Department for Business, Energy & Industrial Strategy

UK CLIMATE INVESTMENTS PILOT EVALUATION

Scoping Report

March 2017

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Executive Summary

In early 2016 Ipsos MORI in partnership with Mott MacDonald, Ernst and Young and SQ Consult were contracted to evaluate the UK Climate Investments Pilot. Through the UK Climate Investments Pilot, the Department for Business, Energy & Industrial Strategy (BEIS) is trialling a new approach to investing UK climate finance. The aim is to demonstrate that transformation to low carbon development is possible, replicable at scale and commercially viable whilst simultaneously contributing to economic growth and poverty reduction. UK Climate Investments is a joint liability limited partnership between BEIS and the Green Investment Bank (GIB). Over a pilot phase between 2015-2018 the UK Climate Investments LLP plans to invest £200 million of climate finance funds from BEIS's portion of the International Climate Fund (ICF). This involves an investment into 8 to12 renewable energy and energy efficiency projects in India, South Africa and East Africa.

The evaluation will seek to understand the early impacts of the pilot in order to explore its commercial viability and ability to fund projects which have transformational potential in renewable energy and energy efficiency technologies. In addition, the evaluation will also capture the effectiveness of the processes involved in managing and delivering the pilot in order to understand how changes to the processes could help to increase the desired impact of the pilot programme or future programmes. Ultimately, this evaluation will help to inform BEIS's decision as to whether the pilot should be continued, up-scaled or wound down by May 2018. And, more widely, the lessons learnt through the evaluation will offer additional insight and comparison for those implementing similar international climate funds.

In evaluating the UK Climate Investments Pilot, it is first important to design a credible and defensible approach and methodology. The Evaluation Team have developed an Evaluation Framework for UK Climate Investments in line with industry best practice[1] and have sought to build on lessons learnt from evaluations of interventions which target a similar set of outcomes in similar environments[2]. The evaluation team also hope, in collaboration with CECAN (the Centre for the Evaluation of Complexity across the Nexus) that this evaluation can be used to inform the value of rigorous theory-based evaluation approaches in the energy and

[1] DfID Impact Evaluation Guidelines from Stern et al, OECD-DAC[1] as well as the HM Magenta Book (including most recent thinking about its redesign).
[2] PO6077: International Climate Fund – Mid Term Evaluation: HMG Assessment http://iati.dfid.gov.uk/iati_documents/4773708.pdf, Tyndall's Centre for Climate Change Research: The Green Climate Fund and Lessons from other Global Funds' Experience (2013) http://www.tyndall.ac.uk/sites/default/files/twp158.pdf, The effectiveness of climate finance: a review of the Global Environmental Facility (2013) https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/8632.pdf

climate change sector. It is our intention that the process through which the evaluation is undertaken will allow for capacity building in evaluation approaches at local levels and knowledge transfer through disseminating learnings to local evaluation societies[3].

We recognise the importance of ensuring that the evaluation approach for UK Climate Investments carefully aligns with that of the overall International Climate Fund (ICF) evaluation to some extent given the need to assess the relative value of money of differing approaches. In recognition of these requirements and aspirations the **key principles of the evaluation approach** which we set out in this framework are as follows:

- **Ensuring objective, validated and credible assessments are made throughout the evaluation by:**
    - Building on existing knowledge, literature and independent data sources to support the analysis of process effectiveness and impact where possible which is a fundamental element of a theory based evaluation approach which utilises contribution analysis as a means through which to assess the effect of UK Climate Investments[4].
    - Using the Theory of Change model to underpin all aspects of the data collection, analysis and reporting e.g. the structure of research tools, including depth interview topic guides to allow for effective triangulation and quantification of evidence.
    - Utilising a variety of data collection methods to effectively triangulate evidence against each evaluation question, including quantifiable and objective output and outcome measures to assess the additionality of the pilot projects where feasible;
    - Taking a contribution analysis approach to validate the performance story for UK Climate Investments by reflecting on other potential influences which could have brought about the desired outcomes.

[3] Association of Evaluation Societies: http://ioce.net/, South Africa: http://www.samea.org.za/, Africa: http://www.afrea.org/, India: http://www.desiindia.org/About.html. As well as single country evaluation societies identified here: http://journals.sfu.ca/jmde/index.php/jmde_1/article/viewFile/105/120

[4] The ICF Mid-Term evaluation assessment[4] highlights that there was a lack of focus on “independent data sources to support the analysis”.

- Working collaboratively with a wide range of experts (as per our advisory call off panel) and stakeholders to validate and check emerging findings[5].

- **Aligning the evaluation approaches with the overarching ICF evaluation** requirements to assess the value for money and relevance of the delivery model: The ITT underscores the importance of providing evidence to assess value for money of the pilot as an ICF delivery vehicle. As such, the evaluation approaches have been designed to align with the overarching ICF requirements and to report on value for money for key deliverable outputs.

- **Enabling real-time feedback** by inputting to the monitoring plans for UK Climate Investments and providing quick updates to BEIS and GIB following on from evaluation activities[6].

- **Ensuring a contextual understanding in the interpretation of evaluation findings:** the evaluation team acknowledge that each project invested in is likely to achieve different outcomes and that they are acting within different contexts (sectoral and country). As such it will be important for the evaluation to provide an understanding of not only how and why the project level outcomes are achieved but also to what extent and in what circumstances[7]. A common theory of change construct will be used to design project level case studies and research, alongside a Qualitative Comparative Analysis method to synthesis findings and draw lessons from across project level case studies.

- **Delivering learning for the wider evaluation community in the UK**, and countries in which the UK Climate Investments pilot operates. In particular, this is likely to be around enhancing knowledge of how contribution analysis, as the central analysis approach, can be employed within the wider evaluation community in developing countries for non-experimental programmes. Whilst UK Climate Investments at its core cannot be considered a 'complex' intervention it is most certainly complicated. It may also warrant exploration as an evaluation for case study use by the CECAN.

[5] Tyndall's report on the evaluation of the Green Climate Fund[5] also highlights the importance of developing an evaluation framework collaboratively with a wide range of stakeholders. For this reason, the scoping activities have included familiarisation interviews with key stakeholders from across BEIS and GIB and the frameworks have been developed drawing on the expertise of the full consortium. This will be an important principle underpinning the approach moving forward.
[6] The ODI's evaluation of the Global Environmental Facility highlights that the GEF "does not currently report on the status of disbursement of funds to projects that are in implementation" and therefore cannot monitor if projects are adhering to guidelines or if further support is required. The UK Climate Investments' evaluation will address this by assessing the effectiveness of monitoring information provided as well as the performance of each project against targets.
[7] Pawson & Tilley, Realistic Evaluation (1997)

The frameworks and evaluation approaches

Conceptual frameworks have been developed to enable a pilot level and individual investment level evaluation. Pilot level evaluation frameworks include:

An impact framework: which depicts the overall theory of change for the UK Climate Investments pilot from the inputs including BEIS funds, staff, GIB knowledge and expertise, to activities which take place in order to manage the overall fund and investment processes, outputs including those at project level (closure of investments), Internal (pipeline of leads), and external (press coverage). Following on from these outcomes are identified in the intermediate term including the actual implementation of renewable energy and energy efficiency measures, creating jobs and provision of affordable energy, and the effects of this on greenhouse gas emissions. In the longer term the demonstration effects from UK Climate Investment pilots may bring about positive changes in the investment environment to allow for wider scale replication. Longer term impacts may include shifts towards lower carbon development including access to clean energy, and contributions to a reduction in poverty in the target geographies. Beyond this it is also hoped that the pilot will achieve recognition for the UK in its contribution towards these goals.

A programme theory approach has been recommended with Contribution Analysis as a method which will allow the evaluation team to develop and validate a performance story for the UK Climate Investments' contribution to the outputs, outcomes and impacts achieved. Qualitative Comparative Analysis will be used to help the team to understand more about what works for whom, in what context. Experimental and quasi-experimental approaches have been discounted given the nature of the intervention (inability to randomise investment selection, and challenges in finding suitable controls or scale required for quasi-experimental design). Realist approaches were considered and have been discounted at this point given the complicated rather than complex nature of the UK Climate Investment intervention across the majority of its theory of change within the timeframes of this study.

A Process Evaluation Framework to underpin the structure of the process evaluation. This details the key processes from concept development and business planning, establishing the governance arrangements and marketing and communications to the investment processes and monitoring and reporting on the pilot.

A **value for money framework** aligned to the HM Treasury and DfID guidance: which centres on the three E's – Economy, Efficiency and Effectiveness as well as feeding into a broader cost effectiveness review which will be undertaken by the ICF evaluation team. Drawing on techniques including benchmarking for similar fund

management roles, the cost of generating outputs across the fund and how this compares to other mechanisms.

Examples of project/investment level frameworks have also been provided in the framework in order to illustrate how these would be tailored to specific investments once made. These emulate the overall models in place for the pilot and include process, impact and value for money considerations at an individual project level.

Implementation programme

Our implementation programme is supported throughout by a rolling evidence review, and continual review of pilot and investment level documentation. The primary data collection approach at a pilot level centres on qualitative research methods including consultations with the UK Climate Investments Pilot Delivery team, wider country and sector experts, and the investment community. The project level case studies will triangulate evidence from a range of sources and be 8-12 mini-evaluations in their own right. They will draw on monitoring information, sector and country benchmarking data, project level stakeholder consultations (investors, communities, project developers, technology experts, academic experts, government officials and sector specialists within each country).

The main change suggested in our research methodology is that the originally proposed investor survey has now been changed to qualitative research with investors. We believe that the risks associated with a survey option (low response rates, small coverage of investor types and limited data) are countered by utilising qualitative research methods where the team can explore issues in more depth and allow respondents to provide spontaneous information which may support alternative lines of enquiry for the Contribution Analysis approach.

Evaluation reporting will be tied to key milestones in the Pilot delivery, with a baseline report produced following an initial set of investments, an interim report within a year of the initial investments being made, and a draft final evaluation report at the close of the Pilot period.Over the lifetime of the evaluation the team will maintain an analysis grid which will log key issues as they are identified and verified through triangulation of multiple evidence sources. This will allow for more regular reporting of findings to BEIS and GIB throughout the contract period.

Draft evaluation framework document approved by:

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1 Introduction

UK Climate Investments Fund is being delivered as a pilot by the Department of Business, Energy & Industrial Strategy (BEIS) under the International Climate Fund (ICF) as part of the UK government's commitment to scale up low-carbon investment to keep the world on a 2°C warming pathway[8]. A vast amount of investment needs to come from the private sector in order to help demonstrate that low carbon investment is both sustainable and profitable. The ICF seeks to scale up private sector investment but acknowledges four main barriers to investment:

- Low carbon energy is capital intensive
- It is not perceived as "business as usual" for investors or regulators
- There needs to be a supportive regulatory environment
- Investments are often high risk

A total of £3.87 billion was committed to ICF between 2010 and 2015 to help the world's poorest adapt to climate change and promote cleaner economic growth and a further 5.8bn has been announced to 2020. BEIS's contribution consists of £1.8 billion. Of this, BEIS has agreed to provide £200 million to fund the UK Climate Investments Pilot over a period of three years (2015-2018). A joint venture has been set-up between BEIS and the Green Investment Bank (GIB) with the intention of using minority equity investments to help projects proceed that otherwise would not be able to by investing in renewable energy and energy efficiency projects in developing countries. This involves an investment in 8-12 projects in India, South Africa and East Africa in the renewable energy and energy efficiency sectors that will help mitigate climate change or enable the community to adapt to its effects.

This is considered a novel and innovative delivery model for BEIS and an evaluation of the pilot is crucial to decide the effectiveness of the pilot and whether it should be rolled out post 2018. The evaluation team (Ipsos MORI in partnership with Mott Macdonald, SQ Consult and EY) were commissioned in October 2015 to undertake the evaluation of the UK Climate Investments Pilot.

This report sets out the results from the scoping activities and defines an overall framework for the evaluation. This includes the proposed approach for assessing effectiveness of the delivery processes, the impact of the pilot and projects, as well as the value for money of the pilot.

[8] ICF Implementation Plan – Technical Paper
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/66149/International_Climate_Fund__ICF__Implementation_Plan_technical_paper.pdf

1.1 UK Climate Investments Overview

The aim of the UK Climate Investments Pilot is to trial a new approach to investing UK climate finance and to demonstrate that transformation to low carbon development is possible, replicable at scale and commercially viable whilst simultaneously contributing to economic growth and poverty reduction. There are four specific objectives of the pilot:

- To identify and deliver projects that **scale up private climate finance** flows to low carbon development and, in particular to demonstrate that projects can be both profitable and transformational;
- To demonstrate that the new business model works by **enhancing climate and development benefits** through more effectively and nimbly interacting with the private sector and offering value for money to the Government;
- To **increase the reputation of UK climate finance** compared to the rest of the ICF low carbon development portfolio and improve perceptions of UK climate finance as a viable option; and,
- To provide an **independent evaluation** of the pilot fund.

The UK Climate Investments pilot is distinct from other funding arrangements as it involves a dedicated climate finance delivery vehicle operated in the UK. Ordinarily, funding arrangements would be channelled through multilateral development banks (MDBs) such as The World Bank and European Investment Bank. The proposed advantage of this delivery mechanism is that it is anticipated to improve the reputation of UK climate finance.

The UK Climate Investment pilot also adopts a portfolio approach aiming to invest in between 8 and 12 programmes in three developing countries. This is expected to be more adaptive than existing funding arrangements as it can offer more flexible interaction with the private sector, can adapt to country conditions and is not dependent on any specific set of technologies; a key requirement for financial mechanisms in developing countries as outlined in the IRENA report[9]. A report by Vivid Economics also identifies significant gaps in investments in energy efficiency, transportation and carbon capture and storage (CCS) than is required to reach ICF's climate change commitments[10]. Energy efficiency is an area where the UK Climate Investment pilot intends to focus its investments along with renewable energy projects.

The UK Climate Investments pilot focuses specifically on promoting greater involvement of the private sector in climate investment in developing countries; where there is considered to be a need to scale up private finance flows due to the limited role of the private sector in developing

[9] International Renewable Energy Agency: Financial Mechanisms and Investment Frameworks for Renewables in Developing Countries (2012) http://irena.org/Finance_RE_Developing_Countries.pdf
[10] Delivery options for the International Climate Fund (2014) http://www.vivideconomics.com/wp-content/uploads/2015/03/delivery_options_icf.pdf

countries versus developed countries[11]. The distinctive characteristics of UK Climate Investments are compared with other funding mechanisms in Annex Section 1.

1.2 Evaluation Scope

The evaluation seeks to understand the early impacts of the pilot in order to explore its commercial viability and ability to fund projects which have transformational potential in renewable energy and energy efficiency technologies. In addition, the evaluation will also capture the effectiveness of the processes involved in managing and delivering the pilot in order to understand how changes to the processes could help to increase the desired impact of the pilot programme or future programmes.

Ultimately, this evaluation will help to inform BEIS's decision as to whether the pilot should be continued, up-scaled or wound down by May 2018. And, more widely, the lessons learnt through the evaluation will offer additional insight and comparison for those implementing similar international climate funds.

The ITT sets out a range of key evaluation questions broken down into four categories – early impact, process and delivery, real-time continuous improvement and institutional knowledge. These objectives are outlined in the table below.

Table 1.1 UK Climate Investments Pilot Key Evaluation Questions

Early impact	Process and delivery	Continuous improvement	Institutional knowledge
I1. Did UK Climate Investments pilot achieve its project specific climate and development outcomes? Why or why not?	**P1. Does UK Climate investments appraisal process effectively identify and secure investment in low carbon projects that meet the additionality criteria, be profitable and have credible transformative potential?**	**C1. How can the activities of UK Climate Investments be improved as the pilot runs its course?**	**K1. How can BEIS improve its ability to measure and evaluate transformational change?**
I2. Did UK Climate Investments pilot meet the additionality requirement in the Investment Mandate? Why or why not?	**P2. Did the governance arrangements and delivery mechanisms of the joint venture lead to efficient, economic and effective project delivery?**		**K2. What are the barriers to private sector investment in energy efficiency and renewable energy in UK Climate Investments target countries?**

[11] Delivery options for the International Climate Fund (2014) http://www.vivideconomics.com/wp-content/uploads/2015/03/delivery_options_icf.pdf

I3. To what extent do UK Climate Investments catalyse or contribute to transformational change? Why or why not?	**P3. Does UK Climate Investments dissemination strategy effectively communicate success with the aim of increasing interest by private finance in investing in renewable energy or energy efficiency in the UK Climate Investments target countries?**		**K3. What external factors influence the success of low carbon projects in developing countries and how can they best be managed?**
I4. Has UK Climate Investments successfully leveraged private finance into investments, and what are the profiles of investors?			**K4. To what extent has the UK Climate Investments pilot been value for money as a delivery mechanism for the UK's climate finance?**
I5. Has UK Climate Investments improved the reputation of UK Climate Finance?			

We have reviewed the original evaluation questions against the OECD-DAC criteria[12] and consider these to predominantly cover the key areas required by those undertaking development evaluations. However, there are some gaps regarding questions on the sustainability of the outcomes achieved. As such we suggest adding consideration of this through the following evaluation question:

I6 - To what extent did the outcomes achieved by the UK Climate Investments pilot and the specific projects funded maintain/sustain beyond the lifetime of the investment?

I7 - What were the major factors which influenced the achievement or non-achievement of sustainability of UK Climate Investments outcomes?

Whilst it is understood that the timeframes for this evaluation would make it unfeasible to respond to these questions concretely, it may be possible to gather indications of potential for outcomes to be sustained and any significant risks within the next 2 years.

[12] http://www.oecd.org/dac/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm

1.3 Independence and Impartiality of the Evaluation

Ensuring clear and impartial support for multiple perspectives on the assessment and the value of the UK Climate Investments Pilot will be vital for the effectiveness and integrity of this independent evaluation. The following key governance arrangements and processes will ensure its independence and that autonomy of evaluative judgment is safeguarded:

a. Transparent publication of key documents (for example, this scoping report and the final evaluation report);

b. The establishment of a steering group for sign-off on all key reports, with representatives on this group including a BEIS analyst from a different management chain to that of the intervention (as an example, ICF Evaluation Advisers within BEIS report to the Analytical Directorate rather than the International Climate Change Directorate which commissions this evaluation). While the evaluation outputs will represent the independent views of the consultants delivering the evaluation, this client Steering Group will provide comment and feedback on interim and final outputs through this channel;

c. Effective management of any potential Confict of Interest issues within the parties delivering the evaluation will ensure the findings reported do represent unbiased assessments of the evidence gathered. These processes include only named and approved representatives at the consortium organisations being involved in data collection and analysis, and restricted access to scheme information and outputs. Clear lines of internal governance and transparent accountability and lines of communication have been agreed between BEIS (as the commissioning body) and the evaluation delivery consortium. The evaluation team also draw on local consultants within the scheme's targeted markets, which as well as adding depth and breadth to the evaluative team, helps to build the capacity of local evaluators;

d. Use of Evaluation, Quality Assurance, & Learning Service (EQUALS) provides independent expert comment on the technical quality of the evaluation, and can act as a third independent option in the eventuality of any differing viewpoints between HMG and the evaluation team;

e. Ipsos MORI adheres to the Market Research Society code of conduct and has its own internal Social Research Institute Ethics Group. The SRI Ethics Group exists to support researchers in delivering work which meets the ethical requirements of our clients helping them anticipate, manage and reduce risks in the research of our participants, staff and our clients. The Ethics Group provides an advisory and review function for all projects within the Social Research Institute at Ipsos MORI, with a specific focus on high-risk projects involving vulnerable individuals or sensitive issues. The Ethics Group provides advice and guidance on ensuring the project is carried out ethically and how to handle challenging issues. This approach ensures that research ethics are considered from the outset of all projects, minimising risks to clients, the research and our staff. This approach is centred around the GSR ethical principles as well as drawing on other relevant ethical codes such as the ESRC Research Ethics Framework and the SRA ethical guidelines.

1.4 Scoping Stage Overview

This Evaluation Framework document is the first output from the Evaluation Team and follows on from a detailed inception and scoping phase (early 2016 to May 2016). This has involved:

- **External documentation review:** a detailed review of supporting documents provided by BEIS and sourced by the evaluation team related to global energy trends in developing countries and the climate finance landscape. A list of the documents reviewed can be found in Annex 2.

- **Internal documentation review**: a detailed review of a wide range of documentation associated with the pilot. These covered a range of documents such as the investment mandate, investment committee papers, business case and business plan. A list of the documents reviewed can be found in Annex 2.

- **Briefing and introduction to GIB:** an initial meeting took place between GIB, BEIS and Ipsos MORI to provide an introduction to the evaluation team and outline the key requirements from GIB during the initial scoping stage and the key tasks involved in the main stage of the research.

  Familiarisation interviews: 10 consultations with 11 key GIB and BEIS stakeholders involved in the design and the delivery of the programme took place. Stakeholders were identified in collaboration with BEIS, GIB and the Consortium to ensure the most suitable individuals were involved. The primary aim was to understand their key objectives and success factors for the pilot and to understand the delivery processes that had been adopted. These consultations predominantly took place face-to-face. The discussions were adapted depending on the role and organisation with which the individual was associated. A list of those interviewed can be found in Annex 3.

- **Theory of change workshop**: once the majority of familiarisation interviews had taken place, a half day workshop was held with stakeholders from GIB and BEIS and facilitated by the Evaluation Team to discuss and agree upon the theory of change and to highlight the key risks and assumptions in the pilot design. This involved providing a draft theory of change in advance of the workshop. During the workshop, a visioning exercise then took place to understand what success would look like for the pilot and how success is anticipated to be realised. Following this, the draft theory of change and assumptions and risks were discussed and findings from the workshop were fed into the evaluation framework.

- **Development of conceptual frameworks**: the workshop as well as the familiarisation interviews and the documentation reviews have helped to develop the evaluation frameworks. The frameworks are used to refine the evaluation questions set out in the table above and to set-out the options for delivering the process, impact and economic evaluation as part of the main-stage of the evaluation as well as a refined theory of change.

1.5 Structure of this report

The remainder of this report is structured as follows.

- **Section 2 – Overview of UK Climate Investments objectives and case for intervention:** an overview of the pilot and project-level objectives and the strategic and economic case for the UK Climate Investments pilot being established,
- **Section 3 – Overview of UK Climate Investments processes:** a description of the processes involved in the pilot, from the set-up phase through to project-level monitoring and dissemination activiites.
- **Section 4 – Process evaluation framework:** a description of the process evaluation and how the evaluation will be conducted at the main-stage at a pilot and project level.
- **Section 5 – UK Climate Investments Theory of Change:** a description of the causal pathway through which the pilot's inputs and activities are expected to contribute to short, medium and long term outcomes and impacts.
- **Section 6 – Impact evaluation framework:** an outline of the proposed approach for delivering the impact evaluation and the value for money assessment.
- **Section 7 – Main stage specification:** a summary of the proposed approach for addressing the key evaluation aims, including approaches to data collection, analysis and synthesis.
- **Annexes** (currently provided as a separate document).

2 Overview of UK Climate Investments objectives and case for intervention

2.1 UK Climate Investment Pilot objectives

UK Climate Investments is a joint venture, structured as a limited liability partnership (LLP) between BEIS and the Green Investment Bank (GIB). Over a pilot phase between 2015-2018 the UK Climate Investment LLP plans to invest £200 million of climate finance funds from BEIS's portion of the overall International Climate Fund (ICF). This involves an investment into 8 to 12 renewable energy and energy efficiency projects in India, South Africa and East Africa.

The aim of the UK Climate Investments LLP is to pilot a new, complimentary approach to investing UK climate finance by demonstrating that transformation to low carbon development is possible, replicable at scale and commercially viable whilst simultaneously contributing to economic growth and poverty reduction. There are four overarching objectives for the UK Climate Investments pilot derived from the Business Case and Investment Mandate:

1. **Achieve commercially viable and transformational investments:** To identify and deliver projects that scale up private climate finance flows to low carbon development and address the particular gaps in the international climate finance architecture. Investments should be transformative and have a demonstration effect, build a successful track record and prove commerciality of low carbon investments to the broader market;

2. **Demonstrate value for money of the delivery mechanism:** To demonstrate that the new business model works to enhance climate and development benefits by achieving better value for money. And, by working more effectively and interacting more nimbly with the private sector, using less administrative and financial resource compared to the rest of the International Climate Fund (ICF) low carbon development portfolio; and

3. **Make the UK more visible in climate finance:** To increase the reputation of UK climate finance compared to the rest of the ICF low carbon development portfolio.

4. **Independently evaluate the pilot:** To provide an independent evaluation of the pilot fund[13]. The aim of this is to assess whether the pilot has potential to achieve transformational change and subsequently if the pilot should be expanded and scaled-up.

[13] There will also be a Gate 5 review by the Major Projects Authority to determine the success of the Pilot

2.2 Aligning project-level objectives to overall Pilot performance

In addition to the overall pilot aims, specific objectives have been set for each project invested in under the fund (referred to as 'project-level objectives'). These are described in more detail below but, first of all the alignment of these two sets of objectives is considered (i.e. the extent to which success against the project-level objectives can expect to translate into success against the pilot-level aims).

At a project level, the aims seek to achieve commercially viable and transformational investments, matching pilot-level objective 1 (section 2.1). However, achievement of the project-level objectives alone will not meet pilot-level objectives 2 and 3 seeking value for money from the overarching delivery mechanism and reputation for UK climate finance. These objectives require programme activity beyond and between projects if these higher level aims are to be achieved. In response to this, the evaluation frameworks presented in this report seek to define this intra-project activity and provide strategies to address both pilot and project level objectives.

There are five objectives for each project as stated in the Investment Mandate and in adherence to GIB's Green Investment Policy. These are the key conditions that projects must meet by the end of the investment period.

1. **Investment in one of three areas:**

    (i) Renewable energy projects in at least two of the sectors other than the energy efficiency projects
    (ii) At least one energy efficiency project; and
    (iii) At least: two of the geographies;

2. **Investing on arm's length[14] commercial terms** through minority equity positions in projects that have not yet reached commercial operations (unless a yieldco) and with contribution from UK Climate Investments LLP of no more than 30% investment of the total financial assistance.

3. **Demonstrate transformational potential,** with each investment meeting at least four of the following criteria**:**

    (i) Sustainable - financially sustainable if the LLP exits;
    (ii) Have the potential to be replicable - copied by others in either the same country, region or more widely; and,
    (iii) Incentivise the private sector - able to attract private sector co-finance to lead to material reductions in overall project costs within a country context.
    (iv) At scale - support a step change in the sector within a country context

[14] The arm's length principle (ALP) is the condition or the fact that parties to a transaction are independent and on an equal footing.

(v) Increase capacity or capability - build capacity / capability in other institutions / organisation (both public or private) to replicate the activity
(vi) Political will and ownership - strengthen political buy-in and public support for the activity and/or aligns with country strategies and/or uses the national systems
(vii) Innovative - be a 'first of a kind' investments within a country context – sector and/or technology and/or financing mechanism

4. **Demonstrate additionality of the project to ensure projects do not "crowd-out" private sector investment:**

(i) A pre-condition that the project is in compliance with the Additionality Requirement;
(ii) Evidence of prior efforts made to seek private sector funding and written confirmation that no offer was acceptable for the project to proceed and why; and
(iii) Satisfaction that there is a reasonable likelihood, in the absence of funding from UK Climate Investments; the project would not proceed at the same scale or standard.

5. **Are classified as Official Development Assistance (ODA) and contribute to a reduction in poverty** (with the meaning given to the phrase in the International Development Act 2002).

6. **Deliver against Green Purposes**[15]

(i) The reduction of greenhouse gas emissions
(ii) The advancement of efficiency in the use of natural resources
(iii) The protection or enhancement of the natural environment
(iv) The protection of enhancement of biodiversity
(v) The promotion of environmental sustainability

2.3 Situating UK Climate Investments intervention within a typical project cycle

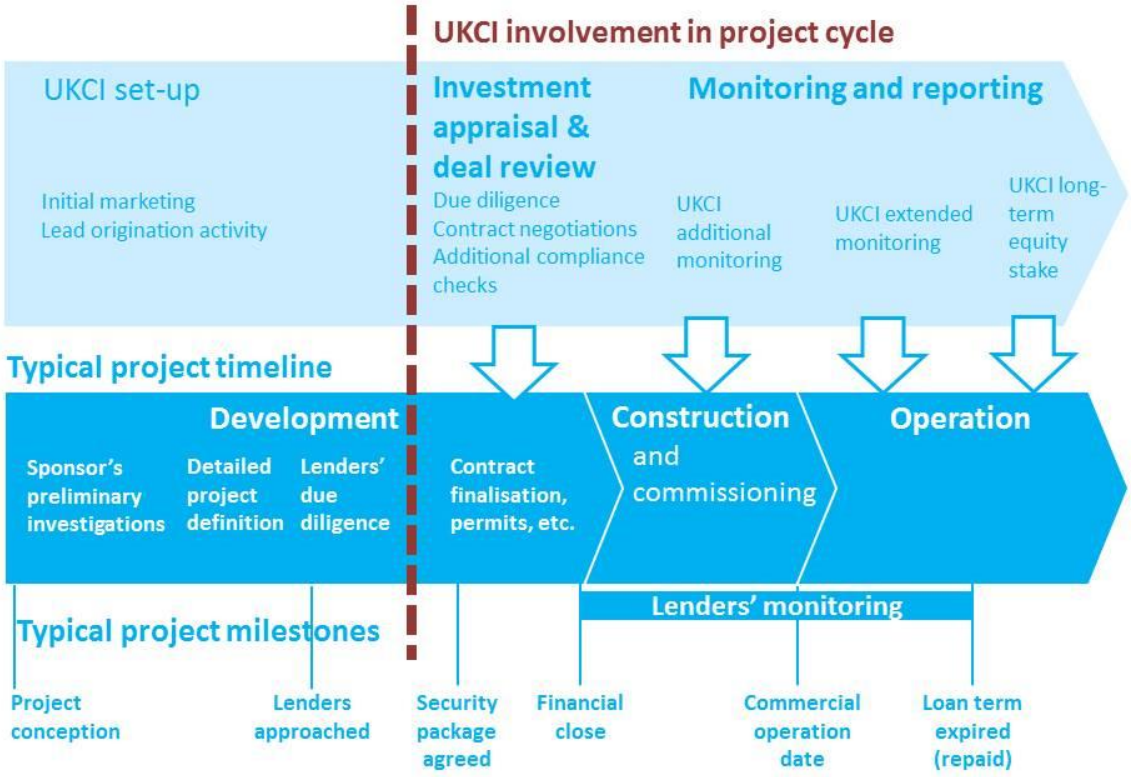
The ultimate aim of UK Climate Investments is to contribute to transformational change in markets and sectors that are felt unlikely to reach desired levels of low carbon development and poverty alleviation without public sector intervention, at least in the immediate term. A key aim of any public sector programme of this nature, and particularly in the context of this being Official Development Assistance (ODA), is for the achievement of outcomes to be additional to that which would be possible in the absence of the intervention. Section 2.4 discusses in detail the case for intervention in the context of existing market barriers. First of all, however, in the context of these overarching ambitions to be transformational and additional, it is useful to define the point at which UK Climate Investments is seeking to inject capital into Independent Private Power (IPP) projects. Figure 2.1 presents a typical IPP project development cycle and

[15] Green Purposes, as determined by Parliament, are set out in s.1 of the Enterprise and Regulatory Reform Act 2013 and enshrined in GIB's constitutional documents

illustrates the point at which UK Climate Investments will generally become involved. This demonstrates that projects are likely to be substantially developed in terms of their overall project development cycle (including detailed project specifications and due diligence led by lenders) at the point of UK Climate Investments equity stake. A discussion of the key issues for exploration through the evaluation in relation to this element of the scheme design is provided in Annex 4.

Figure 2.1: UK Climate Investments Involvement in Project Cycle

Source: UK Climate Investments Evaluation Team (May 2016)[16]



2.4 Strategic and economic case for UK Climate Investments

There are a range of market failures and barriers which impact investing in renewable energy and energy efficiency projects in the UK Climate Investments selected countries. While many of these will be specific to each country and project location, there are a number which are more systemic. Typically, these barriers fall into a number of areas:

- **Political** – renewable energy investment in developing countries is often hindered by unfavourable regulatory and political climates (for example, taxation, joint venturing[17],

[16] This is recognised to be a simplified diagram of the process. The evaluation will be alert to project specific characteristics in which the process varies, such as projects that are initially debt-financed.
[17] http://irena.org/Finance_RE_Developing_Countries.pdf

lack of supportive measures for clean energy such as FiTs and tax incentives[18] and unstable political settings - such as a lack of agreement between political parties).

- **Financial and economic** –project affordability faces risks based on whether a meaningful and bankable PPA can be agreed, the wider investment climate for projects and the financial / economic quality of the project(s)[19]. For renewable energy projects, the key issue is off-take guarantees while micro-economic conditions affect investments in energy saving projects.
- **Supply chain and logistics** – many target jurisdictions, which have yet to see significant volumes of renewable energy and energy efficiency projects, are characterised by a lack of appropriate supply chain and reliance on ad hoc and expensive logistics. Industry is only likely to invest in supply chains and logistics support once there is a commitment to a pipeline of projects.
- **Social and environmental** – at project development stage these are risks such as the availability of labour and environmental impacts associated with any new or greenfield project. Another key issue can be the socio-political acceptability of the technology to be implemented. Large scale renewable energy technologies can be perceived as adversely impacting the surroundings and livelihood of people by some[20]. Energy efficiency technologies have to overcome barriers such as lack of knowledge and commitment from management of manufacturing companies about these technologies.
- **Technical and operational** – these barriers relate to transformational technology deployment, maintenance (and skilled staff for maintenance) and the challenges of technology choice and logistics[21]. For renewable energy projects a critical issue in several countries is the availability of a grid connection with projects often located in remote locations and with local grid operators lacking funds or political support to build these[22]. Implementation of energy efficiency measures is often hindered by a lack of technological knowledge. Lack of familiarity with renewables technologies can also lead to excessive risk aversion and inability to price capital effectively[23]. These factors have led to a historical tendency towards fossil fuels due to greater familiarity with these technologies and typically less capital intensive investments compared with renewables[24].
- **Institutional and regulatory** – in addition to wider regulatory barriers linked to political risks, a common barrier is a lack of complete regulatory documents (e.g. grid codes etc.) and also regulatory instruments to allow for an IPP.

[18] Green Investment Bank (GiB), UK Climate Investments LLP Business Plan
[19] Polzin et al, Drivers and Barriers for Renewable Energy Investments in Emerging Countries – The Case of Wind Energy in China, India and Brazil, 2015
[20] IRENA, Renewable Energy Innovation Policy: Success Criteria and Strategies, 2013; GiZ, Legal Frameworks for Renewable Energy: Policy Analysis for 15 Developing and Emerging Countries, 2012
[21] ibid
[22] Polzin et al, Drivers and Barriers for Renewable Energy Investments in Emerging Countries – The Case of Wind Energy in China, India and Brazil, 2015
[23] Green Investment Bank (GiB), UK Climate Investments LLP Business Plan
[24] ibid

Table 2.1 overleaf provides a more complete indication of these market failures, including a rough assessment of how severely individual barriers manifest in each country[25]. Based on the scheme documentation review and stakeholder interviews conducted, the key barriers which could be addressed by UK Climate Investments are highlighted in Table 2.1. More detail on this is provided in section 5, which illustrates the Theory of Change.

[25] http://www.worldbank.org/en/projects-operations/country-strategies#1

Table 2.1 Addressing barriers and market failures[26]

			Qualitative assessment of extent of influence of barriers within selected geographies		
Market Failure / Barrier	**Can UK Climate Investments Address?**	**How?**	**East Africa[27]**	**India**	**South Africa**
POLITICAL					
• **Established energy sector policies setting the overarching framework for electricity sector development in renewable energy/energy efficiency sectors***	No	N/A	T – Low R – Medium K - Low	Low	Low
• **Institutional stability and capacity / capability to support the development of and negotiation with IPPs**	In Part	Through the process of joint investments, UK Climate Investments should be able to support the development capacity and capability	T – Low R – Medium K - Low	Low	Low
• **Lack of wider policies relating to inward investors such as appropriate tax codes, trade barriers, foreign exchange rules, import policies, insolvency, basis for joint venturing etc*.**	No	N/A	T – Medium R – Medium K – Low	Low	Low
• **Limited competition and "ringfencing"**	No	N/A	T – Low R – Medium	Low	Low

[26] Factors affecting renewable energy and energy efficiency projects are included in the table. In particular, factors 1, 3, 4, 5, 8, 9, 13, 14, 15 and 17 apply equally to renewable energy and energy efficiency.
[27] T= Tanzania, R= Rwanda, K= Kenya
* Barriers marked with an asterisk indicate that Climatescope also provides an assessment of these barriers within these markets

of policy making from regulation and investment decision making (i.e. government to regulator to usually state-owned electricity company.			K - Low		
ECONOMIC AND FINANCIAL					
• **Affordability of projects to end-consumers (given regulation)**	In Part	Through transactional process and investing UK Climate Investments can support the development of affordable business models and financing structures.	T – Medium R – Medium K - Low	Low	Medium
• **Ability to secure offtake agreements (and hence reduce credit risk assumed by project developers and financiers).**	Yes	Through investing in projects that work with commercial and industrial offtakers rather than utilities (and therefore demonstrating profitability and reliability)	T – High R – High K - Medium	Low	Low
• **The market position of a project and how old versus new IPPs are treated in economic and technical despatch**	No	N/A	T – Low R – Low K - Medium	Low	Low
• **Achieving key financial metrics and hurdles**	Yes	Through provisions of long-term equity	T – Medium R – Medium K - Low	Low	Low
• **Credit worthiness of private companies and the state-owned electricity companies.**	No	N/A	T – high R – Medium K - Medium	Medium	Medium
SOCIAL AND ENVIRONMENTAL					
• **Efforts to expand access to power to the rural poor using clean energy technologies**	In Part	Through supporting project sponsors to implement new initiatives	No different to other countries.	No different to other countries.	No different to other countries.
• **Social barriers to investment (e.g. traditional communities' rights to land, perceptions of health-risks related to renewable tech)**	In Part	Through working with project sponsors an appropriate plan for reducing social barriers can be implemented.	No different to other countries.	No different to other countries.	No different to other countries.

• **Environmental impacts**	In Part	Through supporting project sponsors UK Climate Investments can support effective environmental management to mitigate environmental impacts	No different to other countries.	No different to other countries.	No different to other countries.
• **Land access and compensation structures for loss of land**	In Part	Through supporting project sponsors UK Climate Investments can support appropriate land acquisition	T – Medium R – Medium K - High	Low	Low
TECHNICAL AND OPERATIONAL*					
• **Is the technology appropriate and technically feasible**	Yes	Through demonstrating the successful construction and operation of a technology in a particular local context (including successfully obtaining permits, local public support etc.)	No different to other countries.	No different to other countries.	No different to other countries.
• **Can construction be effectively carried out with the right skills?**	In Part	See above	T – Low R – Medium K – Low	Low	Low
• **Maintenance availability and affordability**	In Part	See above	T – Medium R – High K – Low	Low	Low
• **Grid connection**	No	N/A	T – Medium R – High K – High	Medium	High
• **Lack of clear models for energy efficiency programmes**	In part	UK Climate Investments aim to work with major energy efficiency suppliers to help develop a model for programmes	T – Medium R – High K – High	Medium	Medium
INSTITUTIONAL AND REGULATORY					
• **Are there appropriately skilled labour to sustain the investment**	In Part	Through working with project sponsors an appropriate plan for upskilling (and allowing for replication) can be achieved.	T- Low R – Medium K – Low	Low	Low
• **Is there the human capacity to support development of and negotiations with IPPs.**	In Part	Through working with project sponsors an appropriate plan for upskilling (and allowing for replication) can be achieved.	T – Low R- - Medium K – Low	Low	Low

• **Regulations in the power sector are rarely complete relating to PPAs, use of system charges and system access. These are often in policy, but not in regulatory instruments.**	In Part	UK Climate Investments can use its influence to ensure that these are drafted appropriately and allow for replication	T – Low R – Medium K – Low	Low	Low
• **Subsidised and regulated energy prices, resulting in low electricity prices (creating non-viable business model)**	No	N/A	T – High R – High K - Low	Medium	Medium
• **Regulations regarding wider treatment of financial aspects are often weak or require lengthy case-by-case negotiation (eg import duties).**	In Part	UK Climate Investments can use its influence to ensure that these are drafted appropriately and allow for replication	T – Medium R – Medium K – Low	Medium	Low
• **Standard PPA are often not available**	Yes	UK Climate Investments can use its influence to ensure that these are drafted appropriately and allow for replication	T – Medium R – Medium K – Medium	Medium	Low
• **Insufficient institutional capacity for developing contracts that defend the rights of the investor**	No	N/A	T – Low R – Low K – Low	Low	Low
• **Insufficient numbers of qualified staff to process applications.**	No	N/A	T – Medium R – Medium K – Medium	Low	Low
• **Extent of liberalisation of the country's power market to attract investment**	No	N/A	No different to other countries.	No different to other countries.	No different to other countries.

2.4.1 Case for equity investment approach

The review of market failures in Table 2.1 demonstrates that there are likely to be a substantial number and range of barriers that the UK Climate Investments Pilot will not be able to address. In many instances this reflects the chosen investment-based approach; taking equity stakes in Special Purpose Vehicles (SPVs) at late stages of project development (as illustrated in Figure 2.1). Further consideration of the implications of this approach, and key issues for exploration during the evaluation related to this, are discussed in section Annex 4.

The choice of a minority equity investment mechanism is not unique for public funds supporting private sector investing in renewable energy and energy efficiency. Minority equity investing is a widely used approach, for instance among organisations like the IFC where their limit is 25% holdings for example. Such a form of investment is important particularly where there is a gap in the process of financial negotiations in financial close or where private sponsors and their equity are looking to share risk.

For example, in India, investment in power generation requires many tens of billions of dollars[28]. Here, and in the other geographies, public funding is insufficient to provide this investment and while private funding is available, it generally flows to lower risk projects; for example, better known technologies, and geographies with lower political and regulatory risk. While the UK Climate Investments minority equity instrument is not unique, it aims to support sharing risk to allow for the deployment of technologies and projects more at the frontier of investing.

2.4.2 Case for investment

Beyond addressing some of the specific barriers and market failures identified in Table 2.1 above, there is a wider case for UK Climate Investments in clean energy in the target countries. Access to energy is partial in all the geographies and there is a general shortage of generating capacity, with all countries suffering from low levels of electrification, power outages and shortages. Each of the countries show transformational potential, market fundamentals and a conducive ‘enabling environment’, with strong regulatory support in most of the markets. See Annex 5 for a more detailed discussion of these points.

[28] IEA, 2015, India Energy Outlook

3 Overview of UK Climate Investments design and delivery process

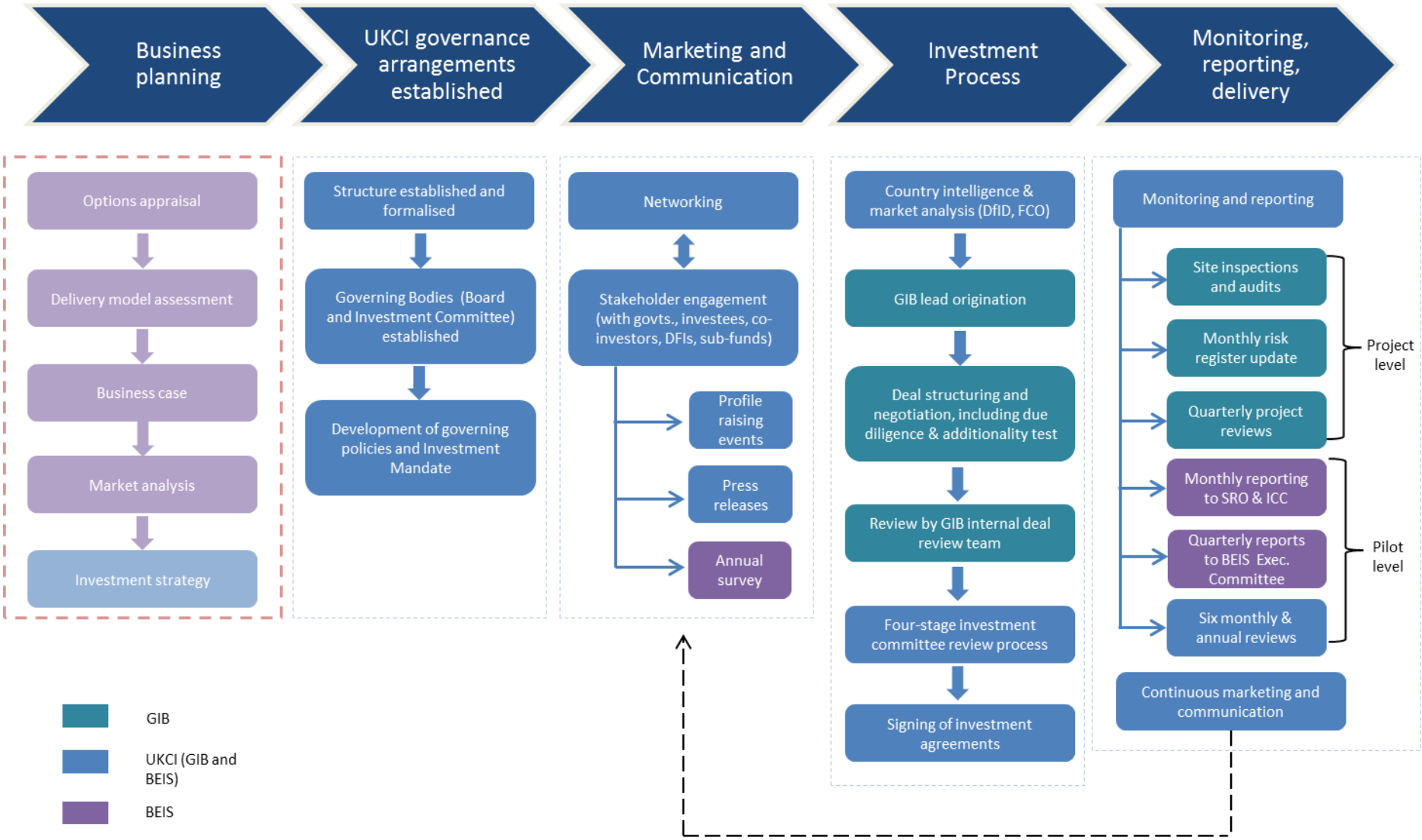
This chapter details the set of processes involved in delivering the UK Climate Investments pilot and summarises the key issues for consideration when developing the process evaluation framework.

3.1 Process Overview

BEIS and GIB have collaborated to establish a set of clear processes that guide how the UK Climate Investments pilot would be structured, managed and implemented to ensure it delivers against its objectives. The process map in Figure 3.1 overleaf provides an overview of the key processes – from concept development and business planning, establishing the governance arrangements and marketing and communications to the investment process and monitoring and reporting of the UK Climate Investments pilot.

Figure 3.1: UK Climate Investment Process Map

Source: UK Climate Investments Pilot Internal Project Steering Group (May 2016)



3.1.1 Concept development and business planning

Responding to the urgent need to scale-up low carbon investment in developing countries, BEIS sought approval from the ICF to set-up a dedicated UK climate finance delivery vehicle[29]. This was aligned with the ICF's objectives to:

- Change facts on the ground, by delivering results that demonstrate that low carbon climate resilient development is feasible and desirable.
- Improve the international climate architecture and finance system, to increase the scale; efficiency and value for money of climate spend.
- Pioneer innovation to test out new approaches to delivering climate finance that have the potential to achieve bigger and better results in the future.

A number of processes were involved to assess and decide on the best delivery model.

3.1.1.1 Options appraisal

In assessing the best route to achieving the strategic objectives set out above, BEIS considered six options[30]:

1. Do nothing
2. Increase commercial in house resource
3. Strengthen partnerships with other countries development finance institutions (DFIs)
4. Set-up a dedicated trust fund with a Multilateral Development Bank (MDB)
5. Set up a new delivery vehicle from scratch
6. Procure a private fund manager to invest UK climate finance
7. Extend the remit of an existing UK vehicle

Each option was assessed against the following criteria:

1. Three key objectives: improve the climate finance architecture, secure stronger climate and development benefits and improve the reputation of UK climate finance
2. Critical success factors: value for money and strategic fit
3. Potential achievability: ability to influence and its absorptive capacity
4. Risk profile

[29] GIB International Pilot - Business Case 27 02 15
[30] GIB International Pilot - Business Case 27 02 15

5. Potential cost
6. Supply side capacity: appropriate expertise and long-term pipeline management
7. Alignment with the regulatory agenda
8. Timing implications

It was decided that the preferred way forward was to extend the remit of an existing UK vehicle.

3.1.1.2 Delivery model assessment

Following the options appraisal, BEIS commissioned Vivid Economics to conduct an independent study to look at alternative ways to deliver ICF funding by considering the role of a new or existing UK institution to move into the international climate finance space[31]. The study shortlisted three possible delivery vehicles that could feasibly be pursued to achieve the UK Climate Investments' objectives:

- Providing resources to Infraco Africa (part of the Private Infrastructure Development Group (PIDG)) to support early stage project development activities in sub-Saharan African;
- Using CDC's relationships with its portfolio companies to offer energy audits and finance for energy efficiency opportunities;
- Undertaking a pilot scheme with the UK Green Investment Bank (GIB) to deploy ICF resources in middle income countries with a view to increasing private sector investment in developing countries.

Vivid Economics concluded that GIB was best suited to deliver the UK Climate Investments' objectives given its potential to deliver strong climate results and ability to engage with the private sector.

A short-list of three options was developed for working with GIB.

1. Do the minimum - leverage GIB's commercial and green expertise to help the ICF team originate and appraise projects.
2. Pursue a time-limited pilot with GIB to set up a "GIB International" subsidiary for GIB to manage and invest £200m ICF funds over 3 years
3. Provide £200m capital to GIB to make investments

[31] Vivid Economics (2014) Delivery options for the International Climate Fund http://www.vivideconomics.com/wp-content/uploads/2015/03/delivery_options_icf.pdf

3.1.1.3 Development of Business Case

Informed by the delivery model assessment, a business case was developed to proceed with the development of a pilot with GIB. This entailed outlining the strategic case, economic case, commercial case, financial case and management case for establishing the UK Climate Investments pilot. The economic case consisted of a qualitative benefits appraisal, risk appraisal and value for money appraisal of the three options for working with GIB. It was decided the best option would be for GIB to establish a subsidiary 'GIB International' so that BEIS and GIB could set up a time-limited pilot and investment vehicle that would allow GIB International to manage and invest £200 million of ICF funds over 3 years.

3.1.1.4 Market analysis and country selection

Also as part of the economic appraisal, economic modelling for the pilot was designed to model a range of investments in different countries and Renewable Energy and Energy Efficiency technologies in order to test the concept properly in 3 different countries. A market analysis was also undertaken by KPMG on behalf of GIB that considered BEIS's objectives in terms of priority countries and technology coverage. The UK Climate Investment target markets were assessed by looking at the following three criteria[32]:

1. Transformational indicators- countries where UK Climate Investments can have the greatest environmental and social impact;

2. Market fundamentals- focus on large markets where demand for new generation capacity is strong and renewables are competitive relative to fossil fuel alternatives

3. Enabling environment- markets with a strong enough enabling environment for renewable energy investments and alignment with GIB's institutional links and capabilities

Based on the market analysis, India, South Africa and East African countries (particularly Kenya) were identified as having markets with the strongest enabling environment and transformational potential. Both renewable energy and energy efficiency projects have been considered due to a recognition by BEIS that they need to tackle both the requirement for more energy produced naturally and the need for more energy services that produce the same energy output but with less energy input; energy efficiency in particular is not happening at the scale it should be.

3.1.1.5 Development of investment strategy

An investment strategy[33] was developed based on each country's need for green investment, an assessment of any gaps in capital flows, and the feasibility of partnering with other players in the market to unlock opportunities.

Three key elements are considered as part of the investment strategy:

[32] As detailed in GIB International Pilot - Business Case 27 02 15
[33] GIB's UK Climate Investments Business Plan

1. **Partners and pipeline:** identifying the key developers and the nature of their pipeline
2. **Products:** identifying potential products and how these could address barriers to capital
3. **Transformation:** assessing whether the proposed investment strategy performs against BEIS's transformational indicators

3.1.2 Governance

3.1.2.1 Governance structure establishment and formalisation

Governance arrangements were established within and formalised between the ICF, BEIS and GIB to provide senior level and operational management of the UK Climate Investments pilot, and to support reporting requirements. These are detailed below and summarised in figure 3.2**Error! Reference source not found.Error! Reference source not found.** together with lines of reporting, authority and accountability[34].

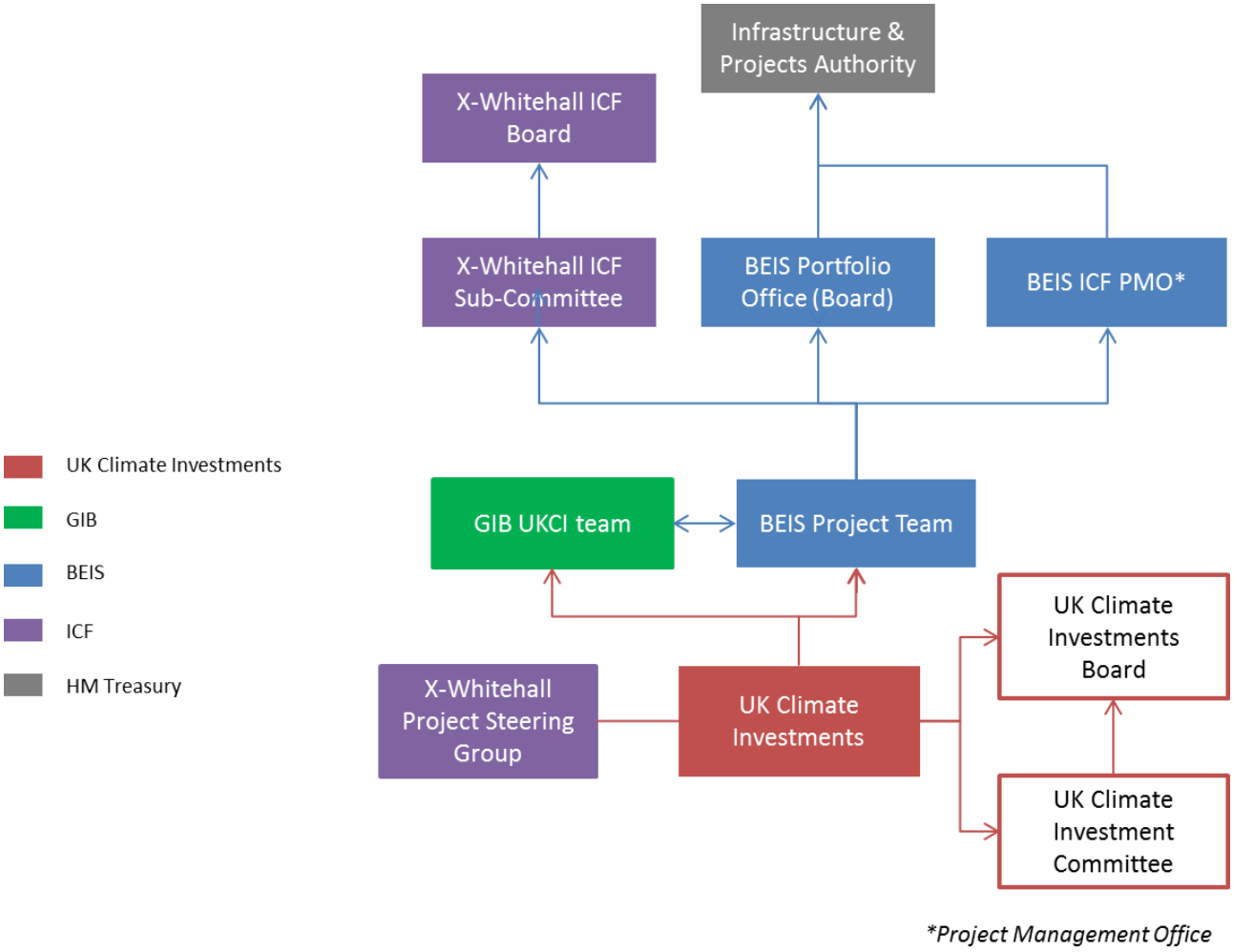
- HM Treasury Governance
  - Infrastructure and Projects Authority (previously Major Projects Authority)
- ICF Governance
  - A Cross-Whitehall Director General (DG) Level ICF Board and sub-committee responsible for all ICF expenditure, oversight of project implementation and collection and review of ICF investments
  - A Cross-Whitehall Steering Group involving members of DfID, the Treasury, BIS and the Cabinet Office.
- BEIS Governance
  - A BEIS Portfolio Office Project Board of senior officials from across the department that oversees project delivery and manages risks
  - The ICF Programme Management Office (PMO) in the International Climate Fund team
  - BEIS UK Climate Investment project team
- GIB Governance
  - UK Climate Investment portfolio team made up of investment professionals with a mix of experiences in power, renewables and/or emerging markets.
- UK Climate Investments Governance

[34] As detailed in GIB International Pilot - Business Case 27 02 15

- Investment Board comprising of 2 representatives from BEIS and 2 from GIB, chaired by BEIS
- Investment Committee comprised of GIB representatives and one BEIS representative chaired by GIB

Figure 3.2: Governance Structure and reporting lines

Source: UK Climate Investments Pilot Internal Project Steering Group (May 2016)



3.1.2.2 Establishment of UK Climate Investments governing bodies

Two main governance bodies for the UK Climate Investments pilot were established: the UK Climate Investments Board and Investment Committee (IC)[35]. The Board has overall responsibility for the strategic governance of the project and includes representation from both

[35] As detailed in GIB's UK Climate Investments Business Plan

BEIS and GIB. The Board has the power to object to investment decisions on grounds it does not comply with key terms in the Investment Mandate (with the exception of transformational change).

According to GIB and BEIS, the IC is controlled by GIB and has delegated responsibility from the Board for analysing, sourcing, identifying structuring, negotiating and transacting the investments to be made. The IC has authority on final decisions on all investments, divestments and portfolio matters undertaken by the UK Climate Investments pilot and approval of all investment stages. Decisions are based on consensus with simple majority, if a vote is required, and the Chief Risk Officer (GIB) has right of veto. The IC has delegated responsibility from the Board on its activities and on those investments it has approved or anticipates approving and is given its authority from the Members.

The IC members largely comprise of key individuals from across GIB's Senior Management team and wider platform with relevant expertise in financing of development, construction and operation across a range of energy-related infrastructure projects in developed and emerging markets. There is a voting member from BEIS and in addition, there is an independent member/observer from BEIS's policy team who does not have voting rights but is rather placed to help understand and learn lessons from the pilot. The Terms of Reference[36] of the IC sets out the rules, responsibilities and requirements of the committee regarding membership, meetings, authority, management, duties and decisions and recommendations.

3.1.2.3 Development of UK Climate Investment Policies and Mandate

An Investment Mandate was developed to set out: the investments in which the IC is permitted to invest; the high level investment objectives; investment criteria; transformational indicators; and additionality requirements.

Investments must also adhere to both green and environmental principles as laid out by GIB in its Green Investment and Responsible Investment policies. The Green Investment Policy was designed to ensure that the UK Climate Investments pilot activities are in line with GIB's Green Investment Principles within an international context.

GIB's Green policy requires that:

- Investments will make a contribution to the reduction of greenhouse gas emissions
- Investments will have an enduring green impact
- GIB will set out clear and firm investment criteria
- There is a robust green impact evaluation across all projects
- Requirements for monitoring and engagement are clearly documented

[36] As detailed in GIB International Pilot - Business Case 27 02 15

- Reporting on the performance of projects will be transparent

The Responsible Investment policy was developed to ensure all forms of investment by UK Climate Investments considers environmental, social and related governance issues in the investment process.

The Responsible Investment policy entails:

1. An assessment of environmental and social risk and governance
2. Portfolio management and ownership in compliance with Equator Principles and environmental and social regulations
3. Reporting to stakeholders and disclosure of ESG matters or issues as well as an investment exit strategy if required

3.1.3 Marketing and communications

Marketing and communication activities are two-fold. One element of the activities is to raise awareness of the pilot in the UK and across government. The other, larger element is to help build relationships with recipient country governments, potential investee energy companies in the targeted countries, potential co-investors (either in-country or global), development financial institutions (DFIs) and emerging market sub-funds. **Error! Reference source not found.**.Table 3.1 overleaf provides an overview of the UK Climate Investments marketing and communication activities, the target stakeholders and who is responsible for the activity[37].

3.1.3.1 Networking

To date, the UK Climate Investments pilot has used its network of contacts from GIB, BEIS, DFID and the FCO to promote the pilot.

3.1.3.2 Stakeholder engagement

GIB plans to increase UK Climate Investments reputation with international investors and project developers through participating in relevant conferences and organising profile raising events, including leveraging BEIS's existing DfID/FCO networks.

It is expected that high-level stakeholder engagement summits will be organised in collaboration with the FCO in each country targeting government officials and politicians, practitioners and those involved with the projects on the ground to introduce the UK Climate Investments pilot. The aim of these summits will be to help increase the understanding of UK climate finance, showcase good practice and attract further investment opportunities.

3.1.3.3 Press coverage

To further increase the reputation of the UK Climate Investments pilot and communicate with its stakeholders and the general UK public during the pilot implementation, press statements will

[37] As detailed in GIB International Pilot - Business Case 27 02 15

be published once a project has reached financial close, six monthly and annual UK Climate Investment pilot newsletters will be produced and case studies will be showcased on the gov.uk and GIB websites.

Table 3.1 Marketing and communication strategy

Marketing and Communication Activities	Stakeholder audience	Responsibility
Networking	Recipient country governments; potential investees and co-investors; DFIs; and sub-funds.	GIB, BEIS, DFID and the FCO
Stakeholder engagement	Governments; potential investees and co-investors; DFIs and sub-funds.	GIB, BEIS, FCO
Press coverage e.g. press statements, case studies, newsletters	General UK public, recipient country governments; potential co-investors, investees and sub-funds; MDBs; DFIs	GIB, BEIS

3.1.4 Investment origination

In addition to promoting UK Climate Investments, GIB uses its network within the markets they operate to identify and execute deals. Experts were specifically identified and appointed to GIB's internal deal team that have relevant contacts and experience to lead the identification and origination of investment opportunities. The stakeholder engagement events mentioned above will also be used to target potential investors. For example, GIB is using its existing network to schedule and attend meetings in South Africa in order to generate potential leads.

The origination process has also involved some cold-calling by UK Climate Investments team, and a small number of leads have been generated by projects coming forward to pitch themselves. In total, across the full network around 330 potential ideas for projects were received by UK Climate Investments team – among these 12-20 were considered worth exploring further, and so far 9 have been taken forward to the IC.

The UK Climate Investment's processes will need to run alongside the existing independent private power (IPP) project development cycle[38], effectively piggy backing on lenders screening, due diligence and monitoring cycle. UK Climate Investments LLP aims to get involved in the later stages of project development when the key contracts (making up the so-called "security

[38] The role of UK Climate Investment Pilot in mobilising public funds for investment in private power projects must be seen within the context of an underlying private IPP (independent private power) project development cycle.

package") are ready in outline and the sponsors and the senior debt providers have carried out most of their due diligence.

Within this investment strategy, UK Climate Investments still aim to provide funding which meets financing gaps but is still additional (i.e. it provides finance that would not otherwise come forward from another source)[39]. Figure 2.1 illustrates at what stage UK Climate Investments LLP is most likely to become involved in the IPP development cycle, and how the pilot's processes fit within the standard project cycle.

3.1.5 Investment process

The UK Climate Investments pilot follows GIB's standard four-stage investment process[40]. This process is conducted by GIB's internal deal team that produces four pre-approval papers – a preview, structure, pre-final or final paper – that are presented to the IC under each stage. The internal deal team is made up of members from the cross-cutting GIB areas including the financial, risk, legal and sustainable finance teams.

The four papers guide the deal review, appraisal and negotiation process by informing the IC of details about the investment and investee company, including equity analysis and due diligence issues. Each member of the deal team reviews and appraises the project based on their respective areas of expertise. If the IC is satisfied with the information provided in the papers, approval will be made, and a budget provided, to progress the potential investment to the next stage.

Figure 3.3 details each stage of the investment process and the information provided within the corresponding four papers produced by the internal deal team that is used to inform deal negotiations, recommendations, approvals and progression of each investment.

A summary of this process is also described below.

- **Stage 1: Investment screening**

  Under this stage the IC evaluates the commercial, environmental and transformational merits of the project in line with the UK Climate Investments' criteria. Commercial due diligence is also carried out consisting of a high level assessment of returns, an environmental screening identifying contribution towards at least one of GIB's Five Green Purposes; and a check that the project is ODA compliance

- **Stage 2: Indicative offer**

  Once screened, the risks are identified, and a detailed diligence plan is formed along with an execution plan and a detailed budget is then approved. A detailed valuation is also

[39] It may be possible for UK Climate Investments to be involved at an earlier stage of project development if a judgement is made that UKCI's provision of long term equity automatically meets additionality requirements.
[40] As detailed in GIB's UK Climate Investments Business Plan

carried out and an indicative term sheet is presented to the IC outlining the terms of investment.

- **Stage 3: Full binding offer**

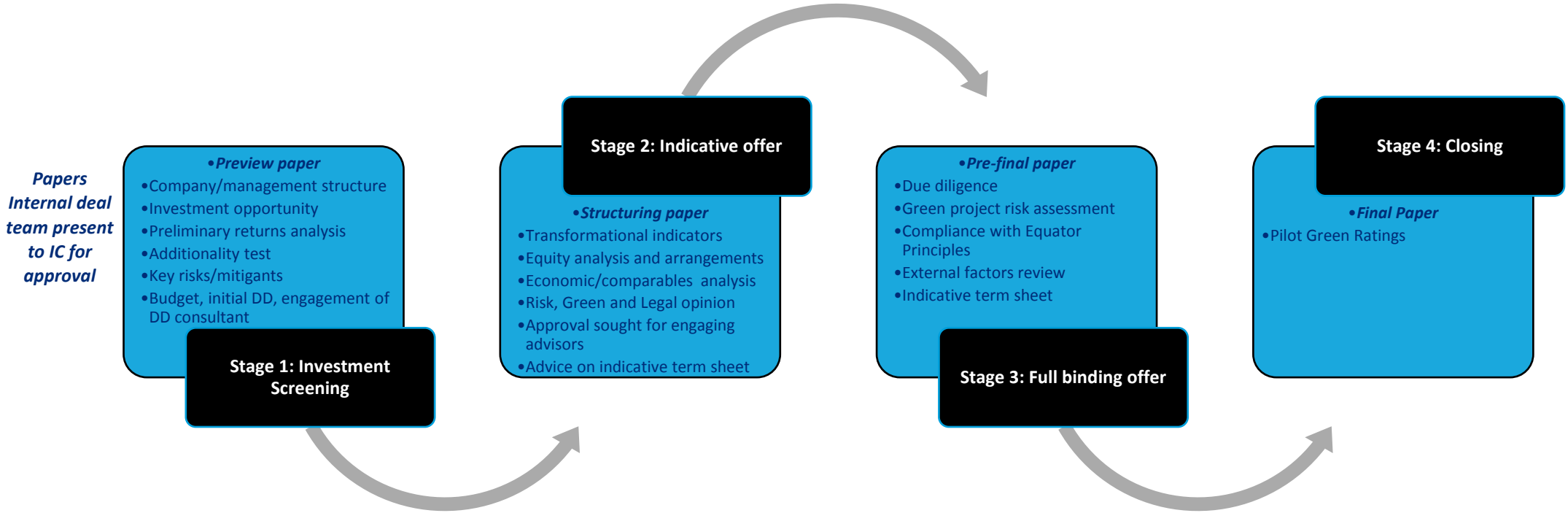
Full due diligence is subsequently undertaken with the assistance of external advisors. Drafting and negotiation of full financial and commercial terms are carried out in accordance with technical, legal, green and risk requirements.

- **Stage 4: Closing**

The final stage of the investment process includes approval of the full and final terms, as well as approval to execute financial transaction and commit capital. From here, the investment is transitioned to the UK Climate Investments portfolio management team within GIB with a detailed 100-day handover plan.

Figure 3.3 Project Investment Process

Source: Green Investment Bank, Business Plan



As part of the investment process, the investment committee assesses the additionality of the proposed investments, that is, what would happen if the project is not funded. This aims to ensure that the UK Climate Investments does not crowd out other private sector entities.

Each project is expected to provide an additionality document as detailed in the investment mandate evidencing how the project is expecting to be additional. A project that successfully demonstrates additionality must satisfy the investment committee that there is sufficient evidence of an unwillingness or insufficiency of private sector funding within the timetable required and on acceptable terms.

During the mainstage process evaluation, when assessing the effectiveness of the scheme design and implementation, it may be helpful to compare the approach taken by UK Climate Investments to issues such as additionality with other organisations and programmes that have established processes to make similar judgements. To aid this, Table 3.2 provides a summary of different known approaches to additionality across funding organisations. Annex 6 provides a more detailed review of these approaches and their additionality requirements.

The UK Climate Investments pilot is distinct from the approaches detailed in Figure 3.2 as it only requires evidence of financial additionality and there is no non-financial additionality requirement such as development outcomes or political risk and mitigation. There are three pieces of documentary evidence required by the Investment Committee in order to review as outlined in the Investment Mandate; these are:

(1) Evidence as to whether the investor has sought other forms of private sector commercial funding;
(2) Evidence that the terms of this funding were not acceptable to enable the project to proceed; and,
(3) An explanation of why the terms were not acceptable.

There is also no specific test or tool implemented for UK Climate Investments to assess additionality. This is unlike other approaches that set out a series of questions such as IFC and ADB or implement an assessment tool such as AfDB. Instead the project must satisfy the investment committee by providing evidence of ‘an unwillingness or insufficiency of private sector funding within the timetable required and on acceptable terms’[41]. Furthermore, there is no third party or independent validation required in the same way as ADB, UNFCCC-CDM and GCF.

[41] As detailed in the Investment Mandate.

Table 3.2 Summary of Approaches to Additionality

Institution	Additionality Criteria	Tests & Tools	Evidence	Review
International Finance Corporation (IFC) [42]	1. Financial additionality 2. Non-financial additionality (development outcomes)	The IFC additionality primer sets out questions to be answered by staff to justify the additionality.	Not specified	Unknown
Asian Development Bank (ADB) [43]	1. Financial additionality 2. Non-financial additionality	Key questions set out in Annex 1 of the Guidelines for the preparation of project performance evaluation reports.	Not specified	Review by independent evaluation department
African Development Bank (AfDB) [44]	1. Political risk mitigation, 2. Financial additionality 3. Improved development outcomes	Additionality and Development Outcomes Assessment (ADOA)	Unknown	Unknown
United Nations Framework Convention on Climate Change - Clean Development Mechanism (UNFCCC – CDM) [45]	1. Financial additionality 2. Sustainable development criteria of host country	1. Financial analysis 2. Barriers analysis 3. Common practice analysis 4. First of its kind test 5. Positive technology lists 6. Automatic additionality criteria	Public documents, approved documents or third party sources	Validation by accredited third parties and spot checks/reviews by the UNFCCC secretariat
Green Climate Fund (GCF) [46]	Not explicit criteria on additionality. Overarching criteria include: 1. Impact potential 2. Paradigm shift potential 3. Sustainable development potential 4. Needs of the recipient	Additionality assessment is implicit in the assessment of the project / programme objectives against the baseline scenario and the rationale for GCF involvement in consideration of the alternatives. Specific tests are not specified	Not specified	Review by accredited implementing entities and the GCF secretariat and approval from the GCF Board

[42] IFC's Additionality Primer, Updated January 31, 2013, http://www.ifc.org/wps/wcm/connect/13130f804f2fcf32bb78ff032730e94e/Additionality_Primer_Jan_2013_without_case.doc?MOD=AJPERES

[43] ADB, Guideline for the Preparation of Project Performance Evaluation Reports on Nonsovereign Operations, November 2014. http://www.adb.org/sites/default/files/institutional-document/33431/pai-6-07b.pdf

[44] Balancing Development Returns and Credit Risks: Evidence from the African Development Bank's Experience, http://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/Working_Paper_186_-_Balancing_Development_Returns_and_Credit_Risks-_Evidence_from_the_AfDB%E2%80%99s_Experience.pdf

[45] Tool for the demonstration and assessment of additionality https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf

[46] Funding Proposal Template, Concept Note Template, http://www.greenclimate.fund/ventures/funding/fine-print

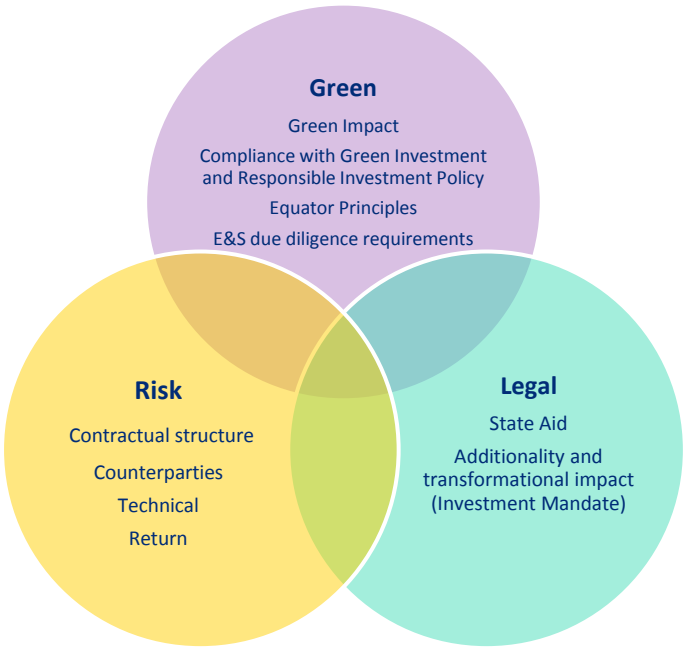
	5. Country ownership 6. Efficiency and effectiveness			

3.1.6 Due diligence

The due diligence process runs in parallel with the investment process (see 3.3 above) and covers the three areas of green, risk and legal as shown in 3.4 to analyse the potential green impact of an investment, its profitability and its alignment with the ICF's KPIs and transformational change criteria.

Figure 3.4: Green, Legal and Risk Assessments

Source: UK Climate Investments Pilot Internal Project Steering Group (May 2016)



The green aspects are covered by the Green Investment Handbook[47] and relates to environmental and social due diligence (see section 3.1.6.1. below)

The legal aspects are covered under the investment mandate in terms of additionality and transformational impact as well as the compliance with state aid rules (see section 3.3.6.2. below)

At this point of time, information on how due diligence is undertaken with regards to contracts, counterparties, technical and financial (as illustrated under 'Risk' in figure 3.4) is not available. More information on these due diligence processes is expected once project evaluations have started.

3.1.6.1 Environmental and Social Due Diligence (green assessment)

During the investment process, the UK Climate Investments pilot uses GIB's environmental and social (E&S) due diligence process that is governed by the Green and Responsible Investment Policies[48]. The process is applied throughout the whole investment cycle, from pre-investment, acquisition, ownership and exit of an investment. This allows E&S governance considerations to be integrated and continuously assessed, monitored and reported.

[47] GIB Green Investment Handbook http://www.greeninvestmentbank.com/green-impact/green-investment-handbook/

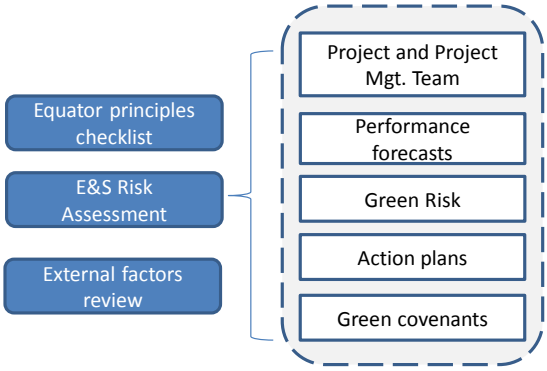
[48] Green Investment Policy http://www.greeninvestmentbank.com/media/44995/green-investment-policy_0116_03.pdf; Responsible Investment Policy http://www.greeninvestmentbank.com/media/44996/responsible-investment-policy_0116_04.pdf

GIB assesses the green and responsible investment impact and risks by completing an equatorprinciples[49] applicability criteria checklist, environmental and social project risk assessment and a review of external factors. As can be seen in figure 3.5, during this stage, they assess the following:

- The project entities and project management team capability
- Performance forecasts e.g. renewable electricity and/or heat generation or demand reduction that can then be used to forecast carbon savings
- Green risk, including those associated with a project being unable to deliver the forecast green impact, those associated with non-compliance with investment and other social and environmental risks
- Action plans – where the due diligence process identifies gaps or non-alignment to an investor's policy or other standards, an action plan will be agreed with investee management
- Green covenants

Figure 3.5: E&S Due Diligence

Source: UK Climate Investments Pilot Internal Project Steering Group (May 2016)



Where appropriate, GIB will contract independent social and environmental experts to support E&S due diligence, for example, to assess biomass sustainability, environmental, health and safety (EHS) and energy efficiency.

The findings of the E&S due diligence along with forecast green performance and green risk assessment is considered as part of the investment decision making process. Following financial close, the projects are subject to monitoring during implementation and delivery.

[49] As detailed in the Responsible Investment Policy UK Climate Investments applies both the Equator Principles and the six Principles for Responsible Investment (PRIs) in their due diligence process, as well as legal and good practice standards

3.1.6.2 Compliance with the legal requirements (state aid and investment mandate)

In order to conduct due diligence, the investment committee assesses each project against the following:

- an explanation as to why the Transformational Indicators will be satisfied
- evidence that the investment is compliant to the additionality requirement and no other funding has been appropriate
- an explanation as to why the proposed investment can contribute to a reduction in poverty
- a description of any other sources of finance for the investment

A discussion to agree whether or not a proposed deal meets these requirements is part of the core remit of the Investment Committee.

In terms of additionality, section 4.1.2. of the Investment Mandate sets out the requirements for meeting the commitment on additionality to ensure that UK Climate Investments do not crowd out other private sector entities. All investments must follow the requirements and gain approval on the additionality requirement from the Investment Committee at the structuring stage.

In order for the approval to be obtained from the Investment Committee evidence must be presented from the Investment Entity that:

- they have sought other forms of private sector commercial funding;
- the terms of this funding were not acceptable to enable the project to proceed; and
- explains why the terms were not acceptable.

The Investment Committee must then be satisfied based on the evidence obtained and to their knowledge of the markets that there is a reasonable likelihood, in the absence of participation by UK Climate Investments, that there is an unwillingness and/or insufficiency of Private Sector Commercial Funding that would enable the Investment Entity to proceed with reputable and credible counterparties, within the timetable required and on terms acceptable to the relevant Investment Entity. For more information on how different organisations have dealt with the issue of additionality refer to Annex 6.

In terms of the transformational indicators, the evaluation team will need more information on the paper's evidence and processes (that are supplementary to the investment papers) to demonstrate transformational change potential.

3.1.7 Monitoring and reporting

Monitoring and reporting is carried out both at the UK Climate Investments pilot level and the individual project level. As UK Climate Investments is still in its infancy and investments are still

being finalised, project level monitoring and reporting has not yet begun and may be subject to change.

3.1.7.1 UK Climate Investments Project level

Once a project has passed the final stage of Investment Committee approval, the signing of the certificate has been completed, and the project has been handed over to the Portfolio Management Team, it will be subject to monitoring by the Sustainable Finance Team. Whilst specific monitoring requirements will depend on the characteristics of the investment, its sector and size of investment, the following is expected to be monitored:

- The material environmental and social risks identified during due diligence;
- Trends in pilot Green Ratings (i.e. 5 Green Purposes)
- Actual operational performance and related green impact against the forecasts; and
- On-going compliance with covenants agreed in the financing documentation

GIB has developed a number of tools and templates to help them fulfil their internal monitoring and reporting of the above[50]. These include:

- Environmental and social risk register and radar – outlining the inherent and residual risk ratings and the likelihood and impact of these occurring, what controls have been in place to mitigate the risk and the actions/safeguards.
- Base risk profile – sets the indicative level of monitoring and client engagement needed based on the overall level (high, medium, low) of risk of a project
- Environmental and social incident report
- Project action watch list – projects are placed on a watch list if an issue/event has been reported or is identified but not being satisfactorily addressed

GIB uses both the Green and Responsible Investment Dashboard (GRID) and the Green Performance Dashboard to give an overall snapshot of a project's risk (as compared to the previous reporting period) and performance.

Throughout delivery, GIB will carry out a monthly risk register update and a quarterly review of each business case in the UK Climate Investment portfolio. According to the Responsible Investment Policy, UK Climate Investment portfolio management activities will be conducted based on regular compliance reports from the entities and associated projects, site inspections and audits, as applicable, with follow-up engagements as required.

[50] Green Investment Handbook: How we monitor http://www.greeninvestmentbank.com/media/44721/how-we-monitor.pdf

In addition to monitoring and reporting of a projects green risk and impact, including compliance with agreed covenants and environmental and social project related risks, each project will be monitored against its progress towards transformational change criteria. Embedded within each contract with the project entity will be a requirement that a logframe, baselines and milestones be developed (ideally during appraisal), and reported against every 6 months to GIB. This will help GIB measure a projects progress towards, and contribution to, UK Climate Investment's transformational change objectives alongside GIB's Green Purposes.

In order to help measure progress, BEIS and GIB have developed a [draft] scoring matrix that scores each project against 8 transformational indicators:

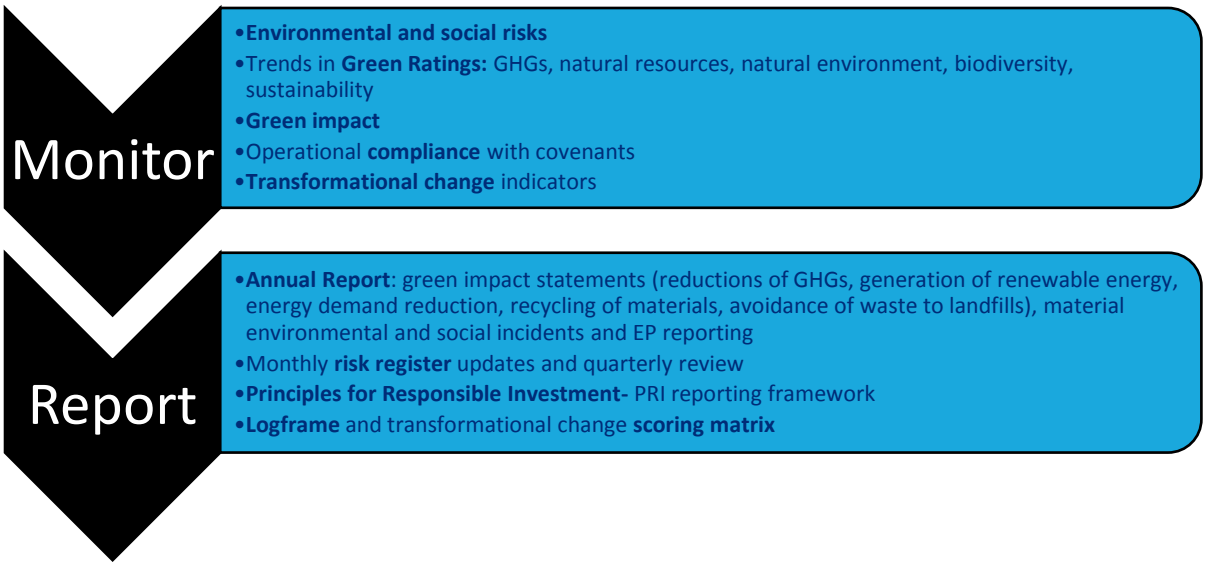
1. Political will and local ownership
2. Capacity and capability increased
3. Innovation
4. Evidence of effectiveness shared
5. Leverage/creation of incentives for others to act
6. Replicable
7. At scale
8. Sustainable

Each indicator is represented on a scale of 1-5, where 1 indicates that a project has not met the objective and 5 meaning that there is full and demonstrable evidence of the project achieving the transformational target. Evidence will need to be provided on how each project has met each criterion, with GIB then assigning each indicator a score out of 4 for each project.

Figure 3.6 provides an overview of GIB's internal monitoring and reporting process, providing information on how GIB assesses and forecasts green performance, risks and transformational change as part of the investment decision, what they monitor to ensure progress against forecast following an investment decision and how they disclose and report actual and forecast green performance data.

Figure 3.6: SEQ Figure * ARABIC UK GIB's project level monitoring and reporting process[51]

Source: Green Investment Bank, Business Plan



3.1.7.2 UK Climate Investments Pilot level

At the pilot level, the information above will then be used by GIB to ensure the UK Climate Investment is delivering against its mandate by tracking progress against the indicators detailed in the UK Climate Investments logframe. GIB is required to report bi-annually to BEIS. Six month reviews will be undertaken to provide a high level assessment of progress led by the UK Climate Investments project team with input from the GIB Fund Manager. In addition, annual reviews will be carried out and reported to the ICF which will focus on how the Pilot is performing against the project's theory of change and key performance indicators.

Progress on the UK Climate Investment pilot will be highly visible across Whitehall and within BEIS as a result of the multiple reporting channels that it feeds into[52]. These include:

[51] As detailed in GIB's UK Climate Investments Business Plan
[52] As detailed in GIB International Pilot - Business Case 27 02 15

- Standard X-Whitehall performance management requirements for all ICF projects including monthly progress, financial and risk reporting, annual reviews and project completion reports.
- BEIS reporting requirements. These include a monthly Dashboard meeting with the Senior Reporting Officer (SRO) to ensure continuing oversight of the ICF portfolio; monthly International Climate Change (ICC) Directorate Programme reporting (which in turn feeds into the International Security & Resilience (ISR) Group report for the DG and are used for monthly challenge sessions with Directors (including the SRO); and inclusion in the BEIS Portfolio Office's quarterly report on projects for the BEIS Executive Committee chaired by the Permanent Secretary.
- ICF results collection and annual review. Annual progress and results will be fed into the Climate Change Compass (previously MEL) annual report outlining the progress of the evaluation and results to date based on the logframe and KPI indicators agreed upon. This will be combined with an Annual Review including a QA note to be provided by independent analysts.
- BEISUK Government Investments (UKGI) quarterly review of each business in the GIB portfolio and a monthly risk register update for the UKGI Executive Committee.
- Overview of UK Climate Investments objectives and case for intervention

4 Process Evaluation Framework

This section provides an overview of the evaluation approach to explore the process elements at both a pilot and a project level. The framework specifies the approach to answering the key process evaluation questions including the data collection sources.

4.1 Aims and overview for UK Climate Investments Pilot Process evaluation framework

The process evaluation seeks to assess the effectiveness of the process in identifying and securing low carbon projects and the efficiencies of the mechanisms to enable effective project delivery. The process evaluation will be important in determining the key success factors (and barriers) for delivery by examining how, why and under what conditions the outcomes of the UK Climate Investments Pilot was (or was not) achieved.

The table below provides a framework detailing the process evaluation questions that will need to be answered, as outlined in the ITT, mapped against the core stakeholder groups and sources of evidence that will be gathered through the main-stage study.

A summary of all secondary scheme monitoring and reporting documents that will form part of the available evaluation evidence are presented in Annex 2. The evaluation frameworks and data collection strategy detail how these sources will be used to contribute to both the process and impact assessment of UK Climate Investments aligned to the evaluation objectives.

The core questions the process evaluation is seeking to address are outlined in table 4.1 below.

Table 4.1 Key evaluation questions against success criteria

Key evaluation questions
P1. Does the UK Climate Investments Pilot appraisal process effectively identify and secure investment* in low carbon projects that meet the additionality criteria and have credible transformative potential? (*noting it will be important for the evaluation to consider the origination and identification of projects separately from the process of securing the investments)
P2. Did the governance arrangements and delivery mechanisms of the joint venture lead to efficient, economic and effective project delivery?
P3. Does the UK Climate Investments Pilot dissemination strategy effectively communicate success and subsequently increase private finance interest in investment?

4.2 Pilot and project level process evaluation frameworks

These framework has been derived from detailed documentation review of GIB policy and process documents, consultations with key stakeholders and BEIS's investment journey map that has already been developed. Table 4.2 below outlines a set of sub-questions derived from the key process evaluation questions laid out by the process area chronologically. The different types of measures and evidence sources which will be used are also detailed in the table; the evaluation team are seeking to provide both subjective measures, derived from perceptions among stakeholder groups and objective measures, where possible, such as monitoring performance information and documentary evidence, in order to ensure a greater weight of evidence.

The process evaluation questions to be addressed at a project level are detailed in Table 4.3 further below. The high level evaluation questions listed in the first pilot level framework (Table 4.2) will also be explored in relation to individual projects and discussed with the UK Climate Investments delivery teams as part of these consultations.

Table 4.2 Process Evaluation Framework (Pilot Level)

				Key Stakeholder Groups			Secondary evidence	
Process area	**High Level Evaluation Questions**	**Sub- Level Process Evaluation Questions**	**Types of measures**	**UK Climate Investments Delivery & Management team[53]**	**Investment community**	**Wider country & sector experts**	**Monitoring information**	**Documentation review**
Governance & Delivery Mechanism Arrangements	P2. Did the governance arrangements and delivery mechanisms (detailed in section 3.1) of the joint venture lead to efficient, economic and effective project delivery?	P2a. How effective were the governance mechanisms in enabling the UK Climate Investments Pilot project delivery to demonstrate success (i.e. commercial viability and transformational change)?	- Perceptions among UK Climate Investments Delivery & Management team - Number of success measures identified within contracts and investment origination documents - Comparison with other delivery mechanisms used in similar programmes via CC/MEL	✓✓✓			✓✓	✓
		P2b. What difficulties or barriers in the governance structure affected delivering the UK Climate Investments Pilot as planned?	- Perceptions among UK Climate Investments team	✓✓✓				
		P2c. What governance arrangements enabled effective delivery of the UK Climate Investments Pilot?	- Perceptions among UK Climate Investments team	✓✓✓				
		P2d. Was the UK Climate Investments Pilot implemented as intended?	- Perceptions among UK Climate Investments team - Number of pilot processes outlined that have been conducted and extent to which there has been variation	✓✓✓			✓✓	
Marketing and communications	P2 Did the governance arrangements and delivery mechanisms (detailed in section 3.1) of the joint venture lead to efficient, economic and effective project	P1a. Are there sufficient mechanisms and available budgets to promote the UK Climate Investments Pilot programme?	- Perceptions among UK Climate Investments team	✓✓✓				
		P1b. How has the marketing and communications strategy aligned with the project's objectives or requirements of investors?	- Perceptions among wider investment community - Review of marketing and communications strategy outlined versus similar project strategies		✓			✓✓

[53] UK Climate Investments Delivery & Management Team includes BEIS Commercial & Climate Finance teams and GIB's cross-cutting teams e.g. Sustainable Finance, Risk, Legal and Deal teams.

	delivery?	P1c. How effective are marketing and communications activities in raising awareness of the UK Climate Investments Pilot in country and amongst potential investors?	- Perceptions among UK Climate Investments team - Perceptions among wider investment community	✓✓	✓✓			
		P1d. What support is provided to potential project developers/investors/deals? How effective has this been?	- Review of time spent with co-investors - Types of support available (e.g. briefing materials) - Perceptions among UK Climate Investments team - Accounts from delivery team	✓✓✓				✓✓
	P3. Does the UK Climate Investments Pilot dissemination strategy effectively communicate success and subsequently increase private finance interest in investment?	P3a. How effective has the UK Climate Investments Pilot's marketing, communication and information dissemination been in generating investments?	- Perceptions among UK Climate Investments team - Types of marketing and communication and dissemination materials - Number of marketing and communications materials - Increased interest in co-investing with GIB (via EY benchmarking) - Number of investors across the UK Climate Investments portfolio - Number of investments made & projects initiated - Number of letters/support from national authorities or local regulators - £ private investment generated for UKCI projects - Ratio public: private investment - £ private investment in market overall (i.e. the long-term impact of successful communication leading to more private investment beyond UKCI)	✓✓✓				✓✓✓
		P3b. How is the UK Climate Investments Pilot delivery team engaging with stakeholders to disseminate results and support changes to policy as relevant? How effective has this been?	- Perceptions among UK Climate Investments team - Audiences of marketing and communication and dissemination materials	✓✓✓	✓✓	✓		✓✓✓
Investment Identification	P1. Does the UK Climate Investments Pilot appraisal process effectively identify and secure investment in low carbon projects that meet the	P1k. How effective is the investment process in identifying investment in renewable energy /energy efficiency projects?	- Perceptions among UK Climate Investments team - Review investment origination document references to identifying renewable energy/energy efficiency - Types of project investments	✓✓				✓✓✓

	additionality criteria and have credible transformative potential?	P1m. What barriers or difficulties are there in identifying investments? What influence have regulatory, financial and institutional challenges had?	- Perceptions among UK Climate Investments team - Perceptions among wider investment community - Perceptions among wider country and sector experts - Review of level of regulatory, financial and institutional barriers in-country	✓✓	✓✓✓	✓✓✓		✓
Investment origination	P1. Does the UK Climate Investments Pilot appraisal process effectively identify and secure investment in low carbon projects that meet the additionality criteria and have credible transformative potential?	P1l. How effectively did co-investor requirements align with the objectives of the Pilot? To what extent were trade-offs made?	- Perceptions among UK Climate Investments team	✓✓✓				
		P1n. What are the most successful means of originating renewable energy and energy efficiency projects?	- Perceptions among UK Climate Investments team - Perceptions among wider investment community - Perceptions among wider country and sector experts - Review of any existing literature evaluating means of originating renewable energy or energy efficiency projects	✓✓	✓✓	✓✓		✓
		P1o. Do deal originators have clear guidance and tools to assess the requirements of the investment criteria?	- Perceptions among UK Climate Investments team	✓✓✓				
Investment process	P1. Does the UK Climate Investments Pilot appraisal process effectively identify and secure investment in low carbon projects that meet the additionality criteria and have credible transformative potential?	P1e. To what extent are communications clear regarding the requirements **to the project investors throughout the deal process**?	- Perceptions among UK Climate Investments team - Assessment of clarity in any documentations relating to bidding process	✓✓				✓✓
		P1f. What was involved in the selection process for securing funding for a project? How effectively has this process been implemented? (e.g. has it identified investments on suitable legal terms, with the right controls, at appropriate level of risk, and what is track record of the partners, where in the project lifecycle is UKCI engaging?) Have processes changed since UKCI inception?	- Perceptions among UK Climate Investments team - Review of investment minutes and committee papers in comparison to investment portfolio information	✓✓✓			✓✓✓	
		P1g. How does the investment mandate align with the objectives of UK Climate Investments Pilot?	- Perceptions among UK Climate Investments team - Review of investment minutes and committee	✓✓✓				✓✓✓

			papers in comparison to investment mandate					
		P1h. How is the investment mandate balanced with wider climate change mitigation objectives for ICF?	- Perceptions among UK Climate Investments team - Perceptions among wider country and sector experts - Review of ICF climate change objectives	✓✓		✓✓		✓✓✓
		P1i. How effective is the screening process at identifying projects for additionality, replicability, commerciality and potential for transformational change?	- Perceptions among UK Climate Investments team - Perceptions among wider investment community - Perceptions among wider country and sector experts - Review of investment committee papers and minutes - Assessment of GIB's green ratings and transformational assessment dashboard - Comparison with other additionality screening measures used in similar programmes via CC/MEL	✓✓	✓	✓✓	✓✓✓	✓✓
		P1j. To what extent does the DD process provide a clear means to assess additionality, replicability and potential for transformational change?	- Perceptions among UK Climate Investments team - Comparison of due diligence processes against due diligence reports (e.g. E&S risk register, incident report, risk profile, GRID dashboard, green performance dashboard)	✓✓			✓✓✓	
	P2. Did the governance arrangements and delivery mechanisms of the joint venture lead to efficient, economic and effective project delivery?	P2e. How appropriate is the due diligence (DD) process compared with other standards?	- Perceptions among UK Climate Investments team - Perceptions among wider investment community - Review of other GIB and BEIS due diligence processes - Comparison with other DD processes used in similar programmes via CC/MEL	✓✓	✓			✓
		P2f. To what extent do the UK Climate Investments Pilot DD requirements align with existing processes? How is the process different?	- Perceptions among UK Climate Investments team - Review of other GIB and BEIS due diligence	✓✓				✓✓

			processes					
		P2g. How has the investment process attempted to remain impartial in relation to the decision making by GIB & BEIS??	- Perceptions among UK Climate Investments team	✓✓✓				
		P2h. Have suitable quality procedures been put in place to verify that appropriate agreements were instigated at the onset between co-investors and the UK Climate Investments Pilot management team?	- Perceptions among UK Climate Investments team - Review of procedures outlined in contract and compliance agreements	✓✓✓			✓✓	
		P2i. How does the investment process seek to ensure continuous improvement in the selection process?	- Perceptions among UK Climate Investments team	✓✓✓				
		P2j. To what extent is the project assessment standardised or divergent for each project?	- Perceptions among UK Climate Investments team - Number of standardised assessment processes per project	✓✓			✓✓✓	
		P2o. To what extent does the DD process account for risk and mitigation?	- Perceptions among UK Climate Investments team - Review of project risk registers and risk profiles	✓✓			✓✓✓	
		P2p. How does the DD process attempt to balance the objectives of the pilot? (e.g. additionality, commerciality and transformational potential)	- Perceptions among UK Climate Investments team	✓✓				
Monitoring & reporting	P2. Did the governance arrangements and delivery mechanisms of the joint venture lead to efficient, economic and effective project delivery?	P2k. To what extent does the monitoring process account for risk assessment and mitigation?	- Perceptions among UK Climate Investments team - Review of project risk registers and risk profiles	✓✓			✓✓✓	
		P2l. Are projects audited through the delivery of the pilot? How effectively do audits identify issues?	- Perceptions among UK Climate Investments team - Number and regularity of project audit reports	✓✓✓			✓✓	
		P2m. How effective are the monitoring and reporting processes for ensuring that the objectives were being met by all parties involved?	- Perceptions among UK Climate Investments team - Assessment of number of monitoring and reporting documents that link to overarching objectives	✓✓✓			✓✓	

		P2n. What lessons have been learned from delivery and monitoring of projects? Have any changes been made to the delivery processes as a result? Or changes to the specifications for future programmes or projects more widely?	- Perceptions among UK Climate Investments team	✓✓✓				

The number of ✓in each cell denotes the weight of the evidence source with ✓✓✓ meaning it has the greatest weight and ✓ meaning it has the least weight

The table below provides a project level outline of the key evaluation questions against the different types of measures and evidence sources. The results from the project level would also feed into the pilot level evaluation questions.

Table 4.3 Process Evaluation Framework[54] (Project Level)

				Key stakeholders					Secondary data
Process area	High Level Evaluation Questions	Sub-Level Process Evaluation Questions	Types of measures	Project investors	Investment community	Wider country & sector experts	Project delivery partners	External stakeholders	Monitoring information
Governance and delivery mechanism arrangements	P2. Did the governance arrangements and delivery mechanisms of the joint venture lead to efficient, economic and effective project delivery?	p2a. How effective were the governance mechanisms in enabling the project delivery to be successful? (i.e. commercial viability and transformational change	-Perceptions among project investors - Perceptions among delivery partners - Number of success measures identified within contracts and investment origination documents	✓✓✓			✓✓		✓✓
		p2b. What difficulties or barriers in the governance structure affected delivering the project as planned?	-Perceptions among project investors - Perceptions among delivery partners - Perceptions among external stakeholders	✓✓✓			✓✓	✓	

[54] A small 'p' in the numbering system denotes that the question is similar to the pilot level question but has been adapted to refer to the specific project

Process Evaluation Framework

Marketing and communications	P1. Does the UK Climate Investments Pilot appraisal process effectively identify and secure investment in low carbon projects that meet the additionality criteria, be profitable and have credible transformative potential?	P1b. How has marketing and communications strategy aligned with the project's objectives or requirements of investors?	- '-Perceptions among project investors - Perceptions among delivery partners - Perceptions among external stakeholders - Perceptions among wider country and sector experts - Review of marketing and communications strategy outlined versus similar project strategies	✓✓✓	✓		✓✓	✓	✓
		p1c. How effective are marketing and communications activities in raising awareness of the project in country and amongst potential investors?	- Perceptions among project investors - Perceptions among wider investment community - Perceptions among external stakeholders	✓✓	✓✓			✓	
		p1d. What support is provided to project investors? How effective has this been?	- Review of time spent with investors - Types of support available (e.g. briefing materials) - Perceptions among project investors - Perceptions among delivery partners - Accounts from delivery team	✓✓✓			✓✓		✓
	P3. Does the UK Climate Investments Pilot dissemination strategy effectively communicate success and subsequently increase private finance interest in investment?	p3b. How is the project delivery team engaging with stakeholders to disseminate results and support changes to policy as relevant? How effective has this been?	- Perceptions among project delivery partners - Perceptions among wider investment community - Perceptions among wider country and sector experts - Perceptions among external stakeholders	✓✓✓	✓	✓	✓✓	✓✓	
Investment identification	P1. Does the UK Climate Investments Pilot investment appraisal process effectively identify and secure investment in low carbon projects that meet the additionality criteria, be profitable and have credible transformative potential?	P1k. How effective is the investment process in identifying investment in renewable energy/energy efficiency projects?	- Perceptions among project investors (including those not successful in receiving UKCI investment) - Perceptions among external stakeholders - Review investment origination document references to identifying renewable energy/energy efficiency - Types of project Investments	✓✓✓				✓✓	✓
Investment origination	P1. Does the UK Climate Investments Pilot investment appraisal process effectively identify and secure investment in low carbon projects that meet the additionality criteria, be profitable and have credible transformative potential?								
		P1l.. How effectively did co-investor requirements align with the overall objectives of the Pilot? To what extent were trade-offs made?	- Perceptions among project investors	✓✓✓					
		P1o. Do deal originators have clear guidance and tools to assess the requirements of the investment criteria?	- Perceptions among project investors - Perceptions among external stakeholders	✓✓✓				✓✓	

Process Evaluation Framework

Investment process	P1. Does the UK Climate Investments Pilot appraisal process effectively identify and secure investment in low carbon projects that meet the additionality criteria, be profitable and have credible transformative potential?	P1e. To what extent are communications clear regarding the requirements to the project investors throughout the deal process?	- Perceptions among project investors - Perceptions among external stakeholders	✓✓✓				✓✓	
		P1f. What was involved in the selection process for securing funding for a project? How effectively has this process been implemented? Has this changed since its inception?	- Perceptions among project investors - Perceptions among delivery partners - Perceptions among external stakeholders - Review of investment minutes and committee papers in comparison to investment portfolio information - Comparison of selection process across projects	✓✓✓			✓✓	✓	✓
		P1j. To what extent does the DD process provide a clear means to assess additionality, replicability, commerciality and potential for transformational change?	- Perceptions among project investors - Perceptions among delivery partners	✓✓✓			✓✓		
	P2. Did the governance arrangements and delivery mechanisms of the joint venture lead to efficient, economic and effective project delivery?	P2g. How has the investment process attempted to remain impartial in relation to the decision making by GIB & BEIS?	- Perceptions among project investors - Perceptions among delivery partners	✓✓✓				✓	
		P2h. Have suitable quality procedures been put in place to verify that appropriate agreements were instigated at the onset between co-investors and the UK Climate Investments Pilot management team?	- Perceptions among project investors - Review of procedures outlined in contract and compliance agreements	✓✓					✓✓
Monitoring and reporting	**P2. Did the governance arrangements and delivery mechanisms of the joint venture lead to efficient, economic and effective project delivery?**	P2k. To what extent does the monitoring process account for risk assessment and mitigation?	- Perceptions among project investors - Perceptions among delivery partners - Review of project risk registers and risk profiles	✓✓✓			✓✓		✓✓✓
		p2l. How is the project audited through the delivery of the pilot? How effectively do audits identify issues?	- Perceptions among project investors - Perceptions among delivery partners - Number and regularity of project audit reports	✓✓			✓		✓
		P2m. How effective are the monitoring and reporting processes for ensuring that the objectives were being met by all parties involved?	- Perceptions among project investors - Perceptions among delivery partners - Assessment of number of monitoring and reporting documents that link to overarching objectives	✓✓✓			✓✓		✓

		p2n. What lessons have been learned from delivery and monitoring of the project? Have any changes been made to the processes as a result? Or changes to the specifications for future programmes or projects more widely?	- Perceptions among project investors - Perceptions among delivery partners	✓✓✓			✓✓✓		

The number of ✓in each cell denotes the weight of the evidence source with ✓✓✓ meaning it has the greatest weight and ✓ meaning it has the least weight

5 UK Climate Investments Theory of Change

5.1 Theory of change and logic model for UK Climate Investments Pilot

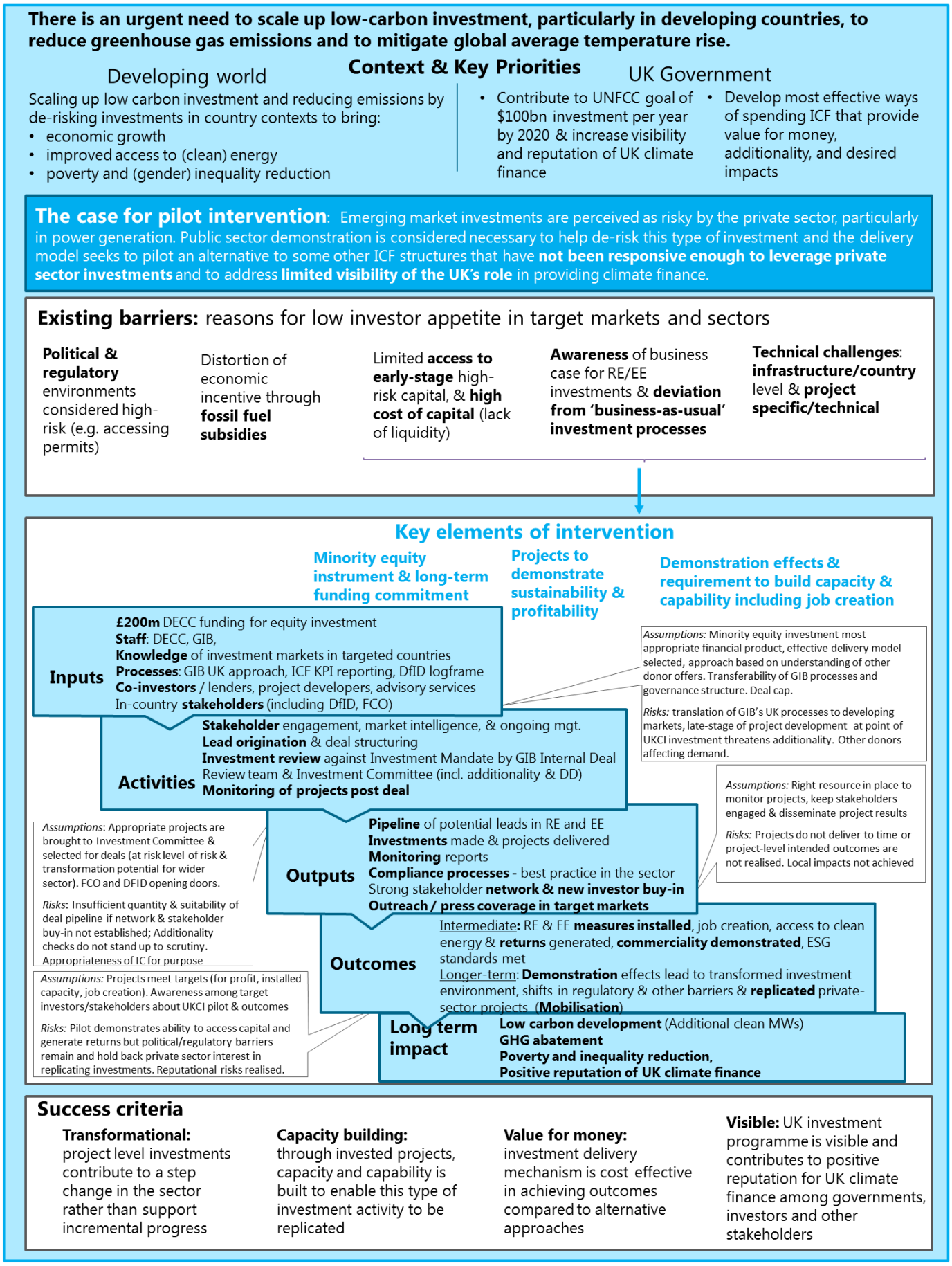
Figure 5.1 summarises the theory of change for the UK Climate Investments pilot. This has been produced collaboratively with BEIS and the GIB. It demonstrates the causal pathway through which the Pilot aims to achieve its impacts; that is to contribute to the ICF's objective of improving the international climate finance architecture and value for money of climate spend by demonstrating that low carbon development in emerging markets is possible, replicable, commercially viable and transformative. The operating objectives of each investment relate to responsible investment, green impact, mobilising additional private sector investment and seeking to overcome market failures whilst minimising adverse impacts on competition.

The theory of change details how these outputs and outcomes are anticipated to come about starting with the key processes being set-up and delivered by the UK Climate Investments LLP. These relate to the pilot's governance arrangements, marketing and communications strategy, investment process (origination, screening, review, appraisal, negotiation and signing) as well as monitoring and reporting.

The theory of change represents a living document and its key components and assumptions will be revisited regularly over the course of the evaluation. Through further evidence collection and stakeholder consultation the model will be further refined, for example, this will involve teasing out in more detail the different types of input and understanding their function in the programme logic

Figure 5.1: Pilot level theory of change

Source: UK Climate Investments Pilot Internal Project Steering Group (May 2016)



The Theory of Change includes the following elements:

- **Inputs** for the intervention include: BEIS provided funds (£200 million), staff, GIB knowledge and experiences made in the UK and internationally. Further inputs include specific expertise that aim to support the internal processes, such as legal advice and due diligence. The pilot model assumes that project developers provide the technology know-how, expertise on the local market situation and lay the groundwork for successful investments, including attracting private investment to complement the involvement of UK Climate Investment pilot.**Activities** are defined from the perspective of UK Climate Investments pilot and include the overall fund management processes as well as the individual project investment process as described in section 2.2.

- **Outputs** in the theory of change relate to elements of the UK Climate Investments pilot that will need to be achieved to fulfil its mandate, such as the pipeline of potential leads, strong networks and enhanced market knowledge within GIB. Other outputs are those focused more outwardly, such as the generation of press releases and stakeholder buy-in. At the project level the closure of investments is the main output of the process. At the internal and project levels, strong compliance processes and related monitoring reports aim to represent best practice in the sector.

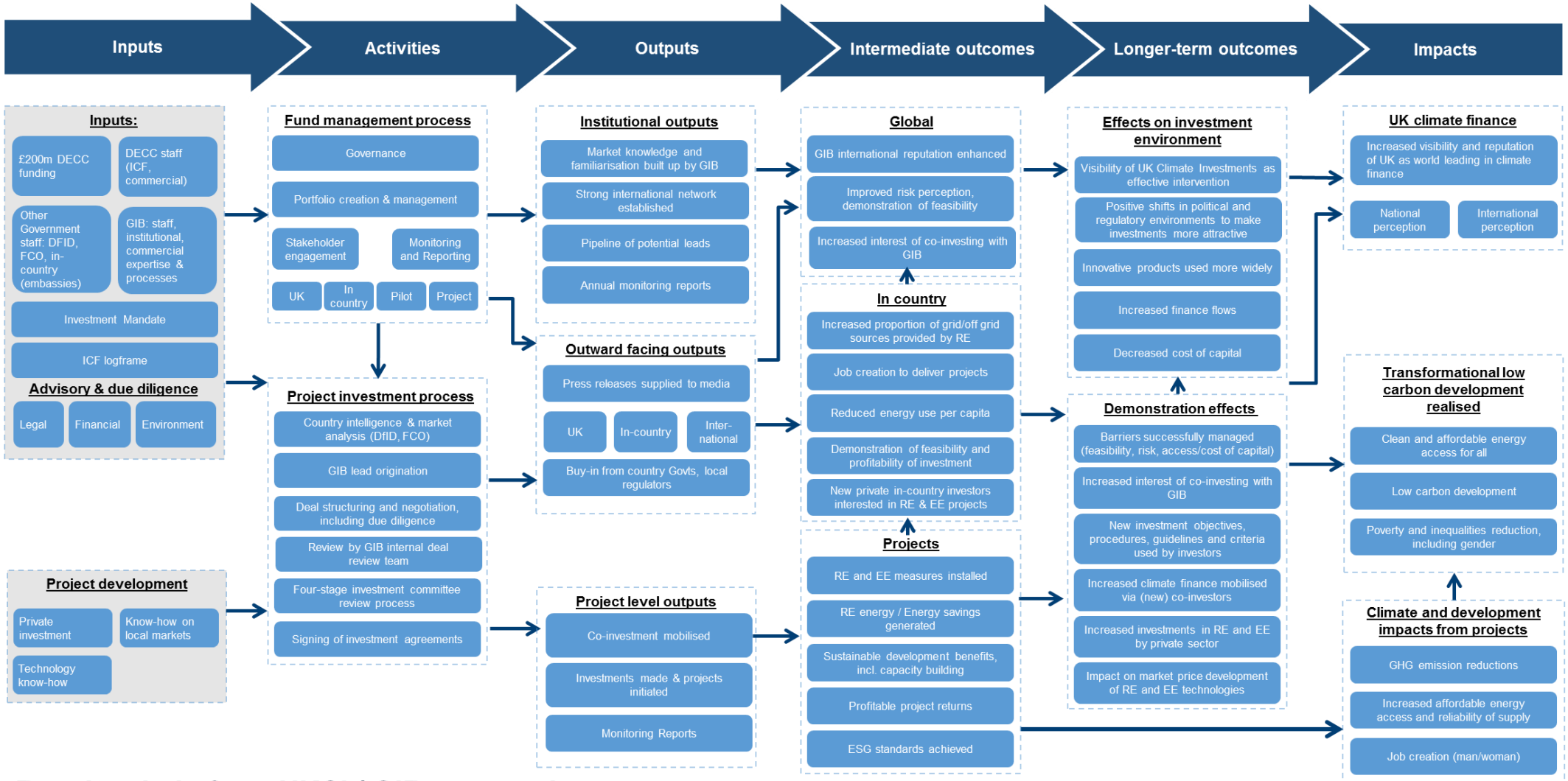
- **Outcomes** are distinguished into intermediate and long-term outcomes. At the intermediate level, the main project outcomes include the actual implementation of renewable energy and energy efficiency measures, creating jobs and affecting the wider sustainable and affordable energy access situation in the country and the reliability of supply. The direct effects on greenhouse gas emissions and transformation from investments are, however, likely to be small. Longer-term outcomes rely on the demonstration effects of investments and resulting effects on the investment environment.

- **Impacts** in the longer-term are sought to be shifts towards lower carbon development, including access to clean energy, and simultaneously contribution to a reduction in poverty in the target geographies. The Pilot seeks to achieve recognition for the UK in its contribution to these goals. It is expected by the UK Climate Investments team that these impacts will come about as an indirect effect of the pilot intervention, achieved through the demonstration of innovative (transformative) projects. The means by which these demonstration effects will be created is discussed further below.

Figure 5.2 provides a more detailed view on the theory of change. It illustrates how different elements outlined in the overview interact to achieve the envisaged outcomes and impacts at the pilot level.

Figure 5.2: Theory of Change Detailed Results Chain

Source: UK Climate Investments Pilot Internal Project Steering Group (May 2016)



Results chain from UKCI / GIB perspective

The realisation of this results chain from inputs to impacts is likely to depend on the demonstration effects of the realised projects. The realised projects will have a direct influence on the energy situation in the country, through additional electricity production (renewable generation) or reduced energy use (energy efficiency). This has an impact on the ability of the country to either provide energy to more people or to provide more reliable energy supply to existing customers (e.g. reduced brown-out times), enhancing **access to energy** and **leading to greater industrial/commercial growth or development**. In the case of energy efficiency measures, the energy provided would not necessarily be 'cleaner,' but would rely on the composition of energy supply in the country.

As highlighted in the UNDP's Human Development Report, energy access and reliability of supply is fundamental to ensuring high productivity, health, education and access to information[55]. Effects on inequality are complex and need to be addressed in the specific investment context. How far enhanced access potentially further increases inequalities, or manages to reduce inequalities depends on the national circumstances and the specifics of the investment. However, one can say that in general increased access to energy and greater commercial growth will contribute to reducing inequality (e.g. through job creation or improved quality of life/health/education). This pilot does not aim to reduce inequality directly rather it seeks to improve economic development which may lead to poverty reduction. The evaluation will seek to explore this when considering the intended and unintended consequences of the UK Climate Investments pilot.

Enhanced access or increased reliability can have positive impact on productivity, opening up new opportunities for business or enhancing productivity in existing business, if the enhanced energy supply is used for productive purposes. This scenario can contribute to the desired positive impacts on **poverty**.

Whether investments will lead to actual direct greenhouse gas emission reductions depends on:

- the additionality[56] of the investment at the time of decision-making
- market development during implementation affecting additionality and/or baseline emissions (counterfactual)
- unintended effects (see discussion in section 5.2)

Whether investments will finally support the desired **low carbon development**, will depend on the ability to generate replication. Depending on the geography, a wide replication could also potentially impact the local or regional market, for example through the building up of local

[55] Gaye, A; United Nations Development Programme: Human Development Report (2007): Access to Energy and Human Development http://hdr.undp.org/sites/default/files/gaye_amie.pdf

[56] Additionality from the perspective of the energy sector, not the individual investment, i.e. would the renewable energy capacity have been built in the absence of the investment or the energy efficiency project been carried out

knowledge on technologies, the establishment of distribution networks or a skilled work force, further enhancing transformational impact.

The main **assumptions** for achieving transformational change are:

- Minority equity investment is most appropriate financial instrument,
- GIB process developed in the UK can be transferred to developing countries,
- Appropriate projects can be found and brought forward to the investment committee
- The right resources are in place to monitor projects, keep stakeholders involved and disseminate project results.
- Projects get implemented as expected,
- Awareness on these projects can be raised.

The main **risks** of not reaching transformational change are:

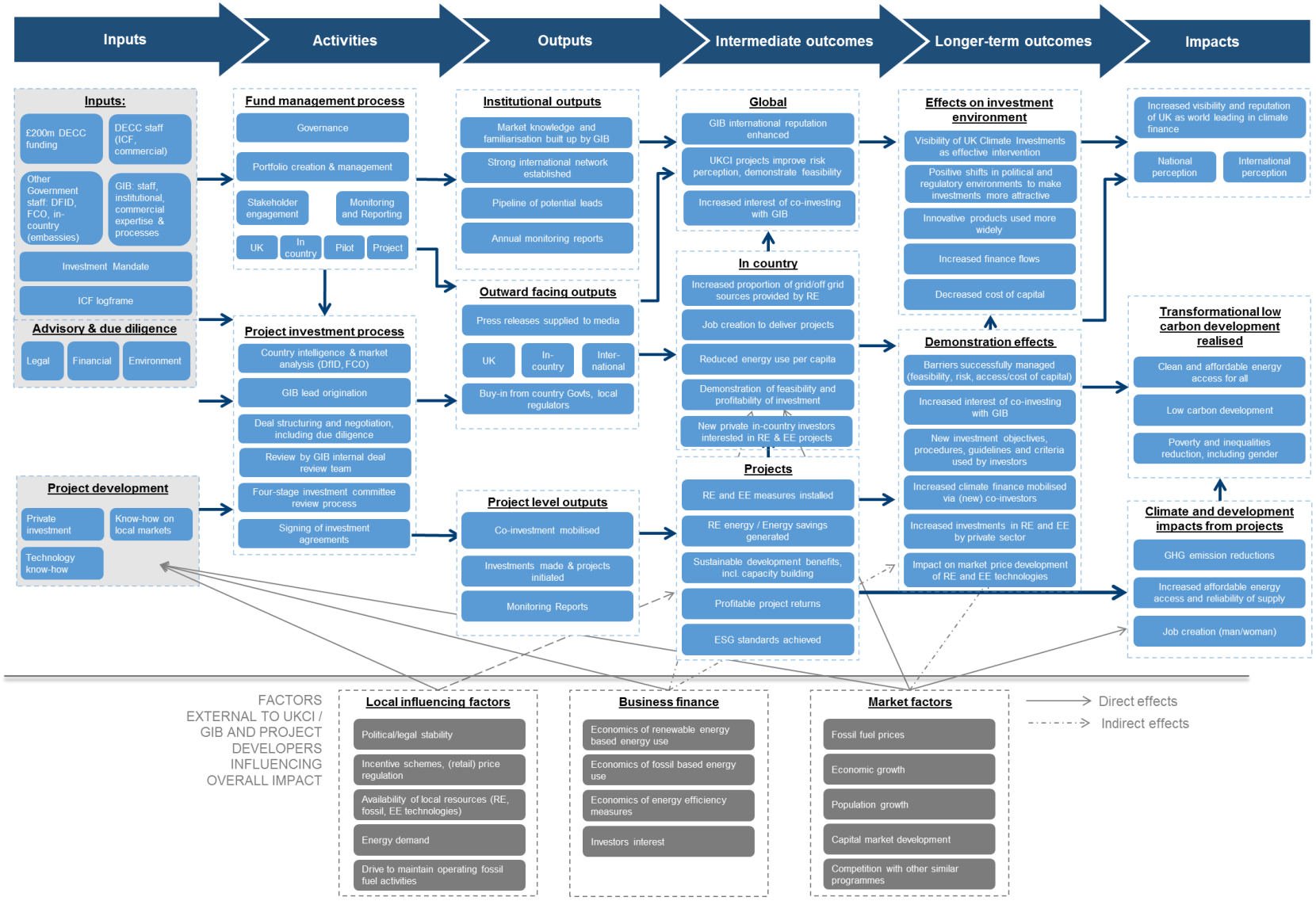
- Other types of financing are required by the project to reach financial close,
- Translation of GIB's UK processes to developing countries is not achievable,
- Projects find other sources of financing: either private sector, or public funding,
- The right staff cannot be found to commit themselves to the UK Climate Investments pilot,
- Projects face unforeseen problems during implementation, co-investors withdraw, or projects do not get implemented as per the agreed plan,
- The targeted group of stakeholders cannot be reached.

Summarising

The UK Climate Investments pilot leads to transformational change and increased reputation of UK climate finance by providing additional investments in innovative renewable energy or energy efficiency projects. The demonstration effects of these projects will lead to replication and consequent upscaling of private sector investments. Successful projects will enhance positive press coverage, that subsequently enhance the reputation of UK climate finance.

Figure 5.3 Influence of external factors on the results chain.

UK Climate Investments Theory of Change



Source: UK Climate Investments Pilot Internal Project Steering Group (May 2016)

5.2 Unintended consequences

While Figure 5.1 sets out the theory by which the UK Climate Investments pilot is set to achieve its intended impacts, this evaluation must also consider whether the initial inputs and activities contribute to any unintended consequences. These are listed below.

- **Crowding out private investments**: The financing from the UK Climate Investments pilot is to be additional to other sources of available funding. It should not crowd out private sector commercial funding[57]. Therefore, in the absence of the UK Climate Investments pilot funding the project will not be realised. This is to be demonstrated by the investees and GIB staff prior to the investment committee meeting. A negative, unintended consequence can be that the transformation brought about cannot be attributed to the UK Climate Investments pilot and that free market competition rules are not respected. This is because funded projects would have received commercial funding anyway.

- **(income) Inequality**: The UK Climate Investments pilot uses official development assistance (ODA) money to realise the projects. ODA is UK tax payers' money that supports aid and development in low to middle income countries[58]. It is to be spent on tackling the great global challenges – from the root causes of mass migration and disease, to the threat of terrorism and global climate change – all of which also directly threaten British interest[59]. The UK Climate Investments pilot is focused on middle-income countries. A negative, unintended consequence can be that the interventions do not take into account measures to realise access to modern sources of energy for the poor and more disadvantaged people. This deficiency does not contribute to reducing (income) inequality in the recipient country and on the contrary, these investments may result in more inequalities.

- **Gender equality**: In most societies, women have unequal rights, and have a subordinated position to men. The investments should consider this and, at least, not contribute to any worsening of gender inequality. A negative, unintended consequence can be that the interventions worsen the position of women[60].

  Under ODA rules the importance of monitoring gender equality as part of this intervention is clear. The evaluation seeks to address this through specific and transparent logframe indicators (table 6.5) and through required project reporting output requirements.

[57] Investment Mandate (Article 4.1.2)
[58] https://www.britishcouncil.org/organisation/transparency/official-development-assistance
[59] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/478834/ODA_strategy_final_web_0905.pdf
[60] United Nations "The World Survey on the Role of Women in Development - Gender Equality and Sustainable Development", Report of the Secretary-General, ISBN: 978-92-1-130330-8, United Nations, 2014. Available at http://www.unwomen.org/~/media/headquarters/attachments/sections/library/publications/2014/unwomen_surveyreport_advance_16oct.pdf

Evidence will be collected primarily through project monitoring and during case study interviews; the evaluation team will seek to verify gender information provided through these interviews in relation to each project (for example, asking during interviews for details of the gender balance of the project team, and in the local workforce involved in the project and comparing responses with recorded monitoring information).

Within the context of this Pilot, it is anticipated that it will be the make-up of project teams that have secured investment which will be the most significant gender lens to assess; although, the gender of beneficiaries of these projects will also be monitored and recorded.

In addition to this, the evaluation will assess gender equality in relation to the overall Pilot governance through stakeholder consultations and the longer term gender impact of the intervention considering, for example, whether local people are likely to be displaced through the project and the extent to which this affects women.

- **Land rights**: Access to land as a productive resource is key to the livelihoods of millions of farmers around the world. Project development often requires securing tracts of land for the realisation of the project. In developing countries often land and property rights may not always be well developed or respected. A negative, unintended consequence can be that the interventions result in people displacement, or local land owners are not properly compensated.[61] [62]

- **Environmental**: In developing countries often the environmental legislation may not be as well developed as in the UK. This can lead to a situation where the full environmental effects resulting from the project are not considered before a permit is issued. Detailed environmental impact assessments are not always required. A negative, unintended consequence can be that the interventions lead to environmental pollution (land use changes, threats to local biodiversity, noise pollution, air quality, etc.).[63] [64]

- **Rebound effects**: Rebound effects are commonly related to energy efficiency measures. An unintended consequence of successful energy savings projects is that household income and profits in businesses increase as result of lower energy expenses. The reduction of energy expense is a positive consequence for individual consumers as well

[61] Economic and Social Development Department FAO “Gender and Land Rights – Understanding Complexities; Adjusting Policies”, Policy Brief, FAO, March 2010. Available at http://www.fao.org/docrep/012/al059e/al059e00.pdf

[62] International Institute for Environment and Development, “Land tenure and agricultural investment. Investing in local tenure security for inclusive and sustainable development”, Background paper for the European Report on Development (ERD). Available at https://ec.europa.eu/europeaid/erd-background-paper-land-tenure-and-agricultural-investment-investing-local-tenure-security_en

[63] Bell, Ruth Greenspan, and Clifford Russell. "Environmental Policy for Developing Countries." Issues in Science and Technology 18, no. 3 (Spring 2002). Available at http://issues.org/18-3/greenspan/

[64] Nazrul Islam, Isabel Martínez, Ikechi Mgbeoji, and Wang Xi (2001). Environmental Law in Developing Countries: Selected Issues. IUCN, Gland, Switzerland and Cambridge, UK, CDG, Berlin, Germany and ZAV, Bonn, Germany. xiv + 140 pp. ISBN: 2-8317-0625-4. Available at https://portals.iucn.org/library/efiles/edocs/EPLP-043.pdf

as the overall economy of countries. On the other side, money savings may lead to increased activity levels or additional new activities that consume more energy. This way part of the impact of the energy efficiency improvement investment is reduced. [65]

The evaluation will also seek to ensure that additional unintended consequences that have not been anticipated are captured as part of the fieldwork period through stakeholder consultations and secondary data analysis.

5.3 Tailoring the UK Climate Investments theory of change to specific investments and circumstances

The overall pilot level theory of change needs to be tailored to the specific theories of change at the individual investments (project level). The exact routes through which the pilot will achieve the demonstration effect, desired replication and thus the transformation will largely depend on the nature and circumstances of the individual investments. On a project level the following three elements are key to establish a theory of change:

- **The project design**, In the context of the pilot's Investment Mandate and scale of funds, six types of project design can be identified that lead to the desired transformational change in a country specific context:
- Project designs that demonstrate an innovative commercial **funding structure,**
- Project designs that promote innovative **technology solutions or business models**,
- Project designs that demonstrate new and innovative ways to **tackle existing barriers** (discussed in section 2.4),
- Project designs that **combine** in innovative ways different well-established elements.
- Project designs that **strengthen political buy-in or public support** aligned with the country's strategy
- Project designs that can **build capacity or capability** within other institutions or organisations
- **The approach to establish transformational change**, these are demonstration effects the project design aims to achieve. Examples are: overcome existing barriers, increased interest of co-investing with GIB, new investment objectives, procedures, guidelines and criteria used by investors.

[65] Economic Consulting Associates, UK Department for International Development (DFID), "The Rebound Effects for Developing Countries", Evidence on Demand – Climate and Environment Infrastructure and Livelihood, 2014. Available at http://dx.doi.org/10.12774/eod_cr.march2014.eca

- **The specific circumstances of the geography**: are the external factors that can influence the desired demonstration effects and hence the impact. Transformational change depends on the specific context of the relevant geography and the investment type, i.e. renewable energy or energy efficiency. The same type of investment can be highly innovative in one country, while it could be considered business-as-usual in another.

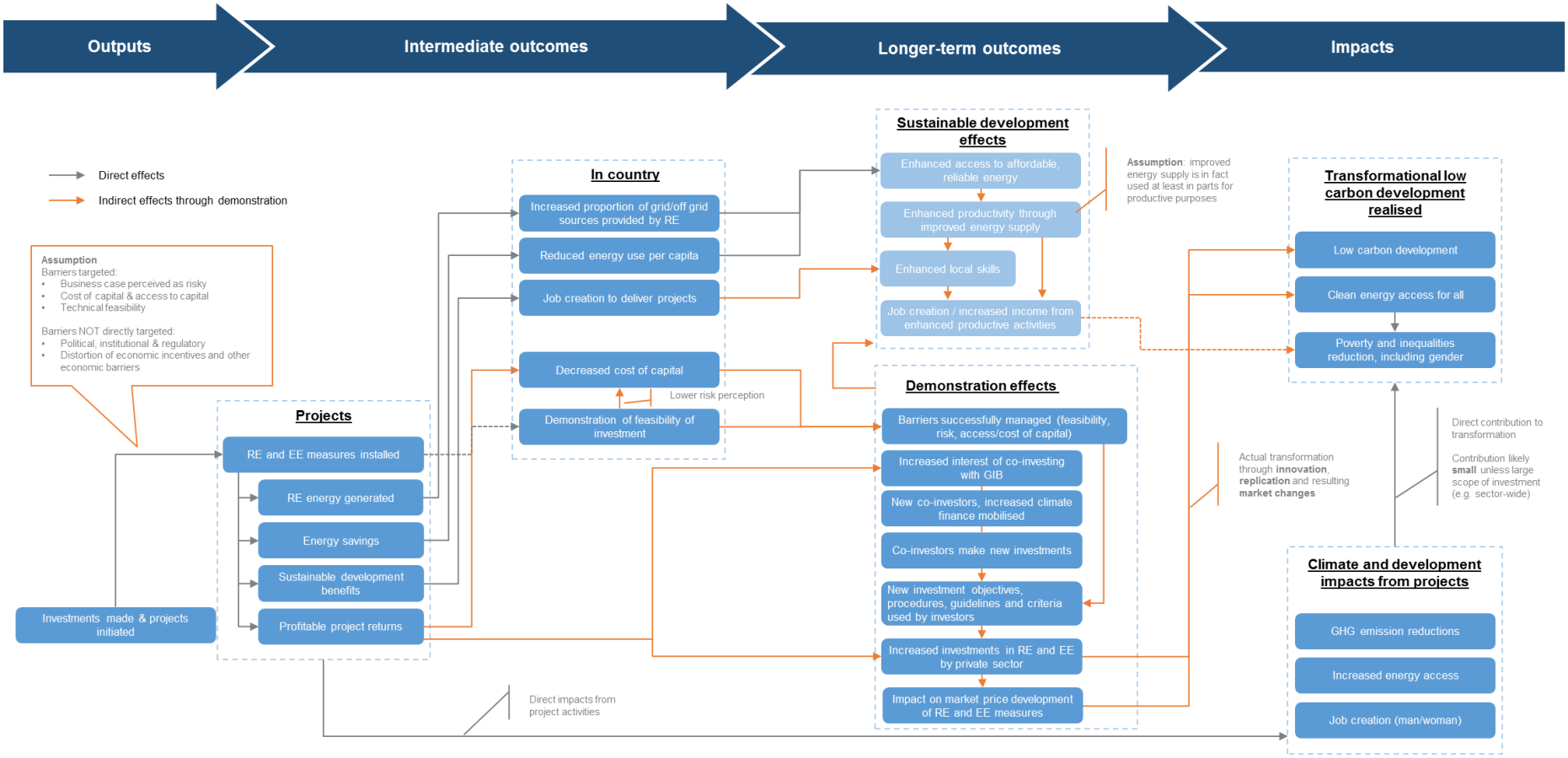
Figure 5.3 illustrates how the mechanism for transformation will impact the results chain. Building further on Figure 5.4, this representation of the pilot now focuses on the in-country effects on the investment market and the subsequently anticipated demonstration effects, including effects on sustainable development. Where in the graph:

- **The project design** determines the focus of transformational effects
- **The targeted mechanism used to establish transformational change** equals demonstration effects
- **The specific circumstances of the geography** affect the ability of the demonstration effects to achieve the desired impacts.

Figure 5.4 Results chain for transformation focusing on innovative project designs

Source: UK Climate Investments Pilot Internal Project Steering Group (May 2016)

The following box illustrates how this translates into an individual results chain for a specific investment.



6 Impact Evaluation framework

This section sets out the proposed approach to delivering an early-stage impact evaluation and establishing a baseline for a future longer-term assessment of impacts. It recommends an approach to assessing the contribution that the Pilot makes specifically to the realisation of these outcomes, relative to other contributing factors. It then details the indicators that the evaluation will need to measure to identify these outcomes and the timelines over which these can be expected to be identifiable. The following data collection strategy explains how evidence will be collected against these indicators and the benchmarks which will be used to aid an assessment of their relative success.

6.1 Aims for an impact evaluation of the UK Climate Investments Pilot

The two key evaluation objectives, as specified in BEIS's ToR, relating to the impact evaluation framework are to:

- **Assess the achievement of the UK Climate Investments' outputs, outcomes and impacts** as presented in the Theory of Change, including the likelihood of achieving transformational change and commercial viability; and,
- Assess the extent to which UK Climate Investments can **attribute transformational change to its activities.**

The ToR breaks down these main objectives into the more detailed impact-related questions presented in Table 6.1 below. The table links each of the key evaluation questions to the success criteria detailed in the Theory of Change as ultimately answering these questions through the impact evaluation will contribute to an overall assessment of whether the UK Climate Investments Pilot has achieved the vision for success (defined collaboratively with BEIS and the GIB through the Theory of Change workshop during the evaluation scoping phase). Later in this section, specific measures of success are detailed to show how the relative performance of the Pilot against these areas will be assessed.

Table 6.1 Key evaluation questions linked to success criteria

Key evaluation questions
I1. Did UK Climate Investments pilot achieve their project specific climate and development outcomes? Why or why not?
I2. Did UK Climate Investments pilot meet the additionality requirement in the Investment Mandate? Why or why not?

I3. To what extent do UK Climate Investments catalyse or contribute to transformational change? Why or why not?
I4. Has UK Climate Investments successfully leveraged private finance into investments, and what are the profiles of investors?
I5. Has UK Climate Investments improved the reputation of UK Climate Finance?

A review of these evaluation questions, as stated in the ToR, has been completed against the OECD-DAC criteria[66]. As discussed in section 1, this review process has identified some gaps regarding questions on the sustainability of the outcomes achieved. As such, it is suggested that the following evaluation questions are considered for inclusion in a revised ToR:

I6 - To what extent did the outcomes achieved by the UK Climate Investments pilot and the specific projects funded **maintain/sustain beyond the lifetime of the investment**?

I7 - What were the **major factors which influenced the achievement or non-achievement of sustainability** of UK Climate Investments outcomes?

Whilst it is understood that the timeframes for this evaluation would make it unfeasible to respond to these questions concretely, this section goes on to consider how it may be possible to gather indications of potential for outcomes to be sustained and any significant risks within the next two years.

6.2 Key considerations in the design of an impact evaluation strategy for UK Climate Investments

This section presents the recommendation, and underpinning rationale, for an impact evaluation of UK Climate Investments centred on a theory based contribution analysis approach.

Contribution analysis can support inferences of causality within a non-experimental programme and helps to assess to what extent observed results are due to the programmes activities rather than other factors. The approach rests on the creation of a ‘contribution’ or ‘performance story’, providing an initial narrative of what it is reasonable to expect the UK Climate Investments has contributed relative to other inputs. Through collecting evidence to either prove or disprove this contribution story, this approach will enable evidence-based judgements to be made on the differentiation between the impact of the UK Climate Investments and other explanations of the outcomes.

[66] http://www.oecd.org/dac/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm

The feasibility and value of alternative impact evaluation strategies have been considered, from quasi-experimental designs to a realist framework but these have been discounted in favour of contribution analysis.

The recommendation to use a contribution analysis approach is based on the following key considerations:

Table 6.2 Key considerations for contribution analysis

Key consideration	Discussion	Value of contribution analysis (CA)
Scale of intervention and likely contribution of external factors	UK Climate Investments is a £200 million investment in total which is spread across 8-12 projects across three different markets. In the context of the $100bn target per year for low carbon investment in the developing world, this is clearly a small scale intervention. As discussed in section 2, it is also an investment being made within the context of many external political, regulatory, financial and social factors which will also act to either help or hinder the achievement of outcomes and impacts.	Given that the project-level investment made by UK Climate Investments does not sit in isolation, and will form one part of a wide range of market and social factors also affecting the desired outcomes, it is necessary for this evaluation to be able to identify the contribution made to the outcomes, rather than attempting to answer questions of attribution. CA will enable the expected contribution made by the external factors to be clearly articulated, and when compared with the theory-based performance story for the impact of the UKCI, to unpick the extent to which the latter is leading to outcomes observed.
Assessment of the complexity of the programme being evaluated	Overall UK Climate Investments is considered a complicated, rather than complex intervention, with the direct outcomes from investment fairly easy to define and trace. There are elements of complexity in the achievement of higher-level transformational change outcomes however, which require demonstration effects to influence change in society and markets more broadly (involving complex and non-linear interactions between different groups and organisations, highly dependent on	While a truly complex system may be best evaluated through a realist approach, and a simpler intervention may lend itself to a quasi-experimental strategy, the two-tiered nature of UK Climate Investments – with more straight-forward direct project outcomes but more complex indirect demonstration effects - can both be handled through CA. The identification of direct project outputs will act as 'building blocks' in the performance story, and when linked to the Theory of Change, will be examined to see if they provide reasonable grounds to believe in the contribution these make

	context[67])	to longer-term outcomes.
Timeframes over which impacts will be realised & need to evaluate both **direct and indirect outcomes** from initial investment	Within the timeframe of the evaluation and Pilot (up to 2018) only immediate and direct outcomes of investments can be expected to be measureable, for example jobs generated in project set-up and operation and levels of co-investment achieved. Given the invested projects will run for many years, many of their ultimate impacts (on energy access, reliability of supply, overall clean energy capacity generated) may only be known in theory by 2018, and the realisation of ultimate goals to contribute to higher level shifts in climate finance approaches, low carbon development and poverty alleviation beyond the outcomes of individual projects will not be identifiable for decades.	CA will enable the evaluation to form a judgement on whether the 'performance story' is holding true so far, and based on the theory of change whether the subsequent steps towards higher-level impacts appear likely at this point in time, and the extent to which contribution to this from UK Climate Investments can be attributed in light of external influencing factors.

6.3 Implementing a contribution analysis approach to assessing impacts

This section sets out the stages involved in implementing contribution analysis and identifies the elements of this evaluation framework, and of the planned evaluation activities, that will form the basis of the approach:

- **Setting out the attribution problem to be addressed and developing the theory of change:** The Theory of Change presented in section 5.1 provides a description of the short, medium and long-term outcomes and impacts that UK Climate Investments hopes to achieve, as well as the causal pathways through which these should be realised from the inputs and activities of the Pilot. This is currently defined at an overall Pilot level and tailored versions for each individual investment will need to be created based on project-centred documentation reviews and stakeholder consultations. These detailed project-level Theories of Change will provide the specific performance story for each investment;

[67] http://learningforsustainability.net/post/complicated-complex/

- **Description of theoretical assumptions and external factors:** Section 5.1 of this framework also details the assumptions and risks on which the theory of change is based and the factors that are and are not in the control of the programme. Section 5.1 which describes the baseline scenario also provides the assumptions of what else in these markets and sectors may act to influence the achievement of targeted outcomes aside from the direct actions of the UK Climate Investments. Section 5.2 summarises potential effects that may not be measurable in any robust way and where the contribution of UK Climate Investments is not expected to be identifiable. Again, when the investments have been made, detailed examination of external factors acting at individual project-level will be needed – drawn from review of contextual and secondary data in the specific area of the project as well as extensive consultation with project teams and related stakeholders and experts;

- **Populating the model with data and evidence:** Data collection (both quantitative and qualitative) for each of the outcome and impact indicators defined in Table 6.4 will provide the observed changes in outcomes, and (particularly through stakeholder consultation) the processes and paths of influence through which these have been realised.

- **Assemble and assess the performance story and challenges to it:** This will form an initial 'performance story' for the UK Climate Investments including hypotheses of where extraneous factors can be discounted as explanations for outcomes. This step will also assess the influence of external factors and the development of alternative explanations for outcomes to establish the programme's contribution to outcomes,

- **Revising the performance story and ongoing gathering and synthesising of evidence:** Ongoing analysis and collaborative testing of the theory throughout the evaluation period as further rounds of data collection are completed and findings synthesised (approach to synthesis discussed in section 7.5). This process is crucial to ensuring that the theory of change development is an iterative and flexible process and it can be adapted and updated at key points during the evaluation.

One example of this approach in practice is to consider the causal pathway that the UK Climate Investments pilot aims to improve the reputation of UK climate finance through GIB marketing and communication activity. The extent to which the pilot contributes to improved reputation can be tested by assessing the extent to which investors are favourable towards the UK Climate Investments pilot programme. Contribution analysis can be applied here to infer whether there is a causal relationship between the activity (i.e. marketing and communications) and the outcome (i.e. high favourability). It relies on a plausible theory of change, evidence that the activity took place, that the chain of expected results occurred as defined in the theory of change and that no other potential factor had a significant contribution.

The value of a contribution analysis approach has also been considered by detailing the approach which will be taken to untangle the contribution of UK Climate Investments for each of its types of outcome and impact, considering the competing factors likely to also be at play. Further discussion of competing factors is provided when defining the baseline for UK Climate

Investments in section 6.3.; although both in Table 6.3 below and in section 6.3 this just provides a starting set of suggestions which will be more fully developed during the baseline evaluation stage, as well as updated in real time over the course of the evaluation as further competing factors are identified through the research.

Table 6.3 Competing factors by type of outcome

Type of outcome	Indication of likely competing factors	Identifying UK Climate Investments contribution
Direct project-level outcomes (e.g. energy capacity created or saved, energy access, reliability of supply, local jobs generation etc.)	Co-investor funding can also lay claim to contributing to direct outcomes of their share of investment Considering the additionality of the UK Climate investments is also required to rule out alternative explanations of the outcomes i.e. is it possible projects would have proceeded and produced these outcomes anyway?	UK Climate Investments is providing a maximum of 30% total investment for a single project with co-investors providing the rest of the funding. The attribution of project-level outcomes (such as energy capacity created or saved, jobs generated) to UK Climate Investments can therefore take a proportionality approach i.e. if UK Climate Investments contributes 30% of the funding then 30% of the impacts are generated to the programme. Comparative evidence from data collection with unsuccessful investments will also help unpick the additionality of the contribution story from the UK Climate Investments share of investment. The approach to the case-study research is presented in section 7 provides more information on the QCA approach that will enable robust conclusions to be drawn between the assessment of successful and unsuccessful projects.
Demonstration effects at country-level outcomes (e.g. changes in investor attitudes, less restrictive regulatory environments, political buy-in)	Changes to the political and regulatory framework within which RE and EE investments are made will compete with UK Climate Investments in contributing to these outcomes e.g. levels of fossil fuel subsidies, any changes in permitting laws	While this is not an intended outcome group in the Theory of Change, data collection with country-based experts (in policy, regulation, financial market, academia) may identify whether the cumulative effects of multiple UK Climate Investments projects within one market are having a contributory effect to wider level shifts in attitudes and practices, and the relative importance of this compared with changes in factors external to the programme. BEIS's annual

		stakeholder survey may offer an evidence source to feed into the evaluation's assessment of levels of awareness of UK Climate Investments, and therefore the likelihood that it has had an impact on these outcomes. As this survey is likely to be targeted at groups that are more likely to be aware of UK Climate Investments (e.g. as part of the FCO network), qualitative consultation across a wider breadth of stakeholders will also feed into this.
Transformational change effects at overall Pilot level (within each market)[68] e.g. shifts in levels of private sector investment for RE and EE, step-change in overall clean energy access, reliability of supply and poverty reduction	There are significant market level factors that will contribute to the achievement of these transformations, including, for example, the health of the economy or the price of power. Other locally or internationally based interventions seeking to contribute to similar outcomes will also form part of the competing performance story, though (similarly to UK Climate Investments) these are likely to have a small influence overall compared to larger market forces.	This will be the most challenging scale of effects to identify and attribute to the UK Climate Investments programme. Within the scope of the Pilot and current evaluation timeline, contribution analysis will enable the necessary, shorter-term, 'contributors' to these higher level effects to be identified. While process tracing may also help here, this would place a lot of reliance on the projects and on GIB to capture information (for example, on the meetings that they have to disseminate findings) and to provide detail on how they have sought to influence change. A realist approach to developing and testing mid-range theories could also be used although it is recommended that an assessment of whether this offers additional value on top of a contribution analysis approach is re-considered once the investments are finalised.

6.3.1 Guarding against positive bias in contribution analysis

A contribution analysis approach relies on evaluative judgement to infer causality of the Pilot to achieve commercially viable and transformational investments. This creates the risk of positive bias towards the proposed theory of change if the evaluator is more likely to seek, or recall,

[68] Transformational change is a key aim of the Pilot; consultation with BEIS during the scoping phase has confirmed that transformative effects are anticipated within each target market, rather than *across* markets.

evidence that helps confirm the theories outlined in this model at the expense of full consideration of alternative theories.

There are a number of ways in which positive bias will be mitigated through the design and delivery of this evaluation:

- **The development of alternative theories:** critical perspectives and rival theories will be considered alongside the theories outlined in the theory of change. This will create a number of different performance stories to test. The key tasks through which to develop these alternative stories include the document review and stakeholder interviews conducted in quarter three of 2017 as well as drawing on project level case studies during 2017 and 2018. These channels will be used by the evaluation team to assess, from a broad range of viewpoints, expectations for trends in key outcomes and the ways in which these outcomes may come about.

- **Open ended questions:** open ended questions will be included in the questionnaire and topic guide designs (rather than offering a choice of response options) to reduce the potential room for evaluator bias and avoid as far as possible the interviewer being able to lead the interviewee towards the proposed programme theories.

- **Quality assurance:** the consortium consists of a quality director and quality assurers at each stage of the evaluation process. This embedded quality assurance process will provide an additional check on how evidence is being synthesised. Where possible, the evaluation delivery process plans for members of the consortium who have not been actively involved in the collection of evidence to provide the quality assurance role for that particular evidence base, allowing there to be a check that there is no bias towards the proposed programme theories and alternative theories have been considered.

6.3.2 Discounted impact evaluation options

An assessment of the options for any impact evaluation should start by considering the most robust approaches and discount these only when it is certain that the intervention type, evidence availability and wider context do not allow for them. The Maryland Scientific Methods Scale (Sherman et al, 1997) is a systematic tool for considering the methodological rigour, and applicability, of different approaches. At the most robust end of this scale (Level 5) is an experimental randomised control trial (RCT) design, with the next most robust methods considered the highest quality quasi-experimental designs involving pre and post measurement across both a treatment and control group.

The most robust version of these approaches for UK Climate Investments could be the use of a threshold design (regression discontinuity design) – in essence comparing projects that “just made it” and receive UK Climate Investments, to those that “just missed out” and were discounted late in the Investment Committee process. This design is comparable in robustness to a RCT as, in theory, the process creates matched and balanced control and treatment samples. However, the restricted number of projects that are receiving investment through UK Climate Investments (between eight and twelve) reduces the validity and reliability of conducting this approach in a quantitative way. In addition, although the Investment Mandate guides the selection of projects for funding, there is not a very strict set of criteria (for example, a scoring

system) or cross-case assessment to determine the allocation of investment. Instead, investment decisions are made on a case-by-case basis on the individual merits of each project. Unsuccessful requests for funding through UK Climate Investments, and similar projects that receive funding but through alternative routes, are likely to differ substantially, and systematically, in both observed and unobserved characteristics which would bias the results.

Beyond quasi-experimental designs, there are a range of theory-based approaches that can be considered for the evaluation of UK Climate Investments. A summary of these, including the requirements that would underpin each approach and the relevance and applicability of these to UK Climate Investments is presented in Table 6.4.

Table 6.4: Assessment of (discounted) theory-based impact evaluation approaches

Potential theory-based approach	Summary explanation	Key dependencies	Extent to which approach is deemed viable for, and likely to offer value to, evaluation of UK Climate Investments
Realist approach[69]	Structured examination of the context and mechanisms combining to generate a pattern of outcomes; seeking to understand what works, for whom and in what circumstances.	1. Complex policy/intervention environment 2. Clear articulation of theory of change 3. Multiple strands of evidence collection 4. Data collection around programme context and mechanisms (as well as processes and outcomes)	**Viable but may not add significant value beyond other approaches** *The evaluation of UK Climate Investments requires an assessment of the piloted approach (minority equity investments via a LLP), and in contrast to the Climate Change Compass*[70]*, is not comparing different approaches to achieving the same outcome in different contexts. While a realist approach may offer value to the assessment of high-level outcomes which move beyond the direct effects of the pilot investments to the scaled-up impacts achieved through demonstration effects (enabling an assessment of the mechanisms and context in play that affect the realisation of these connections), it is felt that contribution analysis can also offer this.*
Process tracing[71]	Seeking evidence that can link an intervention to any observed outcome-level change, as well as for alternative "causal stories" of change in order to understand the significance of any contributions the	1. Clear articulation of theory of change, with particularly clear definitions of process/strategies to influence interim outcomes 2. Detailed process-related evidence	**Viable but lack of certainty in availability of evidence required** *Process tracing could offer value to the evaluation, for example in identifying how changes in regulatory environments have occurred at a national level and to what extent the UK Climate Investments pilot has played a role and whether alternative explanations can be ruled out (e.g. to what extent GIB's stakeholder engagement activities have led to changes in investor attitudes, political buy-in or better regulatory environments). However, this approach relies heavily on capturing information about what organisations have done (e.g. this would require information from GIB on meetings held with policymakers or regulators*

[69] Pawson and Tilley 2007
[70] The meta-evaluation of all the interventions within the International Climate Fund (ICF)
[71] http://aea365.org/blog/?s=claire+hutchings&submit=Go

	intervention made to the desired change.		*and clear evidence of what was said and what the ongoing impact of this was). As there can be no guarantee the evaluation team would receive the suitable depth and breadth of information required, process tracing is not favoured as a main evaluation approach. However, the evaluation team could support GIB if they wish to use this approach to track their own contribution and influence on regulation at a national level.*
Simple comparative design	Identification of cases that are outside of the intervention but that are as similar as possible to those going through it i.e. comparison of projects that were and were not offered investment under UK Climate Investments Pilot.	1. Identify unsuccessful projects that are similar as possible to successful projects	**Viable but only as weak qualitative based approach, though can be strengthened using Qualitative Comparative Analysis (QCA)** Too few projects will receive UK Climate Investments funding to apply this in quasi-experimental manner (as discussed above), but a case-study based design can be used to qualitatively compare successful and unsuccessful projects and the relative importance of UK Climate Investments funding on the scale, scope and timing of projects as well as on the achievement of outcomes. Qualitative Comparative Analysis (QCA) will help improve the robustness of comparison through structured examination of factors across cases – this is **recommended as a complementary approach to the main Contribution Analysis approach**; data collection strategy for case-study design is detailed in section 6.3 and in section 7 for QCA.

6.3.3 Defining the baseline for UK Climate Investments (the wider context)

To enable the contribution of the UK Climate Investments Pilot to be understood, it is first necessary to define the baseline scenario. In the case of UK Climate Investments, the baseline scenario is not a historical reference point but instead is a description of the assumption about what would have happened over the same period if the Pilot activities were not implemented.

There are two key elements to the baseline for the impact evaluation:

1. It must provide a **baseline for the key outcome indicators** anticipated as part of the pilot (i.e. those presented in section 6.4). This will be largely achieved through benchmarking which is discussed in section 7.4; and,
2. The approach must also provide a **baseline for the wider contextual factors** that may influence the success of the programme. Three key stages to establishing and analysing these factors are presented later in this section.

The evaluation will involve a number of activities to define these two elements to the baseline. These are described in more detail in the data collection strategy (section 7.4) but broadly speaking involve consultations with the UK Climate Investments team, in-country policymakers, sector experts and investors as well as a review of literature and secondary data, including benchmarking sources.

Ideally, baselining activities would be set at a very targeted level which correspond to the types, geographies and aims of the investments made. For example, baselining the state of off-grid solar PV projects in rural India rather than baselining the situation for renewables generally across India. A targeted baseline such as this will be of far more value to the assessment of impact and provide greater opportunity to identify the contribution made by UK Climate Investments. The risk of baselining at too general a level is that the effects of the intervention may not be measurable. However, it is not possible at the current stage in the policy delivery to define the baseline at this level of detail as closed investment deals have not yet been made.

It may be possible to proceed with defining the baselining, and developing this part of the framework, if information on the following can be obtained, helping to narrow the scope of the activity:

- the most likely regions that will receive funding

- the most likely technologies that will be implemented

- any other likely features of projects (e.g. off grid vs. on grid)

Once the key facets of the baseline definition above have been defined, three key steps will be taken to establishing the baseline of wider contextual factors (point 2 above). The data collection activities that feed into these tasks are discussed in detail in section 7 of this report.

1. Understanding the current context

Key to defining the baseline will be considering key contextual factors for low carbon development in developing countries, and the rate at which these are either helping or hindering

the achievement of the outcomes sought by the UK Climate Investments Pilot, even in a scenario where it has not been implemented (see section 6.3.3 for more detail).

The types of contextual factors that are likely to need to be considered, and which will be a focus for this element of the baseline, are briefly discussed below:

- **Levels of renewable energy capacity**: At a global level, including in developing countries, the implementation speed and amount of renewable energy solutions has been rapidly increasing[72]. Current trends suggest some markets in Sub-Saharan Africa (SSA) are poised to leapfrog to an economic development paradigm based on affordable renewables. With large renewable energy resources, improving economics and international policy momentum, renewables could aim to meet almost two-thirds of power demand growth in SSA through 2020.[73]

- **Economic growth rates in developing countries**: The middle income countries targeted by the UK Climate Investments have seen high economic growth rates over the last few years, although the rates have declined over the last five years[74].

- **Enabling environment:** Regulatory regimes for renewable energy and energy efficiency have reached maturity in the developed world, and are progressing in most developing countries. Key countries, such as China and India, have bolstered their deployment ambitions going forward[75]. These aspects increase the ease of doing sustainable energy business in general, influence the attractiveness of investment in the targeted countries and contribute to development of supply chains.

- **Investor trends and developments**

    - **Climate risk disclosure and fossil fuel divestment**: Institutional investors, such as pension funds, are demanding disclosure of Climate Risks and strategies for addressing them as well as moving away from investment in fossil fuels. Climate risk disclosure is being led by the Financial Stability Board (FSB) to assist companies in providing financial risk information to potential investors. In addition, investors have started to move out of fossil fuel investments (divestment). This is expected to result in a trend to invest in renewable energy or energy saving[76][77]. This may imply that more private sector financing for renewable energy or energy efficiency projects may become available. The main bottle neck is finding bankable projects; hence project developers can ‘shop around’ for the best financing deal.

[72] http://fs-unep-centre.org/sites/default/files/publications/globaltrendsinrenewableenergyinvestment2016lowres_0.pdf
[73] https://www.iea.org/Textbase/npsum/MTrenew2015sum.pdf
[74] http://www.imf.org/external/pubs/ft/weo/2016/update/01/
[75] https://www.iea.org/Textbase/npsum/MTrenew2015sum.pdf
[76] http://divestmentfacts.com/pdf/Fischel_Report.pdf
[77] http://www.thecrimson.com/article/2014/10/2/timeline-fossil-fuels-divestment/

- **Currency risks**: exchange rates in local markets may be volatile and there may be a potential risk of loss from fluctuating foreign exchange rates resulting in declining or stagnant investment flows into target markets.

- **Donor funding**: Various sources of climate finance, through a wide range of channels, will influence the rate of private sector development (including schemes run by ADB, AfDB, EBRD, World Bank and others). In addition, this may be affected by agreements such as the legally binding global climate deal adopted by 195 countries in Paris in December 2015, due to come into force in 2020. The UNFCCC Green Climate Fund (established in 2010 at COP 16) is intended to be the main fund for global climate change finance in the context of mobilising $100 billion per year to be invested in low carbon development by 2020[78].

In addition to the factors outlined above, additional contextual factors that may influence low carbon development in developing countries were identified when considering the strategic rationale for the pilot (see section 2.4). Looking across all these potential factors, they can be categorised into five main areas (as detailed below): political, economic and financial, social and environmental, technical and operational and institutional and regulatory. The sources of evidence required to baseline both wider contextual factors and project level indicators are outlined in section 7.

Political	Economic and financial	Social and environmental	Technical and operational	Institutional and regulatory
Established energy sector policies	Affordability to end consumers	Social barriers to investment	Suitability and feasibility of technology	Appropriately skilled labour
Institutional capacity and stability	Ability to secure offtake agreements	Environmental impacts	Effectiveness of construction	Human capacity to support development
Lack of inward investor policies	Market position of new independent private power (IPPs)	Land access and compensation for loss of land	Maintenance availability and affordability	Lack of complete regulations in PPAs (Power Purchasing Agreements)
Limited competition and restrictive regulation	Achieving key financial metrics	Levels of renewable energy capacity	Grid connection	Subsidised and regulated energy prices

[78] http://unfccc.int/cooperation_and_support/financial_mechanism/green_climate_fund/items/5869.php

	Credit worthiness of private companies and state owned companies		Lack of clear models for EE programmes	Weaknesses of regulations regarding wider financial aspects
	Economic growth rates in developing countries			Lack of standard PPAs
	Investor trends and developments			Insufficient institutional capacity to develop contracts
	Climate funds			Insufficient numbers of qualified staff to process applications
				Regulatory regimes

2. Identifying likely barriers and drivers

Through the baseline data collection as comprehensive a list, and an understanding of these contextual factors will be drawn together as possible. The factors will also be categorised into either potential drivers or potential barriers to the UK Climate Investments pilot. This will be determined by drawing on the theory of change and data collection activities to identify the competing stories that could be at play. Building up a series of competing theories as to how the outcomes sought by UK Climate Investments could come about (and the external and internal factors operating on these) will be an important output from this stage to enable the Contribution Analysis approach which will be taken to understanding impact.

3. Analysis of key barriers to the pilot

Once the contextual factors identified during stage 1 have been categorised as potential barriers, it will be important to analyse these in more detail in order to understand which specific elements of the intervention they may be expected to act upon, and whether these factors can

be expected to act differently on different stakeholders. This approach will draw on the Theory of No Change (TONC) which provides a hypothesis as to why a causal link cannot work within certain circumstances or among certain stakeholders[79].

The potential barriers identified via Step 2 will be mapped to illustrate the likelihood of these barriers prohibiting the achievement of the intended outcomes. A "barrier circle" can be created which categorises each of the general barriers in relation to the extent of their hindrance to the pilot[80]. The pilot strategies, that is, how they intend to address these barriers, can then be overlaid against the barrier circle. For example, making financing available as a way to address the barrier that there is a lack of affordability in climate finance investments.

6.4 Defining Key Outcome Indicators, and identifying transformational change

The Theory of Change presented in section 5.1 detailed the outputs, intermediate and longer-term outcomes, and long-term impacts that the UK Climate Investments Pilot is seeking to achieve. These are discussed in more detail in this section to present clear indicators that can be measured by the evaluation in order to assess whether these outcomes have been achieved. Table 6.5 presents the logframe for UK Climate Investments as agreed by BEIS and GIB in Autumn 2016 (as a living document it is subject to further change).

Table 6.5: UK Climate Investments logframe

[79] Wörlen (2013), The Theory of No Change https://www.climate-eval.org/blog/theory-no-change
[80] Wörlen (2014),The Theory of No Change: A tool for analysing capacity building needs for low carbon development http://lcs-rnet.org/pdf/lcs_rnet_presentations/PS4-1-2_Wrlen.pdf

IMPACT 1	Impact Indicator 1.1	Analysis
Transformational, low carbon development potential	Extent to which UK Climate Investments intervention is likely to have a transformational impact (ICF KPI 15)	Unit: Scoring criteria (1-5) measured at project-level
IMPACT 2	**Impact Indicator 2.1**	**Analysis**
Enhanced positive reputation of UK climate finance	International: Increased awareness and favourability of UK climate finance in policy target countries, surrounding regions and climate finance policy sphere	Unit: Share of respondents aware/ favourable and qualitative assessment
OUTCOME 1	**Outcome Indicator 1.1**	**Analysis**
Strong climate outcomes are secured from projects	Net Change in Greenhouse Gas Emissions (tCO2e) – tonnes of GHG emissions reduced or avoided by UK Climate Investments portfolio (ICF KPI 6)	Unit: Cumulative tonnes of GHG emissions (dissagregated by country, technology, on/off grid, fuel type)
OUTCOME 2	**Outcome Indicator 2.1**	**Analysis**
Strong development outcomes are secured from projects	Total number of direct jobs created by UK Climate Invesments projects (ICF KPI 5)	Unit: No (aggregated at pilot level, dissagregated by country, technology, RE/EE, on/off grid fuel type, gender)
OUTCOME 3	**Outcome Indicator 3.1**	**Analysis**
Decreased cost of capital	Reduced cost of capital to similar projects	Unit: £ (disaggreated by technology, country, on/off grid). Qualitative assessment
OUTCOME 4	**Outcome Indicator 5.1**	**Analysis**
UK Climate Investments pilot improves risk	Average (expected) returns on investment to the vehicle since the UK Climate Investments pilot began (e.g. projects reached commissioning	Unit: % (aggregated at a pilot level, disaggregated by country, technology, RE or

perception, demonstrates feasibility/return of RE/EE investments	stage)	EE)
	Outcome Indicator 5.2	**Analysis**
	Average speed of implementation between lead generation and project implementation	Unit: Month (aggregated at a pilot level, disaggregated by country, technology, RE or EE)
OUTPUT 1		
Private and public investment mobilised directly by UK Climate Investments fund	**Output Indicator 1.1**	**Analysis**
	Cumulative number of investments and capital invested by the fund	Unit: number of investments
	Output indicator 1.2	**Analysis**
	Volume of public finance mobilised for climate change purposes as a result of UK Climate Investments portfolio (ICF KPI 11)	Unit: £ of public finance invested in projects; (aggregated at a pilot level, disaggregated by country, technology, RE or EE, and aim to breakdown by new investors by technology/country)
	Output Indicator 1.3	**Analysis**
	Volume of private finance mobilised for climate change purposes as a result of UK Climate Investments portfolio (ICF KPI 12)	Unit: £ of private finance invested in projects; (aggregated at a pilot level, disaggregated by country, technology, RE or EE, and aim to breakdown by new investors by technology/country)
	Output Indicator 1.4	**Analysis**
	Number of private and public sector investors across UK Climate Investments portfolio	Unit: No. of private sector investors in projects (aggregated at a pilot level, disaggregated by private vs.public finance, country, technology, RE or EE, and aim to breakdown by new investors by technology/country)

Impact Evaluation framework

OUTPUT 2		
Strong international network established (for both deal origination and effective dissemination)	**Output Indicator 2.1**	**Analysis**
	Number of people accessing information from GIB's website on the international pilot aggregated by geography	**Unit: Average No./month**
	Output Indicator 2.2	**Analysis**
	Number of meetings with stakeholders in project origination (potential) project investors, project developers	**Unit: No. (total and differentiated by national level and local project level)**
	Output Indicator 2.3	**Analysis**
	Number of meetings with stakeholders promoting UKCI and GIB overseas	**Unit: Average No./month**
OUTPUT 3	**Output Indicator 3.1**	**Analysis**
Renewable energy and energy efficiency measures are installed	**Level of installed capacity of clean energy as a result of GIBI investment in the project (MW)(ICF KPI 7)**	**Unit: MW (dissagregated by country, technology, RE/EE, on/off grid fuel type)**
	Output Indicator 3.2	**Analysis**
	Electricity demand reduction (MWh) resulting from the GIBI project (ICF KPI 16)	**Unit: MW (dissagregated by country, technology, on/off grid fuel type)**

6.5 Identifying transformational change

For transformational low carbon development to be realised (measured ultimately through indicators of renewable energy capacity, clean energy access, reliability of supply and poverty alleviation), investment in individual projects through UK Climate Investments needs to have demonstration effects that scale up more localised and project specific related outcomes to the wider sector and market. This requires broader political, social, economic, market and technological shifts, such as:

- Political – does the project design allow for local political buy-in and ownership?
- Social – does the project design offer a clear solution to challenges of social inequality?
- Economic – does the project design allow for a new series of financing approaches?
- Market - does the project design allow for a new supply chain or industrial segment to grow?
- Technological – is it a new project design deployed for the first time or is it an existing technology deployed for the first time in a country?

Assessing transformational change will require the evaluation to draw from a highly developed understanding of each of the markets. Evaluation activities described in the data collection strategy therefore include significant consultation with in-country experts (policy-makers, academics, technology experts etc.) In addition, the potential distinct nature of each project means that the measure for capturing transformational success will differ for each case study – data collection strategies therefore also include in-depth consultation with experts in the specific fields relevant to individual investments.

These considerations have a number of implications for the design and subsequent assessment of the evaluation framework indicators. Even at a project level these are long-term investments in projects that will run for many years beyond the timeframe of the Pilot period (until 2018) and the ability to link these investments and project-related outputs to wider transformational change indicators is likely to take several decades to become apparent and measurable. The framework presented here, therefore, identifies indicators that can ensure the outcome measures can be replicated at later stages in the lifetime of the projects, likely to feed into a more formal impact evaluation in 2019. Within the timeframe of this initial evaluation, and within the Pilot period up until 2018, this element of the evaluation will seek to identify the *potential* for investments to contribute to transformational change in the longer term. The pilot and project level indicators listed in the ‘impact’ category are those likely to lead the assessment of transformational change.

6.6 Effects Not Measurable

As the Pilot evaluation will be conducted within a set timeframe it will not be possible to measure some of the expected longer-term and intermediate outcomes of the UK Climate Investments Pilot, as described in the Theory of Change. While a partial, and interim, assessment of these types of outcome will be assessed based on early indicators, a more robust assessment is not possible. There are also challenges for the measurement of other outcomes for which the Pilot effect is anticipated to be marginal. The following outcomes will therefore be assessed qualitatively and in a general context, drawing on expert qualitative perception:

- **Wider use of innovative products (and their effects on the investment environment):** When plotting the performance of a new technology or product against the money or effort invested, it most often yields an S-shaped curve: slow initial acceptance, then accelerated uptake, then diminishing growth before becoming replaced by something new [81]. It is anticipated to be highly unlikely to be able to measure the effects of the UK Climate Investments pilot on this trajectory. Assuming the UK Climate Investments are focused on projects in the first phase of the S-curve it will be difficult to determine the effect of the pilot on the wider use of innovative products in a certain market by the investment made. This is as the correlation between a specific investment and the wider market development cannot be drawn.

- **Enhanced productivity through improved energy supply** (as sustainable development effect): Productivity is the ability to transform inputs into outputs[82]. Improved quality of energy supply and the reduction of interruptions of services contribute to better productivity in most economic activities. However, productivity is affected not only by quality of energy supply but by many other factors, such as the overall labour productivity, the level of diversification of the economy into higher value-added areas in agriculture, manufacturing and services along with economic reforms a focus on innovation[83] and the quality of management. It is therefore unlikely to be possible to measure the specific impact of the UK Climate Investments pilot on productivity.

- **Enhanced local skills** (as sustainable development effect): Local skills are the result of several developments including: on going workforce-development initiatives, (constraints on) informational resources available to individuals, market failures[84] and presence of a large informal market sector. It will not be possible to attribute the effects of the UK Climate investments (better quality energy supply) to the overall enhanced local skills.

[81] http://w4.stern.nyu.edu/research/technology_s-curves_in_renewable_energies.pdf
[82] ttps://www.unido.org/uploads/tx_templavoila/Productivity_in_developing_countries_trends_and_policies.pdf
[83] http://www.oecd.org/newsroom/boosting-productivity-key-for-developing-economies-to-close-income-gap-with-advanced-countries-says-oecd-development-centre.htm
[84] http://www.ifs.org.uk/events/1100

- **Increased proportion of grid/off-grid sources provided by renewable energy** (global or within a country): Given the available total funding, the contribution that the UK Climate Investments pilot could make to the share of renewable energy within a middle-income country and the world is likely small. Measurement would require the availability of country specific data on the amount of renewable energy supplied broken down by grid/off grid. Where this data is available there is often a delay in its release and the error margins are likely to be larger than the UK Climate Investments contribution. As a result of these issues, proxy, and shorter term measures, are included instead in the logframe i.e. investment mobilised and new investors entering market.

6.7 Value for money assessment

The business case for the pilot of UK Climate Investments defines Value for Money in line with HM Treasury Green Book guidance as well as the DFID approach. Specifically, it states that value for money needs to be considered against each of the following elements:

- Economy: Are we or our agents buying inputs of the appropriate quality at the right price?
- Efficiency: How well do we or our agents convert inputs into outputs?
- Effectiveness: How well are the outputs from an intervention achieving the desired outcomes?
- Cost-effectiveness: How much impact does an intervention achieve relative to the inputs that we or our agents invest in it?

The core evaluation questions detailed below can only be answered following on from a detailed value for money assessment which explored each of the elements above.

- P2 – Did the governance arrangements and delivery mechanisms of the joint venture lead to efficient, economic and effective project delivery?
- K4 - To what extent has the UK Climate Investments pilot been value for money as a delivery mechanism for the UK's climate finance?

In the remainder of this section is outlined our approach to each element of the value for money measurement in the business case and potential benchmarking sources for each element. More widely, in order to answer evaluation question K4 we would suggest that these are also benchmarked to other evaluations that have been conducted such as those at a programme level for the Private Infrastructure Development Group (PIDG), the EU-Africa Infrastructure Trust Fund and PPIAF. EY has access to all of these evaluations and can request formal access for the purposes on enabling wider benchmarking within this evaluation as well as within the ICF evaluation team's work.

The approach set out here for the value for money assessment has been signed off by ICF economists, however, there is an expectation of their further involvement in analytical work

regarding the CBA to ensure the analysis meets internal standards and feeds into internal analysis of the Pilot's performance in 2018.

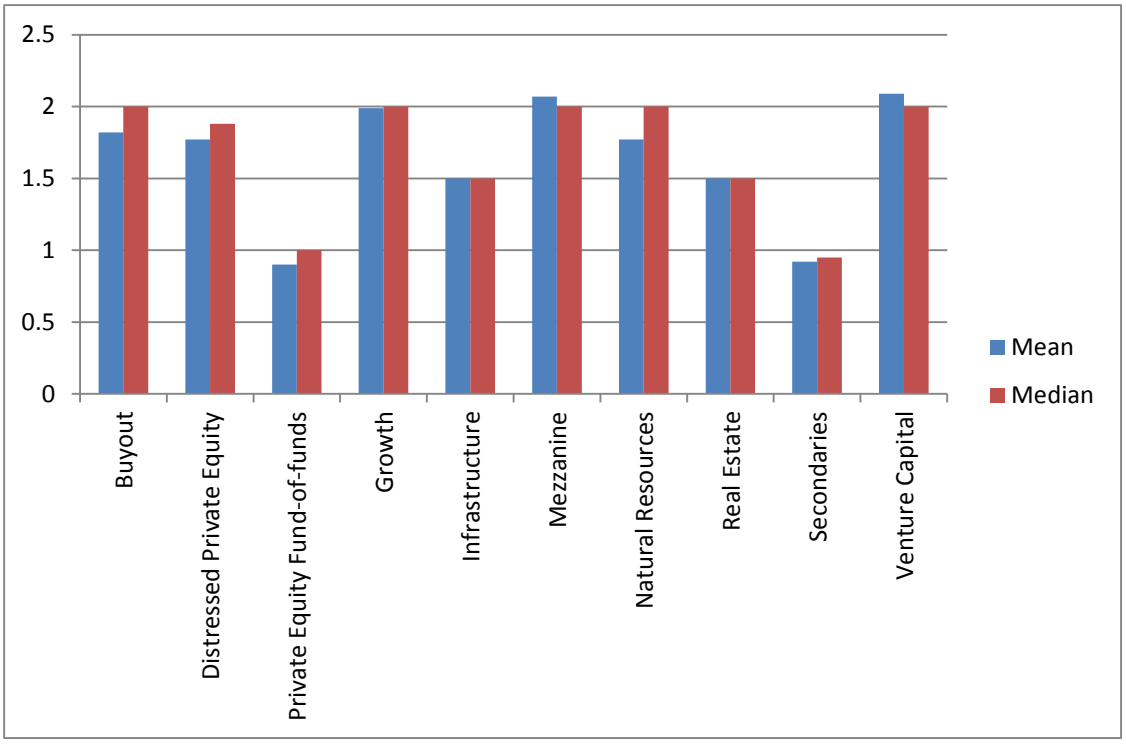
6.7.1 Economy

The business case for the Pilot states that is too early to consider the appropriate economy measures. It does however indicate and present appropriate measures relating to the fixed and variable fees of GIB. In EY's experience this is appropriate and benchmarks are available to consider what these ranges should be.

It is important to recognise however that while benchmarks are available in both public and private sectors, the specific and "special" nature of the Pilot might make direct referencing to other funds more problematic (and indeed this is EY's recent experience when benchmarking fund management fees for the Private Infrastructure Development Group - PIDG).

Firstly, in terms of an assessment of fixed fees, the business case presents a number of comparables such as the CTF, GCPF, CP3 and GAP. These all suggest that fixed fees should be between 0.8% (for GCPF) and 1.44% (for GAP). More widely across PIDG, the range of fixed costs is between 1.44% and 3% (for equity facilities). When considering private sector comparables Figure 6.1 presents data from Preqin[85] on current management fee charges for all equity funds and for infrastructure funds in particular.

Figure 6.1: Current Management Fee Charges for all equity Funds and infrastructure funds



[85] Preqin is an industry source of data and intelligence on alternative assets https://www.preqin.com/

Source: Preqin and Ernst and Young (2016)

EY would suggest that the measurement of fixed fees is based on management costs and then regularly benchmarked to comparables as above and also to the data from the Preqin dataset.

With regards to variable / success fees these are more complicated to consider. Public sector comparators (such as against CDC) are more difficult. However, based on experience with the PIDG, these are usually between four and seven percent. Wider benchmarks are available from Preqin, but the exact amounts are less available. Based on available data, average carry for private sector infrastructure funds is 17.5% based on a 9% hurdle rate.

EY would suggest that the measurement of variable / success fees is based on payments to GIB and then regularly benchmarked to comparables as above and also to the data from Preqin dataset.

6.7.2 Efficiency

Efficiency is the combination of how inputs achieve outputs. In this case, the data prepared under Economy on the management and variable / success fees can be used and considered against outputs presented elsewhere in this report. These will allow simple ratios which can then also be benchmarked. EY would however suggest that some of the short term outcomes are also considered in this exercise to make sure that these are also comparable. This should be in line with not just prior GIB experience, but also direct comparators such as the PIDG, and other climate finance efforts. The information required will be prepared elsewhere through the evaluation and benchmarks can be developed from comparators sources.

In addition, the efficiency of the evaluation must also incorporate an assessment of the quality of investments. The logframe presented earlier in this chapter provides suggested measures of not just the number of investments delivered but also assessment of the extent to which they meet the Mandate, the time period over which investments become successfully implemented projects and the financial additionality of the projects.

6.7.3 Effectiveness

As outlined in the section above, EY will be able to produce a series of ratios for efficiency. In the case of effectiveness, it is the effectiveness of achieving outcomes and the cost to benefit ratio that is important and as such, there is the need to monetise the “benefits” of the Pilot. These benefits have been monetised in the Business Case to demonstrate ex-ante estimates.

EY would suggest that these assumptions which allow for the monetisation of benefits are reviewed now that the project has been engaged. These monetised benefit values will need to include:

- Carbon pricing (which in the business case was recognised as being one of the most significant elements of the benefit calculation). In this case, the evaluation should consider the range of carbon price scenarios particularly those from BEIS and other development partners.

- The value of a "job" which will need to reflect potentially direct and indirect (multiplier) effects. This is notoriously difficult to estimate, but a simplistic approach would be to assume that all jobs are "new" jobs and as such, wages from these are attributable as an economic gain.

- The economic value of a unit of electricity supplied. This is the economic value of electricity. Earlier in this report we outlined that in most target countries for the Pilot, there is a shortage of supply which is constraining economic growth. As such, each additional unit of supply has a marginal economic gain to the economy. These can be measured through the Value of Lost Load (VoLL) or through the economic gain associated with energy source substitution (or a replacement value). VoLL has been used in the UK in the past[86] while the substitution effect is more widely used by development partners. A VoLL estimate may more useful for South Africa, while a substitution measure might be more sensible for other countries in the Pilot. In this case EY would suggest appropriate substitution would be for diesel (used in emergency power provision), charcoal and kerosene.

- Other "externalities" can also potentially be included such as those for environmental protection and other aspects. These have been rigorously tested through the European Commission's ExternE (External Costs of Energy) programme and could be included here[87].

These are other outcomes from the Pilot which will not be quantifiable and as such they are not presented here.

This will draw on the DFID-BEIS guidance on economic appraisal for ICF projects, which includes established carbon values.

6.7.4 Cost Effectiveness

Cost effectiveness is the measure of efficiency between inputs and outputs / outcomes. As such, much of the information generated above will be used to calculate these as simple ratios. In EY's view these will be:

- Ratios for each output / outcome per unit of input, for example, cost per MW of capacity added, cost per tGHG, finance leverage ratios

[86] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/224028/value_lost_load_electricty_gb.pdf and http://journal.frontiersin.org/article/10.3389/fenrg.2015.00055/full

[87] http://www.externe.info/externe_d7/

- Ratios for measures of effectiveness, for example cost per unit of electricity supplied.

An overarching evaluation question is about the value for money of this delivery model compared to alternative means of delivering climate finance (predominantly through multilaterals such as the World Bank Group). As such some of the less tangible benefits which could be anticipated from the use of a more direct delivery model including the increase in reputation of UK Climate Finance

Whilst these benefits cannot be easily or sensibly quantified EY would still recommend their consideration as a narrative in any assessment of the value for money achieved through UK Climate Investments. This would be in keeping with the qualitative treatment of non-monetised impacts in other ICF business cases.

7 Main stage specification

This section provides the main stage specification, explaining how the key evaluation questions will be addressed at both a pilot and project level through detail of the data collection, analysis and synthesis approaches.

7.1 Addressing key evaluation questions

Table 7.1 overleaf outlines how the overall evaluation activity expects to address the key evaluation questions as detailed in the tender.

Table 7.1: Summary of evaluation activity against key evaluation questions (overleaf)

Main stage specification

	Evaluation Activity								
Key evaluation questions	**Wider literature review (e.g. policy, sector & country documentation)**	**Pilot/ project documentation review**	**Consultations with UK Climate Investments delivery team**	**Consultations with investment community**	**Consultations with wider country and sector experts**	**Project level case study**	**Unsuccessful case study**	**Monitoring information analysis**	**Sector and country bench-marking**
I1. Did the UK Climate Investments pilot achieve its project specific climate and development outcomes? Why or why not?		✓	✓ ✓			✓✓✓	✓✓✓	✓✓✓	
I2. Did the UK Climate Investments pilot meet the additionality requirement in the Investment Mandate? Why or why not?		✓✓	✓			✓✓✓	✓	✓✓✓	
I3. To what extent does the UK Climate Investments pilot catalyse or contribute to transformational change? Why or why not?	✓	✓	✓	✓✓	✓✓	✓✓✓	✓✓✓	✓✓✓	✓
I4. Has the UK Climate Investments pilot successfully leveraged private finance into investments, and what are the profiles of investors?	✓	✓	✓	✓✓✓	✓✓✓	✓✓	✓	✓	✓
I5. Has the UK Climate Investments pilot improved the reputation of UK Climate Finance?				✓✓✓	✓✓✓				✓✓
I6. To what extent did the outcomes achieved by the UK Climate Investments pilot and the specific projects funded maintain/sustain beyond the lifetime of the investment?		✓	✓✓		✓	✓✓✓		✓✓	
I7. What were the major factors which influenced the achievement or non-achievement of sustainability of UK Climate Investments outcomes?		✓	✓✓	✓	✓	✓✓✓		✓✓	✓
P1. Does the UK Climate Investments pilot appraisal process effectively identify and secure investment in low carbon projects that meet the additionality criteria, be profitable and have credible transformative		✓	✓✓			✓✓✓	✓	✓✓✓	

potential?									
P2. Did the governance arrangements and delivery mechanisms of the joint venture lead to efficient, economic and effective project delivery?		✓✓	✓✓			✓✓✓		✓	
P3. Does the UK Climate Investments pilot dissemination strategy effectively communicate success with the aim of increasing interest by private finance in investing in renewable energy or energy efficiency in the target countries?	✓		✓	✓✓✓	✓✓✓	✓✓			
C1. How can the activities of the UK Climate Investments pilot be improved as it runs its course?	✓	✓	✓ ✓ ✓	✓	✓	✓✓	✓	✓	✓
K1. How can BEIS improve its ability to measure and evaluate transformational change?	✓	✓	✓ ✓ ✓	✓	✓✓	✓✓	✓	✓	✓
K2. What are the barriers to private sector investment in energy efficiency and renewable energy in UK Climate Investments pilot target countries?	✓✓		✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓		
K3. What external factors influence the success of low carbon projects in developing countries and how can they best be managed?	✓✓		✓✓	✓✓✓	✓✓✓	✓	✓		
K4. To what extent has the UK Climate Investments pilot been value for money as a delivery mechanism for the UK's climate finance?		✓	✓			✓✓	✓✓	✓✓✓	

The number of ✓in each cell denotes the weight of the evidence source with ✓✓✓ meaning it has the greatest weight and ✓ meaning it has the least weight

7.2 Implementation strategy

Table 7.2 below details how the evaluation activity outlined in the previous table will be implemented during the lifetime of the evaluation. These timings remain under review and will be adjusted as required to follow the timing of Pilot progress and investments.

Table 7.2 Evaluation timetable

Evaluation activity	2017				2018			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Pilot documentation review (monitoring info & wider literature review of policy, sector & country documentation)								
Project documentation review								
Research material design (e.g. topic guides, survey)								
Stakeholder consultations: UK Climate Investments Pilot delivery team								
Stakeholder consultations: wider country and sector experts								
Stakeholder consultations: investment community								
Theory-based successful project case studies[88]**:** successful project level stakeholder consultations (baseline, interim and final data collection points)								
Theory-based unsuccessful case studies[89]**:** unsuccessful investments - stakeholder consultations (interim data collection point)								
Pilot level sector and country benchmarking								
Analysis of monitoring information								
Analysis and synthesis of findings								

[88] Each theory based successful project case study will include review of internal secondary data, stakeholder consultations, project level theory of change development and country and sector benchmarking

[89] Each theory based unsuccessful project case study will include review of internal secondary data and stakeholder consultations

7.3 Data collection strategy

This section provides the specification for the data collection tools that will be implemented during the evaluation baseline and mainstage. This has been split into pilot level and project level specifications.

7.3.1 Pilot main-stage specification

The following section outlines the required research tools for the process and impact evaluations to assess the pilot and the specific projects. This is divided into internal secondary data, external benchmarking activities and qualitative research required.

Internal secondary data

At the highest level, there is expected to be a portfolio of information from GIB that will be included in the evaluation:

- The number of investments made
- The profile of investments by technology
- The variation of investments across geographies
- The distribution of renewable energy and energy efficiency investments
- The number of leads contacted
- The number of investments that reach each stage of the investment process

The secondary data internal to the Pilot is that collected through GIB's project monitoring activities. Information will be collected on each investment following the log frame agreed by BEIS. It is understood that the log frame is currently a live document and it is recommended that it is reviewed in light of the list of indicators provided in Figure 6.4, ensuring that monitoring structures are in place wherever feasible to contribute data to the evaluation.

Monitoring information will include:

- BEIS quarterly reports
- GIB annual reports
- GIB summary of transactions
- International development outcomes reports (DfID)
- Value for money assessments (DfID)

The evaluation will also depend on the synthesis of evidence from a number of sources that will offer an indication of both the performance of the UK Climate Investments Pilot and evidence of changes in the environment that might have influenced project delivery. These include:

- Bi-annual and annual reports reported to ICF
- BEIS Quarterly reports
- BEIS Investment journey map
- Appraisal assessments (such as GIB's internal green team's four papers: *preview, structural, pre-final and final*)
- GIB annual reports
- GIB investment mandate (& investment origination documents)
- Investment Board meeting minutes
- Investment Committee meeting minutes

External benchmarking activities

External secondary data sources will be used for desk-based benchmarking activities reviewing project monitoring information, the climate finance landscape and outcomes of similar projects within these sectors and countries.

The focus of benchmarking for key outcomes needs to reflect the indicators which are contained in the Theory of Change. Based on the key outcomes (immediate and longer-term), Table 7.3 presents the potential benchmark data which can be utilised to determine the appropriateness of UK Climate Investments and how they will be used.

Overall, there are a number of outcomes for which benchmarking are either not possible or in our opinion do not lend themselves to ready and meaningful benchmarking. From the Immediate and Longer-Term Outcomes, we would suggest that the following are not the subject of benchmarking:

- GIB Reputation;
- Reputation of UK Climate Investments as an effective intervention;
- Innovative products used more widely; and
- Interest in more co-investing with GIB / UK Climate Investments;

Table 7.3: Benchmarking sources for assessment of UK Climate Investments

Outcome Indicator (Immediate Outcomes)	Benchmarking Source	Use of Benchmark
GLOBAL		
• ***GIB Reputation***	*Not benchmarked*	*N/A*
• **Improved Risk Perception for**	*Not explicitly benchmarked, but correlated with later measures of ROI and Cost of Capital.*	Local benchmarks looking specifically at the cost of debt and equity.

projects enhancing further project feasibility		Time series analysis of average equity returns for listed equities across a range of comparable countries and creation of quartile data for comparison / benchmarking.
IN-COUNTRY		
• **Increased proportion of RE MW**	**IEA's Annual Report** – Installation and Share of Renewable Energy https://www.iea.org/publications/freepublications/publication/2014_IEA_AnnualReport.pdf **ClimateScope reports** http://global-climatescope.org/en/	This benchmark will be useful for comparison amongst peer groups of the installed and potential capacity. When this is measured over time against the UK Climate Investments pilot, it should show how effective the Pilot has been. To reinforce country measures of projects which are developed and which are in the pipeline.
• **Job creation**	*Job creation benchmarking is too location, technology and country specific to benchmark in a meaningful way. For example, Rwanda is too small to consider developing a renewables supply chain to allow for local manufacture of PV panels.* Data can be developed from **ClimateScope's relevant enterprise data.**	There will be a focus on benchmarking the number of renewable energy/ energy efficiency enterprises (if assuming that these are creating employment). The number of enterprises related to each country will provide a useful proxy for employment. A rise in the number or size of enterprises will demonstrate a strengthening supply chain and is a good proxy for job creation.
• **Reduced energy use per capita**	**IEA's Energy Balances for Non-OECD countries report.** http://www.iea.org/statistics/topics/energybalances/	This publication contains energy balances for all countries and is useful for measuring energy consumption per capita. It will allow us to benchmark energy use and renewable energy use per capita to show outcomes.
• **Reduced cost of capital**	Two measures for cost of capital to reflect local and international investor requirements. 1. **Local investors: Government borrowing interest rates (measured through Treasury Bills);** 2. **International investors: Changes to Sovereign Credit ratings via Bloomberg and S&P data (using EY sources)**	These local benchmarks will be useful in terms of looking specifically at the cost of debt and equity
• **Demonstration of feasibility of investment**	*Not explicitly benchmarked, but is correlated with later measures of ROI and Cost of Capital.*	Local benchmarks looking specifically at the cost of debt and equity. Time series analysis of average equity returns for listed equities across a range of comparable countries and creation of quartile data for comparison / benchmarking.

PROJECTS

• **Renewable energy/ energy efficiencymeasures installed**	**IEA's Annual Report** – Installation and Share of Renewable Energy https://www.iea.org/publications/freepublications/publication/2014_IEA_AnnualReport.pdf **ClimateScope reports** http://global-climatescope.org/en/	This benchmark will be useful for comparison amongst peer groups of the installed and potential capacity. When this is measured over time against the UK Climate Investments pilot, it should show how effective the Pilot has been. To reinforce country measures of projects which are developed and which are in the pipeline.
• **Renewable energy / energy efficiencysavings**	**IEA's Energy Balances for Non-OECD countries report.** http://www.iea.org/statistics/topics/energybalances/	This publication contains energy balances for all countries and is useful for measuring energy consumption per capita. It will allow us to benchmark energy use and renewable energy use savings.
• **ROI**	This will be measured in country. Investors in each country have a choice of investing in projects or in other listed equity (i.e. investing on stock exchanges). Data is available from **Bloomberg and S&P** (using EY sources)	Time series analysis of average equity returns for listed equities across a range of comparable countries and creation of quartile data for comparison / benchmarking.

EFFECTS ON INVESTMENT ENVIRONMENT

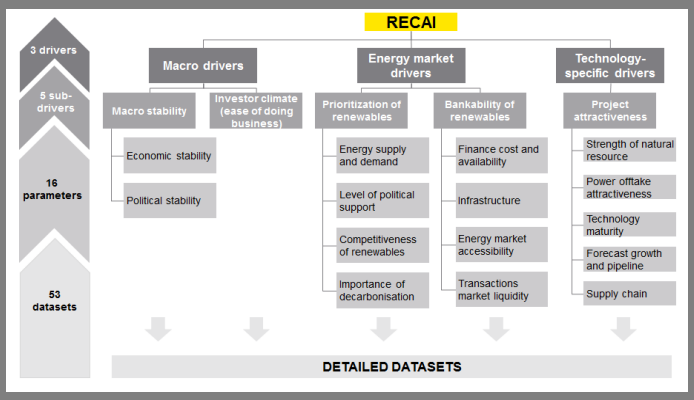
• ***Reputation of UK Climate Investments as an effective intervention***	*Not benchmarked*	*N/A*
• **Positive movement in political and regulatory environments making investments more attractive**	At an aggregate level measured through peer and quartile comparisons of the **International Finance Corporation (IFC) Doing Business index.** http://www.doingbusiness.org/ Additional benchmarking based on **ClimateScope reports relating specifically to the energy sector** http://global-climatescope.org/en/download/	The IFC Index and ClimateScope reports will allow for the creation of relative rankings between countries to assess both the wider business environment (IFC data) and that specifically relating to Energy (ClimateScope). Where UK Climate Investments contributes to smoother processes and procedures should be apparent in the relative rankings.
• ***Innovative products used more widely***	*Not benchmarked*	*N/A*

DEMONSTRATION EFFECTS

• **Barriers to investment reduced**	At an aggregate level measured through peer and quartile comparisons of the **International Finance Corporation (IFC) Doing Business index.** http://www.doingbusiness.org/	The IFC Index will allow for the creation of relative rankings between countries to assess the wider business environment. Where UK Climate Investments contributes to smoother processes and procedures should be apparent in the relative rankings.
• ***Interest in more co-investing with GIB / UK Climate Investments***	*Not benchmarked*	*N/A*
• **New investment parameters used by Investors**	At an aggregate level measured through peer and quartile comparisons of the **International Finance Corporation (IFC) Doing Business index.** http://www.doingbusiness.org/	The IFC Index will allow for the creation of relative rankings between countries to assess the wider business environment. Where UK Climate Investments contributes to smoother processes and procedures should be apparent in the relative rankings.
• **Increased climate finance mobilised**	**The OECD DAC External Development Finance Statistics** http://www.oecd.org/dac/stats/climate-change.htm along with Climate Scope and Bloomberg data will provide information relating to climate finance flows.	Capture of the level of public sector climate finance and how this has been allocated to each country to assess the level of private investment and create quartile benchmarks. A combination of these sources will support trend analysis within countries and across a peer group. Where UK Climate Investments contributes to smoother processes and procedures should be apparent in the relative rankings.
• **Increased investments in Renewable energy/ energy efficiencyby private sector**	**The OECD DAC External Development Finance Statistics** http://www.oecd.org/dac/stats/climate-change.htm along with Climate Scope and Bloomberg data will provide information relating to climate finance flows.	Capture of the level of public sector climate finance and how this has been allocated to each country to assess the level of private investment and create quartile benchmarks. A combination of these sources will support trend analysis within countries and across a peer group. Where UK Climate Investments contributes to smoother processes and procedures should be apparent in the relative rankings.
• **Impact on market price of Renewable energy/ energy efficiencytechnologies**	There is no internationally recognised source for market prices of renewable energy or energy efficiencytechnologies, however jurisdictions with active auction mechanisms should have data on successful bids in terms of USc/kWh	Accessing and interpreting data on technology prices is problematic. The best indicator is likely to be auction prices, where these are available. These will be energy prices, which include the effects of risk premium, deployment scale, resource availability and a host of other factors that will make cross jurisdiction comparisons difficult.

For outcomes that are benchmarked, we will use two approaches – peer group benchmarking and within country benchmarking.

Now in its 12th year, RECAI ranks 40 countries on the attractiveness of their renewable energy investment and deployment opportunities. EY will leverage the methodology framework, databases and output analysis underling the RECAI as well as experience tailoring this to assist clients with market entry or portfolio strategies.



Peer group benchmarking will be based on obtaining data and creating quartile based peer groups for each of the countries. The peer groups will be based on a weighted combination of income (measured as GDP per capita on a PPP[90] basis) and Energy Consumption (measured as TPER[91] per capita). The indicator data will then be collected for each of these comparator countries and ranges within quartiles defined to provide an assessment of reasonableness.

Within country benchmarks will be based on direct measures between projects and / or indicators.

More widely, the Renewable Energy Country Attractiveness Index (RECAI) will be employed to benchmark each country. The RECAI can help to create a set of global benchmarks to compare movement and improvement of countries combining all aspects of outcomes. The box below summarises the data within RECAI that would allow comparison of data at a simple aggregate level for all aspects.

Qualitative research at pilot level

Qualitative research will provide additional context and depth to help not only understand the expected and achieved outcomes and outputs of the pilot and to assess impact but the processes in place and the effectiveness of these processes. This will primarily be conducted through in-depth stakeholder interviews with the UK Climate Investments pilot delivery team and project investors but also through consultations with the investment community and country sector experts to ensure and compare processes more widely and within the country context.

Table 7.4 below outlines how each evidence source will be used to address the overall process evaluation questions.

[90] PPP is a Public Private Partnership
[91] TPER is the Total Primary Energy Requirement

Table 7.4 Pilot main stage evidence sources and evaluation questions being addressed

Evidence source	Evaluation question addressing
Internal secondary data	
Investment portfolio information	P1. Does the UK Climate Investments Pilot appraisal process effectively identify and secure investment in low carbon projects that meet the additionality criteria, be profitable and have credible transformative potential?
Monitoring information	I1. Did the UK Climate Investments Pilot achieve their project specific climate and development outcomes? Why or why not? I2. Did the UK Climate Investments Pilot meet the additionality requirement in the Investment Mandate? Why or why not?
Performance assessment information	I3. To what extent does the UK Climate Investments Pilot catalyse or contribute to transformational change? Why or why not? I6. To what extent did the outcomes achieved by the UK Climate Investments pilot and the specific projects funded maintain/sustain beyond the lifetime of the investment? I7. What were the major factors which influenced the achievement or non-achievement of sustainability of UK Climate Investments outcomes?
External benchmarking activities	
Desk based benchmarking activities	I1. Did the UK Climate Investments Pilot achieve its project specific climate and development outcomes? Why or why not?
RECAI	I2. Did the UK Climate Investments Pilot meet the additionality requirement in the Investment Mandate? Why or why not?
Application of wider VfM benchmarks	I3. To what extent does the UK Climate Investments Pilot catalyse or contribute to transformational change? Why or why not?
Qualitative research	
UK Climate Investments delivery and management team	P1. Does the UK Climate Investments Pilot investment appraisal process effectively identify and secure investment in low carbon projects that meet the additionality criteria, be profitable and have credible transformative potential? P2. Did the governance arrangements and delivery mechanisms of the joint venture lead to efficient, economic and effective project delivery? P3. Does the UK Climate Investments Pilot dissemination strategy effectively communicate success and

	subsequently increase private finance interest in investment? I1. Did the UK Climate Investments Pilot achieve its project specific climate and development outcomes? Why or why not? I2. Did the UK Climate Investments Pilot meet the additionality requirement in the Investment Mandate? Why or why not? I3. To what extent does the UK Climate Investments Pilot catalyse or contribute to transformational change? Why or why not? I4. Has UK Climate Investments successfully leveraged private finance into investments, and what are the profiles of investors? I5. Has UK Climate Investments improved the reputation of UK Climate Finance? I6. To what extent did the outcomes achieved by the UK Climate Investments pilot and the specific projects funded maintain/sustain beyond the lifetime of the investment? I7. What were the major factors which influenced the achievement or non-achievement of sustainability of UK Climate Investments outcomes?
Investment community	P3. Does the UK Climate Investments Pilot dissemination strategy effectively communicate success and subsequently increase private finance interest in investment? I4. Has UK Climate Investments successfully leveraged private finance into investments, and what are the profiles of investors? I5. Has UK Climate Investments improved the reputation of UK Climate Finance? I7. What were the major factors which influenced the achievement or non-achievement of sustainability of UK Climate Investments outcomes?
Country sector experts[92]	I3. To what extent does the UK Climate Investments Pilot catalyse or contribute to transformational change? Why or why not? I5. Has UK Climate Investments improved the reputation of UK Climate Finance? I6. To what extent did the outcomes achieved by the UK Climate Investments pilot and the specific projects funded maintain/sustain beyond the lifetime of the investment? I7. What were the major factors which influenced the achievement or non-achievement of sustainability of UK

[92] Country sector experts may include policy and government officials, academic professors/researchers in low carbon energy /climate finance field, technology experts related to specific product/area and project developers

	Climate Investments outcomes?

Table 7.5 details the different stakeholder groups that will be consulted and how the sample will be sourced as well as the method for engaging with them and how each intends to answer the key process and impact questions.

Table 7.5 Overview of qualitative research at pilot level

Audience	Approach	Sample source	Sample design
UK Climate Investments delivery and management team	Up to10 face to face in depth interviews (baseline, mid-point and close of evaluation)	UK Climate Investments project team	BEIS x5 (commercial, climate finance team) GIB x5 (sustainable finance, risk, legal teams and country leads)
Investment community	Up to 70 consultations in each of two waves (Q3 2017 and Q2 2018)	UK Climate Investments project team (EY + desk research from Ipsos MORI)	See the 'Primary research with investment community' section below
Country and sector experts	Up to 30 consultations (once at project inception and again at the close of the pilot)	• Consortium contacts • GIB • Sector and country benchmarking sources • Expert panel • BEIS • DfID • Foreign & Commonwealth Office (FCO)	20 sector specialists within each country • Policy and Government officials (e.g. clean energy team) x2 • Academic professors/researchers in low carbon energy /climate finance field x2 • Technology experts related to specific product/area (i.e. PHV, onshore wind) x3 • Project developers (i.e. in renewables/low carbon projects) x3

Primary research with investment community

Investigation conducted during the scoping stage has demonstrated the value of primary research with the investor community in contributing to an understanding of the impacts of the UK Climate Investments pilot. In the original evaluation design, 15 qualitative interviews and a quantitative survey were specified to measure attitudes and behaviours of investors in response to the pilot. However, a more detailed examination of the requirements and feasibility of a survey has indicated that more extensive qualitative engagement, extending the qualitative strand to 70 interviews, is likely to offer greater value to the evaluation than the quantitative research. This is due, in part, to the challenges of delivering the survey in a robust and comprehensive manner.

Owing to this change of approach, more detail on the revised methodology and deviations to the initial evaluation specification is presented below; see Annex 7 for additional details about the considered, but ultimately discounted, sample sources for investor research. Please note these changes in approach are cost neutral.

Sample frame and interview method

The investment community of interest to the evaluation is diverse, comprising a range of organisation types, which may be global or in target markets. Therefore, the sampling frame for these interviews must be designed to cover all investor types, including those with differing levels of awareness of / interest in UK Climate Investments, involvement in project countries, technological specialism, and scale of investment. Details of these investor types, and the anticipated numbers of interviews to be completed with each type, are presented in the table below.

Table 7.6 Investor types and anticipated number of interviews with investment community

Type of investor	Examples	Anticipated number of interviews (total 70)
Private Sector Equity	• **Private Equity Funds: Actis, Blackrock** • **Infrastructure Funds: Pan-African Infrastructure Development Fund (PAIDF), African Infrastructure Investment Managers (AIIF)**	Private equity funds: 5 Infrastructure funds: 5
Private Sector Debt	• **Large international investment banks: HSBC, Credit Agricole, Standard Chartered** • **Large regional investment banks: Standard Bank, Investec** • **Local banks to project countries**	International banks: 10 Regional banks: 5 Local banks: 12 (4 per target region)
Other Private Sector Investors	• **Family offices: Guggenheim** • **Pension funds: including both large 'international' funds such as Ontario Teachers, and funds in countries local to**	Family offices: 3 Pension funds: 5

	projects	
Development Finance Institutions (DFIs):	• **CDC, FMO Development Bank, KfW Development Bank, International Finance Corporation (IFC)**	All: 10
Other Public Funding Institutions	• **Private Infrastructure Development Group (PIDG)** • **Export Credit Agencies: Overseas Private Investment Corporation (OPIC), UK Export Finance (UKEF)**	All: 5
Project sponsors/developers	• **Globeleq, Aldwych International, Berkeley Energy, Lekela**	All: 10 (a mix of local/cross-geography)

The diversity and geographic scale of this investment community present a number of challenges to securing a robust quantitative-scale sample. In particular, identifying a representative sample source would be extremely difficult, as exemplified by the review of potential sources summarised in Annex 7.

Furthermore, some of the investor groups are small (e.g. large international banks), so achieving a high response rate – akin to doing a census of these groups – would be necessary to obtain a robust quantitative picture of their views. However, Ipsos MORI's previous experience of surveying investors – for example, on behalf of UK Trade and Investment – suggests expected response rates would be low, at around 10%. This would ultimately result in small coverage of investor types and would lead to challenges in interpreting and drawing conclusions from the data. Such low response rates would be compounded by attrition of the sample between the baseline and follow-up survey, which would diminish sample sizes further.

Using qualitative in-depth interviews rather than a quantitative survey will mitigate these risks and offer a number of additional benefits relevant to this evaluation. Qualitative methods are less dependent on achieving large numbers of responses and statistically robust sample sizes are not required. This approach is also likely to achieve better response rates and will be more appropriate given the seniority and position of investors sought.

Qualitative interviews will also offer greater depth of information. The method will allow interviewers to interactively explore investors' perceptions and clarify responses. This will enable a fuller analysis of investors' perceived barriers, risks and other perceptions, and the reasons behind change or inertia in attitudes. It will also reduce the risk of misunderstanding or misinterpretation of investors' views, which is beneficial given the complexity of the topic.

The approach will also provide greater flexibility, enabling investors to spontaneously offer information. This is in contrast to quantitative surveys, in which questions and answers must be anticipated in advance. This flexibility will be beneficial given the uncertainty around the projects to be invested in by the programme and the diversity of the sample.

The sample for the interviews will be identified by EY, supported by desk research by Ipsos MORI. The investors will be 'screened' when contacted to ensure a minimum number of those interviewed of each investor type are not currently investing in the sector in the project countries. The interview guide will be written collaboratively by Ipsos MORI and EY to ensure appropriate questions are included, pertinent issues are discussed and the right terminology is used. The interviews will be conducted by interview specialists inthe core Ipsos MORI team but to guard against any risk of limited technical knowledge, EY will attend a briefing session as well as attend (or dial in to - where conducted by telephone) the first few interviews as well as be available over the interview period for clarification questions and be closely involved in the analysis and interpretation of findings.

The interviews will be conducted face-to-face if in London, or by telephone/Skype if outside London, and will be 30-45 minutes in length. They will be repeated at two stages: in quarter three of 2017 (following the first few investments being made) and again towards the end of the pilot in quarter two of 2018. During the subsequent wave, interviews will be conducted with those investors who took part in the baseline stage and agreed to be re-contacted. This longitudinal design will enable measurement of any changes prior to and after the pilot among the same sample of investors.

To mitigate the risk of attrition of the sample between the baseline and post wave, extra sample will be added in the post wave to replace any loss during the intervening period. Although longitudinal measurement will be precluded with this 'top up' sample, it will be possible to conduct ex post measurement of attitudes and behaviour with this sample.

7.3.2 Project main-stage specification

The following section outlines the required data collection strands to conduct the main-stage of the evaluation to assess the impact and processes involved in the projects. The primary approach for the project stage is longitudinal theory-based case studies among successful and unsuccessful projects.

This is comprised of five key elements, discussed in more detail below.

1. **Internal secondary data:** project documentation and monitoring information
2. **Theory of change development:** project level theories of change
3. **Country and sector benchmarking**
4. **Qualitative research successful project including:**
    - Consultations with project investors & delivery partners
    - Consultations with external country stakeholders
5. **Qualitative research with unsuccessful investors including:**
    - Consultations with project investors & delivery partners

Internal secondary data

Familiarisation with each of the projects (both successful and unsuccessful) to identify intended activities and expected outcomes will be required relying primarily on reviews of project documentation, where available.

Documentation is expected to include:

- GIB investment mandate (& investment origination documents)
- Investment Committee meeting minutes
- Appraisal assessments (such as GIB's internal green team's four papers: preview, structural, pre-final and final)
- GIB project final contracts and compliance agreements
- Pipeline of projects and stages reached within investment process

The evaluation will also depend on the collection of monitoring information from successful projects[93] (and where available, projects that were not ultimately selected for UK Climate Investments funding). These will include:

- Additionality assessments
- Audit reports
- GIB project green impact measures
- GIB project logframes
- GIB project final contracts and compliance agreements
- Quarterly project reviews
- Due diligence reports (including any risk appraisals, green or transformational assessments and dashboards)

Theory of change development

In parallel to the documentation review and qualitative research, a theory of change will be developed for each successful project. As discussed in section 5 this will build on the pilot level theory of change and be adapted at the project level to account for particular project elements identified as having transformational change potential, technology specific outputs and outcomes and country and sector specific external factors or barriers.

[93] Please see Pilot main-stage specification for list of monitoring information and project level documentation

The aim of the project level theory of change is to demonstrate the causal pathway through which each project is able to achieve its expected impacts and to detail how these impacts come about through the key processes involved (e.g. governance arrangements and monitoring and reporting). The theories of change would also detail the main assumptions and risks for projects to achieve their anticipated outcomes and impact.

The project level theories of change will follow the same design as the pilot level theory of change as detailed in section 5. Similarly, the theories of change are expected to be adapted and amended throughout the evaluation as the projects progress and additional information and insight is gathered.

Country and sector benchmarking

The creation of complementary project level frameworks will also review whether desk-based benchmarking activities will be required as part of the project level specifications.

Qualitative research with successful projects

The qualitative evidence for the project evaluation will be derived from longitudinal case studies. This will comprise of up to 10 interviews per project case study. There will be a range of questions, which are better addressed through qualitative methods given the diversity of projects. Case-study research will enable in-depth research with project investors, delivery partners and wider stakeholders. This approach will allow responses to be triangulated, and reported alongside the relevant documentary evidence and monitoring information as detailed above.

Once projects have been identified for investment, case studies for each project will be conducted in each country along with case studies among unsuccessful projects.

Once the nature of the investment and country is known the evaluation management and leadership team will appoint an appropriate lead investigator. As part of the process evaluation, the case studies will look to evaluate the mechanisms in place to ensure the success of the delivery structure and the effectiveness of these processes as well as any lessons learned from the successful projects.

This research will engage a range of stakeholders involved with the individual projects and more broadly within the sector or country. 5-10 qualitative depth interviews will be conducted per project (as detailed in Table 7.7 below).

Table 7.7 Overview of qualitative research with successful projects

Evaluation activity	Sampling design	Sampling sources
Project investors and delivery partners	Up to 5 face to face in depth interviews per project (baseline, mid-point and close of evaluation) with: - Project leads x2 (e.g. account manager) - Project delivery partners x3 (e.g. developers or suppliers)	- UK Climate Investments project team
External stakeholders	Up to 5 consultations per project (once at project inception and again at the close of the pilot) Dependent on the project type but likely to include: - Academic professors/researchers in low carbon energy /climate finance field - Technology experts related to specific product/area (i.e. PHV, onshore wind) - Project developers (i.e. in renewables/low carbon projects) - Financial authorities (incl. advisors & fund managers) - Local government officials - Country and sector experts	- Consortium contacts - GIB - Sector and country benchmarking sources - Expert panel - BEIS - DfID

Where feasible, initial, face to face interviews would be conducted following the project set up face to face, followed by mid-series telephone interviews (if time permits) and a final face to face case study visit at the end of the project.

As per the pilot level data collection strategy, the table overleaf outlines the approach to qualitative data collection, the key audiences, sample source, proposed sample design and how the qualitative evidence intends to address the process and impact evaluation questions.

Qualitative research with rejected projects

An additional five case studies will be conducted among rejected projects – that is projects that are not successful in receiving funds through UK Climate Investments. The evaluation will aim to select rejected projects that are as similar as possible to UK Climate Investment funded projects.

The identification of rejected projects that are best suited to the requirements of the evaluation is likely to involve a series of screening interviews with delivery partners as well as reviews of the Investment Committee minutes to understand the reasons projects were not successful. These would be matched as far as possible to the successful projects based on a set of screening questions including but not limited to:

1. Level of investment requested,
2. Type of technology being implemented,

3. Target region or country,
4. Area of transformational change potential,
5. Existing projects and investment portfolio and anticipated outcomes.

Ideally, to enable this comparability to be as close as possible, the rejected projects should also be selected from those that make it as far through the Investment Committee review process as possible i.e. they fail to continue between the third and final stage of the Investment Committee.

It is recommended that the projects selected for these comparator case-studies have reached financial close without UK Climate Investments support. This is so that the longitudinal case-studies are as useful as possible. However, the evaluation will also seek to understand the proportion of projects that do not manage to proceed once rejected from the UK Climate Investments process (important for assessing additionality) – we will need to liaise with GIB to understand what information they will have on the progress of rejected projects, and if this is limited consider what opportunities there are to collect this ourselves. Through this selection criteria, case studies with rejected projects will provide a counterfactual group in order to compare how these projects differ or are similar to those projects which are successful as a method of isolating (as far as possible) the effect of the UK Climate Investments pilot. For example, contributing to judgements on the extent to which UK Climate Investments involvement ensures projects produce outcomes beyond the installation of renewable capacity or energy saving measures, to also enable capacity building and transformational change.

Reviewing the unsuccessful projects will also allow the evaluation to answer question such as: whether an unsuccessful project going ahead demonstrates that GIB identification procedures worked because the project would not have been additional, or alternatively, whether this demonstrates that the schemes processes missed a potential investment as concessional finance was successfully attained.

Unsuccessful case studies will be made-up of up to 5 qualitative depth interviews per project. As per the successful case studies, the exact audience will be dependent on the type of project or investment as well as the current status of the investment. Table 7.9 below provides an indication of the stakeholders who would be approached.

Table 7.9 Overview of qualitative research with unsuccessful projects

Evaluation activity	Sampling design	Sampling approach
Unsuccessful project investors	Up to 5 face to face in depth interviews per project (mid-point of evaluation) with: - Project leads x2 (e.g. account manager) - Project delivery partners x3 (e.g. developers or suppliers)	- UK Climate Investments project team - Investors and project delivery team - In-country leads - Consortium contacts - Expert panel

The timing of data collection with rejected projects will need to be reviewed once these projects have been selected and their post-UK Climate Investments funding arrangements and financial close status is known. For example, if rejected investments have continued without UK Climate Investment funding, baseline interviews could be conducted with follow-up interviews at the close of the evaluation (in parallel with the successful project level interviews). If

The evaluation team are aware that there may be an additional level of engagement required to encourage unsuccessful investors to take part in the evaluation. As with the successful project level case studies, there are a number of steps that need to be taken in collaboration with the UK Climate Investments delivery team to maximise engagement.

1. **Ensuring that the delivery team keep the evaluation team informed of all negotiations** that have been held with the unsuccessful investments as well as the reasons why they were not selected for investment. This will ensure the evaluation team liaise with the project team in an informed and engaged way which generates confidence in the value of the evaluation.
2. **Evaluation team consulting with the delivery team to assess the most appropriate time to contact the project investors** following the rejection of the project in order to maximise chances of engagement – it is recommended that the initial approach takes places shortly after a final decision on the investment is made as this is when the project team are likely to be most engaged in the programme and have the best recall of the process they have experienced.
3. **Initial communication with the project leads via the Director of the ICC at BEIS** to emphasise the significance of the evaluation and the importance and weight of their views in the assessment of the pilot.
4. **Communication with the project leads also need to highlight the benefits to the investor in participating** such as providing the opportunity to give feedback on the process and the future delivery of the programme.

7.4 Data analysis and synthesis strategies

7.4.1 Analytical approaches

This section considers the most appropriate analytical approaches to making sense of the diverse set of data that will be collected across the evaluation, likely to include:

- Reviews of pilot and project level documentations
- Findings from qualitative consultations
- Analysis of monitoring information
- Analysis of sector and country level benchmarking

Both the type of analysis required, and the weight of importance it's given in the overall synthesis of evaluation evidence, will vary dependent on the type of data collection method (whether qualitative or quantitative), the level of stakeholder engagement (whether direct or indirect interaction) and the evaluation question being addressed (whether questions can be answered directly or indirectly through available evidence).

7.4.2 Qualitative analysis

Qualitative evidence can be divided into pilot level consultations with the pilot delivery team and wider sector experts and investment community and project level case-studies comprising of consultations with project leads, delivery partners and local external stakeholders and experts.

Qualitative analysis will consist of three layers; content analysis at a project case level, thematic analysis at a project case level and qualitative comparative analysis at a pilot level to synthesise the findings from across the case studies to provide generalizable and transferable insight.

(Within-case) content analysis[94]

Content analysis comprises of a three stage approach to qualitative analysis. The first stage applies a set of code frames to the data derived from the text data. The second stage builds on the code frames and analyses the findings based on the underlying theory (drawn from the theory of change) and the final stage, the underlying context. This is particularly suitable for drawing out findings from individual stakeholder consultations and project level consultations and to help identify common content and subject matter at a pilot level.

(Within-case) thematic analysis[95]

For each case study, and for consultations with the pilot delivery team and wider stakeholders, this involves coding of text where required, development of descriptive themes related to the

[94] Hsieh, H. and Shannon, S. (2005) Qual Health Res November 2005 vol. 15 no. 9 1277-1288
[95] Thomas J, Harden A. Methods for the thematic synthesis of qualitative research in systematic reviews. BMC Med Res Methodol 2008;8:45.

primary data and the generation of analytical themes to provide greater context and interpretation of the key findings. This may include country, project, transformational change and pilot level themes and ensures a complete picture of the project (or process issue under examination in the case of some of the delivery team interviews) and understanding of the context in which it operates.

Qualitative comparative analysis[96] (QCA)

The main approach to synthesise the qualitative findings across the project case studies will be a qualitative comparative analysis (QCA). QCA can be used to assess impact via qualitative evidence and to help identify multiple pathways to achieving change.

Case-study approaches alone have weaknesses as while they provide great depth in a particular outcome in a particular context, it is difficult to interpret how generalizable their learnings are to other projects or contexts. In addition, if not carried out systematically and transparently, findings from case studies may not have external validity (i.e. be replicable by external researchers). QCA aims to provide a structure for generating learnings at broader level than each individual project assessing the wider implications.

QCA is particularly suitable for case-study based approaches providing a systematic comparison; comparing a number of factors across a number of cases in order to create a set of generalizable and transferable insights to create pilot level learnings. This involves testing the theory of change by identifying the factors that are necessary to obtain the specified outcome or output within each context, in this case, within each case study. And, then assessing the extent to which the case study provides evidence that it has been able to achieve this outcome by defining a set of scoring criteria and developing a dataset. This draws on realist evaluation principles and helps to answer the questions “what works best, why and in what circumstances”.

The key steps involved in QCA are as follows:

1. **Clear and detailed theories of change:** As outlined in section 5, the evaluation team, in collaboration, with BEIS has provided a detailed theory of chain and results chain. Although we recognise that these will still need to be developed at project level, they provide a useful starting point to develop a set of key factors on which the outcomes can be assessed.

2. **Comparable, granular data across a set of cases:** As detailed in the data collection strategy, the evaluation team has outlined a wide breath of data collection approaches including internal secondary data and qualitative consultations. These approaches will be implemented consistently across all successful and unsuccessful projects.

3. **A clear definition of what a ‘case’ is:** For the purposes of this evaluation, a case is defined at a project level. This is due to the relatively high number of cases (13-18 when unsuccessful projects are also included). Guidelines suggest that more than five cases will

[96] Ragin CC. The comparative method: moving beyond qualitative and quantitative strategies. Berkeley, CA: University of California Press; 1987.

have the greatest added value and for this reason, a case is defined at a project level as opposed to a country or technology level.

Table 7.10 below exemplifies how we would expect this dataset to be defined when assessing a specific outcome.

Table 7.10 Example application of QCA to analysis of UK Climate Investments

Case	Factor A:	Factor B:	Factor C:	Outcome
	Proportion of work conducted by local firms	***Level of local policymaker buy-in***	***Level of dissemination activity***	***Local capacity building and replicability***
Project 1	0.66	0	0.66	0.66
Project 2	0	0.33	0.66	0.66
Project 3	0.33	0.66	0	0
Project 4	0.66	0	0.66	0.66
Project 5	0	0.33	0.66	0.66
Project 6	0.33	0.66	0	0
Project 7	0.66	0	0.66	0.66
Project 8	0	0.33	0.66	0.66
Project 9	0.33	0.66	0	0
Project 10	0.66	0	0.66	0.66
Project 11	0	0.33	0.66	0.66
Project 12	0.33	0.66	0	0
Project 13	0.66	0	0.66	0.66

* 0 = no or weak evidence to support; 0.33 = some evidence to support; 0.66 = strong evidence to support

It is important to note that additional analysis will be carried out to ensure that the detail and nuances of the qualitative evidence is retained when providing project level summaries.

Summary of qualitative analysis approaches

Table 7.11 below outlines how each analytical approach intends to answer the key evaluation questions.

Table 7.11 Summary of analytical approaches to answering key evaluation questions

	Qualitative analysis		
Key evaluation questions	**(Within-case) content analysis**	**(Within-case) thematic analysis**	**QCA**
I1. Did UK Climate Investments pilot projects achieve their project specific climate and development outcomes? Why or why not?	✓	✓	

I2. Did UK Climate Investments pilot projects meet the additionality requirement in the Investment Mandate? Why or why not?	✓		
I3. To what extent do UK Climate Investments catalyse or contribute to transformational change? Why or why not?			✓
I4. Has the UK Climate Investments pilot successfully leveraged private finance into investments, and what are the profiles of investors?		✓	✓
I5. Has the UK Climate Investments pilot improved the reputation of UK Climate Finance?			✓
I6 - To what extent did the outcomes achieved by the UK Climate Investments pilot and the specific projects funded maintain/sustain beyond the lifetime of the investment?	✓	✓	✓
I7 - What were the major factors which influenced the achievement or non-achievement of sustainability of UK Climate Investments outcomes?			✓
P1. Does the UK Climate Investments pilot appraisal process effectively identify and secure investment in low carbon projects that meet the additionality criteria, be profitable and have credible transformative potential?	✓	✓	✓
P2. Did the governance arrangements and delivery mechanisms of the joint venture lead to efficient, economic and effective project delivery?	✓	✓	✓
P3. Does the UK Climate Investments pilot dissemination strategy effectively communicate success with the aim of increasing interest by private finance in investing in renewable energy or energy efficiency in target countries?	✓	✓	✓
C1. How can the activities of the UK Climate Investments pilot be improved as the pilot runs its course?			✓
K1. How can BEIS improve its ability to measure and evaluate transformational change?			✓
K2. What are the barriers to private sector investment in energy efficiency and renewable energy in the UK Climate Investments target countries?			✓
K3. What external factors influence the success of low carbon projects in developing countries and how can they best be managed?			✓
K4. To what extent has the UK Climate Investments pilot been value for money as a delivery mechanism for the UK's climate finance?	Please see separate VfM section for details on analytical approach		

7.4.3 Quantitative analysis

The majority of the analysis will be qualitative due to the weight of qualitative data analysis. However, across all questions the evaluation will aim to integrate quantitative measures such as secondary data, benchmarking activities and monitoring information as far as possible. This section looks at how quantitative data will be analysed. There are three key types of analysis that will be carried out.

Raw data synthesis: During the data management stage, raw data in SPSS and Excel format will be reviewed and sorted and frequency tables created where necessary. Tables will be designed in line with the theory of change and results chain developed.

Descriptive and inferential analysis: Once data has been synthesised, descriptive and inferential analysis will be used governed by the theory of change and results chain. Monitoring information will be primarily descriptive providing summaries about the portfolio of investments as detailed in the previous section. Any quantitative data generated through engagement with investors (e.g. through semi-structured interviews with large sample), on the other hand, will employ more inferential analysis to draw inferences on what investors think about the current climate finance landscape in developing countries.

Time-series analysis: In order to assess changes in perceptions, investments or the climate finance landscape since the initial inception of the pilot and during and at the close of the pilot, time-series analysis will be employed.

7.4.4 Overall synthesis to answer evaluation questions

In parallel to data analysis, the evaluation will seek to synthesise the qualitative and quantitative evidence in order to answer the evaluation questions. This will allow the evaluation team to triangulate the evidence and validate the findings from different data collection strategies. The evaluation team can be more confident if similar findings and themes are identified from different methods and sources.

Synthesis is also able to generalise the findings from across the case study evidence and provide insight into the potential replicability of the pilot in different contexts and sectors.

The evaluation will employ **meta-synthesis**[97]. This approach seeks to analyse the findings from across primary and secondary, and across qualitative and quantitative[98] evidence to form interpretive explanations and thematic descriptions. The following main steps will be followed:

1. Organisation of the evidence by theory area into data tables;
2. Thematic analysis of evidence by individual reviewers;
3. Comparison of thematic analysis and identification of chains of influence (drawing on the results chain);
4. Making connections among the chains of influence; and,
5. Refining the theory of change in light of the evidence from the findings.

Weight of evidence-based approach to synthesis

As outlined above, a variety of analytical approaches will be employed in order to answer each evaluation question. One consideration for the synthesis of the outputs from these multiple

[97] Sandelowski M, Barroso J. Handbook for synthesizing qualitative research. New York, NY: Springer; 2006.
[98] The principles of the meta-synthesis, which is primarily employed for qualitative analysis, will also be applied to quantitative analysis for the purpose of this evaluation in order to ensure a consistent approach is employed.

analytical strands is dealing with any contradiction in the findings produced. A 'weight of evidence' based approach is required where different strands of evidence are weighted based on an assessment of their reliability and validity. The assumptions currently being made about how the evidence will be weighted are provided below, in order from most valid and reliable to least:

- **Monitoring information:** evidence will be weighted depending on the extent to which the evaluation team is able to verify the monitoring information (e.g. it may be possible to verify direct project outputs such as amount of megawatts produced, whereas it may be more challenging to verify outcomes such as the number of local jobs supported)
- **Secondary documentary sources:** familiarisation documents such as committee or board minutes produced by internal stakeholders will be weighted second to monitoring evidence as there will be an element of stakeholder bias in the documents produced.
- **External stakeholder perceptions:** country and sector experts as well as the wider investment community will provide an impartial perspective on the project
- **Internal stakeholder perceptions:** GIB and BEIS's closeness to the project will mean perceptions of themselves will be given less weight than a potentially more impartial external stakeholder.
- To ensure there is also limited evaluator bias, the analysis will draw on evidence reviews conducted across different members and organisations in the evaluation team. Consortium workshops will be held in advance of each of the key deliverables discussed below to assist this process. There will be an internal peer review process within the evaluation team so that members less involved in the design or administration of data collection provide a critical challenge function to the analytical outputs of the strand to help ensure the findings are defensible and stand up to scrutiny. Further discussion of consortium delivery and quality assurance arrangements are discussed in Annex 8.
- The evaluation will also use the above assumptions of the weight of evidence (in conjunction with quality assurance of the findings) to consider the extent to which contradictory findings should be dismissed or explored further. There is the possibility that contradictory findings may be explained by alternative theories and may provide unexpected insight into how the pilot may contribute to transformational potential.

7.4.5 Evaluation deliverables

Table 7.12 below provides an outline of what is entailed in the evaluation deliverables and what the project team can expect to receive at which points and how this will help at key decision points during the evaluation. Annex 8 also provides further details of the evaluation governance strategy and stakeholder engagement activities as well as the potential risks to the evaluation.

Table 7.12 Summary of evaluation deliverables

Deliverable	Content	Revised timings (based on delayed investment schedule)	Decision points
Pilot Baseline report	Initial baseline of measures to assess outcomes and impacts and project potential for transformational change and additionality. Report will contain a revised theoretical framework and evaluation plan.	Aug'16 TBC – ongoing discussions about baseline work	BEIS's Annual Review and Climate Change Compass results collection (Oct 2016)
Project level evaluation reports	Reports will cover each project case study including the project level theory of change, progress updates and intended/achieved outputs.	Dec'16 (baseline), Dec '17, Dec'18	Climate Change Compass results collection (Oct 2016, 2017 & 2018)
Pilot level annual (interim) report and presentation	The pilot level annual reports will provide an update on the progress of the pilot synthesising the findings to date across all data collection methods including the consultations, survey and case studies as well as the most recent theoretical framework and evaluation plan.	Jan '17 (building on project-level submitted in Dec)	BEIS's Annual Review and Climate Change Compass results collection (Oct 2017)
Pilot level six monthly report	A six monthly report will provide evidence to BEIS and the UK Climate Investments project team evidence of any potential issues as well as successes and challenges with the delivery and appraisal process of the pilot.	Aug'17,	BEIS & UKCI Consortium Six Monthly meetings Climate Change Compass results collection (Oct 2017)
Draft final evaluation report	A summation and interpretation of all of the findings from the evaluation including consultations, surveys and all case studies. The report will contain a validated and final theoretical framework as well as the lessons learned and recommendations for future evaluations.	Jan '18	
Final evaluation report and presentation	A revised version of the draft final evaluation report addressing any additional comments or feedback from BEIS and GIB.	Feb'18 (but project dependent)	BEIS Workshop Development Finance Institutions and private investors events

7.5 Considerations of current policy delivery timings for initial data collection

Under the original evaluation plan, baseline data collection was due to be complete in early-mid 2016. However, the Investment Committee are still considering deals and no investments have yet been made, requiring an adjustment to the timing of the different evaluation strands and data collection activities. It is also important to consider what can be learned from experiences of the policy and delivery teams so far, particularly given UK Climate Investments is currently in a pilot phase. This section considers the implications of the policy delivery timings for both the process and impact evaluation strands to ensure the evaluation is contributing to one of its key aims to provide effective real-time learning.

Process evaluation

This is a critical period for the process evaluation to learn from the experiences of the policy and delivery teams to understand how the Pilot's intended processes have been implemented to date, and to what extent these have been fit for purpose. This will include identifying elements that have worked well as well as any that have hindered progress delivery, and will look at both the scheme design (e.g. the Investment Mandate requirements) as well as the processes (e.g. the origination of deals, Investment Committee). It will be important to unpick what is contributing to delays in the investment timeline and what, if anything, could be amended to improve this process and its outcomes.

This will contribute to learning under the first process evaluation question: *"P1 Does the UK Climate Investments Pilot appraisal process effectively identify and secure investment in low carbon projects that meet the additionality criteria, be profitable and have credible transformative potential?"*

Consultations will be arranged with members of the UK Climate Investments policy and delivery teams, at both BEIS and GIB. The appropriate number, and specific stakeholders, to involve in these consultations will be discussed with BEIS as it is recognised that whilst this is an important period for evaluation activity, it must be careful not to place additional burden on delivery teams focused on progressing investments. Additionally, to these consultations, a small desk review will be conducted to identify whether there are any transferable learnings from schemes seeking to make investments in similar types of projects or markets and to offer a point of comparison to the processes employed by UK Climate Investments.

The findings from this strand will be provided to BEIS to feed into the Annual Review in Autumn 2016.

Impact evaluation: setting the baseline

A number of evidence sources will ultimately feed into the baseline (approach described in section 6.3). In light of the current stage of the policy delivery (with no final investments yet confirmed), these data collection strands are reviewed below to consider which can proceed in the short-term:

1. Consultations with the Investment Community

   In-depth interviews with the investment community will be valuable in understanding the current investment environment (offering a baseline point of comparison to later reviews of this when it is hoped that UK Climate Investments will have influenced investor attitudes and ultimately investments in the technologies and markets targeted by UK Climate Investments). To be as relevant as possible, these consultations would be focused on investors, and on discussing the current situation in relation to, technologies and geographies that were similar to investments made under the pilot. While more general consultations could be conducted now (e.g. gathering views on the investment environment in Kenya, rather than specifically in onshore wind in eastern Kenya), it is likely that these would need to be repeated at a more specific level once the details of investments were known. This would waste evaluation resources and risk over-burdening potential respondents.

2. Consultations with Country and Sector experts

   Similarly, to point 1 above, it is recommended that these consultations are conducted once they can be made relevant to the specific investments made.

3. Documentation and benchmarking review

   Similarly, to the direct engagement via consultations, the most useful documentation reviews for the baseline will be focused at the specifics of the investments (e.g. benchmarks that relate to the specific characteristics of the investments, as far as possible). However, there are also broader macro trends that need to feature in the baseline, looking ahead to a future full impact evaluation of UK Climate Investments which will aim to identify the contribution of the programme in the wider context of climate finance trends in the developing world. Sources such as EY's RECAI and ClimateScope can, for example, therefore be reviewed now and documented as part of the baseline report.

Based on our current understanding of the likely timings for investments, we anticipate that the strands that are unable to progress in the immediate term, may be able to start in Q4 2016 as the first projects are confirmed. This will be kept under close review and discussed with BEIS in light of ongoing policy delivery updates.

7.6 Strategy for real-time learning and capacity building

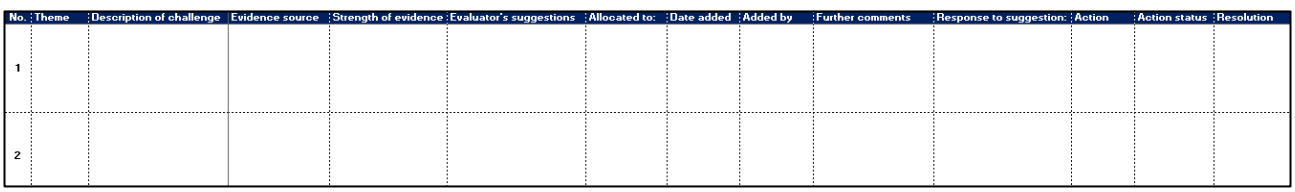
In addition to assessing the effectiveness and impact of the processes delivered by the UK Climate Investments Pilot, under the ToR for this evaluation there is also a clear aim to contribute to real-time learning and capacity building:

- **Real-time continuous improvement:** How can the activities of the UK Climate Investments Pilot be improved as the pilot runs its course?
- **Institutional knowledge:** How can BEIS improve its ability to measure and evaluate transformational change?

It is suggested that the following specific elements of the Pilot are the focus for real-time learning, though this can be reviewed with BEIS and GIB and revised as required:

- **Identifying deals meeting investment criteria**: optimising marketing and guidance around Pilot to most efficiently start negotiations with deals that are likely to meet Mandate.
- **Investment appraisal processes**: reviewing Investment Committee process, including approach to assessing additionality and reasons for deal rejections (offering learning through comparison to other programmes (see figure 3.2) where appropriate).
- **Support during implementation:** reviewing processes for monitoring project progress and outputs, as well as overall investment portfolio management.
- **Learning from project-level best practice:** due to the likely staggering of project starts (depending on timing of final investment decisions), learning from the effectiveness of the processes employed by one project can be shared for the benefit of later projects e.g. approaches to local end-user engagement, or dissemination activities. Cross-project level learning will help to identify potential for replication, leading to scaling-up of initial project-level impacts.
- **Dissemination**: optimising approaches to disseminating project and pilot-level outcomes to maximise the potential for demonstration effects and ultimately transformational change, and to meet the target of increasing UK climate finance reputation.
- **Monitoring and evaluation approaches**: learning about the most viable and useful approaches to evaluating an internationally-focused intervention such as UK Climate Investments with multiple layers, and timeframes, of anticipated impact. This will assist BEIS with capacity building and its contribution to the evaluation sector.

The phased implementation strategy and deliverables have been designed in a way that ensures the opportunity for on-going real time learning to be fed to BEIS and GIB. For previous policy evaluations the specific delivery of learning (as opposed to broader evaluation findings on effectiveness and impact) has been presented through a log-sheet (set up in Excel and based around section headings such as the issues listed above). This has been kept as a live document which has been regularly updated as evaluation evidence has been gathered and synthesised. This approach to delivering key learning points could also be adopted for the evaluation of UK Climate Investments if suited to BEIS and GIB.



No.	Theme	Description of challenge	Evidence source	Strength of evidence	Evaluator's suggestions	Allocated to:	Date added	Added by	Further comments	Response to suggestion:	Action	Action status	Resolution
1													
2													

The learning in these specific areas will be shared at the six-monthly progress meetings with the UK Climate Investments Pilot delivery team. This will be a key mechanism for the study team to share insights and learnings and to discuss their implications. Any specific areas of learning

which are more time-bound and could be implemented to immediate beneficial effect for the programme will be provided between these six-monthly meetings, for example on the weekly project update calls with BEIS and with a process for updating GIB agreed as needed.

Beyond the UK Climate Investments LLP team, there are a range of stakeholders internal to BEIS and the GIB, but also in other parts of Government and externally at the Centre for Evaluating Complexity that will benefit from being engaged in the learning from this evaluation. The overall effectiveness of the Pilot, and its ongoing impact, will also be assisted by engaging project-level teams in this learning and capacity building. A stakeholder engagement plan to achieve this is included in Annex 9.

7.7 Linking outputs with Climate Change Compass (the wider ICF evaluation)

Running in parallel to the UK Climate Investments Pilot evaluation is the International Climate Fund (ICF) evaluation. Climate Change Compass (the name for this monitoring, evaluation and learning programme) is taking a realist approach to understanding the overall impact of the ICF, and more specifically the types of funding approach that have worked to achieve the desired outcomes most effectively and efficiently (including in value for money terms) in different geographies and intervention contexts. Similarly, to the UK Climate Investments evaluation, Climate Change Compass has a strong interest in measuring transformational change and both evaluations will draw on the KPI 15 methodology for this.

Given that the UK Climate Investments Pilot represents one strand of ICF activity that will need to be considered under the wider monitoring, evaluation and learning programme, it is anticipated that monitoring, reporting and learning from this evaluation will be of assistance to Climate Change Compass. Indeed, the effectiveness of both evaluations is likely to be aided through collaborative working at the outset to identify similar types of outcome indicator to ensure these will be comparable at the Climate Change Compass' synthesis stage (for example, using the same units of measurement for quantitative indicators, or making the same assumptions under value for money calculations).

An initial call has been held with the Climate Change Compass team and it is recommended that, following finalisation of both respective frameworks, the two evaluation teams meet to discuss these in more detail and seek agreement on synergies such as this where possible. Comparing evaluation timetables and the most important points for sharing findings will also be helpful.

7.8 Next steps for evaluation framework: key decisions and dependencies

This section summarises the key dependencies from BEIS and GIB based on the proposed approach. It also highlights a small number of deviations in the recommended approach presented in this framework from the original suggestions made in the evaluation tender.

Table 7.13: Key dependencies to implement proposed approach

Evaluation element	Detail of key dependency	Respon-sibility	Section reference
Assessment of deal origination process	Detailed list of leads in each market, including source of lead (e.g. existing contact, new approach by GIB, proactive approach) and stage reached with deal discussions	GIB	3.1.4
Assessment of marketing, engagement and pilot-level dissemination activities (linked to realisation of demonstration effects, visibility goals & capacity building)	As much of the UK Climate Investment's marketing and communication activities have not been set in stone, it will be important for the evaluation to be kept up-to-date with activities such as profile raising events planned or attended by GIB, BEIS or the UK Climate Investment team.	GIB / BEIS	3.1.3
Process & impact framework	Project-level and pilot-level monitoring reports	GIB	4 & 6
Outcomes logframe	Revisions to current logframe to incorporate new indicators and associated monitoring/ measurement	BEIS/ GIB	6.4
Unsuccessful project case-studies	Contact details for deals considered at Investment Committee but not selected for investment, and detailed explanation of stage at which deal negotiation reached and reasons for rejection	GIB	7.3.2
Alignment with Climate Change Compass	Sight of, and ideally a discussion through, the Climate Change Compass evaluation framework to identify shared areas of monitoring and to agree consistent approaches and definitions.	BEIS	7.6

Summary of deviations from original specification

This evaluation framework provides further detail and justification for many of the elements of the approach suggested in the initial project specification provided in response to BEIS's evaluation tender. There are, however, a few suggested deviations from this initial approach based on the scoping work conducted. These are summarised below alongside a brief re-cap of the rationale for the amendment.

Table 7.14 Deviations to initial evaluation specification at tender stage

Evaluation element	Detail of deviation	Rationale for change	Section reference	Cost review
Data collection with UK Climate Investments delivery team	Original suggestion of in-depth interviews with UK Climate Investments team based in-country dropped from specification	Delivery team all UK-based	7.3.1	**Cost neutral change: re-allocated to expand scale and scope of expert interviews** These interviews could be re-allocated to be expert interviews as BEIS have suggested expanding this strand. Originally specified as 10 expert interviews x country, this would provide capacity and budget for 20+ per country. It is recommended that this is kept as a flexible option depending on number and range of experts required depending on range of investment types.
Primary research with investors	Replaced initial consideration of a quantitative investor survey with larger-scale qualitative phase with investors	Lack of high quality sample for survey	7.3.1	**Cost neutral change: replaced with equivalent strand of qualitative research** 140 investor interviews (conducted across 2 waves of fieldwork) can be delivered for the same budget allocated to the two-wave investor survey originally specified.
Project-level case-studies	There may now be a lower likelihood of conducting three tranches of case-study research with some projects, depending in the timing of investments and project	Delays in investment process, likelihood of this being staggered over longer	7.3.2	**Based on key** dependencies: - whether it is appropriate to front-load the first case-studies - precise case-study specification at project-level (i.e. appropriate number and range of interviews, desk review tasks and benchmarking) not known until investments are

	inception	period of Pilot than initially anticipated		made - the deadlines agreed for finalising of pilot-level evaluation work and reporting under this contract
Timing of baseline period	Baseline report now timetabled for August 2016	Delays in investment process have restricted ability to start baseline activities targeted and tailored around project-level context.	7.4.5	**No cost implication**

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