IFC's Definitions and Metrics for Climate-Related Activities

IFC CLIMATE BUSINESS DEPARTMENT

VERSION: 3.1

UPDATED: APRIL 2017

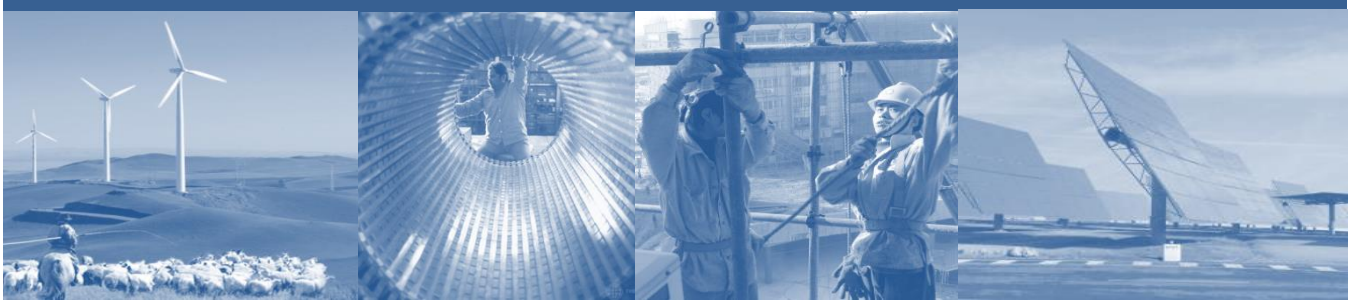

Table of Contents

Introduction 3
Climate Finance Tracking 4
Mitigation 5
Adaptation 12
Special Climate 15
Annex 1: Terms of Reference: Climate Metrics Steering Committee 17
Annex 2: History of the Document 18
Annex 3: IFC Adaptation Case Studies 19

Introduction

IFC first started tracking climate finance in 2005 and since then has expanded its climate business, partnering with stakeholders and sharing lessons learned with other financial institutions. In 2011, IFC introduced Definitions and Metrics for Climate-Related Activities (Climate Definitions) to provide institutional guidance to identify climate-related activities. This document outlines the definitions and typology that IFC uses for identifying, promoting, and tracking climate-related investment and advisory projects.

IFC periodically updates its Climate Definitions to take into account changes in the marketplace, changes in IFC's strategy, and updates to the commonly agreed principles[1] for tracking mitigation finance agreed to by the multilateral development banks.[2]

As part of the 2016 WBG Climate Change Action Plan, IFC's Climate Implementation Plan includes four objectives.

I. Scale climate investments to reach 28 percent of IFC's annual financing by 2020
II. Catalyze $13 billion in private sector capital annually by 2020 to climate sectors through mobilization, aggregation, and de-risking products
III. Maximize impact through greenhouse gas emissions reduction and resilience
IV. Account for climate risk—the physical risk of climate impacts and the carbon asset risk in IFC's investment selection

IFC will use the Climate Definitions to realize the goals in the Climate Implementation Plan and, in so doing, seeks to strengthen climate finance governance and better align climate metrics to IFC investment appraisal and business development processes.

[1] http://www.worldbank.org/content/dam/Worldbank/document/Climate/common-principles-for-climate-mitigation-finance-tracking.pdf
[2] See Annex 2 for the evolution of IFC's Climate Definitions and Metrics over time.

DIRECT MITIGATION

Direct Mitigation activities result in GHG reductions attributable to changes in an IFC client's operation as a result of IFC investments or advice. Through investments, IFC finances projects resulting in GHG reductions. Through Advisory Services, clients contract IFC to provide technical assistance to their operations leading to GHG reductions. Both are subject to ex ante appraisal of GHG emissions and other environmental and social effects, as well as ex post verification upon project completion and operation to ensure project objectives were met.

Project categories that qualify as Direct Mitigation, provided that net GHG emissions reductions are calculated,[12] are as follows.

1) Renewable energy (greenfield and brownfield)
   a. Renewable energy in electricity generation
      i. Wind power
      ii. Geothermal power
      iii. Solar power (concentrated solar power, photovoltaic power)
      iv. Biomass or biogas power
      v. Ocean power (e.g., wave, tidal, ocean currents, salt gradient)
      vi. Hydropower plants
      vii. Renewable energy power plant retrofits
   b. Heat production or other renewable energy application
      i. Solar water heating and other thermal applications of solar power in all sectors
      ii. Thermal applications of geothermal energy, including space and district heating, heating of greenhouses, heating soils and facilities for agriculture, heating aquaculture ponds
      iii. Wind-driven pumping systems or similar
      iv. Thermal applications of sustainably produced bioenergy in all sectors, including efficient, improved biomass stoves if no associated deforestation
   c. Measures to facilitate integration of renewable energy into grids
      i. New, expanded, improved transmission systems (lines, substations)
      ii. Storage systems (battery, mechanical, thermal storage,[13] pumped storage[14])
      iii. New information and communication technology, smart-grid and mini-grid
2) Lower-carbon and efficient energy generation
   a. Transmission and distribution systems
      i. Retrofit of transmission lines or substations and distribution systems (software and hardware changes) to reduce energy use and technical losses per unit of end-use consumption, including improving grid stability and reliability[15] (only if net emission reductions can be demonstrated)
   b. Power plants

[12] If GHG emission reductions are not calculated, activities listed under Direct Mitigation can be considered as Special Climate.

[13] For a quick reference to the role of thermal storage in renewable energy integration into grids, see https://www.irena.org/DocumentDownloads/Publications/IRENA-ETSAP%20Tech%20Brief%20E17%20Thermal%20Energy%20Storage.pdf

[14] For a quick reference to the role of pumped storage in renewable energy integration into grids, see https://www.esmap.org/sites/esmap.org/files/DocumentLibrary/Frederic_Louis_SEMAP_Mexico_Pumped%20storage%20VRE%20Integration.pdf

[15] In the case of capacity expansion, only the part that is reducing existing losses is included.

i. Thermal power plant retrofit to enable switch from more-GHG-intensive fuel to different, less-GHG-intensive fuel type
ii. Conversion of existing fossil fuel–based power plant to co- or tri-generation[16] technologies that generate electricity in addition to providing heating and cooling
iii. Energy-efficiency improvements in existing thermal power plant, including conversion from single- to combined-cycle electricity generation, operating changes, rehabilitation of major equipment, and installation of waste heat recovery units

c. Other
   i. Rehabilitation of district heating and cooling systems
   ii. Utility heat loss reduction and greater waste heat recovery

3) Energy efficiency:

a. Energy efficiency in industry
   i. Industrial energy efficiency improvements in existing facilities through the installation of more-efficient[17] equipment, changes in processes, reduction of heat losses, and greater waste heat recovery[18]
   ii. Installation in existing facilities of co- or tri-generation equipment
   iii. Implementation of greenfield manufacturing facilities that exceed global energy use standards[19]
   iv. More-efficient facility replacement of older facility (old facility retired)
b. Energy efficiency improvements in existing industrial, commercial (including warehouses), public, and residential buildings
   i. Energy efficiency improvement in lighting, appliances, and equipment
   ii. Substitution of co- or tri-generation plants that generate electricity in addition to providing heating and cooling for existing heating and cooling systems for buildings
   iii. Retrofit of existing buildings: architectural or building changes that enable reduction of energy consumption
c. Energy efficiency improvements in the utility sector and public services
   i. Energy efficiency improvement in utilities and public services through the installation of more-efficient lighting or equipment
   ii. Reduction of losses in utility water
   iii. Utility natural gas loss reduction
   iv. Utility auxiliary electricity consumption reduction
d. Vehicle energy efficiency fleet retrofit
   i. Existing vehicles, rail or boat fleet retrofit or replacement (e.g., use of lower-carbon fuels, electric or hydrogen technologies)
e. Energy efficiency in new commercial, public, and residential buildings
   i. Green buildings

[16] In all co- and tri-generation projects, it is required to have lower GHGs than the option without combined heat and power.
[17] Upon documented reduction in energy consumption beyond business-as-usual.
[18] GHG calculation methodology will allow for heat recovery for reduction of process heating need.
[19] Applicable to activities meeting global energy use standards ensuring best-in-class technologies and providing demonstration value within markets of operation and subject to previous guidance approved by the IFC Climate Metrics Steering Committee.

ii. Use of highly efficient architectural designs, energy-efficient appliances and equipment, and building techniques that reduce building energy consumption, exceeding available standards and complying with high energy efficiency certification or rating schemes

4) Agriculture, forestry, and land use

a. Activities that contribute to Climate Smart Agriculture[20]

i. Reduction in energy use in traction (e.g., efficient tillage) and other agricultural processes

ii. Reduction in water consumption (efficient irrigation), laser soil leveling, switching to less-water-intensive crops, water harvest and storage facilities

iii. Agricultural projects that improve existing carbon pools (e.g., rangeland management; collection and use of bagasse, rice husks, or other agricultural waste; reduced tillage techniques that increase carbon contents of soil; rehabilitation of degraded lands; peatland restoration)

iv. Reduction of non-carbon dioxide GHG emissions from agricultural practices (e.g., paddy rice production, fertilizer use)

v. Livestock and aquaculture projects that reduce methane and other GHG emissions (e.g., improved animal health, animal husbandry, manure management with biodigesters, improved nutrition, increased productivity, etc.)

b. Afforestation, reforestation, biosphere conservation

i. Afforestation (plantations) of nonforested land

ii. Reforestation on previously forested land

iii. Sustainable forest management activities that increase carbon stocks or reduce the effect of forestry activities

iv. Reduced emissions from deforestation and forest degradation

v. Biosphere conservation projects (including payments for ecosystem services) targeting reduction of emissions from the deforestation or degradation of ecosystems

c. Biofuels

i. Production of biofuels (including biodiesel and bioethanol)

5) Nonenergy GHG reductions

a. Fugitive emissions

i. Reduction of gas flaring or fugitive methane emissions in existing oil and gas industry installations

b. Carbon capture and storage

i. Carbon capture and storage projects not involving enhanced oil recovery

c. Air conditioning and refrigeration

i. Replacement of refrigerants with high global warming potential in existing industrial, commercial, or residential infrastructure with solutions with lower global warming potential

[20] IFC follows the Climate Smart Agriculture definition of the World Bank http://www.worldbank.org/en/topic/agriculture/brief/foster-climate-smart-agriculture