

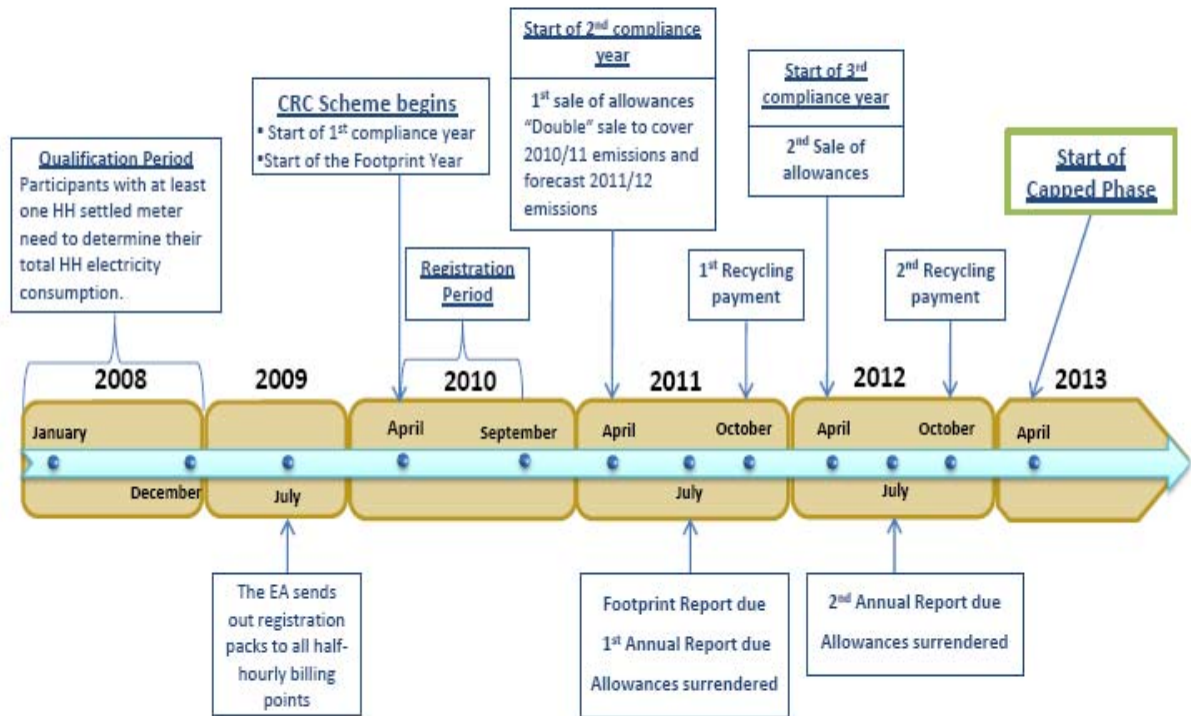
HERMES Emission Trading Scheme Findings of first year of trading

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CRC Timeline – Introductory Phase



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Hermes ETS 2008 Initial Questions

- CRC IMPACTS ON OUR REAL ESTATE ACTIVITIES
- What is the order of magnitude of the costs associated with CRC for real estate funds?
- Is it most cost effective for an organisation to buy all of its allowances up front, therefore incurring the initial cost and keeping control over the cost/benefits?
- Would an organisation seek to pass on the cost/benefits to the occupiers to provide incentive for behaviour change?

Hermes ETS

- The Hermes Emissions Trading Scheme (HETS) is a virtual model of the Carbon Reduction Commitment
 - 103 properties
- Baseline year set as 2007
- Cap set as baseline - 5% emissions
- League table position based purely on relative changes in emissions
 - not growth metric, AMR or Carbon Trust Standard
- Calculations modelled on guidelines produced by DECC March 09
- Assumes Hermes ETS Participants constitute entirety of trading scheme



Developed with Upstream Sustainability Services
Jones Lang LaSalle

Real value in a changing world

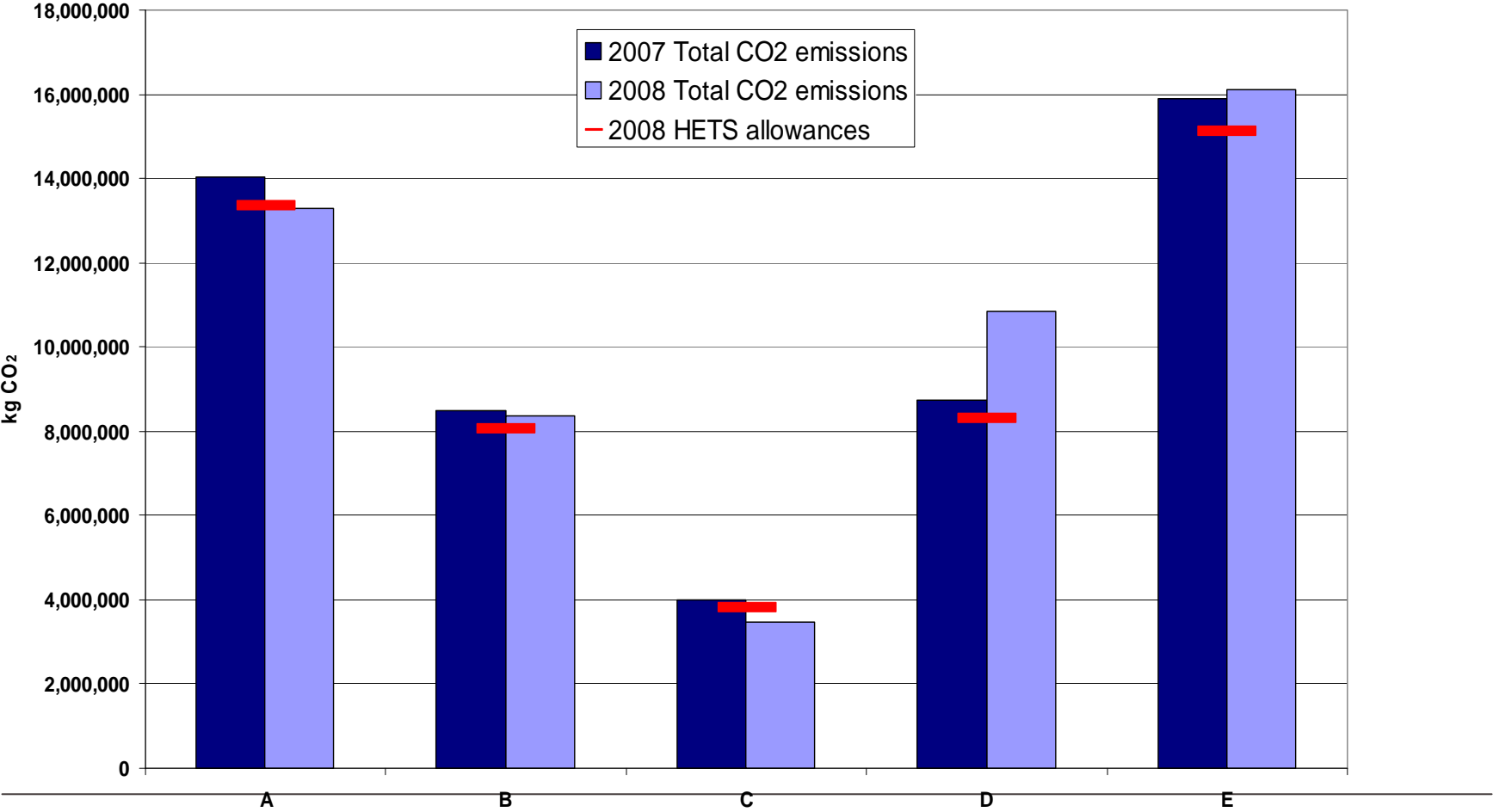
Findings of Hermes ETS 2008

KEY ELEMENTS AFFECTING FINANCIAL IMPACT

- Cash Flow
 - Cash flow impact of buying allowances
 - Cash flow impact of first double sale in 2011
- Projections
 - Accurate emissions projection avoids cost of buying in secondary market without redistribution
- League Table
 - Significant financial impacts come from position on league table
- Occupier incentive, or lack of?
 - Phase 1: administrative burden probably too high to pass cost on to occupier – no incentive for occupiers to reduce emissions
 - Phase 2: Increased cost will call for allocation of cost/ benefits to occupiers – at present not clear how this could be implemented

Hermes ETS 2008 Results

Hermes CO₂ emissions and HETS targets
Total By Fund



Hermes ETS 2008 Results

Results of Hermes ETS 2008

Estimated CRC costs in phases 1 and 2 of the scheme, for selected participants in the Hermes ETS

Note: Price of carbon - Phase 1: £12/tCO₂; Phase 2: £50/tCO₂

Year	Participant	League Table position	£ Allowances Bought	£ Recycling cost (+ or -)	£ Trading cost (+ or -)	£ Overall cost or benefit
2011	A	2nd	£160k	£10k	£0.5k	£11k
	C	1st	£45k	£5k	£4k	£9k
	D	5th	£100k	-£9k	-£30k	-£39k
2015	A	2nd	£667k	£215k	£2k	£217k
	C	1st	£189k	£112k	£16k	£128k
	D	5th	£415k	-£195k	-£126k	-£321k

Cash Flow impact of buying allowances

- Cash flow impact in 6 months between auction of allowances and re-distribution
- Greater impact of first auction in April 2011 due to double year auction
- Actual emissions for the financial year 2010/2011; and
- Projected emissions for year 2011/2012

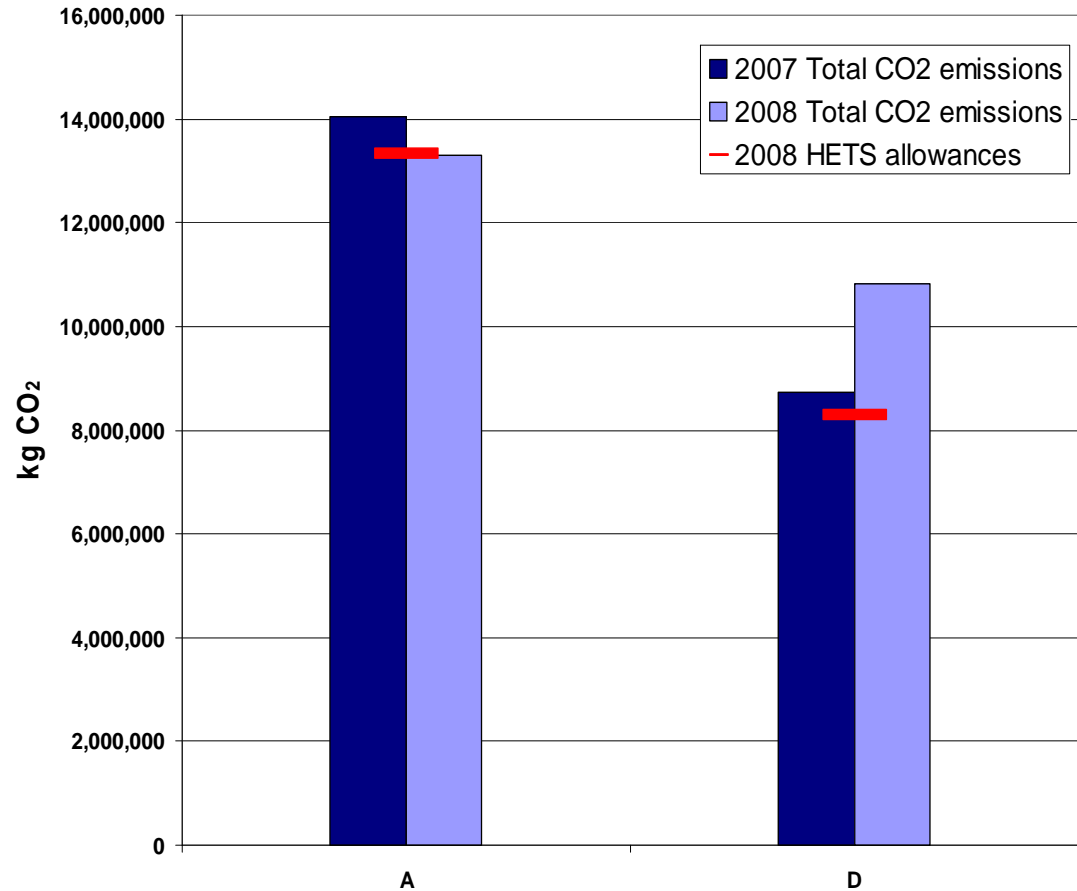
- Up front cost of buying allowances in Hermes ETS 2008

– A: £160k	* 2	= £320k
– B: £100k	* 2	= £200k
– C: £45k	* 2	= £90k
– D: £100	* 2	= £200k
– E: £150	* 2	= £300k

Importance of accurate emissions projection

- Participant A has accurately predicted emissions
- Participant D has emitted considerably more than it predicted.

Hermes CO₂ emissions and HETS targets
Total By Fund



Importance of accurate projection

Participant D faces high trading costs

Especially in phase 2 if the price of carbon increases, e.g. £50/tCO₂

Scenarios	Difference between allowances and actual emissions (tCO ₂)	Allowance Price £/tCO ₂	Trading Cost	Recycling Cost
Yr1 D	-2,527,743	12	-£30,333	£0
Yr1 D	- 2,527,743	18	-£45,499	£0
Yr5 D	- 2,527,743	50	-£126,387	£0
Yr5 A	44,385.81	50	£2,219	£0

Participant A is better off having accurately predicted emissions, however:

- Cash flow implications for over buying more allowances
- Risk of not being able to sell any excess allowances in secondary market

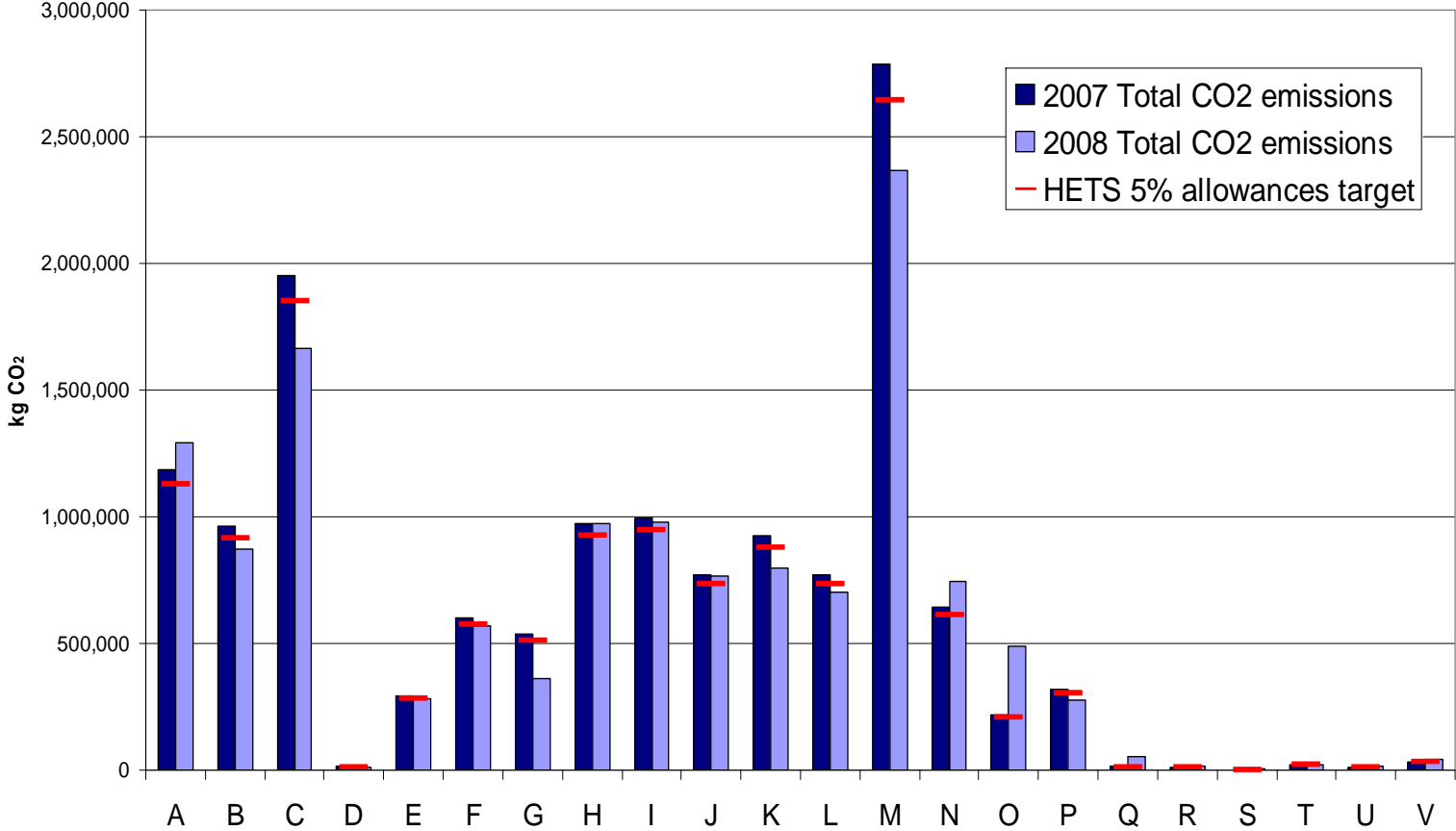
Impact of league table

- With good prediction league table is responsible for majority of financial benefits
- In Year 5: With a recycling payment of up to $\pm 50\%$ the importance of league table increases significantly
- Estimates assume price of carbon will increase with cap introduced

Scenario	Position on league table	Allowance Price £/tCO ₂	Trading Cost	Recycling Cost	Overall Cost
Yr1 A	2 of 5	12	£533	£9,889	£10,422
Yr5 A	2 of 5	50	£2,219	£215,689	£217,909
Yr1 D	5 of 5	12	-£30,333	-£8,959	-£39,292
Yr5 D	5 of 5	50	-£126,387	-£195,397	-£321,784

Impact of passing on cost/ benefits at asset level

Organisation A CO₂ emissions and HETS targets



Impact of passing on cost/ benefits at asset level

- Assuming that one allocates the cost/benefit at asset level following the same rules as the CRC at organisational level
- Only after 5 years, assuming a cost of allowances at £50 / tonne of CO2 individual assets can begin to make significant savings or incur significant costs.

Scenario	Position on league table	Allowance Price £/tCO ₂	Trading Cost	Recycling Cost	Overall Cost
Yr1 M	2 of 22	12	£3,344	£1,679	£5,023
Yr5 M	2 of 22	50	£13,935	£30,736	£44,671
Yr1 O	20 of 22	12	-£3,338	-£282	-£3,620
Yr5 O	20 of 22	50	-£13,909	-£5,162	-£19,071

Impact of passing on cost/ benefits to occupiers

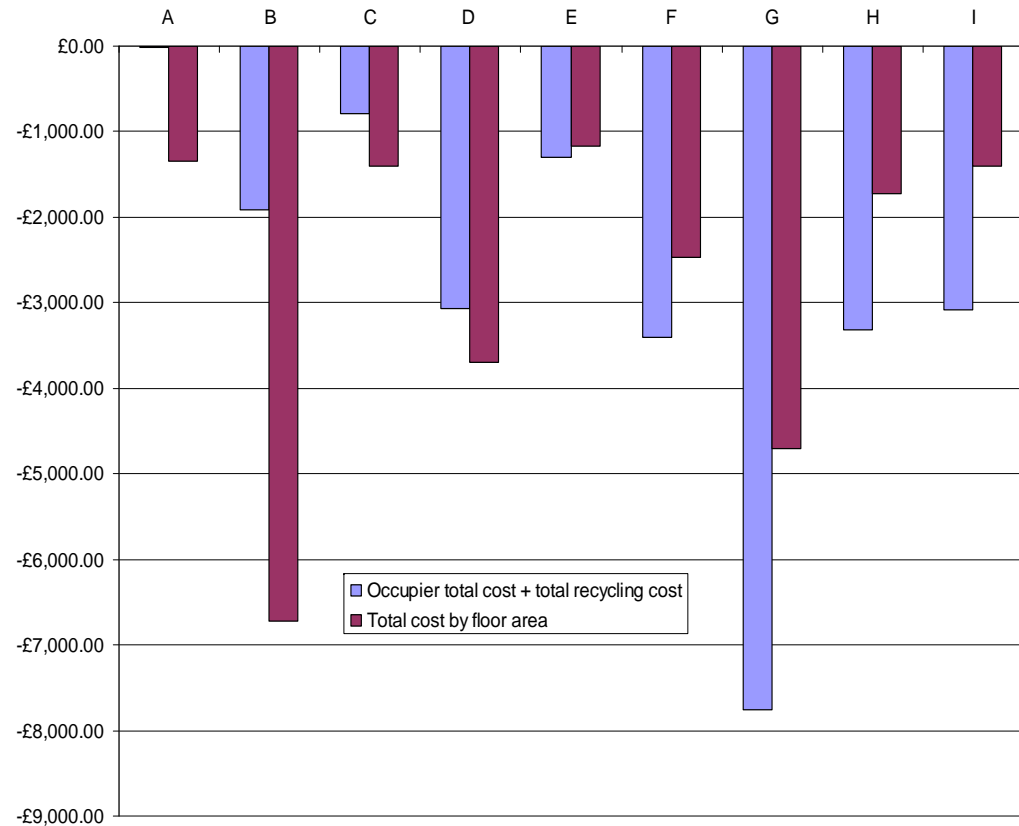
Allocation per floor area

- In Yr5 cost to Occupier B equals £6,700
- In Yr 5 cost to Occupier G is £4,700

With sub-meters & allocation by league table

- In Yr5 cost to Occupier B equals £1,900
- In Yr 5 cost to Occupier G is £7,700

Total costs for individual occupiers in yr5 within a single property



Is there an incentive for Occupiers in CRC?

- In the first phase when there is no emissions' cap to the trading system, the cost/benefits of the scheme will be of a very small order of magnitude.
- The administrative burden of passing on these cost/benefits to our occupiers will outweigh any potential savings for Hermes Funds.
- In such case there will be no cost incentive on occupiers to reduce their emissions
- In the second phase the financial impacts increase significantly and it would be important to find ways to share responsibility with occupiers and give them an incentives to change behaviour change

Impact of the League Table

- During both phase, the league table will be play a significant role in determining the overall cost or benefit of the scheme to organisations
- In phase 2 the league table recycling payments will increase even further
- The league table's determining criteria need to be FAIR and verifiable
- Is there a need for a league table, or would a well assigned cap and auction process provide the right incentive for organisations to reduce emissions?
- If the league table is to stay how to ensure FAIRNESS to all participants?

NEXT STEPS

- Getting an accurate record of your emissions
- Working out your total footprint emissions
 - footprint year 2010/11
 - original copies of energy bills, meter readings or fuel delivery invoices to work out energy use – can be requested from supplier
- Working out emissions to be included in CRC
 - core sources (see CRC use guide)
- Listing CRC emissions
- Producing a footprint report – non submission = FINE
 - total footprint emissions, CRC emissions, exemptions through CCAs.
- Compiling an evidence pack
 - structural records that define the scope of your organisation
 - data records showing your energy consumption – utility company meter readings should be the principal source of data.
 - special event records covering any unusual events e.g. meter breakdown, change of energy supplier, change in company structure
 - data for Early Action and Growth metrics
 - records to support exemptions and energy credits (see section 3 and Annexes 2 and 3).

NEXT STEPS

