly/ shredding/ optical sorting/ mercury decontamination	Flat Panel Displays	Metals, plastics, glass and mercury
Active Disassembly	Shape memory polymers	LCDs	Liquid crystal, indium, metal, glass, plastics
Visys Spyder	Laser sorting	Shredded WEEE	Glass, metals, plastics
Kinetic Gravity Separator	Terminal velocity	Plastic	Fine copper, metal, glass
MeWa Smash Boom Bang	Disassembly by mechanical 'throwing' within a drum	Mixed WEEE	Capacitors, plastic casing, batteries, electric motors, transformers, circuit boards





Key Challenges

1. WEEE Recast targets
2. WEEE arising are predicted to increase, particularly from large household items and, from 2020, photovoltaics.
3. Demand for raw materials
 - » widely used in high-tech manufacturing
 - » supply security
 - » material prices
 - » export of resources

For example, global demand for rare earth elements, critical to mobile phones, flat screen TVs and computers, is forecast to grow at up to 11% a year between now and 2014. China produces around 97% of the world's supply of these, and in 2010 it cut its export quota by 72%.



Thank You



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WEEE and the Law

Current Issues

Andrew Bryce

Principal, Andrew Bryce & Co, Solicitors -
Environment & Health and Safety

The Legal Framework

- 2006 Regulations (as amended)
 - BIS WEEE Guidance
 - DCF Code of Practice
 - EA WEEE guidance and EPR guidance
 - Condoc April 2013: response by 21st June
 - Distinction between new requirements and RTC changes
 - Timetable
- 

Enforcement

- Efficient enforcement is essential to avoid distortion of the market
 - EA enforcement has been low key
 - 2010 4 prosecutions 17 formal cautions
 - 2011 2 prosecutions 8 formal cautions
 - 2012 1 prosecution 6 formal cautions
 - Some AATF Permits not renewed
 - Does not include general permitting and TFS offences
- 

Civil Sanctions

- Currently apply to certain Packaging, Haz Waste Regs and TFS offences
 - WEEE and EPR not currently included
 - Government opposed to extension of civil sanctions and probably don't understand benefits
 - Most packaging offences dealt with by Environment Undertakings: good for WEEE?
- 

Transfrontier Shipment

- Enforcement a priority for the EA crime teams enforcing back down the waste stream
 - WEEE is a major focus
 - Foreign re-use market will probably die on basis of new Directive requirements
 - Standard of crushed WEEE plastics being scrutinised which will increase processing cost
- 

Recent TFS Cases

- R v. KV : liability for TFS offence runs back through the supply chain to point of origin
 - R v. Ideal Waste : incidental contamination
 - Intersoh Scrap: broker obligation to reveal source in Annex VII documentation
 - R v. Ezeemo: is strict liability offence and repair was recovery
- 

New Sentencing Guidelines

- Consultation until 6th June
 - Levels of fines to increase significantly for companies: tariff categorised by turnover
 - Currently waste offences under S. 33 EPA and environmental permitting offences
 - Will be rolled out in due course across all environmental offences
 - Unlikely to change significantly following consultation
- 

Issues for Discussion

- Do DCF operators want to trade in wastes with volatile price structures? How will they contract?
 - Do the Regulators know the real volumes of WEEE in the market? Are all imports monitored?
 - Legal distinction of B2B and B2C very blurry!
 - Is trading evidence more transparent than Scheme to Scheme deals?
 - Producer Takeback Scheme: how would it work?
 - Will proposed changes throw away baby with the bath water?
- 

Conclusions

- Contract challenges for new proposals
 - As targets go up enforcement is more important
 - Export for re-use becoming uneconomic
 - What is the impact of removing the value of evidence on collection rates?
 - Will DCFs cherry pick waste streams?
 - Are timetables for changes realistic?
- 

WeCare

about compliance

Q & A session

WeCare
about compliance

Coffee break

The virtuous circle

Richard Shaw

Group Commercial Manager at SIMS Group UK Ltd



Agenda

- Where we were
 - Where we are now
 - Addressing future challenges
- 

The Past

- Scrap metal merchants - “The Historical Recyclers”
 - SIMS established in 1910 – many acquired and similar businesses in the UK formed at a similar time
 - Adapting to client and environmental requirements
- 

The re-positioning of the Recycling Industry

- Legislation changes:-
 - ODS Regulations
 - Hazardous Waste Regulations
 - ELV Directive
 - WEEE Directive
- Non-adoption of the above equated to SIMS losing 30% + of overall volume
- Diversification of business:-
 - MIREC Acquisition
 - European Facilities
 - ELV Compliance
 - Organic Growth

ELV de-pollution?



ELV Depollution Rig



Fridge Recycling?



End of Life Fridge Transportation



Tonnages and Processing Capacity

- **Figures for 2012**
 - Approx 9,000,000 tonnes of scrap produced in the UK
 - Fe + Nf material
 - Domestic and export markets
- WEEE tonnage arisings – 504,000 tonnes
- WEEE tonnage (metal content) will partly go into the total scrap arising tonnage, there is an amount of double-counting on comparison of the figures
- However – WEEE represents no more than 5% of total scrap production
- Increased collection of WEEE will not cause any processing capacity issues
- Massive over-capacity of WEEE processing ability in the UK versus actual WEEE arisings (a “mirror” of the shredder / fragmentiser position)

ELV Regulations

- By 2008 – 85% of ELV must be recycled
 - By 2015 95% must be recycled
 - SIMS and others have been exceeding 85% for several years
 - £20m + investment
 - ‘Level playing field’ regarding enforcement...
- 

ASR Plant



WEEE Directive – The Advent of AATFs

- Organic growth and investment:-
 - FRP Newport (plus second plant)
 - CRT dismantling – multi-site hand dismantling
 - SDAs - Stalybridge
- Acquisition
- Partnerships / Collaborations in order to address economies of scale
 - Downstream processing infrastructure

Newport WEEE Plant



Addressing the future:-

- Ferrous + non ferrous
- Precious metal recovery
- 'Non metallics'
- Plastics recycling
 - Billingham investment
- Aggregate recycling
- ASR Plant
- Pentane Fridge Legislation 1/6/13
- Drive to minimising landfill:-
 - Maximising resource recovery
 - Minimising disposal costs
- Development of services to address current needs:-
 - CSR as opposed to simply WEEE Directive compliance

Dangers

- Illegal Exports
- “Leakage”
- ‘Race to the bottom’ on price – as opposed to quality of service, sustainable solutions and sound audit trails
- The un-equal enforcement of standards and policing of AATFs

The Recast unravelled

Graeme Vickery & David Styles

BIS WEEE Team



Why the WEEE Recast?

- Improving environmental protection (scope, collection rates, small WEEE take back, Individual Producer Responsibility - IPR)
 - Reducing burdens (harmonisation and “authorised representative”)
 - Reducing illegal exports
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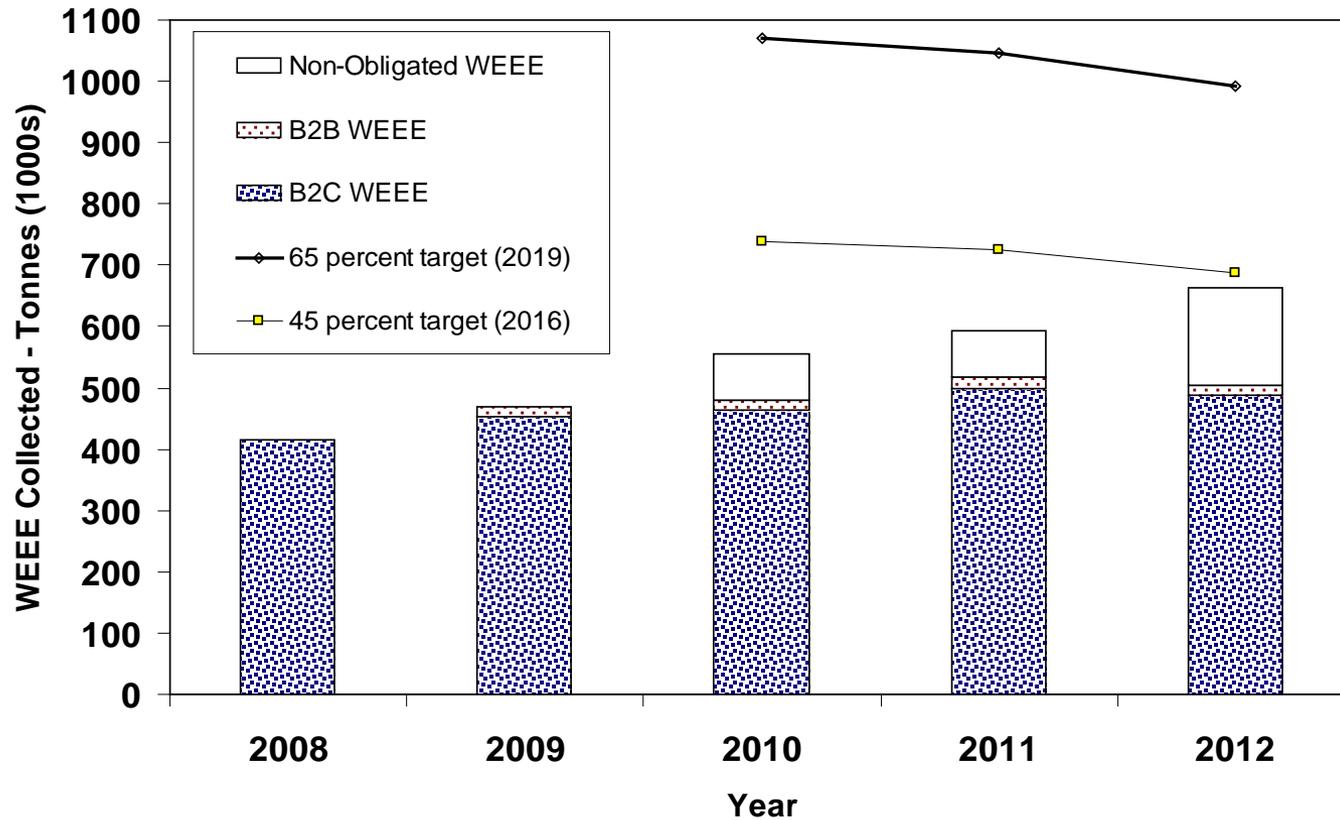
Scope

- Move from Closed Scope to Open Scope – August 2018;
 - How to deal with the “interim period”;
 - Photovoltaic panels and Lamps (Gas Discharge and LED) – new and combined categories.
- 

Collection rates

- 4kg/head; 2016 45% WEEE placed on Market; 2018 - 65% (85% WEEE generated)
 - “substantiated estimates” – light iron waste stream and LDA/SDA;
 - 400m² sales area and the Distributor Takeback Scheme;
 - IPR follow up – options, costs and benefits
- 

Collection rates



Illegal shipments of EEE/WEEE

- New provisions require EEE for export to be properly tested, documented and packaged before export for reuse.
 - Puts in place in regulations what is already agreed in guidance by the UK and EU Member States and others.
- 

WEEE Consultation Part 2

Red Tape Challenge: policy options for reforming the household WEEE collection system



What is the Red Tape Challenge

- Opportunity to tell Government
 - Which regulations are working
 - Which are not working
 - What should be scrapped
 - What should be simplified
 - and what can be done differently
- Electrical producers commented on WEEE Regulation compliance costs

Summary of Proposals

- De minimus threshold for small producers
- Flexibility for DCFs to self treat “value” streams
- Options relating to the B2C WEEE system:
 - Do Nothing
 - National Compliance Scheme
 - Collection target and compliance fee
 - Matching of collectors to PCSs

A lot will remain unchanged

- No change to B2B obligations
 - B2C collections continue to be via distributor take-back and DCFs
 - Distributor Takeback Scheme continues
 - LAs continue to collect 5 streams
 - LAs continue to partner with a PCS with guaranteed removal of all WEEE at no cost
 - All WEEE arising “in the system” must be treated by AATF
 - Reporting of EEE and WEEE data required
- 

Greater choice for DCFs and small producers

- De minimus threshold for small producers
 - Direct registration with environment agency
 - No requirement to join a compliance scheme
 - B2B producers take-back obligations unchanged
- Designated Collection Facilities choice to self-treat WEEE streams or hand over to PCS
 - Notify ahead of compliance year
 - Report data

Option 1 – Do nothing

- B2C compliance system remains unchanged
 - Not minded to pursue this option but views sought
 - Not supported by Impact Assessment

Option 2 National Producer Compliance Scheme

- Single national compliance scheme
 - Producers must join or could register directly with Agency if a large producer
 - PCS contracts with collectors (ie DCFs, Distributors)
 - PCS contracts for transport and treatment
 - Producer obligation calculated by market share/cost of WEEE arising by stream
- 

Option 3 Collection Target and Compliance Fee

- DCF free to tender PCS contracts
 - PCS Collection target set ahead of the year using historical WEEE and EEE market share data split by stream
 - PCS to PCS contracts possible but no evidence trading
 - Compliance fee is alternative form of compliance
 - Guaranteed free uplift from LAs even if target achieved
 - Proposal to mitigate against PCS financial risk of collection requests in excess of targets
- 

Option 4 PCS/DCF Matching Process

- Multiple PCSs
 - DCFs/Retailers offer all or selected WEEE Streams into the matching process
 - Algorithm established to match collectors and streams to PCS for compliance period
 - No collection target – obligation based on WEEE arising and market share
 - PCS free to contract for treatment etc including with each other
 - Any imbalances at year end would be rectified
- 

Possible Timeline

- 21 June Consultation closes
 - August Government Response to consultation
 - Comments invited on revised draft Regulations
 - Nov/December new Regulations laid
 - 1 January 2014 New Regulations enter force
 - **But** timing of any RTC changes is dependent on which of the 4 options is pursued
- 

More information and how to respond

David Styles/Graeme Vickery

Email weee@bis.gsi.gov.uk

Tel 020 7215 0211/1836

Use online response tool at:

<https://www.gov.uk/government/consultations/waste-electrical-and-electronic-equipment-weee-implementing-the-recast-directive-and-uk-system-changes>

WeCare
about compliance

Q & A Session

WeeeCare plc

WeCare
about compliance

Lunch

What are we going to do about WEEE

Jonathan Perry

Take Back Compliance Consultant at Dell

Option 1: Do Nothing



Option 1: Do Nothing

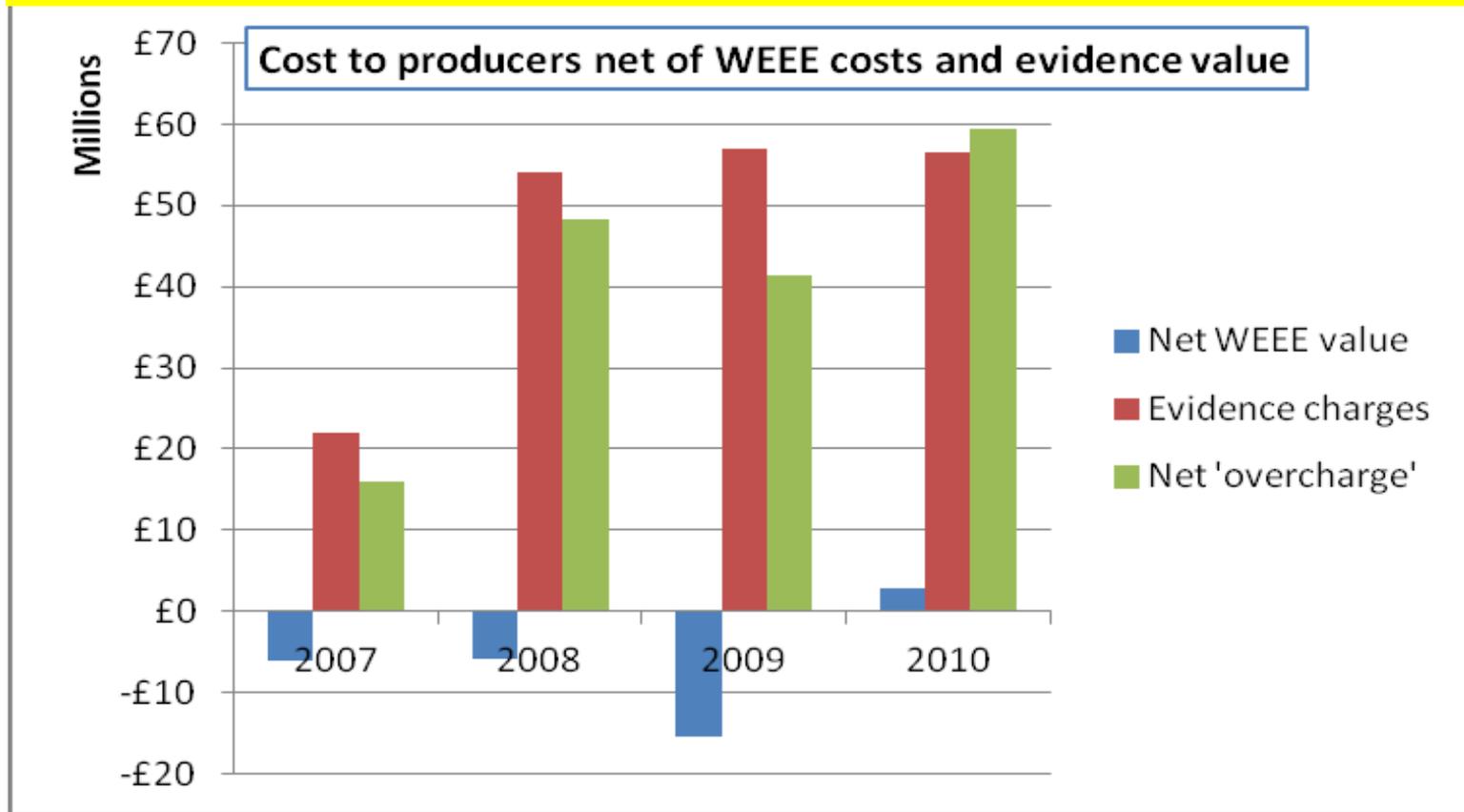
“It is this trading of WEEE evidence and the **“must buy”** requirement on schemes in order to meet their financial obligations that have created the **excess costs.**” (BIS Impact Assessment para 29)

“There is no incentive for a PCS to offer a lower price to attract new members even where it has surplus WEEE, since it can always sell surplus evidence to deficit PCSs who must buy at the given price to meet obligations or face criminal sanctions. “

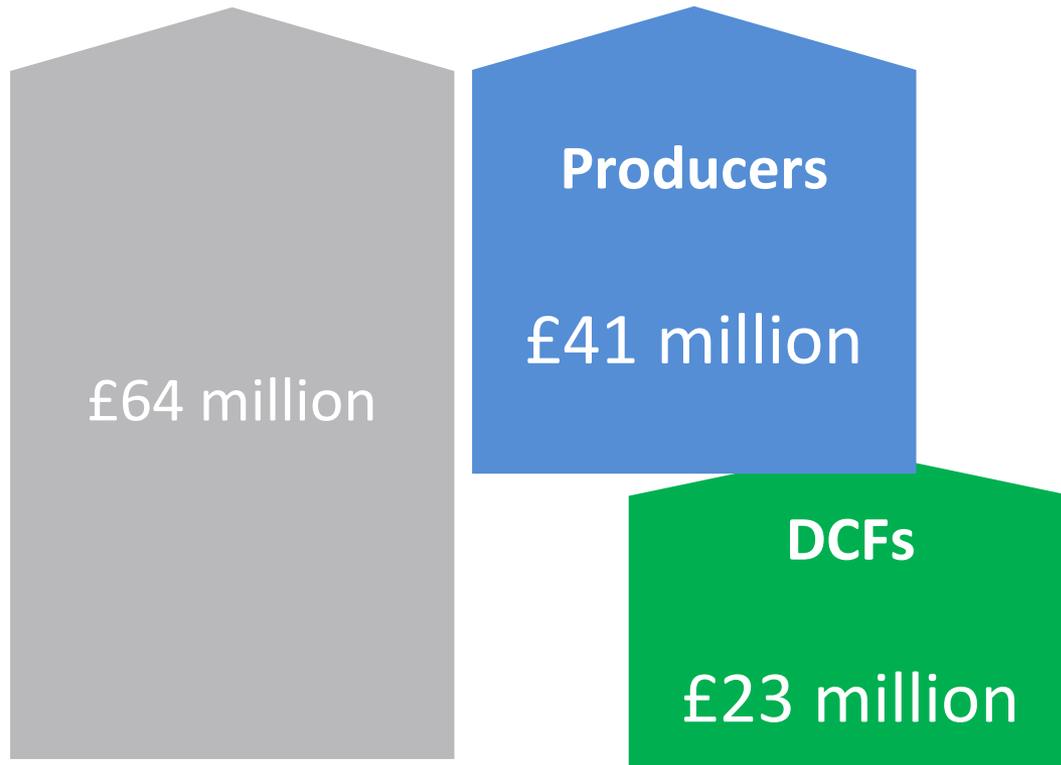
“With prohibitively high switching costs, the producer is said to be **locked-in to the supplier...**Where switching costs for a producer are prohibitively high, the situation can be modelled as a monopoly – where there is increased risk of price discrimination.” (BIS Impact Assessment para 37)

Comparison of net value vs evidence charge

Producers are paying £60m more to meet the UK WEEE Regulations that the actual costs of recycling this material



Both Producers and Local Authorities are losing out



If Local Authorities could keep the value of WEEE they collect they would receive an estimated...

... £23 million

Option 1: Do Nothing

The options to change the UK system 'would bring significant reductions in net costs compared to the existing system. **Each of the alternative options would, therefore, represent a deregulatory measure**.' (see BIS Consultation para 71)



Option 2: Single Compliance Scheme

The image shows the box art for the Monopoly Electronic Banking Edition. At the top left is the Parker Brothers logo. Below it, the text reads "Property Trading Game from Parker Brothers®". The main title "MONOPOLY" is in large, white, outlined letters on a red background, with Mr. Monopoly's head integrated into the letter 'O'. To the right of the title is the word "BRAND". Below the title, "ELECTRONIC BANKING EDITION" is written in a stylized font. The central figure is Mr. Monopoly, wearing a black top hat and a red bow tie, holding a cane. He is holding a stack of Monopoly cards in his right hand and a blue electronic calculator in his left hand. The calculator has a digital display showing "157" and various function buttons. The background features a cityscape with the Statue of Liberty, the US Capitol, and the Gateway Arch. Fireworks are visible in the sky. In the bottom left corner, a yellow banner reads "CARDS NOT CASH! NOW PLAY WITH MILLIONS ON YOUR CARD!". In the bottom right corner, a red banner reads "Featuring the properties of Monopoly Here & Now". A small green box in the bottom right corner says "Family AGES 8+".

PARKER BROTHERS

Property Trading Game from Parker Brothers®

MONOPOLY BRAND

ELECTRONIC BANKING EDITION

MONOPOLY

001 1935 2007 7070
P-01/35
CHARLES B DARROW
12/07-4

CARDS NOT CASH!
NOW PLAY WITH MILLIONS ON YOUR CARD!

Featuring the properties of Monopoly Here & Now

Family AGES 8+

Competitive market for WEEE

Single compliance system	Competitive compliance system
Sweden	Denmark
Belgium	Ireland
Luxembourg	Italy
Greece	France
Estonia	Austria
Malta	Germany
Cyprus	Finland
Netherlands	Portugal
Norway	Spain
Switzerland	Slovenia
	Slovakia
	Poland
	Lithuania
	Latvia
	Hungary
	UK



The Economic Costs of Monopoly Schemes

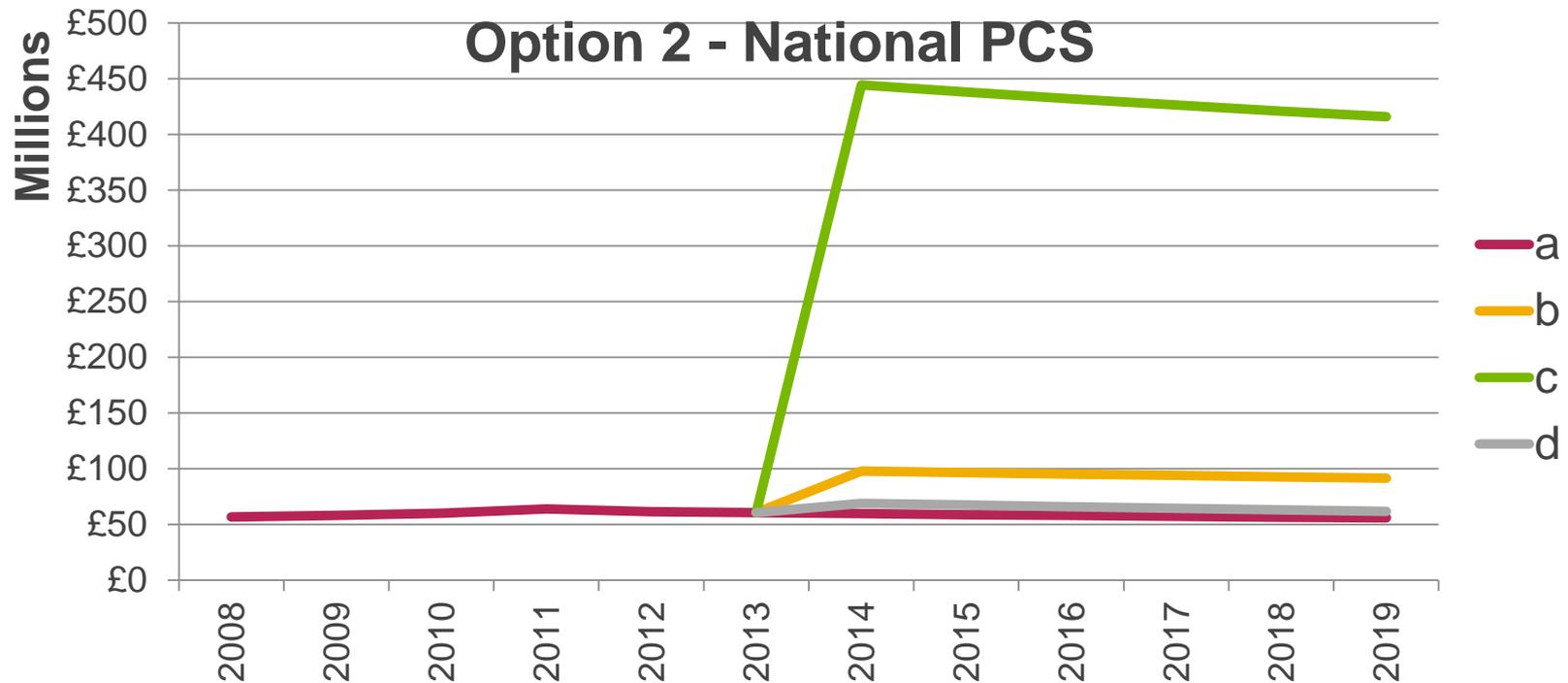
	Equipment type	Flat screen monitor	Laptop	Desktop	Small IT (DVD drive)	Consumer AIO printer
	Average weight / unit sold	4.00 kg	2.00 kg	6.00 kg	0.30 kg	7.00 kg
Average Monopoles (Netherlands, Switzerland, Norway, Sweden)		€ 2.30	€ 1.27	€ 1.50	€ 0.10	€ 1.28
Average Competition (Germany, UK, Spain, Italy, Austria)		€ 1.40	€ 0.21	€ 0.26	€ 0.01	€ 0.30
Cost difference		164%	604%	576%	744%	422%

Source: HP benchmarking November 2012

EMEA Take Back



Option 2: Economic Costs



- Line a. – baseline maintaining current evidence system. 2014 cost of £60m.
- Line b - assumes 164% increase in costs against baseline in line with best case EU examples of monopoly schemes. 2014 cost of £98m.
- Line c. - assumes 744% increase in costs. 2014 cost of £444m.
- Line d. - Adds the cost differential between competitive schemes and monopoly schemes to UK costs. 2014 Cost of £69m

Option 3: Target and Compliance Fee

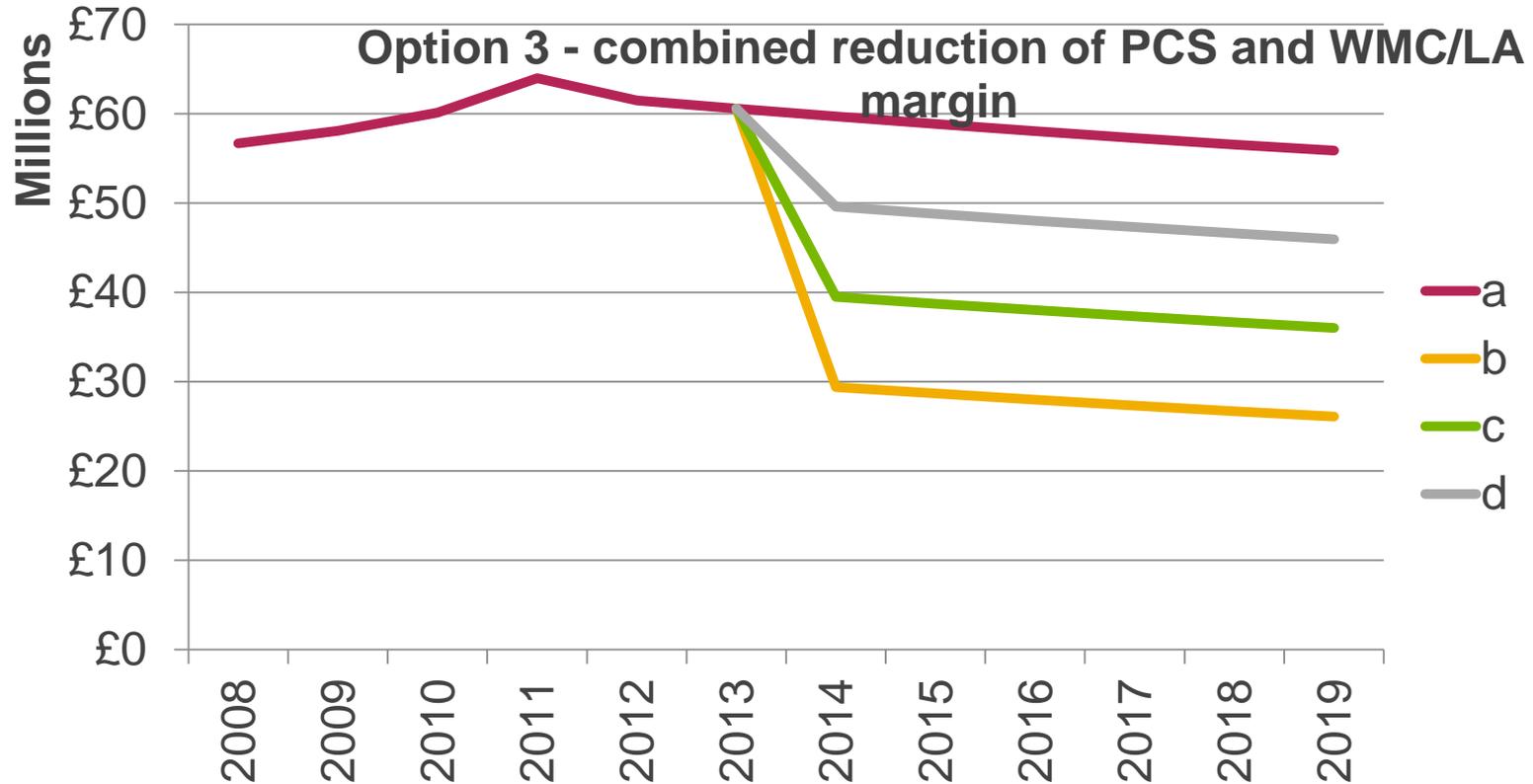


What are the key advantages?

- The introduction of a penalty fee is likely to reduce the opportunity for ransom pricing charged in trades between PCSs.
- LA's, Waste Companies, retailers or other WEEE collectors would remain free to seek to partner with any PCS they chose or could choose to deal with WEEE themselves.
- Collectors can choose which streams they would choose to self- treat and report the tonnes and streams into the system free of charge.

- This option carries a risk that the system could be manipulated to return to a situation of costs significantly in excess of the true costs of compliance limiting the ability to reduce the costs of red tape to their full potential.
- Local Authorities may not be able to access the full value of the WEEE they collect.
- It is unclear how the penalty fee will be set and who will be responsible for setting it.

Option 3: Economic Benefits



Line a. – baseline. 2014 cost of £60m

Line b. – assumes that WMC/LA and PCS trading margin will be reduced by 75%. 2014 cost of £29m.

Line c. – assumes that WMC/LA and PCS trading margin will be reduced by 50%. 2014 cost of £39m.

Line d. – assumes that WMC /LA and PCS trading margin will be reduced by 25%. 2014 cost of £49m.

Option 4: Matching System

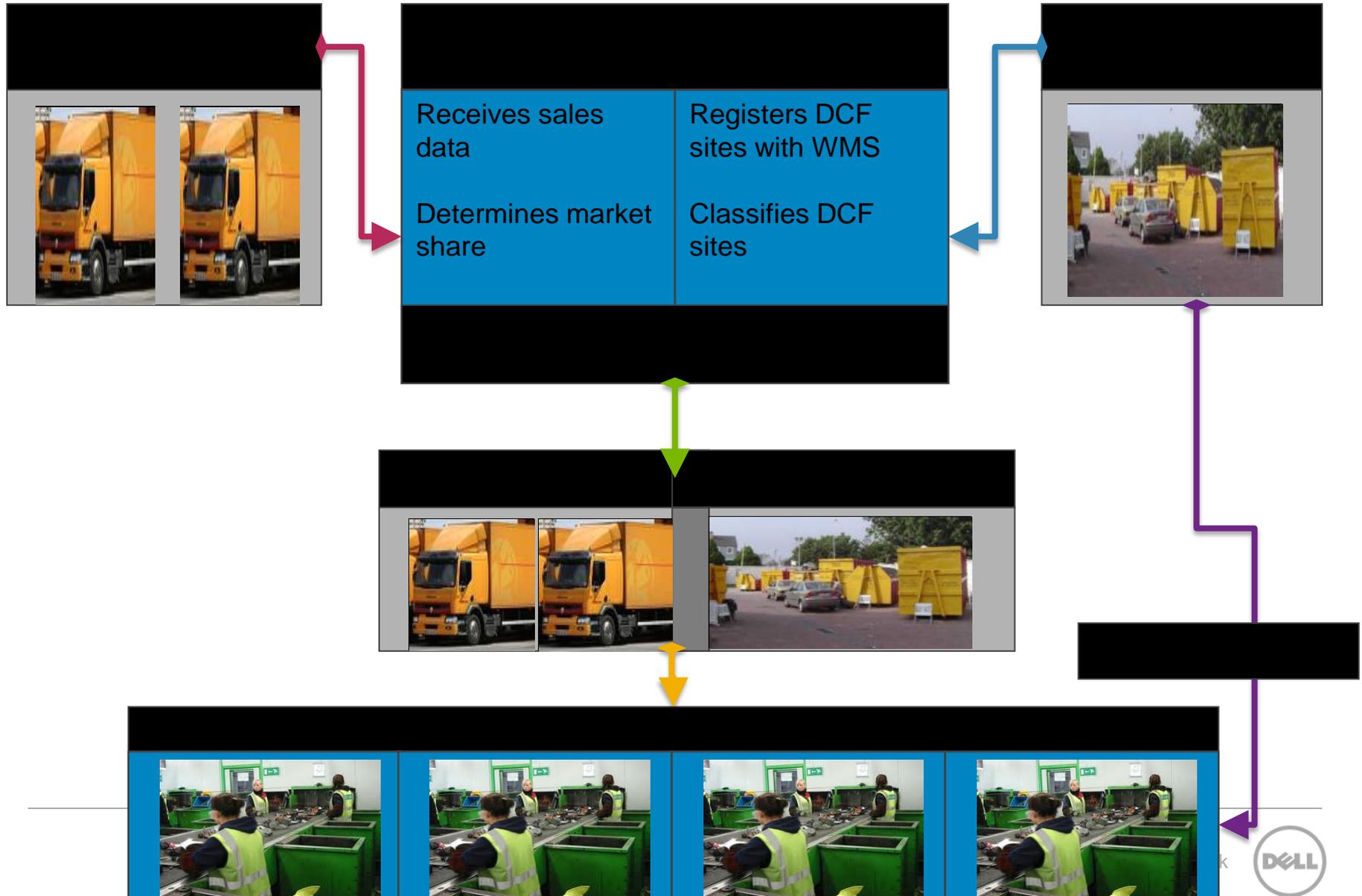


How does the WMS Work?

- The WMS will operate as a black box.
 - It is similar to the Ireland, Italian, and Germany WEEE system.
 - Sites (DCF's) are allocated across the whole country for a whole compliance period to producer compliance schemes which need the WEEE on the basis of their market share.
- The matching in the UK will be undertaken by an organisation called the WEEE Matching Service (WMS)
 - The WMS will be funded by producers.
 - All Producer Compliance Schemes must join the WMS in order to access the WEEE they are required to finance.
- DCF's have freedom to participate or not in the WMS by stream.
- Option 1: Self management
 - DCFs can choose, on an annual basis and by WEEE stream, to manage the collection and treatment of WEEE through AATFs directly, and retain any resulting revenue.
- Option 2: work with WMS
 - LAs and/or other economic operators collecting can alternatively offer one or more of the household WEEE streams into the WMS that will partner them with a Producer Compliance Scheme (PCS).



WEEE Matching Service



Benefits for Local Authorities

1. Flexibility and Choice

- Provides DCFs with the flexibility to choose by waste stream between a PCS collection or managing WEEE collection independently

2. Ability to retain the value of WEEE

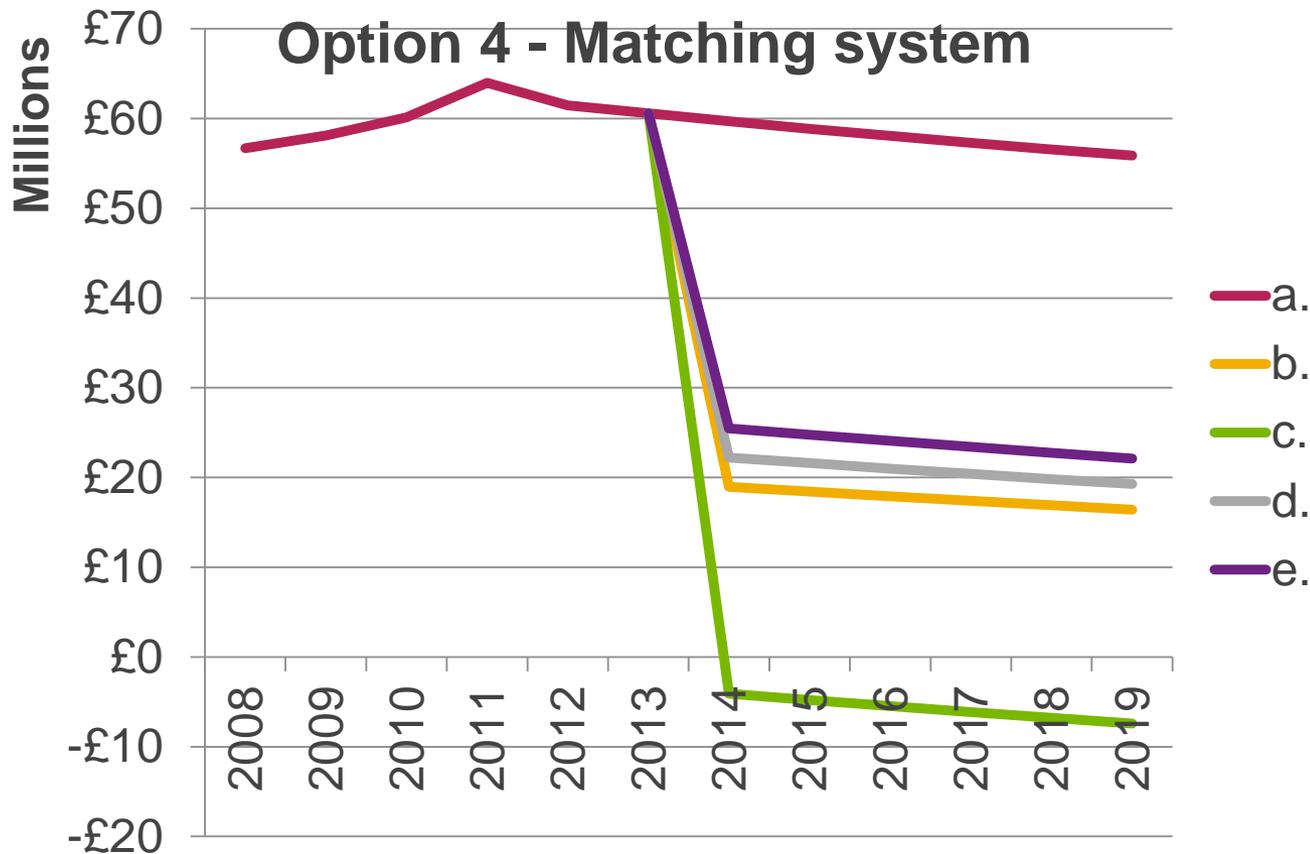
- DCFs have control to retain the value of valuable WEEE streams estimated at £23 million each year.

3. WEEE Awareness and Infrastructure Fund

- The Regulations, conditions of scheme approval and/or WEEE Matching Service could require PCSs to support new and innovative collection.
- For example, each PCS would need to establish and/or provide funding for a national WEEE Awareness and Infrastructure Fund (WAIF).
- This would operate in the same way as the DTS.
- For example, if a WAIF of about £2 million per annum was generated, between 2007 and 2012 this would have created a sum in excess of £13 million.



Option 4: Economic Benefits



DCFs
£23 million

Line a. – baseline. 2014 cost of £60m.

Line b. – assumes zero premium but zero value to producers. 2014 cost of £19m.

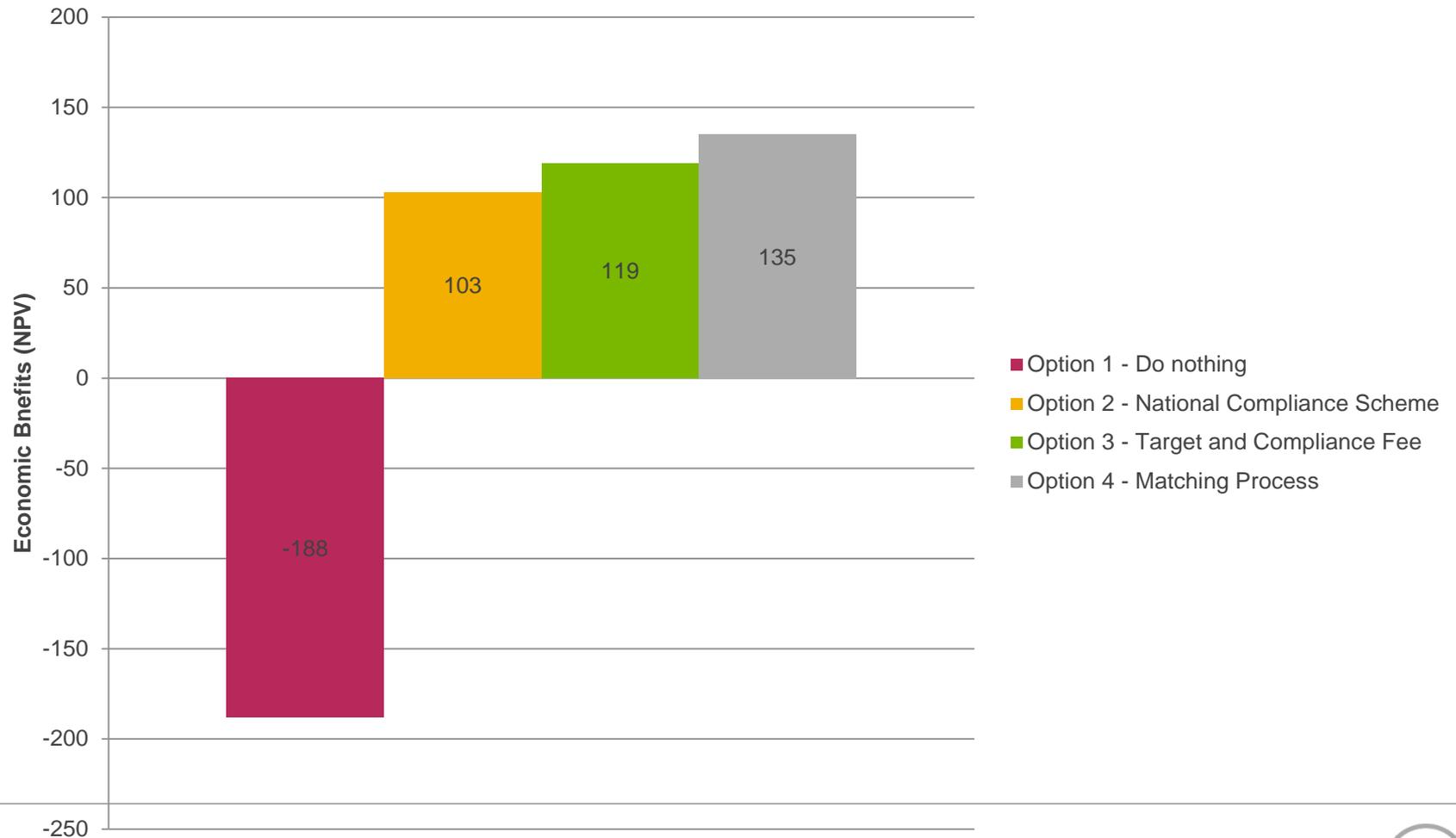
Line c. – assumes zero premium but all net value to producers. 2014 value of £4m.

Line d. – assumes £30 premium applied to 50% of tonnage, zero value to producers. 2014 cost of £22m

Line e. – assumes £30 premium applied to all tonnage, zero value to producers. 2014 cost of £25m

Economic Advantages

Economic Benefits (NPV)



Source: BIS (2013) Impact Assessment: Waste Electrical and Electronic Equipment (WEEE) system

EMEA Take Back



A pessimist sees the difficulty in every opportunity; an optimist sees the opportunity in every difficulty.



Local Authority perspective

Fred Twiddy

Waste Service Manager at Bradford Council

- Local Authority Provide the infrastructure for collection of WEEE
- How will WEEE Recast effect Local Authorities

Red Tape Challenge:

4 options under consideration

- 1. Do nothing
 - 2. Single National Scheme
 - 3. Target System
 - 4. PCS DCF Matching Process (Allocation Method)
- 

Options 2, 3 & 4 allow Local Authorities to self-manage some or all of their WEEE streams

- Local Authorities could retain any revenue generated
- But also retain risk if material values fall
- Smaller economies of scale
- Decision to be made in advance for a full year
- Local Authorities must report WEEE that they treat
- This will be counted towards the national collection targets
- Loss of PCS added value support e.g. communication campaigns

Proposals

4. PCS DCF Matching Process (Allocation Method)

- No procurement process
- Could retain contractors
- Geographical location/size of authority no longer an issue as will be allocated to a PCS

3. Target System

- Similar to current system so less upheaval to implement

2. Single National Scheme

- No procurement process
- Improved accountability
- No trading of evidence
- Option to opt out

Concerns

4. PCS DCF Matching Process (Allocation Method)

- No competition for service, added value to meet local needs
- No influence on Number of contractors – logistical nightmare
- Loss of power to influence areas such as reuse

3. Target System

- Fear of non-collections if schemes reach their targets
- PCS have no incentive to collect once targets have been met
- Compliance Fee fund may not be available if schemes meet collection
- Targets

2. Single National Scheme

- No choice or competition
- No choice of AATF
- Consideration of local needs
- No bespoke added value support

Current Scheme

1. No change

- Authority Can Tender and determine which PCS/AATF contractors best meet the standard requirements of tender specification.
- Reuse/Recycling Data provided
- Duty of care notes provided
- Ability for revenue and added value
- Producer is responsible

Current Scheme

1. No change

- Managing AATF when exceeding permitted threshold

Option 1

- Delivers service level agreements determined by local authorities
 - Flexibility for Authorities to manage WEEE Waste
 - Develop a sound working relationship with PCS
 - Ability to terminate PCS if none compliance with service level agreement
- 

Improve Option 1

- *WEEE Regulator*
 - *Reuse*
 - *Local Authority Facilities*
 - *Tendering and service level agreements*
- 

- IMPROVE OPTION 1

Retailer perspective

Sion Stanfield

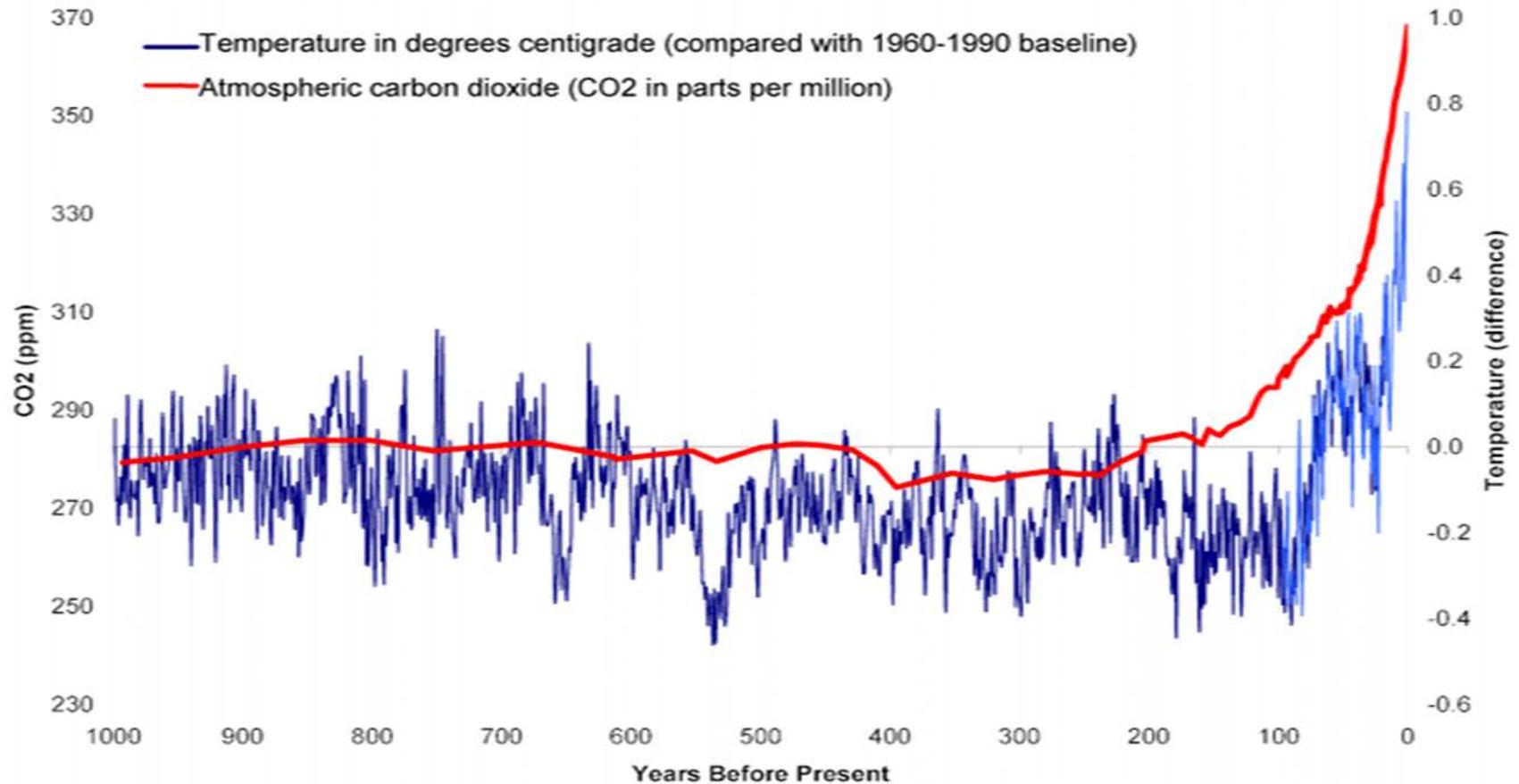
Director, eco-procure



Agenda

- Introduction.
 - Climate change.
 - What consumers think.
 - What consumers expect.
 - The challenge for electricals.
 - Engaging the consumer.
 - Reduce, reuse and recycle.
 - Summary.
- 

The planet - climate change



Positive proof of global warming.



**18th
Century**

1900

1950

1970

1980

1990

2006

What consumers think

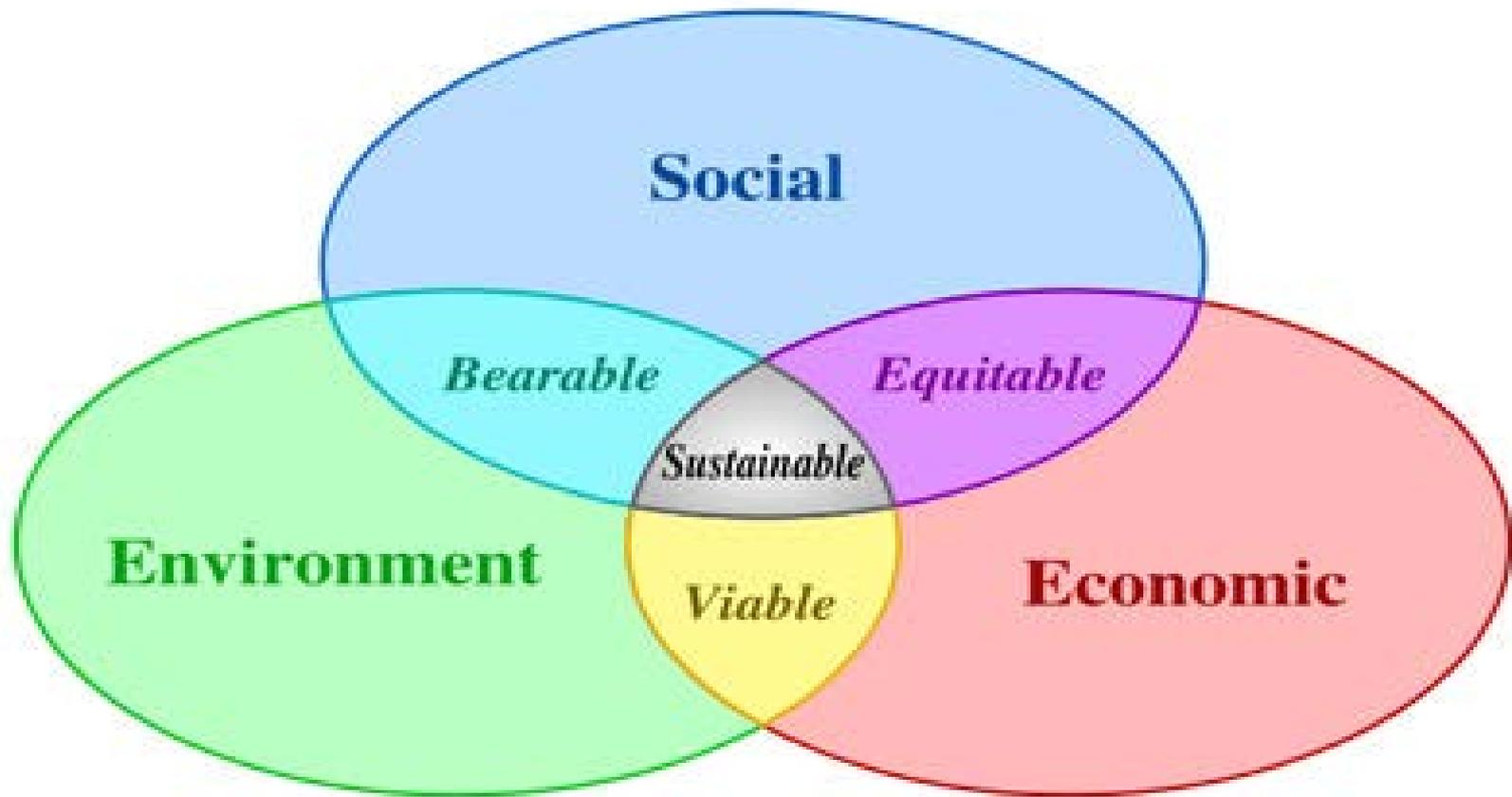
- Awareness of **global warming** is high with 9 out of 10 consumers hearing a lot about it.
 - **71% of consumers** didn't believe they were doing everything they could to stop global warming.
 - Global warming is perceived to be the most **immediate threat** to life after terrorism.
 - After Government, **big business** is considered to have the greatest responsibility for doing something to stop global warming but is currently perceived as doing very little.
 - Key barriers are having to **pay more** to be green and feeling that action is meaningless unless the world takes action.
 - Not having enough information on how to live a **greener lifestyle**.
- 

Climate change is visible



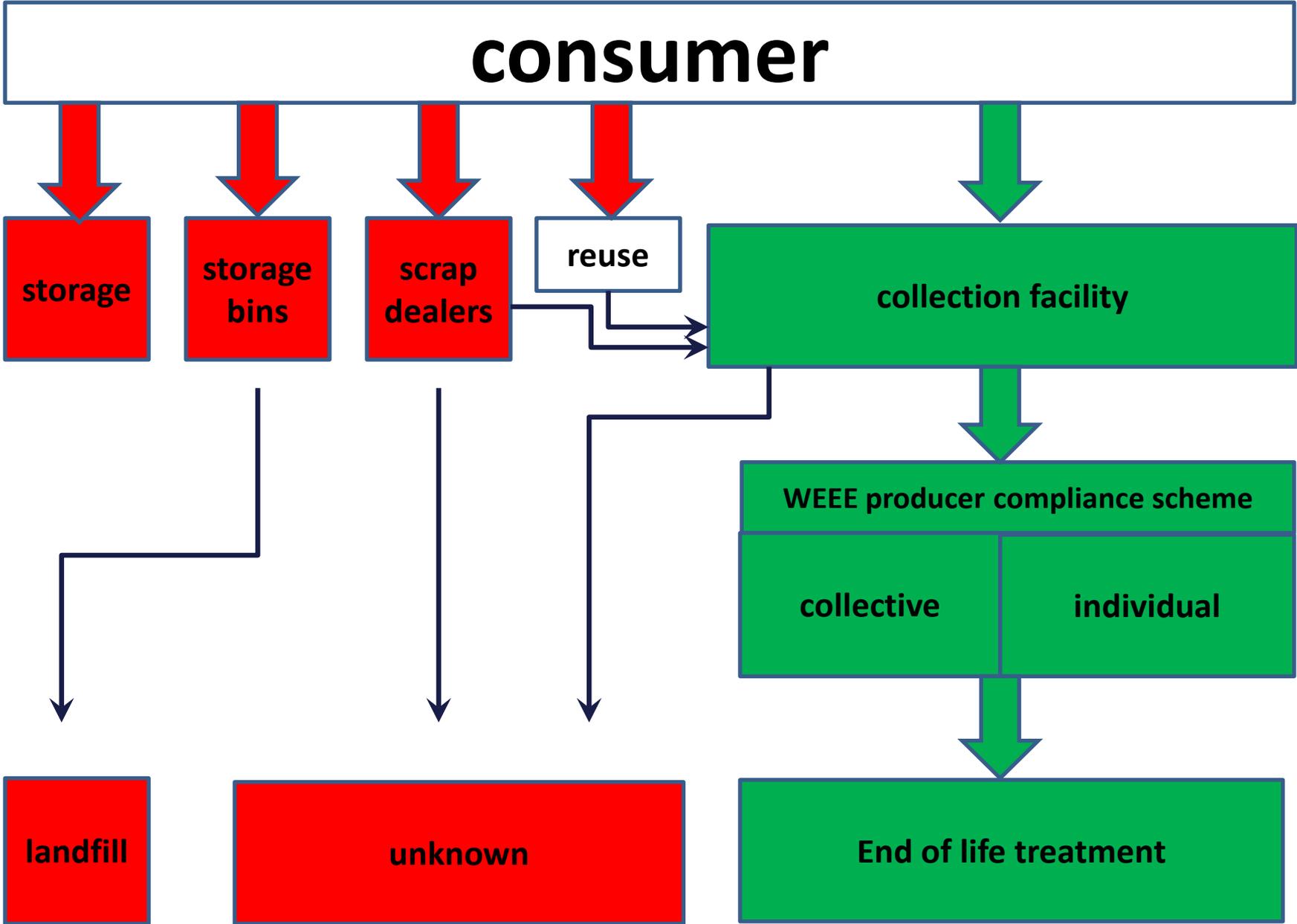
What consumers expect

- Consumers expectations of business is to act in a sustainable way, many remain willing to **penalise** companies.
 - While consumers feel they **can not afford** to devote finances to these issues, they expect that companies will.
 - And due to their **scale**, they will have more of an impact than individual efforts.
 - Consumers have a clear expectation that the Government and companies **will take the lead** on this issue by becoming more sustainable themselves.
 - Consumers expect the retailers and big business to **educate** them on sustainable living.
- 



Electricals - the challenge “we” have

- Electrical goods fastest growing waste stream, **5% each year.**
 - Each year we go through over **1.2 m tonnes of electrical waste.**
 - 75% of waste electronics end up in **landfill sites.**
 - 15 million mobile phones are upgraded in the UK each year.
 - Of the **“six million electrical items”** thrown away every year, estimated over half are still working or could easily be repaired.
- 



Engaging the consumer

- Winning “**hearts and minds**”
 - **Rewarding** good behaviour.
 - **Simple communication** by pictorials.
 - Diverse collection methods to **suit their needs.**
- 

Diverse collection methods needed



Reserve online. Collect in-store.



Reduce by design



Reuse- creating a market



Recycle - prioritise

- UN study found that a **desktop computer** uses **ten times** its weight in fossil fuels during its manufacture, whereas a **fridge** may only use **1-2 times** its weight in fossil fuels.
- Some electronic items are replaced more frequently than others; a **fridge** might be replaced after **10 years**, whereas a **computer** is typically replaced **every 2 years**, and **mobile phones every 18 months**.
- Recycling aluminium uses just **5% of the energy** it would take to mine it from bauxite; recycling steel saves **75% of the energy** it would take to make it from new.

Recycle- “closing the loop”



With substantial material and environmental savings, **Indesit** has become the first company to successfully incorporate recycled plastic from the UK waste stream within a high-end electrical equipment item on a large-scale.

Recycled content

Sony, Nokia and **Motorola** are incorporating recycled plastics in their phones;

one of their marketing messages is that these products are more environmentally friendly than earlier models
This is a worldwide market in which CO2 reduction and recycling are seen as important by many customers.



Summary

- Climate change is visible.
- Consumer expectation of big business is high.
- Electricals – fastest growing waste stream.
- Key ways to engage the consumer.
- Diverse collection methods needed.
- Re-use – creating a market.
- Success through collaboration.

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WeCare
about compliance

Q & A session

WeCare
about compliance

Coffee break

Where are the regulations going?

Claire Snow

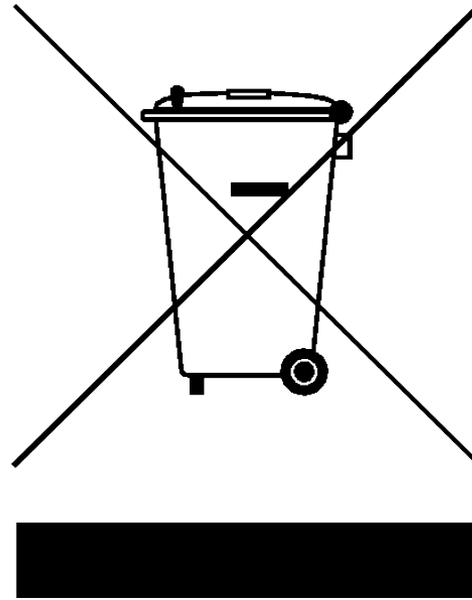
ICER



Peter Hunt

WasteCare Group

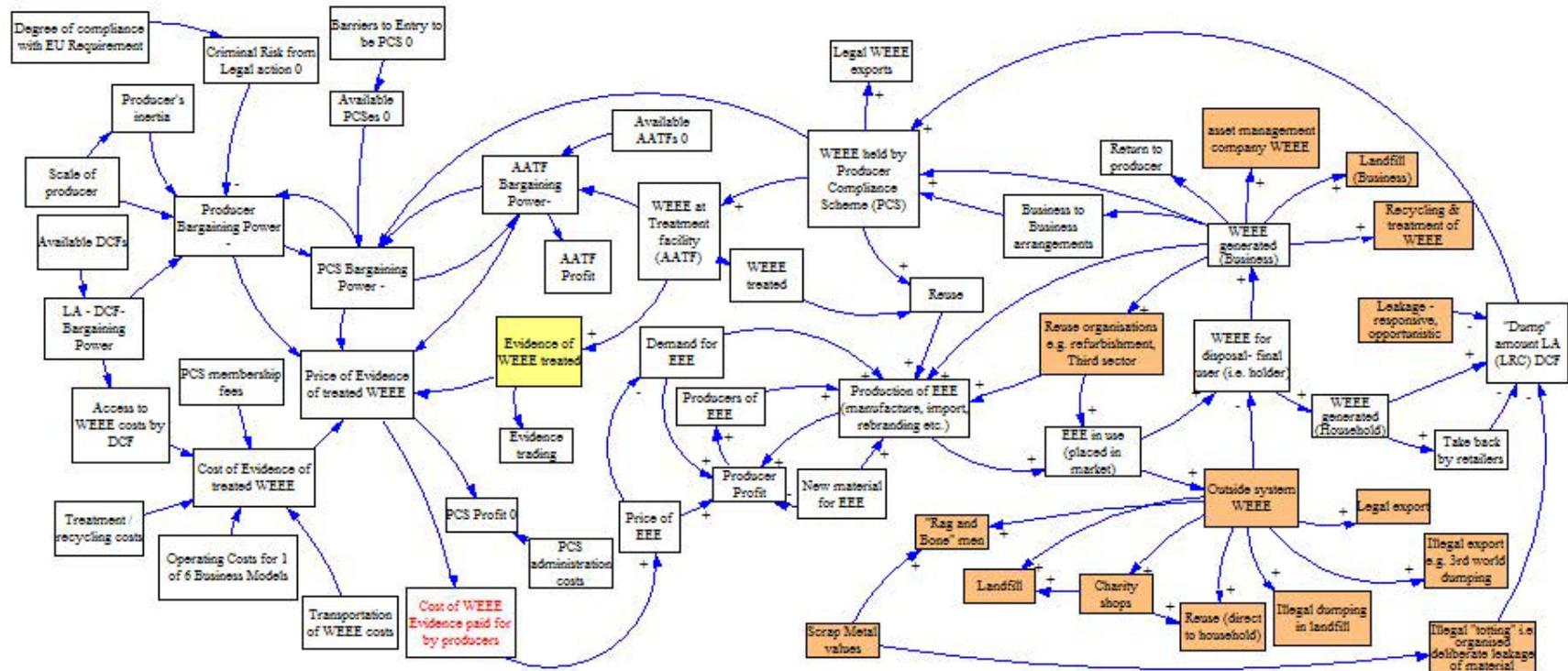




WEEE regulations 2006
(amended 2009)
(Possibly amended 2013)

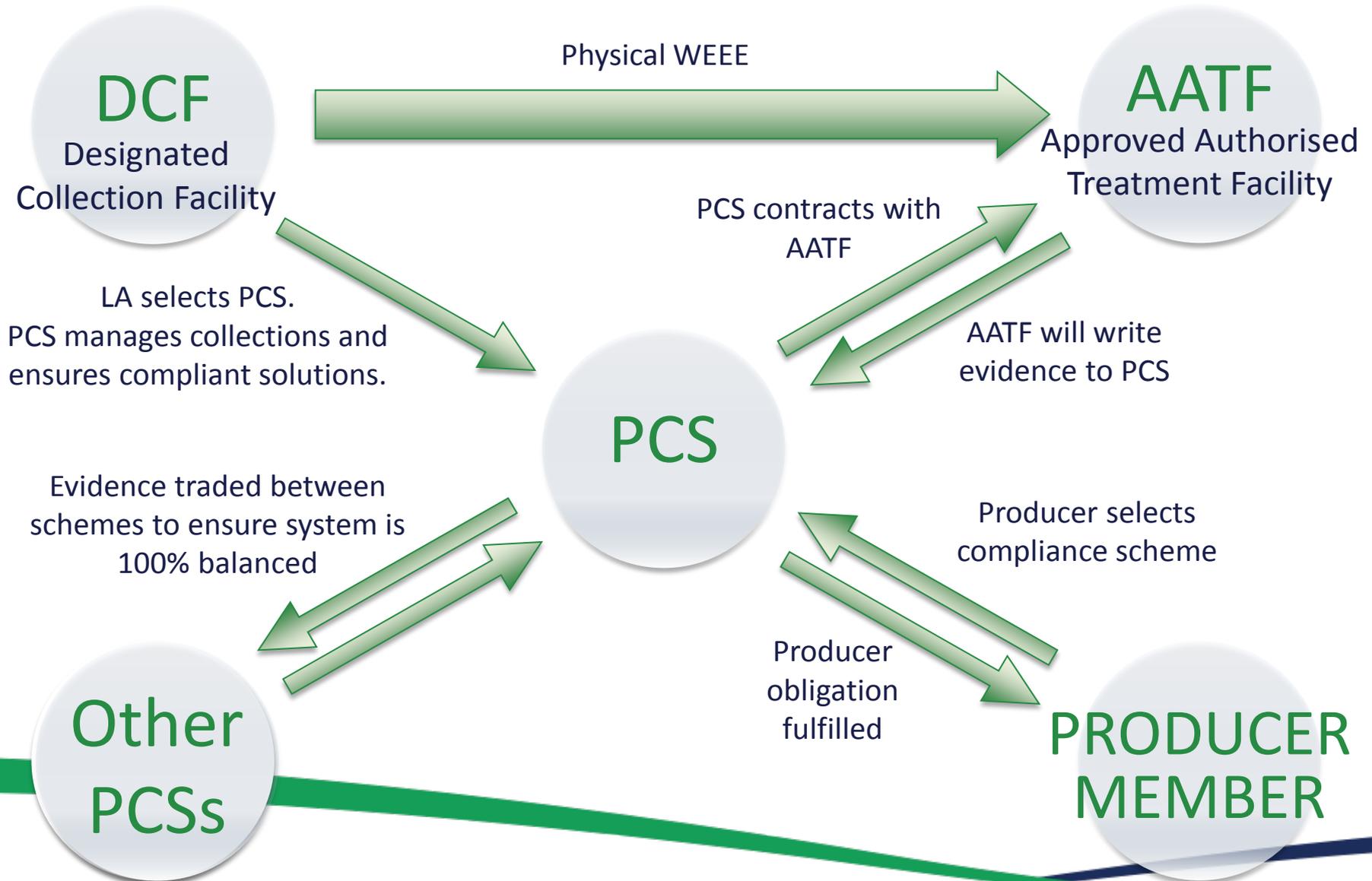
Diagram of existing system

Fig 3: Stylised diagram of existing system



Source; BIS, operational research unit

Current WEEE compliance system



Requirements of the current directive

- Producers
 - Declare EEE placed on market
 - Finance B2C (inc. collection) + B2B recycling
- Distributors (retailers)
 - Offer take-back (or join DTS)
- Local authorities
 - Provide collection infrastructure
- Treatment operators
 - Register
 - Satisfy minimum standards
 - Report throughput

Producer compliance costs

- **Current cost:** **£64 million**
- **True cost of compliance (estimated)**
 - Value of recovered WEEE today: (£70 million)
 - Cost of collection and recovery: £90 million
 - Cost of compliance: £10 million
 - **Net true cost to producers: £30 million**
- Annual EEE value onto UK market: £27 billion
- Cost implication of producer compliance: 0.01%

Additional requirements for the new directive

- Provide sustainable production and consumption by,
 - Preventing WEEE
 - Promoting reuse, recycling and recovery
 - Reducing the disposal of WEEE
 - Setting harmonized targets, starting at 45% by 2016
 - Minimising the administrative burden
 - Setting European minimum standards for reuse, recycling and recovery.
- 

Projected (costs)/benefits of proposed options

10 years (2014-2023) NPV £ millions

	Option 1	Option 2	Option 3	Option 4
Producers	-928	491	274	540
PCS	162	-136	-137	-158
DCF	8	-3	98	-3
WMC	242	-229	-110	-229
Distributors	17	-20	-8	-15
AATF	158	0	0	0
Society	158	0	0	0
Government	-5	0	2	0
Net Total	-188	103	119	135

Pros and cons

- Option 1 – Do nothing

Pros	Cons
B2C successfully funded by producers	High cost to producers
No material issues at LAs and DCFs	Lack of transparency for producers
Increased recycling rates encouraged	Lack of competition between schemes
Reuse promoted	Difficulty for producers to change schemes
Added value opportunities encouraged	“Lost” evidence

Option 1

A practical option

WEEE1+



Proposed amendments to WEEE1

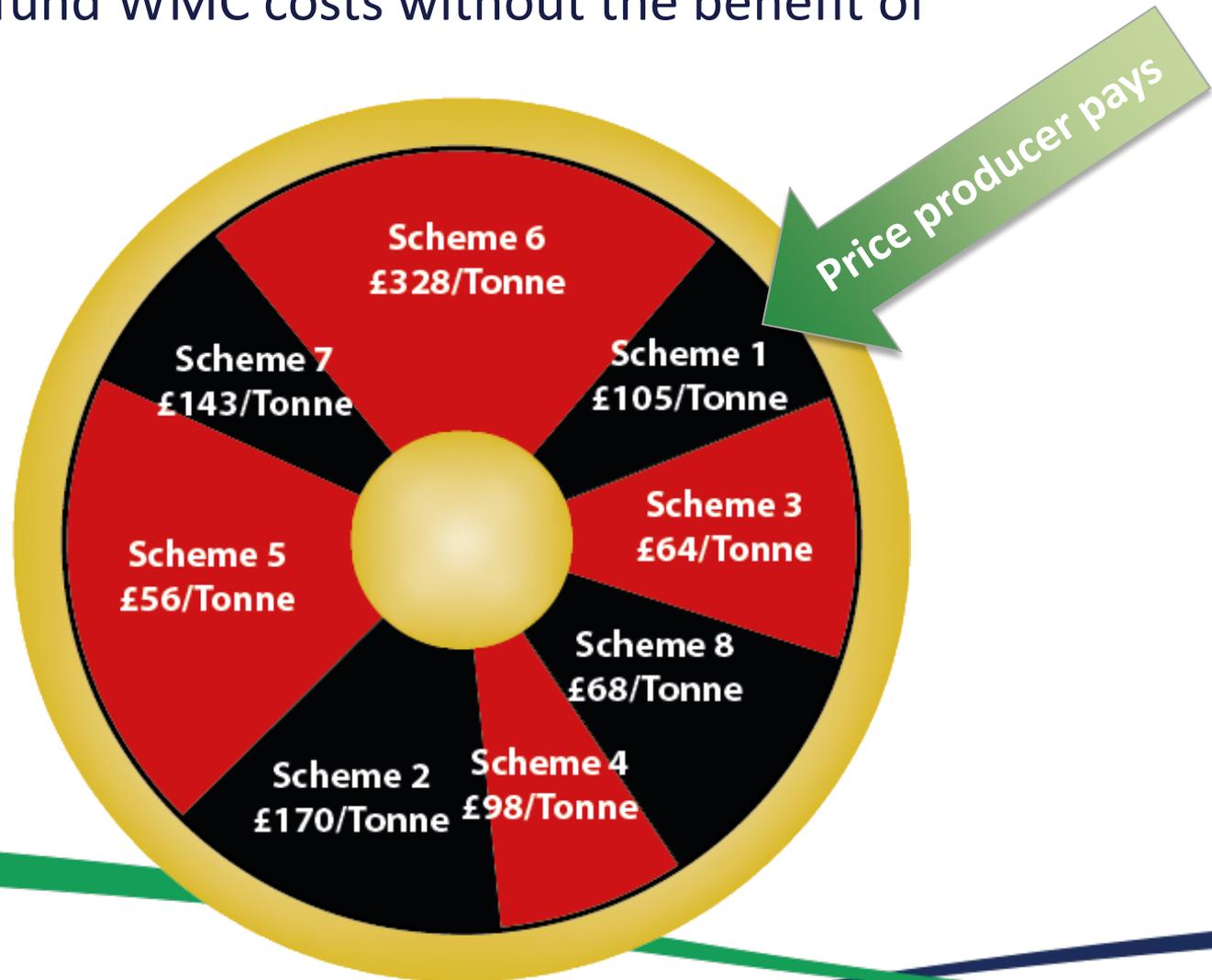
1. Introduce de minimis level for providing evidence (suggested 1 tonne pa)
 2. Remove distinction of B2B and B2C WEEE
 3. Set targets based on WEEE placed on market
 4. Increase PCS registration fee in line with Battery PCS to £92,000
 5. Reduce registration fees to producers by 50%
 6. Allow compliance costs to be made public, as suggested
- 

Estimated annual saving

Item	Fee
Registration fees	£500,000
Evidence costs	£25 – 30 million

100% Guaranteed Demand

- Producers fund WMC costs without the benefit of market forces

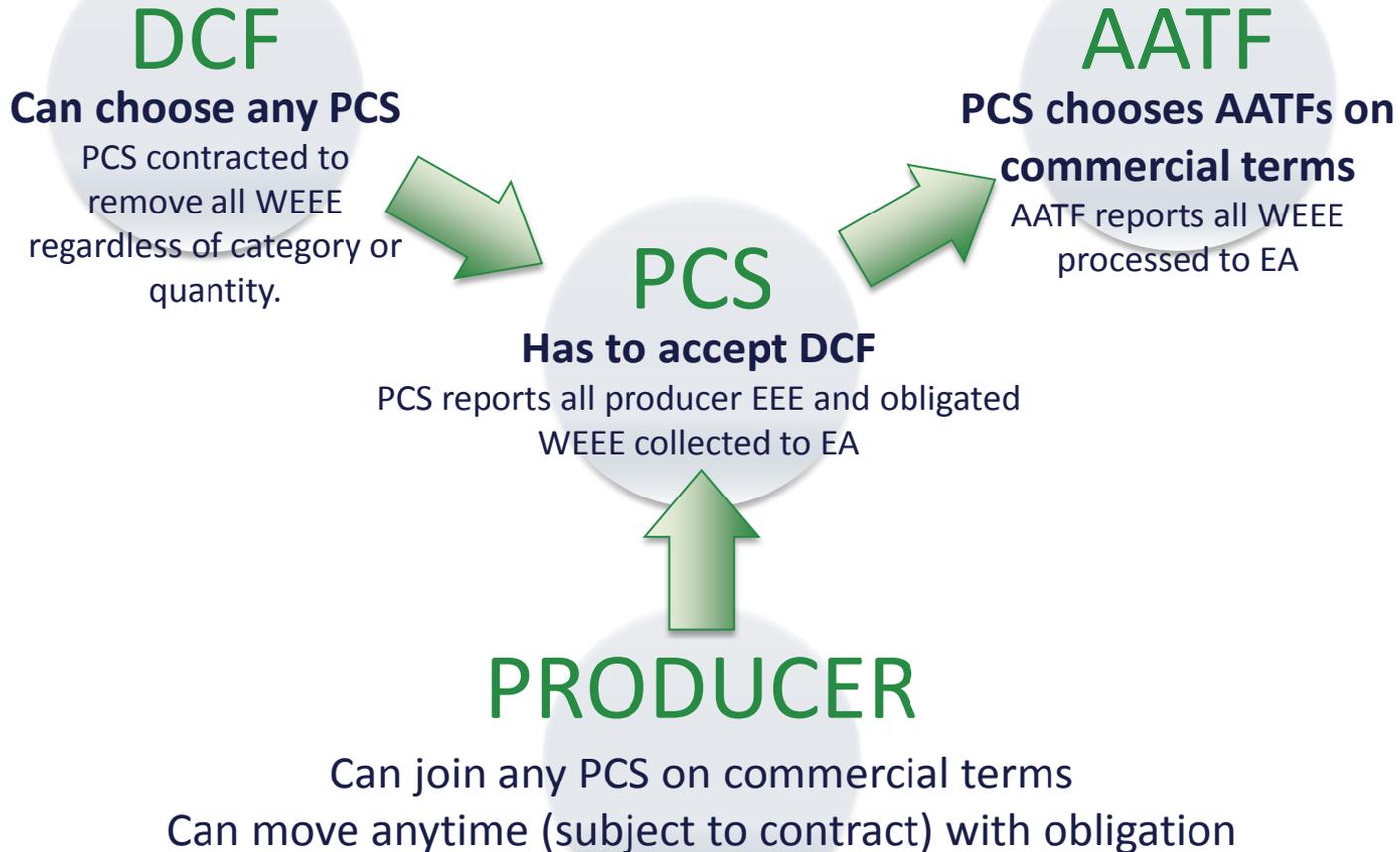


45% EEE target instead



Transferred by agreement.

Option 1 (amended)



Projected (costs)/benefits of proposed options

10 years (2014-2023) NPV £ millions

	Option 1	Option 2	Option 3	Option 4	WEEE1 +
Producers	-928	491	274	540	410
PCS	162	-136	-137	-158	-180
DCF	8	-3	98	-3	90
WMC	242	-229	-110	-229	0
Distributors	17	-20	-8	-15	-15
AATF	158	0	0	0	0
Society	158	0	0	0	80
Government	-5	0	2	0	5
Net Total	-188	103	119	135	190

Other issues for discussion;

1. The inclusion of open scope e.g. photovoltaic cells and other products, previously excluded.
 2. The impact of illegal exports and proposed curbs.
 3. Powers of entry
 4. Retailer Take-back and changes to retailer responsibility.
 5. Opportunity for LA scrap sales and the possible implications.
 6. Orphan waste and the implications.
 7. Grey imports and the implications.
 8. Impact of substantiated estimates.
 9. Recovery targets by category.
 10. Individual producer responsibility and CPR
 11. De minimis for producer registration.
 12. Any other issues you would like to raise.
- 

Pros and cons

- Option 2 – National compliance scheme

Pros	Cons
No procurement process	No choice of AATF
Improved accountability	No competition
No evidence trading	No fall back option
	No added value services
	Less accountability
	Monopolistic
	No fall back option
	No leverage

Pros and cons

- Option 3 – A collection target and compliance fee

Pros	Cons
Local contractors	High cost locations may suffer
No evidence trading	Potential for PCSs to over collect then reduce service
Service level agreements	
Longer term contracts	
Added value support maintained	
Flexible	

Pros and cons

- Option 4 – A matching process of collection sites to PCSs

Pros	Cons
No procurement process	Too many contractors
Could retain existing contractors	No continuity
Geography not an issue	Lack of local knowledge and H&S issues
	High carbon footprint
	Reduction in reuse
	No audit trail
	High capital expenditure
	More admin and lack of accountability
	No service consistency

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Panel Discussion



Poll results



Thank you for your time
Remember, time is running out!