pioneering
infrastructure
changing lives

# RESULTS MONITORING HANDBOOK

December 2018

Guidance on Identifying, Recording and Reporting PIDG's Development Impact

1st Edition

# Contents

# Glossary

| | |
|---|---|
| Access | Number of people with access to new or improved infrastructure |
| DAC | the OECD's Development Assistance Committee |
| DFI | Development Finance Institution |
| DI Team | PIDG's Development Impact team |
| FCAS | Fragile and Conflict-Affected States |
| PIDG DIT | PIDG Development Impact team |
| PCM | Post-Completion Monitoring |
| PSI | Private Sector Investment |
| RMS(s) | Results Monitoring Sheet(s) |
| RM Team | Results Monitoring Team |
| TICs | Total Investment Commitments |

# 1 Introduction to PIDG and its Theory of Change

## 1.1 Introduction to the Private Infrastructure Development Group

***Purpose***

The Private Infrastructure Development Group (PIDG) is an innovative infrastructure finance organisation which encourages and mobilises private investment in pioneering infrastructure in the frontier markets of sub-Saharan Africa and south and south-east Asia. PIDG's purpose is to is to combat poverty in the poorest and most fragile countries through pioneering infrastructure to help economies grow and change people's lives.

***Structure***

To achieve its aims PIDG has created a series of companies, designed to harness the efficiency of the private sector and its ability to provide capital. These companies operate at different stages of the infrastructure investment cycle, so each has a slightly different way of delivering results against the overarching PIDG mission. In other words, each of the individual companies is involved in activities which contribute to PIDG's 'Theory of Change' in different ways.

## 1.2 The PIDG Theory of Change

A Theory of Change for any organisation, whatever its mission, can be used to describe the way that the organisation uses its resources – staff, funding, expertise, partnerships and so on – to create immediate and definable outputs which lead to identifiable outcomes (changes or benefits) and which can then be linked to impacts for people and the environment.

The overall PIDG Theory of Change therefore describes how PIDG deploys the staff in its companies and the funding received from its Owners to generate a pipeline of projects, add value to them, mobilise private sector partners alongside them and invest in infrastructure projects. These projects have a range of different outcomes.

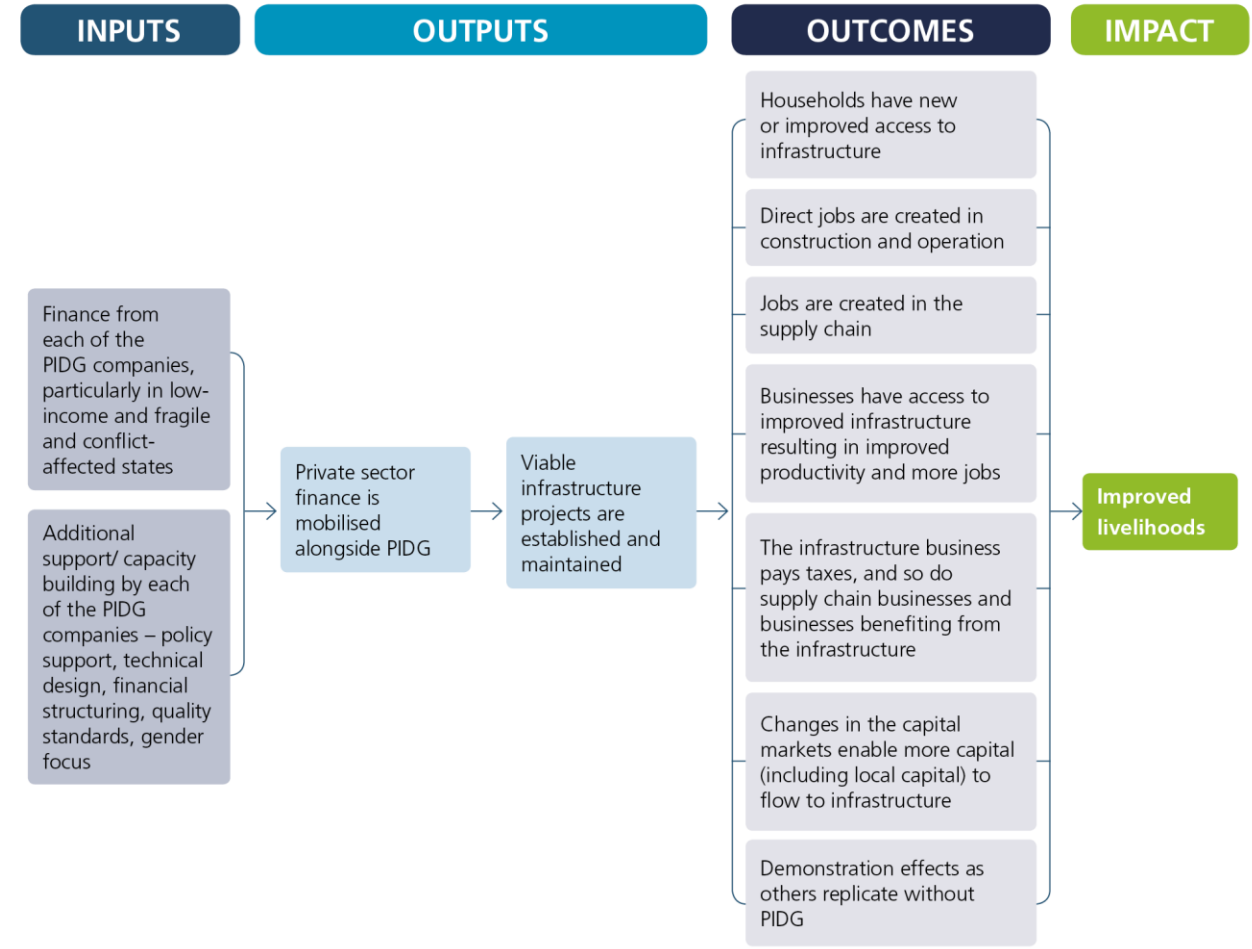
For many infrastructure projects, the principal benefits arise because they provide domestic users with access to new or improved infrastructure and therefore lead to an improved quality of life – . This can apply to energy projects, telecommunications, water projects and roads, amongst others.

For other projects, the principal benefits arise more from new or improved access for business users (for example, a more reliable energy supply, better roads, improved communications), resulting in more efficient and productive economic activities. This in turn results in increased employment by businesses, increased activity in their value chains and wider impacts driven by the multiplier effects.

In other cases, the impact may be substantially increased because the PIDG investment has mobilised additional funding from private sector sources. A project might even create or enable a fundamental shift in the way that other organisations in the system behave. So, for example, a project may prove the viability of a particular technology, enabling others to invest in follow-on projects. Or it may identify a financing mechanism which brings local currency into a transaction, lowering the exchange risk for that deal and making it more likely that local currency providers will engage in future transactions.

Projects will often demonstrate more than one of these routes to impact. The diagram on the next page illustrates these different routes to impact.

For each investment PIDG makes, there must be a clear articulation of how that investment is expected to create impact, together with suggested ways in which progress might be tracked. The aim of PIDG's monitoring and evaluation function is to support the PIDG Companies in gathering data relating to their specific Theory of Change, and to test through evaluations whether PIDG's activities do in fact lead to the intended outcomes and impact.




## 1.3 Key development indicators flowing from the Theory of Change[1]

The key development indicators which flow from this Theory of Change are -

| **Result level** | **Development Result Indicator** | **Components** | Relevant hand-book section |
|---|---|---|---|
| **Input** | **Finance** | • Investment made by PIDG Companies<br>• TA Funding provided | Section 3 |
| | **Additional support** | • Strategic role of the PIDG Company in securing a deal – this includes financial additionality ie PIDG providing funding that is not available elsewhere<br>• Better design and efficiency (increased affordability, | Section 4 |

[1] The range of key results indicators will not change under the new PIDG Strategy, but there is likely to be an increased focus within the components on the strategic themes of Affordability, Replicability, Scale, and Transformation, as well as specific results indicators on empowerment of women & girls, and climate change.

| | | | |
|---|---|---|---|
| | | better outcomes for women, better outcomes for climate change)<br>• Improved regulatory and policy environment (capacity of public sector strengthened) | |
| **Outputs** | **Investment mobilised** | **Investments from commercial entities:**<br>• Domestic commercial finance (equity and/ or debt).<br>• Foreign commercial finance (equity and/ or debt).<br>**Investment from DFIs:**<br>• DFI finance (equity and/ or debt). | Section 5 |
| | **Viable infrastructure projects** | • Projects reaching financial close (disaggregated by FCAS and DAC I / DAC II)<br>• Projects commencing operations | Section 6 |
| **Outcomes** | **Access to infrastructure** | • Number of people expected to have access to new infrastructure.<br>• Number of people expected to have access to improved infrastructure. | Section 7 |
| | **Employment** | • Direct short-term jobs created during construction.<br>• Direct long-term jobs created during operations | Section 8 |
| | **Wider economic impact** | • Narrative on enhancement of local capacity<br>• Narrative on other economic impacts resulting from the PIDG-supported infrastructure including jobs enabled by the infrastructure.<br>• Fees and taxes paid to the government, and subsidies avoided. | Section 9 |
| | **Demonstration effect (longer-term outcome)** | • Capital mobilisation through greater private participation in infrastructure in a country, sector or region.<br>• Improved attitudes and greater willingness to invest in the private sector in emerging markets as a result of reduced risks or reduced perception of risks | Section 10 |

Some of these development impact indicators can be quantified while others require a qualitative description. The indicators need to be considered for each project. Some projects will be stronger in one aspect than another. For example, an on-grid energy project might be expected to provide new or improved access to a large number of users, while a project designed to enable people to access affordable housing might reach fewer people but might introduce new and replicable financial products to the market.
The investment manager for each project should be clear about the particular boxes on the Theory of Change which are relevant to that specific intervention.

***A Development Impact scorecard is being designed by each PIDG company to reflect the principal routes to impact that cannot be captured in quantifiable terms.***

## 1.4 PIDG-wide Indicators

PIDG wants to be able to aggregate its results across all of its various activities. PIDG-wide indicators include:

- PIDG Company ('Facility') Commitments
- Projects reaching Financial Close
- Access to infrastructure
- Total Investment Commitments mobilised
- Total Private Sector Investment mobilised
- Direct Jobs Created – short-term and permanent

These indicators may not always capture the most important impacts of a specific PIDG intervention – or even perhaps a PIDG Company. There may be other data on capacity-building or market- building which are more important. However, all PIDG Companies need to report on the data points above to enable aggregation.

## 1.5 Key Performance Indicators ( set by PIDG's owners)

- Some of the numerical data collected are used in the analysis of performance of individual PIDG Companies: we have divided these into Targets and Indicators. The Targets are things against which each PIDG Company is "marked", and which appear in the PIDG Companies' Business Plans and KPI forecasts.
- The Indicators report on what the PIDG Company has achieved, but there is no forecasting demanded on these nor is there a negative connotation if the numbers are low.
- As a general rule, the Targets should be those things which the PIDG feels are most important to achieving its mission through each PIDG Company's operations, whereas the Indicators are "other outputs" that are useful to identifying what has been achieved, but less "central" to PIDG's overall impact. In some cases, as noted below, this is because the "direct" numbers that we are reporting on are less impactful than the indirect/wider impacts for which we do not have numerical data.
- Each individual PIDG Company has a Theory of Change which nests within the overall PIDG Theory of Change. This reflects what each PIDG Company is seeking to achieve.

## 1.6 Qualitative Results Monitoring

As noted above, there are a number of areas where the information about the impact of PIDG-supported projects is qualitative, rather than quantitative. The wider development impacts of our projects that are shown in the Theory of Change, take place on both the micro (e.g. local communities, building local capacity), and macro (e.g. businesses benefitting from reliable power and transport routes) levels.

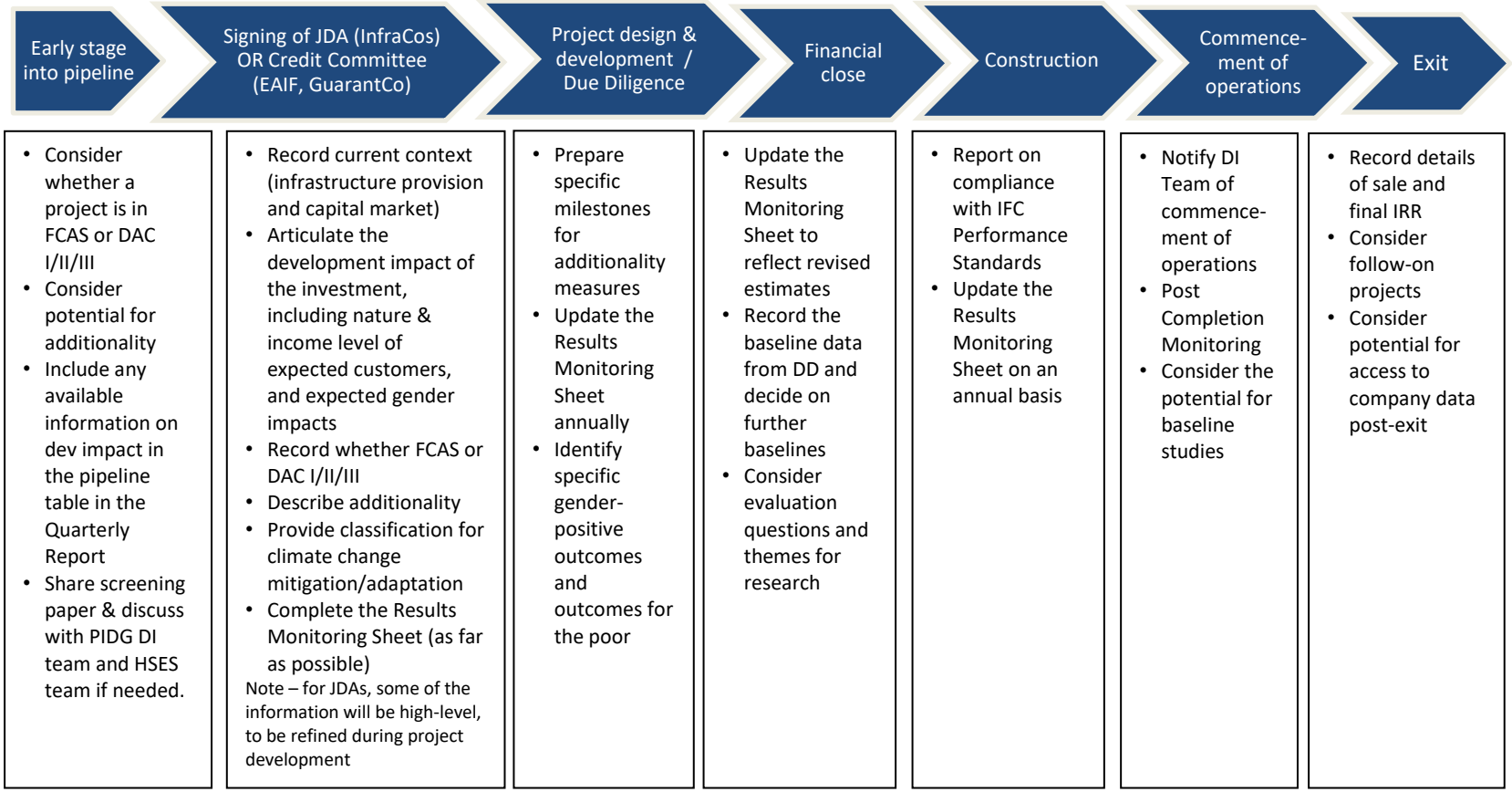
Therefore, a key part of PIDG's results monitoring and reporting is in identifying these wider impacts – which are often exponentially greater than the numbers directly affected by the infrastructure being provided. There are sections provided in the Results Monitoring Sheets wherein these expected wider impacts should be articulated.

***Each PIDG company is developing a Development Impact scorecard to reflect the most powerful pathways to impact, in order to capture the benefits of a project beyond the quantifiable indicators.***

# 2 Introduction to PIDG processes for monitoring, evaluation and learning

## 2.1 Activities through the investment cycle

The investment process is different for each of the PIDG Companies and so this diagram will apply differently across PIDG. However, the principles behind it are that (a) the monitoring, reporting and evaluation of impact should be integrated in the investment process and (b) the PIDG Ltd Development Impact team is available to support the PIDG Companies in exploring how best to identify, articulate, manage, monitor and evaluate development impact.



## 2.2 Development impact data and narrative in investment papers[2]

PIDG Companies make investments in infrastructure projects which deliver development impact by providing new or improved access to infrastructure, by creating income-generating opportunities in the economy and/ or by changing the financial system to enable an increased flow of capital to create more of these opportunities in the future.

**Ex ante assessment** of the development impact and additionality of a project is critical for selection of appropriate projects as well as being important for enabling monitoring and management of progress against those development impact and additionality targets. The PIDG Development Impact team can provide useful advice on how these areas can best be addressed in the investment paper, which should include:

- A description of the **Theory of Change** – what the outputs of the project will be, who the customers are and how they will benefit
- A commentary on the **economic costs and benefits**, with a particular focus on any subsidies and on the cost of the project relative to possible alternatives, especially if there was no competitive process
- Identification, articulation and scoring of **additionality**, including a commentary on the nature and terms of other current transactions in the market
- Commentary on how **gender** has been considered in the project
- If the project does not contribute to **carbon emissions** reductions (ie uses fossil fuels), a clear statement of why lower-carbon alternatives are not viable
- Any **demonstration effects** or changes to the capital market which are expected or intended
- Possible obstacles to the achievement of the expected development outcomes

The PIDG Development Impact team will organise a programme of visits to individual projects to enable them to meet with the PIDG Company team and the project developers and understand a sample of project in more depth.

In some cases, the Results Monitoring Sheet (RMS) will be included as an Appendix to the investment paper. The extent to which it will be possible to complete the detailed numbers in the RMS at this stage will depend on the PIDG Company and the project. At this stage in the project cycle, therefore, the focus should be on completing the sections setting out the Overall Project Summary, the fit with the Theory of Change and route to impact, and the Additionality scoring.

### Revisiting the investment case

There would not normally be any need for further review by the DI team until the PIDG Company submits its RM Sheet at JDA and/or Financial Close. However, there will be project which have considerable changes and/or delays between credit committee approval and financial commitment, which may require changes to the route to impact and/or additionality, or pose additional challenges in terms of Environmental, Social and Governance standards.

In such cases, the DI team will help the PIDG Companies to revisit the project documentation, so that it can be reviewed by the Credit Committee. Below are set out a list of the various events/changes that would indicate a need for potential revision of how the project is represented.

[2] The term 'investment paper' refers to different documents for the different companies, but it is the paper presented to the Company's decision-making committee which determines whether PIDG will allocate funding and staff resources to the development of a project.

- Delay of 1 year
- Changes to the nature or development impact of the project (including the country context):
    - Type of Infrastructure
    - Type of technology
    - Scale of output (by >25% up or down)
    - Increased or decreased additionality
    - Macro-economic context, which might make the project more/less attractive to investors
    - Potential for PIDG Company input to no longer be required (particularly impact on GuarantCo or EAIF)

- Changes to the Financing structure [where the exact values and providers of funding had not been estimated pre-CC, the focus is on the relative weighting and overall figures]
    - PIDG Commitment amount – any change
    - Relative level of mobilisation between DFI and PSI – change of > 5%
    - Overall change in TICs or PSI figures by > 10%
    - Changes in debt and/or equity instruments
    - New grants and/or changes in level of grant
    - [For InfraCo involvement in asset management] Changes in expectations for PIDG involvement post-Operations

In addition, any revisions to the Conditions Precedent which will have an impact on the above, should also be notified.

## 2.3 Capturing development impact data for the PIDG Ltd Board, Owners and other stakeholders

There are various points at which both the PIDG Ltd Board and the Owners[3] have sight of the strategy for achieving development impact and the specific development impact of potential and actual PIDG projects –

- Narrative in the **PIDG strategy and PIDG Company business plans** and around the KPIs for each PIDG Company
- **Commentary on the pipeline and portfolio** in quarterly reports
- The **database at data.pidg.org**, which provides names of projects under active development, and development impact information on all of the projects which have achieved Financial Close and beyond (this is public and available to all stakeholders)
- **PIDG Annual Report**, which gathers all of the data from the PIDG database (also public and available to all stakeholders).

The **overall strategy** for PIDG will clearly articulate how each PIDG Company is expected to deliver impact, based on their Theory of Change, and the Key Performance Indicators (previously logframe targets) that flow from that. PIDG Companies will be expected to show, for each investment, how it contributes to that strategy.

**Quarterly reports** should include narrative on how individual projects are expected to deliver impact. Wherever possible, they should provide an estimate of some of the quantifiable impacts, whether in terms of investment that might be mobilised or in relation to the estimated type and number of beneficiaries. It is

[3] The nature and frequency of reporting on development impact to PIDG Ltd Board and Owners has yet to be worked out in detail.

recognised that for many projects it will be difficult to provide detail at this early stage, in which case it should explain the development rationale for the transaction and note that greater detail will become available later.

The PIDG Development Impact team will maintain a **development impact database** of the projects which are currently in the pipeline for the PIDG Companies. This is different from the database at data.pidg.org as it is a more active management tool for tracking the expected qualitative and quantitative impact and the activities (discussions, visits, baselines, evaluations) undertaken to support and verify this. A member of the PIDG Development Impact team will be assigned to each project, to provide support or guidance to project teams where necessary. This will ensure that PIDG Ltd has a good understanding of the projects being developed, and can provide a ready response to stakeholders when asked about PIDG's current activities.

The Owners rely heavily on the data contained in the **data.pidg.org database**. Questions raised by Owner governments in relation to PIDG's activities are answered by reference to that database. It is therefore very important that the information reflected in that database is as accurate as possible. This is generated through the quantitative information provided on the Results Monitoring Sheets.

## 2.4 Results Monitoring Sheets

The Results Monitoring Sheets (RMSs) are designed to provide all the key information necessary to understand the objective and development impact rationale of each project. The aim is for the RMS to be accessible and understandable to any member of PIDG Ltd and the PIDG Company, as a standalone document.

PIDG Companies will be responsible for including an RMS as an Appendix to the investment paper, updating the RMS on an annual basis and notifying the PIDG Development Impact team when a project commences its operations.

All quantitative data provided at the commitment stage is "predicted". When the project becomes operational, the PIDG Companies fill in the 'Actual' data on the RMS based on updated estimates of impact data that are available at that stage: this is referred to as 'Project Completion Monitoring'.

## 2.5 Reporting to PIDG Ltd Board and Owners

Under the current system, the database at data.pidg.org is updated on a quarterly basis to reflect the expected development impact of the projects that have reached financial close in the previous quarter. In order to meet the deadlines for reporting to PIDG Ltd Board and the Owners, the timetable allows time for the PIDG Development Impact team to review the submissions from the PIDG Companies and ensure that the data is in line with PIDG's guidelines. This is important because the Owners rely on the PIDG Development Impact team for this quality assurance process and the credibility of PIDG's results depends on it.

With the PIDG Development Impact team being more closely involved in discussions with the PIDG Companies about development impact at an early stage, there will be a reduced focus on the process of completing the Results Monitoring sheets at the end of the quarter, although this process will still be in place to ensure that data is gathered on all projects in a timely way.

## 2.6 Recognising results

Accounting for the impact of PIDG's activities is complex because PIDG Companies commit staff resources and funding to projects for several years before the project reaches a point at which it is fully developed for funding purposes, and it can be several more years until the construction period is complete and the infrastructure becomes operational.

PIDG only recognises and publishes the predicted results from projects when they reach Financial Close. This is because, before that time, there is a much higher chance of the project failing, or of considerable changes in funding and scope – and, consequently, of development impact.

However, PIDG Companies do complete RMSs for projects 'under active development' (i.e. post-JDA, and DevCo mandates). This data can be taken as indicative by PIDG Owners and PIDG Ltd, so the data needs to be as robust and prudent as possible.

All PIDG's reported results are based on the predicted figures provided at Financial Close. These are predicted numbers – even the funding amounts – since the projects' development may result in changes to all aspects of the quantitative indicators. These numbers are then revisited after the project has become operational, as part of the "Post-Completion Monitoring" process.

The PIDG Annual Report includes a section which compares the "Predicted vs. Actual" results for projects that have become operational. Although the 'actual' figures are not then reflected in the numbers reported by PIDG, this process of comparison is designed to provide assurance that no significant changes occur between 'predicted' and 'actual'.

## 2.7 Evaluating results

PIDG's Evaluation programme is designed to gather information that will supplement the data gathered through the regular monitoring processes. The different types of evaluation include those that -

- explore the impact of individual investments in more depth;
- seek to validate or triangulate proxy estimates by applying different approaches to compare the results; and
- draw out PIDG's performance across the portfolio in specific thematic areas such as capital markets development, affordability of infrastructure, or a focus on the needs of women and girls.

A sample of individual investments are selected for evaluation each year, with selection depending on a number of factors including the size, geography, type of investment, and the PIDG Company involved. In order to enable PIDG to report on the change that it has created through the project, the PIDG Development Impact team aims to conduct baseline studies. These baseline studies are identified and designed through a process of consultation between the PIDG Development Impact team and the PIDG Companies. PIDG Companies are encouraged to propose projects for evaluation, especially where a project is expected to test a new concept, approach or impact.

The PIDG Development Impact team is not able to check proxy estimates on all projects, so the triangulation studies focus on the ones that are most representative and / or that are the most likely to require modification.

Evaluations are carried out at a number of different levels:

- **Individual projects** - Baselines and end-line evaluations of individual projects to understand what has changed as a result of individual projects, and to assess whether the project has achieved the expected impacts;
- **Thematic studies** – for example of PIDG's impact on gender, affordability, climate change, economic activity, the SDGs – to understand how PIDG's activities contribute to these overarching goals and to identify ways in which PIDG could do more within its strategic remit;
- **Sector studies** – for example energy within a specific country - to understand how PIDG's interventions have affected the overall picture of delivery of that infrastructure;
- **Consumer surveys** - to gather on-the ground information from the people who are expected to be benefiting from the PIDG-supported infrastructure;
- **Lessons learned studies** – Annually, each PIDG Company is required to produce a paper on a lesson learned. Historically, these have not been considered and addressed in detail, but the Development Impact team will seek to draw out the relevant lessons and more actively communicate those within PIDG and outside.
- **Process evaluation** - Evaluations of the processes that PIDG has in place, to check whether the systems are working well to identify impactful projects, to enhance the impact where possible, to achieve impacts and to report them. These process evaluations will help PIDG to learn and adapt its approach where necessary

# 3 Identification, Development and Financing of Projects

## 3.1 Why PIDG reports on the number of projects reaching JDA and financial close

PIDG's objective is to support the financing of infrastructure projects, especially in poorer and fragile states. Owners to PIDG and investors in PIDG want to be able to identify the infrastructure which their funding has been used to support, and to link their funding to provision of that infrastructure to specific beneficiaries in their focus countries.

It is therefore important for PIDG to be able to monitor and report on the number of projects that are being worked on, the number that have reached certain milestones (depending on the nature of the PIDG Company's activities), the number that have reached financial close and the number that are then operational. PIDG Companies' impact might be greater from investing smaller amounts in a larger number of projects, or focusing their efforts on fewer, larger projects, or by a balance between the two. The appropriate approach will vary depending on the PIDG Company and the nature of the particular projects; each PIDG Company's strategy will need to set out its response to this challenge.

## 3.2 How and when projects are reported

As soon as a PIDG Company commits to a project in the form of a mandate (DevCo), a Joint Development Agreement (the InfraCos) or at Financial Close (EAIF and GuarantCo), PIDG needs to be able to report on that project to the Owners.

The table below sets out – for each PIDG Company type – what should be included in the PIDG Company's Financial Commitment figure, and when Financial Close should be recognised.

| PIDG Company | Financial Commitment | Equity Sale | Financial Close recognised |
|---|---|---|---|
| **InfraCo Africa and InfraCo Asia** | Total project development costs committed by the PIDG Company when a binding Joint Development Agreement or equivalent is signed | Signature of a Share Sale and Purchase Agreement(s) for part or all of the PIDG Company's equity rights in a project to a private sector investor | All project and financing agreements signed, and required conditions contained in them have been met. |
| **EAIF and ICF-DP** | Value of loan agreement signed with borrower as at financial close | N/A | Signature of agreements by all investors and lenders to meet total funding needs for completion of a project, and all conditions precedent (CPs) to have been met. |
| **GuarantCo** | Value of guarantee agreement with borrower, committed when a guarantee agreement is signed. | N/A | All project and financing agreements signed, and required conditions contained in them have been met. |

| PIDG Company | Financial Commitment | Equity Sale | Financial Close recognised |
|---|---|---|---|
| TAF | Size of grant made available to support a PIDG Company project | N/A | N/A |

| PIDG Company | Financial Commitment | Commercial Close | Financial Close |
|---|---|---|---|
| DevCo | DevCo project preparation and transactional advisory support costs, committed when Owners approve an application. Funds are disbursed when DevCo signs a financial advisory agreement mandate | Commercial/contractual close occurs when all project agreements between the relevant private and public parties have been signed (financing arrangements may still be pending) | Financial Close occurs when all the project and financing agreements have been signed and all the required conditions contained in them have been met. |

Detailed questions about how to account for these projects as they come into the PIDG portfolio and as they are modified during the course of the project design and structuring before disbursement and during the course of the investment itself, are at Appendix 6, including the following –

- What happens if PIDG is part of a corporate transaction rather than a specific project?
- How should I account for projects involving more than one PIDG Company?
- Should I treat a restructuring loan, follow-up loan or extension of funding as a separate financial close?
- What happens if a project is cancelled?
- When should I count a project as operational?
- What are the Fragile and Conflict Affected States and what are DAC I, II and III countries?

# 4 Additional Support / Additionality

## 4.1 Why PIDG monitors and reports on additionality

As a publicly-funded organisation, PIDG must ensure that it is delivering benefit in a way that is additional to the role a private sector organisation might play. This is important in providing evidence to Owners, taxpayers and other stakeholders that PIDG funding is not being wasted. It is also important because if the private sector could be active instead of PIDG in certain areas, then PIDG may be distorting the market and preventing it from growing as effectively as possible.

PIDG Companies should also be prepared to explain their additionality if they are facing considerable competition with other DFIs for the deals they are undertaking. While this may not be an issue of crowding out the private sector investors, there are questions as to whether increased competition indicates that PIDG is not necessarily operating at the "frontier".

## 4.2 How each of the PIDG Companies assess additionality

Each of the PIDG Companies does this in a different way, so each has articulated its view of additionality, outlined in Appendix 7.

## 4.3 Monitoring additionality

PIDG must be able to articulate, ex ante, how a project is expected to be additional. It must also monitor progress against that initial assessment in order to gather evidence on whether PIDG is playing the role that was anticipated and to learn from what happens in practice.

This is particularly important when incentive payments to developers are structured in a way which rewards the achievement of additionality.

PIDG Companies are therefore expected to put in place some milestones against which progress on additionality can be assessed.

# 5 Mobilisation of capital

## 5.1 Why PIDG monitors and reports on funding mobilised

PIDG was established to fill a gap in the market because funding was not flowing to the infrastructure projects needed in the poorest countries. Its aim is to pave the way for private sector investors. The more private sector funding that PIDG can mobilise (on appropriate terms), the further PIDG funding can go.

## 5.2 Reporting on the different components of Funding Mobilised

### Funding mobilised alongside PIDG and funding catalysed as a result of PIDG

PIDG reports on the funding that is mobilised alongside it at the time of its investment: this is the focus of this section. However, it is also important to recognise that PIDG may have an additional impact as a result of its activities which pave the way for – or catalyse – subsequent private sector investment, which is not directly linked to the PIDG investment. This is considered in Section 10 on demonstration effects.

### Accounting for funds mobilised alongside PIDG

In terms of the funding mobilised alongside PIDG, Owners and other stakeholders are interested to know the source of that funding and the role that PIDG itself has played in mobilising it.

Each investment must be taken in context, and particular financing structures are appropriate for each investment and at different stages and scales.

| Public sector investment | DFIs | Foreign private sector (hard currency) | Regional private sector investing in local currency | Local private sector investing in local currency |
|---|---|---|---|---|
| Least | | | | Most |

Level of impact of different types of funding

PIDG may be investing alongside other Development Finance Institutions (DFIs): that is appropriate in a context where for example private sector investors are not willing to offer the tenor of loan that the infrastructure investment needs. Ultimately, PIDG would like to see local capital markets develop sufficiently so that local currency funding is available for infrastructure.

In general, the following guidance applies -

- Where co-investment is by parastatals, these should usually be considered public funds, therefore not counting towards the total of private sector investment mobilised.
- Sponsor investment counts as private sector investment and is currently included in the total of investment mobilised by PIDG

The current approach is to add up all of the private sector investment in a transaction and then count it as investment mobilised by PIDG. If all of the other DFIs in a transaction are doing the same, this leads to double-counting when trying to assess the total amount of private sector funding mobilised by public sector funds across all development interventions, and masks the real story. Work is currently underway, both by OECD-DAC and by a group of Multilateral Development Banks, to come up with an approach which allocates the private sector component of a deal to other funders depending on how active their role and their share in the total financing package. PIDG is monitoring progress on this initiative and will report in line with the consensus approach when it emerges.

# 6 Viable infrastructure projects

## 6.1 Why monitoring commercial viability is important to PIDG

PIDG aims to demonstrate to private sector investors that they are able to invest in a particular country or technology, so proving commercial viability is an important part of that achieving that aim.

## 6.2 How PIDG monitors commercial viability

The expected Financial Internal Rate of Return, and the expected time that it will take for the project to reach commercial viability, will be specified in the investment paper.

PIDG's standard financial monitoring of an investment provides information on its projected and current commercial viability. Some early stage projects may take some time to reach commercial viability.

# 7 Access to new or improved infrastructure

## 7.1 Why PIDG reports on access to new or improved infrastructure

Increasing access to infrastructure is widely accepted to be an important way to improve people's livelihoods in the poorest countries. The Facts and Figures on SDG 9[4] note that -

- About 2.6 billion people in the developing world are facing difficulties in accessing electricity full time
- 2.5 billion people worldwide lack access to basic sanitation and almost 800 million people lack access to water, many hundreds of millions of them in Sub Saharan Africa and South Asia
- 1-1.5 billion people do not have access to reliable phone services
- Quality infrastructure is positively related to the achievement of social, economic and political goals
- Inadequate infrastructure leads to a lack of access to markets, jobs, information and training, creating a major barrier to doing business
- Undeveloped infrastructure limits access to health care and education
- For many African countries, particularly the lower-income countries, the existent constraints regarding infrastructure affect firm productivity by around 40 per cent

PIDG's Theory of Change assumes that access to infrastructure will improve people's livelihoods. There are two main types of access to consider here.

- individuals within households having access to more, improved or more affordable sources of energy, water and transport solutions; and
- businesses having access to infrastructure which enables them to establish or to operate more effectively.

This section considers the first of these routes to impact. The second of these routes – through businesses creating job opportunities – is considered in section 9 on 'Wider economic impacts' below.

Access to infrastructure has historically been the principal key reporting number for PIDG's Development Impact in its Annual Report, although PIDG's internal reporting looks at a range of indicators which provide a sense of the depth of our development impact, including the Development Scorecard value, specific aspects around low-income affordability and gender empowerment, DAC and FCAS status of the countries and private sector investment.

## 7.2 How PIDG calculates access to new or improved infrastructure

It can be difficult to measure accurately the number of people with access to the infrastructure provided by PIDG-supported projects. For many types of projects, PIDG uses proxy figures, based on calculation methodologies. The assumptions behind these calculations need to be as robust as possible, based on the reality of what is being provided, and on reliable data sources.

In the investment paper, the quarterly reports or the RMS, it is important to have -

- A clear description of what infrastructure people are gaining access to, and how it will be new or improved (this is not always self-evident)
- A description of the methodology
- The calculation of the Access figures, with each contributing number being quoted and sourced

These figures need to be "reality-checked" to ensure that the calculation has not yielded a figure that is, for example, larger than the population of the country or region in which this infrastructure can be accessed.

[4] http://www.undp.org/content/undp/en/home/sustainable-development-goals/goal-9-industry-innovation-and-infrastructure/targets/

It is important to distinguish between "Access to new infrastructure" ("New") and Access to improved quality of service ("QoS"). The defining factor is the nature of the access to the service provided by the infrastructure.

For example, a grid-tied power-generation project may provide people with access to a new source of power, but their experience of it is only in terms of the QoS – such as fewer outages – unless the project is providing those who previously did not have access to power or telecoms in a certain area.

In addition to this Handbook, the PIDG Development Impact Team has provided separate guidance on calculating the Access figures. Please see Appendix IX. These guidance notes cover such issues as:

- Use of proxies
- Calculation Methodologies
- Realism checks
- Types of information used for assumptions
- Source of information

PIDG's Owners want to see benefits accruing to people in developing countries, and particularly to low-income people within those countries. The people included in access numbers should therefore be people within the country of operation.

***Legitimate Access claims***

Access can only be claimed on infrastructure which is being funded through the transaction that PIDG is supporting, rather than the wider development plan of the recipient company.

For example – on a house-building project – PIDG can only claim Access for the tranche of house-building funded by the transaction in which the PIDG Company is involved, rather than the house-builder's overall business plan. The same is applicable on projects where the company may be using the revenue arising from the infrastructure funded by PIDG to further expand the business.

## 7.3 Understanding more about who benefits from access to infrastructure

As noted above, the numbers for 'access to infrastructure' relate to the estimated number of domestic users that may gain access to infrastructure, calculated by use of a proxy. Owners are also interested to have information on the type of beneficiary and in particular the number of women who benefited and / or the number of low-income people. PIDG's approach to this disaggregation is outlined in sections 7.3.1 and 7.3.2 below.

### *7.3.1 Breakdown of 'Access' numbers by Gender*

In some small-scale projects, the specific people gaining access to the new or improved infrastructure can be identified and therefore it may be possible to gather reasonably accurate data on the number of women and girls reached. In those projects, the PIDG Company can provide this data. In In most cases, however, the number of people gaining access is estimated by means of a proxy calculation and the proportion that are women also needs to be estimated.

For this purpose, the PIDG Development Impact team applies the Female Beneficiary Estimation Tool, which calculates the percentage of females gaining access to the infrastructure, based on two factors - one relating to the gender inequality in the country and the other reflecting the extent to which the project deliberately focuses on women.

The RMS includes a specific section on how a project delivers impact for women and girls, and any information about new or improved access for women and girls is included in that section, as outlined in section 10 below.

### *7.3.2 Number of low-income users gaining access*

The approach here also depends on whether the number of people gaining access to the infrastructure, are known – for example in the case of small-scale off-grid projects. In most cases, however, these numbers will be estimates and therefore so will the numbers from a particular income group.

One of the simplest ways of estimating the number of low-income people with new or improved access might be to apply the "poverty rate" in the country or region to the overall number of people with access to the infrastructure in question. However, PIDG does not take this approach because in a country with a low grid-connection rate, it is likely that people on low incomes will be the ones who are not connected to the grid and therefore they will not benefit proportionately from the improved access.

Instead, the calculation should take into account the nature of the infrastructure provided, and what will be needed to enable low income households to access this infrastructure. This will need an assessment of the affordability to low income groups. It is also important to include within this figure any low-income households which are expected to gain access to the infrastructure as a result of bolt-on projects linked to the overall project.

In projects where the reach to low income consumers is an important part of the Theory of Change, PIDG may want to understand in more depth whether this has really happened in practice. In these cases, it would be valuable to undertake a baseline study (see section x below) so that the actual impacts can be monitored more closely.

### *7.3.3 Length of time that growth in the market can be factored into Access calculations*

In estimating access numbers for infrastructure in a growing market (for example, a market where the subscribers to the infrastructure will grow over time rather than peaking at the start of operations), the calculations often identify the growth in users over a period of time. This is then used as the basis on which to for attribute a percentage/proportion of that increase to the new/improved infrastructure.

However, given the issues around technological change and/or obsolescence, and to ensure that the numbers claimed are robust and prudent, PIDG allows the increase in the market to be counted for a maximum of two years. This issue is dealt with in more detail in the sector guidance note in Appendix IX.3.

# 8 Direct jobs created

## 8.1 Why PIDG reports on direct jobs created

Job creation is one of the most important aspects of economic development. With a job, an individual is able to generate income that can pull his or her family out of poverty. Provided it is a 'good job' which provides the individual with safe working conditions, reasonable pay and hours, and adequate opportunity for his or her voice to be heard, this job is likely to offer a higher quality of life.

For many DFIs, the creation of 'good' jobs is the principal measure of the success of their investments. The number of direct jobs created is generally quite clear and quantifiable with some degree of accuracy. This number is therefore one which provides strong evidence of positive economic impact.

For PIDG, 'direct jobs created' is also an important measure but it differs in this important respect: most of PIDG's infrastructure projects – unlike, for example, investments in manufacturing or agricultural activities – do not directly employ very many people. PIDG's infrastructure projects provide employment during construction but when it comes to the operational phase few people are required – for example, it only takes a small group of skilled people to operate a power plant.

PIDG's infrastructure projects have a much wider and deeper economic impact as a result of the economic activity generated by the energy, roads, ports or communications investments, both in the supply chain and through the enabling effect of the infrastructure itself. These aspects may have a significant effect on job creation but is much less easily calculated and also much less easily attributable to PIDG. PIDG's approach to assessing this wider impact on job creation is explored in section 9 below.

## 8.2 How PIDG reports on jobs created

The number of direct jobs created on PIDG projects is separated into:

- short-term job creation: the jobs created during construction; and
- long-term job creation: the jobs created in operating the infrastructure.

Sometimes the calculation needs to be based on assumptions – for example, where the project involves the construction of houses or telecoms towers. The PIDG Development Impact team has provided guidance for these cases, which is set out in Appendix 2.

Where there are part-time employees, the calculation is made in terms of full-time equivalents (FTE), unless there is a good reason to depart from this principle, and this needs to be clearly stated.

Because PIDG's Owners are interested in the impact on local people, the number for direct jobs created should exclude expatriate workers.

### *Breakdown of 'Jobs created' numbers by gender*

If the numbers of jobs are provided by the sponsor or developer, then it may be possible to obtain the gender split in these jobs from them. If not, then PIDG considers additional factors in estimating the likely gender breakdown. For long-term jobs in operating the infrastructure, relevant factors will include

- Cultural norms in communities local to the site
- Demographics and education levels in local community
- Various roles that need to be filled, and how this plays out in terms of cultural norms
- Job numbers/breakdown on comparable projects in the same country
- Whether the project has an intentional gender focus (by sponsors, developers or counterparties)

For short-term jobs, although predominantly construction roles which are mostly filled by men, it is worth considering the same points above.

The Female Beneficiary Estimation Tool (described in section 7.3.1 above) is used for estimation of women and girls with access to new and improved infrastructure and not for the breakdown of jobs created by gender.

# 9 Wider economic impacts

## 9.1 Wider economic impacts considered by PIDG

Many of the economic impacts resulting from PIDG's interventions are not captured by the quantitative reporting outlined in the preceding sections. PIDG must therefore try to understand and assess wider economic impacts through an ex ante narrative which outlines the principal impacts expected, through baseline studies of some investments which record the economic situation before the project started, and through ex post evaluations.

Each project will differ in its impact on the wider economy, and PIDG need only identify and capture the most important routes to impact on each one. Possible ways in which a project will have wider economic impact will be –

- Through enhancing local development capability – using **local developer teams** and **suppliers** of capital machinery or (ongoing) raw materials for the project
- Through the **jobs generated** by the infrastructure –manufacturing activities benefitting from more reliable power supplies; businesses able to function more smoothly with improved communications; and trade / access to markets being facilitated by roads or ports; all resulting in greater efficiency and competitiveness and hence more jobs.
- Through the **fiscal impact** of the infrastructure i.e. the contribution that it makes to Government in the form of taxes and royalties.

## 9.2 Why PIDG reports on wider economic impacts

The wider and less quantifiable economic impacts resulting from PIDG-supported infrastructure can often be more significant than any of the other impacts that can be measured more directly. Reliable and accessible infrastructure underpins a well-functioning economy.

## 9.3 How PIDG assesses wider economic impacts

### 9.3.1 Enhancing local capability

The use of, and support for, local developer teams should be included in the narrative, also noting any particular help or training provided to the local teams, and – where relevant – examples of where that local team had used its experience on another project.

The economic impacts of the supply chain can be captured in narrative form, noting down any significant local businesses which sell to the infrastructure project supported by PIDG.

### 9.3.2 Jobs generated

Most infrastructure investments will have a positive effect on economic activity and therefore on jobs. However, it is very difficult for PIDG Companies to estimate this at the time of investment. Instead, PIDG must rely on economic models which seek to calculate the job creation effects of certain types of infrastructure in certain types of economy. These models vary in their rigour and reliability but can help to provide data which can then be cross-checked against other sources of data during a project's life.

### 9.3.3 Fiscal impact

The fiscal impact can be measured by reference to the project company's accounts.

***Each PIDG company creates different types of wider economic impacts, including those listed above. The Development Impact scorecard for each PIDG company will reflect the most important elements.***

# 10 Demonstration effects / replication

## 10.1 Why PIDG reports on demonstration effects

PIDG's particular niche is in taking risks which the private sector is not currently able to take, and demonstrating that a particular technology, country or investment structure provides an adequate rate of return. The biggest win for PIDG projects therefore arises if they result in subsequent investment by private sector investors, without the need for further PIDG support.

The demonstration effect can take place through the replication of a particular technology, business model or financial structure. PIDG's role in developing the initial project enables the follow-on projects to be undertaken at lower cost, more quickly, and / or with lower perceived risk to investors.

## 10.2 How PIDG reports on demonstration effects

In some cases, demonstration effects may be difficult to anticipate and difficult to attribute to PIDG. However, at the beginning of a PIDG investment, it may be possible to make a note of the demonstration effects that it is hoped will emerge. These can then be monitored and, even if there is not a clear causal link between the activity and PIDG's original investment, it can be argued that there is a plausible connection.

In some cases, PIDG projects may involve the development of small-scale solutions as pilots that can then be rolled out widely to new customers and regions. Minigrids are one example of this. Replication may happen with or without ongoing PIDG support, although it is expected that the private sector would replace PIDG over time. This type of replication enhances value for money from PIDG's investments because of the catalytic effect on the private sector.

***The Development Impact scorecard for individual PIDG companies will incorporate elements to reflect the expected potential for replication and / or demonstration effects in a particular project.***

PIDG Development Impact team commission evaluations of projects where the justification arose primarily from the potential of that project to deliver demonstration effects, so that the actual effects can be assessed, and lessons learned.

# 10 Affordability

## 10.1 Why PIDG needs to understand the affordability of infrastructure

PIDG's mission is to mobilise private sector investment to assist developing countries in providing infrastructure vital to boosting their economic growth, and combating poverty. If the infrastructure that is provided through PIDG's projects does not expand the usage of infrastructure then it is unlikely to contribute to PIDG's mission.

For example, an energy generation plant constructed in a country with low rate of connection to the grid will not reach the poorest who are not connected to the grid. If the new plant generates energy at a higher cost than alternatives, this will affect the competitiveness of the businesses using electricity from the grid and could result in lower economic growth than would otherwise be the case.

It is therefore important for PIDG to understand the economic costs and benefits of the infrastructure that will be funded by PIDG (including the cost of any subsidies), to be clear about whether the development has been selected through a competitive process, and to make a judgment on whether the infrastructure offers the best available technology at an appropriate price.

## 10.2 How PIDG reports on the affordability of infrastructure

Given the central importance of the affordability of infrastructure (whether for individuals of businesses) to the achievement of its mission, PIDG Development Impact team will closely review the information gathered on each project and will commission independent experts to investigate the economic costs and benefits in more depth if there is any concern.

PIDG Development Impact team will also commission consumer surveys to find out more about how PIDG-funded infrastructure has affected the access, quality and affordability of the infrastructure.

# 11 Gender

## 12.1 Why PIDG reports on its impact on gender

Gender equality and empowerment are fundamental to PIDG's mission to improve infrastructure for economic development and poverty reduction. Analysis by the World Bank shows that poverty and marginalisation are disproportionately experienced by women and girls. Studies carried out by the FAO and others provide evidence that improving women's participation in the workforce leads to major gains in productivity and growth. When women control more household income, children benefit as a result of more spending on food, education and health. And infrastructure projects that don't address the needs and concerns of women are at greater risk of failure.

For all of these reasons, PIDG seeks to understand how each project has an impact on gender and reports specifically on the outcomes for women.

## 12.2 How PIDG reports on its impact on gender

At present, PIDG's approach to reporting its impact in gender is to try to assess what proportion of the people who have new or improved access to infrastructure as a result of PIDG's projects are women.

Where the numbers are not available, PIDG uses a Female Beneficiary Estimation Tool which takes the total number of beneficiaries from a project and applies factors relating to (a) a gender inequality adjustment based on a Gender Inequality Index produced by the UN and (b) a gender mainstreaming adjustment based on whether the individual project is deliberately targeting women as beneficiaries.

But estimating the number of women affected by a project is not a meaningful way to report on the impact that PIDG has on women and girls. More is needed to understand, articulate and enhance the impact of projects on women and girls and to identify how PIDG can keep improving its approach.

For each new investment, the expected impact on women and girls must be articulated. Due diligence processes are expected to include consultation with people affected (in positive or negative terms) by a project, and in particular are expected to consult separately with women and girls to understand their perspectives. All projects will report on their compliance with basic standards on consultation and on non-discrimination in hiring, promotion and firing. For each new investment, the combination of country, sector, size of project, nature of the sponsors and level of influence will determine whether it will be possible to go further than compliance and identify how a project might empower women or even lead to transformational change for women.

# 12 Climate change

## 12.1 Why PIDG reports on its impact on climate change

Climate change will have a disproportionately adverse effect on the poorest and most vulnerable. They are more likely to be directly dependent on agricultural activities which become more unpredictable with climate change. They are also less likely to be able to move to different locations if climate has a particular effect – for example, on the incidence of flooding or drought. And they are less likely to have a safety net, whether through their own insurance or through government support.

PIDG's overall aim is to improve the livelihoods of those on low incomes. So it follows that PIDG's preference is to support projects which drive change towards reducing greenhouse gas emissions and to help people adapt to the consequences of climate change.

## 12.2 How PIDG reports on its impact on climate change

### Greenhouse gas emissions

PIDG has committed to providing a calculation of the greenhouse gas emissions in the RM Sheets for its energy generation projects. The Development Impact team will be collating the data for emissions factors for each type of energy in each project country, and will therefore provide the GHG figure to be included in the RM Sheet.

***PIDG will be monitoring its impact on carbon emissions of energy projects and potentially a wider set of projects. The specific methodology is being developed.***

### Climate change mitigation

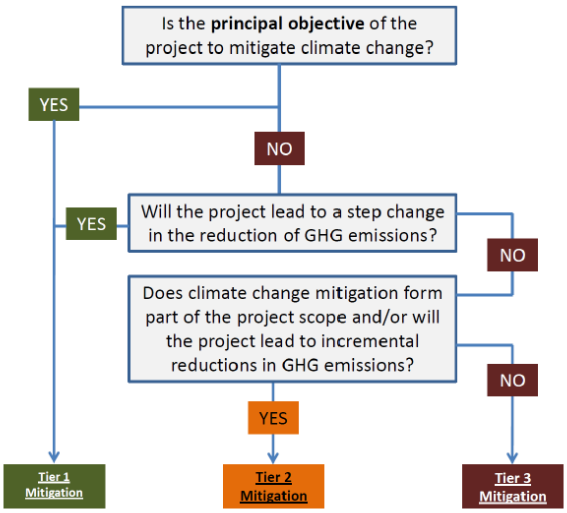
Each of PIDG's projects is classified as Tier 1, 2 or 3 for mitigation according to the following definitions:

**Tier 1** – Projects whose principal objective is to mitigate climate change and / or whose actions can be considered as a step change in terms of reducing greenhouse gas emissions. These projects are market transformative.

**Tier 2** – Projects where climate change mitigation forms an important part of the project scope and / or where greenhouse gas emissions reductions are incremental and cannot be considered a 'step change'.

**Tier 3** – Projects that do not have climate change mitigation co-benefits or are only likely to lead to indirect mitigation co-benefits.

The following decision tree applies -



## Climate change adaptation

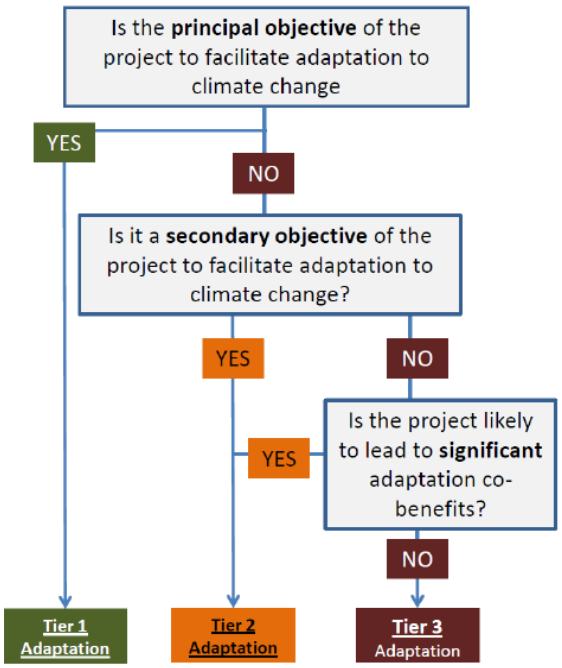
Each of PIDG's projects is classified as Tier 1, 2 or 3 for adaptation according to the following definitions:

**Tier 1** – Projects whose principal objective is to facilitate adaptation to climate change and climate variability. They may be selected by answering the question "would the activity have been undertaken without this objective?"

**Tier 2** – Projects where adaptation is a secondary objective and / or are likely to lead to significant climate change co-benefits.

**Tier 3** – Projects which are not designed to facilitate adaptation to climate change or whose impact is not likely to be significant.

The following decision tree applies -




## Rio Markers

The classifications outlined above are aligned with a system called the Rio Markers which was developed by the OECD-DAC to enable common reporting on the contribution of investments to mitigation and adaptation. So by using the classification methodology, PIDG is able to report on its portfolio in relation to the Rio Markers. For some Owners, this is particularly important as it enables them to tap into specific climate change-related funding pots.

However, it is important to note that in order to satisfy the requirements of the Rio Markers, the climate change mitigation and / or adaptation classification must be made at the time of the investment and justified as part of the original investment submission.

## Climate change resilience

Apart from the contribution that a project is making to climate change mitigation and adaptation, it is important to provide assurance to Owners and other stakeholders that the infrastructure will be resilient in the face of the climate change that is already being experienced. So, for example, the design of a port must take account of expected future sea level rises, the design of a road must take account of potential changes in temperatures, a hydropower plant must be designed with changing rain patterns in mind, and buildings must be constructed to withstand the stronger storms that may result from climate change.

# Appendix I: Template for the Results Monitoring Sheet

## Template for the Results Monitoring Sheet

| | | | | |
|---|---|---|---|---|
| **PIDG Project RMS Sheet** (*Not for DEVCO*) Date Form Completed: | | | | PIDG Company: |
| **Project Title:** | **[ ]** | | | |
| | Date of Approval/ JDA: | Date of: Financial Close: | Country: | Sector**: [and Subsector]** **[incl. Type & MW for Energy projects]** |
| **Summary Project Description:** | | | | |
| **Development impact (Theory of Change)** | ***[include explanation of how specific output milestones will lead to outcomes, and any assumptions underpinning this]*** | | | |
| **Project Status**: | ***[e.g. Fin. Closed / Sold / Loan, G'tee, Mandate Signed]*** | | | |
| | ***[Project Status Comment]*** | | | |
| Recipient of PIDG Funding: | | Jurisdiction of Recipient: | **[Country]** | |
| Date of construction completion and operationalization: | *Expected* | *Actual* | Comments | |
| | | | | |
| Date of Loan Redemption: | | | | |
| **Poverty Focus** | Country category from DAC list of ODA-eligible countries at time the RMS is first completed | | DAC Country Type: * | |
| **Fragile State Focus** | Fragile state status from PIDG List of Fragile States at the time the RMS is first completed | | * | |

| **PIDG Project Results Monitoring Indicators and Notes** | | | |
|---|---|---|---|
| **1. Additionality** | **Expected** | **Achieved** | **Commentary** |
| Description of additionality, including additionality score and milestones | | | |
| **2. Investment Mobilised [i.e. "Total Investment Commitments" (TICs)]** *(Total of 1a+1b+ 1c **+ 1d** below)* | **Committed (US$ million)** | **Actual (US$ million)** | **Additional Information** |
| Total Project Investment | | | |
| Total Private Sector Investment Commitment (1a + 1b) | | | [*Commentary*] |
| 2a Domestic Private Sector Investment of which: | | | |
| *Commercial Equity:* | | | [*NAME (of institution)*]; [*VALUE*] |
| *Commercial Debt:* | | | [*NAME (of institution)*]; [*VALUE*] |
| 2b Foreign Private Sector Investment of which: | | | *COMMENTARY* |
| *Commercial Equity:* | | | [*NAME (of institution)*]; [*VALUE*] |
| *Commercial Debt:* | | | [*NAME (of institution)*]; [*VALUE*] |
| 1c Development Finance **[DFI]** Investment of which: | | | |
| *DFI Equity:* | | | [*NAME (of institution)*]; [*VALUE*] |
| *DFI Debt:* | | | [*NAME (of institution)*]; [*VALUE*] |

| | | | | |
|---|---|---|---|---|
| 1d STATE-OWNED/CONTROLLED ENTERPRISES | | | | |
| *SoE Equity*: | | | [*NAME (of institution)*]; [*VALUE*] | |
| *SoE Debt*: | | | [*NAME (of institution)*]; [*VALUE*] | |
| 1e Project Value thru Grant | | | **TAF**: | **VGF**: |
| | | | | **Grant**: |
| | | | **Non-TAF**: | (Grant): |
| **2a. Access** | **Predicted No of People** | **Actual No of People** | **Additional Information** | |
| i. Number of Additional People Served; of which: | | | | |
| *Female:* | | | | |
| *Male:* | | | | |
| ii. Number of People Below Poverty Line | | | | |
| **2b. Improved Service Level** | **Predicted No of People** | **Actual No of People** | **Additional Information** | |
| i. Number with Improved Quality of Service of which: | | | | |
| *Female:* | | | | |
| *Male:* | | | | |
| ii. Number Below Poverty Line with Improved Service | | | | |
| **3. Direct jobs created** | **Predicted No of people** | **Actual No of People** | **Additional Information** | |
| a. Short Term Effects - during construction of which: | | | | |
| *Female:* | | | | |
| *Male:* | | | | |
| b. Long Term Effects - during operation; of which: | | | | |
| *Female:* | | | | |
| *Male:* | | | | |
| **4. Wider Economic Impact** | | | | |
| **4a Supply chain**<br>Description of important elements of the supply chain | | | | |
| **4b Expected enabling effects on economic activity including jobs**<br>Description of anticipated enabling effect of the infrastructure e.g. on jobs and / or trade | | | | |
| **4c Fiscal Impact** | **Predicted (US$m))** | **Actual (US$m)** | **Additional Information** | |
| A Up-Front Fees to Govt | | | | |
| B Taxes paid to Govt (e.g. Corporation Tax, VAT) during first 5 years of operation | | | | |
| **4d Local capital markets**<br>Description of current context of local capital markets and any expected effect on local capital markets development | | | | |
| **5 Affordability** | | | | |

| | | |
|---|---|---|
| Commentary on how the project contributes to affordable infrastructure– for example -<br>• whether the development came from a competitive process<br>• whole life calculation of the cost to the consumer (including capital and operating costs)<br>• examination of existing technologies being supplemented or replaced<br>• explanation of why the proposed solution is more appropriate than alternatives | | |
| **6 Gender** | | |
| Description of how the project has considered gender aspects (consultation, design, employment) and any particular impacts expected on women and girls | | |
| **7 Climate Change** | | |
| | **Tier** | **Justification** |
| 7a. Mitigation: | * | In the absence of project specific information, the PIDG Development Impact team applies the PIDG climate change classification methodology |
| 7b. Contribution to Adaptation: | * | |
| 7c. Resilience of the project to climate change: | * | |
| 7d. GHG Emissions: | [$CO_2$ *Equivalent (Tonnes)*] | |
| **8 PIDG** | | |
| 8a Any specific support / developmental interventions supported by TAF | . | |
| 8b List any other PIDG Facilities involved and summary of Involvement | | |
| **9 Context** | | |
| 9a Comment on Overall Size of Impact on Sector / National Economy | | |
| 9b Alignment with National Development Plans | | |
| 9c Current enabling environment | National IFC 'Doing Business' Index for the protection of investors | *[Provided by PIDG Development Impact Team / populated automatically upon entry into DB system] |
| | National IFC 'Doing Business' ranking for ease of enforcing contracts | * |
| 9d Government Capacity | National Country Performance Rating | * |
| **10 Health and Safety Risk Indicators** | | |
| 10a. Current level of disease and pandemics | | Health Country Profile ISOS (High, Medium Low) |
| 10b. Extreme climate or weather zone | | Known earthquake or tsunami zone. Extreme weather (>50 °) |
| 10c. Extremely remote location | | >2 hrs drive to airstrip and / or >4 hrs drive to city with hospital |
| **11 Environment Risk Indicators** | | |
| 11a. IFC Project classification (A,B or C) | | IFC Environmental and Social Review Procedure Manual at www.IFC.ORG/ESRP |

| | | |
|---|---|---|
| 11b. Legally protected or Internationally Recognised area | | IFC Environmental and Social Performance Standard 6 |
| 11c. Critical habitat or known concentration of endangered species | | IFC Environmental and Social Performance Standard 6/ IUCN Red list of threatened species |
| 11d. Green field or Brown field development | | |
| 11e. Water Risk | | UN Global Compact: The CEO Water Mandate |
| **12 Social Risk Indicators** | | |
| 12a. Indigenous People | | IFC Environmental and Social Performance standard 7 |
| 12b. Proximity to populated areas | | Dwellings/communities/towns |
| 12c. Requirement for large temporary/mobile workforce | | Workforce of > 500 |
| 12d. Public perception of project | | Low/Medium/High Risk |
| 12e. Land Acquisition required | | |
| 12f. Resettlement likely | | |
| **13 Security Risk Indicators** | | |
| 13a. Human Rights risk of Country/sector | | Human Rights Watch |
| 13b. Use of national security force (Y/N) | | |
| 13c. Use of military or armed guards (Y/N) | | |
| 13d. Known Land Mine or Explosive Remnants of War (Y/N) | | www:the-monitor.org |

| **14 Information on Main Supplier(s):** | | | | |
|---|---|---|---|---|
| Supplier country | Supplier name(s) | Services provided | Value **[USD]** | NOTES.. |
| | | | | |

| **15 OTHER (*In Future / Where Applicable*):** | |
|---|---|
| (Site) Location info: | [*Geographical Coordinates*] |

# Appendix II: Guidance for completion of the Results Monitoring Sheet

## General approach

### Prudent approach to providing impact data

It is not always possible, given the type of projects that PIDG supports, to be 100% accurate in the impact data that PIDG is reporting, but there is a need to be prudent and robust. Wherever assumptions are used, they should be tested and reality-checked, and then applied consistently across all relevant projects.

### Data and commentary

All numerical data should have supporting commentary which enables the reader to understand where the numbers come from, including any assumptions used in the calculation. All calculations should be set out in the commentary, to enable the reader to see how the numbers were formulated.

PIDG policy is not to claim development impact or funding where robust and defensible information is not available, or where we are unsure of achieving particular impact. This means that there are likely to be sections of the RM Sheet without numerical data. The Development Impact team does not regard this as a negative situation, but the RMS should clarify where this is the case.

As such, where there is no numerical data to be input into the RM Sheet – for example, where there is no robust information available on Direct Jobs, or where the type of infrastructure does not lend itself to Access numbers, or where there is no fiscal impact expected – the commentary should briefly explain this. Similarly, any data in the RM Sheets for JDA/Mandate or equivalent should include commentary that the numbers are either indicative or have not yet been formulated.

### Supporting sources for data

Companies should attach a separate sheet which identifies the source document and reference for each piece of data.

It is expected that most of the funding information will come from the lenders/investors business case, but the DI Team recognises that the sources for the most relevant and robust data feeding into the other indicators (Access, Direct Jobs, country/sector contextual information … etc.) may not come from the P90 Business Case. Where other sources of information – such as third party reports/studies, economic forecasts … etc. – these should be hyperlinked with a page/paragraph reference.

#### *Appropriateness of data sources*

In addition to providing an audit trail so that the data can be verified, PIDG also needs to be able to demonstrate that we have used the most appropriate sources for our information. For example, where the funding data on an energy-generation project comes from the P90 Business Case, the annual GWh output should also come from the same source, rather than the more-optimistic P50 Business Case (unless it is not included within the P90). As noted above, the assumptions used should be prudent – in particular, PIDG should avoid using sources which are potentially exaggerated, e.g. political speeches or marketing campaigns.

### Narrative

For those sections where there is only narrative – e.g. the project summary – the narrative should be clear, understandable, and concise, and any technical terminology should be explained. It must be assumed that the reader is not necessarily an expert in project finance and/or development impact.

### Consistency

It is also important that there is consistency of content between RMSs wherever possible.

### Responsibilities

The PIDG Company team is responsible for completing the RMSs and attaching them as an appendix to the investment paper (even if only partially completed at that stage). They should be discussed in good time with to the PIDG Development Impact team so that the RMS submitted to the team for posting on data'pidg.org is as accurate as possible. The PIDG Development Impact Team is responsible for reviewing the RM Sheets and returning them to the PIDG Companies.

The PIDG Companies are responsible for maintaining their own data records – these will input into the Quarterly Reports and other results reporting, which will be reviewed and reconciled with the output from the RM Database.

## Guidance on completion of specific sections

### Initial project description

This section should include the following:

- A description of the project/transaction
- A clear explanation of the type of infrastructure, its purpose and scope
- The PIDG Company's role in the transaction
- A summary of the key points arising from the Environmental and Social Impact Assessment, focused on any key risks and mitigations
- As the project progresses: any updates on progress of the project, which provides – where relevant – a clear picture of any changes to its nature and/or scope, or the role which the PIDG Company has played

### Theory of Change – how the project's activities will lead to outputs and overall outcomes

In this section, the PIDG Company should:

- set out how the project maps onto the PIDG Company's Theory of Change
- explain the way in which the outputs will lead to the overall intended outcomes, and what other factors may be required to achieve this
- articulate the wider developmental impacts – for example, indirect and induced job creation, improving expertise of local developers … etc.
    - clearly show where these wider impacts are to be realised through activities funded by a TAF, or other, grant
- identify the potential for an evaluation piece or case study on the project

### Status classifications

The general status options are listed below, but the table in the section on Classifications and Recognition provides a PIDG Company-by-PIDG Company summary of when these statuses should be given.
The status options are:

- Under Active Development: when a financial commitment has been made through a JDA (InfraCo PIDG Companies), approved and funded Mandate (DevCo) or approved grant (TAF). There is no "Under Active Development" stage for Funding Company ('Facility') projects, where the first recognition is upon Financial Close.
    - Dormant/Stalled: Where a project/mandate is stuck in "under active development" and is not likely to progress, but has not yet been officially cancelled.
- Financial Close/Grant completion: when any project reaches the requirements for Financial Close as set out in Table x.x. It is applicable to all projects except TAF.
- Loan or Guarantee prepaid: when any Funding Company ('Facility') (EAIF, GuarantCo or ICF-DP) projects have the loan or guarantee repaid ahead of schedule.

- Loan or Guarantee redeemed: when the Funding Company ('Facility') has its loan repaid as expected, or guarantee redeemed as expected.
- Project Sold: when InfraCos have sold the equity in the project and there is no remaining debt involvement.
- Operational: when a project has commenced operations
    - Note: when PCM has been carried out, there is no change to the Project Status, but the project will be marked as PCM in a different field
- Commercial Close: only applicable to DevCo projects and as set out in the definitions table below
- Cancelled: when a project has been cancelled
    - Treatment of cancelled projects is set out in the relevant section in Appendix VI.

### Status Comment

There is also a section for Status Comments. Facilities should include any qualifying information, particularly such things as:

- where the change in status should have happened but is delayed (e.g. funding agreements signed by conditions precedent still outstanding)
- where a project is operational but PCM has yet to be carried out
- where it has been agreed that Financial Close can be claimed but there are minor conditions precedent outstanding

### Additionality

This section should include:

- the Additionality components for the project and their respective scoring
- where not self-evident, the basis for allocating the score on a particular component
- how the actual achievement of additionality will be monitored, including the expected timing of milestones
- in subsequent RM Sheet Update processes and at PCM (see relevant section on RM Processes below), progress against the original target – including on achieving the specific tasks and any expected change in the additionality score

### Investment Mobilised

- The funding mobilised is broken down between Domestic Private Sector, Foreign Private Sector and DFI investment – with each separated between Debt and Equity – and Grant funding.
- All amounts should be in US Dollars
- PIDG Company commitments should be included within the DFI Commitments section – mostly as DFI Debt, but there may be some DFI equity entries.
    - Exceptions for this are the majority of GuarantCo guarantees, which are covering private sector investment; and DevCo projects, where the DevCo and IFC input is not included in the Grant section.
    - Note that when calculating any PIDG Company leverage ratios, the PIDG Company commitments should be excluded from the TICs figure
- All funding numbers should be accompanied by commentary providing a breakdown of the funding amounts by provider (e.g. "XXX Bank – $20m; YYY Bank - $38.4m)
    - It is recognised that, in the early stages – for DevCo and InfraCos – these figures might be based on assumptions about the eventual financing structure of the project.
    - Where these are assumptions, the Commentary should clearly flag this point
    - As the numbers will only be "recognised" and reported upon at Financial Close, this will not be a problem, but the funding structure should be verified at that stage.

- The actual commentary – i.e. where there can be more "freeform" explanation – is limited to the commentary section of the subtotal boxes, whereas the lower level breakdowns are limited to the name of the funding institution, the amount funded, and a small "notes" section.

Depending on the PIDG Company, the Total Investment Commitments figure includes different types of funding:

| | **EAIF, GuarantCo, ICF-DP** | **InfraCos and DevCo** | **TAF** |
|---|---|---|---|
| **Included within Total Investment Commitments** | PSI + DFI | PSI + DFI + Grant | None |

## Number of people served

For completion of this section, please refer to section 7 of this handbook and to the guidance notes for different sectors in Appendix 9.

## Direct jobs created

For completion of this section, please also refer to section 8 of this handbook and to the guidance notes at Appendix 9. Where the project sponsor or developer provides these figures, PIDG Companies will need to confirm their confidence that the predicted numbers are based on robust analysis.

In all cases, the Commentary box should identify the source of these numbers, and confirm that they exclude expat workers

## Fiscal Impact

The Fiscal Impact measured for PIDG-supported projects, is defined as the value of the project's **net** fiscal effects to the government. This includes contract payments (e.g. royalties, concession fee) and the total fees paid (including corporate tax, VAT, etc) during the first five years of operation. It is a directly measurable indicator.

Where a project results in a reduction in Government subsidies, an estimate of this figure should be included within the fiscal impact section commentary. The figure should not be combined with the figure for taxes, royalties and fees because the subsidies avoided are more difficult to verify. However, any government subsidies that are paid to the project need to be included as a negative number. This is because the

Government is using its Fiscal reserves to subsidise infrastructure, thus reducing the amount available for other activities.

## Climate Change

PIDG has a system of classification of projects based on their contribution to the mitigation of climate change or adaptation to climate change. These are explained more in Appendix 8. In summary, the classifications are as follows –

| | Tier 1 | Tier 2 | Tier 3 |
|---|---|---|---|
| **Mitigation** | Significant contribution to the mitigation of climate change – for example, through reducing carbon emissions | Incremental contribution to climate change mitigation | No contribution to climate change mitigation |
| **Adaptation** | Significant contribution to people's ability to adapt to climate change | Incremental contribution to climate change adaptation | No contribution to climate change adaptation |

| | | | |
|---|---|---|---|
| **Resilience** | Deliberately designed to show resilience in the face of severe weather events resulting from climate change | Resilient to weather events arising from climate change | Vulnerable to climate change |

### Greenhouse gas emissions – tonnes of carbon

PIDG is currently refining its approach to reporting of Greenhouse gas emissions and will include its detailed methodology in this Handbook in early 2019.

Currently, carbon emissions data is required for energy generation projects. The calculation will use the same key data as should already be in the RM Sheet – energy source, country, peak output, and annual GWh output. These should be set out in the commentary to the GHG box, and the DI team will then use its emissions-factor source sheet, and provide the numbers to be included. PIDG Companies should note that this will include both the build and operation stages.

### PIDG Company collaborations

This section will list:

- all other PIDG Companies involved with the project, and the role they have played
- any TAF grants for the project, and their purpose
- any grants from other organisations, and the details thereof

### Fit with National Development Plans (NDPs) and Sustainable Development Goals (SDGs) achievement plans

This section will discuss how the project fits with the country's NDPs, and – if the country has produced one – the plans for achieving the SDGs.

# Appendix III: Results Monitoring Sheet Processes

This appendix covers the following:

- Overview of processes for each PIDG Company
- In-year transactions
- RM Update process
- Post-Completion Monitoring
- Timetable of processes

## Overview of reporting requirements

The key points are:

- PIDG Companies will interact with the PIDG Development Impact team in the run-up to approving the investment (different PIDG Companies have different processes for this)
    - The PIDG Development Impact team will help with identifying and articulating the additionality and development impact of the project.
- The first formal point for submission of RMSs to the PIDG Development Impact team is when a financial commitment has been made.
- The PIDG Development Impact team will respond with comments, questions and clarifications, and – through an iterative process – the information in the RMSs is verified.
- A revised RMS is submitted at each change in the status of a project.
- In January each year, all RMSs for currently active projects are updated with any changes resulting from events during the year.
- PIDG Companies notify the PIDG Development Impact team when a project becomes operational, and the status of the project is changed.
- Within a year since the commencement of operations, the PIDG Company will carry out Post-Completion Monitoring

The following table sets out what should happen with RMSs for various types and stages of transactions:

| | EAIF / GuarantCo / ICF-DP | InfraCo Africa and InfraCo Asia | DevCo |
|---|---|---|---|
| **Early stage commitment** | N/a | Submit a new RMS when JDA signed | Submit a new RMS when Mandate signed and funding approved by Owners |
| **Commercial Close** | N/a | N/a | Submit an updated RMS |
| **Financial Close** | Submit a new RMS | Submit a new RMS | Submit a new RMS |
| **Loan / Guarantee prepaid** | Submit an updated RMS | N/a | N/a |
| **Loan / Guarantee repaid** | Update the RMS at year-end | N/a | N/a |
| **Cancellation < 1 year after signing** | Submit an updated RMS | Submit an updated RMS | Submit an updated RMS |
| **Cancellation > 1 year after signing** | Update the RMS at year-end | Update the RMS at year-end | Update the RMS at year-end |
| **Commence Operations** | Notify RM Team at end of Quarter | Notify RM Team at end of Quarter | Notify RM Team at end of Quarter (where information available) |
| **Post Completion Monitoring carried out** | Complete the PCM section of the RMS as part of the update process or within 12 months | Complete the PCM section of the RMS as part of the update process or within 12 months | Complete the PCM section of the RMS as part of the update process or within 12 months |

| | EAIF / GuarantCo / ICF-DP | InfraCo Africa and InfraCo Asia | DevCo |
|---|---|---|---|
| **Project sold** | N/a | Submit updated RMS [likely to just have a new status] | N/a |

## In-year Transactions: Process and timings

### Process

When RMSs are completed or updated, they must be submitted to the PIDG Development Impact Team within the mandated time. There is an iterative process wherein the PIDG Development Impact Team will review the RMS, and revert to the PIDG Company with its comments – at times there may be multiple iterations before particular points are verified.

All edits, comments and changes should be made through "Track changes" so that there is a clear audit trail of the process.

Once the RMS has been agreed, the PIDG Development Impact Team will input the contents into the Results Monitoring Database, and send a "clean" copy of the RMS to the PIDG Company for their records. The updated Database is uploaded to http://data.pidg.org/. Members of the public can access the numerical data on this website, but will not be able to see any of the narrative sections. PIDG Companies have a login for the website, which enables them to download the data and narrative in the form of an RMS.

### Timing

In general, to enable the PIDG Company to provide the necessary information, while ensuring that the needs of PIDG Ltd, and the PIDG Development Impact team are met, all new or updated RMSs should be submitted within **six weeks** of the transaction date.

However, in terms of the where the transaction occurs close to Quarter-end, to ensure that all RMSs are received in time for verification in their respective Quarterly Reports, **RMSs must be submitted to the RM team within two weeks of the Quarter-end**, so as to provide sufficient time for each PIDG Company's RM Sheet to be agreed before the QR submission.

If the RMSs are not submitted within this deadline, and the details have not been agreed by the time the Quarterly Report is submitted, then **the transaction will not be included** in the Results and Development Impact tables.

### Content of RMSs for "Under Active Development"

As noted in section 2.6, PIDG only "recognises" its predicted results at Financial Close since there is not enough likelihood at any earlier stage that the predicted numbers will be realised. As such, RMSs for projects with JDAs and DevCo mandates, should be completed with the focus on the narrative aspects, including the commentary on the quantitative data.

Clearly, much of the quantitative data in the JDA will include, at best, general estimates rather than robust figures, and it is important that the RM Sheet indicates clearly where they are estimates. This is particularly the case as, even though the numbers may be provisional, there is still a tendency for them to be treated as indicative when the projects are discussed in Quarterly Reports, and other Owner/PIDG Ltd meetings.

The PIDG Development Impact team's review of these RMSs focuses on:

- Clarifying the understanding and representation of the project
- Ensuring that the RMS sets out what the focus of the project is

- The fit of the project to the PIDG Company's Theory of Change, and the relationship of outputs and outcomes
- The clarity and logic of the Additionality criteria and scores
- Whether the basis for the calculation of indicators, particularly Access, is correct

The Development Impact team may have already provided input on some or all of these areas at the Investment Approval stage.

## Results Monitoring Sheet Update Process

The projects that PIDG supports normally take a number of years to move from development through to commercial operations. During that time, there may be changes to the project or the development impact indicators. These changes need to be reflected in the results monitoring data, and any updates on the progress of projects need to be recorded in the RMSs, so that readers can have a clear picture of the stage of development it is at.

As such, the RM Team carries out an RMS Update Process every year. The outline of the process is set out below:

- In early December, the RM Team sends out copies of all the RMSs for extant projects – i.e. those that have had the initial commitment made, but have not yet reached operations and carried out Post-Completion Monitoring (PCM).
- Each PIDG Company should review the RMSs provided for completeness and should notify the RM Team of:
    - any missing RMSs
    - any RMSs received for projects which should have been finalised in prior years
    - a list of all projects that became operational during the year, and therefore have had PCM carried out
    - a list of any projects that have been repaid, or prepaid, or sold during the year (the information will be included in the individual RMSs submitted for the RM Sheet Update Process)
- Each PIDG Company should then review each of its projects and update the RMSs where relevant – in particular looking at:
    - Any changes in the RM data
    - Any changes to the scope of the project
    - Any changes to the key milestone dates (e.g. Financial Close, Operations, Redemption date)
    - Any changes to the likely outcomes of the project (Section X)
    - Additionality scoring against the original predicted figures (Section X)
    - Inputting the "Actuals" for projects which have had PCM carried out in-year
- It is crucial that **all edits must be done using "Track changes"**, to enable the RM Team to review what has been changed
- All the RMSs must be submitted to the RM Team by the **end of January, at the latest** (it would be useful to submit them earlier, so as to avoid a backlog of RMSs for review)
    - In general, it speeds up the process if each updated RMS is submitted when completed, rather than waiting to deliver them all at the same time
- The RM Team will then review the updated RMSs and revert to the PIDG Companies with any comments, questions for clarification … etc.
- The intention is for the iterative review and agreement process to be completed by the **third week of February**
- Once all the updated RM Sheets have been agreed, the RM Team will enter all the details into the RM Database, which will – in effect – ensure that the Cumulative totals for the RM data are correct.

As with the in-year transaction RMSs, once the process is complete, the RM Team will send each PIDG Company a clean copy of each RMS, for their records.

## Post-Completion Monitoring Process

As set out in the previous section, when a project has commenced operations, the PIDG Company should inform the RM Team, who will change the status of the project. However, following this, the Post-Completion Monitoring process (PCM) needs to be undertaken.

PCM is expected to be carried out between six and twelve months after the project initially becomes operational, and the results are included in the RM Sheet Update process. There will be cases where a project becomes operational at the end of the year, so that PCM is not carried out in time for it to be included within the RM Update Process.

The purpose of PCM is to record and track the actual impact of PIDG-supported projects, once they have reached full operations. This is a monitoring exercise, rather than an evaluation, although there is scope for some of PIDG's Evaluation work to include PCM. The PCM process is undertaken by the relevant PIDG Company, and involves collecting ex-post data, and inserting this into the RM Sheet, in the "Actuals" columns. There will be six main areas covered in the PCM process:

- Funding mobilised: by the time PCM is carried out, all funding should have been disbursed, so this information should be available
- Number of people with Access to new or improved infrastructure: given the use of proxy formulations for this number, the PCM will be more complex, as set out below
- Short-term and Long-term Job Creation: this data should be available, as the construction period will have been completed and the operational infrastructure will have been staffed
- Fiscal impact: although there will not be any "Actuals", PIDG Companies should be able to obtain confirmation of the reasonableness of their predicted figures for this.
- Outputs to Outcomes: by the time PCM is carried out, there should be an insight into the likelihood of the project achieving the outcomes that were originally envisaged.
- Additionality score: PCM is the main opportunity to review the actual Additionality score against the original scoring – a key way of assessing the reasonableness of the ex-ante predictions.

### "Actual" Access numbers

As noted above, the Access numbers are usually based on proxies, calculated using one of the "conversion methodologies". As such, it is not possible to confirm or identify the actual number of people with access to the infrastructure.

Instead, the purpose of the PCM in terms of these numbers is to review the assumptions and update any of the data sources where there is more up-to-date information; as projects can take 3-4 years between Financial Close and PCM, it is likely that the data feeding into the calculation would have changed.

When a project is expected to expand its market (and therefore its customer base or those using its infrastructure) after the data at which it commences operations, this expected growth can be taken into account but only over a time period of 2 years. Growth projections beyond 2 years are deemed to be too uncertain to be included in the number of those gaining access to infrastructure at completion.

## Timetable for RM processes through the year

***Note: This will change with the new PIDG governance and reporting requirements***

| Date | Area of work | Activity |
|---|---|---|
| 14th/15th January | RM Sheets / Annual Results | Deadline for submission of all RM Sheets for Q4 transactions<br>Followed by an iterative process between RM Team and PIDG Companies to review, refine, and agree RM Sheets |
| 31st January | RM Update | Deadline for submission of all updated RM Sheets for prior-year transactions<br>Followed by an iterative process (until 20th March) between RM Team and PIDG Companies to review and agree updates to RM Sheets |
| 12th February | RM Sheets/ Annual Results | Deadline for agreement of RM Sheets for Q4 transactions |
| 14th February | Quarterly Reporting | Deadline for PIDG Companies to submit Quarterly Reports |
| 25th February | KPIs | Deadline for RM Team to send the draft "*201X KPI Achievements and Commentary*" spreadsheets to PIDG Companies, for completion |
| 7th March | KPIs | Deadline for PIDG Companies to submit the completed "*201X KPI Achievements spreadsheets*" |
| 20th March | RM Update | Deadline for agreement of RM Sheets for RM Update Process |
| 31st March | KPIs | RM Team to provide draft "*201X-202Y KPIs*" with all cumulative data, for completion by PIDG Companies |
| 14th April | RM Sheets | Deadline for submission of all RM Sheets for Q1 transactions |
| 15th April | KPIs | Deadline for PIDG Companies to submit KPIs to RM Team<br>Followed by an iterative process between RM Team and PIDG Companies to review, refine, and agree RM Sheets |
| 12th May | RM Sheets | Deadline for agreement of RM Sheets for Q1 transactions |
| 15th May | Quarterly Reporting | Deadline for PIDG Companies to submit Quarterly Reports |
| 14th July | RM Sheets | Deadline for submission of all RM Sheets for Q2 transactions<br>Followed by an iterative process between RM Team and PIDG Companies to review, refine, and agree RM Sheets |
| 12th August | RM Sheets | Deadline for agreement of RM Sheets for Q2 transactions |
| 14th August | Quarterly Reporting | Deadline for PIDG Companies to submit Quarterly Reports |
| 15th September | Business Planning | Deadline for submission of BP Updates<br>The BP Update includes sections for PIDG Companies to provide forecasts of the key targets for the next five years<br>The timetable for the BP Update process is formulated separately, and will be provided when the BP Update templates are circulated earlier in the year |
| 14th October | RM Sheets | Deadline for submission of all RM Sheets for Q3 transactions<br>Followed by an iterative process between RM Team and PIDG Companies to review, refine, and agree RMSs |
| 12th Nov | RM Sheets | Deadline for agreement of RM Sheets for Q3 transactions |
| 14th November | Quarterly Reporting | Deadline for PIDG Companies to submit Quarterly Reports |
| 5th/7th December | RM Update Process | DI Team to send each PIDG Company the RMSs from prior-year transactions to be updated as part of the RM Update Process |
| By 22nd December | RM Update Process / Post-Completion Monitoring | PIDG Companies submit a list of all projects for which Post-Completion Monitoring was carried out during the year<br>PIDG Companies also submit a list of all projects which became Operational during the year – these will have been communicated to the DI Team when they became operational, so this check is simply for completeness. |

## Results Monitoring Sheets for TAF Grants

There are different processes for TAF Grants, due to their nature; the grants do not have “independent” development impact indicators, and therefore the key information has less need of a verification process. When the TAF grant is approved – either by the TAF Technical Advisor or, where necessary, the Owners – the RMS will also be submitted and entered into the database system within three weeks. On a quarterly basis, the system will also be updated to reflect cancellations and completions, where – in both cases – the value of the commitment will be revised to show the actual amount disbursed.

Following the year-end, there will be a reconciliation performed by the DI Team between the records on the RM Database and those on the TAF Database.

TAF already carries out its own version of PCM, once all the grant has been disbursed, in that it gathers various reports from the PIDG Company that has received/used the grant, to assess the impact that the grant has had. Given the processes that the TAF grants already go through, TAF is therefore not required to be involved in the RMS Update process or PCM.

# Appendix IV: DAC Listing of ODA Recipients 2015-18

## Least Developed Countries (DAC I)

| | | | |
|---|---|---|---|
| Afghanistan | Djibouti | Madagascar | Solomon Islands |
| Angola | Equatorial Guinea | Malawi | Somalia |
| Bangladesh | Eritrea | Mali | South Sudan |
| Benin | Ethiopia | Mauritania | Sudan |
| Bhutan | Gambia, The | Mozambique | Tanzania |
| Burkina Faso | Guinea | Myanmar | Timor Leste |
| Burundi | Guinea-Bissau | Nepal | Togo |
| Cambodia | Haiti | Niger | Tuvalu |
| Central African Republic | Kiribati | Rwanda | Uganda |
| Chad | Lao PDR | Sao Tome and Principe | Vanuatu |
| Comoros | Lesotho | Senegal | Yemen |
| Congo, DR | Liberia | Sierra Leone | Zambia |

## Other Low-Income Countries (DAC II)

| | | | |
|---|---|---|---|
| Kenya | Korea, Democratic Republic | Tajikistan | Zimbabwe |

## Lower Middle-Income Countries (DAC III)

| | | | |
|---|---|---|---|
| Armenia | Ghana | Moldova | Samoa |
| Bolivia | Guatemala | Mongolia | Sri Lanka |
| Cameroon | Guyana | Morocco | Swaziland |
| Cabo Verde | Honduras | Nicaragua | Syrian Arab Republic |
| Congo, Republic of | India | Nigeria | Tokelau |
| Cote D'Ivoire | Indonesia | Pakistan | Ukraine |
| Egypt | Kosovo | Papua New Guinea | Uzbekistan |
| El Salvador | Kyrgyz Republic | Paraguay | Vietnam |
| Georgia | Micronesia, FS | Philippines | West Bank & Gaza Strip |

## Upper Middle-Income Countries (DAC IV)

| | | | |
|---|---|---|---|
| Albania | Cuba | Malaysia | South Africa |
| Algeria | Dominica | Maldives | Saint Helena |
| Antigua and Barbuda | Dominican Republic | Marshall Island | St Lucia |
| Argentina | Ecuador | Mauritius | St Vincent and the Grenadines |
| Azerbaijan | Fiji | Mexico | Suriname |
| Belarus | Gabon | Montenegro | Thailand |
| Belize | Grenada | Montserrat | Tonga |
| Bosnia and Herzegovina | Iran | Namibia | Tunisia |
| Botswana | Iraq | Nauru | Turkey |
| Brazil | Jamaica | Niue | Turkmenistan |
| Chile | Jordan | Palau | Uruguay |
| China | Kazakhstan | Panama | Venezuela |
| Colombia | Lebanon | Peru | Wallis and Futuna Islands |
| Cook Islands | Libya | Serbia | |
| Costa Rica | Macedonia | Seychelles | |

## Appendix V: PIDG List of Fragile and Conflict Affected States 2019-20

These are used for reporting on the PIDG project portfolio. The list below has been formulated combining the World Bank Group Harmonised List of Fragile States, and the Fund for Peace Fragile States Index where the country has a total score of over 90.

Used for reporting on the PIDG project portfolio. The list below has been formulated combining the World Bank Group Harmonised List of Fragile States, and the Fund for Peace Fragile States Index where the country has a total score of over 90.

### Africa

| | | | |
|---|---|---|---|
| Burundi | Djibouti | Libya | Sudan |
| Cameroon | Eritrea | Mali | Togo |
| Central African Republic | Ethiopia | Mauritania | Uganda |
| Chad | Gambia | Mozambique | Zimbabwe |
| Comoros | Guinea | Niger | |
| Congo (D. R.) | Guinea Bissau | Nigeria | |
| Congo, Rep. of | Kenya | Somalia | |
| Côte d'Ivoire | Liberia | South Sudan | |

### Europe, Asia, Middle East and Australasia

| | | | |
|---|---|---|---|
| Afghanistan | Lebanon | Pakistan | Tuvalu |
| Bangladesh | Marshall Islands | Papua New Guinea | West Bank & Gaza |
| Iraq | Micronesia, Fed. States | Solomon Islands | Yemen, Republic of |
| Kiribati | Myanmar | Syria | |
| Kosovo | North Korea | Timor-Leste | |

### Latin America and the Caribbean

Haiti

## Appendix VI: Detailed questions on accounting for PIDG's investment

This section covers questions (raised in the main body of the RM Handbook) on the classification and/or treatment of the following:

- Corporate Loans
- Projects with multiple PIDG Company involvement
- Restructuring loans, follow-up transactions and extensions of funding/guarantee
- Multi-phase projects
- Cancelled projects
- Operationality
- Poor and Fragile States

### What happens if PIDG is part of a corporate transaction rather than a specific project?

Where PIDG is part of a corporate loan transaction – e.g. a bond issue – which is aimed at achieving a number of things (including refinancing), there must be a certainty that part of the funding will be used for infrastructure development, to at least the equivalent amount to the funds input by PIDG. This will need to be formalised in some form of covenant, so that PIDG can demonstrate that it has ensured that its support (or the equivalent amount) will be spent on infrastructure development. This should be explained clearly in the project description, and the infrastructure which PIDG is helping to fund must be clearly identified.

### How should I account for projects involving more than one PIDG Company?

Where two or more PIDG Companies co-finance the same project, PIDG policy is to ensure that the development impacts are not double (or triple) counted at the 'PIDG level'. As such the approach is to attribute all development impact indicators to the PIDG Company which "originated" or was first involved in the project.

However, it is important to ensure that PIDG Companies obtain recognition for their role in bringing about such projects and the consequent development impact. As such, PIDG adopts this approach:

- The first-involved PIDG Company will follow normal practice, completing the project RMS … etc.
    - The Funding Section of the RMS should include the other PIDG Companies
- Other involved PIDG Companies should also complete their own RMSs, taking into account the following points:
    - Identify the project as "co-financed"
    - Quantitative data and the commentary on the numbers must be reconciled with the "originating PIDG Company", but can then simply be copied across
    - Particular focus should be placed on setting out the Additionality and narrative as to why the involvement of the 2nd/3rd PIDG Company was required, and what extra input it provided
- For the non-originating PIDG Companies, the RM Team will record the project quantitative data on a separate spreadsheet, and then enter the rest of the RMS content into the Database.
- When reporting on the PIDG Company's specific progress during the year (and at year-end), the results from co-financed projects will be included in the Annual and Cumulative figures
- Following year-end, these figures will be removed from the Cumulative achievements
- The baselines will be similarly adjusted, thus ensuring that the PIDG Company is not penalised.

## Should I treat a restructuring loan, or extension as a separate financial close?

In order to decide whether loans made as part of the restructuring of a project should be counted as a separate Financial Close, and whether an extension – or increase – of a loan's or guarantee's terms should be claimed as an achievement against the Financial Close target, the following approach applies:
The first stage is a sub-classification of the project:

- If the restructuring loan or guarantee extension includes new infrastructure or an increase in the scope of the existing project – i.e. where there will be additional infrastructure built, and additional people will gain access to new or improved infrastructure – it should be treated as a separate Financial Close.
    - However, PIDG Companies will need – as with all FCs – to provide detailed, sourced information in the RM Sheet, to show that:
        - there will be increased Access and other Development Impact; and
        - the increase is a direct result of the increased funding, rather than simply an updating of the previous estimates for the project
- If the restructuring loan does not include any new infrastructure or an increase of scope, then it would not count as a separate Financial Close
    - There would be no increased achievement against the "Number of projects reaching Financial Close" targets
    - The extra PSI and DFI raised in the restructuring loan will be added to the original RM sheet
    - An updated RMS should be submitted within 6 weeks of the transaction date, so that any change in TICs and PSI is recognised as an achievement against the "current year" targets, as well as the cumulative ones
    - There will be a separate indicator for inclusion in the PIDG Company's results table, thus recognising the level of work required to bring such transactions to completion.

## How should I account for a multi-phase project?

All PIDG Companies have some form of multi-phase projects:

- DevCo: where DevCo signs one mandate, but there are multiple projects arising from this mandate
    - In essence, this is 1 "Under Active Development" becoming 2(+) Commercial/Financial Closes
- EAIF and GuarantCo: where the PIDG Company is involved in a project and, later, involved in the expansion to that project, or a second project of exactly the same type, with the same counterparty
    - The previous section has set out the circumstances for counting a follow-up transaction on the same project as a separate Financial Close
- InfraCos: where a project has a pilot stage and then an expansion or replication, with the same sponsor/developer
    - In such cases, the expansion is reliant upon the "proof of concept" in the pilot stage, and usually involves further investment and/or loans being provided by private sector and DFIs.
- InfraCos – where there is a "mini-portfolio" of small-scale projects
    - In such cases, funding for the individual projects is not conditional upon the success of an initial project.

### Guidance for treatment in the RM System

The underlying basis for this treatment is that each separate infrastructure project to which PIDG commits funding should have its Financial Close recognised, and that each Financial Close requires a separate RMS.
In addition, where there is a JDA for a multi-project mini-portfolio, the JDA should stay on the system until the final project reaches Financial Close. This is so that the PIDG Results data represents the aims of the overall project.

### *DevCo*

The initial stage is an IFC origination/mandate, and therefore a single mandate "Under Active Development" will result in multiple projects, each with its own provider; an example of this would be the Scaling Solar programmes. As such, there would be one origination, followed by multiple Commercial Close and Financial Close RMSs.

*Project name, PIDG Company Commitment Amounts and RM indicators*

- The initial RMS for the original mandate should include the expected total outputs of the programme, and the total DevCo Commitment
- The DevCo Commitment should be allocated between the different projects resulting from the mandate – DevCo can decide whether to do this on the basis of a simple division of the amount equally between each project, or whether to do it on some other basis (e.g. size of the individual projects)
- Each Commercial Close will require a **new** RMS, with a project-specific set of figures for funding mobilised and RM indicators (and, where appropriate, MW), as well as project-specific narrative
    - This will become a separate entry from the initial mandate – so that the RM Database shows an initial mandate for the whole programme and a series of projects
- When a Commercial Close is achieved on one of the projects resulting from the mandate, the DevCo Commitment in the original mandate RM entry will need to be reduced accordingly
    - This is to avoid double-counting of PIDG Commitments
- When the last project resulting from the programme mandate reaches Commercial Close, the RM Sheet will be the updated version of the original mandate, and the changes will be made to the original entry in the RM Database.

### *Funding Facilities (EAIF, GuarantCo, ICF-DP)*

The treatment of multiple projects with the same company, or multiple transactions on the same project depends on whether there is, in each case, additional infrastructure being provided – i.e. an expansion of scope. The guidance for this has been set out in an earlier guidance note.

Where the project/transaction is counted as a separate Financial Close, the PIDG Company will need to submit a separate RMS.

*Project name, PIDG Company Commitment Amounts and RM Indicators*

- Careful naming of the project/transaction will be required
- Since each transaction has a separate RMS, the PIDG Company Commitment and RM Indicators included in that RMS will be specific to the project

### *InfraCos*

**Pilot and Replication projects**

Although such projects can be seen as a single project with multiple stages, it has been decided that each phase with a Financial Close and an expansion/replication of the infrastructure should be treated as separate, to maximise consistency across PIDG.

In such projects, the PIDG Company will need to submit its RMS for the JDA, and then – at Financial Close – this will be "updated" and resubmitted as a Financial Close RMS. Subsequent Financial Closes will each require an additional RMS to be submitted.

*Project name, PIDG Company Commitment Amounts and RM Indicators*

- Careful naming of the project/transaction will be required, with each being numbered by its Phase
- Since each transaction has a separate RMS, the PIDG Company Commitment and RM Indicators included in that RMS will be specific to the project

- Facilities will need to ensure that the narrative relates to the specific project phase, and that the Outcomes and Additionality sections clearly set out what the PIDG Company's involvement is achieving at that stage

**Multi-project Mini-portfolios**

In general, this type of project might have two different types of JDA – either one which covers all projects in the mini-portfolio, or a separate JDA for each project.

- Where there is a single JDA for the whole mini-portfolio, each Financial Close will be counted separately using an additional RMS
    - the original JDA record will only be "updated" into a Financial Close RMS for the last project in the mini-portfolio.
- Where there are multiple JDAs, each project within the mini-portfolio is counted as a separate project; this is consistent with the standard PIDG treatment across all PIDG Companies.

*Project name, PIDG Company Commitment Amounts and RM Indicators*

The treatment guidance, below, is only for projects where there is a single JDA for the mini-portfolio. However, in all cases, careful naming of the project/transaction will be required, to ensure clarity.

- Where there is a single JDA for the mini-portfolio, a new RM Sheet should be submitted for each Financial Close
- The PIDG Company Commitment and RM Indicators included in that RMS will be specific to the project.
- The PIDG Company Commitment in the mini-portfolio JDA RMS should be for the overall project
    - This will be decreased each time a project in the mini-portfolio reaches Financial Close
- The PIDG Company Commitment in the Financial Close RMS should be specific to the project
    - If there is no specific PIDG Company commitment for each project (but simply one for the mini-portfolio as a whole), then this should be the total amount divided by the number of projects
- The RM Indicators included in each RMS will be specific to the project
- The narrative in the individual project RMSs for the Financially-close projects should be project specific (but, clearly, identify the project as part of the mini-portfolio), whereas the narrative in the JDA should be for the overall mini-portfolio
- The RMS for the last project in the mini-portfolio to reach Financial Close will replace the JDA RMS.

## What happens if a project is cancelled?

The PIDG approach to cancelled projects differs depending on the circumstances.

| PIDG Company involvement | Point of cancellation | Treatment | Reason |
|---|---|---|---|
| **Company ('Facility' funding all or mostly-disbursed** | Project reached operational status, but failed | TICs and short-term jobs numbers are retained.<br>All other indicators set to zero | The funding was raised and the infrastructure was constructed, but no further development impact will materialise. |
| | Project was cancelled after Financial Close, but before operations | TICs are retained.<br>All other indicators set to zero | Infrastructure not completed, therefore no development impact |
| | JDA/mandate signed for project but not reached Financial Close | Status changed to "Cancelled" and removed from portfolio | Project has not progressed far enough to have a reportable impact |

| PIDG Company involvement | Point of cancellation | Treatment | Reason |
|---|---|---|---|
| | | | |
| PIDG Company funding/ guarantee undisbursed/ unused | Operational projects where the TIC funding is mostly disbursed, but where the PIDG Company's loan/guarantee was not needed | Financial Close still stands, and the other indicators also remain.<br><br>Additionality scores revised. | The project was successful.<br><br>PIDG Company must provide Note for PIDG Ltd to decide whether PIDG demonstrated financial additionality despite the loan/ guarantee not being used. |
| | Project cancelled without any activity having taken place, over twelve months after Financial Close | All indicators should be set to zero.<br><br>Whether it remains in the portfolio depends on the circumstances of the cancellation. | The specific reasons as to why there was no activity on the project will help discern whether this was a case of a prematurely-claimed Financial Close, or whether it was due to circumstances which could not have been foreseen, and were part of the "construction" period. |
| | Project cancelled without any activity having taken place, within twelve months of Financial Close | Status changed to "Cancelled" and project removed from Logframe Achievements (in year and/or cumulative) | There has been no activity – and, for a project to be cancelled in such a short space of time, implies that the Financial Close should not have been signed and/or CPs were not met. |

## When should I count a project as operational?

### *Operational projects*

On some projects it will be difficult to assess when they would count as "becoming operational", and some projects which may never be fully operational. Much of this comes down to the original identification of the infrastructure being provided, and how the expected progress is articulated. Some examples of these issues are:

- A single project (e.g. DevCo's Small Towns Water) which is a programme of infrastructure units across a wide area, and thus is unclear as to when the project becomes operational
    - The project would be classified as "Operational" from the first piece of infrastructure, but would not have PCM carried out until the last piece of infrastructure was operational.
    - However, this would be dependent on how the endpoint/purpose of the project was initially defined
- A project where there is a guarantee line-of-credit (e.g. to allow those who could not normally get loans, to purchase vehicles), and thus has no official "completion" date
    - The project would be classified as "Operational" only at the expiration of the line-of-credit, when PCM was carried out.
- A project where the transaction in which PIDG is involved is part of a wider infrastructure development programme by the company. Although the RM Sheet would allocate a particular aspect of the infrastructure programme as "funded" by the PIDG Company, its operation date may be dependent on the rest of the programme (or, as above, it could be a rolling programme)

    - This is dependent on the definition of the infrastructure that PIDG is supporting
- A project which has become operational, but where a final certification of operation by the project engineer (or similar) has not been completed, for administrative reasons.

In such a situation, the project is treated as "Operational", unless the certification is being withheld because of problems with the project – this may have an impact on other aspects of the RM Sheet.

## What are the Poorest and Fragile States?

### *General approach*

One of the ways that PIDG differs from many other DFIs is in its focus on working in the poorest countries and fragile states. To identify the poorest states, PIDG uses the OECD DAC's list (updated every three years) which divides developing countries into four classifications, usually referred to as DAC I to DAC IV . For identifying the Fragile and Conflict-Affected States (FCAS), PIDG has its own list based on a combination of the World Bank Harmonised FCAS list and the Fund For Peace's Index; this is updated every two years.

Each PIDG Company has a target set for the percentage of the Total Investment Commitments mobilised by their projects, that needs to come from the DAC I/II countries (DAC I-III for GuarantCo), and FCAS. When a project's details are entered into the RM Database, it automatically identifies the DAC and FCAS status of the country, based on the year in which the project was signed. When the DAC and FCAS lists are changed (every three and two years, respectively), they are circulated to PIDG Companies. The current DAC and FCAS lists can be found in Appendices A and B.

### *Timing issues*

There is a risk, when the listing changes, that PIDG Companies might lose out by having a project under development in a country which switches its status. To help mitigate this risk, PIDG policy is to classify the DAC and FCAS status of a project on the basis of its approvals date – which is the date the project is approved by the Credit Committee or equivalent (EAIF, GuarantCo, ICF-DP), or the first RMS date (JDA for InfraCos, mandate for DevCo) – rather than the date of Financial Close.

### *Multiple countries*

If a PIDG-supported project covers multiple countries, with different DAC/FCAS statuses, then the project will be categorised as FCAS or DAC I/II if 50% of the expected PSI commitment is expected to arise in FCAS or DAC I/II states. The relevant PIDG Company should notify the RM team if this is the case.

# Appendix VII: Additionality

## D-1: Defining Additionality for InfraCo Asia and InfraCo Africa

**Overview of InfraCo Asia's & InfraCo Africa's Framework for Additionality**

InfraCo Asia and InfraCo Africa show additionality

1. By mobilising **Finance** for project development and/or for completing the project
2. By improving the **Design** of infrastructure projects
3. By contributing to **Policy** or building the **Capacity** of local stakeholders
4. By promoting good **Environmental, Social** and **Governance** standards
5. By having a direct **Developmental** impact on people

Our Additionality to a project can be measured at two points in its life-cycle: *ex-ante* to explain what we believe our contribution will be to enable the project and bring it to financial close and *ex-post* to demonstrate whether those contributions were made. Additionality is a key investment criterion that needs to be met for every project; a consistent ex-ante analysis that allows for comparison across projects is therefore mission critical for us. There is, however, much less consistency ex-post. We can exit at different points in the project life-cycle (e.g. before, at or after financial close) and the benefits of our involvement may have different incubation periods (e.g. during early-stage development, during operation or several years later once success has been demonstrated). Incorporating a consistent ex-post measure into our definition of Additionality would be difficult to design and would have limited business value. Therefore, **our definition of Additionality will focus on common ex-ante measures while ex-post measures will be assessed through tailored impact assessments.**

**Types of Additionality**

InfraCo Asia and InfraCo Africa have identified 5 ways in which our involvement can be additional to a project: these, and their associated measures, are outlined below.

**1. Financial**

**i. Provision:** Providing financing that the project is unable to obtain elsewhere. It is assumed that for the DevCos this financing will be for project development while for the InvestCos it will be at the point of Financial Close to fund completing the project. It is expected that this will in most, if not all, cases be the default contribution of InfraCo Africa and InfraCo Asia.

**ii. Access:** Raising the financing or accessing the grants required to complete the project. It is assumed that for the DevCos this financing will be for project development while for the InvestCos it will be at the point of Financial Close to fund completing the project. Both InfraCo Africa and InfraCo Asia have helped projects access PIDG financing such as TAF grants. InfraCo Asia has also found that their reputation has created market confidence such that private sector investors will provide more favourable terms than they otherwise would have. This might be by virtue of a longer grace period, longer loan tenor, provision of local currency financing, innovative financing structure, innovative product etc.

For both the above, from an InvestCo perspective, InfraCo Asia's experience has been that timely intervention by the InvestCo not only closes the funding gap at financial close but also ensures that other funding commitments and government approvals do not lapse. This was demonstrated in InfraCo Asia's Coc San hydro project in Vietnam as well as the wind projects in Pakistan. Moreover, in some cases InfraCo Asia has also been able to secure commitments from other investors/lenders that once financial close is achieved, some of the InvestCo's capital would be recovered and the DevCo would be able to partially divest its equity stake.

**2. Design**

**i. Demonstration effect:** Pioneering a new technology or innovative approach for the first time in a country such that it can be replicated in the future. For example: in Cambodia, InfraCo Asia demonstrated how to use technology to develop a high quality export product rather than relying on traditional manual salt farming practices

**ii. Efficiency and Effectiveness:** Improving the design of the infrastructure service such that it is either more efficient (cheaper to construct, operate or maintain) or more effective (better value for money) or more

sustainable. For example: in Nepal, InfraCo Asia was able to substantially reduce the Capex of a hydro project to make it commercially viable.

**3. Standards and Procedures**

**i. Environment:** Improving the environmental standards of a project. We anticipate that all of InfraCo Asia's and InfraCo Africa's projects meet international environmental standards and that these standards would typically exceed those required by the host government or practiced by the local private sector.

**ii. Governance:** Enhancing the corporate governance regime/s of a project such that integrity, transparency and accountability is improved (this would include governance, financial management and procurement). We anticipate that all of InfraCo Asia's and InfraCo Africa's projects have good corporate procedures and standards in place, and that these would frequently exceed those typically practiced by the private sector within the host country.

**iii. Social:** Improving the social standards of a project such that it demonstrates good labour, working and health & safety practices. Again, we expect that InfraCo Asia and InfraCo Africa's projects will meet international standards and that these standards may exceed those required by host governments.

**4. Regulatory and Policy**

**i. Policy:** Enabling governments to create, update or amend their regulatory regime to better facilitate private sector involvement in future infrastructure projects. For example: InfraCo Africa is developing a geothermal project in a country for the first time and as such is working with the host government to define and set a geothermal regulatory regime.

**ii. Capacity:** Empowering local stakeholders with the skills, experience or tools needed to better engage with the private sector and equitably share the benefits and risks of future projects. For example: in Zambia, InfraCo Africa invested in building the capacity of a smallholders co-operative so they could define their own constitution and the conditions under which they wished to participate in an irrigation project.

**5. Social and Economic Development**

**i. Secondary Benefits**: Directly improving people's livelihoods, living standards, access to opportunity or health through additional measures. For example: InfraCo Africa is developing a power project in Zambia which will provide power to a grid but will also deliver secondary benefits to people through the establishment of a Community Trust which could fund a school, health clinic or other developmental initiatives.

**Grading Additionality**

InfraCo Asia and InfraCo Africa need to set a minimum threshold for defining our involvement in a project as "Additional" and to recognise those projects where our involvement is "Highly Additional". To do this, we will attribute each type of Additionality with a score of one (please see Fig. 1 overleaf).

We expect that InfraCo Asia and InfraCo Africa will always provide some form of financial support to a project (in the absence of such financing being provided by the private sector). We also expect all our projects to have good corporate governance and environmental standards. Therefore our involvement in a project must score at least two before it is considered "Additional": i.e. we must demonstrate two out of the five types of Additionality (probably but not necessarily "Financial" and "Standards and Procedures").

For our involvement to be considered "Highly Additional" the project must score at least three: i.e. we must demonstrate three out of the five types of Additionality. This means that InfraCo Asia or InfraCo Africa is also either:

1. Pioneering/demonstrating something new
2. Enabling host governments or local communities to better attract or engage with the private sector
3. Having a direct developmental impact on people

We believe that the private sector is unlikely to do one or more of these three things and so if InfraCo Asia or InfraCo Africa do so their involvement would bring significant Additionality to the project.

**Putting the refined definition of Additionality into practice**

Recognising Additionality

Achievement of each type of Additionality is subjective as the definitions can only be assessed qualitatively not quantitatively. Therefore, our Project Review Committees (PRCs)/Boards will be ultimately accountable for evaluating how additional our involvement in a project is.

We would expect our developers (working with our internal management teams) to initially identify the ways in which InfraCo Asia or InfraCo Africa are additional. This assessment should be presented to our PRCs and validated by them when approving investment. Scores are at the discretion of our PRCs as is whether our involvement in a project is recognised as "Highly Additional".

**Fig 1. Additionality Framework**

| Additionality Type | Ex-Ante | | | |
|---|---|---|---|---|
| | Measure | Score | Scope | Comments |
| Finance | Providing financing that the project is unable to obtain elsewhere | 1 | Project | We assume this to be a default additionality criterion that would need to be fulfilled |
| | Raising the financing or accessing the grants required to achieve financial close. | | | |
| Design | Pioneering a new technology or innovative approach for the first time in a country such that it can be replicated in the future | 1 | Project | |
| | Improving the design of the infrastructure service such that it is either more efficient, more effective or more sustainable | | | |
| Standards and Procedures | Enhancing the corporate governance regime of a project such that integrity, transparency and accountability is improved | 1 | Project | We assume that most (if not all) projects will demonstrate this type of Additionality |
| | Improving the environmental standards of a project | | | |
| | Improving the social standards of a project such that it demonstrates good labour, working and health & safety practices | | | |
| Regulatory and Policy | Enabling governments to create, update or amend their regulatory regime to better failitate private sector involvement in future infrastructure projects | 1 | Project | |
| | Equipping local stakeholders with the skills, experience or tools needed to better engage with the private sector and equitably share in project benefits and risks | | | |
| Social and Economic Development | Directly improving people's livelihoods, living standards, access to opportunities or health through additional measures. | 1 | Project | |

***Please note:*** *Where Additionality Types have multiple measures, achieving one or more measures would result in a score of 1.*

| | |
|---|---|
| Minimum threshold to be considered "Additional": | 2 |
| Minimum threshold to be considered "Highly Additional": | 3 |

InfraCo Asia and InfraCo Africa place a higher developmental value on projects that:

- Pioneer a new technology or approach that can be replicated by others (e.g. new approach to salt farming, green energies or water)
- Leave a regulatory legacy or build capacity within host governments (so facilitating productive investments by the private sector)
- Have a direct developmental impact on poor people

Any project exhibiting one of the three above characteristics would be scored as "Highly Additional".

## D-2: Defining Additionality for DevCo

| Type of Additionality | Subtype of Additionality | Questions to be answered by DevCo | Monitoring | Detail |
|---|---|---|---|---|
| Financial | Funds mobilization | Does the PPP element make an investment happen that would not have happened anyway? | Ex-ante and ex-post | Ex-post can be established at earliest at financial close |
| Non-financial | Efficiency: Improved Design | Does the private sector involvement (due to DevCo participation) bring changes to the design of the infrastructure, leading to improved efficiency? | Ex-ante and ex-post | Ex-post in majority of cases can be established at project commercial close |
| Non-financial | Policy: New or improved policy regulation | Does DevCo participation contribute to improvements in the regulatory environment, both for specific investments and at the country level? | Ex-ante and ex-post | Ex-post in majority of cases can be established at project commercial close |
| Non-financial | Effectiveness: New or better standards | Does DevCo involvement help improve the quality of a project by raising its standards of corporate governance and/or environmental and social sustainability? Does the project bring changes to the government or private sector reporting and monitoring?<br><br>Does IFC introduce contractual innovation or modification that represent an improvement over existing practices? | Ex-ante and ex-post | Ex-post in majority of cases can be established at project commercial close. IFC helps governments improve the quality of their project in many areas of environmental and social management: social and environmental assessment and management systems; labour and working conditions; pollution prevention and abatement; community health, safety, and security; land acquisition and involuntary resettlement; biodiversity conservation and sustainable natural resource management; indigenous peoples; and cultural heritage. As part of the transaction IFC introduces guidance and requirements in the contract about the management of these dimensions. |

## D-3: Defining Additionality and Grading for EAIF

**Financial Additionality**

- Lead arranger and/or structuring bank and/or DFI-coordinator where additionality is achieved by arranging and structuring all or part of the entire debt package; (Grade 1 – Financial Additionality)
- Small transactions where EAIF can be the sole lender to the project or bring one more lender alongside. Additionality is achieved by "hand-holding" the sponsor and financing of small-scale projects which are usually bellow the radar of the larger finance providers. (Grade 1 – Financial Additionality)
- Alternative debt package provider: Transactions where EAIF offers a different debt package where additionally is achieved by providing debt on different terms to other lenders or taking a higher risk in the transaction; (Grade 2 – Financial Additionality)
- Co-lender or participant in transactions where additionality is achieved by closing a funding gap or enhancing other institutions' ability to syndicate transactions; (Grade 3 – Financial Additionality)

**Non-Financial Additionality for EAIF**

| Additionality Type | Definition |
|---|---|
| **Effectiveness: New or better standards** *(ex-ante and ex-post)* | Does PIDG involvement help improve the implementing/sponsor client's capacity by raising its standards of corporate governance and/or environmental and social sustainability? Does the project bring changes to the client's reporting and monitoring? |
| **Risk: Efficient public/ private risk allocation** *(ex-ante)* | Does PIDG participation help improve the allocation of risks between the public and private sectors (e.g. by acting as an 'honest broker' in a PPP deal) or between private investors (e.g. in a restructuring)? |

## D-4: Defining Additionality and Grading for GuarantCo

Additionality **is important in evaluating development projects**. However, its application to guarantee products differs from its application to loan products as a guarantee retains the existing or proposed lender in situ but will enable a different risk profile or tenor than a local lender or marketplace would otherwise accept. This not only enables specific projects to occur that otherwise may not have done so, but also assists in familiarising market participants with new market developments. This helps to change the behaviour of market participants and, over time, helps to develop local markets. GuarantCo also has the ability to source and shape its own transactions, enabling it to also achieve important market firsts such as Mobilink and Lower Solu.

It is essential that GuarantCo maintains a portfolio balanced between more highly developmental projects and 'stronger' but less developmental projects, in order to maintain its Credit Ratings. On this basis, **we define additionality** for GuarantCo in response to the following **questions to ask of ourselves**:

**What is the nature and extent of our Additionality?**

Does GuarantCo participation enable a project to proceed that otherwise would not do so? What elements of the deal structure did GuarantCo's involvement resolve (tenor, cost of funds, currency risk)? Was this the first GuarantCo type facility in the marketplace?

What was the role played by GuarantCo in terms of the project? Did we receive a referral from another DFI that we stood behind, or did we come in to help to fill a financing gap in a larger project or did we originate the project ourselves and then shape it to bring in the private sector and enable it to proceed?

**Types/grades of Additionality**

***Baseline Additionality (Grade 1)***

We guarantee another DFI in order to enable them to get to tenor or quantum thresholds that enable a deal to proceed that was previously 'stuck'. This type of additionality formed much of the GuarantCo portfolio during the early years of GuarantCo 'proof of concept' but is a diminishing proportion of the portfolio. We target for such vanilla additionality to be no more than 25% of the portfolio at any point in time.

***Value Add Additionality (Grade 2)***

In addition to simply enabling a project to proceed, we mobilise private sector lending with a minimum of one private sector participant. These may be smaller deals where the private sector participant would not proceed without GurantCo due to the credit/development trade-off inherent within the project, or may be due to tenor or quantum constraints on the private sector entity. These deals always require elements of both arranging and structuring, which both shapes the deal and helps to educate/develop knowledge of the participants. An example of such a deal would be TBEC.

***High Engagement Additionality (Grade 3)***

These projects would involve a significant arranging and structuring role with multiple participants, leading to market development as well. The increased complexity of such deals comes from the multiple participants in the deal and the frequent need to educate multiple participants as to the characteristics and benefits of GuarantCo's products. A good example of such a project would be Lower Solu.

***Exceptional Additionality (Grade 4)***

Projects which are genuinely ground-breaking and which may be said (often ex post) to be transformational for markets, through genuine market development. These projects will typically be harder to identify during development. Examples would include Mobilink (the introduction of Islamic Financiers to the GuarantCo product, improving access to finance) or Wataniya, where the early cancellation of the guarantee proved the knowledge and capacity of the local banks had been fundamentally altered.

## D-5: Defining Additionality for TAF

**TAF Window 1: Technical Assistance Grants**

***Introduction***

TAF Window 1 grants are made available to PIDG Companies for General Technical Assistance – studies, plans, consultancy services, and capacity building to facilitate development and/or implementation of projects prepared, financed, and/or guaranteed by one or more of the PIDG Companies.

***Window 1 Additionality Defined***

TAF makes its Window 1 funding available on a highly selective basis. Activities must be Additional in order to qualify for TAF funding. TAF defines “Additionality” to mean that TAF-funded activities must complement rather than replace or duplicate the normal project preparation or due diligence work for which PIDG Companies already have working capital or which would be carried out in any case by counterpart governments, project partners, or other project or market stakeholders. Most of the activities supported by TAF Window 1 involve building the capacity of government counterparts or private sponsors and operators to support or participate in deals being prepared by PIDG Companies. But as the next section indicates, Window 1 also supports a variety of other kinds of activities as well.

***Eligible Types of Window 1 Activities (and Additionality Criteria)***

The following section describes activities eligible in principle for TAF Technical Assistance funding along with the additionality criteria that must be met in order for applications to be approved:

i. Infrastructure Development Strategies: Studies intended to guide governments on options for financing of infrastructure, including mechanisms to promote private sector involvement and local currency financing.

   *Additionality criteria: This work is additional only when governments are unable to develop such strategies without outside assistance and no other source of outside support is available.*

ii. Policy, Regulatory, and Institutional Reforms: Support for the design and implementation of specific reforms aimed at facilitating financing of infrastructure by the private sector. This category includes

activities to strengthen local capital markets, when such work enhances the likelihood of project financial closure or the sustainability of projects targeted by PIDG Companies.

*Additionality criteria: This work is additional only when governments are unable to develop such strategies without outside assistance and no other source of outside assistance is available.*

iii. Pioneering or Pilot Transactions: Support to the design and implementation of particular projects or transactions that will be financed and/or guaranteed by a PIDG Company. These must be projects that are pioneering in some important respect, reflect some measure of innovation, and/or offer significant potential demonstration effects.

*Additionality criteria: This work is additional only when the pioneering status of such a transaction means that markets and project stakeholders are unfamiliar with the transaction and this unfamiliarity results in likely failure of the transaction to reach financial closure in timely and/or affordable manner.*

iv. Capacity Building: Activities aimed at building the capacity of government counterparts, private sector sponsors/operators, officials of local capital markets, staff of financial institutions, employees of quasi-public enterprises, etc. Among other things, training can focus on the design of arrangements for mitigating risk and/or raising funds for private sector investment in infrastructure, ensuring value for money in the provision of infrastructure services, and analysis of any fiscal impact for governments resulting from commitments entered into by public authorities.

*Additionality criteria: This work is additional when certain missing skills are essential for transactions to reach financial closure in a way that is timely, affordable and likely to generate intended social and economic benefits.*

v. Development Add-On Activities: These activities are related to but technically separate from projects involving PIDG Companies. Add-ons are intended to increase the beneficial infrastructure impacts of PIDG projects, particularly in terms of poverty reduction and gender equality. They usually occur after financial close of a project prepared by a PIDG Company.

*Additionality criteria: These activities are additional when they offer substantial poverty reduction benefits (or other socio-economic and demonstration benefits), but cannot be paid for from the relevant project being prepared by the PIDG Company.*

vi. Unusual or Unusually Expensive Preparation Activities: TAF funding can be used to pay for technical assistance that reflects unusual or unusually expensive costs of developing projects in poor countries.

*Additionality criteria: This work is additional when it makes up the difference between (i) the costs of normal preparation activities that meet domestic standards for things like environmental impact assessments, and (ii) the cost of such work done to meet the sorts of international standards that the PIDG Companies must follow.*

vii. Post Transaction Support: Financial support to PIDG Companies and/or directly to governments and/or private investors post-financial close, if it becomes evident during project implementation that further assistance is urgently needed and desired by all parties.

*Additionality criteria: This work is additional when it is essential to the sustainability of a viable PIDG project, but for which no funding is available from project stakeholders including investors, government, or other development agencies.*

***Window 1 Contributions to Types of Additionality***

The different types of Window 1 activities target multiple kinds of Additionality (Table 1).

**Table 1: Window 1 Contributions to Types of Additionality**

| **Type of Window 1 Activity** | **Type of Additionality** | | | | |
|---|---|---|---|---|---|
| | Finance: Structuring or mobilization | Efficiency: Better project design | Effectiveness New or better standards | Policy: Improved laws/regs | Risk: Improved allocation |
| Infrastructure development strategy | | **X** | | | **X** |
| Policy, reg. institutional reforms | | | **X** | **X** | |
| Piorneering or pilot projects | | **X** | | | **X** |
| Capacity building activities | **X** | **X** | **X** | **X** | **X** |
| Development add-on activities | **X** | **X** | | | |
| Unusual or unusually expensive | **X** | **X** | | | |
| Post-transaction support | **X** | **X** | | | |

***How Additionality is confirmed for Window 1 Activities***

The TAF application process for Window 1 grants is designed to ensure additionality of these technical assistance grants, along with other requirements for approval. The basic steps in the process are described below:

i. Informal contact and briefing. Before applications are formalized and submitted, the sponsoring PIDG Company is encouraged to discuss the activity with the PIDG Technical Adviser, who assesses the additionality of the proposed work, as well as other required characteristics (type of activity, DAC status of the country, quality of the activity design, likely bankability of the underlying investment project, etc.). The PIDG Company involved is encouraged to withhold its application until the Additionality of the work is clear in the application document.

ii. Formal application submission. The PIDG Company next submits a completed application to TAF using a standardised application form designed to elicit information about the activity, including the extent to which it is additional. Sections of the application require PIDG Companies to classify the type of activity for which funding is requested, summarize the proposed activities and provide a rationale for TAF involvement, and precisely identify the expected beneficiaries of the proposed activity.

iii. TAF analysis and recommendation. The PIDG Technical Advisor next prepares a memorandum to the PIDG Owners recommending approval of applications that meet all of TAF's funding requirements, including additionality. In addition to the memo, the Technical Advisor also scores the application against a list of TAF application appraisal criteria, one of which is as follows:

*Complementarity/Additionality of TAF Grant: extent to which the TAF Grant would fund activities considered additional to "normal" investment due diligence/project preparation activity.*

**TAF Window 3: VGF Grants**

***Introduction***

TAF Window 3 makes available viability gap funding (VGF) to qualifying projects. VGF reduces the upfront capital costs of pro-poor infrastructure projects involving private participation by, in most cases, making a grant available at the time of financial close so that it can be used during construction.

***Window 3 Additionality Defined***

In the case of Window 3, TAF defines "Additionality" to mean that TAF VGF funding must complement rather than replace, duplicate, or unduly subsidise project investment by public or private partners in a pro-poor infrastructure project. VGF achieves additionality by filling a project "viability gap" between project costs and expected project revenues, assuming affordable user tariffs or unitary payments by government. The intention is to make economically viable projects financially viable, while helping to mobilise private sector investment and ensuring that the private sector still shares in the risks of infrastructure delivery and operation.

***Eligible Types of Window 3 Activities***

VGF Additionality is realized when the grants address affordability issues and therefore make projects bankable. For different kinds of financial structures, VGF is disbursed in different ways in order to ensure that it is not undermining its additionality by taking on risks that the private sector should bear.

i. For projects involving debt and equity VGF grants normally become available once equity subscriptions are made and then disbursed pro rata with debt draw-downs. In exceptional cases, where the capital grant needs to be integrated into the capital structure of the project in order to attract lenders, TAF considers VGF disbursement prior to debt disbursements if such disbursement could be supported by enhanced due diligence and monitoring of project milestones

ii. For <u>equity-only</u> projects VGF is not intended to take on construction risk, but again to address affordability issues. So for these projects VGF normally becomes available when construction completion is certified. There may be circumstances with equity-only projects where VGF may follow staged equity disbursements, if these are linked to reliable project delivery milestones.

***Window 3 Contributions to Types of Additionality***

VGF grants contribute to two basic kind of Additionality:

i. <u>Financial structuring</u>. VGF enables a project to reach financial close that would not have done so otherwise. It does this by closing the viability gap described above and making an economically viable project financially viable.
ii. <u>Financial funds mobilisation</u>. VGF directly mobilises private investment for a project because it makes the project commercial (financially viable) and therefore potentially attractive to private investors of various kinds. VGF helps attract other investors because it makes projects bankable.

***How Additionality is Confirmed in Window 3 Activities***

The TAF application process for VGF grants is designed to ensure Additionality of funding, along with other requirements for approval. Key steps in the process are the same as those described above in connection with Window 1 grants. However, in addition to the basic TAF application process, special requirements have been added to the VGF approval process because of the large size of the grants involved. Requirements targeted at confirming additionality include the following:

i. TAF VGF funding must be clearly justified on the grounds that it transforms an economically viable pro-poor project into a financially viable one by attracting the necessary investment at affordable costs. This justification must be tested via early stage project appraisals, including cost-benefit analysis and value-for-money assessments. All of these appraisals must be summarized in a project concept note that accompanies VGF applications.

ii. The adequacy of mechanisms for ensuring that poor people (rather than private investors) are the principal beneficiaries of VGF grants must be clear as well. Pro-poor outputs can be required by the terms of PPP contracts (or the terms of financial closure where PPP contracts are not applicable) and enforced by regulators. Or where no such contract or regulator is likely to exist, pro-poor benefits can be ensured by the nature of the project itself (locus, sector, expected users). Early stage assessments need to demonstrate that these mechanisms and/or characteristics are in place and capable of working as anticipated.

iii. To ensure that VGF funding complements rather than replaces, duplicates or unduly subsidizes private investment, the VGF funding is not accessed, even after award, until the private equity for the project has been committed and is in place. Furthermore, for projects that are also funded with debt, VGF disbursement will usually take place pari passu with debt disbursements, in order to ensure that lenders are also taking on project risks.

iv. To further guard against over subsidizing private investors, the determination of grant levels should be linked to a competitive process for selecting private sponsors/operators (operators selected on the basis of lowest grant required). TAF will provide VGF support to projects that do not involve competitive selection of a sponsor/operator only under exceptional circumstances that are assessed via a special no-objection review. Exceptional circumstances would include situations in which an operator/sponsor is already in place or has been established by the relevant PIDG Company as part of the project development process

v. In cases where the determination of the grant level cannot be linked to the selection of a sponsor/operator through a competitive process, the recipient of the VGF grant is responsible for showing to the satisfaction of TAF that the underlying project costs have been established through a competitive process or equivalent (i.e., are at a level that would have reasonably been achieved through competition, as determined through appropriate expert review and benchmarking), which in turn would impact the level of the VGF grant. This is to ensure that the VGF grant does not excessively benefit the various project suppliers (of credit, equity investment, or construction/operation services). The assessment must be designed to ensure the same grant outcome as that reached if the grant determination process were linked to competitive selection of the sponsor/operator.

vi. Finally, in order to ensure an extra degree of due diligence regarding VGF grants, the various up-front appraisals and assessments done by the sponsoring PIDG Company must be evaluated by TAF's Panel of Experts (PoE), a committee of independent outside international experts with expertise in project finance, PPPs, infrastructure, public investment, and capital grants. The panel determines eligibility for VGF grants, and must also carefully assess the optimal size of grants, for reasons described above, including satisfying themselves about the process that has determined the proposed level of VGF. The PoE must approve an application for TAF VGF funding before it goes to PIDG Owners for final approval. The PoE is a key tool in confirming that proposed VGF grants are additional in nature.

## Appendix VIII – Climate change classifications by sector

| Energy | | | |
|---|---|---|---|
| **Tier 1** | | | |
| **Sub-sector** | **Type of qualifying projects** | **Qualification** | **Example** |
| **Renewable Energy** | Wind Power | - | - |
| | Biofuels/biomass | If the Biomass/bio-energy used is from non-sustainable sources and might contribute to increased levels of deforestation and degradation, then assign to Tier 3. To assign to Tier 1 requires very strong evidence base. | Production of secondary or tertiary biofuels for power generation. |
| | Geothermal | - | - |
| | Solar PV/Solar thermal | - | - |
| | Hydro with storage | If the size and depths of the hydropower storage is likely to lead to methane emissions this project should be assigned to Tier 2. | |
| | Hydro run of the river | - | - |
| | Tidal/ Wave power | - | - |
| | Waste to energy | n/a | Methane power generation; incineration |
| **Energy Efficiency** | Energy efficiency projects | Projects must lead to a significant improvement in energy efficiency over a significant scale. | City-wide improvements to street lighting efficiency. |
| | CHP, CCHP and Waste Heat Recovery | Project must lead to significant rather than incremental reductions in GHG emissions. | CHP plant that provides district heating to domestic houses |
| | Power station upgrade | Project must lead to significant rather than incremental reductions in GHG emissions. | Rehabilitate an existing power plant to decrease emissions |
| | Rehabilitate transmission and distribution systems to reduce technical losses | Project must lead to significant rather than incremental reductions in GHG emissions. Do not include new or expansion of capacity in transmission and distribution systems. | Network wide improvements to reduce transmission losses |
| **Carbon Capture and Storage** | Carbon Capture and Storage (CCS) projects | - | - |
| **Demand side energy management** | Smart grids | - | - |
| **Other Tier 1 Energy** | Please state and justify | - | - |
| **Tier 2** | | | |
| **Sub-sector** | **Type of qualifying projects** | **Qualification** | **Example** |
| **More efficient power generation** | More efficient generation but using the same fuel | - | Installation of more efficient combustors or power generators |
| | Fuel switch | - | Gas fired power station in place of a coal or heavy fuel oil power plant |

| | | | |
|---|---|---|---|
| **Sub-sector** | **Type of qualifying projects** | **Qualification** | **Example** |
| **More efficient power generation** | Grid extension to displace Kerosene burning | - | Displace the use of individual kerosene burners or diesel generators in remote areas with a less carbon intensive option. |
| **Energy Efficiency** | Energy efficiency projects | Incremental improvements to GHG reductions | - |
| | CHP, CCHP and Waste Heat Recovery | Incremental improvements to GHG reductions | - |
| | Power station upgrade | Incremental improvements to GHG reductions | Rehabilitate an existing power plant to decrease emissions |
| | Rehabilitate transmission and distribution systems to reduce technical losses | Incremental improvements to GHG reductions | - |
| **Other Tier 2 Energy** | Please state and justify | n/a | - |
| **Tier 3** | | | |
| **Sub-sector** | **Type of qualifying projects** | **Qualification** | **Example** |
| **Conventional Energy and Power** | Grid Extension (both gas and electricity) | - | - |
| | Oil/coal fired power station | - | - |
| **Other Tier 3 Energy** | Please state and justify | | |

| **Transport** | | | |
|---|---|---|---|
| **Tier 1** | | | |
| **Sub-sector** | **Type of qualifying projects** | **Qualification** | **Example** |
| **Roads & Highways** | A 'step change' to lower carbon modes of road and highway transport | Incremental improvements to vehicle emissions are not sufficient, nor are a switch from, for example, petrol to CNG/LPG unless it is part of preparing and implementing a national policy. | Projects that support a shift from petrol to hydrogen vehicles |
| | Improve vehicle emission and/or fuel efficiency standards. | Need to be market transformational | Introduction of vehicle emission and/or fuel efficiency standards where none existed before or significant tightening of existing standards |
| | Enhanced traffic management, reduced congestion or improved traffic flow. | Need to be market transformational If the project is likely to lead to additional usage of road infrastructure then assign to tier 3. Strong evidence base is necessary. | Redesign road network with the primary purpose of reducing congestion and therefore emissions |

| | | | |
|---|---|---|---|
| | Bus network | - | Introduce a bus network to reduce the use of the car |
| **Ports, waterways and shipping** | Transfer of bulk transport from roads and railways to ships as justified by reducing the carbon footprint per ton of cargo transported | Project must result in significant reductions in GHG emissions | Increase capacity of a port with the objective of enabling greater transport of freight by sea rather than by air. |
| **Railways Railways** | Build new or improve and expand rail networks | Project must result in significant reductions in GHG emissions | Introduction and expansion of high speed trains |
| | Fuel switch from conventional diesel or coal railcars to electric railcars | If electric railcars run off a carbon-intensive grid, then this type of project does not qualify. | - |
| **Cycle and pedestrian** | Creation of cycle and pedestrian infrastructure/routes that will displace existing or potential travel by conventional modes of transport | - | - |
| **All Tier 1 Transport** | Biodiesel for transport | If it is replacing a more GHG intensive fuel and if the bio-diesel is from a sustainable source. To assign to Tier 1 requires a strong evidence base. | Replacing petrol with sustainably sourced bio-ethanol |
| | Projects whose explicit aim is to avoid the necessity for people to travel altogether. | Very strong evidence base required and it must be the principal objective | ICT infrastructure provided to avoid the need for business travel |
| **Other Tier 1 Energy** | Please state and justify | - | - |

**Tier 2**

| Sub-sector | Type of qualifying projects | Qualification | Example |
|---|---|---|---|
| **Roads & Highways** | Shift to lower-carbon modes of road and highway transport | Incremental improvements | A shift from petrol to CNG/LPG |
| | Improve vehicle emission standards and/or fuel efficiency standards | Incremental improvements | Gradually replacing an old taxi fleet with a new, and more fuel efficient taxi fleet |
| | Enhanced traffic management, reduced congestion or improved traffic flow. | Incremental improvements | Traffic management to reduce GHG emissions per unit transported (e.g speed limits, high occupancy vehicles) |
| **Ports, waterways and shipping** | Improve the fuel efficiency of ships and port facilities | - | - |
| **Aviation** | Improve the fuel efficiency of planes and use lower carbon fuels | - | - |
| **Railways** | Improve and expand rail networks e.g. introduction and expansion of high speed trains | In contrast to tier 1 projects these projects involve more moderate extension projects and improvements. | - |
| | Regenerative breaking | - | - |

| | | | |
|---|---|---|---|
| **Public Transport Systems** | Promoting greater use of public transport | - | Awareness raising campaign |
| **Cycle and pedestrian** | Promoting greater uptake of walking and cycling | - | Awareness raising campaign |
| **Other Tier 2 Transport** | Please state and justify | - | |

**Tier 3**

| Sub-sector | Type of qualifying projects | Qualification | Example |
|---|---|---|---|
| **All Tier 3 Transport** | Projects that are not likely to have mitigation co-benefits or whose impact will be indirect | - | - |

## Housing

**Tier 1**

| Sub-sector | Type of qualifying projects | Qualification | Example |
|---|---|---|---|
| **Renewable energy and energy efficiency for buildings** | Install new heating and cooling systems in houses using renewable energy | The must lead to significant GHG emission savings rather than incremental improvements | Policy mandating that all new builds incorporate renewable energy into the development. |
| | Green building design (LEED or BREEAM certified buildings) | The principal objective of the project must be to reduce emissions from new builds. Level will vary depending on the country context - in some cases a basic LEED/BREEAM rating could be sufficient. | Policy mandating that all houses should be designed to an appropriate BREEM/LEED level. |
| | Retrofit old buildings to provide energy savings | Needs to demonstrate significant improvements relative to the baseline, not just incremental improvements | City wide programme to retrofit houses to increase their energy efficiency. Individual projects will not qualify. |
| | Installation of cookers using renewable energy (solar/ bio-energy) | Bio-energy must be from non sustainable sources (if the sustainability of bio-energy cannot be proven then assign project to Tier 3) | |
| **Transport/access** | New Housing or refurbished housing includes multimodal interchange and/or is car free/near city centre | Needs to demonstrate significant improvements relative to the baseline, not just incremental improvements | New development is cited specifically to reduce car usage |
| **Other Tier 1 Housing** | please state and justify | | |

**Tier 2**

| Sub-sector | Type of qualifying projects | Qualification | Example |
|---|---|---|---|
| Fuel switch | Switching from a more emission-intensive energy supply to a less emission- intensive energy supply (e.g. oil to gas) | Not applicable if part of a wider national change in energy supply. Must be a project-level (e.g. group of houses) initiative | Change a towns fuel supply from oil to gas. |

| | | | |
|---|---|---|---|
| Energy efficiency | Incremental energy efficiency improvements to building fabric or appliances | Project level (i.e. group of houses) initiative | Upgrading to energy efficient light bulbs in houses |
| **Sub-sector** | **Type of qualifying projects** | **Qualification** | **Example** |
| Behavioural change | Encourage behavioural change in relation to energy use within buildings | n/a | Awareness raising campaign around energy efficiency in the home. |
| Other Tier 2 Housing | please state and justify | | |
| **Tier 3** | | | |
| **Sub-sector** | **Type of qualifying projects** | **Qualification** | **Example** |
| All Tier 3 Housing | Projects that are not likely to have mitigation co-benefits or whose impact will be indirect | | slum redevelopment, finance to home-owners |

| **ICT** | | | |
|---|---|---|---|
| **Tier 1** | | | |
| **Sub-sector** | **Type of qualifying projects** | **Qualification** | **Example** |
| Energy Efficiency | Improve energy efficiency in information technologies | A step change in GHG emission reduction | Significant energy efficiency improvements to data servers |
| | Improve energy efficiency in telecommunications systems | A step change in GHG emission reduction | Designing low energy base station sites and ones that run off renewable energy |
| Tier 1 ICT | Please state and justify | | |
| | | | |
| **Sub-sector** | **Type of qualifying projects** | **Qualification** | |
| Energy efficiency | Improve energy efficiency in information technologies | Incremental GHG savings | Incremental energy efficiency improvements to data servers |
| | Improve energy efficiency in telecommunications systems | Incremental GHG savings | Implementing infrastructure optimisation and sharing |
| Other Tier 2 ICT | please state and justify | | |
| **Tier 3** | | | |
| **Sub-sector** | **Type of qualifying projects** | **Qualification** | **Example** |
| All Tier 3 ICT | please state and justify | | |

## Water & Sanitation

### Tier 1

| Sub-sector | Type of qualifying projects | Qualification | Example |
|---|---|---|---|
| Water & Wastewater | Reduce or capture methane emissions from wastewater treatment and distribution | n/a | - |
| | Energy generation from wastewater | n/a | Sludge incineration; production of biogas; hydrogen from wastewater |
| | Energy efficiency improvements to water and wastewater infrastructure | Project must result in significant reduction in GHG emissions and not just incremental improvements | Significant improvements to pumping efficiency across the network |
| | Incorporation of renewable energy into water and wastewater infrastructure | Project must result in significant reduction in GHG emissions and not just incremental improvements | - |
| | Reduce energy consumption during wastewater treatment | Project must result in significant reduction in GHG emissions and not just incremental improvements | - |
| Other Tier 1 Water and Sanitation | Please state and justify | - | - |

### Tier 2

| Sub-sector | Type of qualifying projects | Qualification | Example |
|---|---|---|---|
| Water & Wastewater | Reduce or capture methane emissions from wastewater treatment and distribution | In contrast to Tier 1 projects, these projects result in incremental rather than significant reduction in GHG emissions. | - |
| | Energy generation from wastewater | In contrast to Tier 1 projects, these projects result in incremental rather than significant reduction in GHG emissions. | - |
| | Energy efficiency improvements to water and wastewater infrastructure | In contrast to Tier 1 projects, these projects result in incremental rather than significant reduction in GHG emissions. | - |
| | Incorporation of renewable energy into water and wastewater infrastructure | In contrast to Tier 1 projects, these projects result in incremental rather than significant reduction in GHG emissions. | - |
| | Reduce energy consumption during wastewater treatment | Incremental improvements rather than a step change in energy conservation and efficiency | - |
| | Reduce per capita water consumption using demand side measures | n/a | Installation of water efficient appliances |
| Other Tier 2 Water & Sanitation | Please state and justify | - | - |

### Tier 3

| Sub-sector | Type of qualifying projects | Qualification | Example |
|---|---|---|---|
| All Tier 3 Water & Sanitation | please state and justify | | |

## Waste

### Tier 1

| Sub-sector | Type of qualifying projects | Qualification | Example |
|---|---|---|---|
| Waste Prevention | Avoiding the use of primary materials for manufacturing through waste avoidance and material recovery (i.e. the GHG emissions associated with the use of primary materials – mostly energy-related – are avoided) | Projects can only be classified here if their principal objective is to mitigate climate change. Requires strong justification. | Significant increase in reuse/ recycling of materials (e.g. steel) which leads to a reduction in primary extraction. |
| **Sub-sector** | **Type of qualifying projects** | **Qualification** | **Example** |
| Waste to Energy | Waste incineration with electricity generation and/or excess heat used to implement a district heating system | Project must lead to a step change in terms of reducing GHG emissions and not simply lead to incremental change. | Gasification or Pyrolysis plant |
| Landfill gas capture | Capture methane and/or use it for energy generation | Project must lead to a step change in terms of reducing GHG emissions and not simply lead to incremental change. | Installation of a landfill gas capture system |
| Composting | Aerobic processing to avoid methane emissions | Project must lead to a step change in terms of reducing GHG emissions and not simply lead to incremental change. | - |
| Other Tier 1 Waste | please state and justify | - | - |

### Tier 2

| Sub-sector | Type of qualifying projects | Qualification | Example |
|---|---|---|---|
| All | Incremental improvements to reducing GHG emission from the waste sector | In contrast to Tier 1 projects, these projects result in incremental rather than significant reduction in GHG emissions. | - |
| | Encourage/legislate for increased recycling/re-use | n/a | Stipulate material re-use rates for construction projects |
| Household waste | Encourage recycling | n/a | Awareness raising campaign |
| Other Tier 2 Waste | please state and justify | - | - |

### Tier 3

| Sub-sector | Type of qualifying projects | Qualification | Example |
|---|---|---|---|
| All Tier 3 Waste Projects | Please state | - | - |

## Forestry, Agriculture and Land Use Change

### Tier 1

| Sub-sector | Type of qualifying projects | Qualification | Example |
|---|---|---|---|
| Forestry | Sustainable forestry management to improve the carbon sink of forests or to avoid deforestation and degradation | - | Certifying a forest to a relevant standards (FSC, PEFC, FLEGT, Lacey Act) |
| | Afforestation and reforestation projects | Provided they do not lead to disturbance of carbon in carbon rich soils (e.g. afforestation projects on peatlands would not qualify) | - |
| | Sustainable peatland/wetland/ forestry management and protection | - | Rewetting peatlands to prevent desiccation and carbon emissions |
| | Support countries in accessing finance through REDD+ | - | - |
| | Manage or rehabilitate the condition of mangroves | - | - |
| **Sub-sector** | **Type of qualifying projects** | **Qualification** | **Example** |
| Agriculture | Soil management practices that reduce GHG emissions or increase the potential of soils to act as a carbon sink | - | Conservation tillage systems |
| | Sustainable grassland management | - | limiting the timing and number of grazing animals on degraded pastures; restoration of severely degraded lands by replanting with perennial grasses |
| | Reduce methane emissions from rice production | - | Mid season drainage of paddy fields to reduce methane emissions |
| | Manure management to reduce GHG emissions | - | Airing manure to promote aerobic decomposition |
| | Bio-energy from crops | But not if it leads to leakage. It must be demonstrated that over the life cycle of the project the GHG emissions saved are significant | Use Miscanthus as a source of sustainable biomass for bioenergy and biofuels |
| Wetlands | Manage or rehabilitate wetlands to increase carbon sequestration/decrease GHG emissions | - | Rehabilitating a wetland |
| Other Tier 1 Agriculture and Forestry | Please state and justify | | |

### Tier 2

| Sub-sector | Type of qualifying projects | Qualification | Example |
|---|---|---|---|
| All | Incremental improvements to reducing GHG emission from forestry, agriculture and land use | In contrast to Tier 1 projects, these projects result in incremental rather than significant reduction in GHG emissions. | - |

| | | | |
|---|---|---|---|
| Forestry | Energy efficiency improvements to timber harvesting/forest management processes | - | - |
| Agriculture | Irrigation pumping using renewable energy | - | - |
| | Switch to less water intensive crops | - | - |
| | Energy efficiency improvements to agricultural processes | - | - |
| Other tier 2 Agriculture & Forestry | please state and justify | | |

**Tier 3**

| Sub-sector | Type of qualifying projects | Qualification | Example |
|---|---|---|---|
| All Tier 3 Agriculture & Forestry | Please state | | |

## Industry

**Tier 1**

| Sub-sector | Type of qualifying projects | Qualification | Example |
|---|---|---|---|
| Primary (extractive) | A step change in industry practice to reduce GHG emissions | - | |
| Secondary (manufacturing) | Development of new green industries (e.g. construction of renewable energy technologies) | - | Support for the renewable energy sector |
| | A step change in industry practice to reduce GHG emissions | - | Project converting scrap metal to steel bars |
| Tertiary (services) | Services to support new green industries | - | - |
| | A step change in industry practice to reduce GHG emissions | - | - |
| Quaternary | A step change in industry practice to reduce GHG emissions | - | - |
| Other Tier 1 Industry | Please state and justify | | |

**Tier 2**

| Sub-sector | Type of qualifying projects | Qualification | Example |
|---|---|---|---|
| Primary (extractive) | Substitute inputs to reduce GHG emission in existing coal mining operations | - | Switch to renewable or low carbon energy to power operations |
| | Change operational procedures or techniques, or retrofit technologies to reduce GHG emissions in existing operations | - | More energy efficient extraction techniques |

| | | | |
|---|---|---|---|
| | Methane capture | - | - |
| | Improve water use efficiency | - | - |
| | Reduce gas flaring | - | - |
| Secondary (manufacturing) | Improve energy efficiency in existing production units | - | - |
| | Decarbonise the supply chain | - | - |
| | Green procurement | - | - |
| | Industrial symbiosis (e.g. fly ash reuse) | - | - |
| Tertiary (services) | Incremental improvements to the sectors GHG performance | - | - |
| Quaternary | Incremental improvements to the sectors GHG performance | - | - |
| Other Tier 2 Industry | Please state and justify | | |

**Tier 3-**

| Sub-sector | Type of qualifying projects | Qualification | Example |
|---|---|---|---|
| All Tier 3, Industry | Please state and justify | | |

## Capital Markets Development

**Tier 1**

| Sub-sector | Type of qualifying projects | Qualification | Example |
|---|---|---|---|
| All Tier 1, Capital Markets Development | Please state and justify | | |

**Tier 2**

| Sub-sector | Type of qualifying projects | Qualification | Example |
|---|---|---|---|
| All Tier 2, Capital Markets Development | Please state and justify | | |

**Tier 3**

| Sub-sector | Type of qualifying projects | Qualification | Example |
|---|---|---|---|
| All Tier 3, Capital Markets Development | Please state and justify | | |

## Climate Change Adaptation

**Tier 1**

| Sub-sector | Type of qualifying projects |
|---|---|
| Energy | Projects that increase the resilience of energy infrastructure and distribution systems to the predicted impacts of climate change. |
| | The development of projects and plans that seek to put in place an appropriate mix of energy sources to increase the resilience of the energy sector and the population it serves. |
| | Support for micro-generation and community scale energy generation in order to reduce vulnerability to climate change. |
| Other Tier 1 Energy | Please state and justify |

| | |
|---|---|
| Transport | Increase access of communities to services (e.g. health services) for the purpose of increasing their resilience to the predicted impacts of climate change. |
| | Ensure populations are able to reach safe areas, which are protected from the impacts of climate variability and extremes (e.g. higher land during flood events) |
| Other Tier 1 Transport | Please state and justify |
| Housing | Retrofit houses to increase their resilience to the predicted impacts of climate change |
| | Re-settle people from an area of high climate change risk to an area of low climate change risk. |
| Other Tier 1 housing | Please state and justify |
| ICT | Please state and justify |
| Water & Sanitation | Projects to increase the resilience of the water & sanitation sectors to the predicted impacts of climate change. |
| Other Tier 1 Water & Sanitation | Please state and justify |
| Waste | Projects to increase the resilience of the waste sectors to the predicted impacts of climate change. |
| Other Tier 1 waste | Please state and justify |
| Agriculture | Increase resilience of agricultural sector to the changing distribution of pests and diseases. |
| | Promoting diversified agricultural production to reduce climate risk (e.g. growing a mix of different crops and different varieties of each crop). |
| | Supporting the development of genetically modified crops, which remain productive despite climate change (e.g. drought, heat and salt tolerant species varieties) |
| | Implementing water conservation and efficiency measures to reduce vulnerability to changes in precipitation patterns. |
| | Recover degraded agricultural areas for crop production |
| | Reduce vulnerability of crops, storage areas and supply chains to the predicted impacts of climate change and climate variability. |
| Other Tier 1 Agriculture | Please state and justify |
| Forestry | Restoration of former forest areas in order to reduce vulnerability to the impacts of climate change. |
| | Increasing the connectivity of forests to help them adapt to the impacts of climate change. |
| | Promoting sustainable forest management that reduce soil erosion and exposure to wildfires |
| | Select tree species that are resilient to the predicted changes in climate |
| Other Tier 1 Forestry | Please state and justify |
| Fisheries | Research on the impacts of climate change on fisheries and the development of solutions. |
| Other Tier 1 Fisheries | Please state and justify |
| **Sub-sector** | **Type of qualifying projects** |
| Industry | Projects to increase the resilience of industry processes and supply chains to the predicted impacts of climate change. |
| Other Tier 1 Industry | Please state and justify |
| Early Warning Systems and disaster response | Development of early warning systems to help populations respond effectively to extreme weather events. |
| Other Tier 1 Adaptation Projects | Please state and justify |
| **Tier 2** | |
| **Sub-sector** | **Type of qualifying projects** |
| Energy | As for tier 1, but adaptation is either only a secondary objective of the project or is a significant co-benefit of the project. |

| | |
|---|---|
| Transport | As for tier 1, but adaptation is either only a secondary objective of the project or is a significant co-benefit of the project. |
| Housing | As for tier 1, but adaptation is either only a secondary objective of the project or is a significant co-benefit of the project. |
| **Sub-sector** | **Type of qualifying projects** |
| ICT | As for tier 1, but adaptation is either only a secondary objective of the project or is a significant co-benefit of the project. |
| Water & Sanitation | As for tier 1, but adaptation is either only a secondary objective of the project or is a significant co-benefit of the project. |
| Waste | As for tier 1, but adaptation is either only a secondary objective of the project or is a significant co-benefit of the project. |
| Agriculture | As for tier 1, but adaptation is either only a secondary objective of the project or is a significant co-benefit of the project. |
| Forestry | As for tier 1, but adaptation is either only a secondary objective of the project or is a significant co-benefit of the project. |
| Fisheries | As for tier 1, but adaptation is either only a secondary objective of the project or is a significant co-benefit of the project. |
| Industry | As for tier 1, but adaptation is either only a secondary objective of the project or is a significant co-benefit of the project. |
| Early Warning Systems and disaster response | As for tier 1, but adaptation is either only a secondary objective of the project or is a significant co-benefit of the project. |
| Other Tier 2 Adaptation | As for tier 1, but adaptation is either only a secondary objective of the project or is a significant co-benefit of the project. |
| **Tier 3** | |
| **Sub-sector** | **Type of qualifying projects** |
| Tier 3 Adaptation Projects | Please state |

# Appendix IX: Detailed guidance on calculating indicators

## IX.1 Access to infrastructure – energy projects

This guidance relates to a number of different types of energy-related infrastructure:

- Transmission and distribution, i.e. connection
- Mini- and micro-grid energy generation
- Grid-tied energy generation

The majority of PIDG-supported energy projects are in energy-generation plants where the output goes into a country's national grid. There are also some projects based around gas transportation and distribution, where the LPG is being piped to power plants, and therefore the development impact Access calculation uses the relevant energy-generation method.

There are also some off-grid energy generation projects, whereby the output is into mini- and micro-grids. As large-scale energy generation becomes increasingly attractive to the private sector, this type is likely to increase in the PIDG portfolio, particularly those projects which set up solar panels in community-based micro-grids.

Finally, there are transmission and distribution projects, or energy-generation projects which include a connection programme as part of the activity funded by the PIDG-supported transaction. These are few in number principally because the connection programmes are normally run by the country's government, rather than private sector organisations.

As with all Access calculations, the PIDG policy is that Access can only be claimed for the project which is funded by the PIDG-supported transaction.

### Transmission and Distribution/Connection

There have, historically, been very few distribution projects in the PIDG portfolio, since most connection projects are undertaken by the country's government, rather than by sponsor companies.

Where a project is solely supporting connecting new users to an energy supply, the number of people with Access to New Infrastructure will simply be the number of new connections funded by the transaction in which PIDG is involved.

Where there is a grid-tied energy generation project which combines generation and connection, the new connections funded by the PIDG-supported transaction will be counted with "Access to New Infrastructure", and the improvement in quality of service to already-connected users will be represented as set out in the "Grid-tied energy generation" section below.

[For mini- and micro-grids where the project has a combination of energy generation and connection, please see below]

As with other areas of Access calculation, PIDG can only claim development impact for the activity funded by the transaction in which it is involved – number of people gaining Access from future

connection plans which are not funded by the PIDG-supported transaction cannot be included in our results.

## Energy generated for Mini- and Micro-Grids

Most of the mini-grid projects supported by PIDG include a grid-connection aspect, which means that PIDG Companies should be reporting the number of people with Access to New Infrastructure.

Calculating the Access numbers for small-scale grids is relatively straightforward, since it will be clear how many people will benefit, and this can be confirmed by PIDG's evaluation work. It is assumed that all those who are connected to the grid will benefit.

If the project is one where diesel-powered energy generation is replaced by renewables, then there needs to be a careful assessment of whether this will lead to improved quality of service for those already connected to the grid.

Although there are clearly climate-related improvements, this alone would not count as an improved quality of service to users, despite the fact that those located near the generator might benefit in terms of air-quality … etc. Instead, PIDG Companies should identify such things as whether there will be a reduced tariff, or whether the energy generated will be on a more consistent basis.

If there are no indicators of improved quality of service, then the Access figure should just reflect those new users connected as part of the project. [This does not mean ignoring the climate-change-related benefits, but these will be set out elsewhere in the RM Sheet, rather than in the Access numbers].

## Grid-tied Energy Generation

Overall, the highest prevalence in PIDG's historic portfolio has been grid-tied energy generation projects.

Previously, we have used the conversion methodology agreed by the DFI Harmonisation Group, which divided the total annual generation by the per-capita electricity consumption.

This number has always been recognised as a proxy, and one which is unlikely to be accurate; but it is recognised that it is impossible to come up with an accurate number. PIDG will be undertaking a wider-scale evaluation of the impact of grid-tied energy generation projects, but even this will still not be sufficient to provide an accurate number. Moreover, each country will have different situations which would vary the impact of energy generation projects.

The resulting number from the conversion methodology equation is generally communicated as the equivalent number of people whose average consumption the energy generation plant would be able to support; in other words, the number of new people that could be supplied with energy by the plant.

However, as noted in the introduction, there are very few projects which involve distribution and connection to the national grid (as opposed to mini-grids). Since PIDG does not claim access to infrastructure where it is not actually creating that access, our policy is that grid-tied energy

generation projects is always classified under “Access to improved quality of service”. This means that we cannot claim for new connections to the grid unless the project includes that aspect.

Therefore, it has been recognised that the DFI Harmonisation Group’s conversion equation does not really fit with our grid-tied energy generation projects.

In addition, there have always been challenges to defending the conversion methodology, in that it ignores a number of other factors:

- The “per capita electricity consumption” figures used, which come from the World Bank dataset, are based on total electricity generated, divided by the total population. This ignores the fact that – in many of the countries in which we operate – there is a low percentage of the population that is actually connected to the grid.
- Where there are multiple PIDG-supported energy generation projects in the same country, the Access figure will – in some respects – be multi-counting the “same” grid-connected users.
- Consumption rates vary by time of day and time of year, which means that the energy generation produced by some of the renewable energy sources – particularly Solar, Wind and, to a lesser extent, Hydro – will not be consumed by domestic users, unless there is some form of storage capability.
- Different households will use electricity for different purposes, depending on their levels of wealth – e.g. the poorest may use biomass for cooking, and electricity only for lights, compared to those who have white goods … etc.
- The conversion equation provides a proxy number at a specific time, but cannot take account of changing usage patterns over time. Since PIDG reports its Access on a cumulative basis, this is problematic.
- Although the PIDG calculation for Access should exclude transmission losses, it does not take account of Domestic vs. Commercial/Industrial use.
    - This is less of a problem since the equation used by the conversion methodology means that the ratio of commercial vs. domestic is factored into both the energy generated by the plant and the “consumption per capita”. Therefore the two cancel each other out

Given that energy input into the grid is fungible – i.e. it simply adds to the amount of energy input into the grid, rather than being able to be directed to specific users – the reality is that grid-tied energy generation affects all those connected to the grid.

Theoretically, therefore, it could be claimed that our projects provide improved quality of energy supply to all of the grid-connected population of a country where PIDG-supported projects are located. However, there are two problems with using these numbers:

- Unless the energy generation is particularly large, the impact per user may be minimal, and would not constitute a “noticeable” improvement in quality of energy supply. Any attempt to set a sufficient level of increased energy that all users would experience improved quality of service, would result in an arbitrary percentage level

- Claiming all grid-connected people would lead to an exponential increase in PIDG's Access figures, to the point where they would be – in most cases – unrealistic and would undermine PIDG's credibility.

Hence, what is needed is an indicator which

- is relevant to what the project is doing – i.e. providing increased electricity into the grid;
- recognises the relative incremental impact of the project;
- avoids multiple-counting of a country's grid-connected population where there is more than one project in that country; and
- ensures that PIDG results are robust, credible and defensible

## ***Option 1***

### Calculation

The sponsor's business case should provide the annual electricity generation of the plant into the grid, expressed in KWh/MWh/GWh.

This should be included in the commentary for the Access figures, and will usually be calculated as:

**(Peak Output x 8760 x Output capacity percentage) – energy used by plant – transmission losses**

- Peak Output is the figure given for the plant – e.g. "a 40MW plant"
- 8760 is the number of hours per year
- Output capacity – usually expressed as a percentage – is the fraction of the peak output that the plant can actually generate on an average basis. It takes into account such things as maintenance time, percentage of the time that the plant will operate … etc. For example, Solar and Wind power have much lower output capacity percentages than HFO, LPG or Geothermal plants.
- Energy used by plant is the energy used to keep the plant and facilities running
- Transmission losses are normally based on a percentage and vary according to the state of the grid, length of transmission line … etc.

The RM Team will provide for all PIDG Companies a table which shows – per country – the total annual GWh of electricity generated for the grid, the population of the country and the percentage of the population connected to the grid.

Access is then calculated as:

$$(Population \times \%\ connected\ to\ the\ grid) \times \frac{Project\ GWh\ into\ Grid}{(Total\ GWh\ generated + Project\ GWh)}$$

In effect, this is a compromise aiming to balance the points above, but it is recognised that the "number of people with Access to improved infrastructure" is still a proxy, and does not really reflect the actual number of people affected.

## ***Option 2***

Given the difficulties noted, PIDG has decided that using an Access figure for grid-tied energy does not reflect the nature of the development impact that such projects actually achieve.

Instead, we will be reporting this as a separate figure from the Access for other types of projects and other sectors.

Therefore, what is required is to calculate the annual electricity generation of the plant, and using the data provided by the RM Team, to prepare a table (set out at the end of this section) to be used in our reporting

### Calculation

The sponsor's business case should provide the annual electricity generation of the plant into the grid, expressed in KWh/MWh/GWh.

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**(Peak Output x 8760 x Output capacity percentage) – energy used by plant – transmission losses**

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- Energy used by plant is the energy used to keep the plant and facilities running
- Transmission losses are normally based on a percentage and vary according to the state of the grid, length of transmission line … etc.

**Grid-tied energy impact table**

| Country | Population connected to the electricity grid | Total GWh input to the grid from all plants | GWh of PIDG projects in each country |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |

### Gas distribution to an energy generation plant

There are some Gas ("LPG") projects which build or enhance gas transmission infrastructure to energy-generation plants using LPG, e.g. building or enhancing gas pipelines to generation plants. In such projects, the development impact is usually articulated (and claimed) in terms of the increased energy that the plants will generate as a result of increased supply of gas.

Before this calculation can be made, the RM Sheet must set out:

- What is being done to improve gas flow to the plant
- A calculation of the increased generation by the plant – in terms of KWh energy per year – as a result of this increased flow

Following this, the calculation will be made using whichever of the methods above is relevant; usually, it is for grid-tied energy generation projects.

## IX.2 Access to infrastructure – telecoms projects

This guidance covers a number of different types of telecoms-related infrastructure. However, it should be noted – along with the standard caveat that we only "claim" results related to the transactions in which PIDG was involved – that this is likely to change as the technology changes.

PIDG's involvement in telecoms has changed considerably in line with the readiness of the private sector to invest in telecoms infrastructure. The requirement for PIDG to be additional and at the frontier, should direct investment decisions to the point whereby PIDG Companies should not be involved in projects where private sector involvement might occur without any need for concessional financing. Hence, future telecoms projects will need to demonstrate how they are technologically and/or geographically "frontier", and thus need PIDG support.

The main areas of telecommunications infrastructure we will be covering are:

- Telecoms Towers sharing (new and refurbished)
- Expansion of network
- Broad-range telecoms/broadband connectivity (e.g. satellites and cable-laying)

Note that in ALL network- or coverage-related projects, the assessment of increase in size of network can only be taken for a two-year period. This is done so as to ensure that we are prudent in accepting that the rapid rate of technological change can make certain types of infrastructure obsolescent. This is unlikely to lead to total disuse of the network or technology, but it is assumed that it will lead to a plateau in terms of user numbers.

### Telecoms towers sharing

In such transactions (e.g. Eaton Towers, Helios Towers) the project – either purchases and refurbishes or builds new – telecom towers. Although telecoms towers are an important part of expanding a network, in these projects the main purpose is to decrease the concentration of subscribers to a particular tower, and thus reduce the level of dropped calls and network outage. As such, it is assumed that all those who are gaining Access, are being provided with Improved Quality of Service (QoS), rather than being provided with new telephone connection.

The Access is calculated on the basis of the increase in tenants (excluding the anchor tenant), multiplied by the number of subscribers per tenant (the "tenant" is the provider of the network service).

This provides a balance between the fact that mobile-phone-users will, as they move, transfer from one tower to another (i.e. one user, multiple towers), and that their "place" on the tower will then be taken by another user (i.e. one subscriber-place, multiple beneficiaries). Instead, it provides the capacity, at a point in time, for subscribers to make use of this infrastructure which will then lead to improved QoS.

The following data is required for this calculation:

- Number of new towers [*Tn*]
- Number of refurbished towers [*Tr*]
- Co-location (i.e. sharing) ratio per tower – usually calculated for an overall geographical area – to provide the number of **new** tenants [*CL*]
- Number of anchor tenant(s) [*Anchor*]
- Number of subscribers per tenant [*Subs*]

The calculation is:

**(Tn x CL x Subs) + [(New Tenants) x Subs]**

Where:

New tenants is calculated depending on whether the number of anchor tenants is given as per tower or overall:

- Per Tower: New Tenants = **(CL – Anchor) x Tr**
- Overall: New Tenants = **(CL x Tr) - Anchor**

These calculations will provide the total capacity of subscribers obtaining improved QoS at any one time, from the project's telecoms towers (i.e. *funded by the transaction*).

If the number of new tenants per tower (or per network) for refurbished towers is not available, then it can be assumed as: **(co-location rate – 1)** for each tower. However, this assumes that there was no tower sharing beforehand, which is not always the case, so it is preferable to obtain the data listed above.

Sometimes, the project sponsor will provide the total number of new tenants for the network of towers, based on the business case projections. However, even with this information, it is important to check the numbers to see if this leads to a reasonable co-location ratio.

There is an alternative which would be to look at the number of people with telephones who live within range of these towers, but this is problematic because (a) the range is somewhat limited, and (b) this ignores the fact that mobile phones enable the user to be mobile.

## Network Expansion – geographical coverage or technological enhancement

Overall, the basis for the Access numbers in this type of infrastructure project is to look at the coverage and increase in users. The underlying assumption is that a network expansion will provide

people with Access to new infrastructure, in that they will be able to be connected to a network in a place where, previously, this was not possible.

Most of the data for this calculation can be obtained from the project/company business case, and reports from the telecoms regulator. However, there are a number of areas of complexity in calculating the Access figures for these transactions:

*1: Attributing the proportion of expansion to the PIDG-supported transaction*

- Many of the PIDG's network expansion transactions are part of a wider expansion and/or financial-restructuring plan, where the funding raised by the PIDG-supported transaction is part of a larger capital expenditure pot.
    - PIDG Companies should pro-rate the development impact using a percentage calculated as "transaction TICs" / "total cost of the expansion"
- If the transaction is a bond issue aimed mainly at financial restructuring, the PIDG Company **must** ensure that its investment has a written mandate committing the company to invest an equivalent amount in Capital Expenditure.
- If there is a particular CapEx spend which is a similar amount to that put in by the PIDG Company, and the infrastructure from that spending can be clearly attributable to a specific (and separate) piece of infrastructure, PIDG can use this specific infrastructure as the basis for its Access calculation.

*2: Focusing on the infrastructure, not the company*

- The main focus when looking at the impact of the project is in terms of the number of users utilising **the infrastructure** that is funded by the PIDG-supported transaction, rather than by the market share of the company undertaking the expansion.
- This means that to calculate the incremental increase in users attributable to the project, PIDG Companies will need to identify and factor-in the other providers of telecom infrastructure.
    - This will be a key part of the calculation where the available data relates to the geographical population coverage of a network.

*3: Timing*

- As noted in the introduction, the maximum period over which growth can be measured will be for the first two years of operations.
- It is recognised that some network expansions become operational incrementally – that the infrastructure begins operating once it is in place, rather than waiting for the whole network expansion to be completed before commencing operations.
- However, the Access calculations should be based on the first two years of full operation of the expanded network.

*4: Data*

- There are a number of different ways to calculate Access for network expansions – depending on what data and forecasts are available – and some of these calculations are rather complex.
- Therefore, PIDG Companies should contact the Results Monitoring team in the pre-approval stages, when the company/sponsor business case is produced, and the RM Team will work with the PIDG Companies to identify the most robust method for calculation.

## How to calculate Access

Taking all these points into account, this section provides some general ideas about methods of calculating Access, depending on the type of information available. PIDG Companies will note that the same general approaches will apply irrespective of whether this is a simple network expansion or a rollout of a newer technology (e.g. 4G).

Data sources

The list below covers the main types and sources of data that should be gathered – we recognise that not all of this information is available:

- Projected number of subscribers:
    - at the start of operations (of the expanded network); and
    - after two years of operations
- Projected number of users of the company's infrastructure at these two dates
- Expected overall growth in subscribers for the whole country over the period
- Expected increase in company's geographical/population coverage over the period
- Market share data and projections:
    - Market share for all participants in the telecoms industry
    - Identification of which participants use their own infrastructure and which use other participants/tower-sharing services
- Total cost of company's planned network expansion

These projections will be updated as part of the Post-Completion Monitoring, which will then feed into the "Actual" Access figures

Given that not all of this data may be available, the section below sets out different ways that Access can be calculated. We have used an example to show the types of information needed and how they might be used.

**Examples of calculations: Basic Data**

- Company A operates in Country Z.
- Population is 85 million people; 95% of the population connected to a mobile network = 76m people.

- The PIDG Company is part of a $180m transaction for Company A. The whole network expansion plan will cost, in total, $600m. Therefore, the PIDG Company can claim 30% of the Access.

Current market share data (necessary):

- Company A [PIDG-supported]: 15.2m users – 20% market share – own infrastructure
- Company B: 11.4m users – 15% market share – uses Company C's infrastructure
- Company C: 26.6m users – 35% market share – own infrastructure
- Company D: 15.2m users – 20% market share – own infrastructure
- Company E: 3.8m users – 5% market share – uses Company A's infrastructure
- Company F: 3.8m users – 5% market share – own infrastructure

Company A has 15.2m users AND Company E's 3.8m users also use its infrastructure: (15.2+3.8)/76 = **25%** of all current subscribers use Company A's infrastructure

The market as a whole is expected to grow at a rate of 2.5% p.a. (straight-line)

<u>Option 1: Forecasts for geographical population coverage are available</u>

[These are normally more robust than expectations about the number of a company's subscribers]

Company A's network will increase its geographical coverage from 35% to 49% of the population.

- Increased geographical mobile-connected population that have the potential to be covered by the expanded network: (49%-35%) x (95% of 80m) = 10.64m
- However, other companies will also have infrastructure covering the same area; therefore we have to factor in Company A's share of infrastructure – 25%.
    - Hence, the more likely potential number of people likely to access Company A's infrastructure is: 10.64 x 25% = 2.66m
- The whole network expansion may lead to 2.66m people gaining Access, but the PIDG-supported transaction (not just the amount put in by the PIDG Company) is providing only 30% of the cost of the expansion.
    - Therefore the Access which can be claimed would be: 10.64m x 25% x 30% = **798,000 people**

<u>Option 2: the sponsor has forecasted expected increase in customers/subscribers for the first two years of operations of the expanded network</u>

Company A expects to have 16.5m subscribers when the expanded network becomes operational, rising to 19.5m within two years.

- There would be an increase of 3m people over the period
- Not all of these new subscribers can be attributed to the new infrastructure, since the whole market is expected to grow even without the new infrastructure

    - Therefore we need to deduct the number of new subscribers over this 2-year period who can be assumed to have joined, even without the new network
    - This would be calculated as the number of subscribers at operations date, multiplied by the growth percentage: 16.5m x (2 x 2.5%) = 825k people
- We also need to include the funding percentage of this transaction
- Hence Access would be calculated as :
    - (3m – 825k) x 30% = **652,500** people.

PIDG Companies will note that the data used in option 2 is less robust at Financial Close, since Company A knows where it wants to expand its network, whereas subscriber forecasts in a fast-changing market such as telecoms are less reliable.

However, the reliability of these forecasts is likely to increase at Post-Completion Monitoring, since the starting point will be verifiable.

Other points to note:

- Any increase in subscriber numbers or network coverage resulting from the acquisition of another company should not be included in the Access calculations, since this has nothing to do with an increase in Access for users.
    - This is one of the most common examples of incorrectly focusing on the Company, rather than the infrastructure
- Where there is a sole provider of the infrastructure (often a government-controlled company or parastatal), then all increase in users arising from the expansion can be attributed to that provider.

## Broad-range Telecoms

The challenge in calculating Access for these projects is that the level of potential coverage is so large that it is likely to be noticed and questioned. As such, wide-ranging assumptions are unlikely to be sufficiently robust to justify the large value of Access claimed – instead, there will need to be a greater level of justification than simply “maximum potential coverage”.

A further complicating factor is that the multi-country nature of some of these projects makes it difficult to identify corroborating data for the business case forecasts, and – even where such data is available – the resulting calculations are likely to be highly complex.

Given these challenges, the preferred basis for calculating Access is the number of subscribers to the service provided by this infrastructure, rather than the number of telecoms or internet users in the country/ies covered.

Where the number of overall users is the only available data, the calculations need to deduct the growth in user numbers that would have occurred without the new infrastructure.

The Access calculation will be limited – as with all Telecoms sector projects – by being based around forecasts for the first two years of operations only, so as to take account of the rapid technological change and likelihood of increased competition that occurs in this sector.

**Subscriber numbers forecasted**

- The project sponsor is likely to have forecast – as part of its business model – the expected number of subscribers in the first years of operations
- These should be reviewed alongside industry reports and studies which will have sufficient information to give some sense of the reasonableness of the forecasts
    - Note that aspirational statements in press notices – e.g. by politicians or telecoms businesses – should not be used as corroboration
- The Results Monitoring team, in its review of the "early-stage approval" papers, will help review and, if required, refine the calculation.
- When the project reaches Financial Close, there should be a forecast number of subscribers over the first two years of operations.
- By the time Post-Completion Monitoring is carried out, the PIDG Company team will be able to review the data for the first six months of operations, which will help inform the predicted figures
- Unlike most other projects, it is recommended that – even though there is usually no further update of the RM information for projects after PCM – the numbers are revisited after the first two years of operations, since this will provide accurate "Actuals" figures.

Where – as often happens for internet connection – the only data available is on the current number of users, and expectations for growth, the following data should be sought:

- Current number of users
- Expected growth in users and demand by the end of the first two years of operations
- Percentage of population that could be covered by new infrastructure

The process is to calculate what the number of users would be without the new infrastructure – based on the current number and the growth rate.

## IX.3 Access to infrastructure – agricultural projects

The starting point for all Access calculations is clearly setting out the route to impact. By identifying who the infrastructure is intended to benefit, PIDG Companies will then be able to identify the necessary data for the Access calculations.

The following types of agri-infrastructure each have a different approach to calculating the Access numbers:

1. Projects which build infrastructure enabling farmers to use new methods of farming and/or increase their own output, will have Access figures based on the number of farmers within the target area/community who can access the infrastructure.
    - In such projects, the key is to articulate how farmers will gain access to the infrastructure – the existence of the infrastructure is not sufficient to ensure this.
2. Projects which build or enhance infrastructure which enables farmers to collectivise and therefore carry out economies of scale … etc., will have Access figures based on the number of farmers within the target group – often on the basis of locale/community

3. Projects which build infrastructure so that farmers/fishermen can process or store their produce will have Access figures based on the capacity of the plant and the numbers of those within range of the infrastructure. The same is true for projects which provide logistics infrastructure for farmers.
    - In other words, the route to impact for such projects is that of enabling the farmers to utilise the processing plant
4. Processing plants for which the impact is through use of the output of those plants – e.g. fertiliser – will calculate the Access numbers on the basis of the output of the plant and the ability of the farmers to access (both in terms of cost and physical access) that output

This list covers most of the types of agri-infrastructure projects which PIDG is able to support. It is possible that there will be other types of project which are not currently covered in the PIDG portfolio. If/when such projects arise, the PIDG Company should contact the RM Team to discuss how the route to impact might be used as the basis of calculating the Access figures.

**Type 1**

- The Access figure will depend upon a clear route to impact, so that the farmers can be assured to have access to the infrastructure in question. This is likely to have multiple aspects including:
    - training/education in use of the new infrastructure;
    - affordability, or subsidising, of the infrastructure; and
    - physical access to the infrastructure.
- Once this has been clarified, the Access number will be calculated as those who can gain Access to the infrastructure based on the PIDG-supported transaction – usually, the local community/target group.
    - Plans for future expansion of the infrastructure which will be funded by the company or another transaction cannot be claimed as part of PIDG's results.
- As this is a new method/instrument for agriculture, the number of people will be included under "Access to New Infrastructure".

**Type 2**

- Access numbers for these types of project should be relatively simple, based on the target group and the expected number of those joining the programme (assumptions around this must be set out in the commentary).
- Access will usually be classified under "Access to New Infrastructure".

**Type 3**

- Access figures should be calculated based on the capacity of the agri-processing/storage infrastructure.
- The route to impact must set out who the expected users will be, and how they will gain access to the infrastructure – both in terms of cost and physical access to the plant
    - For example, a mill or fish refrigeration plant may have capacity for a large volume of produce, but only be accessible by those who can afford it, and – without transport logistics – are near enough to access it.
- The data required for such calculations will include the average output of those using the infrastructure, as well as the plant capacity
    - Thus the number for Access will be calculated as "**yearly capacity divided by annual average output of users**"
    - The assumptions behind output of users should factor in the target group of users and their ability to get their produce to the infrastructure (e.g. smallholder farmers vs. larger farming concerns)
- The Access figure should be the smaller of the results of the Access calculation and the assessment of potential users
    - i.e. Access to the infrastructure will be limited either by the infrastructure's capacity or who can actually use/afford the processing/storage infrastructure
- Access is likely to be classified as Access to New Infrastructure.

- Where the infrastructure is replacing something that was already in use, the Access numbers will be based on the **increase** in users.

**Type 4**

- This type of infrastructure is classified as agri-infrastructure because its development impact is based around the fact that the output is used for agriculture. It is not to be confused with agri-processing infrastructure (Type 3).
- As with Type 3, the route to impact must set out who the expected users will be in terms of affordability and distribution of the product
- Access will be calculated on the basis of the consumption of the output, calculated as **"Total Annual Output divided by Average annual consumption per user"**
    - It is crucial that the expected/estimated consumption amounts fit with the profile of who is expected to be able to afford/receive the product, as set out in the route to impact
- The Commentary should include these assumptions and the calculations related to them

## IX.4 Short term job creation – multi-unit construction

The first, key, point is that – as noted elsewhere in the RM Handbook and Guidance sheets – PIDG only reports the indicators for the infrastructure funded by the transaction in which PIDG is involved. In these types of projects, there are likely to be further units of infrastructure planned as part of the business's overall plan, but which are not being funded directly by the transaction in which the PIDG Company is involved, but these are not "claimed" by PIDG within its indicators.

In terms of the number of short-term FTE jobs created, the figure normally included in the RM Sheet comes from the project sponsor's business case, which should be based upon the expected "usual" number of jobs created for constructing a particular infrastructure. For the purposes of PIDG's results reporting, this number should exclude expat workers.

However, this is less easy when it comes to certain types of infrastructure which involves the construction of multiple units – for example, telecoms towers or affordable/low-cost housing.

One way of calculating the number of jobs created is to multiply the number of people required to construct one unit by the number of units. However, this assumes that there are different people working on each different unit (which would seem unlikely for commercial and practical reasons), rather than a smaller number of teams constructing multiple units over a period of time.

Instead, the PIDG approach is to obtain the following information about construction (and, in the case of telecoms towers, refurbishment):

| | *Reference* |
|---|---|
| Amount of time taken for a team to construct/refurbish a single unit of infrastructure | *T1* |
| Total amount of time spent on construction – i.e. the period during which all the infrastructure is constructed/refurbished (usually somewhere between 2 and 4 years) | *TA* |
| Total number of units to be constructed/refurbished | *U* |
| Number of workers per construction team | *N* |

The number of short-term jobs is then calculated as:

$$\frac{U}{(TA \div T1)} \times N$$

Where:

TA÷T1 = number of units which one team can construct over whole construction period

As such, the equation calculates how many teams are required to construct/refurbish all the units within the time limits of the construction period; multiplying this by the standard number of workers per team, thus provides the number of FTE short-term jobs created.

This method assumes that the project will employ a team to build as many units as possible over the construction period, rather than employing a different team for each separate unit of infrastructure.

T1, or the amount of time taken to construct one unit, is expected to vary between tasks (e.g. refurbishing vs. building telecoms towers), countries and types of infrastructure. It is also possible that T1 will change over time as technological advances are made, and local workers gain more experience in these.

As such, the commentary in the RM Sheet should set out:

- The values for T1, TA, U and N
- The sources on which T1 and N are based, particularly any variation in such figures from other projects in the same infrastructure and country
- The calculation above