

Carbon Reduction Commitment (Energy Efficiency Scheme)

Members Sustainable Development Advisory Group
30 October 2009

Carbon Reduction Commitment

- Mandatory carbon trading scheme covering approx 5000 public and private sector organisations
- For every tonne of CO₂ emitted by RMBC we have to purchase 1 allowance
- Allowances are purchased in April to cover the CO₂ emitted for energy used in Council buildings/sites and street lighting:
 - Includes schools
 - Does not include transport
 - No credits for green electricity
- Energy consumption monitored / projected and reported annually in July (includes electricity, gas and other fuel types)
- Allowances surrendered in July to cover annual emissions.

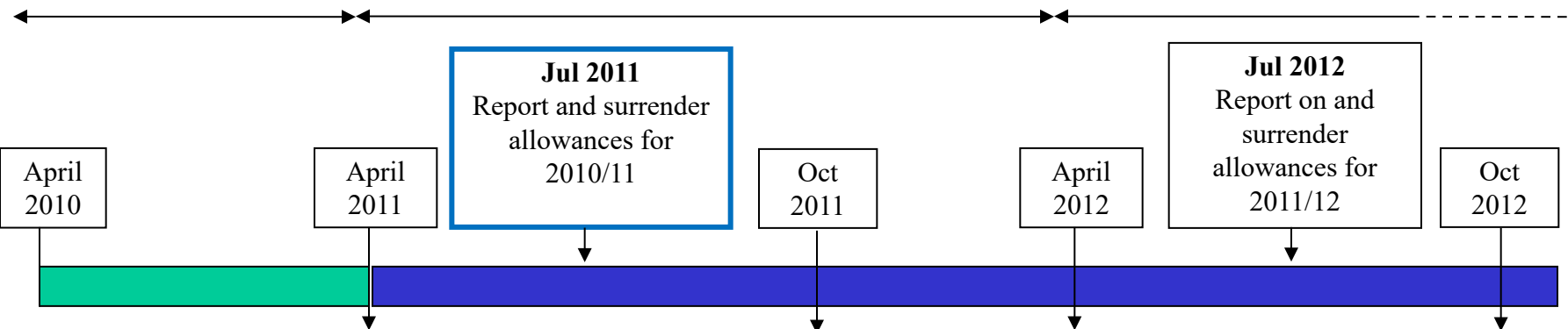
Carbon Reduction Commitment

- £12 per allowance for the first 3 years (Introductory phase)
- Receive reimbursement payment based on league table position
- Unknown price for the following phases - purchased through a sealed bid auction
- Amount of allowances available to the market will be capped from April 2013
- Where to buy allowances?
 - Sealed bid
 - Secondary market
 - Safety Valve
- Banking allowed for introductory phase but not allowed to carry allowances over to next phase
- Unlimited banking for future years

Year 1: 2010/11

Year 2: 2011/12

Year 3: 2012/13



April 2010

April 2011

Jul 2011
Report and surrender allowances for 2010/11

Oct 2011

April 2012

Jul 2012
Report on and surrender allowances for 2011/12

Oct 2012

1st Sale takes place

- > RMBC pays £12/tCO₂ forecast 2011/12 allowances. Approx 43,000 tonnes per year - £516,000
- > 2011/12 allowances released by Government
- > Government holds 1 years of scheme revenue

1st Recycling payments made

- > Revenue from April 2011 sale
- > Government holds £0 of scheme revenue

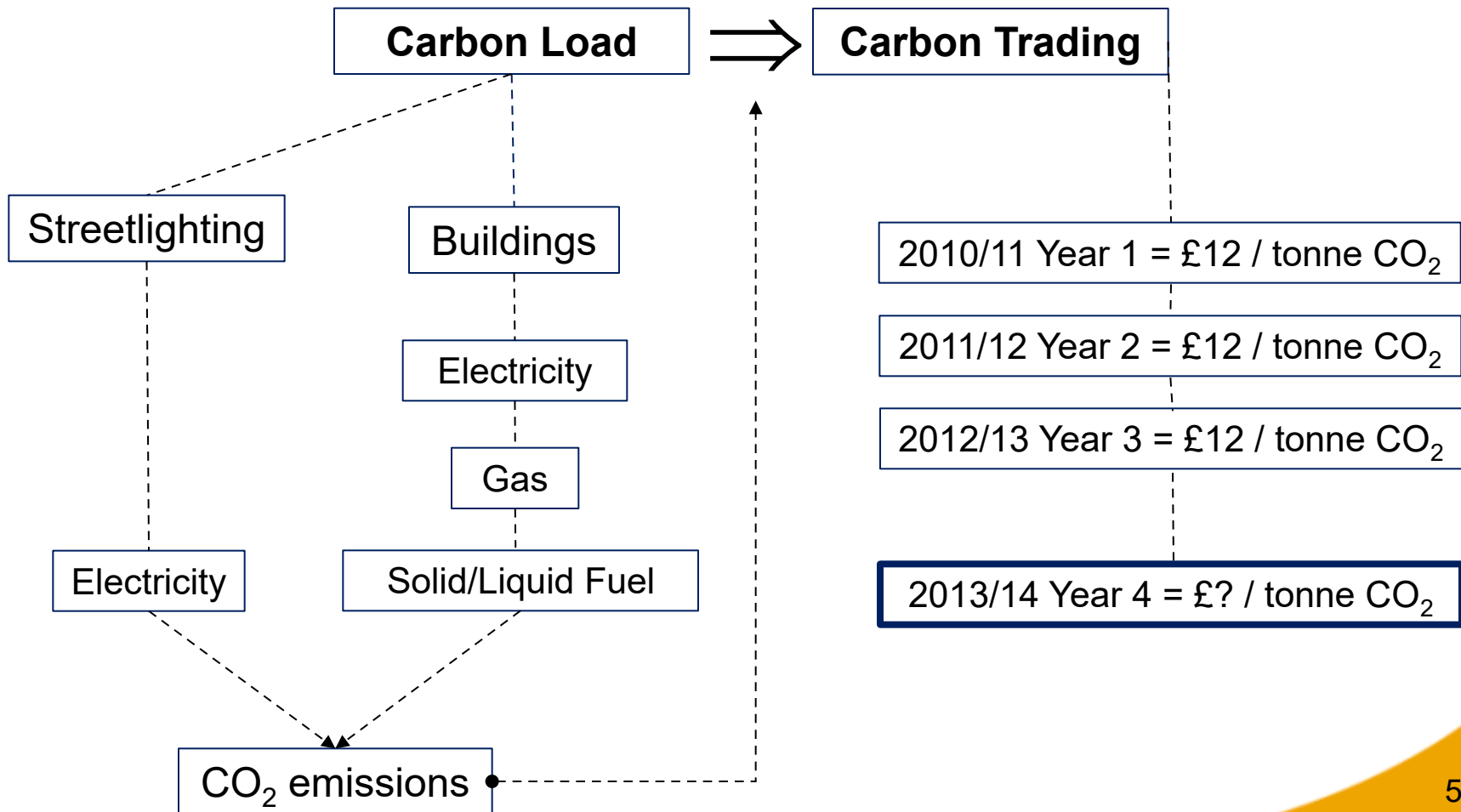
2nd Sale takes place

- > RMBC pay £12/tCO₂ for forecast 2012/13 allowances
- > 2012/13 allowances released
- > Government holds 1 year of scheme revenue

2nd Recycling payments made

- > Revenue from April 2012 sale recycled back from Government to participants
- > Government holds £0 of scheme revenue

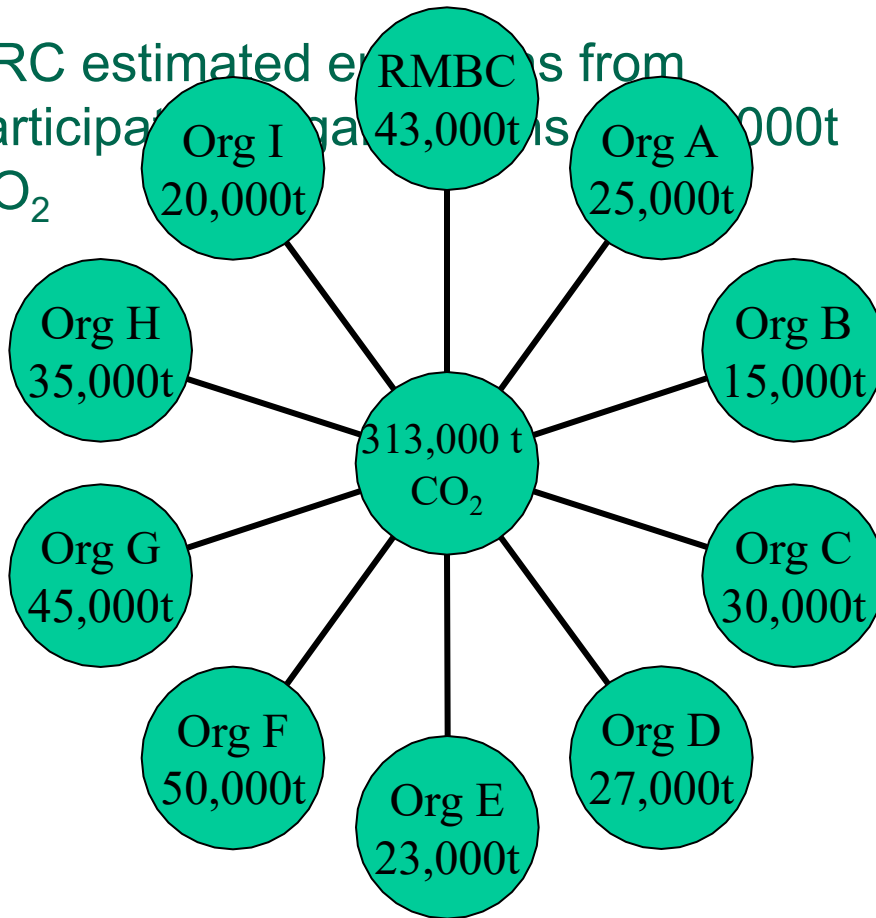
Carbon Trading Equation



Organisation:	Rotherham MBC	Fuel type	Amount used	Units	Conversion factor*	Total kg CO ₂	Comments
Name of respondent:	David Rhodes	Electricity (grid)	59900454.00 0	Kwh	0.537	32167741.81	
		Electricity - CHP		Kwh	0.304	0	
		Electricity (onsite renewables)	1488.000	Kwh	0.000	0	<i>PV Cells at Brinsworth comp</i>
Period	Apr 2013 - Mar 2014	Natural gas	57469836.00 0	Kwh	0.185	10630195.56	
Length of data collection	12 Months	Gas oil	449986.000	Kwh	0.252	113396.472	
Estimated carbon savings	2%	Coal	270351.000	Kwh	0.329	88945.479	<i>DEFRA CO₂ rate</i>
		Total kg CO₂				43000279.32	
Comments:		Total tonne CO₂				43000.28	
Based on CRC Portfolio 090609		Proportion per month (t/CO₂)				3583.36	

Carbon Trading

CRC estimated emissions from participating organisations are 313,000t CO₂



Carbon Trading

Sealed Bid Auction

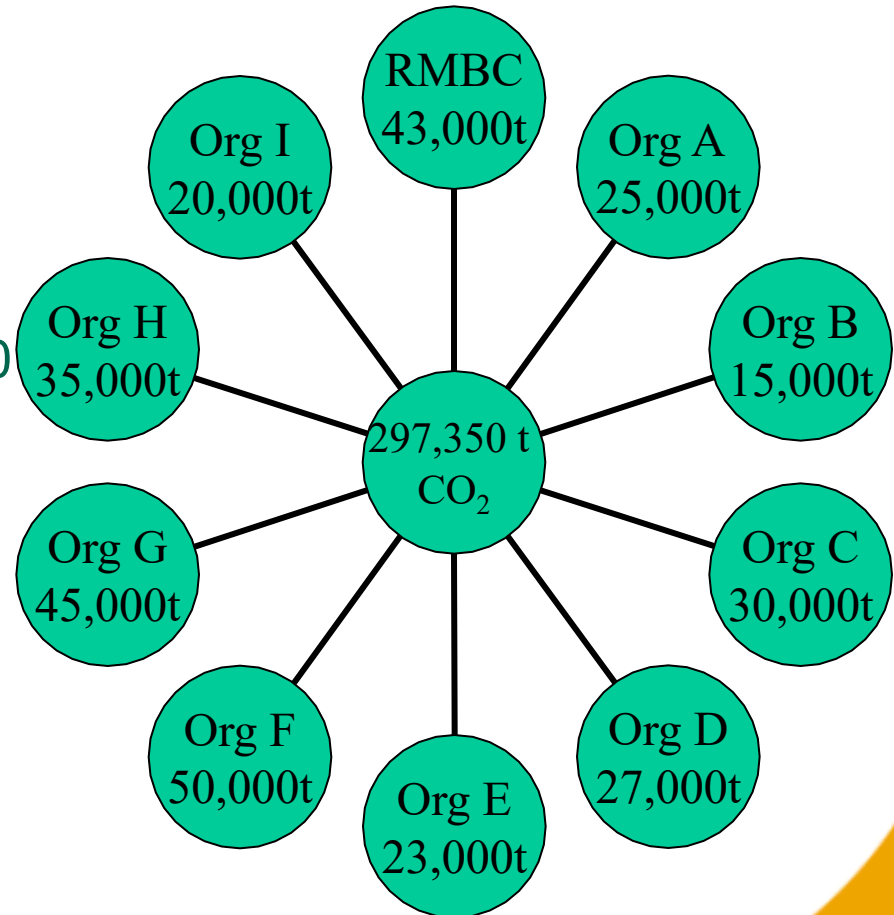
RMBC projected emissions = 43,000 tonnes of
CO₂ submits a sealed bid:

STEP 1 - BIDDER INFORMATION	Bidder Organisation Name	RMBC
	Bidder Representative	Paul Lution
	Representative Phone	01709 821122
	Representative Email	p.lution@rotherham.gov.uk
STEP 2 - ENTER BID INFORMATION (Bidders must enter five bids)	Allowance Price	Quantity Bid
	£10	43,000 (= £430,000)
	£12	43,000 (= £516,000)
	£14	41,000 (= £574,000)
	£16	40,000 (= £640,000)
	£18	37,000 (= £666,000)
STEP 3 – SIGNATURE	I am authorised to sign and make this submission on behalf of the Bidder Organisation named above. Authorized Signature: P. Lution Date: 30 October 2009	

Carbon Trading

Capped from April 2013

1. CRC estimated emissions from participating organisations = 313,000 t CO₂
2. Government apply a 5% cap = 15,650 t CO₂
3. Allowances available for auction = 297,350 (313,000 – 15,650)



Carbon Trading

Sealed Bid Auction

Available allowances = 297,350. Received bids from participating organisations:

Available allowances = 297,350											
Allowance Price	Quantity Bid (000,s)										
	RMBC	A	B	C	D	E	F	G	H	I	Total
£10	43	25	15	30	27	23	50	45	35	20	313,000
£12	43	23	15	30	27	23	48	45	34	20	308,000
£14	41	23	14	29	25	23	48	45	32	18	298,000
£16	40	20	14	27	24	23	45	43	30	18	284,000
£18	37	18	12	27	22	22	45	42	30	17	272,000

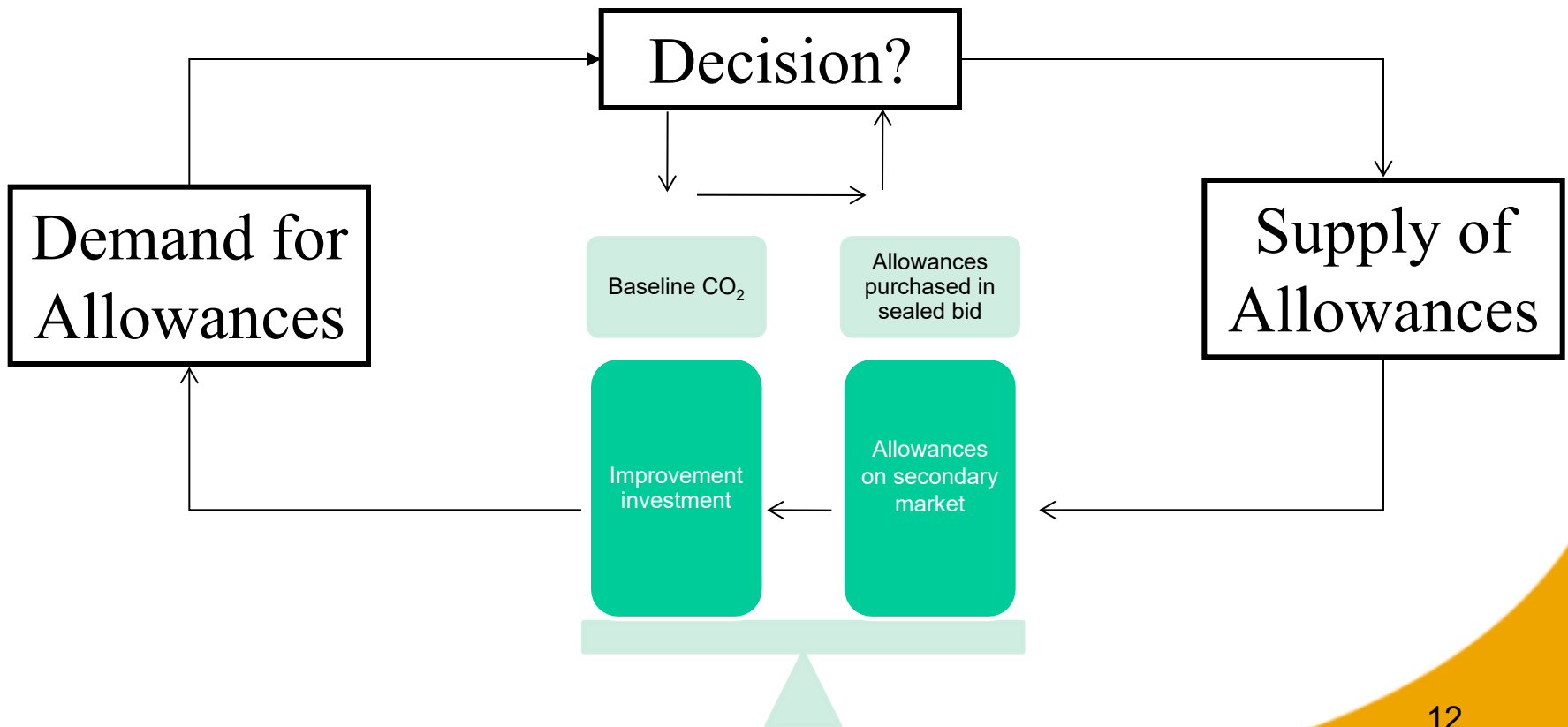
Carbon Trading

Sealed Bid Auction Result

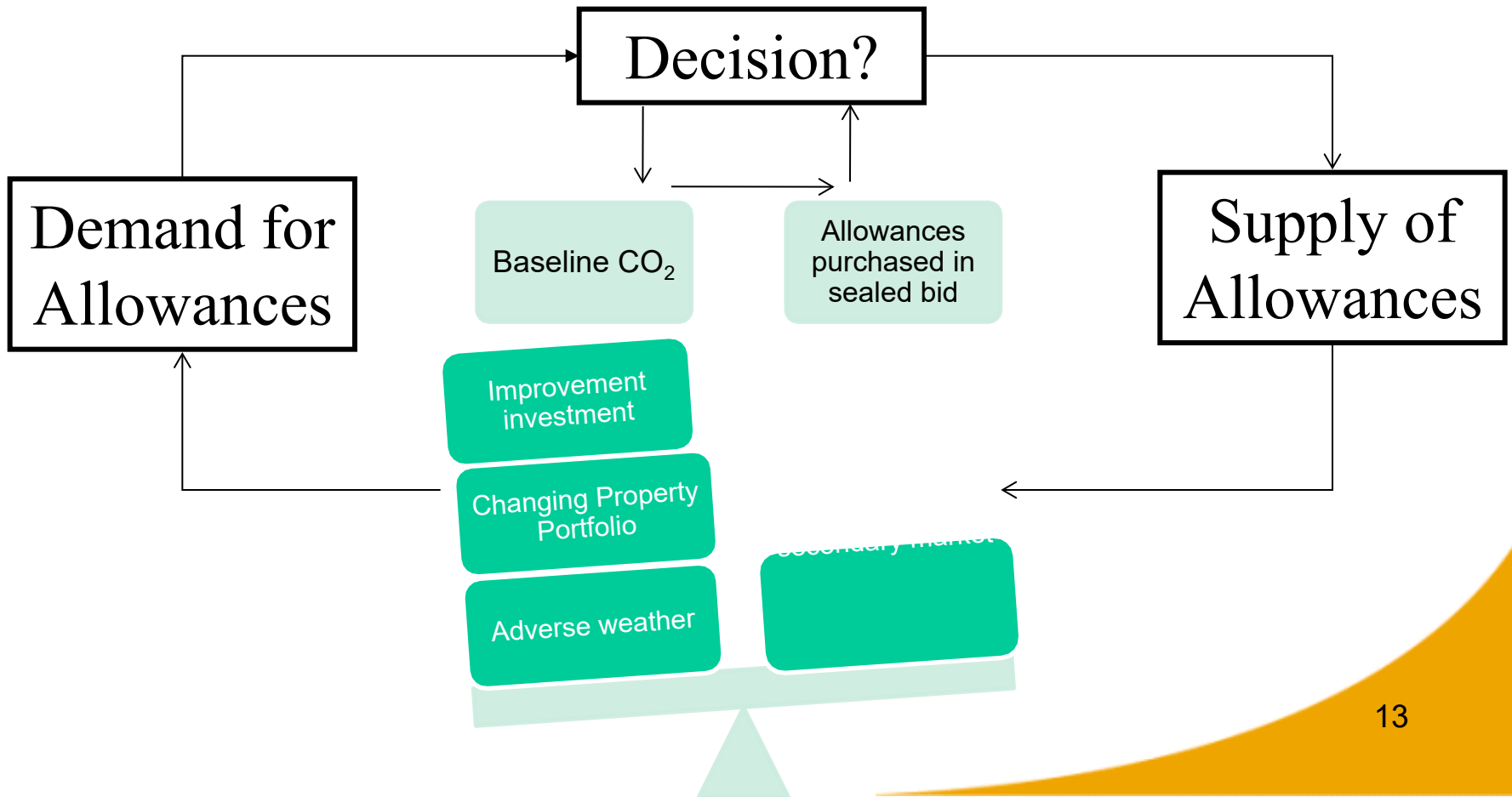
RMBC projected emissions = 43,000 and submitted a sealed bid resulting in allowances being allocated at £16 per tonne = 40,000 allowances.

A deficit of 3,000 tonnes of CO₂ emitted without allowance cover.

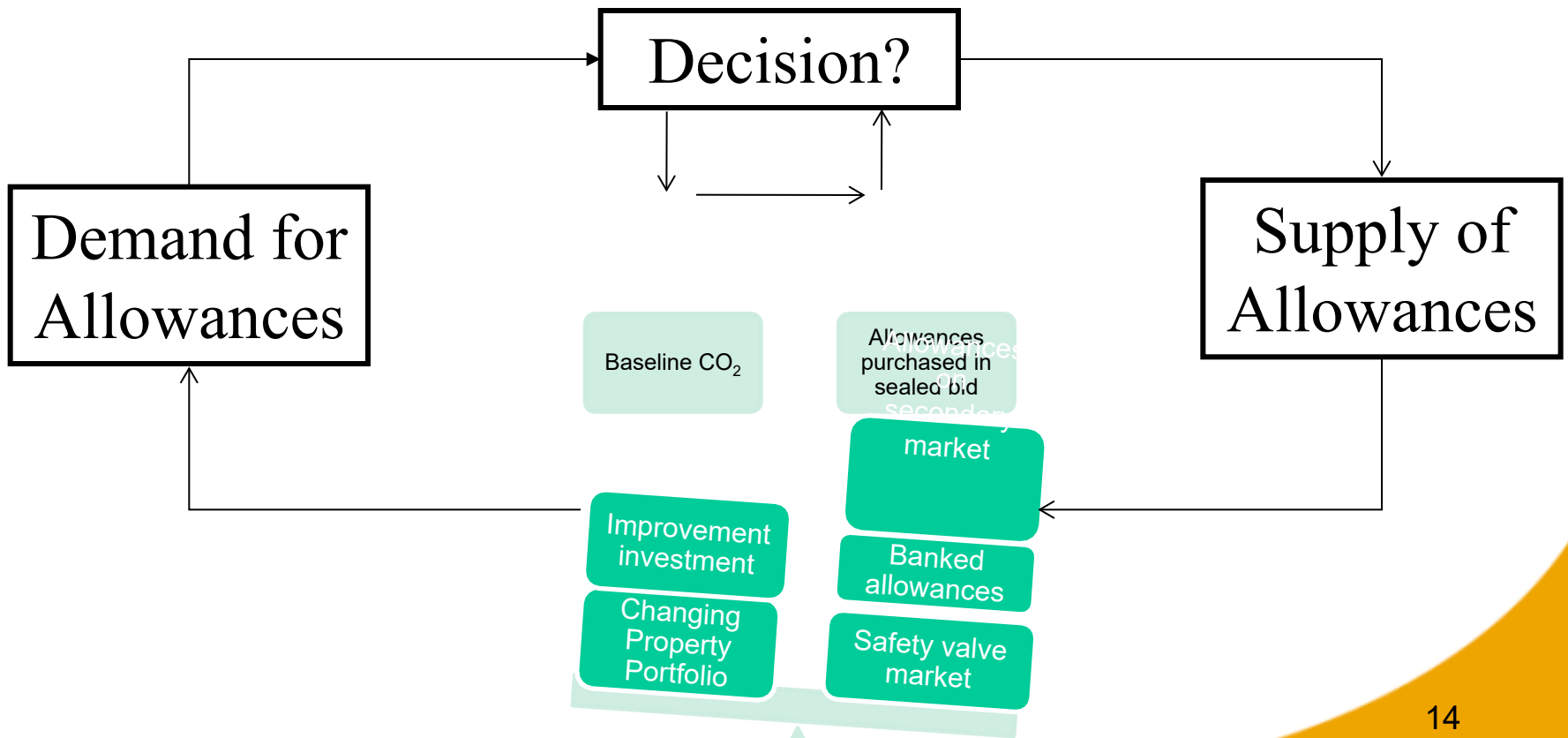
Carbon Trading Supply and Demand



Carbon Trading Supply and Demand



Carbon Trading Supply and Demand



Carbon Trading Gamesmanship

1. Reduce emissions > Investment
2. Reduced allowances > lower cost
3. Reduced risk > less potential cost
4. Form a secondary market coalition e.g. YPO
5. Create a grey market

Performance League Table

Repayments are made in October and the amount depends on:

- RMBC's position in the league table
- A bonus or penalty applied

Introductory Phase			
<u>Year 1</u> April 2010 To March 2011	Parameters	Explanation	weight
	Early Action 1	Installation of voluntary automatic metering by 31 March 2011	50%
	Early Action 2	Accreditation to the Carbon Trust Energy Efficiency Standard	50%

<u>Year 2</u> April 2011 To March 2012	Early Action 1	Installation of voluntary automatic metering by 31 March 2011	20%
	Early Action 2	Accreditation to the Carbon Trust Energy Efficiency Standard	20%
	Absolute savings	% reduction in CO ₂ emissions using a 5 year rolling average (years available average for the first 5 years)	40%
	Growth	Growth in size or revenue whilst demonstrating carbon reductions in real terms on a 5 year average	20%

Performance League Table

Repayments are made in October and the amount depends on:

- RMBC's position in the league table
- A bonus or penalty applied

Year 3 April 2012 To March 2013	Early Action 1	Installation of voluntary automatic metering by 31 March 2011	10%
	Early Action 2	Accreditation to the Carbon Trust Energy Efficiency Standard	10%
	Absolute savings	% reduction in CO ₂ emissions using a 5 year rolling average (years available average for the first 5 years)	60%
	Growth	Growth in size or revenue whilst demonstrating carbon reductions in real terms on a 5 year average	20%

Future Phases			
	Parameters	Explanation	weight
All compliance years 2013 onwards	Absolute savings	% reduction in CO ₂ emissions using a 5 year rolling average	75%
	Growth	Growth in size / revenue whilst demonstrating carbon reductions in real terms on a 5 year average	25%

Reimbursement Payment

Calculated from two elements:

1. A set payment based on the proportion of the total CRC emissions in the first year of the scheme (2010/11).

e.g. RMBC has emissions of 100 tonnes of CO₂ in 2010/11 and the total emissions from all participants in 2010/11 is 10,000 tonnes of CO₂ then RMBC's share is 1%. The basis for each future recycling payment to RMBC will therefore be 1% of the total revenue raised each year.

2. This is then adjusted by a bonus or penalty payment based on our position in the performance league table. Essentially, the higher your position in the table, the better your bonus payment.

Reimbursement Payment

Note.

when RMBC improves more than average, we spend less each year on energy and allowances – but receive a higher fraction of the recycling pot.

This therefore means there is a double financial benefit for good performance.

Reimbursement Payment

The top placed organisation will have the highest bonus rate and the bottom organisation the maximum penalty rate.

Phase	Year	Bonus/Penalty Rate
Introductory phase	2010 - 2011	+/-10%
Introductory phase	2011 - 2012	+/-20%
First capped phase	2012 - 2013	+/-30%
First capped phase	2013 - 2014	+/-40%
First capped phase	2014 - 2015	+/-50%

Risks

- Significant admin/cost/resource burden
- Large 'up-front' payment that could be reduced in reimbursement
- Reputational risk
- Change and late delivery of regulations / guidance / admin support (EA) – as with DEC's
- Changes to regulations
- Penalties significant
- General election by June 2010
- Projections of emissions

What now?

- Confirm portfolio and improve monitoring
- CRC admin and support
- Develop a trading strategy and prepare bids
- Develop schools strategy (DCSF Schools Financial regulations consultation)
- Installation of AMR
- **Carbon Trust Standard**
- Review carbon reduction plans (*photovoltaic Panels*)

Questions?

