

centrica 2017



Basis of Reporting

2017

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Lost Time Injuries and Lost Time Injury Frequency Rate

1. KPI Description

Lost time injury frequency rate (LTIFR) is an industry standard measure for tracking personal safety performance for serious injuries.

A lost time injury is defined as an incident arising out of Centrica’s operations which leads to an injury where the employee, agency worker or contractor is not available to work for one day or more, excluding the day that the injury occurred.

2. Scope

	Included in scope	Excluded from scope
Geography	<ul style="list-style-type: none"> Global 	<ul style="list-style-type: none"> N/A
Organisational	<ul style="list-style-type: none"> All Centrica businesses 	<ul style="list-style-type: none"> N/A
Operational	<ul style="list-style-type: none"> Injuries that occur in a Centrica work environment, as defined in HSES-STD-03. 	<ul style="list-style-type: none"> LTIs resulting from non-work related activities. Franchisee injuries are not recorded as work related except where work is undertaken under contract to Centrica by a Franchisee.

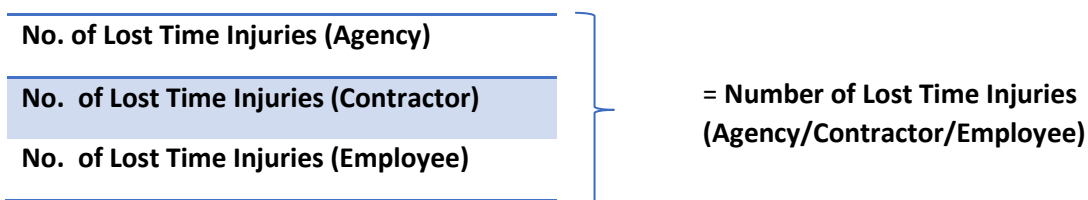
3. Calculation methodology

3.1 Unit of measure

Lost Time Injury: Number

LTIFR: Per 200,000 work hours

3.2 Calculation



MyHSES constituent indicator filter criteria:

- Work Related = Yes,
- Workflow state=Any except 'Draft' or 'Deleted',
- Injury → Lost Time sub types that have Relationship to Centrica = ‘Agency’, ‘Contractor’, OR ‘Employee’

Indicator counts the number of Lost Time sub types that meet these conditions.

$$\text{LTIFR} = \text{MAT} \frac{[\text{Number of lost time injuries} \times 200,000]}{\text{MAT [Hours worked]}}$$

MAT – Moving Annual Total

3.3 Changes from previous years

Lost Time Injury Frequency Rate calculated using 200,000 hours used as the basis of reporting (previously 100,000) to allow for easier industry sector benchmarking.

4 Data quality, collection and reporting frequency

Centrica plc HSES Group Reporting Standard 03 sets out the detailed data collection process. Data is collected monthly via Group Submissions which have been validated by the HSES Director (or nominated delegate) and reported on a monthly basis.

Total Recordable Injury Frequency Rate (TRIFR)

1. KPI Description

Total recordable injury frequency rate (TRIFR) is an industry standard measure for tracking personal safety performance for serious injuries.

Recordable injuries include all work related injuries apart from first aid. This includes fatalities, lost time, restricted duty and medical treatment (Note: all needle stick and sharps injuries are recordable). For the avoidance of doubt the USA OSHA regulation 29 CFR 1904 is used to define recordable injuries and the requirements for recording injuries in myHSES.

To avoid double counting of injury events, only the most severe outcome for an injury is reported in our statistics, for example if a lost time injury eventually results in a fatality, the injury severity is updated in the original event and consequently the lost days' information ceases to be recorded. Likewise, restricted/modified duty severity events that later result in lost time (and vice versa) will only be reported as lost time, however myHSES will maintain both lost time and restricted/modified duty lost days separately.

2. Scope

	Included in scope	Excluded from scope
Geography	<ul style="list-style-type: none"> Global 	<ul style="list-style-type: none"> N/A
Organisational	<ul style="list-style-type: none"> All Centrica businesses 	<ul style="list-style-type: none"> N/A
Operational	<ul style="list-style-type: none"> Injuries that occur in a Centrica work environment, as defined in HSES-STD-03. 	<ul style="list-style-type: none"> Recordable injuries resulting from non-work related activities. Franchisee injuries are not recorded as work related except where work is undertaken under contract to Centrica by a Franchisee.

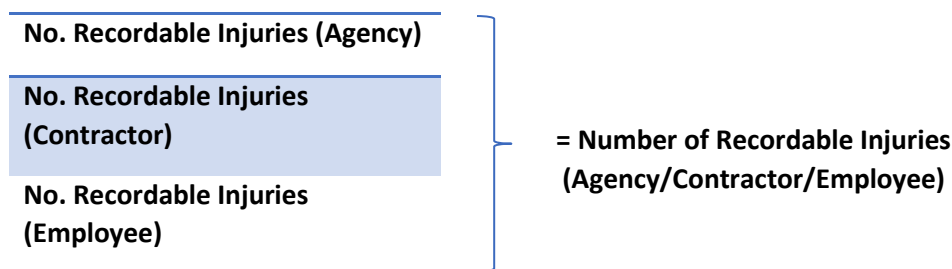
3. Calculation methodology

3.1 Unit of measure

Recordable Injuries: Number

TRIFR: Per 200,000 work hours

3.2 Calculation



myHSES constituent indicator filter criteria:

Basis of Reporting 2017

- Work Related = Yes,
- Workflow state = Any except 'Draft' or 'Deleted',
- Injury → Sub types 'Fatalities', 'Lost Time', 'Modified/Restricted Duty' OR 'Medical Treatment'
- Relationship to Centrica = 'Agency', 'Contractor', 'Employee'

Indicator counts the number of Injury sub types that meet these conditions.

$$\text{TRIFR} = \frac{\text{MAT [Number of recordable injuries]} \times 200,000}{\text{MAT [Hours worked]}}$$

MAT – Moving Annual Total

4.3 Changes from previous years

Recordable Injury Frequency Rate calculated using 200,000 hours used as the basis of reporting (previously 100,000) to allow for easier industry sector benchmarking.

4. Data quality, collection and reporting frequency

Centrica plc HSES Group Reporting Standard 03 sets out the detailed data collection process. Data is collected monthly via Group Submissions which have been validated by the HSES Director (or nominated delegate) and reported on a monthly basis.

Fatalities

1. KPI Description

This indicator measures any work related fatalities associated with our activities.

2. Scope

	Included in scope	Excluded from scope
Geography	<ul style="list-style-type: none"> Global 	<ul style="list-style-type: none"> N/A
Organisational	<ul style="list-style-type: none"> All Centrica businesses 	<ul style="list-style-type: none"> N/A
Operational	<ul style="list-style-type: none"> Injuries that occur in a Centrica work environment, as defined in HSES-STD-03. 	<ul style="list-style-type: none"> Fatalities of members of the public resulting from our activities are also reported, but these are not included in the total fatalities figure. Franchisees Non-work related fatalities

3. Calculation methodology

3.1 Unit of measure

Number of people

MyHSES constituent indicator filter criteria:

- Work Related = Yes,
- Workflow state = Any except 'Draft' or 'Deleted',
- Injury Event Type = 'Fatality'
- Relationship to Centrica in Injury section = 'Agency', 'Contractor', 'Employee'

Indicator counts the number of injury sub types that meet these conditions.

4. Data quality, collection and reporting frequency

Centrica plc HSES Group Reporting Standard 03 sets out the detailed data collection process. Data is collected monthly via Group Submissions which have been validated by the HSES Director (or nominated delegate) and reported on a monthly basis.

Tier 1 (Significant) Process Safety Events

1. KPI description

Process safety is defined by the International Association of Oil & Gas Producers (IOGP) as: *“a disciplined framework for managing the integrity of operating systems and processes that handle hazardous substances. It relies on good design principles, engineering, operating and maintenance practices.”*

At Centrica the effectiveness of our process safety improvement programmes are tracked through both lagging and leading indicators. These lagging and leading indicators are based on American Petroleum Institute (API) Recommended Practice (RP) 754, Process Safety Performance Indicators for the Refining and Petrochemical Industries.

This Recommended Practice (RP) identifies leading and lagging process safety indicators that are useful for driving performance improvement. The indicators are divided into three tiers that represent a leading and lagging continuum. Tier 1 is the most lagging and Tier 3 is the most leading. Tiers 1 and 2 are suitable for public reporting and Tiers 3 is intended for internal use at individual sites.

2. Scope

	Included in scope	Excluded from scope
Geography	<ul style="list-style-type: none"> • UK • Ireland • Netherlands • Norway • Canada 	<ul style="list-style-type: none"> • North America
Organisational	<ul style="list-style-type: none"> • Centrica’s upstream businesses: Exploration & Production, Centrica Storage, Bord Gais (Whitegate power station) and Distributed Energy and Power. • All directly controlled activities are included. This includes all activities undertaken by third parties where: <ul style="list-style-type: none"> ○ work activities are undertaken under a Centrica business brand ○ work performance is under the direct control of a Centrica businesses line management ○ Centrica owns or has the controlling interest in the premises/asset where the third party is working 	<ul style="list-style-type: none"> • Energy Marketing and Trading, Connected Homes, Direct Energy and British Gas

Drawing from the American Petroleum Institute’s¹ (API) recommended practice a Tier 1 process safety event will include any:

¹ ANSI/API RECOMMENDED PRACTICE 754. FIRST EDITION, APRIL 2010

“unplanned or uncontrolled release of any material, including non-toxic and non-flammable materials (e.g. steam, hot condensate, nitrogen, compressed CO₂ or compressed air), from a process that results in one or more of the consequences listed below:

- *an employee, contractor or subcontractor “days away from work” injury and/or fatality;*
- *a hospital admission and/or fatality of a third-party;*
- *an officially declared community evacuation or community shelter-in-place;*
- *a fire or explosion resulting in greater than or equal to \$25,000 of direct cost to the Company;*
- *a pressure relief device (PRD) discharge to atmosphere whether directly or via a downstream destructive device that results in one or more of the following four consequences:*
 - *liquid carryover;*
 - *discharge to a potentially unsafe location;*
 - *an on-site shelter-in-place;*
 - *public protective measures (e.g. road closure);*
- *a PRD discharge quantity greater than the threshold quantities (Appendix 1) in any one-hour period;*
- *a release of material greater than the threshold quantities (Appendix 1) in any one-hour period”*

3. Calculation methodology

3.1 Unit of measure

Number

4. Data quality, collection and reporting frequency

4.1 Data quality

A Group Process Safety Event (PSE) review and assurance process exists in order to minimise the inaccuracies in the process safety event data that is recorded and reported in myHSES, as far as is practicable. This is done to a level that allows stakeholders to assess Process Safety performance with reasonable confidence. In addition to this the review process will ensure that the Group Process Safety function holds an auditable record of all year to date PSE's.

4.2 Data Collection

The Process Safety Event Reporting Support Tool (Appendix 2) is used to assist those reporting an event to determine whether it is a process safety event, and if it is which tier it should be reported as under API RP 754.

The recording system for all source data is myHSES, our new global HSES data management system launched in September 2015. From 1st January 2016 myHSES has been used to systemise business level data validation and provide all HSES metrics and performance reports used within business units and at group level.

The basis of reporting is aligned with industry best practice in order to ensure consistency and the ability to benchmark. To achieve this, the approach is based on the American Petroleum Institute's (API) recommended practice (Process Safety Performance Indicators for the Refining and Petrochemical Industries, RP 754).

4.3 Reporting Frequency

During 2017 data has been reported monthly to Group HSES.

Tier 2 Process Safety Events

1. KPI description

Process safety is defined by the International Association of Oil & Gas Producers (IOGP) as: *“a disciplined framework for managing the integrity of operating systems and processes that handle hazardous substances. It relies on good design principles, engineering, operating and maintenance practices.”*

At Centrica the effectiveness of our process safety improvement programmes are tracked through both lagging and leading indicators. These lagging and leading indicators are based on American Petroleum Institute (API) Recommended Practice (RP) 754, Process Safety Performance Indicators for the Refining and Petrochemical Industries.

This Recommended Practice (RP) identifies leading and lagging process safety indicators that are useful for driving performance improvement. The indicators are divided into three tiers that represent a leading and lagging continuum. Tier 1 is the most lagging and Tier 3 is the most leading. Tiers 1 and 2 are suitable for public reporting and Tiers 3 is intended for internal use at individual sites.

2. Scope

	Included in scope	Excluded from scope
Geography	<ul style="list-style-type: none"> • UK • Ireland • Netherlands • Norway • Canada 	<ul style="list-style-type: none"> • North America
Organisational	<ul style="list-style-type: none"> • Centrica’s upstream businesses: Exploration & Production, Centrica Storage, Bord Gais (Whitegate Power Station) and Distributed Energy and Power. • All directly controlled activities are included. This includes all activities undertaken by third parties where: <ul style="list-style-type: none"> ○ work activities are undertaken under a Centrica business brand ○ work performance is under the direct control of a Centrica businesses line management ○ Centrica owns or has the controlling interest in the premises/asset where the third party is working 	<ul style="list-style-type: none"> • Energy Marketing and Trading, Connected Homes, Direct Energy and British Gas

A Tier 2 Process Safety Event is a LOPC with lesser consequence. It is defined as:

An unplanned or uncontrolled release of any material, including non-toxic and non-flammable materials (e.g. steam, hot condensate, nitrogen, compressed CO₂ or compressed air), from a process that results in one or more of the consequences listed below and is not reported in Tier 1:

- An employee, contractor or subcontractor recordable injury;
- A fire or explosion resulting in greater than or equal to \$2,500 (USD) of direct cost to the company;

- a pressure relief device (PRD) discharge to atmosphere whether directly or via a downstream destructive device that results in one or more of the following four consequences:
 1. Liquid carryover;
 2. Discharge to a potentially unsafe location (e.g. resulting in exposure to flammable or toxic mixtures or contact with an ignition source);
 3. An on-site shelter-in-place;
 4. Public protective measures (e.g. road closure);
- A PRD discharge quantity greater than the threshold quantity (see appendix 1) in any one-hour period; or
- A release of material greater than the threshold quantities (see appendix 1) in any one-hour period.

3. Calculation methodology

3.1 Unit of measure

Number

4. Data quality, collection and reporting frequency

4.1 Data quality

A Group Process Safety Event (PSE) review and assurance process exists in order to minimise the inaccuracies in the process safety event data that is recorded and reported in MyHSES, as far as is practicable. This is done to a level that allows stakeholders to assess Process Safety performance with reasonable confidence. In addition to this the review process will ensure that the Group Process Safety function holds an auditable record of all year to date PSE's.

4.2 Data Collection

The Process Safety Event Reporting Support Tool (see appendix 2) is used to assist those reporting an event to determine whether it is a process safety event, and if it is which tier it should be reported as under API RP 754.

The recording system for all source data is myHSES, our new global HSES data management system launched in September 2015. From 1st January 2016 myHSES has been used to systemise business level data validation and provide all HSES metrics and performance reports used within business units and at group level.

The basis of reporting is aligned with industry best practice in order to ensure consistency and the ability to benchmark. To achieve this, the approach is based on the American Petroleum Institute's (API) recommended practice (Process Safety Performance Indicators for the Refining and Petrochemical Industries, RP 754).

4.3 Reporting Frequency

During 2017 data has been reported monthly to Group HSES.

Process Safety Event Frequency Rate (Tier 1 and 2)

1. KPI Description

This indicator captures the frequency of Tier 1 and Tier 2 process safety events, which are events resulting in the unplanned or uncontrolled release of any material, including non-toxic and non-flammable materials (e.g. steam, hot condensate, nitrogen, compressed CO₂ or compressed air), from a process that results in one or more of the consequences listed in the scope.

2. Scope

	Included in scope	Excluded from scope
Geography	<ul style="list-style-type: none"> • UK • Ireland • Netherlands • Norway • Canada 	<ul style="list-style-type: none"> • North America
Organisational	<ul style="list-style-type: none"> • Centrica’s upstream businesses: Exploration & Production, Centrica Storage, Bord Gais (Whitegate Power station) and Distributed Energy and Power. • All directly controlled activities are included. This includes all activities undertaken by third parties where: <ul style="list-style-type: none"> ○ work activities are undertaken under a Centrica brand ○ work performance is under the direct control of a Centrica line management ○ Centrica owns or has the controlling interest in the premises/asset where the third party is working 	<ul style="list-style-type: none"> • Energy Marketing and Trading, Connected Homes, Direct Energy and British Gas
Tier 1	<ul style="list-style-type: none"> • An employee, contractor or subcontractor fatality and/or lost time injury; • A hospital admission and/or fatality of a third-party; • An officially declared community evacuation or community shelter-in-place; • A fire or explosion resulting in greater than or equal to \$25,000 (USD) of direct cost to the Company; • A pressure relief device (PRD) discharge to atmosphere whether directly or via a downstream destructive device that results in one or more of the following four consequences: <ul style="list-style-type: none"> - Liquid carryover; - Discharge to a potentially unsafe location (e.g. resulting in exposure to flammable or toxic mixtures or contact with an ignition source); - An on-site shelter-in-place; - Public protective measures (e.g. road closure); 	

- A PRD discharge quantity greater than the threshold quantities shown in appendix 1 in any one-hour period;
- A release of flammable gas or liquid that exceeds the threshold quantities described in appendix 1 in any one-hour period.

Tier 2

- An employee, contractor or subcontractor recordable injury;
- A fire or explosion resulting in greater than or equal to \$2,500 (USD) of direct cost to the company;
- a pressure relief device (PRD) discharge to atmosphere whether directly or via a downstream destructive device that results in one or more of the following four consequences:
 - Liquid carryover;
 - Discharge to a potentially unsafe location (e.g. resulting in exposure to flammable or toxic mixtures or contact with an ignition source);
 - An on-site shelter-in-place;
 - Public protective measures (e.g. road closure);
- A PRD discharge quantity greater than the threshold quantity shown in appendix 2 in any one-hour period
- A release of material greater than the threshold quantities described in appendix 2 in any one-hour period.

3. Calculation Methodology

3.1 Unit of measure

Number per operational hours

3.2 Calculation

$$\text{Tier 1 \& 2 PSI Frequency Rate} = \frac{\text{MAT}[\text{No. of Tier 1 \& Tier 2 Process Safety Events}] \times 200,000}{\text{MAT}[\text{Operating Hours}]}$$

Total work hours, including employees and contractors at operational sites within the organisational scope.

3.3 Changes from previous years

Reporting period has changed from Year to Date (YTD) to Monthly Annual Total (MAT) – a rolling average over the previous 12 months.

4. Data quality, collection and reporting frequency

4.1 Data quality

A Group Process Safety Event (PSE) review and assurance process exists in order to minimise the inaccuracies in the process safety event data that is recorded and reported in myHSES, as far as is practicable. This is done to a level that allows stakeholders to assess Process Safety performance with reasonable confidence. In addition to this, the review process will ensure that the Group Process Safety function holds an auditable record of all year to date PSE's.

4.2 Data Collection

Basis of Reporting 2017

All relevant data is collected and reported as required to be in line with HSES-STD-03. The Process Safety Event Reporting Support Tool is used to assist those reporting an event to determine whether it is a process safety event, and if it is which tier it should be reported as under API RP 754. Process Safety hours worked are manually submitted to Group from tagged process safety assets.

4.3 Reporting Frequency

Data is reported monthly to Group HSES by each business unit.

Brand Net Promotor Score (NPS) Overview

1. Metric Overview

Brand NPS is a new metric that was rolled out in 2017 encompassing six business units (BUs).

All consumer facing BUs reviewed and agreed to adopt Brand NPS as a key customer metric and measurement of the health of the relationship the customer has with us from January 2017.

The metric is reported externally as part of our Interims and Prelims activity. It is also used in the annual report. It is not however included in the executive remuneration KPIs (previous NPS schemes remain in place and are covered separately in this document).

There are several compelling reasons as to why Brand NPS was adopted across all Geographies:

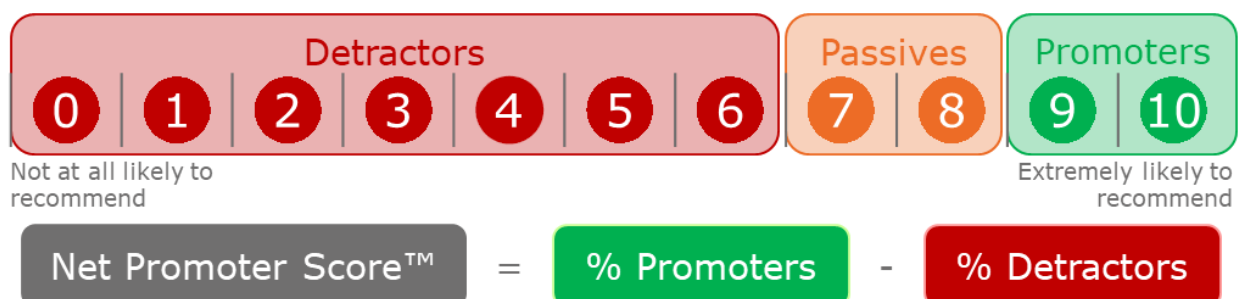
- Brand NPS is a holistic measure in a customer’s relationship with a company, driven by perceptions of internal and external factors. This umbrella measure is strongly linked to the customers’ view of the company proposition and by default will encompass lower level interactions measured by Journey or Touchpoint NPS.
- The customers’ perception with an organisation remains important irrespective if the relationship is an ongoing contractual one or a one-off interaction (e.g. one-off fix). For one off fixes our aim should be to drive repeat business so Brand NPS remains relevant.
- The adoption of Brand NPS will not replace existing focus on other measures, e.g. Touchpoint/ Journey NPS will still exist as key metrics within each organisation.

2. KPI Description

NPS measures the willingness of a respondent to recommend a company, its products or services. NPS is a widely-recognised business metric and has been shown to be linked with company growth.

NPS is calculated by categorising customers into three groups based on how they answer the question: “How likely is it that you would recommend [brand / company] to family, friends or colleague?”. The question is displayed to respondents (customers) with labels above the scale: 0: Not at all likely - 10: Extremely likely. The score is calculated using the below method.

Figure 1: How NPS is calculated



UK Home Brand Net Promoter Score (NPS)

1. Scope

UK Home Brand NPS measures customer advocacy among residential customers of British Gas, Sainsbury's Energy and Dyno; this includes customers with no recent interaction with the business.

British Gas customers within scope are Energy and Home Services. Within energy we report on Duel Fuel / Single Fuel customers, within Home Services we report on Contract / On Demand customers. For Sainsbury's Energy we report on Energy customers and for Dyno we report on Home Services customers.

UK Home Brand NPS is calculated from one survey carried out by a market research agency (Hall & Partners) which is representative of residential customers. End of year score is based on monthly weighted 6 month rolling score up to December 2017. This is to ensure robustness and eliminate any spikes in monthly survey data.

2. Calculation methodology

UK Home Brand NPS is calculated monthly by calculating the percentage of promoters for the last 6 months, the percentage of detractors for the last 6 months, and subtracting detractors from promoters. This is done for each brand (British Gas, Sainsbury's Energy and Dyno) and the 3 scores weighted to create the consolidated UK Home Brand NPS.

The weightings are applied to the British Gas, Sainsbury's Energy and Dyno NPS data to reflect customer numbers, which are taken from SAP CRM, to create the UK Home Brand NPS. This is expressed as one overall figure rather than a percentage.

Within the British Gas component of the UK Home Brand NPS, further weightings are applied to ensure that the results are representative of residential customers and as such are weighted based on customer life stage (Young Sharers/Couples/Singles, Families, Empty Nesters/Active Retired, and Elderly), product holding (Energy or Services).

There are no weightings within the Sainsbury's Energy and Dyno scores.

The current monthly total completed surveys among **British Gas** residential customers are ~1,200 (6-month average based on ~7,200). Year end is 6-month period to December 2017*.

The current monthly total completed surveys among **Sainsbury's Energy** residential customers are ~40 (6-month average based on ~240). Year end is 6-month period to December 2017**.

The current monthly total completed surveys among **Dyno** residential customers are ~50 (6-month average based on ~300). Year end is 6-month period to December 2017**

**As of November 2017, the total British Gas customer sample has been halved to ~600 (6-month average based on ~3,600).*

*** As of November 2017, the number of competitor interviews will be halved to ~20 surveys per month for Sainsbury's Energy (6-month average based on ~120 surveys and ~25 surveys per month for Dyno (6-month average based on ~150 surveys).*

3. Data quality, collection and report frequency

3.1 Data collection and reporting frequency

Interviews are conducted online via an external research agency. Interview quotas are set on British Gas product holding (e.g. Energy and Services contracts). Corrective weights are added to the final British Gas data to ensure the data represents the customer base.

Fieldwork takes place daily. Approx. 1,200 interviews* with British Gas residential customers, 40 interviews* with Sainsbury's Energy customers, and 50 interviews* with Dyno customers are completed monthly. Hall & Partners recruits customers from third party online panels (Research Now, Toluna and Your Word/YWN), while surveying them and collating the resulting data using their CAWI (Computer-Assisted Web Interviewing) tool, Askia Vista.

Customers surveyed in the last month for any British Gas survey are excluded from the sample, as are customers who have completed the Brand NPS survey itself within the last six months.

The UK Home Brand NPS figure is published to the business monthly as a rolling 6-month figure.

**As of November 2017, the number of interviews will be ~600 per month for BG (300 BG Energy Customers and 300 BG Home service customers), 20/month for Sainsbury's Energy and 25/month for Dyno.*

*** As of November 2017, the number of competitor interviews will be halved to ~650 respondents per month.*

3.2 Data quality and review

Hall & Partners are not tied to a single sample panel provider. This means they can negotiate the best prices with suppliers, driving efficiencies for British Gas. Hall & Partners can cherry-pick the optimal combination of partners. Sample suppliers are selected based on their expertise and market coverage.

All data is checked at various key stages of the study each month. Data is cleaned each week to ensure smooth running fieldwork. Live survey data is monitored on a weekly basis so that any poor respondents can be removed. These respondents are replaced while in field.

Our data cleaning criteria includes:

- Removing speeders: respondents are removed if they complete the survey in less than 33% of the median length of interview.
- Removing incomprehensible open-ends: Hall & Partners review the data from our open-ended questions and identify any respondent who entered don't know, left blank or entered an unintelligible answer.
- Un-engaged respondents: looking at respondent behaviour within surveys to make sure they are engaged and completing truthfully. Hall & Partners do these by looking at more than one factor, i.e. straight liners who also have poor open end responses.

In addition to our quality control Hall & Partners have in place additional checks on our data which include:

- RDG checks – Hall & Partners run dummy data before fieldwork commences and thoroughly check routing and logic to ensure the script is set-up correctly.
- Soft launch live data checks – after we achieve 10% of the required sample we check live data. These data are checked by both our DP team and the account teams.
- Ensuring the interim tables are thoroughly checked to correct any issues in the set-up earlier rather than later and checking the final data (un-coded and coded) at the end.

- Running a final check of the data after implementing coded data.
- Checking base sizes to ensure the correct number of respondents are attained for each question.
- Check response scale punches for attribute batteries to be sure they are correct (e.g., 1 to 5 scale should have punches 1 to 5) and do not require flipping (so that 1=low scale point and 5=high scale point).

North America Home Brand NPS

1. Scope

Brand NPS measures advocacy for a representative sample of current customers at a non-specific point in the customer lifecycle. Brand NPS depicts general customer sentiment and is primarily utilized for top line brand tracking and overall business performance trending.

For North America Home (Direct Energy [DE] NAH) brand NPS is measured for both Energy and Home Services lines of business. Energy and Home Services measures are also combined on a customer holdings basis to generate an overall NA Home Brand NPS score.

NAH Brand NPS is a composite based on Energy and Services/Home Protection Brand measures reporting as a composite six-month weighted average.

The NA Home NPS metric measures customers across each operating unit and region. The table below outlines the scope of the metric and indicates the type of measurement used.

Table – Brand NPS Scope Metrics and Type of Measurement Used

Line of business	Measurement	Method	Region(s)	Brands/Markets
DER – Residential Energy	Brand NPS	Online Survey via email	Texas US North Canada	<ul style="list-style-type: none"> ▪ Texas (Direct Energy, First Choice Power, Bounce Energy, CPL Retail Energy, WTU Retail Energy) ▪ Canada (Direct Energy brand, Alberta competitive only) ▪ USN (Direct Energy brand in CT, DC, DE, IL, IN, MA, MD, MI, NJ, NY, OH, PA). Gateway brand in DC, MD, NY, NJ, PA, VA.
DES – Residential Home Services	Brand NPS	Online Survey via email	All	<ul style="list-style-type: none"> ▪ Airtron ▪ Direct Energy Alberta ▪ Clockwork brands (One Hour Heating and Air, Benjamin Franklin Plumbing, and Mister Sparky Electric) ▪ Direct Energy Protection Plans (DEPP) Serviced by Clockwork & 3rd Party Brands ▪ Direct Energy Solar ▪ Home Warranty of America (HWA) ▪ AWHR

2. Calculation Methodology

A Brand NPS score is calculated by each line of business. 1) Calculations for DER Brand NPS are first conducted on a regional basis to show a NPS regional score, and then combined with other regions using weightings based on customer count to produce a line of business NPS score. 2) DES Brand NPS scores are calculated at the Organization level and are then combined on a customer weighted basis to generate an overall DES score. 3) NA Home Brand NPS combines the monthly score for Energy and Services on a customer holdings basis to generate an overall NAH Brand NPS score.

3. Data quality, collection and report frequency

3.1 Reported Measures

The NPS score is calculated by adding all the promoters, divided by the total sample for the period, and adding all the detractors, divided by the total sample for the same period. A score is produced by subtracting the resulting percentage of detractors from the percentage of promoters and multiplying by 100.

Six Month Weighted Average NPS is calculated as a weighted average of the monthly NPS scores earned over the six-month period based on monthly sample size.

The full NA Home NPS score is calculated by multiplying each business units NPS score for the monthly period against a previously determined weighting based on customer holdings and adding the totals together. The formula below shows the calculation:

NA Home Brand NPS = (Residential Energy NPS x customer count%) + (Residential Services Brand NPS x customer count%)

NA Home Brand Sample size equals the sum of the completed NPS responses applicable to Residential Energy and Residential Services Brand NPS programs in the period.

3.2 Data Collection – Residential Energy Brand NPS

For 2017, the Energy Brand NPS metric was collected via email method conducted by a third-party research agency, VirtuaTel. Measurement campaigns are conducted monthly via an established questionnaire.

DE provides the agency with a full sample of qualifying DE customer records by region and brand. Data management aligns to industry best practices with the research agency performing all necessary data hygiene and list management rules, for example ensuring no duplications exist. The agency collates interview responses and provides summary scoring and raw data to the respective Direct Energy team who verifies the calculations for final NPS scores. NPS scores exclude “don’t know” responses and are cleansed of any errors should they exist.

Survey participants are screened for eligibility based on being a current customer and not an employee of the company. As a best practice, the NPS question is the first question presented in the survey interview. Participants are selected as a random sample of current customers comprising a representative overall brand population by region and commodity, where applicable. Surveys are conducted for all brands and markets serviced by residential energy operating unit excluding prepaid lines of business.

Participants are selected as a random sample of customers where service has been on-flow for greater than three months. A customer may be invited to participate in the Brand study only once in six months where a score has not been submitted in the prior 12 months.

3.3 Data Collection – Residential Services/Home Protection Brand NPS

Residential Home Services Brand NPS is collected via online surveys presented by email invitations. All DES Brand surveys are conducted by a third-party research agency, VirtuaTel. Measurement campaigns are conducted monthly via a limited NPS questionnaire.

DE provides the agency with a full sample of qualifying DES customer records. The agency then issues NPS survey invitations for all eligible customers included in the sample file. Data management aligns to industry best practices with the research agency performing all necessary data hygiene and list management rules, for example ensuring no duplications exist. Survey response data is available via the agency hosted reporting portal. The responsible Direct Energy team retrieves response data from the agency portal and completes all necessary calculations to generate final NPS scores. NPS scores exclude any records where NPS score does not exist or brand data is not defined.

Participants are selected as a random sample of customers having eligible service visits or product relationships in the preceding 12-month period. A customer may be invited to participate in a Brand study only once in six months where a score has not been submitted in the prior 12 months.

Ireland Brand NPS

1. Scope

The Ireland (Bord Gáis Energy) Brand NPS is a residential programme run through our market research partner, Kantar Millward Brown (KMB) via their Omnibus survey.

2. Calculation methodology

KMB include a nationally representative sample in their omnibus survey:

- Agents achieve surveys by calling door to door and achieving face to face in home interviews with respondents.
- With each assignment/sampling point, interviewers are given a quota sheet which includes the areas to target e.g. Gender, Age and Social Class Targets. The quotas are set from the 2016 census data.
- KMB measure both gas and electricity Brand NPS scores separately through the omnibus across all suppliers.
- KMB receive on average 100 responses each for Bord Gáis Energy (BGE) customers gas and electricity per month.

3. Data quality and collection & reporting frequency

3.1 Reporting frequency

Brand NPS scores are received monthly from KMB from their omnibus survey and this includes information for all suppliers in Ireland. The overall monthly score reported into Centrica are based on;

- a 6-monthly rolling NPS score for BGE's gas and electricity customers
- the scores are amalgamated/weighted based on customer numbers for gas and electricity
- the customer numbers are held and updated in Feb (for end Dec) and July (for end May).

3.2 Data quality and collection

Interview validation is done to establish that data collected by interviewers has been carried out in accordance with project instructions, including; the number of interviews, participant selection, following questionnaire instructions and general requirements (e.g. as covered in interviewer training / project briefings).

A minimum of 10% of all interviews achieved are validated in accordance with industry standards, and is carried out as soon as possible during and after fieldwork (within 2 weeks of the interview date), and the resulting data processed and/or reported to clients. Work is carried out at KMB's Westgate office (London) by their team of highly trained telephone validators.

In addition to telephone validations KMB also conduct postal validations when they have not been able to reach participants via telephone.

KMB look to review all aspects of interviews and the interviewer is graded on several measures. The results of these checks are fed-back and discussed with interviewers.

The findings feed into planning the allocation of future projects. Every interviewer working on a project should be validated or monitored each quarter where applicable and a minimum of 75% of all interviews they conduct should have a valid telephone number.

For data validation, the team check the data tables versus top line data from the system. The data is then e-tabulated into a deck to minimise human error. The e-tabulated deck is also re-checked manually to make sure all information is pulling in correctly. They have script checking in place to make sure everything is working from an interview POV.

Reported results are viewed and compared to ensure that there hasn't been a significant change. If there has been a significant change then we look at market factors e.g. have other suppliers changed in line, has there been price changes etc.

Connected Home Brand NPS

1. Scope

Connected Home (Hive) NPS measure is based on a representative sample of Hive Active Heating (HAH) customers, who have been with Hive for at least 3 months. The sample is balanced to be representative of the customer base on three measures (outlined below).

For 2017 the Hive NPS measure is UK only. Eventually, other geographies will be included (e.g. North America, Ireland & Italy).

2. Calculation methodology

Interviews are conducted online via an external research agency, Trinity McQueen. Interview quotas are set on: HAH product holding, Multi product holding, and Tenure. Corrective weights are added to the final data to ensure the data represents the customer base.

The table below outlines the weights applied to the data for 2017.

In mid-2017, as part of a review of weighting factors, a new data source was identified. Platform data provides a more accurate picture of Connected Home product holdings than previous source Salesforce, so from September 2017 onwards only platform data was used – definitions and explanations below:

**Salesforce data Provides all direct sales volumes that are attached to Hive customers (but importantly excluded retail sales via the likes of Amazon). This still remains the most accurate source of Tenure data.*

***Platform data Provides a view of all the products which being used on the Hive platform (regardless of where purchased) This is now the most accurate source of data for Product holdings.*

Note: to align with the rest of the Centrica Group NPS reporting, Tenure weights will no longer be applied to Hive Brand NPS from Dec 2017.

3. Data quality, collection and reporting frequency

3.1 Data collection

Fieldwork takes place via an online survey conducted by Trinity McQueen amongst customers who have owned Hive products for 3 months or longer. Fieldwork takes place in the 3rd week of each month. The monthly total completed surveys among Hive customers are ~400 (6-month average based on ~2,400). Year end is 6-month period to December 2017.

Centrica Connected Home Insight team provides a sample file containing customer records (password protected using Keka software), and uploads this to the SFTP with a separate private login and password.

The sample file includes records for customer name, address, email address, customer ID number, product holdings, first installation date. When the file is requested, it already has the following exclusions applied: customers who do not agree to receive marketing emails & employees.

Trinity McQueen invites customers from a client sample file provided by Centrica Connected Home, which only includes customers who have NOT opted out of marketing emails.

Customers invited to take part in the survey in the last month for the Hive Brand NPS survey are excluded from the sample for the following 6 months if the survey is completed or the following 3 months if the invite is ignored or unopened.

3.2 Data Quality Review

On receipt of customer data, it is de-duplicated to remove multiple instances of individuals by comparing emails addresses and customer ids as unique identifiers.

The online survey data collection method filters those ineligible for the survey (those who claim not to own a Hive product or have not owned a Hive product for at least 3 months). Those ineligible to complete the survey are removed from the agencies collected data during the quality assurance process at the end of fieldwork each month.

Once the survey is live, the Centrica Connected Home Insight team is alerted to the fact fieldwork is underway by the receipt of customer contact emails. These are triggered by customers who have taken the survey and have requested a call/ email back from Hive Customer Services to discuss a particular issue (the email is sent directly to the CS team, copying the Insight lead).

During fieldwork, regular quality assurance processes take place to monitor and remove people who are deemed to have paid insufficient attention to the questions asked within the survey, the criteria for removal from the data set is anyone who completes the survey in less than half the median survey completion time.

Open response questions within the survey are monitored and any containing nonsensical or incomplete responses are flagged and the respondents survey data is removed.

Respondents who have provided poor responses to the survey as outlined above are flagged within the sample file and would not typically be invited to future surveys.

Quotas are set during fieldwork to ensure the sample is representative of the Hive customer base. Following fieldwork an agree weighting profile (detailed above) is applied to the data to ensure it matches the current Hive customer profile as closely as possible.

The weighted data is tabulated and checked by both a project manager and a research executive. Following this the data is compiled into a monthly dashboard in PowerPoint where all key measures are reported. All key measures are checked by a senior member of the research team and are cross referenced with the underlying data file for that month and are also reviewed in light of historic data and trends to ensure accurate figures are reported.

Once the reports are received by Centrica Connected Home insight team, the data is sense checked by:

- comparing the NPS across various sub groups of customers in relation to the total score;
- trends are compared versus previous months' years;
- scores are placed in context of external factors like weather (which is an indicator of product usage for heating);
- scores are placed in context of internal factors like customer issues (ie system outages).

If significant shifts are identified that look out of the norm, further investigation is conducted by the Centrica Connected Home Insight Team and Trinity McQueen to further explore the underlying causes and appropriate action taken as a result (e.g. confirmation data is reliable with explanation) before releasing the results internally.

UK Business Brand NPS

1. Scope

UK Business (British Gas Business) commenced reporting of a six-month rolling Brand NPS metric in mid-2016.

UK Business Brand NPS interviews are conducted via CATI methodology by an external research agency, Future Thinking Research. Interviews are conducted on a randomised basis with a quota imposed against SME and I&C customers (reflecting the customer count for each).

The use of CATI over online ensures we capture the required number and spread of time-poor, hard to get hold of business customers, maximising responses for areas where the potential customer universe is small (i.e. I&C customers/prospects). BGB also has a low level of email penetration (c.40%), which is further rationale to use CATI over online methodologies.

Both UK Business customers and 'Rest of Market prospects' (competitor customers) are interviewed on an ongoing basis, with 1,000 BGB customers and 800 prospects interviewed during each quarterly reporting schedule.

2. Calculation methodology

To ensure there are controls on reporting the correct calculations once the survey data is collected, Future Thinking (FT) apply the following checks and controls before and during the analysis:

- All in-house data analysis is undertaken using specialist survey analysis software.
- Before a survey goes live, dummy data is created and then checked to see that all questions are being answered.
- Any scripting instructions, validations and logic as stated in the original questionnaire will be pre-programmed into the individual project set up by trained data processing personnel.

FT produce an initial analytical output via tabulations. At this stage, all created tabulations are checked to ensure the analysis requirements have been followed. These checks are carried out as a minimum: All tables are present as specified; the base is correct and accurately described; the break is checked against source questions; figures for subgroups and nets are correct; statistical analysis is appropriate and correct.

The UK Business Brand NPS figure is then published to the business on a monthly schedule, the score based on a six-month rolling methodology. The reporting of this monthly six-month rolling score is in line with all other Centrica business units.

Each monthly score going in to the six-month figure is weighted by interview base contributing to the rolling score, but in terms of customer weighting the Brand NPS score UK Business does not weight as it only represents SMEs in the metric.

3. Data quality, collection and reporting frequency

3.1 Data collection

In terms of sourcing sample data to use for the study, UK Business customer data is selected and provided by the UK Business CRM Operations / Data Planning team to ensure accurate sampling. For 'Rest of Market prospects', sample is selected by Future Thinking via Experian. All data is provided on a monthly schedule to ensure good data quality in terms of 'freshness'.

BGB sourced data is handled by the CRM Operations / Data Planning team from BGB's own SAP billing system from a SQL Server data source which is +1 day older than the billing system.

The main data selection is carried out by Experian on our behalf. Experian work to BGB's sample brief, compile and supply the data back to us, then the internal checks take place to ensure they've formatted and given us good quality data against the billing system.

Quality controls are put in place by CRM Operations / Data Planning to review and qualify that the variables selected match the billing system directly i.e. Phone Numbers and Contacts relate to the customer etc.

The data is internally stored in SQL as a table, is outputted into a restricted access file share and then shared with Future Thinking via the encrypted Huddle file sharing platform, which is Centrica IS Security approved. Any data sent back to BGB by Future Thinking is also shared via Huddle.

Future Thinking Research (FT) source prospect (Rest of Market) sample from Experian. Specific criteria are used to source data and a random representative sample is obtained from Experian.

Future Thinking have sample and reporting procedures set out in their quality manual (ISO20252:2013), which staff follow on all projects. The manual sets out FT's approach to thoroughly and systematically plan and check all their research materials and deliverables and approach to project management.

3.1 Data quality

In terms of cleaning the data by UK Business before being sent to Future Thinking, items will be taken out of the sample set as not being suitable for delivery for reasons such as invalid and phone numbers of an incorrect length. Review and cleaning of contacts and positioning of the data within the output is also conducted i.e. Post Code in Post Code, Town in Town etc. Customers surveyed within in the previous 4 months for any BGB survey are also excluded from the sample, as are customers who have an open high-level complaint.

Further data checking and cleaning takes place once FT receives the original sample, which is firstly coded into the required groups for interviewing and reporting. Then telephone numbers are checked firstly for within sample duplicates and secondly for bad numbers (incomplete/missing, etc.). If found, these records are removed and added to a separate file which stores all removed records by reason.

Once the cleansing is complete, the DP Processor will carry out their usual sampling processing tasks, such as adding the month and serial IDs for tracking purposes.

FT's approach to receiving customer data from UK Business on the Brand NPS Study and sampling, is detailed below:

- The Password protected sample is securely received via Huddle.
- The sample is then processed by FT's DP processor following the UK Business' NPS processing instructions.
- A researcher will then check the processed sample against FT's UK Business NPS sample checking document. This includes checks such as ensuring all removals are valid and accounted for and telephone numbers are valid.

- Only once the researcher is happy with the sample, will the DP processor load the sample for telephone interviewing.
- During fieldwork, should any customers request to be removed from the sample and future samples, the DP Processor will be informed and their contact details will be added to the “Do not Contact” list.

FT’s ISO20252:2013 quality processes require a Project Report to also be set-up, containing all key information which feeds into the running of the project across our company. This also provides a quality record, for example documenting the various quality checks undertaken, whom by and the director sign-off of each key stage of the project

FT’s approach to quality control checks in reporting include:

- Reporting only begins once the Analysis/Tables are signed off as being correct
- Tables are checked to ensure that the base sizes are correct and that the base sizes for routed questions are correct. Mean scores and NPS scores are manually calculated to ensure that they reflect the tabulated scores
- The weighting on the tables is also checked against the targets.
- Once the tables are finalised, we begin reporting
- Reports/debriefs are populated by one team member
- Another team member will then check the data in the report/debrief
- Commentary is then written by a team member
- The commentary and final draft is then checked by a senior member of the team and any amendments are conducted as appropriate.
- The report / debrief is then shared with the client and any amendments/feedback is actioned and a new draft is re-issued and this process continues until the deck is finalised
- Once the data in the report/debrief has been signed off, a research director will give one final sense check of the data and commentary.

North America Brand Business NPS

1. Scope

North America Business (Direct Energy) measures NPS performance across its Commercial & Industrial (C&I) and Small Business (SB) customers in all markets within the United States.

Table A below outlines the scope of the metric and indicates the type of measurement used.

Table A – Scope of metrics and type of measurement used

Line of Business	Measurement	Regions/Segments
NAB - Business	Brand	<ul style="list-style-type: none"> U.S.A. only Large & medium, and small commercial customer base

2. Calculation methodology

North America Business (NAB) customers are measured via a brand survey in the USA only. The score is then weighted to customer counts under SME and I&C. Each NPS score is calculated by adding all the promoters, divided by the total sample for the period, and adding all the detractors, divided by the total sample for the same period. A score is produced by subtracting the resulting percentage of detractors from the percentage of promoters and multiplying by 100.

Calculated as a weighted average of the monthly NPS scores earned over the six-month period based on monthly sample size.

The full North America Business NPS score is calculated by multiplying each customer segment NPS score for the monthly period against a previously determined weighting based on customer holdings and adding the totals together. The formula below shows the calculation:

$$\text{NA Business Brand NPS} = (\text{SB Brand NPS} \times \text{customer count \%}) + (\text{C\&I Brand NPS} \times \text{customer count \%})$$

3. Data quality, collection and reporting frequency

3.1 Data collection

NAB runs an SSIS package querying our Billing LDC data tables pulling out customers from ERM, P2C, Discovery and Apollo. Customer eligibility is dependent on the following conditions: They must have a company name, have been a customer for at least three months, and are marked active (fully enrolled, on flow, and have not initiated a drop process). Our MDM process identifies a customer billed in multiple billing systems and only includes one service location for that customer in the list provided to ERC. Once the file is generated, it is dropped off onto an FTP site where the file is automatically encrypted to protect the privacy of the data. ERC retrieves the file via the FTP site.

3.2 Data quality

Data is collected through telephone interviews conducted by our vendor, ERC. Daily Red Alerts are reviewed by a member of the quality assurance department to ensure the verbatim captured meets the red alert criteria. They are then sent to DE. Each verbatim comment is reviewed by a member of the quality assurance department and bucketed based on criteria specified by Direct Energy. Once the monthly report has been generated, a member of the client services team reviews the report for consistencies.

The OPS and QA teams host 2 internal calibrations per week with the agents:

- 1 session specifically for new agents
- 1 session for more tenured agents

ERC listens to completed calls for each agent as well as calls that did not result in a complete. They cover what the agents did well and address any opportunities they may have to improve.

Each member of the QA department is assigned a group of agents to monitor each month.

In addition to these monitoring reviews, the agents' calls are monitored by their supervisors daily.

British Gas Journey NPS

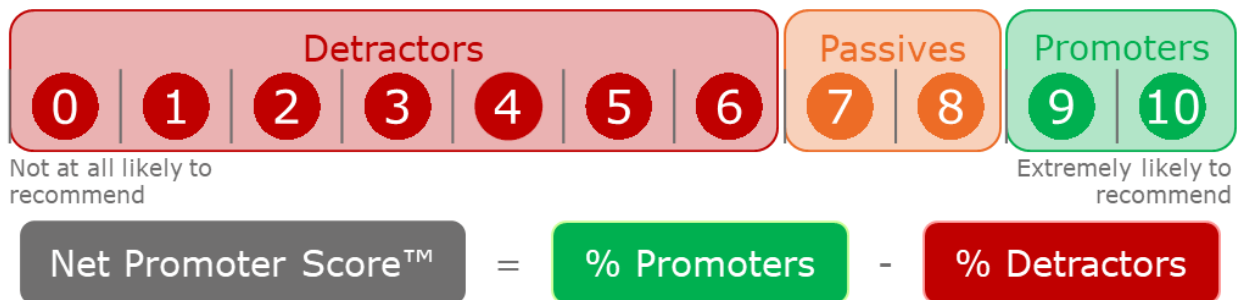
1. KPI Description

British Gas Journey NPS (BGJNPS) is a pre-existing NPS metric that has been reported in prior years and is linked to LTIP.

NPS measures the willingness of a respondent to recommend a company, its products or services. NPS is a widely-recognised business metric and has been shown to be linked with company growth.

NPS is calculated by categorising customers into three groups based on how they answer the question: “How likely is it that you would recommend [brand / company] to family, friends or colleague?”. The question is displayed to respondents (customers) with labels above the scale: 0: Not at all likely - 10: Extremely likely. The score is calculated using the below method.

Figure 1: How NPS is calculated



2. Scope

British Gas JNPS combines scores across Residential (UK Home) Energy, Residential (UK Business) Services and UK Business divisions. The metrics are derived from surveys designed to measure the customer experience at the end of key customer journeys.

Responses for the British Gas UK Home JNPS programme started collecting in October 2014 when the first ‘tactical survey journeys’ went live, with further journeys going live in 2015. The UK Home JNPS programme combines scores across UK Home Energy and UK Home Services.

UK Business responses started collecting in 2013, this solution was designed as an email based contact NPS solution, built around 8 key customer journeys. This was launched in 2 phases, timed around the implementation of a new billing and CRM system; phase 1 launched before its implementation and phase 2 afterwards. When the UK Home (formerly BGR) JNPS programme launched, the UK Business surveys were integrated into the overall survey. This included Business Energy and Services. In February 2016, the Energy sample moved to an automated solution (like the Services sample) meaning surveys invites are now sent following the closure of a query in SAP and a quote generated via Inbox Management.

3. Calculation methodology

NPS is calculated in the Maru/edr portal using the ‘brand advocacy’ modifier (a modifier allows the end user to amend the statistic). This is widely used but manual calculation checks on the scores are often conducted.

For all UK Home JNPS scores, the metric is reported monthly and it is a weighted rolling 3-month score. The score is calculated by subtracting the percentage of promoters for the most recent 3 months from the percentage of detractors for the most recent 3 months. The target score is based on performance in December.

For all UK Business JNPS scores, the metric is reported monthly and it is the calendar month score. The target score is based on performance in December.

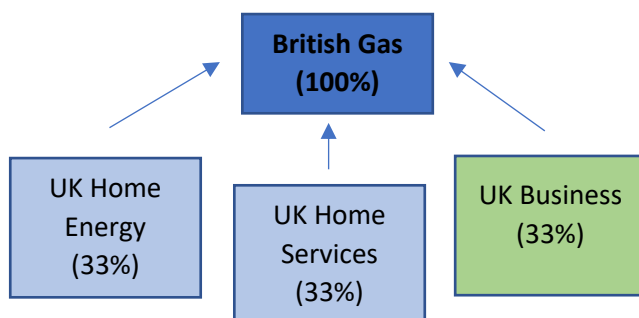
Weighting continues to be applied to the UK Home NPS scores but not for UK Business (this was stopped from 2016 due to the removal of the local government schemes and the impact of not weighting was deemed to be low).

The UK Home weighting scheme is reviewed on an annual basis to ensure it accurately reflects the customer base and includes any newer survey journeys. The Debt and On Demand survey journeys were included while the Change Preference survey journeys removed (due to surveys no longer collecting). The Moving Home quaternary journey level weighting was also removed in preparation for improvements to the customer journey (the 2017 weighting is now based at the survey level).

In 2016 we identified an issue with the reported NPS for Billing, Annual Statement and DD Reassessment. Although the data is triggered by customers who contacted British Gas post one of these experiences, we found some customers were feeding back on other contact reasons (e.g. engineer visit). Consequently, the score we had been reporting for Bill, Annual Statement and DD Reassessment was not fully representative of that experience for these 3 sub-journeys. This was corrected by isolating the impact, correcting the past data and engaging stakeholders.

British Gas also report an overall British Gas JNPS score which is based on an equal weighting of the UK Home Energy, UK Home Services and UK Business scores. This remains unchanged (see Figure 4 below).

Figure 4: British Gas Score Composition



3.1 Types of measurement

The British Gas JNPS is made up of NPS scores obtained from customers after they have reached the end of key customer journeys. This allows us to measure the impact of the entire experience.

Table B – Outlines types of measurement used

Metric	Measurement Type	Composition/Inputs
(1) British Gas JNPS	Weighted average of 3 scores	UK Home Energy JNPS, UK Home Services JNPS, UK Business JNPS
(2) UK Home Energy NPS	Weighted average of scores across 4 journeys	Shop, Join, Use and Help, Change. Weights based on volume of customers going through each journey. Use & Help is based on weighted average of sub-journeys. Weights based on volume of customers going through each sub-journey.
(3) UK Home Services JNPS	Weighted average of scores across 4 journeys	Shop, Join, Use and Help, Change. Weights based on volume of customers going through each journey.
(4) UK Home Overall JNPS	Weighted average of scores across Energy & Services	UK Home Energy JNPS, UK Home Services JNPS
(5) UK Business JNPS	-	There is no current weighting in place.

There are exclusions to the above metrics, these are:

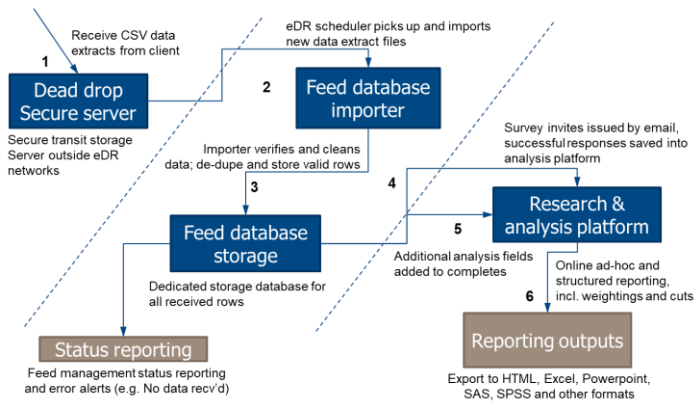
- The UK Home NPS scores exclude Energy Leave and Energy Services.
- The UK Business NPS scores exclude Debt, Silent Bill and Complaints.

4. Data quality, collection and reporting frequency

4.1 Data collection

The study is carried out by our agency partner Maru/edr (formerly eDigitalResearch) but all sample data is provided by British Gas. Customers are invited to take part in an online survey via email. A typical data process flow diagram can be found below:

Typical Data Flow Diagram

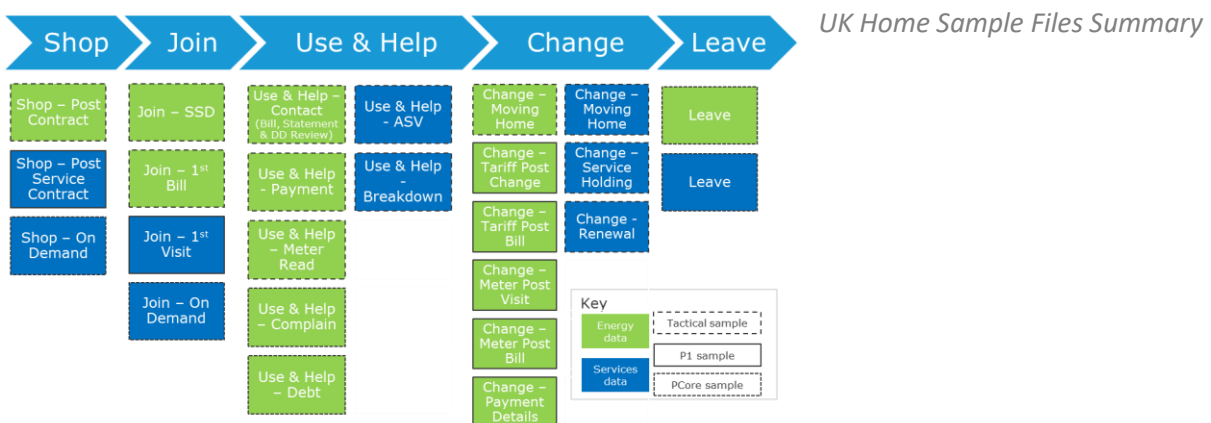


Any information processed by Maru/edr on behalf of British Gas is stored and processed within the Maru/edr technology platform, in their private hosting network in Reading, UK. This information is encrypted at rest (on disk), and in transit (over networks and the Internet) to prevent eavesdropping and unauthorised disclosure. Information is backed up regularly, in an encrypted format, and transferred off-site to another Maru/edr facility within the UK. This ensures that recovery from disaster or corruption is possible.

Survey responses are collected in real time and survey data is accessible 24/7 via an online portal called Kato (formerly HUB). Key stakeholders have access to the portal but overall access is controlled via Single Sign On. Training on how to use the portal is available to the team, when needed.

4.1 Data quality

For all UK Home surveys, British Gas supply a daily feed of Energy and Services customers split across 25 different sample files which are sent securely via sftp. The files provided can be found in the figure below.



Before the data reaches Maru/edr, it passes through Business Rules/Exclusions which are managed by British Gas, this is to ensure we only survey the relevant customer groups. British Gas maintain the 90 day no contact rule but Maru/edr feed in this process. Maru/edr do however conduct some deduping in their system over a 30-day period (after this time UK Home files are deleted), against the UK Business surveys and the Email survey.

The data must be provided to Maru/edr in the agreed formats otherwise the files will not be processed by the Maru/edr system. The sample files are subjected to a number processing rules including:

- deduping
- prioritisation of processing order
- discard rules to save sample
- validation checks across a subset of columns
- volume controls (min/max limit on the number of rows)

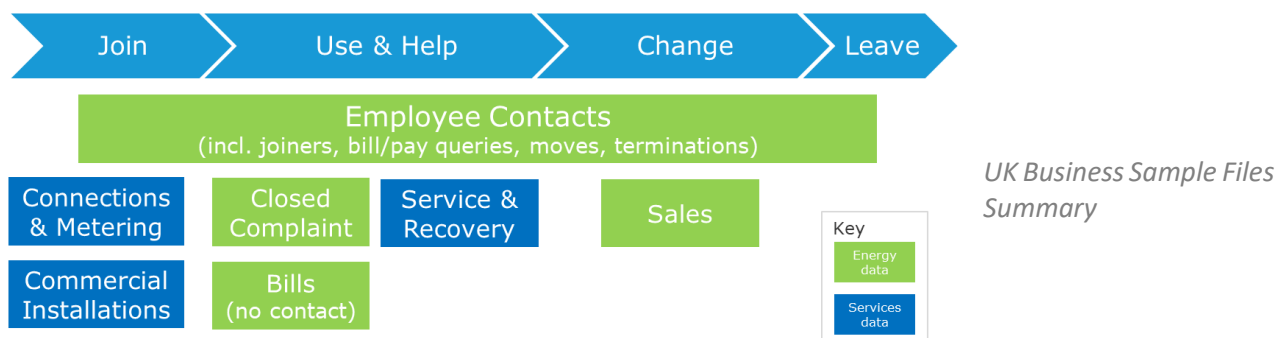
If any of these rules are not met, then the file will fail to process. In this instance an error notification is sent to the Maru/edr Operations team to action/escalate as appropriate.

In addition to the automated checks, the Maru/edr Operations team carry out post collection checks on the file provision and sample volumes in the form of:

- Bi-weekly sample file checks
- Weekly volume checks (and escalation of issues to main contact)
- Bi-monthly sample report

4.2 UK Business Data Quality and Collection

For all UK Business surveys, British Gas supply a feed of Energy and Services customers split across 7 different sample files. The Employee and Sales files are provided every working day while the other files are provided on a weekly basis. The sample files are provided securely via sftp or uploaded directly to our portal. The files provided can be found in the figure below.



Before the data reaches Maru/edr, it passes through Business Rules/Exclusions which are managed by British Gas, this is to ensure we only survey the relevant customer groups. Maru/edr manage the 90 no contact rule and duping extends across the UK Home surveys (UK Home JNPS up to 30 days and UK Email).

The data must be provided to Maru/edr in the agreed formats otherwise the files will not be processed by the Maru/edr system. The sample files are subjected to a number processing rules including:

- deduping
- discard rules to save sample
- validation checks across a subset of columns

If any of these rules are not met, then the file will fail to process. In this instance an error notification is sent to the Maru/edr Operations team to action/escalate as appropriate.

In addition to the automated checks, the Maru/edr Operations team carry out post collection checks on the file provision and sample volumes in the form of:

- Weekly sample file checks (and escalation of issues/missing files to main contacts)
- Monthly sample report

4.3 UK Business Reporting and Quality Checking

Automated push reports are provided on a basis containing unweighted data (some times more frequently). The Business team have access to several real-time dashboards.

The data is reported monthly in 2 auto-populated PowerPoint packs and a shorter, more targeted Narrative pack is produced shortly after by the Maru/edr Client Servicing team. The Maru/edr Client Servicing team also produce quarterly insight presentations. UK Business NPS scores exclude Debt, Complaints and Silent Bill as these scores are used information and tracking purposes only.

Direct Energy NPS

1. KPI Description

1.1 Direct Energy (DE) NPS

DE NPS (a combination of North America Home and North America Business NPS scores) is a pre-existing NPS metric that has been reported in prior years and is linked to LTIP.

1.2 Brand NPS

Brand NPS is a holistic measure in a customer's relationship with a company, driven by perceptions of internal and external factors. This umbrella measure is strongly linked to the customers' view of the company proposition and by default will encompass lower level interactions measured by Journey or Touchpoint NPS.

The customers' perception with an organisation remains important irrespective if the relationship is an ongoing contractual one or a one-off interaction (e.g. one off fix). For one off fixes our aim should be to drive repeat business so Brand NPS remains relevant.

2. Scope

2.1 North America Home

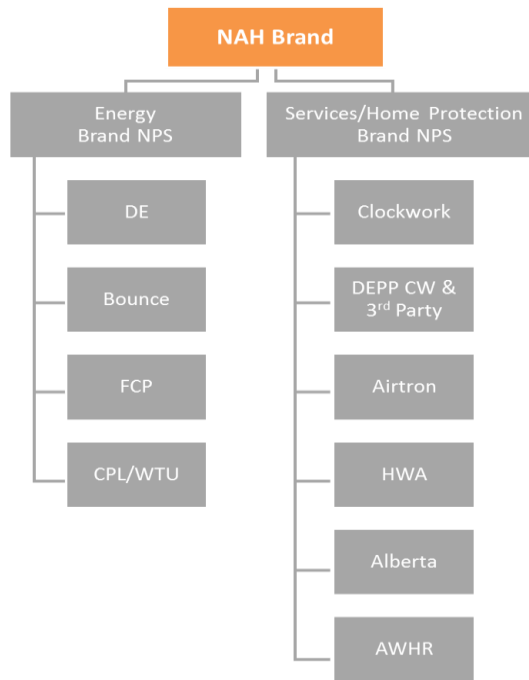
North America Home (DE NAH) measures NPS performance across the Residential Energy and Services business units for brand tracking and operational uses as described in this document. NAH adopted new standards for reporting brand NPS in 2016 in conjunction with the formation of the NAH organization as well as to align with overall Centrica group common operating model practices.

Brand NPS measures advocacy for a representative sample of current customers at a non-specific point in the customer lifecycle. Brand NPS depicts general customer sentiment and is primarily utilized for top line brand tracking and overall business performance trending.

Brand NPS is measured for both Energy and Home Services lines of business. Energy and Home Services measures are also combined on a customer holdings basis to generate an overall NA Home Brand NPS score.

Brand NPS has been measured for DER Residential Energy dating back to 2004. The Brand NPS measure was newly introduced for both Home Services and NA Home in 2016 in conjunction with the creation of the NA Home organization and to align with Centrica group standards for NPS performance measurement.

NA Home Services began measuring brand performance in April 2016. NA Home Overall Brand NPS was first reported in July 2016.



2.2 North America Home Services Touchpoint NPS

NAH touchpoint NPS is collected after a customer interaction with the services businesses;

- Direct Energy Home Services Alberta
- Clockwork and Airtron Services
- Home Warranty of America (HWA)
- Direct Energy Solar
 - NAH had a change in strategy for DE Solar as of July 12th, no longer measuring NPS through TouchPoint or Brand from August onwards. There was no impact to the overall NPS score, since Solar is only .15% of the overall weighting. The delta was reweighted and applied across the other brands.
- Direct Energy Protection Plan (DEPP)

2.3 North America Business

North America Business (DE NAB) measures NPS performance across its Commercial & Industrial (C&I) and Small Business (SB) customers in all markets within the United States.

The table below outlines the scope of the metric and indicates the type of measurement used.

Table A – Scope of metrics and type of measurement used

Line of Business	Measurement	Regions/Segments
NAB - Business	Brand	<ul style="list-style-type: none"> • U.S.A. only • Large & medium, and small commercial customer base

3. Calculation Methodology

3.1 NAH Brand NPS

A Brand NPS score is calculated by each line of business.

- 1) Calculations for DER Brand NPS are first conducted on a regional basis to show a NPS regional score, and then combined with other regions using weightings based on customer count to produce a line of business NPS score.
- 2) DES Brand NPS scores are calculated at the Organization level and are then combined on a customer weighted basis to generate an overall DES score.
- 3) NA Home Brand NPS combines the score for Energy and Services on a customer holdings basis to generate an overall NAH Brand NPS score.

3.2 NAH TouchPoint NPS

DES Touch Point NPS scores are calculated for each of six primary lines of business. These scores are then combined on an established customer holdings basis to generate a weighted NPS measure for the overarching DES organization.

DER Touch Point NPS scores are calculated for each region, Texas and US North, and overall on a pure response basis.

3.3 NAB Brand NPS

NAB customers are based on the brand survey in the U.S.A. only. The score is then weighted at 65% for small companies and 35% for mid-sized and large companies. Each NPS score is calculated by adding all the promoters, divided by the total sample for the period, and adding all the detractors, divided by the total sample for the same period. A score is produced by subtracting the resulting percentage of detractors from the percentage of promoters and multiplying by 100.

The Direct Energy NPS measure is the combination of NPS figures for Direct Energy Residential Brand NPS weighted 50%, Direct Energy Services Contact NPS weighted 30% and Direct Energy Business Brand NPS weighted 20%. The score is calculated by the percentage of customers defined as promoters (scoring 9-10) minus the percentage defined as detractors (scoring 0-6).

4. Data quality, collection and reporting frequency

4.1 Data collection

For 2017, the Energy Brand NPS metric was collected via email method conducted by a third party research agency, VirtuaTel. Measurement campaigns are conducted monthly via an established questionnaire.

DE provides the agency with a full sample of qualifying DE customer records by region and brand. Data management aligns to industry best practices with the research agency performing all necessary data hygiene and list management rules, for example ensuring no duplications exist. The agency collates interview responses and provides summary scoring and raw data to the respective Direct Energy team who verifies the calculations for final NPS scores. NPS scores exclude “don’t know” responses and are cleansed of any errors should they exist.

Survey participants are screened for eligibility on the basis of being a current customer and not an employee of the company. As a best practice, the NPS question is the first question presented in the survey interview. Participants are selected as a random sample of current customers comprising a representative overall

brand population by region and commodity, where applicable. Surveys are conducted for all brands and markets serviced by residential energy operating unit excluding prepaid lines of business.

Participants are selected as a random sample of customers where service has been on-flow for greater than three months. A customer may be invited to participate in the brand study only once in six months where a score has not been submitted in the prior 12 months.

4.1.1 Data Collection – Residential Home Services Brand NPS

Residential Home Services Brand NPS is collected via online surveys presented by email invitations. All DES Brand surveys are conducted by a third-party research agency, VirtuaTel. Measurement campaigns are conducted monthly via a limited NPS questionnaire.

DE provides the agency with a full sample of qualifying DES customer records. The agency then issues NPS survey invitations for all eligible customers included in the sample file. Data management aligns to industry best practices with the research agency performing all necessary data hygiene and list management rules, for example ensuring no duplications exist. Survey response data is available via the agency hosted reporting portal. The responsible Direct Energy team retrieves response data from the agency portal and completes all necessary calculations to generate final NPS scores. NPS scores exclude any records where NPS score does not exist or brand data is not defined.

Participants are selected as a random sample of customers having eligible service visits or product relationships in the preceding 12-month period. A customer may be invited to participate in a Brand study only once in six months where a score has not been submitted in the prior 12 months.

4.1.2 Data Collection – Touch Point Home Services NPS

Direct Energy Home Services Alberta

Alberta Canada data is collected through the daily execution of email NPS surveys the day following the MOT customer interaction. All eligible customers (not on Do Not Contact list) with an email address are surveyed. The email vendor, Relation 1, delivers daily response files to Direct Energy. The survey execution files and the response files are loaded daily to database tables.

Clockwork and Airtron Services

Clockwork and Airtron customers are managed similarly to Alberta with the exception that only mail surveys are conducted for Airtron with 25% sampling of Service and 100% sampling of install. For Clockwork, majority of surveys are conducted for all service and install jobs when the customer's email is available; mail surveys are executed only for the install customers who do not have an email address. For Clockwork, email surveys are processed by a marketing research agency, Relation 1. For both Clockwork and Airtron, printed surveys are generated and processed by a print vendor, RR Donnelly. The survey execution files and the response files are loaded daily to database tables.

Home Warranty of America (HWA)

For HWA, an email survey is sent to every homeowner who had a claim in which a vendor (contractor) was assigned. The data is collected, and results of those surveys are stored in database tables. Every Monday an automated job queries the above referenced tables, and sends an encrypted NPS file to the Customer Insights and Analytics team.

Direct Energy Solar

Each Direct Energy Solar customer is invited to participate in a Touch Point satisfaction survey at the point their new solar installation is connected to the energy grid, thus marking a completed installation. Surveys

invitations are presented via email generated directly from DE Solar Salesforce CRM and Marketo email solution. Survey results are stored in company tables and queried by DE Solar personnel. NPS scores are calculated and conveyed to responsible Direct Energy team members for inclusion in company NPS reporting.

NAH had a change in strategy for DE Solar as of July 12th, no longer measuring NPS through TouchPoint or Brand from August onwards. There was no impact to the overall NPS score, since Solar is only 0.15% of the overall weighting. The delta was reweighted and applied across the other brands.

Direct Energy Protection Plan (DEPP)

Direct Energy Protection Plan (DEPP) customer surveys are conducted based on whether services were performed by Clockwork branded technicians or third party contracts. In each case surveys are delivered via email and are conducted online.

In the case of Clockwork services, surveys reflect the Clockwork Brand (OH, MS, BF) who serviced their appointment. Survey invitations are generated by a marketing research agency, Relation 1, who provides a response file daily to Direct Energy that is loaded to NPS database tables.

DEPP customers not serviced by a Clockwork brand contractor are invited to participate in a DEPP branded survey. These email survey invitations are generated internally by DE via batch processes managed in the Buffalo Grove operations site. The survey execution files and the response files are loaded daily to database tables.

Table – DES Touch Point NPS Survey Methods by LOB and Survey Management Group

Line of Business	Survey Method	Survey Management Entity
DE Home Services Alberta	Email	Relation1
Airtron	Print Mail	RR Donnelly
Clockwork	Email/Print Mail	Relation 1/RR Donnelly
DE Protection Plan (DEPP)	Email	<ul style="list-style-type: none"> • Serviced by CW • Service by 3rd Party
DE Solar	Email	<ul style="list-style-type: none"> • Relation1 • DE Internal
Home Warranty of America (HWA)	Email	DE Internal
AWHR	Post Card	BFC

4.1.3 Data Collection – Residential Energy Touch Point NPS

US Residential Energy customers may receive invitation to complete a Touch Point survey following contact with the customer care centre. Records are selected based on a qualifying agent disposition placed on the account during the service interaction and where a valid email address exists on the account and the customer has not opted-out of email communication.

Survey sample files are generated daily by DE via automated batch processing and are submitted to the survey vendor, VirtuaTel for invitation processing. Data management aligns to industry best practices with the research agency performing all necessary data hygiene and list management rules, for example ensuring no duplications exist.

A single email invitation may be sent to a customer daily based on a qualifying interaction. Surveys invitations are controlled by customer email address to ensure a single customer does not receive multiple surveys associated to unique accounts or multiple contacts.

The Touch Point survey consists of various satisfaction and diagnostic questions applicable to the customer service experience including the NPS question in standardized format. Completed survey responses are captured in real time and response data is posted to an online reporting portal offered by the solution provider, Virtuatel.

Performance reporting is generated within the hosted reporting portal utilizing standard NPS calculation methodology.

The NA Home NPS metric measures customers across each operating unit and region. The table below outlines the scope of the metric and indicates the type of measurement used.

Table – Brand NPS Scope Metrics and Type of Measurement Used

Line of Business	Measurement	Method	Region(s)	Brands/Markets
DER – Residential Energy (Contributes 77% weighting to NAH Brand NPS)	Brand NPS	Online Survey via email	Texas US North Canada	-Texas (Direct Energy, First Choice Power, Bounce Energy, CPL Retail Energy, WTU Retail Energy) -Canada (Direct Energy brand, Alberta competitive only) -USN (Direct Energy brand in CT, DC, DE, IL, IN, MA, MD, MI, NJ, NY, OH, PA). Gateway brand in DC, MD, NY, NJ, PA, VA.
DES – Residential Home Services (Contributes 23% weighting to NAH Brand NPS)	Brand NPS	Online Survey via email	All	-Airtron -Direct Energy Alberta -Clockwork brands -(One Hour Heating and Air, Benjamin Franklin Plumbing, and Mister Sparky Electric) -Direct Energy Protection Plans (DEPP) Serviced by Clockwork & 3rd Party Brands -Direct Energy Solar -Home Warranty of America (HWA) -AWHR

Table – Touch Point NPS Scope Metrics and Type of Measurement Used

Line of Business	Measurement	Method	Region(s)	Brands/Markets
DER – Residential Energy	Touch Point NPS	Online Survey via email	US Inbound Customer Care	<ul style="list-style-type: none"> ▪ Texas (Direct Energy, First Choice Power, Bounce Energy, CPL Retail Energy, WTU Retail Energy, First Choice Power Power-to-Go, Direct Energy Power-to-Go, CPL Prepaid) ▪ USN (Direct Energy brand in CT, DC, DE, IL, IN, MA, MD, MI, NJ, NY, OH, PA. Gateway brand in DC, MD, NY, NJ, PA, VA.
DES – Residential Home Services	Touch Point NPS	Online Survey via email Print Mailer	All	<ul style="list-style-type: none"> ▪ Direct Energy Services Alberta ▪ Airtron ▪ Clockwork brands (One Hour Heating and Air, Benjamin Franklin Plumbing, and Mister Sparky Electric) ▪ Home Warranty of America (HWA) ▪ Direct Energy Protection Plans (DEPP) Serviced by Clockwork & 3rd Party Brands ▪ Direct Energy Solar ▪ AWHR <p>2016 Baseline Reporting:</p> <ul style="list-style-type: none"> ▪ American Water Heater Rentals (AWHR) ▪ Direct Energy Protection Plans (DEPP) Serviced by Third Party Contractors

4.2 Weighting

The full NA Home NPS score is calculated by multiplying each business units NPS score for the monthly period against a previously determined weighting based on customer holdings and adding the totals together. The formula below shows the calculation:

$$\text{NA Home Brand NPS} = (\text{Residential Energy NPS} \times 76.87\%) + (\text{Residential Services Brand NPS} \times 23.13\%)$$

NA Home Brand Sample size equals the sum of the completed NPS responses applicable to Residential Energy and Residential Services Brand NPS programs in the period.

The full NA Business NPS score is calculated by multiplying each customer segment NPS score for the monthly period against a previously determined weighting based on customer holdings and adding the totals together. The formula below shows the calculation:

$$\text{NA Business Brand NPS} = (\text{SB Brand NPS} \times 65\%) + (\text{C\&I Brand NPS} \times 35\%)$$

4.3 Data quality and review

Various NPS metrics are reported for each program, but only the 12-month weighted average NPS is reported for DE NPS (NAH + NAB). Each NPS score is calculated by adding all the promoters, divided by the total sample for the period, and adding all the detractors, divided by the total sample for the same period.

A score is produced by subtracting the resulting percentage of detractors from the percentage of promoters and multiplying by 100.

Twelve Month Weighted Average NPS is calculated as a weighted average of the monthly NPS scores earned over the twelve-month period based on monthly sample size.

The full **NA Home** NPS score is calculated by multiplying each business units NPS score for the monthly period against a previously determined weighting based on customer holdings and adding the totals together. The formula below shows the calculation:

$$\text{NA Home Brand NPS} = (\text{Residential Energy NPS} \times 76.87\%) + (\text{Residential Services Brand NPS} \times 23.13\%)$$

NA Home Brand Sample size equals the sum of the completed NPS responses applicable to Residential Energy and Residential Services Brand NPS programs in the period.

The full **NA Business** NPS score is calculated by multiplying each customer segment NPS score for the monthly period against a previously determined weighting based on customer holdings and adding the totals together. The formula below shows the calculation:

$$\text{NA Business Brand NPS} = (\text{SB Brand NPS} \times 65\%) + (\text{C\&I Brand NPS} \times 35\%)$$

Data is collected through telephone interviews conducted by our vendor, ERC. Daily Red Alerts are reviewed by a member of the quality assurance department to ensure the verbatim captured meets the red alert criteria. They are then sent to DE. Each verbatim comment is reviewed by a member of the quality assurance department and bucketed based on criteria specified by Direct Energy. Once the monthly report has been generated, a member of the client services team reviews the report for consistencies.

The OPS and QA teams host 2 internal calibrations per week with the agents:

- 1 session specifically for new agents
- 1 session for more tenured agents

ERC listens to completed calls for each agent as well as calls that did not result in a complete. They cover what the agents did well and address any opportunities they may have to improve.

Each member of the QA department is assigned a group of agents to monitor each month.

Full time employees – 10 per month

- Week 1: 2 complete, 1 non-complete
- Week 2: 2 complete, 1 non-complete
- Week 3: 2 complete, 1 non-complete
- Week 4: 1 complete

Part time employees – 6 per month

- Week 1: 1 complete, 1 non-complete
- Week 2: 1 complete
- Week 3: 1 complete, 1 non-complete
- Week 4: 1 complete

In addition to these monitoring reviews, the agents' calls are monitored by their supervisors daily.

Employee Engagement

1. KPI Description

Employee Engagement is defined as ‘the extent to which employees are motivated to contribute to business success, and are willing to put effort in to accomplishing tasks important to business goals’. It is generally measured annually, by an external provider (Centrica currently uses IBM Kenexa) via a survey delivered either online or via paper copy to all employees.

2. Scope

All direct Centrica employees are invited to complete the Centrica ‘Our Voice’ Employee Engagement survey. Contractors, third party and agency employees are not invited to take part.

The administration of the survey is agreed annually and is generally administered annually unless otherwise agreed by the Centrica Executive Committee (CEC). The survey generally runs for three weeks although some business units require additional time to allow shift workers to take part.

3. Calculation methodology

The employee engagement index is calculated using four items from the survey and include advocacy, pride, loyalty and satisfaction. Together they contribute towards business performance.

- I would recommend this company as a great place to work.
- I rarely think about looking for a new job with another company.
- I am proud to work for my company.
- Overall, I am very satisfied with my company as a place to work.

The questions are answered using a 5 point scale:

- Strongly Disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly Agree

Employee engagement is presented as a percentage agree score which combines the results of options 4 and 5 above. The results are compared to the IBM global external benchmark so that the relative strength of the scores can be identified.

4. Timeframe

Each year the timing of the survey flexes to accommodate the needs of each business.

In 2017, Centrica Storage (CSL), Energy Marketing and Trading (EM&T) and Exploration & Production (E&P) ran the survey for longer than other business units in order to accommodate the shift pattern of their employees.

Business	Survey opened	Survey closed
CSL, E&P and EM&T	19 September	24 October
Other Centrica businesses	19 September	10 October

5. Languages and geography

The survey is administered in English and the primary countries of distribution are:

1. The United Kingdom
2. Norway
3. The Netherlands
4. America
5. Canada
6. The Republic of Ireland

6. Data quality, collection and reporting frequency

6.1 Data quality

Employee data for all Centrica employees, including the organisational hierarchy is initially extracted from the Centrica Workday database. This data is then checked, verified and updated manually by teams placed within each business to ensure accuracy.

The survey is administered on-line.

IBM invite employees to take part, via an e-mail invitation.

6.2 Data collection

To maintain anonymity responses are captured directly by IBM.

6.3 Reporting frequency

Reports are developed annually for the Centrica Executive Committee and leadership teams. Detailed reports, down to business unit level, are cascaded.

Line manager reports are prepared for every line manager who achieves 5 or more completed surveys. Line manager reports are stored on the IBM Viewpoint database and line managers receive log-in details to enable them to download their reports once available. Line managers receive a short summary report in PowerPoint, a longer more detailed pdf report and a separate excel report which contains the free text comments. This final report will only be available if line managers achieve at least 30 comments.

Diversity (Female and Male Employees)

1. KPI Description

Diversity (female and male employees) is the measure of Centrica's ratio of male to female employees – this metric is designed to highlight differences by other key metrics.

2. Calculation Methodology

Gender information is entered by a new hire when completing their profile in Workday. The calculation of a gender ratio is generating by comparing the disclosed gender information expressed as a percentage. For example, 54% Male: 46% Female. Gender can also be amended by an employee at a later stage which would be reflected in the Workday reports immediate effect.

2.1 All employees

The percentage is calculated based on 1-8 management levels present in Workday.

2.2 Senior managers

To calculate the female percentage of senior managers, the calculation methodology is as above, but based on management levels 1-5 only in Workday.

3. Scope

Gender is measured for all Employees and reported across all countries live with Workday which makes up the majority of the Centrica workforce:

- United Kingdom
- United States
- Canada
- Ireland
- Norway
- Netherlands

3.1 Exclusions

Employees based in India, Trinidad and Tobago. Given that these employees represent less than 1% of the 2017 headcount; these are not considered to be material from a Group absence perspective. Contractors, agency workers, third party staff, outsourced staff.

4. Data quality, collection and reporting frequency

4.1 Data quality

Quality is reliant on the accuracy and timeliness of the data being input into Workday.

4.2 Data collection

Data is collected via live data entry within Workday. When a Worker is hired, this information is collected and becomes available in reports once all necessary steps in the hire process are successfully completed. Employees are responsible for entering and maintaining personal information via Workday.

4.3 Reporting frequency

Diversity data can be added / adjusted daily via Workday, the data is then immediately available through readily configured Workday reports. As Workday reports are self-serve, the flow of data is instantaneous upon the completion of the transaction.

Retention

1. KPI Description

The retention rate is the complementary ratio to the unplanned or regrettable attrition rate and is the proportion of the workforce that remains with the business in a given reporting period expressed as a percentage. There is likely to be some level of correlation between retention rates and Employee Engagement scores, in that a fully engaged workforce is more likely to stay in the business.

2. Scope

Headcount and leavers are measured and reported across all countries live with Workday which makes up the majority of the Centrica workforce:

- United Kingdom
- United States
- Canada
- Ireland
- Norway
- Netherlands

2.1 Exclusions

Employees based in India, Trinidad and Tobago. Given that these employees represent less than 1% of the 2017 headcount; these are not considered to be material from a Group absence perspective.

Commission only employees, non-executive directors and 3rd Party Contingent Workers across all territories.

3. Calculation Methodology

Leaver information is processed via a configured Workday business process and is available as a value used in this calculation.

The attrition rate is the number of unplanned leavers in a given reporting period expressed as a percentage of the active headcount throughout the period and is calculated:

Unplanned Leavers / (Period End Active Headcount + All Terminations for Period)

The retention rate can thus be determined as being 100% minus the voluntary attrition rate (e.g. if the attrition rate is 9%, the retention rate is 91%).

Within Workday all terminations are assigned a primary termination: “Voluntary”; or “Involuntary”. Unplanned leavers are workers who have left the business due to a personal decision which is not within the control of Centrica. These are known as “Voluntary” leavers. Examples within Workday include: Resignation (Personal/Career Progression) & Death in Service.

Period End Active Headcount refers to all individuals undertaking an activity and paid through Centrica’s payroll on a full and part-time basis which includes fixed term contract staff and 2nd Party Contingent Workers at the period end but excludes commission only employees, non-executive directors and 3rd Party Contingent Workers (see below for exclusions). Active Headcount in the period is calculated by taking Period End Active Headcount and adding all terminations in the period (both voluntary and involuntary).

Examples of involuntary leavers include: Fixed Term Contract Termination, Business Divestment, Elimination of position, Mutual Consent.

4. Data quality, collection and reporting frequency

4.1 Data quality

Quality is reliant on the accuracy and timeliness of the data being input into Workday.

4.2 Data collection

Managers are responsible for termination data submission via live transactions within Workday. When a user profile or a headcount adjustment request is raised and the amendment transaction is successfully approved, the information immediately becomes available through a Workday report for which the above calculation is done at user run time.

4.3 Reporting frequency

Leaver information is entered via Workday as and when information becomes known, the data is then immediately available through readily configured Workday reports. As Workday reports are self-serve, the flow of data is instantaneous upon the completion of the transaction.

Absence

1. KPI Description

Employee sickness absence relates to the number of days lost to sickness absence in a given reporting period.

2. Scope

Absence is measured and reported across all countries live with Workday which makes up the majority of the Centrica workforce:

- United Kingdom
- United States
- Canada
- Ireland
- Norway
- Netherlands

2.1 Exclusions

Employees based in India, Trinidad and Tobago. Given that these employees represent less than 1% of the 2017 headcount; these are not considered to be material from a Group absence perspective. Contingent workers across all territories are out of scope.

3. Calculation Methodology

Absence information is entered by an employee into Workday. An employee is anyone who is enrolled on Centrica payroll system. The absence information is then picked up as a reportable metric in Workday. Absence by full time equivalent (FTE) is calculated by dividing the sum of entered absence time in calendar days by the total number of FTE.

4. Data quality, collection and reporting frequency

4.1 Data quality

Quality is reliant on the accuracy and timeliness of the data being input into Workday.

4.2 Data Collection

Data is collected via live transactions within Workday. When absence is entered via an absence business process, the information becomes available in reports once all the necessary steps in the process have been successfully completed. Employees and their managers are responsible for entering absence via Workday.

4.3 Reporting Frequency

The information is reported externally on a yearly basis for the purpose of the Corporate Citizenship reporting. It is also used as an internal management metric whereas the information is available daily through readily configured Workday reports. As Workday reports are self-serve, the flow of data is instantaneous upon the completion of the transaction.

Total Carbon Emissions (Scope 1 and 2 Emissions)

1. KPI Description

The reporting of the company's total carbon emissions in our Annual Report and Accounts is a legal requirement under The Companies Act 2006 (Strategic Report and Directors' Reports) Regulations 2013. It also enables us to understand our greenhouse gas (GHG) footprint, a pre-requisite for the successful management of such emissions.

2. Scope

	Included in Scope	Excluded from Scope
Geography	<ul style="list-style-type: none">• Global	<ul style="list-style-type: none">• N/A
Organisational	<ul style="list-style-type: none">• All wholly or partially owned reporting entities across Centrica²	<ul style="list-style-type: none">• Reporting entities where Centrica has no equity• Independent franchisees of Centrica owned franchises
Operational	<ul style="list-style-type: none">• Scope 1 emissions from the combustion of fuels in the premises, vehicles, equipment and machinery owned/ controlled³ by the reporting entity⁴• Combustion of hydrocarbons in flaring• Release of unburnt hydrocarbons• Scope 2 (Location Based) emissions associated with the electricity, heat and steam we import for use in our premises, vehicles, equipment and machinery.	<ul style="list-style-type: none">• Emissions released during the combustion of biologically sequestered carbon – biomass and biofuels

² Where Centrica has only part equity in a reporting entity, (e.g. joint ventures), the GHG is pro-rated to reflect Centrica's share. Whilst Centrica follows the equity share approach described by the GHG Protocol; we also draw from the IPIECA guidelines, to assist in the application of the GHG Protocol to our complex organisational structures. Accordingly, Centrica applies the company's equity share to the organisation that controls the assets and not the assets themselves

³ Owned can mean owned or exclusively leased by the reporting entity (refer below).

⁴ The equity approach is applied to the reporting entity and does not necessarily reflect the actual ownership of the assets used by that reporting entity. For example, we lease many of the offices and vehicles that we use, but we report them as scope 1 and apportion the emissions based on the equity we have in the reporting entity that uses them.

Table 1 – Scope 1 & 2 Emissions

In scope	Out of scope
Offices and Depots	
Scope 1	Scope 1
Emissions from offices that we wholly or partially own or lease <ul style="list-style-type: none"> • Gas use • Diesel use • Refrigerant loss 	Emissions from offices that we sub-lease to others Biofuels used onsite to generate heat and power for on and offsite use. (Sequestered carbon is reported as a separate indicator)
Scope 2	Scope 2
Emissions from offices that we wholly or partially own or lease <ul style="list-style-type: none"> • Imported power (whether from Centrica or other supplier) 	Emissions from offices that we sub-lease to others
Fleet	
Scope 1	Scope 1
Emissions from: <ul style="list-style-type: none"> • Commercial fleet vehicles owned or leased by Centrica • Company cars (business travel only) • Rental cars where the fuel is claimed back as expensed mileage 	Emissions from: <ul style="list-style-type: none"> • Contractor’s vehicles • Personal mileage in company cars, including commuting • Rental car fuel use unless claimed back as expensed mileage • Grey Fleet (personally owned cars used for company business) • Emissions from biofuels in forecourt fuel
Power Generation Reporting Entities	
Scope 1	Scope 1
Emissions from power generating entities where we have equity: <ul style="list-style-type: none"> • Carbon dioxide (CO₂) from fuel combustion & fugitive emissions • Fugitive GHG (incl. methane (CH₄) from gas turbines, Sulphur Hexafluoride (SF₆) leakage, fugitive natural gas emissions, refrigerant leakage (HFCS and PFCS); emissions of Nitrous Oxide (N₂O)) and Nitrogen trifluoride (NF₃)) 	N/A

Scope 2	Scope 2
Imported power for plant consumption (whether from Centrica or other supplier)	N/A

Hydrocarbon Production & Storage Reporting Entities

Scope 1	Scope 1
GHG emissions from reporting entities where we have equity:	N/A
<ul style="list-style-type: none"> • Carbon dioxide (CO₂) from fuel combustion including flaring • Venting and fugitive GHG (incl. methane (CH₄) from gas turbines, Carbon dioxide (CO₂) from hydrocarbon processing, Sulphur Hexafluoride (SF₆) leakage, fugitive natural gas emissions, refrigerant leakage (HFCS and PFCS); emissions of Nitrous Oxide (N₂O) and NF₃ 	

Scope 2	Scope 2
Imported power for plant (whether from Centrica or other supplier)	N/A

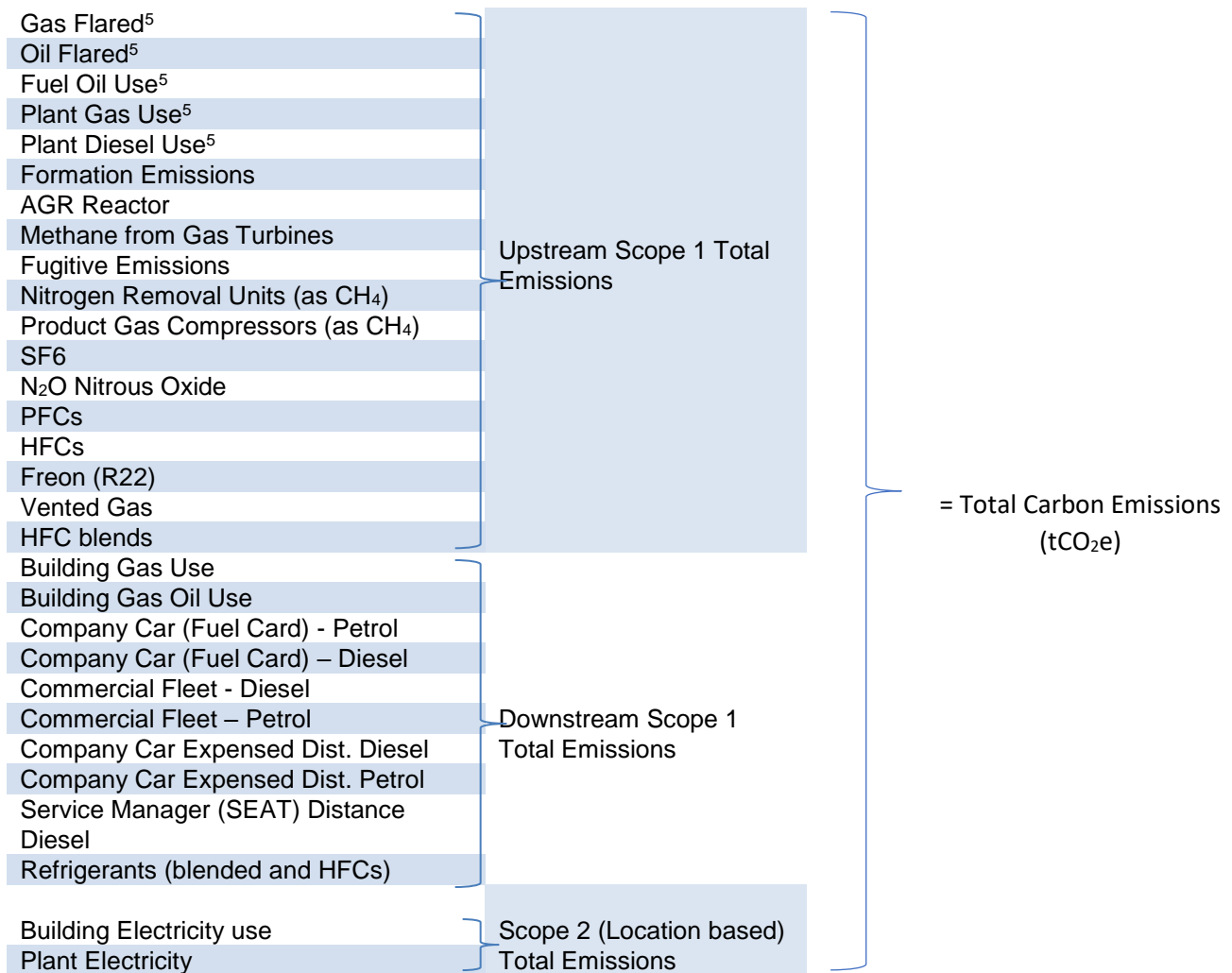
3. Calculation methodology

3.1 Unit of measure

Tonnes of carbon dioxide equivalent (tCO₂e)

3.2 Calculation

Table 2: Constituent indicators



4. Data quality, collection and reporting frequency

Centrica plc HSES Reporting Standard 03 sets out the detailed data collection process. Data is collected quarterly and biannually via a global online reporting system.

5. Assumptions

Site specific emission factors are used where available and when there is site specific variation (e.g. unprocessed natural gas) to convert activity data into GHGs. Where there is negligible site specific variation, standard emission factors, from published sources are applied, including:

- [The Greenhouse Gas Protocol](#) – Revised Edition from the WRI and WBCSD
- Guidelines to [DEFRA/DECC's GHG Conversion Factors for Company Reporting](#) by DEFRA
- [United States Energy Information Administration](#) (EIA)
- [eGrid](#)

⁵ Where EU ETS data is available, this value will replace the individual emission indicators for: Gas Flared, Oil Flared, Fuel Oil Use, Plant Gas Use, Plant Diesel Use.

- [Environment Canada 'National Inventory Report 1990-2006'](#)

Where activity data is submitted in energy units (e.g. kWh of gas consumption), the emission factor is based on the assumption that the energy units are the gross calorific value, unless specified otherwise. This is based on natural gas suppliers typically quoting gas consumption in gross energy units and natural gas being the main fuel source used.

Internal Carbon Footprint

1. KPI description

Centrica has committed to reduce its internal carbon footprint by 20% by 2025 based on a 2015 base year. The proposed ten-year target replaces Centrica’s previous eight-year target which was successfully achieved at the end of 2015 (20% reduction by 2015 compared to 2007).

The target encompasses the carbon emissions associated with our offices, commercial vehicles, company cars, air and rail travel.

ESS (UK) and ESS (NA) represent over 90% of the target. Accordingly, specific targets apply within those businesses underpinned by detailed planning and governance.

2. Scope

2.1 Period

2015 base year to 2025 target year. All data years are calendar years (January to December).

2015 has been selected as the base year for the 2025 ICF as it was the end year for the previous ICF target and as such will ensure a continuously targeted drive to reduce our internal carbon footprint emissions over an eighteen-year period.

2025 is the end year. This means that the emissions associated with the 12 months of 2025 will be compared to those of 2015 to determine the overall reduction.

	Emissions included in scope	Emissions excluded from scope
Geography	<ul style="list-style-type: none"> Global 	<ul style="list-style-type: none"> N/A
Organisational	<ul style="list-style-type: none"> All in-scope assets and activities associated with the businesses within Centrica plc Organic growth of the existing business which does not involve new assets Activities and assets associated with organic growth or new business that cannot be isolated in the financial accounts 	<ul style="list-style-type: none"> Emissions from new businesses⁶ acquired through merger or acquisition (including equity share) and joint ventures since 31 December 2015 Emissions from new assets⁷ since 31 December 2015 that can be isolated in the financial accounts Emissions from business divestments since 2015
Operational	<ul style="list-style-type: none"> Annual emissions associated with energy and fuel consumption from our occupation of offices, our commercial fleet, our company cars and our business travel 	<ul style="list-style-type: none"> Annual emissions from upstream (gas terminals, power stations, etc.) assets Annual emissions from assets and activities other than listed opposite

⁶ A new line of business that can be individually isolated through the financial accounts (typically through cost codes).

⁷ A new asset is an additional asset, whether additional vehicle or office, which does not replace an existing asset (irrespective of whether it’s a result of new business or organic growth).

Operational – Buildings	<ul style="list-style-type: none"> • Building accommodation: <ul style="list-style-type: none"> ○ North America: Buildings permanently occupied by Centrica personnel, including wholly occupied and partially occupied, owned and leased offices ○ Europe: Buildings permanently occupied by Centrica personnel, including wholly occupied and partially occupied, owned and leased offices, that have metered energy consumption⁸ • Emissions associated with the use of gas, biodiesel; biomass and electricity for servicing the office 	<ul style="list-style-type: none"> • Buildings on sites⁹ and for the express purpose of upstream generation and storage (gas terminals and power stations) • Offices and other facilities owned or leased by Centrica but not occupied by Centrica employees • European buildings that do not have metered energy consumption • Home-worker offices • Use of ozone depleting substances (ODS) within office facilities¹⁰
Operational - Commercial fleet	<ul style="list-style-type: none"> • Utility vehicles used by Centrica, including downstream service engineers and upstream site based vehicles • Centrica branded vehicles used by long-term contractors working under Centrica management control • Shuttle buses¹¹ 	<ul style="list-style-type: none"> • Non-road legal vehicles, including heavy plant • Franchisee commercial vehicles • Vehicles used by contractors that do not meet the criteria opposite • Emissions from ESS (UK) Smart Metering commercial vehicles¹²
Operational - Company cars	<ul style="list-style-type: none"> • Emissions from cars owned, leased or hired by Centrica for use by Centrica employees for business purposes • Emissions from ‘cash allowance’ grey fleet¹³ 	<ul style="list-style-type: none"> • Emissions associated with personal mileage • Emissions from ‘non-cash allowance’ grey fleet • Instances where fuel costs are claimed, as opposed to mileage¹⁴

⁸ The majority of North American offices did not have metered data available at the time of the development of the 2015 baseline, hence whilst the un-metered office emissions cannot be accurately tracked, they were considered too material to exclude

⁹ These are excluded as the emissions are reported with the operational emissions

¹⁰ Emissions of ODS are not considered to have a material impact on the total footprint and therefore are not included.

¹¹ Buses used to transport Centrica staff to and from Centrica offices and local public transport/amenity facilities

¹² ESS (UK) Smart Metering vehicles are out of scope as the nature of the business unit means that the number of vehicles will increase and then decrease to zero during the target period, therefore, their inclusion would misrepresent the fleet emission reductions without adding value to the target.

¹³ Grey fleet are privately-owned vehicles used for business purposes. A cash allowance can be offered in lieu of a car in certain circumstances. Historically, where this has been the case, it has been difficult to differentiate the emissions from a company car and hence they are included in the ICF

¹⁴ Claiming fuel costs as opposed to mileage for business purposes is not in line with Centrica expenses policy and therefore is a rare occurrence and considered immaterial.

Operational - Business travel	<ul style="list-style-type: none"> • Air¹⁵ and rail travel undertaken by Centrica employees booked via corporate travel providers¹⁶ 	<ul style="list-style-type: none"> • Air and rail travel undertaken by Centrica employees not booked via corporate travel providers • Taxis • Buses
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New businesses and new assets are excluded to allow for growth whilst allowing for consistency of scope and on-going comparability with our 2015 baseline business.

Furthermore, we aim to ensure new businesses have best technology applied from the outset (e.g. a low emission vehicle fleet), thus limiting the opportunity for further significant improvement during the target period.

Out of scope assets and activities will be accounted for separately. In only excluding future growth that can be isolated within the accounts, a conservative approach is taken and our on-going carbon footprint is over-estimated rather than under-estimated.

3. Calculation methodology

3.1 Unit of measure

TCO₂e

3.2 Calculation

Table 3: Constituent indicators:

Rail	} = ICF (tCO ₂ e)
Building Gas Use	
Building Gas Oil Use	
Office Biofuel (liquid)	
Office Biomass (solid)	
Building Electricity use	
Flights - Short Haul	
Flights - Medium Haul	
Flights- Long Haul	
Company Car (Fuel Card) Volume: Petrol	
Company Car (Fuel Card) Volume: Diesel	
Company Car Expensed Dist. Petrol	
Company Car Expensed Dist. Diesel	
Commercial Fleet - Volume Petrol	
Commercial Fleet - Volume Diesel	
Service Manager (SEAT) Distance Diesel	
Commercial Fleet - Unspecified Fuel	

¹⁵ We exclude Radiative Forcing from the air travel emissions as currently there is very significant scientific uncertainty around the magnitude of the additional environmental impacts of aviation

¹⁶ Bord Gáis do not book travel through corporate travel providers but emissions associated with travel are still reported.

3.3 Base year re-calculation

The 2015 base year emissions will not be re-calculated for mergers and acquisitions (outside scope), but to ensure we do not claim credit for simply down-sizing our business, the base year emissions will be reduced following divestment¹⁷ of any part of the existing business that was in existence during 2015.

This will entail the identification of the in-scope emissions associated with the assets and activities of the divested business and the removal of such, from the 2015 base year emissions.

We recognise that GHG accounting at the individual level can be difficult and that the separation of divested businesses is not always clear cut. Accordingly, to remain credible, a conservative approach will be taken designed to avoid positive bias in the data (i.e. overestimation of the base year footprint) and detailed records maintained for transparency.

Where more accurate data becomes available subsequent to the base year (i.e. a sub-meter is installed in a property), the original estimated data will be reviewed and if appropriate, corrected, back to the base year, based on the more accurate values.

3.4 Base year to end year comparison

The following methodology will be applied to ensure an accurate comparison between the 2015 base year and the 2025 end year.

- The property portfolio, as defined in the boundaries and scope, in existence in 2015 is documented along with the corresponding energy use and GHG emissions. This forms the core property of the 'existing businesses'.
- Should any site close or be vacated, we will cease to account for emissions from the point of vacancy. Historical emissions data will not be removed from the baseline and subsequent years unless the office was vacated due to a divestment. Where vacated sites are directly replaced by a new site(s), the new site will be included in scope from the point of occupation. The replaced site(s) will also stay in scope so that the data during Centrica's occupation is retained.
- The commercial and company car fleet portfolio, as defined in the scope, during 2015 is documented along with the corresponding fuel use and GHG emissions. This forms the core fleet of the 'existing businesses'.
- Business travel is accounted by cost centre. In this way, any travel associated with new, out of scope business can be identified and accounted for discretely.

4. Data quality, collection and reporting frequency

Centrica plc HSES Reporting Standard 03 sets out the detailed data collection process. Data is collected quarterly via a global online reporting system.

5. Emission factors

Emission factors relevant to each region and year will be applied, recognising that a time-lag may be present. The guidance provided on using the emission factors, in association with the emission factors themselves, will be applied unless specifically stated otherwise.

¹⁷ Divestment includes the sale of a going concern and the closure of an operation

The 'Total GHG' direct emission factors are used. These include the global warming potential of carbon dioxide, methane and nitrous oxides. This total GHG approach is most reflective of the company's actual in-scope carbon footprint.

The emission factors used include Scope 1, 2 and 3, but exclude 'out of scope' emissions.

The emissions factors are drawn from the relevant protocols. These will be dependent on:

- The geography of the asset
- The period of the data set
- The fuel source of the emission

The Protocols used include:

- UK GHG Conversion Factors
- Environment Canada Electricity Intensity Tables
- Egrid Summary Tables
- Energy Information Administration (EIA)
- Canada National Inventory Report

LTIP Non-Financial KPI Dashboard

Centrica's remuneration policy was approved by shareholders in April 2015 and set out a Long-Term Incentive Plan, one-third of which is based on a non-financial KPI dashboard, designed to reward sustained high performance over the three-year performance period. Performance against these measures is reported within the Remuneration Report section of the [Annual Report and Accounts 2017](#).

The LTIP non-financial KPI dashboard contains the following equally weighted measures:

- [Significant process safety event \(Tier 1\)](#)
- [Lost-time injury frequency rate \(LTIFR\)](#)
- [British Gas Net promoter score \(NPS\)](#)
- [Direct Energy NPS](#)
- [Employee engagement](#)

Please refer to the relevant sections of this document for the reporting methodologies for these metrics. For each measure, three performance zones have been established representing high, median and low performance. Please refer to table below for details of the respective performance zones for each metric.

The performance zones are represented in the KPI dashboard using the following coloured symbols:

- High performance zone
- Median performance zone
- Low performance zone

Table: LTIP non-financial KPI performance zones

Measures		Performance Zones	
Measure 1	Significant Process Safety Event (Number of Tier 1 events)	High performance zone	Below 3
		Median performance zone	3 to 4
		Low performance zone	Above 4
Measure 2	LTIFR (per 200,000 hours worked) ¹	High performance zone	Below 0.5
		Median performance zone	0.5 to 0.6
		Low performance zone	Above 0.6
Measure 3	British Gas NPS	High performance zone	Above 8pt improvement on prior year performance
		Median performance zone	3pt to 8pt improvement on prior year performance
		Low performance zone	Below 3pt improvement on prior year performance
Measure 4	Direct Energy NPS	High performance zone	Above +35
		Median performance zone	+30 to +35
		Low performance zone	Below +30
Measure 5	Employee Engagement ²	High performance zone	Above 75 th percentile ³
		Median performance zone	Median to 75 th percentile ³
		Low performance zone	Below Median ³

1 For 2015 reporting the unit for LTIFR unit was amended from per 100,000 to 200,000 hours worked, in order to allow for easier industry benchmarking. LTIP performance zones thresholds were therefore amended to reflect this change in unit.

2 In 2017 Centrica's employee engagement survey provider changed to IBM and consequently the survey scoring approach and question set changed. To maintain comparability of scoring for LTIP, all previous questions were retained in the new survey and the LTIP employee engagement score was calculated on the basis of this question set only. The employee engagement score based on the question set for LTIP was 62% favourable for 2017, whilst the score under the new survey model was 52% favourable.

3 As calculated relative to the survey provider IBM's global external benchmark. Benchmark performance percentiles for 2017 are 77% favourable for the 75th percentile and 72% favourable for the median percentile.

Appendices

Appendix 1: Table of Tier 1 threshold quantities

Material Hazard Classification	Threshold Quantity (Outdoor)	Threshold Quantity (Indoors)
TIH* Zone A Materials (e.g. bromine, hydrogen cyanide, phosgene)	5kg	2.5kg
TIH* Zone B Materials (e.g. chlorine, hydrogen sulphide)	25kg	12.5kg
TIH* Zone C Materials (e.g. hydrogen chloride, sulphur dioxide)	100kg	50kg
TIH* Zone D Materials (e.g. ammonia, carbon monoxide)	200kg	100kg
*For advice on toxic inhalation hazards Zones A-D, refer to Group Process Safety Team		
Flammable Gases or Liquids with Initial Boiling Point ≤ 35 °C and Flash Point < 23 °C	500kg	250kg
Liquids with Initial Boiling Point > 35 °C and Flash Point < 23 °C	1000kg	500kg
Liquids with Flash Point ≥ 23 °C (73 °F) and ≤ 60 °C (140 °F) or Liquids with Flash Point > 60 °C (140 °F) released at a temperature at or above Flash Point or strong acids/bases	2000kg	1000kg
The Threshold Quantities above are in line with API 754 - 2010. From 1 January 2018, these will be updated to follow API 754 - 2016.		

Appendix 2: Process Safety Event Reporting Support Tool

PROCESS SAFETY EVENT REPORTING SUPPORT TOOL

This reporting tool is intended to help anyone reporting an event to determine if it is a process safety event and if it is, which tier it should be reported as under API RP 754

Once completed, please save this document and upload it to myHSES in the attachments section in the process safety event

PLEASE ANSWER THE FOLLOWING "YES" OR "NO" FROM THE DROP DOWN BOX

Was there an unplanned or uncontrolled release of any material, including non-toxic and non-flammable materials (e.g. steam, hot condensate, nitrogen, compressed CO2 or compressed air), from a process that results in one or more of the consequences listed	--
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TIER 1 ASSESSMENT

IF THE RESPONSE TO ANY OF THE FOLLOWING QUESTIONS IS "YES" THEN REPORT THE EVENT AS A TIER 1 PROCESS SAFETY EVENT. IF ALL RESPONSES ARE "NO" GO TO TIER 2 ASSESSMENT

Did an employee, contractor or subcontractor suffer a fatality and/or "days away from work" injury?	--
Was there a hospital admission and/or fatality of a third-party	--
Was an officially declared community evacuation or community shelter-in-place declared?	--
Was there a fire or explosion resulting in costs greater than or equal to 25,000 US Dollars for repairs or replacement, clean up, material disposal, environmental remediation and emergency response.	--
Did a pressure relief device (PRD) discharge to atmosphere at a quantity greater than the threshold quantities in Table 1 in any one-hour period whether directly or via a downstream destructive device that results in one or more of the following consequences: - Liquid carryover; - Discharge to a potentially unsafe location e.g. where there is the potential for exposure to flammable or toxic mixtures at or contact with an ignition source); - An on-site shelter-in-place; - Public protective measures (e.g. road closure	--
Was there a release of flammable gas or liquid that exceeds the threshold quantities described in Table 1 in any one-hour period	--

CLICK HERE TO SEE TABLE 1-----> [Table 1](#)

TIER 2 ASSESSMENT

IF THE RESPONSE TO ANY OF THE FOLLOWING QUESTIONS IS "YES" THEN REPORT THE EVENT AS A TIER 2 PROCESS SAFETY EVENT. IF ALL RESPONSES ARE "NO" GO TO TIER 3 ASSESSMENT

Did an employee, contractor or subcontractor suffer a recordable injury	--
Was there a fire or explosion resulting in costs greater than or equal to 2,300 US Dollars for repairs or replacement, clean up, material disposal, environmental remediation and emergency response.	--
Did a pressure relief device (PRD) discharge to atmosphere at a quantity greater than the threshold quantities in Table 2 in any one-hour period whether directly or via a downstream destructive device that results in one or more of the following consequences: - Liquid carryover; - Discharge to a potentially unsafe location e.g. where there is the potential for exposure to flammable or toxic mixtures at or contact with an ignition source); - An on-site shelter-in-place; - Public protective measures (e.g. road closure	--
Was there a release of flammable gas or liquid that exceeds the threshold quantities described in Table 2 in any one-hour period	--

CLICK HERE TO SEE TABLE 2-----> [Table 2](#)

TIER 3 ASSESSMENT

IF THE RESPONSE TO ANY OF THE FOLLOWING QUESTIONS IS "YES" THEN REPORT THE EVENT AS A TIER 3 PROCESS SAFETY EVENT. IF ALL RESPONSES ARE "NO" EVENTS SHOULD NOT BE REPORTED AS PROCESS SAFETY

Was there a loss of primary containment below Tier 2 quantities but above the following thresholds for weeps, seeps and leaks, which are: - Natural Gas ≤ 20%LEL @10cm - H2S < 5ppb at 1m distance or a rotten egg smell @10cm. - Liquids ≤ 4 drips per minute or ≤ 1 litre per 24 hour period	--
Was there a demand on a safety system which prevented a loss of primary containment?	--
Was the safe operating limit/envelope exceeded with a potential for a loss of primary containment?	--
Near miss with the potential for loss of primary containment?	--

NON API754 ASSESSMENT

PLEASE ANSWER THE FOLLOWING "YES" OR "NO" FROM THE DROP DOWN BOX

Was there an unplanned or uncontrolled release of electrical energy from the power generation or transformer process or any directly connected equipment?	--
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ADD ANY COMMENTS IN THE BOXES BELOW TO EXPLAIN YOUR DECISION MAKING

ADD ANY COMMENTS IN THE BOXES BELOW TO EXPLAIN YOUR DECISION MAKING

ADD ANY COMMENTS IN THE BOXES BELOW TO EXPLAIN YOUR DECISION MAKING

ADD ANY COMMENTS IN THE BOXES BELOW TO EXPLAIN YOUR DECISION MAKING

ADD ANY COMMENTS IN THE BOXES BELOW TO EXPLAIN YOUR DECISION MAKING

Basis of Reporting 2017

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