Questionnaire for telephone survey

Sections where adaptions may be required by sector are flagged. Should the survey be carried out with Head Office wording will adapted appropriately and where they are responding on behalf of more than one premises the most streamlined approach for this will devised.

Section	Questions
A: Confirm respondent and business details	A1. Can I check that the organisation occupying the premises is called <recall organisation name from database>? • Yes • No- Thank and close A2. In relation to your role, can I confirm that you are involved in dealing with energy use at <recall address> and would be able to answer questions about <recall organisation name> energy usage at this address? • Yes – SKIP TO A4 • No - Continue A3. Who would be the most appropriate person to speak to regarding energy use in your premises or building at this address? Can you put me through to them?
A: Confirm respondent and business details	I'd like to start by capturing some information on your business activity and size….. A4. Could I confirm that the main activity of your business is <recall activity from database>[6]? • Yes • No – (capture activity) A5. How many people does your organisation employ? (Capture FTE) A6. How many of these employs operate out of this <recall address from database>? (Capture FTE) …
B. Premises type and ownership	I'd now like to capture some information on the premises your business occupies at <recall address>….. B1. Which of the following best describes the premises at [recall address of premises]? Does your organisation have full use of…? • A whole building SKIP TO B6 • A collection of buildings CONTINUE TO B2 • Part of a building SKIP TO B5
B. Premises type and ownership	B2. How many buildings over 100m2 are there on this site? (Interviewer note: Approximate answer is fine. 100 m2 is the size of a typical 3-bedroom house; portakabins etc. should not be included?) B3. Please select the smallest / a typical sized / the largest building on the site (rotate smallest/largest/typical) for which your organisation occupies the

	whole building and you know the floor area. Please base all your following responses on this building. IF NO BUILDING SELECTED THANK AND CLOSE B4 Please provide the following details relating to the building in questions • What is the name or reference for the building? IF BUILDING SELECTED AND DETAILS CAPTURED SKIP TO B6
B. Premises type and ownership	B5. What percentage of the building does <recall organisation name> occupy? (Capture percentage of floor area) CONTINUE
B. Premises type and ownership	B6. Which of the following comes closest to describing the size of the building/building your premises occupies: • Small – up to the size of a 4- or 5-bedroom house • Medium – about the size of a local convenience store or supermarket (e.g. Sainsbury's Local) • Large – about the size of a larger in-town supermarket (e.g. Tesco Superstore) or larger B7. How long has your business occupied this premises? (Capture years) B8.Which of the following best describes how your organisation typically pays for its premises? • Rented • Leased • Lease Purchase • Owned - Outright • Owned - Mortgage • Other (capture details) • Mixture (capture details) • Not sure DO NOT READ OUT • Don't want to say DO NOT READ OUT
B. Premises type and ownership	IF RENTED OR LEASED B9. How long is your rental or tenancy agreement? (Capture years) IF B1=WHOLE BUILDING CONTINUE TO C1 IF B1=A COLLECTION OF BUILDINGS SKIP TO C7 IF B1= PART OF A BUILDING SKIP TO C12
C: Energy supply and state of metering (business occupies whole building)	C1. Which of the following supplies does the building receive and of these which are directly metered? (N.B for other fuels LPG, Oil and Coal must be delivered specifically for the selected address and not to a central point e.g. site boiler) • Oil • Gas • Coal • LPG [For each fuel used capture yes no and whether metered] C2. Is the building located on a site i.e. a collection of buildings? • Yes- CONTINUE

- No -SKIP TO C4

C3. Is the total electricity supply to the building sub-metered? (E.g. you have a meter or meters which are not the utility suppliers meter)?

- Yes - CONTINUE
- No SKIP TO C5
- Don't know SKIP TO C5

C4. What type of meter do you have for electricity?

- Basic meter (These meters need to be read at the site of the meter, and are used by the utility company for billing purposes. These meters are very basic and are similar to those used in domestic buildings. They can have digital displays.)
- Automatic meter reading or "advanced" meter (AMR or advanced meters provide a company with the ability to read a meter remotely, automatically and at frequent intervals. For example, meter readings could be displayed real-time on a control panel/control room, providing much more accurate and 'up to date' energy usage data (than available through monthly or quarterly bills). This type of meter also reduces the need for manual readings and provides access to the information via internet 'portals', for example)
- Smart meter (A 'smart' meter allows meter readings to be displayed off-site (for example, to a utility company or aggregator) on a frequent basis (e.g. half-hourly). A 'smart' meter may also allow the utility company to both remotely read and instruct the meter and therefore allows a number of additional operations such as updating the metering tariff.)

IF C2=YES ASK C5, IF C2=NO SKIP TO C6

C5. Is the total gas supply to the building sub-metered? (E.g. you have a meter or meters which are not the utility suppliers meter)?

- Yes - CONTINUE
- No – SKIP TO SECTION E
- Don't know - SKIP TO SECTION E

C6. What type of meter do you have for gas?

- Basic meter (These meters need to be read at the site of the meter, and are used by the utility company for billing purposes. These meters are very basic and are similar to those used in domestic buildings. They can have digital displays.)
- Automatic meter reading or "advanced" meter (AMR or advanced meters provide a company with the ability to read a meter remotely, automatically and at frequent intervals. For example, meter readings could be displayed real-time on a control panel/control room, providing much more accurate and 'up to date' energy usage data (than available through monthly or quarterly bills). This type of meter also reduces the need for manual readings and provides access to the information via internet 'portals', for example)
- Smart meter (A 'smart' meter allows meter readings to be displayed off-site (for example, to a utility company or aggregator) on

	a frequent basis (e.g. half-hourly). A 'smart' meter may also allow the utility company to both remotely read and instruct the meter and therefore allows a number of additional operations such as updating the metering tariff.)
C: Energy supply and state of metering (business occupies a collection of buildings)	C7. Which of the following supplies does the building receive and of these which are directly metered? (N.B for other fuels LPG, Oil and Coal must be delivered specifically for the selected address and not to a central point e.g. site boiler) • Oil • Gas • Coal • LPG [For each fuel used capture yes no and whether metered] C8. Is the total electricity supply to the building sub-metered? (E.g. you have a meter or meters which are not the utility suppliers meter for this building)? • Yes - CONTINUE • No SKIP TO C10 • Don't know SKIP TO C10 C9. What type of meter do you have for electricity? • Basic meter (These meters need to be read at the site of the meter, and are used by the utility company for billing purposes. These meters are very basic and are similar to those used in domestic buildings. They can have digital displays.) • Automatic meter reading or "advanced" meter (AMR or advanced meters provide a company with the ability to read a meter remotely, automatically and at frequent intervals. For example, meter readings could be displayed real-time on a control panel/control room, providing much more accurate and 'up to date' energy usage data (than available through monthly or quarterly bills). This type of meter also reduces the need for manual readings and provides access to the information via internet 'portals', for example) • Smart meter (A 'smart' meter allows meter readings to be displayed off-site (for example, to a utility company or aggregator) on a frequent basis (e.g. half-hourly). A 'smart' meter may also allow the utility company to both remotely read and instruct the meter and therefore allows a number of additional operations such as updating the metering tariff.) C10. Is the total gas supply to the building sub-metered? (E.g. you have a meter or meters which are not the utility suppliers meter)? • Yes - CONTINUE • No – SKIP TO SECTION E • Don't know - SKIP TO SECTION E C11. What type of meter do you have for gas?

	• Basic meter (These meters need to be read at the site of the meter, and are used by the utility company for billing purposes. These meters are very basic and are similar to those used in domestic buildings. They can have digital displays.) • Automatic meter reading or "advanced" meter (AMR or advanced meters provide a company with the ability to read a meter remotely, automatically and at frequent intervals. For example, meter readings could be displayed real-time on a control panel/control room, providing much more accurate and 'up to date' energy usage data (than available through monthly or quarterly bills). This type of meter also reduces the need for manual readings and provides access to the information via internet 'portals', for example) • Smart meter (A 'smart' meter allows meter readings to be displayed off-site (for example, to a utility company or aggregator) on a frequent basis (e.g. half-hourly). A 'smart' meter may also allow the utility company to both remotely read and instruct the meter and therefore allows a number of additional operations such as updating the metering tariff.)
C: Energy supply and state of metering (business occupies a part of a building)	C12. Which of the following supplies does the building your premises is in receive and which of these are directly metered? (N.B for other fuels LPG, Oil and Coal must be delivered specifically for the selected address and not to a central point e.g. site boiler) • Oil • Gas • Coal • LPG [For each fuel used capture yes/no and whether metered] C13. Is the total electricity supply to the premises sub-metered? • Yes - CONTINUE • No SKIP TO C15 • Don't know SKIP TO C15 C14. What type of meter do you have for electricity? • Basic meter (These meters need to be read at the site of the meter, and are used by the utility company for billing purposes. These meters are very basic and are similar to those used in domestic buildings. They can have digital displays.) • Automatic meter reading or "advanced" meter (AMR or advanced meters provide a company with the ability to read a meter remotely, automatically and at frequent intervals. For example, meter readings could be displayed real-time on a control panel/control room, providing much more accurate and 'up to date' energy usage data (than available through monthly or quarterly bills). This type of meter also reduces the need for manual readings and provides access to the information via internet 'portals', for example) • Smart meter (A 'smart' meter allows meter readings to be displayed off-site (for example, to a utility company or aggregator) on a frequent basis (e.g. half-hourly). A 'smart' meter may also allow the

	utility company to both remotely read and instruct the meter and therefore allows a number of additional operations such as updating the metering tariff.) C15. Is the total gas supply to the premises sub-metered? (E.g. you have a meter or meters which are not the utility suppliers meter)? • Yes - CONTINUE • No – SKIP TO SECTION E • Don't know - SKIP TO SECTION E C16. What type of meter do you have for gas? • Basic meter (These meters need to be read at the site of the meter, and are used by the utility company for billing purposes. These meters are very basic and are similar to those used in domestic buildings. They can have digital displays.) • Automatic meter reading or "advanced" meter (AMR or advanced meters provide a company with the ability to read a meter remotely, automatically and at frequent intervals. For example, meter readings could be displayed real-time on a control panel/control room, providing much more accurate and 'up to date' energy usage data (than available through monthly or quarterly bills). This type of meter also reduces the need for manual readings and provides access to the information via internet 'portals', for example) • Smart meter (A 'smart' meter allows meter readings to be displayed off-site (for example, to a utility company or aggregator) on a frequent basis (e.g. half-hourly). A 'smart' meter may also allow the utility company to both remotely read and instruct the meter and therefore allows a number of additional operations such as updating the metering tariff.) CONTINUE TO SECTION E
D: Occupancy and Running Hours	We would now like to ask a series of questions relating to …..…. • The whole building [IF B1=A WHOLE BUILDING] • <Recall building in collection of and buildings the respondent chose in B4> [IF B1=A COLLECTION OF BUILDINGS] • The premises you occupy within the building [IF B1= A PART OF A BUILDING] D1. How many employees does <recall organisation name> are based in this building on a typical working day?[7] • Capture number of employees D2. Which days of the week do employees in <recall organisation name> typically work in the building? • Weekdays • Weekdays and weekends • Other

	D3. How many hours in a typical working day is the building reasonably fully occupied by your employees (at least 50% of staff present)? • Capture number of hours D4. How many additional hours in a typical working day is the building partly occupied (20% - 50% of staff present)? • Capture number of hours D5. How many weeks per year is the building closed for holiday periods • Capture number of weeks D6. How many visitors <prompt on sector specific type TBC – See Table 9> are in this building on a typical working day? • Capture number of employees
E: Energy using equipment – heating, cooling, ventilation	IF OCCUPY PART OF A BUILDING ASK F1, IF A COLLECTION OF BUILDINGS OR WHOLE BUILDING SKIP TO F2 E1. Does the premise you occupy have its own dedicated building services plant (e.g. heating, and ventilation or cooling if present) or is this provided from central systems serving the whole building? • All heating, cooling etc. is dedicated to our premises & is our responsibility • All heating, cooling etc is provided centrally by the landlord & is their responsibility • Some services are dedicated and some are provided centrally • Not sure E2. Which one of these is the main energy source for heating the building? • Electricity • Natural Gas • Oil • LPG • District Heat • Other • Not sure IF E2=DISTRICT HEAT CONTINUE; IF NOT SKIP TO E4 E3. What is the fuel used to generate the heat for the district heat system? • Natural gas • Oil • LPG • Other • Not sure E4. How much of the building is heated in winter? • None • Special areas only <20%

- Some 20-40%
- About half 40-60%
- Most 60-80%
- All >80%

E5. Do you use electricity to heat tap water and/or showers and if so how many taps/showers are heated by electricity?

- All taps/shower
- Most taps/shower
- Some taps/shower
- None
- Not sure

E6. Which one of the following best describes the ventilation in your building?

- Openable windows everywhere
- Openable windows in most areas plus extract fans in special areas (e.g. kitchens/toilets)
- Ventilation from a central system in most or all of your area
- A mixture
- Not sure

IF E6=OPEN WINDOWS EVERYWHERE SKIP TO E10, IF NOT CONTINUE

E7. Approximately how much of the building uses mechanical ventilation? (If required: mechanical ventilation is where fans supply or extract air to/from the internal spaces through pipes or ducts to grilles in the roof or floor, rather than opening windows to supply fresh air]

- None
- Special areas only <20%
- Some 20-40%
- About half 40-60%
- Most 60-80%
- All >80%

IF E7 DOES NOT=NONE

E8. What type of mechanical ventilation is most commonly used in the building?

- Supply & extract
- Extract only
- Displacement ventilation
- Not sure

E9. What type of ventilation controls you have in the building?

- Variable speed drive fans vary the ventilation rate according to time controls
- Variable speed drive fans vary the ventilation rate according to demand e.g. using CO_2 sensors

- Time controls switch off the ventilation outside normal hours of use
- Ventilation to zones with different hours of use is controlled separately
- None of these

E10. How much of the building has a mechanical cooling or air conditioning system? (If required: this is areas where you can adjust the temperature to keep the space comfortably cool when it is hot outside or it is too hot inside a room)

- None
- Special areas only <20%
- Some 20-40%
- About half 40-60%
- Most 60-80%
- All >80%

IF E10 DOES NOT = NONE

E11. What is the most common type of cooling system is installed in the building?

- Central system with cold air distribution
- Central system with chilled water distribution
- Central system with refrigerant distribution (VRV)
- Local units with refrigerant (DX split units)

IF E10 DOES NOT = NONE

E12. What cooling controls do you have in the building?

- Time controls switch off the cooling outside normal hours of use
- Temperature control is efficiently set via thermostats
- Cooling for zones with different hours of use is controlled separately
- Don't Know
- None of these

IF E10 DOES NOT = NONE

E13. Which of the following applies to your building in terms of cooling?

- The building suffers from high solar heat gains
- The building has external shading to prevent high solar gains
- The building regularly uses night-time ventilation in warm weather
- Cooling is only used in very hot weather (top cooling)
- Cooling is available 24h for special areas only (e.g. servers, control rooms)
- Don't know
- None of these

[All]

E14. Are there any low carbon or renewable energy technologies supplying the building or site?

	• Yes CONTINUE • No SKIP TO F16 E15. Which low carbon or renewable technologies do you have dedicated to the building? • CHP • Ground Source Heat Pump • Air Source Heat Pump • Solar Thermal • Photovoltaic Panels • Wind Turbine • Biomass Boiler • Other • Not sure • None
F: Lighting	…. F1. What controls are present to control lighting in the building? • Light switches that are easily accessible • Light switches that are hard to access • Automatic controls (daylight or presence detectors) • Lighting management system • Don't know F2. Which of the following best describes how lighting controls are used in the building? • Lighting is usually off in unoccupied spaces ○ yes ○ sometimes ○ no • Lighting is usually off where and when daylight is sufficient ○ yes ○ sometimes ○ no
G: Other energy using equipment	Please continue to answer the following question on other energy using equipment in relation to…. • The whole building [IF B1=A WHOLE BUILDING] • <Recall building in collection of and buildings the respondent chose in B4> [IF B1=A COLLECTION OF BUILDINGS] • The premises you occupy within the building [IF B1= A PART OF A BUILDING] G1. Which of the following, if any, do you have in your building? • Catering kitchen serving hot meals (not kitchenettes) ANSWER G2 • Server supporting IT e.g. computer network or tills ANSWER G4

- Data Centre ANSWER G5
- Swimming Pool ANSWER G6
- Laboratory (commercial/research) ANSWER G7
- Laundry facilities ANSWER G8
- Commercial refrigerated storage for food sales GO TO G9
- Non food refrigeration e.g. medical uses GO TO G9
- Lifts or escalators GO TO G9
- None of the above GO TO G9
- Other high energy equipment (please specify) GO TO G9

ASK IF G1= CATERING KITCHEN SERVING HOT MEALS (NOT KITHCENTTES)

G2. Approximately, how many hot meals does the catering facility produce in a typical day?

- Capture number of meals

G3. Which of the following do you use for cooking in your kitchen?

- All electric
- All gas
- Mix
- Not sure

ASK IF G1= SERVER SUPORTING IT

G4. Which of the following best describes your server room?

- Local (serves workstations in this building only)
- Regional (also serves workstations outside this building)

ASK IF G1= DATA CENTRE

G5. What is the floor area of your data centre?

- Capture floor area m2

ASK IF G1= SWIMMING POOL

G6. How big is your swimming pool or pools? What is the length in metres? And what is the width in metres?

- Length of pool 1 (m)
- Width of pool 1 (m)
- Length of pool 2 (m)
- Length of pool 2 (m)
- Don't know

ASK IF G1= LABORATORY

G7. What types of laboratory do you have in the building?

- Physics/instrumentation/electrical

	• Biological • Chemical • Pathology • Forensic ASK IF G1= LAUNDRY FACILITIES G8. How much laundry is processed in the building's laundry facility per week? Answer either: • i) If washing machines/dryers used - number of wash cycles per week • i) If commercial scale laundry facility - tonnes of laundry processed per week G9. How many <recall sub-sector specific item TBC – See Table 10 below> are present in the premises? G10. Which of the following types of outdoor area, do you have which are associated exclusively with the building? And of these are any for your organisation's sole use? • Car Park • Other outdoor area (specify) • None IF G10= CAR PARK G11. How many parking spaces do you have? • Capture number (if unknown ask for estimate for example does it accommodate a few staff , most staff, staff and visitors) G12. When is car park lighting on? • Mornings/evenings when required (e.g. winter) • At all times outside daylight hours • At all times, but automatic controls reduce lighting when not needed
H: Industrial processes	IF SECTOR=FACTORY H1. Does your organisaion have any of the following on-site industrial <prompted list>? For each capture whether powered by gas or electricity. H2. What proportion of this building's floor area is taken up by these processes? • Capture % - if unsure use scale • < 40% • 40 – 60% • 60 – 80% • > 80%

- Not sure

H3. Are you able to split out you energy costs for these industrial processes?

- Yes
- No
- Not sure

IF H3=YES

H4. What proportion of your annual electricity bill is on industrial processes?

- Capture % - if unsure use scale
- < 40%
- 40 – 60%
- 60 – 80%
- > 80%
- Not sure

H5. What proportion of your annual gas bill is on industrial processes?

- Capture % - if unsure use scale
- < 40%
- 40 – 60%
- 60 – 80%
- > 80%
- Not sure

H6. Are there any equipment or processes releasing a significant amount of cooling to the premises that would require additional space heating to compensate? (For example, warm air supplied to cold processing area for maintaining temperature comfort for staff)

- Yes
- No
- Not sure

H7. How many months a year is additional heating required? (Capture number)

H8. Are there any equipment or processes releasing a significant amount of heat to the premises that would require additional cooling to compensate? (For example, air conditioning required to offset the heat from equipment on a production line to ensure staff can work comfortably)

- Yes
- No
- Not sure

H9. How many months a year is additional cooling required? (Capture number)

	H10. Do you have a heat recovery system in place for these industrial processes? • Yes • No • Not sure H11. Are there any processes that would require additional ventilation and air extraction from the building? • Yes • No • Not sure
I: Actors and spilt in responsibility for energy	This final set of questions looks to understand responsibilities for energy for your organisation and whether you have made any changes over the past 2 years. I1. How do you pay for your energy supply? • Payment made directly to your energy supplier • Energy costs included within rent paid to a landlord ○ Is this: ▪ A fixed cost ▪ A variable cost • Energy bills paid by another part of your organisation (e.g. a head office, university central services etc.) • A combination of the above I2. Do you / your organisation have the authority in your building to make fundamental changes to the heating system(s) at <recall address>? For example, change from an oil boiler to a new technology. • Yes • No • Not sure I3. Who is responsible for energy management in your building? • An organisation energy manager who does not normally work in the building • An energy manager who does normally work in the building • Someone who is not a full time energy manager eg building or operations manager • An enthusiast or energy champion in the building • No energy management I4. Over the past two/Since occupying the building[8], has your business done anything to improve your energy efficiency? If so, what have you done? (For each capture the year that the change was made) • Have not done anything on energy efficiency

	• Had an energy audit • Hired an energy manager and/or created a sustainability arm of the business • Implemented behavioural and cultural changes in the business • Improved control and monitoring systems • Implemented an energy management system - ISO50001 • Implemented an energy management system - other • Replaced industrial equipment • Made improvements to industrial processes Investing in building improvements • Heat-supply and heat-related improvements • Other (please specify) I5. What are the main challenges you face in regard to improving the energy efficiency of your business? • Capture open end I6. Additional policy questions identified for the sector
Interview close	Thank you for your time Would it be possible to call you back if we need to check anything? • Yes • No We will be contacting some organisations to request a site visit 1 – 2 days. This will enable us to source data from physical meters and equipment. As a thank you, you will be offered an information pack covering energy and emissions reduction opportunities specifically on your site. Would you be happy for us to contact you again in the future to explain more about what is involved and see if you would be willing to help? • Yes - capture best email address and telephone number • No Finally would you like to take a contact number for: • Market research Society free phone - 0800 975 9596 • Contact at the Department for Business, Energy & Industrial Strategy -

The table below outlines the type for visitors to prompt on by over-arching sector. Further refinement may be required by sub-sector.

Table 9. Sector specific visitors.

Sector	Visitor type
Shop	Customers
Office	Visitors
Factory	Visitors

Warehouse	Visitors
Hospitality	Customers
Arts and leisure	Customers/Members
Health	Patients
Education	Pupils/Students
Sport	Customers/Members
Community	Customers
Transport	Visitors/Customers
Agriculture, countryside, animals	Visitors
Miscellaneous	Visitors
Emergency	Members of the public (including those in custody)
MOD	Visitors
Utilities	Visitors

The below table outlines some overarching categories of equipment that will need to be considered in developing an approach for each sector followed by additional datapoint that need to be captured for each. This list will be developed further with additional desk research, but is presented as starting point for discussion around the level of detail on specific equipment we want to capture.

Table 10. (a) Sector specific equipment (b) Data points for specific equipment

a.

Sector	Refrigeration such as, chillers, refrigerators, upright freezers, chest fridges, cold stores etc.	Cooking equipment such as, ovens, hobs, microwaves, hot counters etc.	Exercise equipment such as, treadmills, exercise bikes etc.	Industrial machinery e.g., assembly, casting, drying, melting, molding or spray painting	Conveyor belts	Medical equipment (e.g. medical fridge, MRI scanners, X-ray machines)	Outdoor sports area with flood lighting (to include follow on questions on operational times)	Specialist lighting (e.g., stage lights.)	Pottery kiln
Shop	✓ (food)	✓ (food)							
Office									
Factory				✓	✓				
Warehouse					✓				
Hospitality	✓	✓							
Arts and leisure								✓	✓
Health						✓			
Education							✓		✓

Sport			✓				✓		
Community								✓	
Transport									
Agriculture, countryside, animals				✓					
Miscellaneous									
Emergency		✓[9]							
MOD	*If offices equipment will be similar for Sector=Office if storage list will be similar for Sector=Warehouse*								
Utilities									

b.

Other data points required for equipment.	**Refrigeration such as, chillers, refrigerators, upright freezers, chest fridges, cold stores etc.**	**Cooking equipment such as, ovens, hobs, microwaves, hot counters etc.**	**Exercise equipment such as, treadmills, exercise bikes etc.**	**Industrial machinery e.g., assembly, casting, drying, melting, molding or spray painting**	**Conveyor belts**	**Medical equipment (e.g. medical fridge, MRI scanners, X-ray machines)**	**Outdoor sports area with flood lighting (to include follow on questions on operational times)**	**Specialist lighting (e.g., stage lights.)**	**Pottery kiln**
Number of items	✓	✓	✓		✓	✓	✓		✓
Number of processes				✓					
Number of meals prepared		✓							
Operational hours			✓	✓	✓	✓ (unless we can proxy on number of people treated?)	✓	✓	✓