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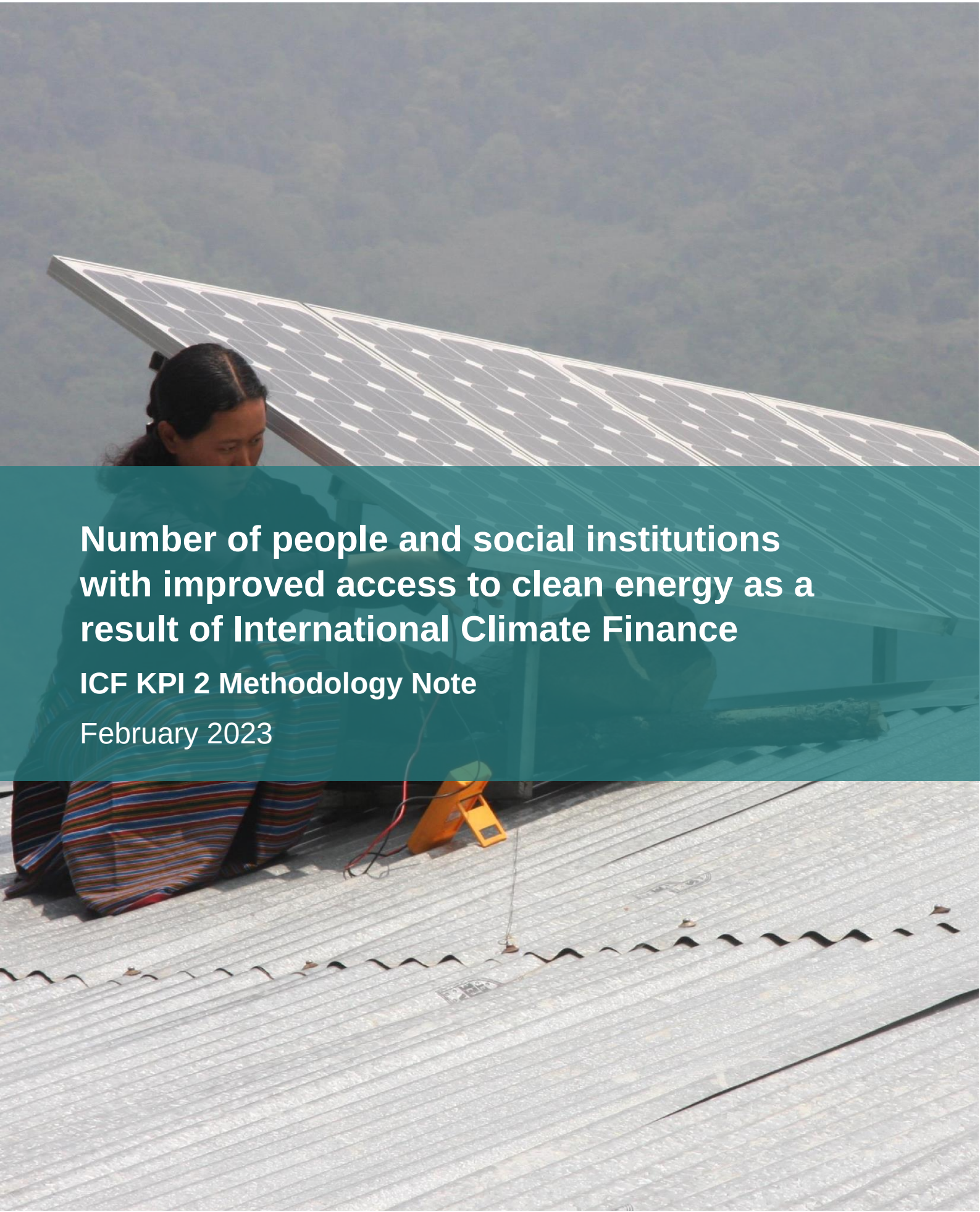

Number of people and social institutions with improved access to clean energy as a result of International Climate Finance

ICF KPI 2 Methodology Note

February 2023

Contents

Photograph from the Asian Development Bank, Bhutan.

Acronyms

Defra	Department for Environment, Food and Rural Affairs
DESNZ	Department for Energy Security and Net Zero
FCDO	Foreign, Commonwealth & Development Office
ICF	International Climate Finance
KPI	Key Performance Indicator
KW	Kilo Watt
MtCO2	Metric Tonnes Carbon Dioxide
MW	Mega Watt
ODA	Official Development Assistance
SDGs	Sustainable Development Goals
TA	Technical Assistance

Number of people and social institutions with improved access to clean energy as a result of ICF

Purpose of the document

International Climate Finance (ICF) is Official Development Assistance (ODA) from the UK to support developing countries to reduce poverty and respond to the causes and impacts of climate change. These investments help developing countries to:

- adapt and build resilience to the current and future effects of climate change
- pursue low-carbon economic growth and development
- protect, restore and sustainably manage nature
- accelerate the clean energy transition.

ICF is spent by the Foreign, Commonwealth and Development Office (FCDO), the Department for Environment, Food and Rural Affairs (Defra), and the Department for Energy Security and Net Zero (DESNZ). This methodology note explains how to calculate one of the key performance indicators (KPI) that we use to measure the achievements of UK ICF. The intended audience is ICF programme teams, results leads, climate analysts and our programme implementing partners. Visit **www.gov.uk/guidance/international-climate-finance** to learn more about UK International Climate Finance, its results and read case studies.

Rationale

Energy access is crucial to development and other services such as education, communication, and refrigeration. Better access to information is contingent on, or enhanced by, energy access.

More efficient cook stoves also have human health and time-saving co-benefits. This is particularly the case for women and children who often suffer more from the negative impact of indoor air pollution and may spend time collecting fuel wood instead of attending to other vital family needs or going to school or playing.

Clean energy should also displace fossil fuels, thereby could result in a reduced burden to the family economy, a substantive reduction in smoke, and lower carbon emissions in the target community and host country.

ICF KPI 2 is an output indicator that measures the reach of UK International Climate Finance's (ICF) climate change programming, by counting the number of people who have improved access to clean energy as a result of ICF intervention. This indicator directly relates to Sustainable Development Goal 7: 'Ensure access to affordable, reliable, sustainable and modern energy for all' and Sustainable Development Goal 13 'take urgent action to combat climate change and its impacts'.

Summary table

Table 1: ICF KPI 2 summary table

Units	Absolute number of people; and absolute number of social institutions
Headline data to be reported	2.1) Number of people with improved access to clean energy as a result of ICF 2.2) Number of social institutions with improved access to clean energy as a result of ICF
Disaggregations	Number of people with improved access to clean energy (2.1) disaggregated by: • Number of people with improved access to clean cooking (2.1.1) • Number of people with improved access to clean electricity (2.1.2) • Number of people with improved access to other clean energy sources (2.1.3) • Data should also be disaggregated[1] by sex, age, disability, and geography. Number of social institutions with improved access to clean energy (2.2).
Revision history	February 2023: • Inclusion of an 'other' category for reporting against 'number of people with improved access to clean energy' • Improved guidance on additionality and attribution • Reduced and updated acronym list • Improved guidance on disaggregations and data quality • Formatting improvements November 2018: • Disaggregated reporting for clean cooking and clean electricity • Additional reporting requirement for the number of social institutions with improved access to clean energy due to the ICF project

[1] As per DFID Action Plan for the Inclusive Data Charter; see also Washington Group on Disability Statistics

Timing	ICF programme teams will be commissioned to report ICF results in spring, according to department-specific processes. Report results for the most recent complete programming year. If reporting lags mean that results are only available more than a year after they were delivered, enter them under the relevant earlier year.
Links across the ICF KPI portfolio	ICF KPI 2 complements ICF KPI 1, which provides a population count of those supported to cope with the effects of climate change as a result of ICF programmes. ICF KPI 2 is linked to ICF KPI 7 (installed capacity of clean energy), as interventions that increase capacity can also increase the access to clean energy. ICF KPI 2 is also linked to ICF KPIs 11 and 12 which monitor public and private finance which can be used to improve access to clean energy. ICF TA 2 counts direct beneficiaries (individuals and organisations) from ICF technical assistance programmes and is a more suitable indicator where ICF programmes are doing something other than capital investment to achieve adaptation results. There is transformational potential within ICF KPI 2, particularly with regards to the possible effect on market systems and the wider effects of improved energy access (such as education), although success will only be evident with a time lag. In this context, ICF KPI 15 is particularly important as a complement to ICF KPI 2.

Technical definition

Clean energy access refers to:

- New household connections to off-grid renewable energy sources such as micro or mini-grids, or solar home systems
- Households that use more efficient cookstoves that materially improve energy efficiency of essential services daily (e.g. air quality, reduced fuel consumption, fuel savings or improved family income)
- Solar lamps and/or solar lanterns with or without chargers

Note that on-grid access is not included in these figures because once energy access is on-grid, it is often difficult to determine the energy source. However, where the on-

grid energy source is known to be clean, we can report on clean energy access based on the on-grid renewable energy sources.

Clean energy is generated from both combustible and non-combustible renewables. Non-combustible renewables include geothermal, solar, wind, hydro, tide, and wave energy. Combustible renewables include biofuels (biogas, bioethanol, biodiesel); biomass products (fuelwood, vegetal waste, pulp and paper waste, animal waste, bagasse); municipal waste (waste produced by the residential, commercial and public service sectors that is collected by local authorities for disposal); and industrial waste.

It is generally not possible to disaggregate grid electricity by source (clean vs. fossil). Furthermore, providing additional energy to the grid does not necessarily translate into improved energy access, unless new connections were simultaneously established in the target populations. This ICF KPI 2 indicator therefore excludes an assessment of on-grid energy access. Any measurements of energy access are likely to be conservative and be a subset of results as improved access to the grid cannot be measured directly.

Methodological summary

ICF KPI 2.1 counts the total number of people with improved access to clean energy. These should be reported as three sub-indicators:

- Number of people with improved access to clean cooking (2.1.1)
- Number of people with improved access to clean electricity (2.1.2)
- Number of people with improved access to other clean energy sources (2.1.3)

The number of social institutions receiving improved access to clean energy should be reported (2.2). For the purpose of ICF KPI 2, ‘social Institutions’ are defined as: schools, universities, hospitals, health centres, government institutions, state owned infrastructure (e.g. water pumps, state owned business centres, etc.), and civil society organisations having physical infrastructure that benefits from clean energy.

If an individual receives improved access to both clean cooking and clean electricity count them ‘twice’: include them under both ICF KPI 2.1.1 and ICF KPI 2.1.2.

The diagram below summarises the ICF KPI 2 Methodology, which is described in more detail in the next section, and in worked examples that follow:

Figure 1: ICF KPI 2.1 Methodological summary

ICF KPI 2.1: Number of people with improved access to clean energy as a result of ICF				
Number of people with improved access to clean cooking as a result of ICF (2.1.1) 1. Check that cookstove is professionally designed (as defined in the next section). 2. Obtain data from programme level monitoring. 3. If necessary, convert household data into total number of people. 4. If necessary, adjust for additionality. 5. Calculate attribution.	+	**Number of people with improved access to clean electricity as a result of ICF (2.1.2)** 1. Check intervention meets minimum Tier 1 for electrification (as defined in the next section). 2. Obtain data from programme level monitoring. 3. If necessary, convert household data into total number of people. 4. If necessary, adjust for additionality. 5. Calculate attribution.	+	**Number of people with improved access to other clean energy sources as a result of ICF (2.1.3)** 1. Check intervention meets criteria (as defined in the next section). 2. Obtain data from programme level monitoring. 3. If necessary, convert household data into total number of people. 4. If necessary, adjust for additionality. Calculate attribution.

Figure 2: ICF KPI 2.2 Methodological summary

ICF KPI 2.2: Number of social institutions with improved access to clean energy as a result of ICF
1. Check intervention meets minimum standards. **2.** Obtain data from programme monitoring. **3.** If necessary, convert household data into total number of people (for 2.1 only) **4.** Adjust for additionality. **5.** Calculate attribution. **6.** Report disaggregated results.

Methodology

The following steps should be followed to calculate number of people and social institutions with improved access to clean energy due to ICF projects. These steps can be applied to both clean cooking (2.1.1) and clean electricity (2.1.2).

1. Check the intervention meets minimum standards

Check that **cookstoves** are professionally designed. This will serve as a proxy measure that they meet minimum safety and emissions standards for cookstoves.

Locally manufactured ('artisanal') cookstoves that do not have a standardised design sometimes offer little or no improvement over a traditional (3stone) fire.

For **electricity**, check that minimum Tier 1 is reached in the Tier system for electrification, as shown in Table 2 below.

For **other clean energy sources,** check the intervention includes clean energy sources for household use. These can include clean energy for heating, cooling, solar lamps and/or solar lanterns with or without chargers.

Table 2: Tier system for electrification

Tier	Services	Typical system
1	Medium bright light and, if possible, limited radio use and telephone charging	Pico Photovoltaic (incl. solar lanterns), battery charging station
2	Bright light, radio, telephone plus use of devices typically requiring tens of watts like TV, video, fan	Solar Home System
3	Tier 2 services, plus use of devices typically requiring a few hundred watts such as rice cookers and refrigerators	Mini Grid
4	Tier 3 services, plus use of devices typically requiring a kilowatt such as water heaters and irons	Limited Grid
5	Tier 4 services plus use of devices typically requiring a few kilowatts such as air conditioners	Grid

2. Obtain data from programme monitoring

Programme-level monitoring data should report either the number of individuals supported, or the number of households and average household size. If household size data is not available, this should be determined from the most recent national census data or from a nationally or sub-regionally representative household survey. See section on **Data quality** below for more details.

The type of support provided i.e. whether clean cooking, clean electricity, both or other should also be reported.

3. If necessary, convert household data into total number of people (for 2.1 only)

If data is collected at the household level, the number of households needs to be converted into the number of people by multiplying by the average household size (as per target country standards for average family).

For household-level interventions, collect age, sex, and disability data on the individuals within each household. If this is not feasible, then estimate the total number of beneficiaries based on typical household size in the target area, and do not infer disaggregations. If local data are not available, then national-level data on household size can be used.

4. If necessary, adjust for additionality

Results are additional if they are beyond the results that would have occurred in the absence of the ICF-supported intervention (known as a business-as-usual counterfactual). To compare results to the counterfactual and account for additionality[2], an allowance needs to be made for households that would have received the product (e.g. solar lantern) without the programme. If available, use an estimate based on household surveys through project/programme monitoring and evaluation. If you are not able to estimate the counterfactual it is suggested to use an 'adjustment factor', which should be high (e.g. 95%) if you are confident your results are additional, and your data quality is good. A lower 'adjustment factor' (e.g. 50%) should be used if you have a lot of uncertainty and there are other partners in the area undertaking similar activities. See supplementary guidance on additionality and attribution.

5. For jointly funded programmes, calculate the UK attribution of results in proportion to funding share

If the UK government is the sole investor in a programme, the full amount of results is attributed to the UK.

If the UK government is one donor among a number of development partners providing funding for a programme, claim results only in proportion to the UK donor share of public co-financing.

In instances where an ICF programme leverages public or private finance that helps to deliver programme results, the share of results associated with any leveraged finance should be attributed to the ICF. Count the leveraged public finance under ICF KPI 11 and the leveraged private finance under ICF KPI 12.

Some funds have multiple investment levels which allow investment both at the fund level and at the individual project level. This means that the initial UK investment in the overall fund blends with project-specific sources of finance further down the delivery chain. For these programmes, attribute results to the UK project by project,

[2] See Annex 2 for definition of counterfactual and additionality.

then sum these to give the total UK results. Where insufficient information exists on project-level finance, UK attribution can be calculated at the fund level.

See supplementary methodology note on additionality and attribution.

Alternative to above methodology: Converting units of low carbon technologies into ICF KPI 2

If only the absolute number of units of low carbon technologies installed are known and there is no household data, then the Our World in Data: Per capita energy consumption data[3] can be used to estimate the number of beneficiaries based on the energy type and country.

Steps 1, 4 and 5 referenced above still need to be followed.

6. Report disaggregated results

The UK Government is committed to the principle that 'every person counts and should be counted'. As a member in the Global Partnership for Sustainable Development Data, we have prioritised four disaggregation axes– sex, age, disability, and geography – which programmes should report for direct beneficiaries. Disaggregation must be based on actual counts; not models or estimates.

Sex

Disaggregate direct beneficiary counts by sex using 2 categories: male and female. Disaggregation should be based on *actual data* that has been observed by the programme's implementing partner, not models or estimates from surveys or elsewhere.

We do not collect or publish sex-disaggregated data using more than 2 categories for safeguarding and data quality reasons. We wish to protect gender minorities from risk of harm in countries where they may experience persecution. Where a beneficiary's transgender, intersex or non-binary status is known, classify according to their gender identity where a 'male' or 'female' designation fits with this. Otherwise leave blank.

Data disaggregation by sex is one of the minimum criteria for scoring a 1 on OECD DAC Gender Marker[4]. The associated guidance states: "Results frameworks and reporting: Gender equality objectives should be integrated into all reporting including annual reviews. Data disaggregation: Programmes reporting key performance indicators (ICF KPIs) 1 and 2 should already be disaggregated by sex, disability, geography, and age."

[3] Our World in Data: Per capita energy consumption data
[4] OECD DAC Gender Marker

Disability
Programmes should incorporate the **Washington Group 'short set'** of 6 disability questions to their population surveys. Anyone who answers 'a lot of difficulty' or 'cannot do at all' to one or more of the six questions should be counted as *disabled*. Anyone who answers 'no difficulty' or 'some difficulty' to all 6 questions is counted as not-disabled.

Geography
Disaggregate direct beneficiary data by geography wherever possible, using 2 categories: urban and rural. In the absence of internationally agreed definitions of urban and rural, follow the definitions set by the national statistics office in the country the programme is operating.

Age
Disaggregate direct beneficiary counts by age using 4 categories: children (age 0-14); youth (age 15-24); adults (age 25-64); and elders (age 65+).

Worked example

Worked example 1 (ICF KP2.1)

Based on a fictitious programme where ICF provided 50% of the finance for a project to provide 1,000 households with solar lanterns.

1. Check that clean cooking and clean electricity meet minimum standards

The solar lanterns fall within Tier 1 of electrification (see Table 2 above).

2. Obtain beneficiary data from programme monitoring

Based on household surveys conducted through programme monitoring, an estimate of 5% of these households would have received solar lanterns anyway, so assume 95% of households were supported in addition to what would have happened without the project/programme.

3. If necessary, convert household data into total number of people (for 2.1 only)

The average household size is taken from national census data for the region and is found to be 5.4 (where this data does not exist, the project should seek to survey a large enough sample to establish average household size, and to enable disaggregation by income level).

Therefore, household size converted into people is 1,000 households × 5.4 average household size = 5,400 individual beneficiaries.

4. If necessary, adjust for additionality

The number of people that have improved access to clean energy are: Number of individual beneficiaries × adjustment factor for additionality = 5,400 individual beneficiaries × 0.95 = 5,130 people that have improved access to clean energy.

5. For jointly funded programmes, calculate the UK attribution of results in proportion to funding share

As ICF only funded 50% of the project, 5,130 people × 0.5 = 2,565 beneficiaries can be attributed to the ICF. Please refer to the 'Supplementary Guidance to ICF Results Methodology Notes: Additionality and Attribution' for further details.

6. Report disaggregated results

The beneficiaries are disaggregated as an example below and would be completed for the full breakdown of disaggregations for achieved, and expected results:

Sex	Disability Status	Geography	Age	Number of people[5]
Female	Not-disabled	Rural	children (age 0-14)	40
Female	Not-disabled	Rural	youth (age 15-24	62
Female	Not-disabled	Rural	adults (age 25-64)	242
Female	Not-disabled	Rural	elders (and 65+)	51
Female	Not-disabled	Urban	children (age 0-14)	22
Female	Not-disabled	Urban	youth (age 15-24	41
Female	Not-disabled	Urban	adults (age 25-64)	178
Female	Not-disabled	Urban	elders (and 65+)	74

**See Annex 1 for a worked example on the number of social institutions with improved access to clean energy as a result of ICF projects*

[5] Please note the number of people reported in the table do not sum to the full number of beneficiaries in Step 5. The table is an illustrative example and in reality there would be additional breakdowns of beneficiary data.

Data quality

Some data will be available directly from programmes, for example from project-level monitoring and evaluation (e.g. household surveys, project reporting). Data on household size should be determined from the most recent national census data or from a nationally or sub-regionally representative household survey. Ideally, the duty to collect data should be the responsibility of recipients of ICF funding, or a third-party auditing entity. This information will need to be kept up to date by liaising with programme managers.

Portfolio ICF results are published annually in autumn in **voluntary compliance with the UK statistics authority code of practice for official statistics**. This means that we make efforts to maximise the trustworthiness, quality, and value of the statistics.

To support ICF data quality, please:

1. Review ICF KPI results provided by programme partners, ensuring that methodologies have been adhered to, and calculations are documented and correct.
2. Ask a suitable analyst or climate adviser to quality assure ICF results before submission.
3. Submit ICF results following the instructions specific to your department. Include supporting documentation of calculations and any concerns about data quality.
4. A revision to historical results may be needed if programme monitoring systems or methodologies are improved, or historical data errors are found. Please update results for earlier years as necessary and make a note in the return. ICF results are reported cumulatively, therefore it is important to make these corrections.

Questions about results reporting can be discussed with central ICF analysts, who undertake a further stage of quality assurance before publication.

Annex 1: Further worked example

Worked example 2 (ICF KPI 2.2)

Based on a fictitious programme where ICF provided 50% of the finance for a programme to provide 20 health centres with solar-powered refrigerators.

To estimate results:

1. Check intervention meets minimum Tier 1 for electrification performance

The UK ICF co-financed a programme to provide 20 health centres with solar-powered refrigerators, which fall within Tier 3 of electrification (see Table 2).

2. Obtain beneficiary data from programme monitoring

Based on surveys through project monitoring, an estimate of 5% of these social institutions would have received solar-powered refrigerators anyway, so assume 95% of health centres were supported in addition to what would have happened without the project/programme.

3. If necessary, convert household data into total number of people (for 2.1 only)
This step is not needed for ICF KPI 2.2.

4. If necessary, adjust for additionality

Therefore, the number of social institutions that have improved access to clean energy is: Number of social institutions supported × [factor for additionality adjustment] = 20 institutions × 0.95 = 18 social institutions that have improved access to clean energy.

5. For jointly funded programmes, calculate the UK attribution of results in proportion to funding share

As ICF funded only 50% of the project, 9 social institutions can be attributed to the ICF.

Annex 2: Definitions

Additionality: Results are additional if they are beyond the results that would have occurred in the absence of the ICF-supported intervention under a 'business as usual' counterfactual (see definition below and supplementary guidance on additionality and attribution).

Attribution*:* Attribution refers to allocating responsibility for results among all actors that have played a causal role in their delivery. This is commonly done based on share of financial contributions. However, there are situations where greater nuance is needed, as with ICF KPI 11 and ICF KPI 12 on public and private finance mobilised, where a broader range of factors is considered. See supplementary guidance on additionality and attribution.

Causality: Causality refers to the assessment that one or more development actors bear responsibility for results, because of ICF-funded interventions.

Climate change[6,7]*:* A change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere, and which is in addition to natural *climate variability* observed over comparable time periods.

Climate change adaptation[8]*:* The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities. In some natural systems, human intervention may facilitate adjustment to expected climate and its effects.

Coping capacity[9]*:* The ability of people, organisations, and systems, using available skills, resources, and opportunities, to address, manage, and overcome adverse conditions.

Counterfactual: The situation one might expect to have prevailed at the point in time in which a programme is providing results, under different conditions. Commonly, this is used to refer to a counterfactual case that would have been observed if the ICF-supported intervention had not taken place.

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[6] United Nations. (1992). United Nations Framework Convention on Climate Change, pp. 7.
[7] UNFCCC Glossary, Article I, pp. 120
[8] IPCC, 2014: Annex II: Glossary [Mach, K.J., S. Planton and C. von Stechow (eds.)]. In: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, pp. 118.
[9] IPCC, 2014: Annex II: Glossary [Mach, K.J., S. Planton and C. von Stechow (eds.)]. In: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, pp. 117-130.

Effects of climate change*:* Effects of both observed climate variability and expected impacts of future climate change on lives, livelihoods, health, ecosystems, economies, societies, cultures, services, and infrastructure.

Mitigation (of climate change)*:* [10]A human intervention to reduce the sources or enhance the sinks of greenhouse gases.

Public finance: Funding from governments, or organisations such as development banks where governments own more than 50% of equity.

Resilience*[11]:* The capacity of social, economic, and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity and structure, while also maintaining the capacity for adaptation, learning and transformation.

Support: Assistance from an ICF programme, with the explicit intention of helping people adapt to observed or predicted climate change impacts. Support could include: agricultural inputs, assets, capacity-building, communications (e.g. climate risk and early warning systems), financial resources, information (e.g. climate forecasting), institutional strengthening, or policy formulation. This definition requires that the ICF programme explicitly recognises and targets people to adapt to the effects of climate change.

[10] IPCC, 2014: Annex II: Glossary [Mach, K.J., S. Planton and C. von Stechow (eds.)]. In: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, pp. 125.
[11] IPCC, 2014: Annex II: Glossary [Mach, K.J., S. Planton and C. von Stechow (eds.)]. In: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, pp. 127.