

Calendar Year 2015 Greenhouse Gas Emissions Inventory Report

Prepared for:

The U.S. Overseas Private Investment Corporation

Prepared by:



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INTRODUCTION

SC&A, Inc. (SC&A) performed an independent assessment of greenhouse gas (GHG) emissions from projects supported by the U.S. Overseas Private Investment Corporation (OPIC). GHGs are atmospheric compounds that absorb and emit solar radiation in the thermal infrared range of the electromagnetic spectrum. An increase in the atmospheric concentration of GHGs, in particular carbon dioxide (CO₂), has been linked to changes in the global climate and adverse impacts on both human and natural systems. In response to the challenges posed by climate change, initiatives are being developed to assess and abate GHG emissions from anthropogenic sources.

This report, prepared by SC&A, presents the analysis undertaken to quantify calendar year (CY) 2015 GHG emissions from “active” OPIC-supported projects that are determined to be “significant” sources of CO₂. “Active” projects are defined as all insurance contracts in force and all guaranty and direct loans with an outstanding principal balance as of September 30, 2016; and “significant” means more than 25,000 short tons of carbon dioxide equivalent (CO₂e) emitted per year. To account for non-significant sources of CO₂ in its portfolio (i.e., sources that emit less than 25,000 short tons of CO₂e per year), OPIC adds a “buffer” equal to 5% of the total emissions from “significant” sources.

This is OPIC’s ninth annual GHG report, and this is the fourth year that SC&A has prepared the report for OPIC. The first five annual GHG reports, including the CY 2007 Baseline Inventory, were prepared by Pace Global.

BASELINE INVENTORY DEVELOPMENT

In order to assess the GHG emissions from OPIC’s portfolio, a Baseline Inventory of CY 2007 emissions was completed in March 2009. The list of active projects that served as the initial input for the Baseline Inventory is presented in Appendix A.

In the Baseline Inventory, “significant” GHG sources were defined as active projects having a maximum Potential-to-Emit (PTE) of more than 100,000 short tons per year of direct CO₂e emissions¹. Projects exceeding the reporting threshold pertained to the energy, oil and gas, transportation, mining, manufacturing, and construction sectors. The Baseline Inventory excluded direct biogenic emissions, accidental chemical releases, and project construction emissions. Also excluded were indirect emissions related to purchased electricity or heat supply (including steam). For that reason, projects in the finance, banking, insurance, and service sectors were excluded from the GHG inventory boundary, given that their carbon footprint is driven by indirect energy purchases.

To account for non-significant sources of CO₂ in the Baseline Inventory (i.e., sources that emitted less than 100,000 short tons of CO₂e per year), OPIC added a “buffer” equal to 5% of the total emissions from “significant” sources.

¹ For the CY 2007 baseline inventory, “active” projects were defined as all insurance contracts in force and all guaranty and direct loans with an outstanding principal balance as of June 30, 2008. For all subsequent inventories, the “active” date was September 30 of the subsequent year (to coincide with the end of OPIC’s Fiscal Year). To match the EPA’s GHG reporting requirements, OPIC lowered the minimum reporting threshold for “significant” projects to 25,000 or more short tons of CO₂e per year starting with the CY 2009 GHG inventory.

The maximum PTE was estimated based on best available project information, which typically included a combination of fuel consumption data, the amount of electricity generated, generating capacity, relative project sizes, and an assumed operating capacity of 8,000 hours per year (unless otherwise noted). OPIC solicited feedback from the individual project sponsors on methods, assumptions, and operational data to corroborate the soundness of emission estimates.

The Baseline Inventory (OPIC 2007) used project sponsor-provided information in cases where OPIC received responses to the requests for data. For projects where project sponsor feedback was not received, emission estimates were developed based on a project's maximum PTE.

Revisions to Baseline Inventory

Various Egypt Subsidiaries (Apache)

In the CY 2009 GHG inventory report (OPIC 2009), the original CY 2007 emissions baseline was revised up by 1,566,685 short tons CO_{2e} to account for the additional 51% share of the Various Egypt Subsidiaries (Apache) project, which mistakenly reported its emissions in relation to its equity share of the project (49%) for the baseline year. Since OPIC requires that 100% of emissions be accounted for, regardless of the project sponsor's equity share, the additional project emissions were added to the inventory. The discrepancy was rectified and reported in 2009 to ensure consistency with OPIC's GHG accounting methodology. The revised CY 2007 emission baseline was 51,949,178 short tons of CO_{2e}.

Latin America Power III Fund

The Latin American Power III Fund (LP III) is a "blind pool" fund, and the downstream investments had not been finalized when OPIC committed to the fund. Therefore, OPIC allocated 2,077,500 short tons of CO_{2e} to the LP III Fund in the CY 2007 Baseline Inventory (which was equal to the projected PTE from the thermal power projects in the LP III pipeline at that time), and subsequent GHG reports. However, in FY 2014, LP III became fully invested without having invested in any projects that had a PTE greater than 25,000 tons of CO_{2e}. Because LP III did not have any projects in its portfolio that exceeded OPIC's GHG reporting threshold, OPIC has decided to remove these allocated emissions from this and all previous GHG inventories. After accounting for the correction from the Apache Project (see above), and removing the LP III emissions from the Baseline Inventory, the revised CY 2007 emissions baseline was **49,767,803** short tons of CO_{2e}.

2008-2012 INVENTORIES

For the CY 2008 GHG inventory (OPIC 2008), Pace Global followed the same process as during the Baseline Inventory development. The CY 2008 emission estimates were eventually revised up to account for a misallocation of Apache's GHG emissions, as discussed above. The revised CY 2008 GHG emissions total for projects active as of September 30, 2009, equaled **32,915,765** short tons of CO_{2e}. The large decrease in emissions was primarily the result of a large coal power generation project (Jorf Laster Energy) becoming inactive (due to loan repayment). Removal of this project accounted for over 85% of the CO_{2e} reductions.

Starting with the CY 2009 GHG inventory, OPIC lowered the minimum reporting threshold for “significant” projects from 100,000 to 25,000 short tons of CO₂e per year to match the EPA’s GHG reporting requirements. Because projects that were previously included in the buffer (i.e., projects between 25,000 and 100,000 tpy of CO₂e) were now being reported, OPIC defined a new buffer to account for projects emitting less than 25,000 tpy of CO₂e (see page 9 for a detailed explanation). Total CY 2009 GHG emissions for projects active as of September 30, 2010, equaled **31,824,461** short tons of CO₂e.

Subsequent inventories followed the same inventory development process as for the CY 2009 GHG inventory. CY 2010 GHG emissions for projects active as of September 30, 2011, totaled **32,480,195**. CY 2011 GHG emissions for projects active as of September 30, 2012 amounted to **32,047,719** short tons of CO₂e, and CY 2012 GHG emissions for projects active as of September 30, 2013, totaled **7,970,993** short tons of CO₂e. Emissions decreased significantly in CY 2012 because a large number of reportable projects became inactive (due to loan repayment or contract cancellation), including many carbon-intensive projects, while only a few reportable projects became active.

2013 INVENTORY SUMMARY

The CY 2013 GHG inventory followed the same inventory development process as in the previous year, with one important exemption; namely, the exclusion of estimated emissions for the Latin American Power III Fund (see page 8). Total CY 2013 emissions were **7,586,646** short tons of CO₂e.

2014 INVENTORY SUMMARY

For the CY 2014 GHG inventory, SC&A reviewed OPIC financial reports to screen projects likely to meet the reporting criteria. Additional scrutiny was given to projects previously identified as reportable, as well as new projects to OPIC’s portfolio that were active as of September 30, 2015. The outcome of the screening analysis resulted in a short list of thirteen (13) projects having a maximum PTE value equal or greater than 25,000 short tons of CO₂e per year. To provide assurance of GHG estimates, OPIC and SC&A solicited additional supporting evidence from project sponsors to corroborate GHG assertions and assumptions made by individual project sponsors.

There was one noteworthy modification to the inventory process. OPIC revised the procedure for assessing the buffer for additional sources to have a consistent picture of potential additional sources across all inventory years (see page 9). This new procedure was applied retroactively to all inventory years.

The CY 2014 GHG inventory also corrected the CY 2013 estimates for CGLOB Astarta Zhadanivka Kyiv and Qalaa Holdings based on additional communication with the project sponsor. Table 5 presents the corrected CY 2013 estimates for these two projects, as well as the updated buffer for additional sources.

The estimated CY 2014 GHG emissions for projects active as of September 30, 2015 amounted to **7,772,851** short tons of CO₂e.

2015 INVENTORY SUMMARY

The CY 2015 GHG inventory followed the same inventory development process as the previous year. Regarding emission methods, a revision was made to the fugitive and combustion emission factors for the West Africa Gas Pipeline (WAGP) project to increase traceability with cited method sources. These emission factors were applied retroactively and had the effect of revising down WAGP's maximum PTE as well as its CY 2009 and CY 2010 emission estimates.

The estimated CY 2015 GHG emissions for projects active as of September 30, 2016 amounted to **7,689,416** short tons of CO_{2e}.

METHODOLOGY

INVENTORY BOUNDARY

The CY 2015 inventory boundary extends to direct emissions from fossil fuel combustion associated with active projects having a maximum PTE over 25,000 short tons of CO_{2e} per year. “Active” projects are defined as all insurance contracts in force and all guaranty and direct loans with an outstanding principal balance at the end of OPIC’s last fiscal year (i.e., September 30, 2016). Excluded from the inventory boundary were direct biogenic emissions, refrigerant losses, process/chemical releases (e.g., methane from wastewater treatment plants), indirect emissions related to purchased electricity or heat supply (including steam), and temporary emissions from a project’s construction.

In order to maintain the original GHG inventory program objectives while addressing changing characteristics of new project sponsors, two reporting requirements have been added to the inventory boundary. First, the reporting threshold of 25,000 short tons of CO_{2e} per year applies to those assets or investment platforms specified in the project clearance description as eligible for OPIC funding. Second, for project sponsors with assets located in various countries, the reporting threshold of 25,000 short tons of CO_{2e} per year is assessed for all assets sharing the same loan identification number.

INVENTORY STRUCTURE

The reportable projects included in the CY 2015 GHG inventory are organized into three tiers. *Tier A* projects are fossil fuel-fired, power generation projects that emit more than 100,000 short tons of CO_{2e} per year. *Tier B* projects are defined as projects in the oil and gas, mining, transportation, manufacturing, construction, or other sectors that have a PTE greater than 100,000 short tons of CO_{2e} per year. *Tier C* projects are those that emit between 25,000 and 100,000 short tons of CO_{2e} per year. Additionally, the CY 2015 GHG inventory includes an estimate of GHG emissions from projects determined to be below the reporting threshold of 25,000 short tons of CO_{2e} denoted as *Buffer for Additional Sources* (see page 9).

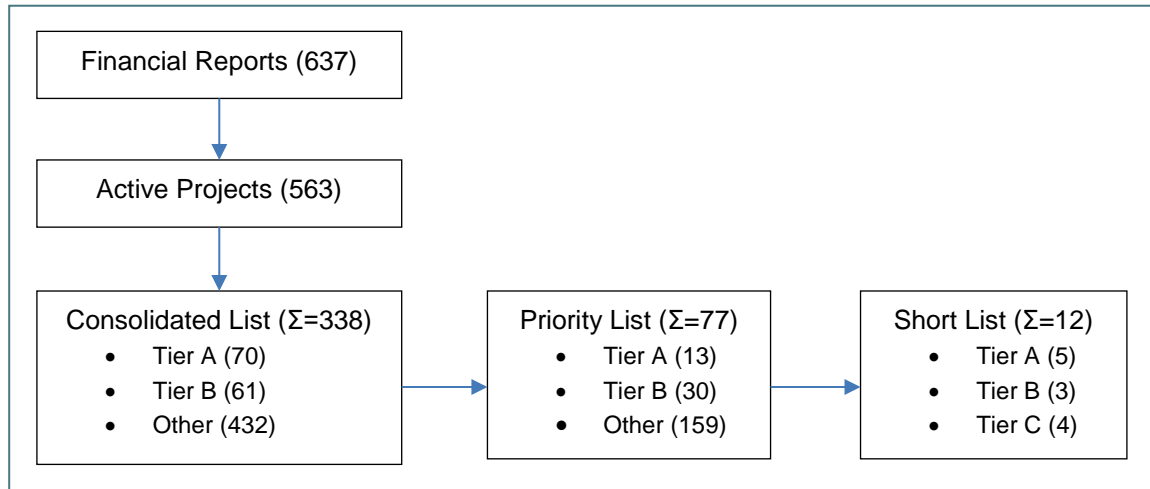
PROJECT SCREENING

SC&A evaluated financial and technical documentation provided by OPIC to identify the subset of projects meeting OPIC’s reporting criteria. The review and analysis of this documentation was conducted in several steps, as shown in Figure 1. Note that the values in parentheses indicate the number of projects assessed in each step of the process for a given category.

The starting point for the CY 2015 GHG inventory was a set of financial reports that listed 637 projects receiving OPIC support in the form of direct investment and guarantees, insurance, frameworks, or funds. SC&A consolidated information from these financial reports and extracted the set of projects that exhibited a financial exposure and disbursement status greater than zero. This first step resulted in a set of 338 entries that reflects the pool of **active projects** for consideration in the current inventory cycle. Active CY 2015 projects are listed in Appendix B. The second step consisted of developing a **consolidated list** of active projects by grouping entries sharing a common loan identification number into Tier A, Tier B, or “Other” according to their economic sector. Entries classified as “Other” were projects in the agriculture, communications, finance,

services, and tourism sectors. Third, SC&A developed a **priority list** of 77 projects by removing entries that were determined to be non-reportable in the CY 2014 GHG Inventory, as well as excluding projects in the finance, banking, insurance, and service sectors, because their emissions are the result of indirect energy purchases (e.g. purchased electricity or steam) – activities that fall outside of OPIC’s inventory scope. Finally, SC&A performed project-specific GHG assessments to ascertain which projects emitted or had a maximum PTE of at least 25,000 short tons of CO₂e. The outcome of this final step was a **short list** of 12 entries, which is presented in Table 1 along with projects that were deemed reportable in past inventories, but are no longer active (i.e., no longer part of OPIC’s portfolio) for this CY 2015 GHG inventory. Table 1 also indicates the calendar year when a project first triggered the reporting requirements.

Figure 1. Project Screening Process



DEVELOPMENT OF EMISSION ESTIMATES

SC&A reviewed relevant project-level quantification methodologies adopted in previous OPIC reports, and concluded that previous methodologies were consistent with OPIC’s GHG reporting policy. Therefore, SC&A utilized emission quantification methodologies from prior GHG inventories for many projects listed in Table 1 as *Current Reportable Projects* with a first year of reporting of CY 2011 or earlier. In other cases, SC&A conferred with OPIC on suitable emission methodologies that maintained continuity with past GHG assessments and could reasonably characterize a project’s activities, scale, and complexity.

For all projects in the CY 2015 short list, SC&A developed project-specific requests for information detailing the activity data needed to assess annual GHG emissions. All project sponsors provided CY 2015 operational data.

Table 1. Running Project Short List

Tier	Project	Country	Sector	Reporting Year	
				First	Last
<i>Current Reportable Projects</i>					
Tier A	AES Jordan	Jordan	Energy – Power	CY2007	CY2015
Tier A	AES Levant	Jordan	Energy – Power	CY2014	CY2015
Tier A	Contour Global – Togo	Togo	Energy – Power	CY2011	CY2015
Tier A	Gaza Private Generating PLC	Gaza	Energy – Power	CY2007	CY2015
Tier A	Power Finance Trust Ltd. (aka Isagen SA)	Colombia	Energy – Power	CY2007	CY2015
Tier B	Pannonia Ethanol	Hungary	Manufacturing	CY2007	CY2015
Tier B	Various Egypt Subsidiaries (Apache)	Egypt	Energy – Oil and Gas	CY2007	CY2015
Tier B	West African Gas Pipeline	Ghana	Energy – Oil and Gas	CY2007	CY2015
Tier C	Aga Khan Hospital and Medical College	Pakistan	Health Care	CY2014	CY2015
Tier C	CGLOB Astarta Zhadanivka Kyiv LLC	Ukraine	Agro-processing	CY2007	CY2015
Tier C	Joshi Technologies	Colombia	Energy – Oil and Gas	CY2009	CY2015
Tier C	Qalaa Holdings (aka Citadel)	Egypt	Manufacturing	CY2007	CY2015
<i>Past Reportable Projects</i>					
Tier A	Adapazari Elektrik Uretim	Turkey	Energy – Power	CY2007	CY2012
Tier A	AES Nigeria	Nigeria	Energy – Power	CY2007	CY2012
Tier A	Grenada Electricity Services (WRB)	Grenada	Energy – Power	CY2007	CY2013
Tier A	Doga Enerji	Turkey	Energy – Power	CY2007	CY2010
Tier A	Gebze Elektrik Uretim	Turkey	Energy – Power	CY2007	CY2011
Tier A	Habibullah Coastal Power	Pakistan	Energy – Power	CY2007	CY2008
Tier A	Izmir Elektrik Uretim	Turkey	Energy – Power	CY2007	CY2011
Tier A	Jorf Lasfar Energy	Morocco	Energy – Power	CY2007	CY2007
Tier A	NEPC Consortium Power	Bangladesh	Energy – Power	CY2007	CY2011
Tier A	Paiton Energy	Indonesia	Energy – Power	CY2007	CY2011
Tier A	Pakistan Water & Power Dev. Authority	Pakistan	Energy – Power	CY2007	CY2010
Tier A	Termovalle SCA	Colombia	Energy – Power	CY2007	CY2012
Tier A	Trakya Elektrik Uretim ve Ticaret	Turkey	Energy – Power	CY2007	CY2007
Tier B	Accroven SRL	Venezuela	Energy – Oil and Gas	CY2007	CY2008
Tier B	Baku-Tblisi-Ceyhan Pipeline	Azerbaijan	Energy – Oil and Gas	CY2007	CY2012
Tier B	E.P. InterOil	Papua New Guinea	Energy – Oil and Gas	CY2007	CY2011
Tier B	Equate Petrochemical	Kuwait	Energy – Oil and Gas	CY2007	CY2008
Tier B	Foxtrot International	Cote d'Ivoire	Energy – Oil and Gas	CY2007	CY2011
Tier B	Lukoil RPK Vysotsk	Russia	Energy – Oil and Gas	CY2007	CY2014
Tier B	Natural Gas Liquids II	Nigeria	Energy – Oil and Gas	CY2007	CY2008
Tier B	Wilpro Energy Services (El Furrial)	Venezuela	Energy – Oil and Gas	CY2007	CY2008
Tier B	Wilpro Energy Services (Pigap)	Venezuela	Energy – Oil and Gas	CY2007	CY2008
Tier C	Dominica Electricity Services	Dominican Republic	Energy – Oil and Gas	CY2009	CY2011
Tier C	Jose Lindley	Peru	Manufacturing	CY2009	CY2010

Source: OPIC and SC&A, Inc.

Tier A – Power Generation Sources

SC&A and OPIC identified five (5) projects in the CY 2015 inventory as active Tier A. In general, the maximum PTE for Tier A projects is based on an operating capacity of 8,000 hours per year (unless otherwise noted), fuel consumption data (where available), the projects' power-generating capacity in megawatts (MW), and/or specific estimates of GHG emissions provided by the project sponsor (when available). The preferred method relied on emission estimates derived from fuel consumption data. All maximum PTE estimates assume an operating capacity of 8,000 hours per year, unless otherwise noted. Project-level activity data, as well as reference conversion and emission factors used in the assessments of annual GHG emissions, are detailed in Appendix C.

Tier B – Oil & Gas and Other Large Sources

Tier B projects are projects in the oil and gas, mining, transportation, manufacturing, construction, or other sectors which have a PTE greater than 100,000 short tons per year. SC&A and OPIC identified three (3) projects on the CY 2015 short list as Tier B. Project emissions were estimated on the basis of production throughput, fuel consumption data, and/or GHG emissions data from similar facilities. All maximum PTE estimates assume an operating capacity of 8,000 hours per year, unless otherwise noted. Emission factors and other industry-relevant metrics were obtained from credible, published information sources. Activity data and calculation details are shown in Appendix C.

Tier C – Smaller Sources

The initial screen for Tier C projects excluded projects already known to exceed 100,000 short tons of CO₂e and projects previously determined to be below the threshold of 25,000 short tons CO₂e. SC&A performed inventory calculations for shortlisted projects based on project descriptions and project sponsor-provided information, as well as published data and emissions factors. SC&A and OPIC identified four (4) Tier C projects on the CY 2015 short list. Activity data and calculation details are shown in Appendix C.

Latin America Power III Fund

As discussed earlier (see page 2), because the Latin American Power III Fund (LP III) did not have any projects in its portfolio that exceeded OPIC's GHG reporting threshold at the time the fund became fully invested, the allocated emissions for LP III (2,077,500 tpy of CO₂e) were not carried over to new editions of the GHG inventory starting with FY 2014 (CY 2013 emissions). Additionally, in the CY 2013 report, OPIC retroactively removed the LP III allocation from the FY 2008-2013 inventories.

Buffer for Additional Sources

The OPIC GHG inventory assesses emissions from projects that exceed the reporting threshold of 25,000 short tons of CO₂e. It is plausible that a number of projects do not exceed 25,000 short tons of CO₂e annually, but may still have a sizeable contribution to OPIC's carbon footprint. To maintain a conservative estimate of emissions from non-reportable projects, OPIC applies a buffer based on emissions from reportable projects in a given year.

For the CY 2007 and CY 2008 inventories, the buffer for additional sources was calculated as 5% of the sum of Tier A and Tier B emissions (i.e., projects with annual emissions over 100,000 short tons of CO₂e). For the CY 2009 to CY 2013 inventories, the buffer for additional sources was defined such that the sum of Tier C emissions and the buffer would always equal 5% of Tier A and B emissions combined.

Change in Buffer Calculation

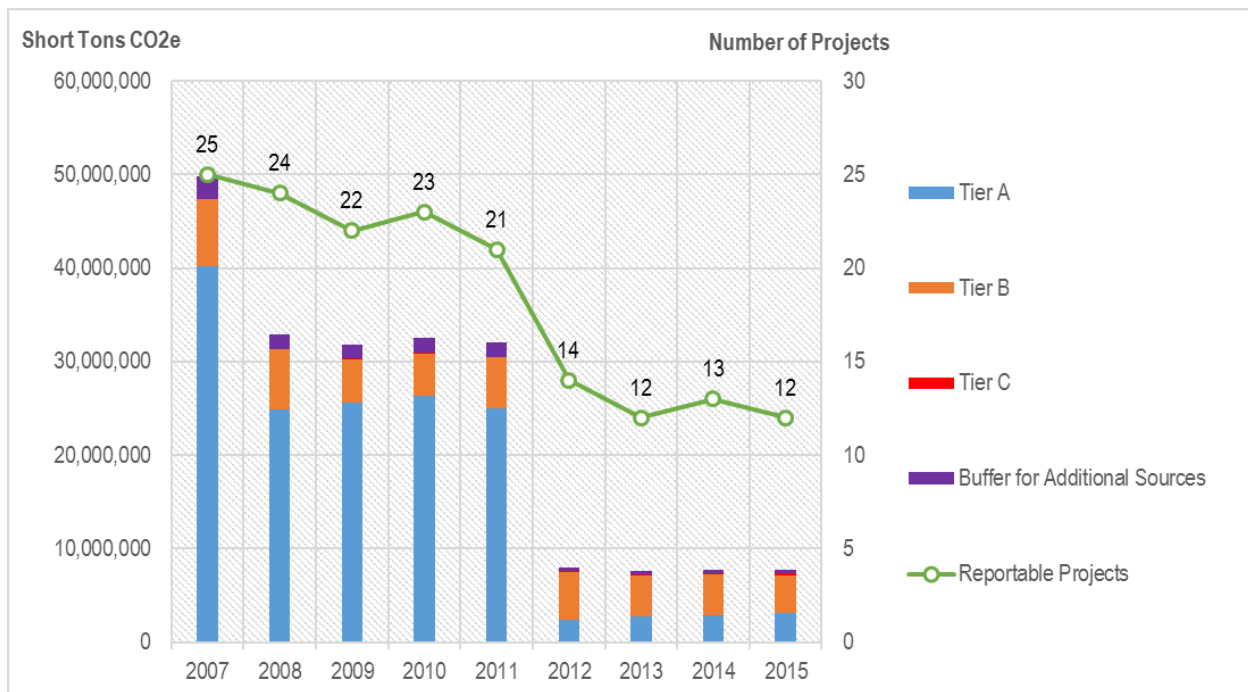
Starting with the CY 2014 inventory, the buffer for additional sources is calculated as 5% of all reportable projects (i.e., Tier A, B and C emissions combined). In the CY 2014 report, OPIC applied this calculation retroactively to emissions reported in CY 2009 – CY 2013 to have a consistent picture of potential additional sources across all inventory years. This change does not have a significant impact on the reported emissions during these years, and is a more conservative estimate than the previous method.

RESULTS

OPIC's CY 2015 GHG inventory is an estimated **7,689,416** short tons CO₂e. In CY 2015, no new projects with significant GHG emissions became operational; however, one project dropped out of OPIC's portfolio due to loan repayment, that is, Lukoil RPK Vysotsk (Tier B), that involved the construction and operation of a crude oil and petroleum terminal. Total portfolio emissions decreased slightly by 1% or 83,435 short tons CO₂e relative to CY 2014.

Figure 2 presents the GHG emission and project count trend for OPIC's inventories from CY 2007 to CY 2015.

Figure 2. OPIC Active Portfolio GHG Emissions, Calendar Years 2007 – 2015



The technical profile of projects deemed reportable since the inception of OPIC's GHG inventory is represented in Table 2. Emission inventory details starting with the base year and culminating with the 2015 GHG inventory are presented in Tables 3 through 5. Tables 3, 4 and 5 present emissions from Tier A, Tier B and Tier C projects respectively. Table 6 summarizes GHG emissions of OPIC's entire portfolio, including emissions associated with potentially unaccounted sources (i.e., Buffer of Additional Sources).

Table 2. Technical Profile of OPIC's Historical Portfolio

Project Name	Description	Capacity / Throughput	Fuel Type
Accroven SRL	NGL Facility	800 mmscf/day	Natural Gas
Adapazari Elektrik Uretim	Combined Cycle	777 MW	Natural Gas
AES Jordan	Combined Cycle	370 MW	Natural Gas & Diesel
AES Levant	Engine-Based Power Generation	240 MW	Heavy Fuel Oil & Natural Gas
AES Nigeria	Engine-Based Power Generation	270 MW	Natural Gas
Aga Khan Hospital & Medical College	Power Plant, Boilers	4.8 MW	Natural Gas
Baku-Tblisi-Ceyhan Pipeline	Crude Oil Pipeline	1.2 million barrels/day	Natural Gas & Diesel
CGLOB Astarta Zhadanivka Kyiv LLC	Agriculture	-	Natural Gas & Coal
Contour Global - Togo	Engine-Based Power Generation	100 MW	Fuel Oil & Natural Gas
Doga Enerji	Combined Cycle	180 MW	Natural Gas
Dominica Electric Services	Power Generation	-	Diesel
E.P. Interoil	Crude Oil Refinery	32,500 barrels/day	Crude Oil Refinery
Equate Petrochemical	Petrochemical Facility	1540 MMBtu/hour	Natural Gas
Foxtrot International	Gas Extraction & Pipeline	100 mmscf/day	Natural Gas
Gaza Private Generating PLC	Combined Cycle	136.4 MW	Natural Gas
Gebze Elektrik Uretim	Combined Cycle	1554 MW	Natural Gas
Grenada Electricity Services (WRB)	Engine-Based Power Generation	18 MW	Diesel
Habibullah Coastal Power	Combined Cycle	140 MW	Natural Gas
Izmir Elektrik Uretim	Combined Cycle	1554 MW	Natural Gas
Jorf Lasfar Energy	Steam Boiler	1356 MW	Coal
Jose Lindley	Manufacturing	-	Natural Gas
Joshi Technologies / Parko Services	Oil & Gas	-	Gas & Diesel
Lukoil RPK Vysotsk	Oil & Petroleum Export Terminal	6.8 million metric tons/year	Fuel Oil
Natural Gas Liquids II Financing	NGL Facility	19.5 mmscf/day	Natural Gas
NEPC Consortium Power	Engine-Based Power Generation	313,105 MMBtu	Natural Gas & Fuel Oil
Paiton Energy	Steam Boiler	1220 MW	Coal
Pakistan Water & Power Authority	Combined Cycle	150 MW	Natural Gas
Pannonia Ethanol	Ethanol Production	240 million liters	Natural Gas
Power Finance Trust (aka Isagen)	Combined Cycle	300 MW	Natural Gas
Qalaa Holdings (aka Citadel)	Manufacturing	-	Natural Gas
Termovalle SCA	Combined Cycle	205 MW	Natural Gas
Trakya Elektrik Uretim	Combined Cycle	478 MW	Natural Gas
Various Egypt Subsidiaries (Apache)	Oil & Gas Extraction & Processing	29,934,702 bbl/year 89,910 mmscf/year	Oil & Natural Gas
West Africa Gas Pipeline	Gas Compression & Transmission	190 mmscf/day	Natural Gas
Wilpro Energy Services (El Furrial)	Gas Compression	60 MW	Natural Gas
Wilpro Energy Services (Pigap)	Gas Compression	100 MW	Natural Gas

Table 3. Tier A Historical Project Emissions (Short Tons CO₂e)

Project Name	Location	Maximum PTE	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016
			CY2007 Baseline	CY2008 Emissions	CY2009 Emissions	CY2010 Emissions	CY2011 Emissions	CY2012 Emissions	CY2013 Emissions	CY2014 Emissions	CY2015 Emissions
Adapazari Elektrik Uretim	Turkey	2,706,499	2,106,754	2,106,754	2,441,657	2,426,053	2,309,241	R/C	R/C	R/C	R/C
AES Jordan [2]	Jordan	1,545,173	N/A	590,940	1,318,130	1,434,569	1,184,010	936,400	1,514,054	1,203,945	949,925
AES Levant	Jordan	1,409,533	N/A	N/A	N/A	N/A	N/A	N/A	N/A	467,262	685,110
AES Nigeria	Nigeria	1,603,307	1,166,398	1,341,157	988,271	949,754	949,754	949,754	R/C	R/C	R/C
Contour Global - Togo	Togo	587,305	N/A	N/A	N/A	Below Threshold	46,561	126,192	161,830	55,467	210,901
Doga Enerji	Turkey	816,057	740,762	740,762	672,014	655,981	R/C	R/C	R/C	R/C	R/C
Gaza Private Generating PLC	Gaza	481,485	293,804	303,535	325,926	228,627	405,262	Below Threshold	161,215	193,406	253,808
Gebze Elektrik Uretim	Turkey	5,412,998	4,121,923	4,121,923	4,794,979	4,833,330	4,535,511	R/C	R/C	R/C	R/C
Grenada Electricity Services	Grenada	141,127 [1]	114,571	121,156	141,127	135,237	134,371	131,206	130,221	R/C	R/C
Habibullah Coastal Power	Pakistan	487,658	447,880	447,880	R/C	R/C	R/C	R/C	R/C	R/C	R/C
Izmir Elektrik Uretim	Turkey	5,412,998	4,694,380	4,694,380	4,300,376	4,739,787	4,824,511	R/C	R/C	R/C	R/C
Jorf Lasfar Energy	Morocco	14,268,496	14,268,496	R/C	R/C	R/C	R/C	R/C	R/C	R/C	R/C
NEPC Consortium Power	Bangladesh	383,159	245,795	343,581	255,734	297,068	297,068	R/C	R/C	R/C	R/C
Paiton Energy	Indonesia	10,045,869 [1]	9,553,044	9,553,044	9,624,125	9,854,076	10,045,869	R/C	R/C	R/C	R/C
Pakistan Water & Power Authority [3]	Pakistan	522,490	522,490	522,490	283,937	283,937	R/C	R/C	R/C	R/C	R/C
Power Finance Trust (aka Isagen)	Colombia	980,011 [1]	203,010	Below Threshold	300,706	305,181	305,181	305,181	775,357	980,011	963,992
Termovalle SCA [4]	Colombia	714,070	Below Threshold	Below Threshold	223,983	223,983	Below Threshold	R/C	R/C	R/C	R/C
Trakya Elektrik Uretim	Turkey	1,818,912	1,747,956	R/C	R/C	R/C	R/C	R/C	R/C	R/C	R/C

NOTE: "N/A" indicates that a project was not yet active in the OPIC Portfolio during that year, and "R/C" indicates that the project was either repayed (loan or guarantee) or cancelled (insurance) prior to the cutoff date for that year.

[1] Maximum PTE was calculated on the basis of a project's maximum operating capacity. When maximum operating capacity could not be properly determined, the maximum PTE was set equal to the highest annual emission level assessed in this or prior OPIC GHG inventories.

[2] Sharp emission increase due to ramped-up energy production from 10,103,603 MMBtu in CY 2007 to 22,536,748 MMBtu in CY 2008.

[3] CY 2009 emissions are significantly lower due to fewer reported operating hours.

[4] CY 2009 emissions are significantly higher due to increased reported operating hours.

Table 4. Tier B Historical Project Emissions (Short Tons CO₂e)

Project Name	Location	Maximum PTE	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016
			CY2007 Baseline	CY2008 Emissions	CY2009 Emissions	CY2010 Emissions	CY2011 Emissions	CY2012 Emissions	CY2013 Emissions	CY2014 Emissions	CY2015 Emissions
Accroven SRL	Venezuela	998,677	998,677	445,832	R/C	R/C	R/C	R/C	R/C	R/C	R/C
Baku-Tblisi-Ceyhan Pipeline	Azerbaijan	787,577 [1]	707,672	707,672	787,577	723,214	671,605	584,200	R/C	R/C	R/C
E.P. Interoil	Papua New Guinea	802,469	392,296	103,247	79,709	75,928	74,985	R/C	R/C	R/C	R/C
Equate Petrochemical	Kuwait	720,573	720,573	680,311	R/C	R/C	R/C	R/C	R/C	R/C	R/C
Foxtrot International [2]	Cote d'Ivoire	104,484 [1]	104,484	104,484	104,484	Below Threshold	27,746	R/C	R/C	R/C	R/C
Lukoil RPK Vysotsk [3]	Russia	107,184	70,767	70,767	76,339	97,117	91,143	92,696	95,070	99,423	R/C
Natural Gas Liquids II Financing	Nigeria	390,806	244,048	244,048	R/C	R/C	R/C	R/C	R/C	R/C	R/C
Pannonia Ethanol	Hungary	113,785 [1]	N/A	N/A	N/A	N/A	N/A	64,244	93,251	101,474	113,785
Various Egypt Subsidiaries (Apache) [4]	Egypt	4,438,554 [1]	3,071,932	3,244,189	3,294,654	3,465,842	4,438,554	4,178,447	4,056,437	4,012,346	3,891,093
West Africa Gas Pipeline	Ghana	189,800	N/A	N/A	189,800	70,925	86,617	86,617	86,617	86,617	68,281
Wilpro Energy Services (El Furrial)	Venezuela	289,106	289,106	289,106	R/C	R/C	R/C	R/C	R/C	R/C	R/C
Wilpro Energy Services (Pigap)	Venezuela	571,090 [1]	571,090	571,090	R/C	R/C	R/C	R/C	R/C	R/C	R/C

NOTE: "N/A" indicates that a project was not yet active in the OPIC Portfolio during that year, and "R/C" indicates that the project was either repayed (loan or guarantee) or cancelled (insurance) prior to the cutoff date for that year.

[1] Maximum PTE was calculated on the basis of a project's maximum operating capacity. When maximum operating capacity could not be properly determined, the maximum PTE was set equal to the highest annual emission level assessed in this or prior OPIC GHG inventories.

[2] Foxtrot maximum PTE corresponds to the peak emissions year when the project was active. In 2010, Foxtrot operated for a minimal period of time and thus had corresponding GHG emissions below the established threshold.

[3] Lukoil has the Potential-to-Emit over 100,000 tons CO₂ annually, although emissions have been reported below this level to date.

[4] In 2007 and 2008, Apache reported their emissions in relation to their equity share of the project (49%). OPIC accounts 100% of a project's emissions regardless of equity share. As a result, emissions data for 2007 and 2008 were revised up to conform to OPIC standards.

Table 5. Tier C Historical Project Emissions (Short Tons CO₂e)

Project Name	Location	Description	Maximum PTE	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016
				CY2009 Emissions	CY2010 Emissions	CY2011 Emissions	CY2012 Emissions	CY2013 Emissions	CY2014 Emissions	CY2015 Emissions
Aga Khan Hospital & Medical College	Pakistan	Health Care	72,965	N/A	N/A	N/A	N/A	N/A	25,064	28,653
CGLOB Astarta Zhadanivka Kyiv	Ukraine	Agriculture	38,404 [1]	N/A	N/A	Below Threshold	36,886	25,470	38,404	32,202
Dominica Electric Services	Dominican Republic	Power Generation	50,084 [1]	50,084	50,084	50,084	R/C	R/C	R/C	R/C
Jose Lindley	Peru	Manufacturing	25,000 [1]	25,000	25,000	R/C	R/C	R/C	R/C	R/C
Joshi Technologies / Parko Services	Colombia	Oil & Gas	91,861 [1]	30,398	57,826	43,564	52,894	73,685	91,861	91,224
Qalaa Holdings (aka Citadel)	Egypt	Manufacturing	105,821	N/A	N/A	N/A	46,707	52,169	47,437	34,279

NOTE: “N/A” indicates that a project was not yet active in the OPIC Portfolio during that year, and “R/C” indicates that the project was either repayed (loan or guarantee) or cancelled (insurance) prior to the cutoff date for that year.

[1] Maximum PTE was calculated on the basis of a project’s maximum operating capacity. When maximum operating capacity could not be determined, the maximum PTE was set equal to the highest annual emission level assessed in this or prior OPIC GHG inventories.

Table 6. Summary of OPIC Historical Portfolio Emissions (Short Tons CO₂e)

	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016
Inventory Item	CY2007 Baseline	CY2008 Emissions	CY2009 Emissions	CY2010 Emissions	CY2011 Emissions	CY2012 Emissions	CY2013 Emissions	CY2014 Emissions	CY2015 Emissions
Tier A	40,227,263	24,887,602	25,670,965	26,367,582	25,037,339	2,453,314	2,742,677	2,900,090	3,063,735
Tier B	7,170,645	6,460,746	4,532,563	4,433,027	5,390,650	5,006,203	4,331,375	4,299,859	4,073,160
Tier C	NQ [3]	NQ [3]	105,482	132,910	93,648	136,486	151,325	202,766	186,358
Tier A, B, C Subtotal	47,397,908	31,348,348	30,309,010	30,933,519	30,521,637	7,596,003	7,225,377	7,402,715	7,323,253
Latin America Power III Fund [1]	0	0	0	0	0	0	0	0	0
5% Buffer for Additional Sources [2]	2,369,895	1,567,417	1,515,451	1,546,676	1,526,082	379,800	361,269	370,136	366,163
TOTAL:	49,767,803	32,915,765	31,824,461	32,480,195	32,047,719	7,970,993	7,586,646	7,772,851	7,689,416

[1] Per agreement between Latin American Power III and OPIC, the Fund agreed to “not make an investment in a Portfolio Company if after such investment, the assets and operations of all Portfolio Companies then held by the Fund would emit (in the aggregate and on a calendar-year basis) in excess of 2,077,500 short tons CO₂ as calculated in accordance with the IPCC”. In FY 2014, OPIC determined that the Fund would not invest in any power-generating projects; therefore, the allocation for the Latin American Power III Fund was not included in the FY 2014 inventory and subsequent inventories. To ensure the reported emissions are accurate, OPIC retroactively removed this allocation from the FY 2008-2013 inventories.

[2] For the CY 2007 Baseline and CY 2008 inventories, the buffer was calculated as 5% of all reportable projects (i.e., those projects that emitted more than 100,000 short tons per year of CO₂e). For the original CY 2010, CY 2011, CY 2012, and CY 2013 emissions, the buffer was calculated so that the buffer plus projects that emitted between 25,000 and 100,000 short tons of CO₂e was equal to 5% of emissions from projects that emitted more than 100,000 short tons of CO₂e. Starting with the CY 2014 inventory, the buffer for additional sources was calculated as 5% of reportable projects (i.e., Tier A, B and C emissions combined). OPIC applied this calculation retroactively to the buffer for CY 2009 – CY 2013, which resulted in an increase in the buffer, and a subsequent increase in reported emissions of between 0.3% and 2.3%.

[3] Not quantified during that year.

APPENDIX A – 2007 ACTIVE PROJECTS

This table lists projects active as of June 30, 2008 that were screened during the 2007 GHG inventory development process.

PROJECT NAME	COUNTRY	SECTOR
FINANCE		
TB-ANDREW & WILLIAMSON FRESH PRODUCE	MEXICO	AGRI
FLAMA DE ORO S.A.	GUATEMALA	AGRI
FLAMA DE ORO, S.A.	GUATEMALA	AGRI
BESCH INT'L, INC/SAN MARTIN FARMS CIA. LTDA.	ECUADOR	AGRI
BRUCH SIDE FARMS AGROPECUARIA DO BRAZIL LTDA	BRAZIL	AGRI
EL SALADERO UY S.R.L.	URUGUAY	AGRI
DMITROV DAIRY FARMS. CJSC	RUSSIA	AGRI
ROTA INTERNATIONAL EXPORTING, LLC.	GUINEA-BISSAU	AGRI
LA FUTURA, S.A.	GUATEMALA	AGRI
WBC-FORESTRADO, INC	LATIN AMERICA REGIONAL	AGRI
WBC-SOUTHERN VALLEY FRUIT & VEGETABLE, INC.	MEXICO	AGRI
WBC-MARICULTURA DEL NORTE, S.DE R.L. DE C.V.	MEXICO	AGRI
CSA-REY BANANO DEL PACIFICO C.A.	ECUADOR	AGRI
LEAWOOD INVESTMENTS INC/BARRIEFIELD LLC	COLOMBIA	AGRI
CELLCOM TELECOMMUNICATIONS INC.	LIBERIA	COMM
SABLE-CELLCOM TELECOMMUNICATIONS INC	LIBERIA	COMM
RURALFONE, INC.	BRAZIL	COMM
ZAO STAR NETWORKS	RUSSIA	COMM
CAFR-MIC TANZANIA LIMITED (TZS)	TANZANIA	COMM
CAFR-MIC TANZANIA LIMITED (USD)	TANZANIA	COMM
CASIA-PACIFIC BANGLADESH TELECOM LIMITED	BANGLADESH	COMM
CPAK-PAKISTAN MOBILE COMMUNICATION(PMCL)	PAKISTAN	COMM
AGROTERMINAL LTD.	RUSSIA	CONS
ATLANTIC GROUP (UGANDA) LTD.	UGANDA	CONS
CUSTOMIZED CONSTRUCTION, INC.	AFGHANISTAN	CONS
INTERNATIONAL DEVELOPMENT TRUST IRAQ	IRAQ	CONS
ROUMEL DEVELOPMENT CORPORATION 2	BOSNIA-HERZEGOVINA	CONS
INTERNATIONAL VILLAGE SH.P.K.	KOSOVO	CONS
GHP(HONDURAS)LLC/GLOBAL HOUSING DEVELOPMENT	HONDURAS	CONS
MASKAN, INC. (TRANCHE A)	AFGHANISTAN	CONS
AFCO-KANDAHAR VALLEY, LLC	AFGHANISTAN	CONS
ROUMEL DEVELOPMENT CORPORATION	BOSNIA-HERZEGOVINA	CONS
JOPA VILLAS, LLC	KENYA	CONS
AMEBRASIL CONSTRUCOES LIMITADA	BRAZIL	CONS
WBC-MONOLITHIC HOUSING S.A.	MEXICO	CONS
SIGMA INTERNATIONAL CONSTRUCTION LLC.	IRAQ	CONS
CENTRAL EAST AFRICA RAILWAYS COMPANY LIMITED	MALAWI	CONS
CONDOMINIOS RIVERSIDE ETAPA II, S.A.	COSTA RICA	CONS
SOUTH AFRICA FINANCING ENTERPRISE	SOUTH AFRICA	CONS
VISTAS BELIZE LTD	BELIZE	CONS
CORREDOR DE DESENVOLVIMENTO DO NORTE S.A.R.L	MOZAMBIQUE	CONS
SOCIEDAD CONCESIONARIA VESPUICIO NORTE EXPRES	CHILE	CONS
EMERGENCY LIQUIDITY FACILITY, L.P.	LATIN AMERICA REGIONAL	FIN
AEGIS INVESTMENT COMPANY	ALL OPIIC COUNTRIES	FIN
CITIBANK, N.A.(RUSSIA/CIS LENDING FACILITY)	NIS REGIONAL	FIN
MIDDLE EAST INVESTMENT INITIATIVE, INC.	GAZA	FIN
CITIBANK, N.A.(PAKISTAN ON LENDING FACILITY)	PAKISTAN	FIN
HONDURAS HOMES, S.A.	HONDURAS	FIN
AFGHAN GROWTH FINANCE LLC	AFGHANISTAN	FIN
BANCO DE CREDITO CENTROAMERICANO, S.A.	NICARAGUA	FIN
BANCO DE CREDITO CENTROAMERICANO, S.A.	NICARAGUA	FIN
BANCO LAFISE HONDURAS, S.A.	HONDURAS	FIN
CMFI-K-REP BANK	KENYA	FIN
FIRST MORTGAGE COMPANY UCO, LLC	ARMENIA	FIN
HFA ZAMBIA LIMITED	ZAMBIA	FIN
INTER-MAC INTERNATIONAL, INC.	HONDURAS	FIN
IRAQ MIDDLE MARKET DEVELOPMENT FOUNDATION	IRAQ	FIN

PROJECT NAME	COUNTRY	SECTOR
MIDDLE EAST INVESTMENT INITIATIVE, INC.	GAZA	FIN
NHCAPSTONE HOLDING GROUP LIMITED	LEBANON	FIN
RUSSIAN ASSET MBS, S.A.	RUSSIA	FIN
TAMEER MICROFINANCE BANK LIMITED	PAKISTAN	FIN
THE COOPERATIVE HOUSING FOUNDATION LEBANON	LEBANON	FIN
W3-BANCO FINANCIERO DEL PERU	PERU	FIN
W3-RIZAL COMMERCIAL BANKING CORP	PHILIPPINES	FIN
W3-SEKERBANK A.S.	TURKEY	FIN
MEII-AL RAFAH BANK	WEST BANK	FIN
MEII-BANK OF PALESTINE	WEST BANK	FIN
COUNTERPART INTERNATIONAL, INC.	PHILIPPINES	FIN
CMFI-TAMWEELCOM	JORDAN	FIN
THE COOPERATIVE HOUSING FOUNDATION	MEXICO	FIN
CALVERT SOCIAL INVESTMENT FOUNDATION	ALL OPIC COUNTRIES	FIN
CMFI-FINANCIERA SOLIDARIA (FINSOL)	HONDURAS	FIN
CMFI-UGANDA FINANCE TRUST	UGANDA	FIN
CMFI-PRIDE UGANDA	UGANDA	FIN
CMFI-CENTER FOR AGRICULTURE & RURAL DEVELOP	PHILIPPINES	FIN
LIBERIAN ENTERPRISE DEVELOPMENT FINANCE CO.	LIBERIA	FIN
CMFI-UGANDA MICROFINANCE LIMITED	UGANDA	FIN
CONSERVATION INTERNATIONAL FOUNDATION	ALL OPIC COUNTRIES	FIN
NCB-DENIZBANK PURPOSE B	TURKEY	FIN
CMFI-APOYO INTEGRAL, S.A. DE C.V.	EL SALVADOR	FIN
CMFI-FUNDACION INTEGRAL COMUNITARIA (FINCA)	MEXICO	FIN
BANCO LAFISE HONDURAS, S.A.	HONDURAS	FIN
WBC-RABITABANK OJSC	AZERBAIJAN	FIN
THE COOPERATIVE HOUSING FOUNDATION	ROMANIA	FIN
SOA KREDIT NON-BANKING CREDIT ORGANIZATI LLC	AZERBAIJAN	FIN
THE COOPERATIVE HOUSING FOUNDATION	ROMANIA	FIN
MICROFINANCE SECURITIES XXEB SA JUNIOR	ALL OPIC COUNTRIES	FIN
PROCREDIT, S.A.	MOLDOVA	FIN
NCB-NBD BANK, JOINT-STOCK COMPANY	RUSSIA	FIN
CMFI-KAZMICROFINANCE LLC	KAZAKHSTAN	FIN
RKU FRANCHISING LIMITED	RUSSIA	FIN
W2-FINANSBANK A.S.	TURKEY	FIN
GLOBAL PARTNERSHIPS MICROFINANCE FUND2006LLC	LATIN AMERICA REGIONAL	FIN
CPAK2-KASHF FOUNDATION	PAKISTAN	FIN
PROCREDIT BANK (TRANCHE 2)	UKRAINE	FIN
W2-ANADOLUBANK	TURKEY	FIN
W2-AYSA FINANS	TURKEY	FIN
CHF/L-FRANSABANK S.A.L.	LEBANON	FIN
BANCO LAFISE, S.A. (TRANCHE 3)	COSTA RICA	FIN
BANCO DE CREDITO CENTROAMERICANO, S.A.	NICARAGUA	FIN
WBC-GEORGIAN LEASING COMPANY, LLC	GEORGIA	FIN
CSI LATINA FINANCIAL, INC.	MEXICO	FIN
GREENWICH FINANCIAL SERVICES, L.L.C.	RUSSIA	FIN
MICROFINANCE SECURITIES XXEB SA SENIOR	ALL OPIC COUNTRIES	FIN
EMERGING MARKETS CONSULTING (PRIVATE) LTD.	PAKISTAN	FIN
IRAQ MIDDLE MARKET DEVELOPMENT FOUNDATION	IRAQ	FIN
WBC-NBD BANK	RUSSIA	FIN
CHF/L-JAMAL TRUST BANK S.A.L.	LEBANON	FIN
WBC-OJSC COMMERCIAL BANK "SDM-BANK"	RUSSIA	FIN
CASIA-LANKA ORIX LEASING COMPANY LTD.	SRI LANKA	FIN
SOA KREDIT NON-BANKING CREDIT ORGANIZATI LLC	AZERBAIJAN	FIN
W3-CREDICORP BANK, S.A.	PANAMA	FIN
NCB-DENIZBANK A.	TURKEY	FIN
GHANA HOME LOANS (FUND 1) LIMITED	GHANA	FIN
W2-BANK CENTERCREDIT	KAZAKHSTAN	FIN
WBC-ZAO DELTALEASING	RUSSIA	FIN
WBC-BANK OF GEORGIA	GEORGIA	FIN
WBC-INDEPENDENT LEASING, LLC	RUSSIA	FIN
WBC-SOTSIALNIY GORODSKOY BANK (SOTSGORBANK)	RUSSIA	FIN
BANCO LAFISE S.A.	COSTA RICA	FIN
W-BANCO FINANCIERA COMERCIAL HONDURENA	HONDURAS	FIN
PROCREDIT BANK	UKRAINE	FIN

PROJECT NAME	COUNTRY	SECTOR
MICROFINANCE SECURITIES XXEB SA MEZZANINE	ALL OPIC COUNTRIES	FIN
W2-FIRST INVESTMENT BANK BULGARIA	BULGARIA	FIN
W2-TEKSTIL BANKASI, A.S.	TURKEY	FIN
UMBRALCAPITAL, S.A.P.I. DE C.V.	MEXICO	FIN
NCB2 –OYAK BANK A.S.	TURKEY	FIN
NCB2-TURK EKONOMI BANKASI A.S.(T.E.B.)	TURKEY	FIN
NCB2-BANK ASYA KATALIM, A.S.	TURKEY	FIN
W-FIRST INVESTMENT BANK	BULGARIA	FIN
CSA-BANCO REGIONAL, S.A.	PARAGUAY	FIN
NCB-OJSC SIBACADEMBANK	RUSSIA	FIN
CCA2-BANCA PROMERICA, S.A.	COSTA RICA	FIN
CCA2-BANCO IMPROSA, S.A.	COSTA RICA	FIN
CCA2-BANCO MERCANTIL, S.A.	HONDURAS	FIN
SMALL BUSINESS CREDIT BANK (TRANCHE A)	RUSSIA	FIN
SMALL BUSINESS CREDIT BANK (TRANCHE B)	RUSSIA	FIN
CSA-BANCO PROCREDIT ECUADOR	ECUADOR	FIN
NCB3-LOCKO BANK	RUSSIA	FIN
NCB3-TRANSCAPITAL BANK JSC	RUSSIA	FIN
W2-BANCO DEL PAIS, S.A.	HONDURAS	FIN
W2-PROBUSINESSBANK	RUSSIA	FIN
W3-BANCO PINE, S.A.	BRAZIL	FIN
W3-BANCO REFORMADOR, S.A.	GUATEMALA	FIN
CASIA-BRAC	BANGLADESH	FIN
CASIA-SKS MICROFINANCE PRIVATE LTD.	INDIA	FIN
CHOUS-BANCO DE LA PRODUCCION S.A.	NICARAGUA	FIN
NCB3-BANCO PINE S.A.	BRAZIL	FIN
W2-ALLIANCE BANK	KAZAKHSTAN	FIN
NCB3-CENTER-INVEST BANK JSC	RUSSIA	FIN
CPAK-ORIX LEASING PAKISTAN LIMITED	PAKISTAN	FIN
CLEB-BANQUE LIBANO-FRANCAISE S.A.L.	LEBANON	FIN
BAN-CREDITO INMOBILIARIO S.A. DE C.V.	MEXICO	FIN
BANCO LAFISE, S.A. (TRANCHE 2)	COSTA RICA	FIN
NCB2-BANCO MERCANTIL DO BRASIL S.A.	BRAZIL	FIN
W2-SIBACADEMBANK	RUSSIA	FIN
W2-TURK EKONOMI BANK	TURKEY	FIN
CLOSED JOINT STOCK COMPANY DELTALEASING	RUSSIA	FIN
NCB3-ROSEUROBANK	RUSSIA	FIN
INTERNATIONAL MORTGAGE BANK	UKRAINE	FIN
NCB2-TURK EKONOMI BANKASI A.S. PURPOSE B	TURKEY	FIN
W-OYAK BANK	TURKEY	FIN
W3-TURKIYE GARANTI BANKASI AS	TURKEY	FIN
NCB3-BANK CENTER CREDIT JSC	KAZAKHSTAN	FIN
CNIS-JSC KAZKOMMERTSBANK	KAZAKHSTAN	FIN
CNIS-JSC HALYK BANK	KAZAKHSTAN	FIN
CHOUS-BANCO FINANCIERA COMMERCIAL HONDURENA	HONDURAS	FIN
NCB2 –BANK TURAN ALEM	KAZAKHSTAN	FIN
W2-OYAK BANK A.S.	TURKEY	FIN
NCB2-JSC PROMSVYAZBANK	RUSSIA	FIN
W2-BANCO ATLANTIDA	HONDURAS	FIN
PROCREDIT HOLDING A.G.	ALL OPIC COUNTRIES	FIN
W2-JSC BANK TURAN ALEM	KAZAKHSTAN	FIN
IRAQ MIDDLE MARKET DEVELOPMENT FOUNDATION	IRAQ	FIN
W2-AKBANK T.A.S.	TURKEY	FIN
ZAO EUROPLAN	RUSSIA	FIN
CHOUS-BANRURAL S.A.	GUATEMALA	FIN
CLEB2-BANK AUDI SAL-AUDI SARADAR GROUP	LEBANON	FIN
NCB3-ALLIANCE BANK JSC	KAZAKHSTAN	FIN
NCB3-ATF BANK JSC	KAZAKHSTAN	FIN
REFORMA BLN-BACKED I	MEXICO	FIN
CLEB-BANKMED S.A.L.	LEBANON	FIN
CLEB-BYBLOS BANK S.A.L.	LEBANON	FIN
BLUEORCHARD MICROFINANCE SECURITIES I LLC	ALL OPIC COUNTRIES	FIN
TRADE BANK OF IRAQ	IRAQ	FIN
ZAO COMMERCIAL BANK DELTACREDIT	RUSSIA	FIN
ZAO EUROPLAN	RUSSIA	FIN

PROJECT NAME	COUNTRY	SECTOR
HOUSING FOR HIV, INC.	SOUTH AFRICA	FIN
PT. PADI MURNI INDONESIA	INDONESIA	MFR
ELLICOTT DREDGES IRAQ, LLC	IRAQ	MFR
NAMGEM TRADING BVI LIMITED	NAMIBIA	MFR
PALCO SP.ZO.O.	POLAND	MFR
TB-WISENBAKER BUILDING SERVICES, LTD.	BRAZIL	MFR
ZAO SOLNTSE MEXICO	RUSSIA	MFR
PURPLE RHINO IMPORTS, INC.	SOUTH AFRICA	MFR
NATURA BEVERAGE LLC	CAMEROON	MFR
DESARROLLO DE RIO PACORA SA	PANAMA	MFR
DESARROLLO DE RIO PACORA SA	PANAMA	MFR
GOLDEN CYPRESS WATER CO. LTD.	PHILIPPINES	MFR
ZAO NUMOTECH-SPEKTR	RUSSIA	MFR
RAYMOND DE VENEZUELA, C.A.	VENEZUELA	MFR
WESTSTAR PRECISION, INC.	COSTA RICA	MFR
NATURA BEVERAGE, LLC	CAMEROON	MFR
MAGNUM MACHINING INCORPORATED	MEXICO	MFR
QWO JOINT STOCK COMPANY	AFGHANISTAN	MFR
ADOBERIA SAHEL, S.A.	MALI	MFR
V G ENTERPRISES, INC.	RUSSIA	MFR
CASAMAR MAURITIUS, LTD./CASAMAR INDIAN OCEAN	MAURITIUS	MFR
SERVICIO GRAFICOS QUIPUS	BOLIVIA	MFR
BAKU OIL TOOLS, LTD.	AZERBAIJAN	MFR
DOMES INTERNATIONAL, INC.	ASIA REGIONAL	MFR
SAFI APPAREL CORPORATION	AFGHANISTAN	MFR
CAMAS GHANA INC.	GHANA	MFR
CPAK2-ENGRO VOPAK TERMINAL LTD	PAKISTAN	MFR
NUMOTECH, INC.	RUSSIA	MFR
AFRICAN-AMERICAN TRADING COMPANY, INC.	GHANA	MFR
RAYMOND DE VENEZUELA, C.A.	VENEZUELA	MFR
PRODUCTORA DE PAPELES SA (SUBORDINATED DEBT)	COLOMBIA	MFR
WBC-PREFERRED BRANDS INTERNATIONAL, LLC	INDIA	MFR
ZAO NYPRO	RUSSIA	MFR
SWEETWATER PAKISTAN (PRIVATE) LIMITED	PAKISTAN	MFR
QWO JOINT STOCK COMPANY	AFGHANISTAN	MFR
ACAI DO AMAPA AGROINDUSTRIAL LTDA.	BRAZIL	MFR
SANTE GMT PRODUCTS LTD.	GEORGIA	MFR
WBC-PREFERRED BRANDS INTERNATIONAL, LLC	INDIA	MFR
LAGRAY CHEMICAL COMPANY LTD	GHANA	MFR
MOUNTAIN PASTURES HOLDINGS LLC	AFGHANISTAN	MFR
WBC-INTERFARMA TIBBI MALZEMELER SANAYI VE TI	TURKEY	MFR
CSA-CORPORACION JOSE R. LINDLEY, SA-2	PERU	MFR
WBC-CORPORATIVO PAPELERO Y DE SUMINISTROS BA	MEXICO	MFR
GOLDEN SIERRA PARTNERS, LLC	ESTONIA	MFR
WBC-DELTA PLASTIK ENDUSTRISI A.S.	TURKEY	MFR
WBC-KELLY GRAINS CORPORATION S.R.L.	MOLDOVA	MFR
ABI GROUP LTD.	AFGHANISTAN	MFR
WBC-SFC ENTEGRE ORMAN URUNLERI SANAYI VE TIC	TURKEY	MFR
WBC-JSC POLIGRAF LAND	RUSSIA	MFR
PREFABRICADOS Y MODULARES DE MONTERREY(PYMM)	MEXICO	MFR
PHYTO-RIKER PHARMACEUTICALS LTD.	GHANA	MFR
CPAK-LUCKY CEMENT LIMITED	PAKISTAN	MFR
PRODUCTORA DE PAPELES SA (PROPAL)	COLOMBIA	MFR
CPAK-D.G.KHAN CEMENT COMPANY LIMITED	PAKISTAN	MFR
CAFR-MIDDLE EAST COMPLEX FOR ENGINEERING	JORDAN	MFR
CSA-CORPORACION JOSE R. LINDLEY, S.A.	PERU	MFR
COMPANIA MINERA PIMENTON SA	CHILE	MINE
BRAZILIAN EMERALDS, INC.	BRAZIL	MINE
ADVANCED CENTRAL GAS COMPANY LIMITED	JORDAN	OIL
BRAVO ENERGY MEXICO SRL DE CV	MEXICO	OIL
PARKO SERVICES, S.A.	COLOMBIA	OIL
BRAVO ENERGY ARGENTINA SCA	ARGENTINA	OIL
PT. TUCAN PUMPCO SERVICES INDONESIA	INDONESIA	OIL
JOSHI TECHNOLOGIES INTERNATIONAL, INC.	COLOMBIA	OIL
BRAVO ENERGY MEXICO SRL DE CV	MEXICO	OIL

PROJECT NAME	COUNTRY	SECTOR
GOLDHAM PTY LTD.T/A KALAHARI GAS CORPORATION	BOTSWANA	OIL
E.P. INTEROIL, LTD.	PAPUA NEW GUINEA	OIL
RPK-VYSOTSK "LUKOIL-II"	RUSSIA	OIL
WILPRO ENERGY SERVICES (PIGAP II) LTD.	VENEZUELA	OIL
WILPRO ENERGY SERVICES (EL FURRIAL) LIMITED	VENEZUELA	OIL
ACCROVEN SRL	VENEZUELA	OIL
NATURAL GAS LIQUIDS (II) FINANCING COMPANY	NIGERIA	OIL
MATH HYDRO POWER (PVT) LTD.	SRI LANKA	POWER
E+CO, INC.	HONDURAS	POWER
TRIANGLE GENERAL CONTRACTORS, INC.	KOSOVO	POWER
AES JORDAN PSC	JORDAN	POWER
PAITON ENERGY COMPANY	INDONESIA	POWER
JORF LASFAR ENERGY COMPANY	MOROCCO	POWER
ADAPAZARI ELEKTRIK URETIM LTD. SIRKETI	TURKEY	POWER
TRAKYA ELEKTRIK	TURKEY	POWER
NEPC CONSORTIUM POWER LTD.(HARIPUR)	BANGLADESH	POWER
DOGA ENERJI	TURKEY	POWER
IZMIR ELEKTRIK URETIM LTD SIRKETI	TURKEY	POWER
GEBZE ELEKTRIK URETIM LTD SIRKETI	TURKEY	POWER
TERMOBARRANQUILLA, S.A.	COLOMBIA	POWER
PAITON ENERGY COMPANY	INDONESIA	POWER
AMERICAN WOOL-CASHMERE, INC.	AFGHANISTAN	SVC
INTERCOMP CJSC	RUSSIA	SVC
SUMMIT ASSOCIATES, LTD.	AFGHANISTAN	SVC
DEXTER SAFETY & INDUSTRIAL PRODUCTS, INC.	MEXICO	SVC
RAPID MAIL COMPANY LIMITED	BELIZE	SVC
GILBERTO J.M.GONZALEZ/DBA/FERRETERIA MORALES	NICARAGUA	SVC
GLOBAL DESIGN, S.A.	PANAMA	SVC
PRINCETON HEALTHCARE	BRAZIL	SVC
INSTITUTO CULINARIO SANTA LUCIA,S.A.	NICARAGUA	SVC
IBS HOLDINGS, LLC	AFGHANISTAN	SVC
SUBWAY RUSSIA, LLC	RUSSIA	SVC
LIVING WATER INTERNATIONAL	KENYA	SVC
ADMINISTRADORA DE INVERSIONES PEGGY, S.A.	GUATEMALA	SVC
ABAMEDIA, L.P.(TRANCHE A)	RUSSIA	SVC
MEDPHARM, INC.	ETHIOPIA	SVC
S&N PUMP AFRICA, LDA	ANGOLA	SVC
GEOSURVEY INTERNATIONAL LLC	KENYA	SVC
THREE PAPAS, INC.	RUSSIA	SVC
QSI INTERNATIONAL SCHOOL OF TBILISI	GEORGIA	SVC
NH SERVICOS DE SINALIZACAO LTDA.	BRAZIL	SVC
INTERNATIONAL COMMUNITY SCHOOL LIMITED	GHANA	SVC
ISTANBUL INTERNATIONAL COMMUNITY SCHOOL (B)	TURKEY	SVC
MAJESTIC GROUP KOREA, LTD.	KOREA (SOUTH)	SVC
TIS LTD.	UZBEKISTAN	SVC
INTERNET GABON, SA	GABON	SVC
AMERICAN EMBASSY SCHOOL OF LUSAKA	ZAMBIA	SVC
THREE PAPAS, LLC	RUSSIA	SVC
WESTWOOD INTERNATIONAL SCHOOL	BOTSWANA	SVC
WBC-ZAO AIRES	RUSSIA	SVC
WINNER GROUP UKRAINE, INC.	UKRAINE	SVC
AMERICAN INTERNATIONAL SCHOOL SYSTEMS, INC.	PAKISTAN	SVC
WBC-VALLARTA VISION Y MISION A.C.	MEXICO	SVC
AMERICAN WOOL-CASHMERE, INC.	AFGHANISTAN	SVC
RB-AMERICAN COOPERATIVE SCHOOL OF TUNIS	TUNISIA	SVC
SALVATIERRA DESARROLLOS URBANOS, S.A. DE C.V	MEXICO	SVC
AMERICAN INTERNATIONAL SCHOOL OF ABUJA	NIGERIA	SVC
WBC-COMERCIAL LAEISZ, S.A. DE C.V.	HONDURAS	SVC
NEW YORK PIZZA CO. LTD.	RUSSIA	SVC
ISTANBUL INTERNATIONAL COMMUNITY SCHOOL,INC.	TURKEY	SVC
WBC-ZAO AIRES	RUSSIA	SVC
WBC-ATLANTIC GROUP LIMITED	UKRAINE	SVC
CNIS-IKEA	RUSSIA	SVC
FIXED RATE FUNDING & LIQUIDITY LTD (HWD SPA)	ALGERIA	SVC
TAYL INVESTORS GROUP LIMITED	AFGHANISTAN	TOUR

PROJECT NAME	COUNTRY	SECTOR
MONGOLIAN RESORTS XXX	MONGOLIA	TOUR
MALIKA HOTEL BUKHARA, LLC	UZBEKISTAN	TOUR
DESARROLLOS DE LOS SUENOS, S.A.	ARGENTINA	TOUR
MERCURY INVESTMENTS LIMITADA	MOZAMBIQUE	TOUR
GAMETRACKERS MANAGEMENT LTD (NYATI LODGE)	MOZAMBIQUE	TOUR
HERMITAGE HOSPITALITY FRANCHISING LIMITED	RUSSIA	TOUR
M/N BUTLER MIMARLAR ARASTIRMA TASARI LTD.	TURKEY	TOUR
COMPANIA GENERAL DE COMERCIO E INDUSTRIA SA	ARGENTINA	TOUR
SOM OTELCILIK VE TURIZM TICARET A.S.	TURKEY	TOUR
TANRUSS INVESTMENT LTD	TANZANIA	TOUR
TANRUSS INVESTMENT LTD	TANZANIA	TOUR
ARMENIA HOTEL COMPLEX CLOSED JSC	ARMENIA	TOUR
JOINT STOCK COMPANY HOTEL TBILISI	GEORGIA	TOUR
IZMIR INTERNATIONAL HOTEL AS	TURKEY	TOUR
SOM OTELCILIK VE TURIZM TICARET A.S.	TURKEY	TOUR
MORUMBY HOTEIS LTDA.	BRAZIL	TOUR
AMERICAN MONOLITH LTD	GEORGIA	TRAN
RED CARRETERAS DE OCCIDENTE, S. DE RL DE CV	MEXICO	TRAN
TRANSNATIONAL AUTOMOTIVE GROUP-CAMEROON S.A.	CAMEROON	TRAN
PACIFIC SUBSEA SAIPAN 2	THAILAND	TRAN
PACIFIC SUBSEA SAIPAN 3	THAILAND	TRAN
PACIFIC SUBSEA SAIPAN, INC.	THAILAND	TRAN
DAYSTAR AIRWAYS LTD (DBA NEVIS EXPRESS)	ST. CHRISTOPHER & NEVIS	TRAN
DAYSTAR AIRWAYS	ST. CHRISTOPHER & NEVIS	TRAN
NORTH AMERICAN FLOAT PLANE SERVICE SAC	PERU	TRAN
LODOM SP.ZO.O-FACILITY B	POLAND	TRAN
PACIFIC INTERNATIONAL HOLDINGS, INC.	GEORGIA	TRAN
CORPORACION QUIPORT S.A.	ECUADOR	TRAN
TARSIAN & BLINKLEY LLC	AFGHANISTAN	N/A
ABC.R.O., INC	EUROPE/EURASIA	N/A
MASKAN, INC. (Tranche B)	AFGHANISTAN	N/A
BESCH INT'L, INC/SAN MARTIN FARMS CIA. LTDA.	ECUADOR	N/A
GLOBAL RAILROAD LEASING, LLC	BRAZIL	N/A
LIVING WATER INTERNATIONAL	KENYA	N/A
BAGRAM FRUIT PACKING COMPANY	AFGHANISTAN	N/A
GAMA LTD	GEORGIA	N/A
SPORTS INTERNATIONAL BILKENT FITNESS VE SPOR	TURKEY	N/A
BRAZILIAN EMERALDS,INC.	BRAZIL	N/A
COMPANIA GENERAL DE COMERCIO E INDUSTRIA SA	ARGENTINA	N/A
BIURO PROJEKTOWANIA SYSTEMOW CYFROWYCH S.A.	POLAND	N/A
BAJA TRANSPORTATION/BAJA SALT	EL SALVADOR	N/A
DARA SALAM REAL ESTATE DEVELOPERS	GHANA	N/A
UNIGESTION HOLDING S.A. (digicel Haiti)	HAITI	N/A
WEND-REY RESTAURANTS LTD	MEXICO	N/A
GLOBAL RAILROAD LEASING, LLC	BRAZIL	N/A
FARO DE AQUA SA DE C.V.	MEXICO	N/A
ASIAN CREDIT FUND CREDIT COOP LLC	KAZAKHSTAN	N/A
OOO AIR STRUCTURES AMERICAN TECHNOLOGIES	RUSSIA	N/A
V-TRAC HOLDINGS Ltd	VIETNAM	N/A
SHORE OVERSEAS AZERBAIJAN	AZERBAIJAN	N/A
THE POWERSOURCE GROUP LLC	PHILIPPINES	N/A
XTREME CINEMAS, SRL De C.V./iehc, Inc	MEXICO	N/A
CLOSED JOINT STOCK COMPANY shvydko-ukraine 2	UKRAINE	N/A
LEMNA DE MEXICO S.A. De C.V.	MEXICO	N/A
CLOSED JOINT STOCK COMPANY shvydko-ukraine 1	UKRAINE	N/A
CENTURY 21 RUSSIA	RUSSIA	N/A
PAKISTAN MORTGAGE GUARANTY TRUST	PAKISTAN	N/A
GAME VIEWERS LTD / GAME TRACKERS (21hana21na)ltd	BOTSWANA	N/A
TIGER MACHINERY COMPANY LLC	RUSSIA	N/A
INTERNATIONAL VILLAGE PRISTINA	KOSOVO	N/A
MICROFINANCE INTERNATIONAL CORPORATION	LATIN AMERICA REGIONAL	N/A
CNIS-OJSC RG BRANDS	KAZAKHSTAN	N/A
DEAMAR NIGERIA LLC	NIGERIA	N/A
TEKFENBANK	TURKEY	N/A
XTREME CINEMAS S.DE RI/XTREME DEL PONIENTE	MEXICO	N/A

PROJECT NAME	COUNTRY	SECTOR
BANCO UNO SA	PANAMA	N/A
BAN-FINANCIERA COMPARTAMOS S.A.	MEXICO	N/A
GLOBAL RAILROAD LEASING, LLC	BRAZIL	N/A
MEDYCYNA RODZINNA S.A.	POLAND	N/A
AFGHANISTAN RENEWAL FUND, LTD	AFGHANISTAN	N/A
ZAO MS-SPETSTELEKOM	RUSSIA	N/A
RIO VERDE, S.A.	NICARAGUA	N/A
ZAO ASTON	RUSSIA	N/A
GUATEMALA MORTGAGE CORPORATION	GUATEMALA	N/A
SIRIUS WIRELESS, LTD	NIGERIA	N/A
WBC-NEWCOM LTD	LATIN AMERICA REGIONAL	N/A
DODSON-LINDBLOM HYDRO POWER PRIVATE LTD	INDIA	N/A
NCB2-FINANSBANK A.S.	TURKEY	N/A
CAFR-MILLICOM GHANA LTD	GHANA	N/A
TECNOQUAT S.A.	GUATEMALA	N/A
ABSOLUT BANK	RUSSIA	N/A
CITIBANK N.A. (al-mansour automotive co)	EGYPT	N/A
CNIS-OAO NIZHEKAMSKNEFTEKHIM (nkkn)	RUSSIA	N/A
TAVL LIMITED (hyatt regency 22hana)	AFGHANISTAN	N/A
DENIZBANK ISTANBUL	TURKEY	N/A
LKI, INTERNATIONAL	NAMIBIA	N/A
CE LUZON GEOTHERMAL POWER CO	PHILIPPINES	N/A
HIDROELECTRICA RIO HONDO S.A.	GUATEMALA	N/A
PUERTO QUETZAL POWER LLC	GUATEMALA	N/A
EMPRESA DE TELECOMMUNICATIONS NUEVATEL SA	BOLIVIA	N/A
IRAQ MIDDLE MARKET FACILITY – Tranche B	IRAQ	N/A
CMS ENSENADA S.A.	ARGENTINA	N/A
LIMA AIRPORT PARTNERS S.R.L	PERU	N/A
LIVING WATER INTERNATIONAL (22hana)	GHANA	N/A
TNT PRODUCTIONS INTERNATIONAL INC	KAZAKHSTAN	N/A
INFINITY	NICARAGUA	N/A
FOURSAN	JORDAN	N/A
CEMACO	GUATEMALA	N/A
MILLICOM (CITIBANK)	TANZANIA	N/A
WBC-ICS PRIME CAPITAL	MOLDOVA	N/A
BANK POSITIF KREDIT	TURKEY	N/A
AL-QUDS BANK	WEST BANK	N/A
INDEPENDENT LEASING LLC	RUSSIA	N/A
CMFI (CITIBANK) PHILIPPINES	PHILIPPINES	N/A
STACK GROUP – SAFE DATA SERVICES	RUSSIA	N/A
SANGHVI MOTORS	INDIA	N/A
INSURANCE		
INVERSIONES AGROPECUARIAS, S.A.	NICARAGUA	AGRI
FARMER GEORGE LIMITED	GHANA	AGRI
GRANTON SAFARIS CC	SOUTH AFRICA	AGRI
BAGRAM FRUIT PACKING COMPANY	AFGHANISTAN	AGRI
FINCA LA CRUZ	ARGENTINA	AGRI
MINISTRY OF WATER RESOURCES	IRAQ	AGRI
BAGRAM FRUIT PACKING COMPANY	AFGHANISTAN	AGRI
INTERNATIONAL FOUNDATION OF HOPE	AFGHANISTAN	AGRI
EL SALADERO, UY SRL	URUGUAY	AGRI
SEMINOLE S.A.	NICARAGUA	AGRI
SIBERIAN FARMS L.L.C.	RUSSIA	AGRI
FINCA CALLE LARGA, CALLE LARGE VIEJA	ARGENTINA	AGRI
EL SALADERO, UY SRL	URUGUAY	AGRI
N/A	GUINEA-BISSAU	AGRI
BEST VALUE ZAMBIA LIMITED	ZAMBIA	AGRI
ZAO VG ENTERPRISES INC	RUSSIA	AGRI
DESARROLLO INDUSTRIAL BIOACUATICO SA (DIBSA)	ECUADOR	AGRI
CAMANICA SA	NICARAGUA	AGRI
VIETNAMNET MEDIA JOINT STOCK COMPANY	VIETNAM	COMM
MINISTRY OF INTERIOR AFFAIRS OF THE REPUBLIC OF SERBIA	SERBIA	COMM
BRASIL TELECOM, S.A.	BRAZIL	COMM
KATEL JOINT VENTURE	KYRGYZ REPUBLIC	COMM
TECONVI SA	BRAZIL	COMM

PROJECT NAME	COUNTRY	SECTOR
MINISTRY OF INTERIOR	MACEDONIA	COMM
VEN WORLD TELECOM CA	VENEZUELA	COMM
RURALFONE DO BRASIL, LTDA.	BRAZIL	COMM
RURALFONE DO BRASIL, LTDA.	BRAZIL	COMM
RURALFONE DO BRASIL, LTDA.	BRAZIL	COMM
RURALFONE DO BRASIL, LTDA.	BRAZIL	COMM
RURALFONE DO BRASIL, LTDA.	BRAZIL	COMM
RURALFONE DO BRASIL, LTDA.	BRAZIL	COMM
AXS BOLIVIA S.A.	BOLIVIA	COMM
NETMASTER COMMUNICATIONS S.R.L.	ROMANIA	COMM
CAICOS TELEVISION HOLDINGS LTD.	TURKS & CAICOS ISLANDS	COMM
VIETNAMNET MEDIA JOINT STOCK COMPANY	VIETNAM	COMM
AFCO – KANDAHAR VALLEY, LLC	AFGHANISTAN	CONS
MUTUAL VENTURES LIMITED	TANZANIA	CONS
ADMINISTRADORA DE INVERSIONES PEGGY, S.A.	GUATEMALA	CONS
S.C. EMPIRE TOWER S.R.L.	ROMANIA	CONS
OPEN JOINT STOCK COMPANY TERMINAL	RUSSIA	CONS
SOUTHERN COASTAL PROPERTIES NICARAGUA, S.A., C/O FERNANDO	NICARAGUA	CONS
MINISTRY OF WATER RESOURCES	IRAQ	CONS
MINISTRY OF FINANCE OF THE DEMOCRATIC REPUBLIC OF CONGO	CONGO	CONS
MINISTRY OF FINANCE OF THE DEMOCRATIC REPUBLIC OF CONGO	CONGO	CONS
ARC CONSTRUCTION COMPANY, LLC	AFGHANISTAN	CONS
ENTERPRISE HOMES TANZANIA LIMITED, C/O ISHENGOMA, MASHA	TANZANIA	CONS
GLOBAL HOUSING DEVELOPMENT, S.A.	HONDURAS	CONS
GENERAL DIRECTORATE OF HIGHWAYS	TURKEY	CONS
AMERICAN INTERNATIONAL SCHOOL OF ABUJA	NIGERIA	CONS
MINISTRY OF FINANCE OF THE DEMOCRATIC REPUBLIC OF CONGO	CONGO	CONS
ALTERRA PARTNERS LLC	PERU	CONS
NA	KENYA	CONS
HRVATSKE AUTOCESTE DOO	CROATIA	CONS
AMERICAN INTERNATIONAL SCHOOL OF ABUJA	NIGERIA	CONS
FINANCIERA TFC, S.A.	PERU	FIN
OOO MORGAN STANLEY BANK	RUSSIA	FIN
BANCO DE CREDITO CENTROAMERICANO, S.A.	NICARAGUA	FIN
MORGAN STANLEY DO BRASIL LTDA.	BRAZIL	FIN
HSBC BANK OF BRAZIL SA – BANCO MULTIPLO	BRAZIL	FIN
NATIONAL ROAD OPERATING & CONSTRUCTION CO	JAMAICA	FIN
PROFICIO D.D.	CROATIA	FIN
GHANA HOME LOANS (FUND I) LIMITED	GHANA	FIN
KOMPANION FINANCIAL GROUP	KYRGYZ REPUBLIC	FIN
HONDURAS HOMES, S.A.	HONDURAS	FIN
KOMPANION FINANCIAL GROUP	KYRGYZ REPUBLIC	FIN
ASYA KATILIM BANKASI A.S.	TURKEY	FIN
BANCO PINE	BRAZIL	FIN
MERODENT ZIMBABWE (PVT.) LTD.	ZIMBABWE	MFR
MINISTRY OF WATER RESOURCES	IRAQ	MFR
NATIONWIDE GROUP OF COMPANIES, INC.	LIBERIA	MFR
MERODENT ZIMBABWE (PVT.) LTD.	ZIMBABWE	MFR
NATURA BEVERAGE SARL	CAMEROON	MFR
MINISTRY OF WATER RESOURCES	IRAQ	MFR
ZAO "ISP OPTICS, SAINT-PETERSBURG"	RUSSIA	MFR
MERODENT ZIMBABWE (PVT.) LTD.	ZIMBABWE	MFR
MINISTRY OF WATER RESOURCES	IRAQ	MFR
MINISTRY OF WATER RESOURCES	IRAQ	MFR
A. STUCKI – RAIL	UKRAINE	MFR
NOT APPLICABLE	AFGHANISTAN	MFR
MERODENT ZIMBABWE (PVT.) LTD.	ZIMBABWE	MFR
A. STUCKI RAIL	UKRAINE	MFR
A. STUCKI – RAIL	UKRAINE	MFR
SORWATHE S.A.R.L.	RWANDA	MFR
ACAI DO AMAPA AGROINDUSTRIAL LTDA.	BRAZIL	MFR
INSTRUM-RAND	RUSSIA	MFR
AFGHANISTAN NATURAL BEVERAGES	AFGHANISTAN	MFR
MINOTERIE DU CONGO, S.A.	CONGO	MFR
AFGHANISTAN BEVERAGE INDUSTRIES (ABI GROUP, LIMITED)	AFGHANISTAN	MFR

PROJECT NAME	COUNTRY	SECTOR
GOLDEN CYPRESS WATER CO., LTD/MRS ALMERA GUBA-GOULD	PHILIPPINES	MFR
GOLDEN CYPRESS WATER CO., LTD/MRS ALMERA GUBA-GOULD	PHILIPPINES	MFR
ZAO ISP OPTICS ST. PETERSBURG	RUSSIA	MFR
DOMES INTERNATIONAL INC – INDIA MANUFACTURING DIVISION	INDIA	MFR
CUIRS HAWTAN S.A.	HAITI	MFR
ISP OPTICS SANKT PETERSBURG	RUSSIA	MFR
KIMBERLY-CLARK PERU SA	PERU	MFR
KIMBERLY-CLARK COSTA RICA	COSTA RICA	MFR
COLOMBIANA KIMBERLY SA	COLOMBIA	MFR
MOLINOS DEL ECUADOR CA	ECUADOR	MFR
ANTARCTICA EMPREENDIMENTOS E PARTICIPACOES LTDA.	BRAZIL	MFR
PSI DO BRASIL SERVICIOS DE SEGURANCA LTDA	BRAZIL	MFR
ABI GROUP LTD.	AFGHANISTAN	MFR
AFRITRACK ANGOLA LDA	ANGOLA	MFR
KWABA – SOCIEDADE INDUSTRIAL E COMERCIAL, S.A.R.L.	ANGOLA	MFR
LES MOULINS D'HAITI S.E.M.	HAITI	MFR
LES MOULINS D'HAITI S.E.M. (LMH)	HAITI	MFR
INSTRUM-RAND	RUSSIA	MFR
LESOTHO FLOUR MILLS LIMITED	LESOTHO	MFR
MINOTERIE DE MATADI, S.A.R.L.	CONGO, DEM. REPUBLIC OF	MFR
MINOTERIE DU CONGO, S.A.	CONGO	MFR
MOBEIRA, SARL	MOZAMBIQUE	MFR
MINOTERIE DE MATADI, S.A.R.L.	CONGO, DEM. REPUBLIC OF	MFR
PAKISTAN WATER AND POWER DEVELOPMENT AUTHORITY (“WAPDA”)	PAKISTAN	MFR
PAKISTAN WATER AND POWER DEVELOPMENT AUTHORITY (“WAPDA”)	PAKISTAN	MFR
KIMBERLY-CLARK VIETNAM CO., LTD.	VIETNAM	MFR
NATIONAL MILLING COMPANY LIMITED	ZAMBIA	MFR
COCA-COLA NIGERIA LIMITED	NIGERIA	MFR
EQUATE PETROCHEMICAL COMPANY K.S.C. (CLOSED)	KUWAIT	MFR
COLOMBIANA UNIVERSAL DE PAPELES SA	COLOMBIA	MFR
AFRITRACK ANGOLA LDA	ANGOLA	MFR
PT CABOT CHEMICAL	INDONESIA	MFR
KIMBERLY-CLARK THAILAND LIMITED	THAILAND	MFR
COLOMBIANA KIMBERLY COLPAPEL SA	COLOMBIA	MFR
KIMBERLY-CLARK PHILLIPINES INC	PHILIPPINES	MFR
MAKSAN MANISA MESRUBAT KUTULAMA SANAYI AS	TURKEY	MFR
WHITE STAR USA	RUSSIA	MINE
SECTOR RESOURCES, LTD. BRANCH	COLOMBIA	MINE
EMPRESA MINERA MANQUIRI S.A.	BOLIVIA	MINE
SOCIEDAD MINERA CERRO VERDE, S.A.A.	PERU	MINE
WHITE STAR USA	RUSSIA	MINE
N/A	NICARAGUA	OIL
MKJ EXPLORACIONES INTERNACIONALES, S.A.	NICARAGUA	OIL
MKJ EXPLORACIONES INTERNACIONALES, S.A.	NICARAGUA	OIL
N/A	NICARAGUA	OIL
PT TUCAN PUMPCO SERVICES INDONESIA	INDONESIA	OIL
WEST AFRICAN GAS PIPELINE COMPANY LIMITED	BENIN	OIL
WEST AFRICAN GAS PIPELINE COMPANY LIMITED	TOGO	OIL
BAKU OIL TOOLS LTD	AZERBAIJAN	OIL
MKJ EXPLORACIONES INTERNACIONALES, S.A.	NICARAGUA	OIL
FOXTROT INTERNATIONAL LDC	COTE D'IVOIRE	OIL
WEST AFRICAN GAS PIPELINE COMPANY LIMITED	GHANA	OIL
VARIOUS APACHE EGYPT CONCESSION SUBSIDIARIES	EGYPT	OIL
THE BAKU-TBILISI-CEYHAN PIPELINE COMPANY	AZERBAIJAN	OIL
N/A	EGYPT	OIL
PERFORACIONES WESTERN, CA	VENEZUELA	OIL
PRIDE FORASOL SAS	CHAD	OIL
ISRAEL ELECTRIC CORPORATION LTD	ISRAEL	OIL
ZETA GAS DE CENTRO AMERICA S.A.	GUATEMALA	OIL
	PHILIPPINES	POWER
DV TECHNOLOGIES D.O.O. BELGRADE	SERBIA	POWER
DV TECHNOLOGIES D.O.O. BELGRADE	SERBIA	POWER
SEP ENERGY INDIA PVT. LTD.	INDIA	POWER
SEP ENERGY PVT. LTD.	INDIA	POWER
KHOZNER HPP	KOSOVO	POWER

PROJECT NAME	COUNTRY	SECTOR
MATH HYDRO POWER (PVT) LIMITED	SRI LANKA	POWER
PUERTO CABEZAS POWER S.A.	NICARAGUA	POWER
P.H. RIO VOLCAN,S.A.	COSTA RICA	POWER
DOMINICA ELECTRICITY SERVICES LTD. ("DOMLEC")	DOMINICA	POWER
TERMOVALLE S.C.A. .E.S.P.	COLOMBIA	POWER
FABMIK CONSTRUCTION & EQUIPMENT CO INC	PHILIPPINES	POWER
TIPITAPA POWER COMPANY LTD.	NICARAGUA	POWER
GAZA POWER GENERATING PRIVATE LIMITED COMPANY	GAZA	POWER
KIDWELL INTERNATIONAL POWER VIETNAM COMPANY LIMITED	VIETNAM	POWER
GRENADA ELECTRICITY SERVICES LIMITED	GRENADA	POWER
HABIBULLAH COASTAL POWER (PRIVATE) COMPANY	PAKISTAN	POWER
CONTOURGLOBAL TOGO S.A.	TOGO	POWER
CE CASECNAN WATER AND ENERGY COMPANY, INC.	PHILIPPINES	POWER
GAZA POWER GENERATING PRIVATE LIMITED COMPANY	GAZA	POWER
P.H. DON PEDRO, S.A.	COSTA RICA	POWER
DOGA ENERJI URETIM SANAYI VE TICARET L.S.	TURKEY	POWER
P.H. RIO VOLCAN, S.A.	COSTA RICA	POWER
TERMOVALLE S.C.A. E.S.P.	COLOMBIA	POWER
CE CASECNAN WATER AND ENERGY COMPANY, INC.	PHILIPPINES	POWER
TERMOBARRANQUILLA S.A., EMPRESA DE SERVICIOS PUBLICOS	COLOMBIA	POWER
AES NIGERIA BARGE LIMITED	NIGERIA	POWER
NATIONAL POWER CORPORATION ("NAPOCOR")	PHILIPPINES	POWER
THE NATIONAL POWER CORPORATION	PHILIPPINES	POWER
BHOTE KOSHI PRIVATE COMPANY PVT LTD	NEPAL	POWER
TIPITAPA POWER COMPANY LTD.	NICARAGUA	POWER
PT ENERGI SENGKANG	INDONESIA	POWER
CBK POWER COMPANY LIMITED	PHILIPPINES	POWER
TURBOVEN MARACAY COMPANY	VENEZUELA	POWER
TURBOVEN CAGUA COMPANY	VENEZUELA	POWER
ISAGAN SA ESP	COLOMBIA	POWER
THE AMERICAN COOPERATIVE SCHOOL OF TUNISIA	TUNISIA	SVC
N/A	LEBANON	SVC
KHUDAIRI TRADING COMPANY LTD.	IRAQ	SVC
UNIVERSAL STAR CO.	UKRAINE	SVC
N/A	UKRAINE	SVC
HILL ESTATES LIMITED, P.O. BOX 31617	ZAMBIA	SVC
AMERICAN UNIVERSITY OF BEIRUT	LEBANON	SVC
N/A	LEBANON	SVC
TOTAL ARTEFACTOS S.A.	PERU	SVC
SAMARA OBLAST	RUSSIA	SVC
MINISTRY OF HEALTH OF SAMARA OBLAST	RUSSIA	SVC
HERCULES LIFTBOAT COMPANY NIGERIA LIMITED	NIGERIA	SVC
NA	IRAQ	SVC
COMPEXPO	HUNGARY	SVC
RELIEF INTERNATIONAL BRANCH OFFICE	AFGHANISTAN	SVC
RELIEF INTERNATIONAL BRANCH OFFICE	PAKISTAN	SVC
RELIEF INTERNATIONAL BRANCH OFFICE	BANGLADESH	SVC
RELIEF INTERNATIONAL BRANCH OFFICES	JORDAN	SVC
RELIEF INTERNATIONAL BRANCH OFFICE	TAJIKISTAN	SVC
RELIEF INTERNATIONAL BRANCH OFFICE	INDONESIA	SVC
THE ASIA FOUNDATION	MONGOLIA	SVC
THE ASIA FOUNDATION	EAST TIMOR	SVC
THE ASIA FOUNDATION	FIJI	SVC
INTERNATIONAL RESCUE COMMITTEE	COLOMBIA	SVC
THE INTERNATIONAL RESCUE COMMITTEE	JORDAN	SVC
INTERNATIONAL RESCUE COMMITTEE	NEPAL	SVC
DIRECTORATE GENERAL PROCUREMENT	PAKISTAN	SVC
THE ASIA FOUNDATION	BANGLADESH	SVC
RELIEF INTERNATIONAL BRANCH OFFICES	SRI LANKA	SVC
GILBERTO JUAN MORALES GONZALEZ, D/B/A FERRETERIA MORALES	NICARAGUA	SVC
THE ASIA FOUNDATION	SRI LANKA	SVC
THE ASIA FOUNDATION	PAKISTAN	SVC
RELIEF INTERNATIONAL BRANCH OFFICE	AZERBAIJAN	SVC
RELIEF INTERNATIONAL BRANCH OFFICE	SOMALIA	SVC
RELIEF INTERNATIONAL HEBRON CENTER OF EXCELLENCE	WEST BANK	SVC

PROJECT NAME	COUNTRY	SECTOR
RELIEF INTERNATIONAL BRANCH OFFICES	LEBANON	SVC
THE ASIA FOUNDATION	VIETNAM	SVC
THE ASIA FOUNDATION	CAMBODIA	SVC
INTERNATIONAL RESCUE COMMITTEE, INC. – BRANCH OFFICES	CHAD	SVC
THE ASIA FOUNDATION	NEPAL	SVC
THE ASIA FOUNDATION	PHILIPPINES	SVC
THE ASIA FOUNDATION BRANCH OFFICES	THAILAND	SVC
INTERNATIONAL RESCUE COMMITTEE – ERITREA	ERITREA	SVC
INTERNATIONAL RESCUE COMMITTEE, INC. BRANCH OFFICES	CENTRAL AFRICAN REPUBLIC	SVC
THE ASIA FOUNDATION	KOREA (SOUTH)	SVC
INTERNATIONAL COMMUNITY SCHOOL, LIMITED	GHANA	SVC
IRC BRANCH OFFICE	THAILAND	SVC
INTERNATIONAL RESCUE COMMITTEE, INC.	AZERBAIJAN	SVC
INTERNATIONAL RESCUE COMMITTEE, INC.	BOSNIA-HERZEGOVINA	SVC
INTERNATIONAL RESCUE COMMITTEE, INC.	CONGO	SVC
ASIA FOUNDATION	AFGHANISTAN	SVC
JL. ADITYAWARMAN	INDONESIA	SVC
COLITE NICARAGUA S.A.	NICARAGUA	SVC
INTERNATIONAL RESCUE COMMITTEE, INC.	RUSSIA	SVC
INTERNATIONAL RESCUE COMMITTEE, INC.	RWANDA	SVC
GOVERNMENT OF ANTIGUA AND BARBUDA	ANTIGUA & BARBUDA	SVC
INTERNATIONAL RESCUE COMMITTEE – KENYA	KENYA	SVC
INTERNATIONAL RESCUE COMMITTEE – BRANCH OFFICES	ETHIOPIA	SVC
S&N PUMP AFRICA LDA	ANGOLA	SVC
INTERNATIONAL RESCUE COMMITTEE, INC. – GUINEA	GUINEA	SVC
INTERNATIONAL RESCUE COMMITTEE – PAKISTAN	PAKISTAN	SVC
UNION "QSI INTERNATIONAL SCHOOL OF TBILISI"	GEORGIA	SVC
INTERNATIONAL RESCUE COMMITTEE, INC. – BRANCH OFFICES	UGANDA	SVC
RIO VERDE WATER CONSORTIUM, INC.	PHILIPPINES	SVC
AMERICAN COOPERATIVE SCHOOL OF TUNIS (ACST) ASSOCIATION	TUNISIA	SVC
COLITE EL SALVADOR S.A., C/O RUSCONI -	EL SALVADOR	SVC
SWEETWATER PAKISTAN (PRIVATE) LTD.	PAKISTAN	SVC
INTERNATIONAL RESCUE COMMITTEE	LIBERIA	SVC
INTERNATIONAL RESCUE COMMITTEE – JAKARTA	INDONESIA	SVC
INTERNATIONAL RESCUE COMMITTEE, INC. BRANCH OFFICES	TANZANIA	SVC
TASHKENT INTERNATIONAL SCHOOL	UZBEKISTAN	SVC
INTERNATIONAL RESCUE COMMITTEE	BURUNDI	SVC
COLITE COSTA RICA, S.A.	COSTA RICA	SVC
COLITE GUATEMALA, S.A.	GUATEMALA	SVC
INTERNATIONAL RESCUE COMMITTEE, INC.	AFGHANISTAN	SVC
INTERNATIONAL RESCUE COMMITTEE, INC. – BRANCH OFFICES	SIERRA LEONE	SVC
WADE RAIN DE MEXICO, S. DE R.L. DE C.V.	MEXICO	SVC
COLITE PANAMA, S.A.	PANAMA	SVC
COLITE HONDURAS, S.A.	HONDURAS	SVC
INTERNATIONAL RESCUE COMMITTEE, INC. BRANCH OFFICES	CONGO, DEM. REPUBLIC OF	SVC
AMERICAN INTERNATIONAL SCHOOL SYSTEM PRIVATE LIMITED	PAKISTAN	SVC
COLITE PANAMA, S.A.	PANAMA	SVC
COLITE EL SALVADOR SA	EL SALVADOR	SVC
COLITE HONDURAS, S.A.	HONDURAS	SVC
COLITE NICARAGUA S.A.	NICARAGUA	SVC
INTERNATIONAL BUSINESS SERVICES	AFGHANISTAN	SVC
KABUL MASKAN COMPANY LTD (KMC)	AFGHANISTAN	SVC
GEORGIAN LEASING COMPANY LTD	GEORGIA	SVC
INTERNATIONAL RESCUE COMMITTEE INC	JORDAN	SVC
GEORGIAN LEASING COMPANY LTD	GEORGIA	SVC
PRINCETON HEALTHCARE DO BRAZIL LTD	BRAZIL	SVC
MEDPHARM INC	ETHIOPIA	SVC
FABMIK CONSTRUCTION & EQUIPMENT CO INC	PHILIPPINES	SVC
LEMNA DE MEXICO, SA DE CV	MEXICO	SVC
HERCULES LIFTBOAT COMPANY NIGERIA LIMITED	NIGERIA	SVC
COMPANIA GENERAL DE COMERCIO E INDUSTRIA S.A.	ARGENTINA	TOUR
JOINT VENTURE ITALKYR CJSC	KYRGYZ REPUBLIC	TOUR
ARMENIA HOTEL COMPLEX CLOSED JOINT STOCK COMPANY	ARMENIA	TOUR
SEVEN HILLS INTERNATIONAL HOTEL, TOURISM & TRADE A.S.	TURKEY	TOUR
TAYL LIMITED	AFGHANISTAN	TOUR

PROJECT NAME	COUNTRY	SECTOR
JOINT VENTURE ITALKYR CJSC	KYRGYZ REPUBLIC	TOUR
M/N BUTLER MIMARLAR ARASTIRMA TASARI VE YAPI LTD. STI.	TURKEY	TOUR
M/N BUTLER MIMARLAR ARASTIRMA TASARI VE YAPI LTD. STI.	TURKEY	TOUR
MALIKA BARIKHASI, LLC/MALIKA HOTEL BUKHARA	UZBEKISTAN	TOUR
M/N BUTLER MIMARLAR ARASTIRMA TASARI VE YAPI LTD. STI.	TURKEY	TOUR
KHIVA MALIKASI, LLC	UZBEKISTAN	TOUR
SEMINOLE S.A.	NICARAGUA	TOUR
MALIKA BARIKHASI, LLC/MALIKA HOTEL BUKHARA	UZBEKISTAN	TOUR
KHIVA MALIKASI, LLC	UZBEKISTAN	TOUR
TAKOMA LTD	UZBEKISTAN	TOUR
CONSOLIDADA DE FERRYS C.A. (CONFERRY)	VENEZUELA	TRAN
CORPORACION QUIPORT S.A.	ECUADOR	TRAN
CORPORACION QUIPORT S.A.	ECUADOR	TRAN
CONSOLIDADA DE FERRYS, C. A. (CONFERRY)	VENEZUELA	TRAN
KWAPA TRADING CO	Liberia	N/A
ST. MICHAEL ENTERPRISES	Yugoslavia	N/A
OTHER		
AMERICAN EQUIPMENT CO., FLUOR CORP	IRAQ	N/A
MINISTRY OF WATER RESOURCES, BALTIMORE DREDGE	IRAQ	N/A
IMMDF, CITIBANK	IRAQ	N/A
TRADE BANK OF IRAQ, CITIBANK	IRAQ	N/A
SIGMA IRAQ LLC, SIGMA INTERNATIONAL CONSTRUCT	IRAQ	N/A
A. KHUDAIRI TRADING CO	IRAQ	N/A
MINISTRY OF WATER RESOURCES, UNITED MARINE INT'L	IRAQ	N/A
AL MANSOUR AUTOMOTIVE CO, CITIBANK	IRAQ	N/A
NATIONAL HOUSEHOLD PRODUCTS CO., CITIBANK	IRAQ	N/A
AL KHALIJ LABORATORIES-PHOTO SERVICES, CITIBANK	IRAQ	N/A
TECHNOLOGY PARTNERS, CITIBANK	IRAQ	N/A
AL-BAREEQ AIR CONDITIONING, CITIBANK	IRAQ	N/A
FURAT WATER, CITIBANK	IRAQ	N/A
BAZIAN BRICKS PRODUCTION COMPANY, CITIBANK	IRAQ	N/A
HILAL AL KHAIR, CITIBANK	IRAQ	N/A
AL MUHANAD PLASTICS, CITIBANK	IRAQ	N/A
AL YOUSIF MODERN WHEAT FACTORIES, CITIBANK	IRAQ	N/A
DARCO WOODWORKING, CITIBANK	IRAQ	N/A
ROZHANO CO FOR GLASS MANUFACTURE, CITIBANK	IRAQ	N/A
AL HARMOOSH FOR GENERAL TRADING TOURISM/TRAVEL, CITIBANK	IRAQ	N/A
AL IHSAN AL DEEM, CITIBANK	IRAQ	N/A
QASIM JAWHAR KAREEM COMPANY (KURDISTAN FLOUR MILL), CITIBANK	IRAQ	N/A
KAIS PLANT FOR MINERAL WATER AND JUICE PRODUCTION, CITIBANK	IRAQ	N/A
JASSIM ROCK CRUSHER GRAVEL AND SAND CATEGORIZATION FACTORY, CITIBANK	IRAQ	N/A
RASUN COMPANY FOR POULTRY, CITIBANK	IRAQ	N/A
BURJ AL FANAR FOR READY MIX CONCRETE CO	IRAQ	N/A
STUDENT SOLIDARITY ORGANIZATION, CITIBANK	IRAQ	N/A
AL-MANSOUR AUTOMOTIVE COMPANY, CITIBANK	IRAQ	N/A
CINEMA SINBAD HOTEL COMPANY, ARCADD INC	IRAQ	N/A
MINISTRY WATER RESOURCES, BALTIMORE DREDGES	IRAQ	N/A
MINISTRY WATER RESOURCES, BALTIMORE DREDGES	IRAQ	N/A
MINISTRY WATER RESOURCES, BALTIMORE DREDGES	IRAQ	N/A
MINISTRY WATER RESOURCES, BALTIMORE DREDGES	IRAQ	N/A
MINISTRY WATER RESOURCES, BALTIMORE DREDGES	IRAQ	N/A
BEARING POINT IRAQ, BEARING POINT INC	IRAQ	N/A
IRAQI MIDDLE MARKET FINANCING FACILITY (IMMFF) FRAMEWORK AGREEMENT, CITIBANK	IRAQ	N/A
IRAQ MIDDLE MARKET DEVELOPMENT FOUNDATION	IRAQ	N/A
TRADE BANK OF IRAQ II, CITIBANK	IRAQ	N/A
ERBILL RESIDENTIAL DEVELOPMENT COMPANY, ERBIL HOUSING PROJECT	IRAQ	N/A
SGV MANAGEMENT COMPANY, ERBIL RESIDENTIAL DEVELOPMENT	IRAQ	N/A
AMERICAN EQUIPMENT CO, FLOUR ENTERPRISES INC	IRAQ	N/A
REPUBLIC OF IRAQ MINISTRY OF ELECTRICITY, GE CAPITAL MARKETS SERVICES	IRAQ	N/A
STATE OIL PROJECTS COMPANY, GENERAL ELECTRIC	IRAQ	N/A
H&W HOLDINGS GROUP LLC	IRAQ	N/A
H&W HOLDINGS GROUP LLC	IRAQ	N/A
INTERNATIONAL DEVELOPMENT TRUST LTD	IRAQ	N/A
INTERNATIONAL RESCUE COMMITTEE-IRAQ	IRAQ	N/A

PROJECT NAME	COUNTRY	SECTOR
IRAQ RECOVERY FUND LLC, EXCALIBUR VENTURES LLC, PRINCE STREET CAPITAL MANAGEMENT LLC, POTOMAC PARTNERS LLC	IRAQ	N/A
A. KHUDAIRI TRADING COMPANY LTD	IRAQ	N/A
KHUDAIRI TRADING COMPANY LTD, AZIZ KHUDAIRI	IRAQ	N/A
IRAQI MINISTRY OF WATER RESOURCES, LIQUID WASTE TECHNOLOGY LLC	IRAQ	N/A
MENA INDUSTRIES INC., MID NATIONAL HOLDINGS	IRAQ	N/A
YAPA MUHENDISLIK INSAAT VE DIS TICARET LTD., MERIDIAN INVESTMENT MANAGEMENT INC	IRAQ	N/A
ORASCOM TELECOM IRAQ CORP, MOTOROLA CREDIT	IRAQ	N/A
MORRIS & MCDANIEL COMPANY	IRAQ	N/A
RELIEF INTERNATIONAL SCHOOLS ONLINE	IRAQ	N/A
RHMK IRAQ FUND, L.P.	IRAQ	N/A
SIGMA IRAQ, SIGMA INT'L CONSTRUCTION LLC	IRAQ	N/A
MINISTRY OF WATER RESOURCES, UNITED MARINE INTERNATIONAL LLC	IRAQ	N/A
ABDUL MAJEED AL-FRAIH GENERAL TRADERS/RAINIA WATERS, CITIBANK	IRAQ	N/A
ADVANCED TECHNOLOGY SYSTEMS, CITIBANK	IRAQ	N/A
AL AZZAWAI, CITIBANK	IRAQ	N/A
AL BAREEQ AIR CONDITIONING, CITIBANK	IRAQ	N/A
AL HARMOOSH GENERAL TRADING, CITIBANK	IRAQ	N/A
AL IHSAN A-DAEEM GENERAL CONTRACTING, CITIBANK	IRAQ	N/A
AL KHALIJ LABORATORIES-PHOTO SERVICES, CITIBANK	IRAQ	N/A
AL MUHANAD CO FOR PLASTIC INDUSTRIES, CITIBANK	IRAQ	N/A
AL RASHEED GYPSUM, CITIBANK	IRAQ	N/A
AL YOUSIF MODERN WHEAT FACTORIES, CITIBANK	IRAQ	N/A
ALIEDAD GENERAL CONSTRUCTION, CITIBANK	IRAQ	N/A
ARABIAN AERATED WATER CO LTD, CITIBANK	IRAQ	N/A
IMMDF-ARKAN HAMID FACTORY, CITIBANK	IRAQ	N/A
BALAK FACTORY, CITIBANK	IRAQ	N/A
BAZIAN BRICKS PRODUCTION CO, CITIBANK	IRAQ	N/A
BECKER FOR MAKING SELLING ALL KINDS, CITIBANK	IRAQ	N/A
BEZA FOR PREPARED CONCRETE LTD, CITIBANK	IRAQ	N/A
BURJ AL FANAR FOR READY MIX CONCRETE, CITIBANK	IRAQ	N/A
DARCO WOODWORKING COMPANY, CITIBANK	IRAQ	N/A
DARZELOCK COMPANY/GENERAL TRADING & EXPORT	IRAQ	N/A
FURAT WATER, CITIBANK	IRAQ	N/A
GARA FACTORY, CITIBANK	IRAQ	N/A
GEBALA CENTER COLLECT AND COOL MILK, CITIBANK	IRAQ	N/A
HASSAN MOHAMMED EINAD FOR WATER, CITIBANK	IRAQ	N/A
IRAQI METAL WEAVING COMPANY, CITIBANK	IRAQ	N/A
JASSIM CRUSHER GRAVEL AND SAND, CITIBANK	IRAQ	N/A
JIDA FOR IRON AND ALUMINUM INDUSTRIES LTD	IRAQ	N/A
K1 GENERAL CONTRACTING CO LTD., CITIBANK	IRAQ	N/A
KAIS PLANT MINERAL WATER, CITIBANK	IRAQ	N/A
IMMDF-KHALAF BLOCK FACTORY, CITIBANK	IRAQ	N/A
KURDISTAN FLOUR MILL, CITIBANK	IRAQ	N/A
LOAY FACTORY FOR ASPHALT PRODUCTION, CITIBANK	IRAQ	N/A
MUTTAHIDA ELECTRICAL BOARDS, CITIBANK	IRAQ	N/A
NAMA GROUP, CITIBANK	IRAQ	N/A
NATIONAL HOUSEHOLD PRODUCTS CO., CITIBANK	IRAQ	N/A
RASUN COMPANY FOR POULTRY LTD, CITIBANK	IRAQ	N/A
ROZHANO COMPANY FOR GLASS MANUFACTURING	IRAQ	N/A
SAMAN MA-RUF ABDULKARIM BARZNI, CITIBANK	IRAQ	N/A
SARQALA COMPANY FOR GENERAL CONTRACT, CITIBANK	IRAQ	N/A
SMAG LOAN, CITIBANK	IRAQ	N/A
STUDENT SOLIDARITY ORGANIZATION, CITIBANK	IRAQ	N/A
STUDENT SOLIDARITY ORGANIZATION, CITIBANK	IRAQ	N/A
TECHNOLOGY PARTNERS, CITIBANK	IRAQ	N/A
Yafa CO FOR FOOD INDUSTRIES, CITIBANK	IRAQ	N/A
FUNDS		
ACTIS SOUTH ASIA FUND, NILGIRI FRANCHISE	INDIA	N/A
RUSSIA PARTNERS II, ISKRA TELECOM	RUSSIA	N/A
RUSSIA PARTNERS II, PSL	NIS REGIONAL	N/A
SEEF II, SERBIA BROADBAND	SERBIA	N/A
ECP AFRICA, SPENCON	EAST AFRICA REGIONAL	N/A
ACTIS SOUTH ASIA FUND, NAT'L DEVELOPMENT BANK	SRI LANKA	N/A

PROJECT NAME	COUNTRY	SECTOR
DARBY-BBVA LATIN AMERICA PRIVATE EQUITY FUND, GRUPO EMPRESARIAL METROPOLITANO (GEMET)	MEXICO	N/A
ECP AFRICA, ECOBANK	WEST AFRICA REGIONAL	N/A
ECP AFRICA, BANK OF AFRICA	AFRICA REGIONAL	N/A
ECP AFRICA, INTERCONTINENTAL BANK	NIGERIA	N/A
ECP AFRICA, CONTINENTAL REINSURANCE	NIGERIA	N/A
ETHOS FUND V, KANDERLANE	SOUTH AFRICA	N/A
ETHOS FUND V, ALEXANDER FORBES	SOUTH AFRICA	N/A
ETHOS FUND V, OCEANIC BANK	NIGERIA	N/A
RUSSIA PARTNERS II, APR BANK MOSCOW	RUSSIA	N/A
ACTIS SOUTH ASIA FUND, CEYLON OXYGEN	SRI LANKA	N/A
AQUA INT'L PARTNERS FUND, GRUPO ROTOPLAST	MEXICO	N/A
ASIAN DEV'T PARTNERS FUND II, PROJECT GREEN	INDIA	N/A
ISRAEL GROWTH FUND, APAX PARTNERS&CO	ISRAEL	N/A
RUSSIA PARTNERS COMPANY LP, SIGULER GUFF & CO	EUROPE/EURASIA	N/A
AIG BRUNSWICK MILLENNIUM FUND, AIG MILLENIUM GP	EUROPE/EURASIA	N/A
AIG BRUNSWICK MILLENNIUM FUND, AIG MILLENIUM GP	EUROPE/EURASIA	N/A
EMERGING EUROPE FUND, TEMPLETON ADVISORS	EUROPE/EURASIA	N/A
RUSSIA PARTNERS COMPANY LP, SIGULER GUFF & CO	EUROPE/EURASIA	N/A
POLAND PARTNERS, LONDON BUTLER & CO	POLAND	N/A
DRAPER INT'L INDIA FUND, DRAPER INTERNATIONAL	INDIA	N/A
INDIA PRIVATE EQUITY FUND, CIBC WORLD MARKETS	INDIA	N/A
AGRIBUSINESS PARTNERS INT'L, AMERICA FIRST CO	EUROPE/EURASIA	N/A
AGRIBUSINESS PARTNERS INTERNATIONAL (BALTICS), AMERICA FIRST COMPANIES	EUROPE/EURASIA	N/A
BANCROFT EASTERN EUROPE FUND	EUROPE/EURASIA	N/A
NEW CENTURY CAPITAL PARTNERS LP, NCH ADVISORS	EUROPE/EURASIA	N/A
NEW CENTURY CAPITAL PARTNERS LP, NCH ADVISORS	EUROPE/EURASIA	N/A
NEW AFRICA OPPORTUNITY FUND LP, ZEPHYR SOUTHERN AFRICA PARTNERS LLC	AFRICA/MIDEAST	N/A
AQUA PARTNERS LP, TARRANT PARTNERS	ALL OPIC	N/A
GLOBAL ENVIRONMENT EMERGING MARKETS FUND LI, GEF MANAGEMENT CORP	ALL OPIC	N/A
ASIA DEVELOPMENT PARTNERS LP, SOUTH ASIA CAPITAL LTD C/O OLYMPUS CAPITAL HOLDINGS	ASIA/PACIFIC	N/A
NEWBRIDGE ANDEAN PARTNERS LP, ACON PARTNERS	LATINAMERICA/CARIBBEAN	N/A
MODERN AFRICA GROWTH AND INVESTMENT COMPANY, CITICORP VENTURES / LAND & MITTENDORF / OTHER	AFRICA/MIDEAST	N/A
AFRICA GROWTH FUND, EQUATOR HOLDINGS LTD	AFRICA/MIDEAST	N/A
MODERN AFRICA GROWTH AND INVESTMENT FUND 2, MODERN AFRICA FUND MANAGERS LLC	AFRICA/MIDEAST	N/A
SOUTHEAST EUROPE EQUITY FUND LTD, BEDMINSTER CAPITAL MANAGEMENT LLC	EUROPE/EURASIA	N/A
GREAT CIRCLE FUND LP (MISF), GREAT CIRCLE CAPITAL	ALL OPIC	N/A
RUSSIA PARTNERS LI O SERIES LP, SIGULER GUFF & CO	EUROPE/EURASIA	N/A
ASIA PACIFIC GROWTH FUND, HAMBRECHT & QUIST ASIA PACIFIC LTD	ASIA/PACIFIC	N/A
DARBY-BBVA LATIN AMERICAN HOLDINGS LLC, DARBY OVERSEAS PARTNERS LTD	LATINAMERICA/CARIBBEAN	N/A
PALADIN REALTY LATIN AMERICA INVESTORS LI LP, PALADOR REALTY I GP, LLC	LATINAMERICA/CARIBBEAN	N/A
EMP AFRICA FUND LI INVESTMENTS LLC, EMP AFRICA MANAGEMENT LP	AFRICA/MIDEAST	N/A
ETHOS PRIVATE EQUITY FUND V, ELIGIBLE US INVESTORS	AFRICA/MIDEAST	N/A
ACTIS SOUTH ASIA FUND 2 LP, ELIGIBLE US INVESTORS	ASIA/PACIFIC	N/A
ASIA DEVELOPMENT PARTNERS LI LP, OLYMPUS ADP II GP, LLC	ASIA/PACIFIC	N/A
CLEARWATER CAPITAL PARTNERS INVESTMENTS II LP	ASIA/PACIFIC	N/A
SOUTHEAST EUROPE EQUITY FUND LTD, BEDMINSTER CAPITAL MANAGEMENT LLC	EUROPE/EURASIA	N/A
BARING MEXICO PRIVATE EQUITY LI FUND, BARING MEXICO II (GP) INC/BARING LATIN AMERICAN HOLDINGS	LATINAMERICA/CARIBBEAN	N/A
ECP MENA GROWTH INVESTMENTS LLC, EMERGING CAPITAL PARTNERS LLC	AFRICA/MIDEAST	N/A
GLOBAL ENVIRONMENT EMERGING MARKET FUND, GEF MANAGEMENT CORP	ALL OPIC	N/A
DARBY PROBANCO LI FUND, DARBY OVERSEAS PARTNERS LTD	LATINAMERICA/CARIBBEAN	N/A
LATIN POWER TRUST LII, CONDUIT CAPITAL PARTNERS	LATINAMERICA/CARIBBEAN	N/A
DARBY BBVA, GRUPO BAJA CERO	MEXICO	N/A
ACTIS SOUTH ASIA FUND, PARAS PHARMACEUTICALS	INDIA	N/A
AQUA INT'L PARTNERS FUND, SPRINGS OF EDEN BV	POLAND	N/A
ASIAN DEV'T PARTNERS FUND II, SANJHVI MOVERS	KOREA	N/A
DARBY BBVA LATIN AMERICA PRIVATE EQUITY FUND, SATELITE DISTRIBUIDORA DE PETROLEO	BRAZIL	N/A
ETHOS FUND V, MORESPORT	SOUTH AFRICA	N/A
ETHOS FUND V, PLUMBLINK	SOUTH AFRICA	N/A
RUSSIA PARTNERS II, SOK	RUSSIA	N/A
RUSSIA PARTNERS II, UKRAINE INSURANCE	UKRAINE	N/A

PROJECT NAME	COUNTRY	SECTOR
SEEF II, HEDEF	TURKEY	N/A
GREAT CIRCLE CAPITAL, OVERSEAS LOGISTIC (RLS)	RUSSIA	N/A
GREAT CIRCLE CAPITAL, BALNAK LOGISTICS GROUP	TURKEY	N/A
GREAT CIRCLE CAPITAL, STS LOGISTICS	RUSSIA	N/A
ZAO AIST	RUSSIA	N/A
KUJTESDA	KOSOVO	N/A
HIPERDIA	ROMANIA	N/A
HEALTH MANAGEMENT SYSTEM	BULGARIA	N/A
WEST CALL COMMUNICATIONS	RUSSIA	N/A
RUSSIA PARTNERS DIRECT INSURANCE	UKRAINE	N/A
HELIOS PT AFRICA	NETHERLANDS	N/A
HELIOS FIRST CITY MONUMENT BANK	NIGERIA	N/A
EMP AFRICA FUND II	ALGERIA	N/A
PLANOR CAPITAL	MAURITIUS	N/A
BLUE FINANCIAL	SOUTH AFRICA	N/A
SAWHF	SOUTH AFRICA	N/A
ECP MENA – SOCIETE D'ARTICLES HYGIENIQUES	TUNISIA	N/A
HELIOS TOWERS	NIGERIA	N/A
EQUITY BANK	AFRICA	N/A
UNIVERSALB	ALBANIA	N/A
CLEARWATER CAPITAL PARTNERS	ASIA	N/A
INSUN – PROJECT GREEN	SOUTH KOREA	N/A
BIS EOOD – NEW EUROPE DIRECTORIES	BULGARIA	N/A
DIAMANT – KONTAKT INSURANCE	UKRAINE	N/A

APPENDIX B – 2015 ACTIVE PROJECTS

This table lists projects active as of September 30, 2016, that were screened as part of the CY 2015 GHG inventory development process.

PROJECT NAME	COUNTRY	SECTOR
A B I GROUP LTD	AFGHANISTAN	Manufacturing
A C D RESEARCH INC	RUSSIA	Manufacturing
AAF SUB-FUND	AFRICA REGIONAL	Finance and Insurance
Abraaj Growth Markets Health Fund	AFRICA REGIONAL	Finance and Insurance
ACCESS AFRICA FUND	AFRICA REGIONAL	Finance and Insurance
Access Africa Fund, LLC	CAMEROON	Finance and Insurance
ACCESSION MEZZANINE CAPITAL III, L.P.	EUROPE REGIONAL	Finance and Insurance
Ace American Insurance Company	GHANA	Educational Services
Acleda Bank	CAMBODIA	Finance and Insurance
Acu Petroleo S.A.	BRAZIL	Transportation and Warehousing
ACWA Power SolarReserve Redstone Solar Thermal Pow	SOUTH AFRICA	Utilities
ADRIATIC INVESTMENT MANAGEMENT L L C	CROATIA	Information
AES CORPORATION	JORDAN	Utilities
AES JORDAN PSC	JORDAN	Utilities
AES LEVANT PSC	JORDAN	Utilities
AFGHAN GROWTH FINANCE LLC	AFGHANISTAN	Finance and Insurance
Africa Finance Corporation	AFRICA REGIONAL	Finance and Insurance
Africa Integras - University of Ghana	GHANA	Educational Services
Africa Telecoms Media and Technology Fund	AFRICA REGIONAL	Finance and Insurance
African Banking Corporation of Botswana Limited	BOTSWANA	Finance and Insurance
African Banking Corporation of Mozambique Limited	MOZAMBIQUE	Finance and Insurance
African Banking Corporation of Zambia Limited	ZAMBIA	Finance and Insurance
African Leadership Academy	SOUTH AFRICA	Educational Services
African Mortgage Company	ZIMBABWE	Finance and Insurance
Aga Khan Hospital and Medical College Founda	PAKISTAN	Health Care and Social Assistance
AKBANK T.A.S.	TURKEY	Finance and Insurance
AL TAMWEEL AL SAREE LIMITED	IRAQ	Finance and Insurance
Al Tamweel Al Saree LLC	IRAQ	Finance and Insurance
ALISTAIR JAMES COMPANY LIMITED	TANZANIA	Transportation and Warehousing
Alsis Mexico Opportunities Fund	MEXICO	Finance and Insurance
Alto Maipo SpA	CHILE	Utilities
Amandi Energy Limited	GHANA	Utilities
AMANECER SPA	CHILE	Utilities
AMERICAN EMBASSY SCHOOL OF LUSAKA FOUNDATION INC	ZAMBIA	Educational Services
American International School of Abuja	NIGERIA	Educational Services
AMERICAN INTERNATIONAL SCHOOL OF ABUJA FOUNDATION INC	NIGERIA	Educational Services
AMERICAN INTERNATIONAL SCHOOL OF MONROVIA IN	LIBERIA	Educational Services
AMERICAN INTERNATIONAL SCHOOL SYSTEMS, INC.	PAKISTAN	Educational Services
AMERICAN INTL SCHOOL OF BAMAKO	MALI	Educational Services
American Intl. School of Bamako	MALI	Educational Services
American Intl. School-Kingston	JAMAICA	Educational Services
AMERICAN UNIVERSITY IN BULGARIA	BULGARIA	Educational Services
AMERICAN UNIVERSITY OF BEIRUT	LEBANON	Educational Services
American University of Central Asia (Tranche	KYRGYZSTAN	Educational Services
American Wool III	AFGHANISTAN	Agriculture, Forestry, Fishing and Hunting
AMETHIS AFRICA FINANCE LIMITED	AFRICA REGIONAL	Finance and Insurance

PROJECT NAME	COUNTRY	SECTOR
AMSTED RAIL COMPANY INC	UKRAINE	Transportation and Warehousing
APACHE CORP	EGYPT	Mining, Quarrying, and Oil and Gas Extraction
APACHE CORPORATION	EGYPT	Mining, Quarrying, and Oil and Gas Extraction
Apollo Towers	BURMA/MYANMAR	Construction
ARGENTINA OLIVE RANCH	ARGENTINA	Agriculture, Forestry, Fishing and Hunting
ARMENIA HOTEL COMPLEX - 2	ARMENIA	Accommodation and Food Services
ASA International	ALL OPIC COUNTRIES	Finance and Insurance
ASIA DEVELOPMENT PARTNERS III, LP	INDIA	Finance and Insurance
ASIA FOUNDATION	AFGHANISTAN	Health Care and Social Assistance
ASIA FOUNDATION	BANGLADESH	Health Care and Social Assistance
ASIA FOUNDATION	CAMBODIA	Health Care and Social Assistance
ASIA FOUNDATION	EAST TIMOR	Health Care and Social Assistance
ASIA FOUNDATION	INDONESIA	Health Care and Social Assistance
ASIA FOUNDATION	MONGOLIA	Health Care and Social Assistance
ASIA FOUNDATION	NEPAL	Health Care and Social Assistance
ASIA FOUNDATION	PAKISTAN	Health Care and Social Assistance
ASIA FOUNDATION	PHILIPPINES	Health Care and Social Assistance
ASIA FOUNDATION	SOUTH KOREA	Health Care and Social Assistance
ASIA FOUNDATION	SRI LANKA	Health Care and Social Assistance
ASIA FOUNDATION	THAILAND	Health Care and Social Assistance
ASIA FOUNDATION	RISK	Health Care and Social Assistance
ASSURANT INC	BRAZIL	Finance and Insurance
AST Telecom Solar Private Limited	INDIA	Utilities
AUSTRALIS AQUACULTURE LLC	VIETNAM	Agriculture, Forestry, Fishing and Hunting
AUTO SERVICE CAUCASUS LTD	GEORGIA	Other Services (except Public Administration)
Avantel S.A.S.	COLOMBIA	Information
Aventura Investment Partners LLC	SENEGAL	Agriculture, Forestry, Fishing and Hunting
Azura-Edo Power Project- Junior Loan	NIGERIA	Utilities
Azura-Edo Power Project- Senior Loan	NIGERIA	Utilities
AZURE POWER (GUJARAT) PVT LTD - SUNEDISON	INDIA	Utilities
AZURE POWER HARYANA PRIVATE LIMITED	INDIA	Utilities
Azure Power Punjab Private Limited	INDIA	Utilities
Azure Sunlight Private Limited	INDIA	Utilities
B M R ENERGY LLC	JAMAICA	Utilities
BAC INTERNATIONAL BANK,INC. (TRANCHE A)	PANAMA	Finance and Insurance
BAC INTERNATIONAL BANK,INC. (TRANCHE B)	PANAMA	Finance and Insurance
BANCO BAC SAN JOSE, S.A. (TRANCHE A)	COSTA RICA	Finance and Insurance
BANCO BAC SAN JOSE, S.A. (TRANCHE B)	COSTA RICA	Finance and Insurance
BANCO DE AMERICA CENTRAL HONDURAS, S.A.(TR A	HONDURAS	Finance and Insurance
BANCO DE AMERICA CENTRAL HONDURAS, S.A.(TR B	HONDURAS	Finance and Insurance
BANCO DE AMERICA CENTRAL, S.A. (TRANCHE A)	NICARAGUA	Finance and Insurance
BANCO DE AMERICA CENTRAL, S.A. (TRANCHE B)	NICARAGUA	Finance and Insurance
BANCO DE CREDITO CENTROAMERICANO, S.A.	NICARAGUA	Finance and Insurance
BANCO LAFISE HONDURAS, S.A.	HONDURAS	Finance and Insurance
BANCO LAFISE S.A.	COSTA RICA	Finance and Insurance
BANCO LAFISE, S.A. (TRANCHE 2)	COSTA RICA	Finance and Insurance
BANCO LAFISE, S.A. (TRANCHE 3)	COSTA RICA	Finance and Insurance
Bayport Management Ltd	ALL OPIC COUNTRIES	Finance and Insurance
BELSTAR CAPITAL LIMITED	GHANA	Manufacturing
BELSTAR CAPITAL LIMITED	GHANA	Utilities
BELSTAR DEVELOPMENT L L C	GHANA	Wholesale Trade
BETSY, LLC	GEORGIA	Accommodation and Food Services
Beyond the Grid Solar Fund (SunFunder)	TANZANIA	Finance and Insurance

PROJECT NAME	COUNTRY	SECTOR
Bien Para Bien S.A., S.A.P.I. de C.V. SOFOM ENR	MEXICO	Finance and Insurance
Big Tree Farms Inc.	INDONESIA	Manufacturing
Blue Mountain Renewables Wind Power Project	JAMAICA	Utilities
BRAC AFRICA MICROFINANCE, LTD. (CLASS B)	TANZANIA	Finance and Insurance
BRAC International Loan Facility ("BILF")	AFRICA REGIONAL	Finance and Insurance
BRAVO ENERGY MEXICO SRL DE CV	MEXICO	Utilities
Bridge International Academy	KENYA	Educational Services
BROAD COVE ECOHOMES LIBERIA, INC	LIBERIA	Construction
BROAD COVE ECOHOMES LIBERIA, INC.	LIBERIA	Construction
BURN MANUFACTURING COMPANY	AFRICA REGIONAL	Manufacturing
Butama Hydro Electricity Company	UGANDA	Utilities
C21 BRASIL DESENVOLVIMENTO IMOBILAIRIO LTDA	BRAZIL	Real Estate and Rental and Leasing
CAFR-AMERICAN INTERNATIONAL SCHOOL LAGOS	NIGERIA	Educational Services
CAIRO AMMAN BANK	JORDAN	Finance and Insurance
Calvert Foundation-Jain Sons Finlease ("Intellegro	INDIA	Finance and Insurance
Calvert Foundation-Thirumeni Finance ("Varthana")	INDIA	Finance and Insurance
Capital Alliance Property Investment Company, L.P.	NIGERIA	Finance and Insurance
CASAMAR MAURITIUS, LTD./CASAMAR INDIAN OCEAN	MAURITIUS	Manufacturing
CASIA-PACIFIC BANGLADESH TELECOM LIMITED	BANGLADESH	Information
Caspian Impact Investments	INDIA	Finance and Insurance
CCA2-GRUPO M HOLDING S.A.	COSTA RICA	Finance and Insurance
CEL SOL S.A.P.I. DE CV	MEXICO	Manufacturing
Centro de Servi? Internacionais de Sa?de,	ANGOLA	Health Care and Social Assistance
CGLOB - CrediQ	LATIN AMERICA REGION	Finance and Insurance
CGLOB - Jamaica Public Service Company Limit	JAMAICA	Utilities
CGLOB - Jamaica Public Service Company Limited #2	JAMAICA	Utilities
CGLOB2 - Banco Atlas	PARAGUAY	Finance and Insurance
CGLOB2 - JSC Bank of Georgia	GEORGIA	Finance and Insurance
CGLOB-ASTARTA-KYIV LLC	UKRAINE	Agriculture, Forestry, Fishing and Hunting
CGLOB-ATTIJARIWABA BANK ("ATW")	MOROCCO	Finance and Insurance
CGLOB-BANCO DEL PAIS, S.A.	HONDURAS	Finance and Insurance
CGLOB-CAL Bank	GHANA	Finance and Insurance
CGLOB-CHI LIMITED	NIGERIA	Manufacturing
CGLOB-Grupo Jaremar	HONDURAS	Manufacturing
CGLOB-PAKISTAN MOBIL COMMUNICATIONS LIMITED	PAKISTAN	Information
CGLOB-TSKB	TURKEY	Finance and Insurance
CHEMONICS INTERNATIONAL INC	ANGOLA	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	BOTSWANA	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	BURUNDI	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	DEM. REPUBLIC OF CONGO	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	DJIBOUTI	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	ETHIOPIA	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	GHANA	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	KENYA	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	MALAWI	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	MOZAMBIQUE	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	NIGER	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	NIGERIA	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	RWANDA	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	SOUTH AFRICA	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	TANZANIA	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	UGANDA	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	ZAMBIA	Professional, Scientific, and Technical Services

PROJECT NAME	COUNTRY	SECTOR
CHEMONICS INTERNATIONAL INC	AFGHANISTAN	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	BANGLADESH	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	INDONESIA	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	MONGOLIA	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	NEPAL	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	PAKISTAN	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	PHILIPPINES	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	VIETNAM	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	ALBANIA	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	BOSNIA AND HERZEGOVINA	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	KOSOVO	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	ANTIGUA AND BARBUDA	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	BOLIVIA	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	DOMINICAN REPUBLIC	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	ECUADOR	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	EL SALVADOR	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	HAITI	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	NICARAGUA	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	PANAMA	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	PARAGUAY	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	PERU	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	EGYPT	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	JORDAN	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	LEBANON	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	MOROCCO	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	WEST BANK AND GAZA	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	ARMENIA	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	AZERBAIJAN	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	GEORGIA	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	KAZAKHSTAN	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	KYRGYZSTAN	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	MOLDOVA	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	TAJIKISTAN	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	UKRAINE	Professional, Scientific, and Technical Services
CHEMONICS INTERNATIONAL INC	RISK	Professional, Scientific, and Technical Services
CHF LEBANON REPLACEMENT FACILITY	LEBANON	Finance and Insurance
CHOUS2-BANCO ALIADO, S.A.	PANAMA	Finance and Insurance
CHOUS2-BANCO CONTINENTAL S.A.E.C.A.	PARAGUAY	Finance and Insurance
CHOUS2-BANCO FICOHSA	HONDURAS	Finance and Insurance
CHOUS2-BANCO REGIONAL S.A.E.C.A.	PARAGUAY	Finance and Insurance
CHOUS2-BANK POZITIF	TURKEY	Finance and Insurance
CHOUS2-GLOBAL BANK CORPORATION	PANAMA	Finance and Insurance
CHOUS2-JSC HALYK SAVINGS BANK	KAZAKHSTAN	Finance and Insurance
CHOUS-BANCO DE LA PRODUCCION S.A.	NICARAGUA	Finance and Insurance
CHOUS-BANCO FINANCIERA COMMERCIAL HONDURENA	HONDURAS	Finance and Insurance
CHOUS-BANCO PROMERICA	COSTA RICA	Finance and Insurance
CHOUS-BANCO REFORMADOR, S.A.	GUATEMALA	Finance and Insurance
CHOUS-BANRURAL S.A.	GUATEMALA	Finance and Insurance
CHOUS-CREDIQ, SA DE CV & CREDITZ INVERSIONES	COSTA RICA	Finance and Insurance
CHOUS-JOINT STOCK COMPANY TBC BANK	GEORGIA	Finance and Insurance
Cinepax Corp.	PAKISTAN	Information
CITADEL CAPITAL LOAN FACILITY	EGYPT	Finance and Insurance
CITIBANK, N. A.	PAKISTAN	Finance and Insurance

PROJECT NAME	COUNTRY	SECTOR
CITIBANK, N. A.	HUNGARY	Finance and Insurance
CITIBANK, N. A.	ROMANIA	Finance and Insurance
CITIBANK, N. A.	TURKEY	Finance and Insurance
CITIBANK, N. A.	EGYPT	Finance and Insurance
CITIBANK, N. A.	JORDAN	Finance and Insurance
CITIBANK, N. A.	UKRAINE	Finance and Insurance
CITIBANK, N. A.	RISK	Finance and Insurance
Claremont Hotel LLC	IRAQ	Accommodation and Food Services
CLEARWATER CAPITAL PARTNERS IV, L.P.	ASIA REGIONAL	Finance and Insurance
CLEB2A-BANK AUDI SAL-AUDI SARADAR GROUP	LEBANON	Finance and Insurance
CLEB2A-BANKMED S.A.L.	LEBANON	Finance and Insurance
CLEB2A-BYBLOS BANK SAL	LEBANON	Finance and Insurance
CLEB2-BANK AUDI SAL-AUDI SARADAR GROUP	LEBANON	Finance and Insurance
CLEB-BANKMED S.A.L.	LEBANON	Finance and Insurance
CLEB-BANQUE LIBANO-FRANCAISE S.A.L.	LEBANON	Finance and Insurance
CLEB-BYBLOS BANK S.A.L.	LEBANON	Finance and Insurance
CMFI-2-Banco Pichincha	ECUADOR	Finance and Insurance
CMFI-2-Fundacion Genesis Empresarial	GUATEMALA	Finance and Insurance
CMFI-2-Grameen Financial Services Private Li	INDIA	Finance and Insurance
CMFI-2-Janalakshmi (round 2)	INDIA	Finance and Insurance
CMFI-2-Janalakshmi Financial Services Privat	INDIA	Finance and Insurance
CMFI-2-Jordan Micro Credit Company (Tamweelcom)	JORDAN	Finance and Insurance
CMFI-2-Microcred Senegal	SENEGAL	Finance and Insurance
CMFI-2-SKS	INDIA	Finance and Insurance
CMFI-2-SKS (Round 2)	INDIA	Finance and Insurance
CMFI-2-Ujjivan (Round 2)	INDIA	Finance and Insurance
CMFI-2-Ujjivan Financial Services Private Li	INDIA	Finance and Insurance
CMFI-OPPORTUNITY MICROCREDIT ROMANIA ("OMRO")	ROMANIA	Finance and Insurance
Commonwealth Partners	JAMAICA	Finance and Insurance
Compagnie des Bauxites de Guinee	GUINEA	Mining, Quarrying, and Oil and Gas Extraction
CONDOMINIOS RIVERSIDE ETAPA II, S.A.	COSTA RICA	Construction
Content Solar Limited	JAMAICA	Utilities
CONTINENTAL GRAIN CO	HAITI	Manufacturing
CONTOURGLOBAL	SENEGAL	Utilities
ContourGlobal Cap des Biches	SENEGAL	Utilities
ContourGlobal Cap des Biches Senegal	SENEGAL	Utilities
CONTOURGLOBAL SOLUTIONS HOLDINGS LIMITED	NIGERIA	Utilities
CONTOURGLOBAL TOGO L L C	TOGO	Utilities
CONTOURGLOBAL TOGO S.A.	TOGO	Utilities
CORPORACION QUIPORT S.A.	ECUADOR	Transportation and Warehousing
CRECERA (LATIN AMERICA EXPORT FINANCE FUND)	LATIN AMERICA REGION	Finance and Insurance
CSA-BANCO REGIONAL, S.A.	PARAGUAY	Finance and Insurance
CSA-BBVA PARAGUAY S.A.	PARAGUAY	Finance and Insurance
CSA-Grupo Jaremar	HONDURAS	Manufacturing
CSA-INTERBANCO S.A.	PARAGUAY	Finance and Insurance
CSI LATINA ARRENDAMIENTO MERCANTIL S.A.P.I.	BRAZIL	Real Estate and Rental and Leasing
CSI LATINA FINANCIAL, INC/CSI LATINA ARRENDA	BRAZIL	Real Estate and Rental and Leasing
CSI LATINA FINANCIAL, INC/CSI LEASING DE CENT	LATIN AMERICA REGION	Real Estate and Rental and Leasing
CSI LEASING POLSKA SP.Z.O.O ET AL	EUROPE REGIONAL	Real Estate and Rental and Leasing
CSI Peru	PERU	Real Estate and Rental and Leasing
d.light design	KENYA	Utilities
DARBY-PROBANCO HOLDINGS, L.P.	LATIN AMERICA REGION	Finance and Insurance
DATASPACE PARTNERS, LLC	RUSSIA	Information

PROJECT NAME	COUNTRY	SECTOR
DCO S.A.	ALL OPIC COUNTRIES	Finance and Insurance
Destino Desarrollos Inmobiliarios, Compania Limita	GUATEMALA	Construction
Dev Equity, LP	LATIN AMERICA REGION	Finance and Insurance
DEVELOPMENT ALTERNATIVES INC. (DAI)	AFGHANISTAN	Professional, Scientific, and Technical Services
DEVELOPMENT ALTERNATIVES INC. (DAI)	BANGLADESH	Professional, Scientific, and Technical Services
DEVELOPMENT ALTERNATIVES INC. (DAI)	MOLDOVA	Professional, Scientific, and Technical Services
DEVELOPMENT ALTERNATIVES INC. (DAI)	RISK	Professional, Scientific, and Technical Services
DIG-LE LEVIER	HAITI	Finance and Insurance
DIG-SOFIHDES	HAITI	Finance and Insurance
DISI WATER PSC	JORDAN	Utilities
ECP AFRICA FIII INVESTMENTS LLC	AFRICA REGIONAL	Finance and Insurance
ECP Africa Fund II Investments LLC	AFRICA REGIONAL	Finance and Insurance
EGYPT-AL WATANY BANK	EGYPT	Finance and Insurance
EGYPT-COMMERCIAL INTERNATIONAL BANK	EGYPT	Finance and Insurance
Envirofit	ALL OPIC COUNTRIES	Manufacturing
ESP Urja Private Limited	INDIA	Utilities
EURASIA FOUNDATION	ARMENIA	Other Services (except Public Administration)
EURASIA FOUNDATION	GEORGIA	Other Services (except Public Administration)
EURASIA FOUNDATION	UKRAINE	Other Services (except Public Administration)
FAIRTRADE ACCESS FUND S.A., SICAV-SIF	ALL OPIC COUNTRIES	Finance and Insurance
Falcon Africa Mezzanine Opportunities	AFRICA REGIONAL	Finance and Insurance
FINANCIERA TFC, S.A.	PERU	Finance and Insurance
FINCA INTERNATIONAL	ALL OPIC COUNTRIES	Finance and Insurance
Firefly Investments 230 (Pty) Ltd.	SOUTH AFRICA	Utilities
First City Monument Bank	NIGERIA	Finance and Insurance
First Mortgage Company	ARMENIA	Finance and Insurance
First Mortgage Company II	ARMENIA	Finance and Insurance
FIXED RATE FUNDING & LIQUIDITY LTD (HWD SPA)	ALGERIA	Utilities
FORESTRY & AGRICULTURAL INVESTMENT MGMT USA	RWANDA	Agriculture, Forestry, Fishing and Hunting
Four Rivers Real Estate, Pte. Ltd.	BURMA/MYANMAR	Real Estate and Rental and Leasing
Foursan Jordan Fund 2	JORDAN	Finance and Insurance
G H L U S A INVESTMENT PARTNERS	GHANA	Finance and Insurance
GAMMA KNIFE PERU	PERU	Health Care and Social Assistance
GARANTI DIVERSIFIED PAYMENT RIGHTS COMPANY	TURKEY	Finance and Insurance
Gazelle Fund L.P.	EUROPE REGIONAL	Finance and Insurance
GCMC II- JUNIOR NOTE TRANCHE	ALL OPIC COUNTRIES	Finance and Insurance
Generacion Solar SpA	CHILE	Utilities
GENWORTH MORTGAGE INSURANCE CORP	SOUTH KOREA	Finance and Insurance
GEORGIAN AMERICAN UNIVERSITY LLC	GEORGIA	Educational Services
GHANA HOME LOANS (FUND 1) LIMITED	GHANA	Finance and Insurance
GIFF-MFI-Arohan Micro Finance Pvt. LTD	INDIA	Finance and Insurance
GIFF-MFI-Suryoday Micro Finance LTD	INDIA	Finance and Insurance
GIFF-MFI-Utkarsh Micro Finance Pvt. LDT	INDIA	Finance and Insurance
GLOBAL COMMERCIAL MICROFINANCE CONSORTIUM II	ALL OPIC COUNTRIES	Finance and Insurance
Global Partnerships Social Investment Fund 6.0	LATIN AMERICA REGION	Finance and Insurance
GLOBAL PARTNERSHIPS SOCIAL INVMT FUND 5.0	LATIN AMERICA REGION	Finance and Insurance
GMT HOTELS, LLC	GEORGIA	Accommodation and Food Services
GMT MTATSMINDA, LLC	GEORGIA	Accommodation and Food Services
GN Bank Limited	GHANA	Finance and Insurance
GN BEVERAGES	MONGOLIA	Manufacturing
GOLDHAM PTY LTD.T/A KALAHARI GAS CORPORATION	BOTSWANA	Utilities
GOOGLE INC	KENYA	Utilities
GoSolar Energy Efficiency S.R.L.	COSTA RICA	Utilities

PROJECT NAME	COUNTRY	SECTOR
GRASSROOTS BUSINESS FUND	ALL OPIC COUNTRIES	Finance and Insurance
Greenlight Planet, Inc.	ALL OPIC COUNTRIES	Utilities
GTS MAJES S.A.C. AND GTS REPARTICION S.A.C.	PERU	Utilities
HAITI 360	HAITI	Manufacturing
Hawa Energy	PAKISTAN	Utilities
HEFF	LATIN AMERICA REGION	Finance and Insurance
HELIOS INVESTORS II AFRICA, LTD.	AFRICA REGIONAL	Finance and Insurance
Husk Power Services	INDIA	Utilities
IDFC	INDIA	Finance and Insurance
IHS FUND II SA PVE	SOUTH AFRICA	Finance and Insurance
IKH TOKHOIROL LLC	MONGOLIA	Mining, Quarrying, and Oil and Gas Extraction
India 2020 II Investors, Limited	INDIA	Finance and Insurance
IndusInd Bank Limited	INDIA	Finance and Insurance
INDUSTRIAL DPR FUNDING LTD.	GUATEMALA	Finance and Insurance
Innovida Haiti Ltd.	HAITI	Manufacturing
Inter-Mac International, Inc.	HONDURAS	Construction
International Bank Liberia Limited	LIBERIA	Finance and Insurance
INTERNATIONAL COLLEGE	LEBANON	Educational Services
INTERNATIONAL COMMUNITY SCHOOL LIMITED	GHANA	Educational Services
INTERNATIONAL RESCUE COMMITTEE	BURUNDI	Health Care and Social Assistance
INTERNATIONAL RESCUE COMMITTEE	CENTRAL AFRICAN REPUBLIC	Health Care and Social Assistance
INTERNATIONAL RESCUE COMMITTEE	CHAD	Health Care and Social Assistance
INTERNATIONAL RESCUE COMMITTEE	COTE D'IVOIRE	Health Care and Social Assistance
INTERNATIONAL RESCUE COMMITTEE	DEM. REPUBLIC OF CONGO	Health Care and Social Assistance
INTERNATIONAL RESCUE COMMITTEE	ETHIOPIA	Health Care and Social Assistance
INTERNATIONAL RESCUE COMMITTEE	KENYA	Health Care and Social Assistance
INTERNATIONAL RESCUE COMMITTEE	LIBERIA	Health Care and Social Assistance
INTERNATIONAL RESCUE COMMITTEE	NIGERIA	Health Care and Social Assistance
INTERNATIONAL RESCUE COMMITTEE	RWANDA	Health Care and Social Assistance
INTERNATIONAL RESCUE COMMITTEE	SIERRA LEONE	Health Care and Social Assistance
INTERNATIONAL RESCUE COMMITTEE	SOMALIA	Health Care and Social Assistance
INTERNATIONAL RESCUE COMMITTEE	SOUTH SUDAN	Health Care and Social Assistance
INTERNATIONAL RESCUE COMMITTEE	TANZANIA	Health Care and Social Assistance
INTERNATIONAL RESCUE COMMITTEE	UGANDA	Health Care and Social Assistance
INTERNATIONAL RESCUE COMMITTEE	ZIMBABWE	Health Care and Social Assistance
INTERNATIONAL RESCUE COMMITTEE	AFGHANISTAN	Health Care and Social Assistance
INTERNATIONAL RESCUE COMMITTEE	MYANMAR	Health Care and Social Assistance
INTERNATIONAL RESCUE COMMITTEE	PAKISTAN	Health Care and Social Assistance
INTERNATIONAL RESCUE COMMITTEE	THAILAND	Health Care and Social Assistance
INTERNATIONAL RESCUE COMMITTEE	TURKEY	Health Care and Social Assistance
INTERNATIONAL RESCUE COMMITTEE	HAITI	Health Care and Social Assistance
INTERNATIONAL RESCUE COMMITTEE	IRAQ	Health Care and Social Assistance
INTERNATIONAL RESCUE COMMITTEE	JORDAN	Health Care and Social Assistance
INTERNATIONAL RESCUE COMMITTEE	LEBANON	Health Care and Social Assistance
INTERNATIONAL RESCUE COMMITTEE	YEMEN	Health Care and Social Assistance
INTERNATIONAL RESCUE COMMITTEE	RUSSIA	Health Care and Social Assistance
INTERNATIONAL RESCUE COMMITTEE	RISK	Health Care and Social Assistance
International School of Kenya Limited	KENYA	Educational Services
INTL CO FOR ENERGY TECHNOLOGY INDUSTRIES	JORDAN	Construction
IRAQ MIDDLE MARKET DEVELOPMENT FOUNDATION	IRAQ	Finance and Insurance
ISQ-OPIC Asia Fund L.P.	ASIA REGIONAL	Finance and Insurance
Itau 2014	BRAZIL	Finance and Insurance
Izmir Bayrakli Hastane Yatirim ve Saglik Hizmetler	TURKEY	Health Care and Social Assistance

PROJECT NAME	COUNTRY	SECTOR
Janalakshmi Financial Services Pvt. Ltd.	INDIA	Finance and Insurance
Jhampir Power (Private) Limited	PAKISTAN	Utilities
JORDAN-ARAB BANK	JORDAN	Finance and Insurance
JORDAN-BANK AL ETIHAD	JORDAN	Finance and Insurance
JORDAN-CAIRO AMMAN BANK	JORDAN	Finance and Insurance
JORDAN-Capital Bank 2	JORDAN	Finance and Insurance
JORDAN-CAPITAL BANK OF JORDAN	JORDAN	Finance and Insurance
JORDAN-HOUSING BANK FOR TRADE AND FINANCE	JORDAN	Finance and Insurance
JORDAN-JORDAN AHLI BANK	JORDAN	Finance and Insurance
JORDAN-JORDAN KUWAIT BANK	JORDAN	Finance and Insurance
JOSHI TECHNOLOGIES INTERNATIONAL, INC.	COLOMBIA	Mining, Quarrying, and Oil and Gas Extraction
JSC BANK OF GEORGIA	GEORGIA	Finance and Insurance
JSC D&B Georgia	GEORGIA	Accommodation and Food Services
JSC PROCREDIT BANK GEORGIA	GEORGIA	Finance and Insurance
KABUL GRAND RESIDENCES LLC	AFGHANISTAN	Construction
K-Electric Limited	PAKISTAN	Utilities
Khushhali Bank Limited	PAKISTAN	Finance and Insurance
Kilombero Plantations Limited	TANZANIA	Agriculture, Forestry, Fishing and Hunting
Kipeto Wind Power Project	KENYA	Utilities
Kiva	ALL OPIC COUNTRIES	Finance and Insurance
Kocaeli Hastane Yatirim ve Saglik Hizmetleri A.S.	TURKEY	Health Care and Social Assistance
KORET ISRAEL ECONOMIC DEVELOPMENT FUNDS	ISRAEL	Finance and Insurance
KWAPLAH INTERNATIONAL TRADING CO INC	LIBERIA	Wholesale Trade
LA FUTURA, S.A.	GUATEMALA	Agriculture, Forestry, Fishing and Hunting
La Hipotecaria El Salvador	EL SALVADOR	Finance and Insurance
La Hipotecaria El Salvadorian Mortgage Trust 2016-	EL SALVADOR	Finance and Insurance
LA HIPOTECARIA PANAMANIAN MORTGAGE TRUST 10	PANAMA	Finance and Insurance
La Hipotecaria Panamanian Mortgage Trust 201	PANAMA	Finance and Insurance
LAAD Americas NV	COLOMBIA	Finance and Insurance
LAFISE GROUP PANAMA, INC.	PANAMA	Finance and Insurance
Lake Turkana -- Nedbank Limited	KENYA	Utilities
Lake Turkana - The Standard Bank of South Africa	KENYA	Utilities
Latam V	LATIN AMERICA REGION	Finance and Insurance
Latin Power III Investments, L.P. (Conduit)	LATIN AMERICA REGION	Finance and Insurance
LCF SPV	ALL OPIC COUNTRIES	Finance and Insurance
LEBANESE AMERICAN UNIVERSITY	LEBANON	Educational Services
Letshego Holdings Limited	AFRICA REGIONAL	Finance and Insurance
Levered Alsis Mexico Housing Opportunities, L.P.	MEXICO	Finance and Insurance
LIBERIAN ENTERPRISE DEVELOPMENT FINANCE CO.	LIBERIA	Finance and Insurance
Livelihood Impact Fund, L.P.	ASIA REGIONAL	Finance and Insurance
LLC "WINNER IMPORTS UKRAINE, LTD"	UKRAINE	Retail Trade
Los Santos Solar I, S.A.P.I. de C.V.	MEXICO	Utilities
Maarifa Edu Holdings Limited	AFRICA REGIONAL	Finance and Insurance
Master Wind Energy Limited	PAKISTAN	Utilities
Materiales Vista Bahia	PANAMA	Construction
Mawingu Networks	KENYA	Information
MCE Social Capital Loan	ALL OPIC COUNTRIES	Finance and Insurance
MEII 2- Quds Bank 2 (SME Increase)	WEST BANK	Finance and Insurance
MEII 3 - Bank of Jordan	WEST BANK	Finance and Insurance
MEII 3 - Bank of Palestine	WEST BANK	Finance and Insurance
MEII 3 - Cairo Amman Bank	WEST BANK	Finance and Insurance
MEII 3 - Jordan Ahli Bank	WEST BANK	Finance and Insurance
MEII 3 - National Bank	WEST BANK	Finance and Insurance

PROJECT NAME	COUNTRY	SECTOR
MEII 3 - Quds Bank	WEST BANK	Finance and Insurance
MEII-2- CAIRO AMMAN BANK (SME INCREASE)	WEST BANK	Finance and Insurance
MEII-2-ARAB BANK	WEST BANK	Finance and Insurance
MEII-2-Bank of Jordan	WEST BANK	Finance and Insurance
MEII-2-Bank of Jordan2	WEST BANK	Finance and Insurance
MEII-2-BANK OF PALESTINE (SME INCREASE)	WEST BANK	Finance and Insurance
MEII-2-JORDAN AHLI BANK (SME)	WEST BANK	Finance and Insurance
MEII-2-PALESTINE COMMERCIAL BANK	WEST BANK	Finance and Insurance
MEII-2-Palestine Commercial Bank 2	WEST BANK	Finance and Insurance
MEII-2-QUDS BANK (SME)	WEST BANK	Finance and Insurance
MEII-BANK OF PALESTINE	WEST BANK	Finance and Insurance
MEII-BANK OF PALESTINE (MOVENPICK)	WEST BANK	Accommodation and Food Services
MEII-CAIRO AMMAN BANK	WEST BANK	Finance and Insurance
MEII-CAIRO AMMAN BANK (MOVENPICK)	WEST BANK	Accommodation and Food Services
MEII-HOUSING BANK FOR TRADE AND FINANCE	WEST BANK	Finance and Insurance
MEII-JORDAN AHLI BANK	WEST BANK	Finance and Insurance
MEMC ELECTRONICS MATERIALS, INC.	INDIA	Utilities
MFX Solutions II	ALL OPIC COUNTRIES	Finance and Insurance
MFX SOLUTIONS, INC.	ALL OPIC COUNTRIES	Finance and Insurance
MIBANCO-IFC SYNDICATION	PERU	Finance and Insurance
MicroBuild Fund	ALL OPIC COUNTRIES	Finance and Insurance
MICROBUILD I, LLC	ALL OPIC COUNTRIES	Finance and Insurance
MICROCREDIT ENTERPRISES	ALL OPIC COUNTRIES	Finance and Insurance
MICROFINANCE GROWTH FUND, LLC	LATIN AMERICA REGION	Finance and Insurance
MICROVEST + PLUS	AZERBAIJAN	Finance and Insurance
MICROVEST I, LP	ALL OPIC COUNTRIES	Finance and Insurance
Microvest Short Duration Fund LP	NICARAGUA	Finance and Insurance
MicroVest Short Duration Fund, LP	GEORGIA	Finance and Insurance
MicroVest+Plus, LP	ALL OPIC COUNTRIES	Finance and Insurance
MIDDLE EAST INVESTMENT INITIATIVE, INC.	GAZA	Finance and Insurance
MIDDLE EAST INVESTMENT INITIATIVE, INC.	GAZA	Finance and Insurance
Miranda Falcon Realty Ltd	WEST BANK	Construction
Mobius Motors Kenya Limited	KENYA	Manufacturing
Moquegua FV S.A.C.	PERU	Utilities
MORGAN STANLEY INCORPORATED	RUSSIA	Finance and Insurance
MORGANTI DEVELOPMENT L L C	WEST BANK AND GAZA	Utilities
MTANGA FARMS LIMITED	TANZANIA	Manufacturing
MULTILATERAL INVESTMENT GUARANTEE AGENCY	NIGERIA	Utilities
NATIONAL UNION FIRE INSURANCE CO OF PITTSBURGH PA	ECUADOR	Transportation and Warehousing
Negev Energy	ISRAEL	Utilities
New York Pizza Co Ltd.	RUSSIA	Accommodation and Food Services
NEXTGEN SOLAWAZI LIMITED	TANZANIA	Utilities
NORC Egypt Oil Recycling Company	EGYPT	Manufacturing
NU STRATA LOGISTICS	LIBERIA	Transportation and Warehousing
Numotech	RUSSIA	Manufacturing
O&S CONSULTING LLC	UZBEKISTAN	Accommodation and Food Services
Olympus Capital Asia Catalyst Fund, L.P.	ASIA REGIONAL	Finance and Insurance
One Acre Fund	AFRICA REGIONAL	Finance and Insurance
Orpower 4 Geothermal	KENYA	Utilities
PACIFIC COLLECTION COMPANY/TRIBAL LOOM	AFGHANISTAN	Manufacturing
PALADIN REALTY LATIN AMERICA INVESTORS III	LATIN AMERICA REGION	Finance and Insurance

APPENDIX C – PROJECT EMISSIONS CALCULATIONS

This appendix contains the inputs, data sources, and calculations used to estimate the emissions for each of the projects in OPIC’s CY 2015 GHG inventory. If project sponsor feedback was submitted in the years from 2007–2014, emissions estimates from those years are also presented in this Appendix C.

TIER A PROJECTS

AES Jordan

Maximum Potential-to-Emit Estimate

AES Jordan’s maximum PTE estimate of **1,545,173 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Fuel Type	Natural Gas	Project Description
Capacity	370 MW	Project Description
Emission Factor	390 g CO ₂ /kWh	IFC 2006
Load Adjustment Factor	85/70	Engineering adjustment to align maximum PTE with operational data supplied by project sponsor for inventory years 2009 through 2012.

Maximum Potential-to-Emit = 1,545,173 short tons of CO₂e per year =

$$370\text{MW} * \frac{1000\text{kW}}{\text{MW}} * \frac{8000\text{hr}}{\text{yr}} * \frac{85}{70} * \frac{390\text{ g CO}_2}{\text{kWh}} * \frac{0.0000011023\text{ short tons}}{\text{g}}$$

2007 Emissions Estimate

AES Jordan was under construction and not operational during 2007. Since emissions from construction would be below the 100,000 short ton threshold, this project was omitted from the 2007 inventory.

2008 Emissions Estimate

AES Jordan’s emissions estimate of **590,940 short tons of CO₂e** for 2008 was calculated using the following information:

Data	Value	Source
Fuel Type	Natural Gas	Project Sponsor
Net Energy Generated	10,103,603 MMBtu	Project Sponsor
Emission Factor	53.06 kg CO ₂ /MMBtu	TCR, Table 12.1

Emissions = 590,940 short tons of CO₂e per year =

$$10,103,603\text{ MMBtu} * \frac{53.06\text{ kg CO}_2}{\text{MMBtu}} * \frac{0.0011023\text{ short tons}}{\text{kg}}$$

2009 Emissions Estimate

AES Jordan's emissions estimate of **1,318,130 short tons of CO₂e** for 2009 was calculated using the following information:

Data	Value	Source
Fuel Type	Natural Gas	Project Sponsor
Net Energy Generated	22,536,748 MMBtu	Project Sponsor
Emission Factor	53.06 kg CO ₂ /MMBtu	TCR, Table 12.1

Emissions = 1,318,130 short tons CO₂e per year =

$$22,536,748 \text{ MMBtu} * \frac{53.06 \text{ kg CO}_2}{\text{MMBtu}} * \frac{0.0011023 \text{ short tons}}{\text{kg}}$$

2010 Emissions Estimate

AES Jordan's emissions estimate of **1,434,569 short tons of CO₂e** for 2010 was calculated using the following information:

Data	Value	Source
Unit 1 Emissions	678,706,541 kg CO ₂	Project Sponsor
Unit 2 Emissions	622,726,311 kg CO ₂	Project Sponsor

Emissions = 1,434,569 short tons of CO₂e per year =

$$(678,706,541 \text{ kg CO}_2 + 622,726,311 \text{ kg CO}_2) * \frac{0.0011023 \text{ short tons}}{\text{kg}}$$

2011 Emissions Estimate

AES Jordan's emissions estimate of **1,184,010 short tons of CO₂e** for 2011 was calculated using the following information:

Data	Value	Source
Fuel Type	Natural Gas & Diesel	Project Sponsor
Total Natural Gas Consumption	11,618,556 MMBtu	Project Sponsor
Total Diesel Consumption	6,256,271 MMBtu	Project Sponsor
Emission Factor Natural Gas	53.06 kg CO ₂ /MMBtu	TCR, Table 12.1
Emissions Factor Diesel	73.15 kg CO ₂ /MMBtu	The Climate Registry, Table 12-1

Emissions = 1,184,010 short tons CO₂e per year =

$$11,618,556 \text{ MMBtu} * \frac{53.06 \text{ kg CO}_2}{\text{MMBtu}} * \frac{0.0011023 \text{ short tons}}{\text{kg}} +$$

$$6,256,271 \text{ MMBtu} * \frac{73.15 \text{ kg CO}_2}{\text{MMBtu}} * \frac{0.0011023 \text{ short tons}}{\text{kg}}$$

2012 Emissions Estimate

AES Jordan's emissions estimate of **936,400 short tons of CO₂e** for 2012 was calculated using the following information:

Data	Value	Source
Fuel Type	Natural Gas & Diesel	Project Sponsor
Total Natural Gas Consumption	5,069,853 MMBtu	Project Sponsor
Total Diesel Consumption	7,851,448 MMBtu	Project Sponsor
Emission Factor Natural Gas	53.02 kg CO ₂ /MMBtu	TCR 2013
Emissions Factor Diesel	73.96 kg CO ₂ /MMBtu	TCR 2013

Emissions = 936,400 short tons CO₂e per year =

$$5,069,853 \text{ MMBtu} * \frac{53.02 \text{ kg CO}_2}{\text{MMBtu}} * \frac{0.0011023 \text{ short tons}}{\text{kg}} +$$

$$7,851,448 \text{ MMBtu} * \frac{73.96 \text{ kg CO}_2}{\text{MMBtu}} * \frac{0.0011023 \text{ short tons}}{\text{kg}}$$

2013 Emissions Estimate

AES Jordan's emissions estimate of **1,514,054 short tons of CO₂e** for 2013 was calculated using the following information:

Data	Value	Source
Fuel Type	Natural Gas & Diesel	Project Sponsor
Natural Gas Consumption (Lower Heating Value)	12,225,754.91 MMBtu	Project Sponsor
Diesel Consumption (Lower Heating Value)	8,284,455.54 MMBtu	Project Sponsor
Natural Gas - Conversion Factor to Higher Heating Value	1.10786	GREET
Diesel - Conversion Factor to Higher Heating Value	1.069685	GREET
Emission Factor Natural Gas	53.02 kg CO ₂ /MMBtu	TCR 2013
Emissions Factor Diesel	73.96 kg CO ₂ /MMBtu	TCR 2013

Emissions = 1,514,054 short tons CO₂e per year =

$$12,225,754.91 \text{ MMBtu} * \frac{53.02 \text{ kg CO}_2}{\text{MMBtu}} * \frac{0.0011023 \text{ short tons}}{\text{kg}} * 1.10786 +$$



$$8,284,455.54 \text{ MMBtu} * \frac{73.96 \text{ kg CO}_2}{\text{MMBtu}} * \frac{0.0011023 \text{ short tons}}{\text{kg}} * 1.069685$$

2014 Emissions Estimate

AES Jordan’s emissions estimate of **1,203,945 short tons of CO₂e** for 2014 was calculated using the following information:

Data	Value	Source
Fuel Type	Natural Gas & Diesel	Project Sponsor
Natural Gas Consumption (Lower Heating Value)	4,415,255.552 MMBtu	Project Sponsor
Diesel Consumption (Lower Heating Value)	10,527,411.68 MMBtu	Project Sponsor
Natural Gas - Conversion Factor to Higher Heating Value	1.1079	GREET
Diesel - Conversion Factor to Higher Heating Value	1.069685	GREET
Emission Factor Natural Gas	53.02 kg CO ₂ /MMBtu	TCR 2014
Emissions Factor Diesel	73.96 kg CO ₂ /MMBtu	TCR 2014

Emissions = 1,203,945 short tons CO₂e per year =

$$4,415,255.552 \text{ MMBtu} * \frac{53.02 \text{ kg CO}_2}{\text{MMBtu}} * \frac{0.0011023 \text{ short tons}}{\text{kg}} * 1.1079 +$$

$$10,527,411.68 \text{ MMBtu} * \frac{73.96 \text{ kg CO}_2}{\text{MMBtu}} * \frac{0.0011023 \text{ short tons}}{\text{kg}} * 1.069685$$

2015 Emissions Estimate Based

AES Jordan’s emissions estimate of **949,925 short tons of CO₂e** for 2015 was calculated using the following information:

Data	Value	Source
Fuel Type	Natural Gas & Diesel	Project Sponsor
Natural Gas Consumption (Lower Heating Value)	13,065,796 MMBtu	Project Sponsor
Diesel Consumption (Lower Heating Value)	1,184,608 MMBtu	Project Sponsor
Natural Gas - Conversion Factor to Higher Heating Value	1.10786	GREET
Diesel - Conversion Factor to Higher Heating Value	1.069685	GREET
Emission Factor Natural Gas	53.06 kg CO ₂ /MMBtu	TCR 2015
Emissions Factor Diesel	73.96 kg CO ₂ /MMBtu	TCR 2014

Emissions = 949,925 short tons CO₂e per year =

$$13,065,796 \text{ MMBtu} * \frac{53.06 \text{ kg CO}_2}{\text{MMBtu}} * \frac{0.0011023 \text{ short tons}}{\text{kg}} * 1.10786 +$$

$$1,184,608 \text{ MMBtu} * \frac{73.96 \text{ kg CO}_2}{\text{MMBtu}} * \frac{0.0011023 \text{ short tons}}{\text{kg}} * 1.069685$$

AES Levant

Maximum Potential-to-Emit Estimate

AES Levant's maximum PTE estimate of **1,409,533 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Fuel Type	Heavy Fuel Oil	Project Description
Capacity	240 MW	Project Description
Emission Factor	666 gCO ₂ /kWh	IFC 2012
Conversion Factor	1000 kWh/MWh	TCR, Appendix C
Conservative Operating Assumption	8000 hr/yr	EIA Form 923 data, 2007

Maximum Potential-to-Emit = 1,409,533 short tons of CO₂e per year =

$$240\text{MW} * \frac{666 \text{ g CO}_2}{\text{kWh}} * \frac{1000 \text{ kWh}}{\text{MWh}} * \frac{8000 \text{ hr}}{\text{yr}} * \frac{1.1023 \times 10^{-6} \text{ short tons}}{\text{g}}$$

2014 Emissions Estimate

AES Levant's 2014 emissions estimate of **467,262 short tons CO₂e** was calculated using the following information:

Data	Value	Source
Consumption Heavy Fuel Oil	5,600,812.08MMBtu	Project Sponsor
Residual Fuel Oil Emission Factor	75.1 kg CO ₂ /MMBtu	TCR 2014
Consumption Distillate Fuel	44,293.51 MMBtu	Project Sponsor
Distillate Fuel Oil Emission Factor	73.96 kg CO ₂ /MMBtu	TCR 2014
Conversion Factor	0.0011023 short tons/kg	TCR 2008

Emissions = 467,262 short tons of CO₂e per year =

$$5,600,812.08 \text{ MMBtu} * \frac{75.1 \text{ kg CO}_2}{\text{MMBtu}} * \frac{0.0011023 \text{ short tons}}{\text{kg}} +$$

$$44,293.51 \text{ MMBtu} * \frac{73.96 \text{ kg CO}_2}{\text{MMBtu}} * \frac{0.0011023 \text{ short tons}}{\text{kg}}$$

2015 Emissions Estimate

AES Levant's 2015 emissions estimate of **685,110 short tons CO₂e** was calculated using the following information:

Data	Value	Source
Consumption Heavy Fuel Oil	7,738,256.34 MMBtu	Project Sponsor
Residual Fuel Oil Emission Factor	75.1 kg CO ₂ /MMBtu	TCR 2014
Consumption Distillate Fuel	48,223.72 MMBtu	Project Sponsor
Distillate Fuel Oil Emission Factor	73.96 kg CO ₂ /MMBtu	TCR 2014
Consumption Natural Gas	693,890 MMBtu	Project Sponsor
Natural Gas Emission Factor	53.06 kg CO ₂ /MMBtu	TCR 2015
Conversion Factor	0.0011023 short tons/kg	TCR 2008

Emissions = 685,110 short tons of CO₂e per year =

$$7,738,256.34 \text{ MMBtu} * \frac{75.1 \text{ kg CO}_2}{\text{MMBtu}} * \frac{0.0011023 \text{ short tons}}{\text{kg}} +$$

$$48,223.72 \text{ MMBtu} * \frac{73.96 \text{ kg CO}_2}{\text{MMBtu}} * \frac{0.0011023 \text{ short tons}}{\text{kg}} +$$

$$693,890 \text{ MMBtu} * \frac{53.06 \text{ kg CO}_2}{\text{MMBtu}} * \frac{0.0011023 \text{ short tons}}{\text{kg}}$$

Contour Global – Togo

Maximum Potential-to-Emit Estimate

Contour Global Togo's maximum PTE estimate of **587,305 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Fuel Type	Fuel Oil	Project Description
Capacity	100 MW	Project Description
Emission Factor for Electricity Generation from Fuel Oil Combustion	666 g CO ₂ /kWh	IFC 2012

Maximum Potential-to-Emit = 587,305 short tons of CO_{2e} per year =

$$100\text{MW} * \frac{1000\text{kW}}{\text{MW}} * \frac{8000\text{hr}}{\text{yr}} * \frac{666 \text{ gCO}_2}{\text{kWh}} * \frac{0.0000011023 \text{ short tons}}{\text{g}}$$

2011 Emissions Estimate

Contour Global Togo's 2011 emissions estimate of **46,561 short tons CO_{2e}** was calculated using the following information:

Data	Value	Source
2011 Emissions	42,239,975 kg	Project Sponsor
Conversion Factor	0.0011023 short ton/kg	TCR 2008

Emissions = 46,561 short tons of CO_{2e} per year =

$$42,239,975 \text{ kg} * \frac{0.0011023 \text{ short ton}}{\text{kg}}$$

2012 Emissions Estimate

Contour Global Togo's 2012 emissions estimate of **126,192 short tons CO_{2e}** was calculated using the following information:

Data	Value	Source
Natural Gas Consumption	16,746,179 m ³	Project Sponsor
Conversion Factor	35.314 scf/m ³	
Natural Gas Calorific Value	1,028 MMBtu/mmscf	TCR 2013
Natural Gas Emission Factor	53.02 kg CO ₂ /MMBtu	TCR 2013
Heavy Fuel Oil (HFO) Consumption	25,417,990 kg	Project Sponsor
HFO Net Calorific Value	40.4 TJ/Gg	IPCC 2006. Vol. 2, Chap. 1
HFO Emission Factor	77,400 kg CO ₂ /TJ	IPCC 2006. Vol. 2, Chap. 1
Light Fuel Oil (LFO) Consumption	868,358 kg	Project Sponsor
LFO Net Calorific Value	43.0 TJ/Gg	IPCC 2006. Vol. 2, Chap. 1
LFO Emissions Factor	74,100 kg CO ₂ /TJ	IPCC 2006. Vol. 2, Chap. 1
Conversion Factor	0.0011023 short ton/kg	



Emissions = 126,192 short tons of CO₂e per year =

$$16,746,179 \text{ m}^3 * \frac{35.314 \text{ ft}^3}{\text{m}^3} * \frac{10^{-6} \text{ mmscf}}{\text{scf}} * \frac{1,028 \text{ MMBtu}}{\text{mmscf}} * \frac{53.02 \text{ kg CO}_2}{\text{MMBtu}} * \frac{0.0011023 \text{ short tons}}{\text{kg}} +$$

$$25,417,990 \text{ kg} * \frac{10^{-6} \text{ Gg}}{\text{kg}} * \frac{40.4 \text{ TJ}}{\text{Gg}} * \frac{77,400 \text{ kg CO}_2}{\text{TJ}} * \frac{0.0011023 \text{ short ton}}{\text{kg}} +$$

$$868,358 \text{ kg} * \frac{10^{-6} \text{ Gg}}{\text{kg}} * \frac{43.0 \text{ TJ}}{\text{Gg}} * \frac{74,100 \text{ kg CO}_2}{\text{TJ}} * \frac{0.0011023 \text{ short ton}}{\text{kg}}$$

2013 Emissions Estimate

Contour Global Togo's 2013 emissions estimate of **161,830 short tons CO₂e** was calculated using the following information:

Data	Value	Source
Natural Gas Consumption	16,370,416 m ³	Project Sponsor
Natural Gas Higher Heating Value	1,028 MMBtu/mmscf	TCR 2013
Natural Gas Emission Factor	53.02 kg CO ₂ /MMBtu	TCR 2013
Heavy Fuel Oil (HFO) Consumption	34,190,245 kg	Project Sponsor
HFO Gross Calorific Value	43 TJ/Gg	National Physical Laboratory, 2015
HFO Emission Factor	77,400 kg CO ₂ /TJ	IPCC 2006. Vol. 2, Chap. 1
Light Fuel Oil (LFO) Consumption	463,096 kg	Project Sponsor
LFO Gross Calorific Value	44 TJ/Gg	National Physical Laboratory, 2015
LFO Emissions Factor	74,100 kg CO ₂ /TJ	IPCC 2006. Vol. 2, Chap. 1
Conversion Factor	35.314 scf/m ³	
Conversion Factor	0.0011023 short ton/kg	

Emissions = 161,830 short tons of CO₂e per year =

$$16,370,416 \text{ m}^3 * \frac{35.314 \text{ ft}^3}{\text{m}^3} * \frac{10^{-6} \text{ mmscf}}{\text{scf}} * \frac{1,028 \text{ MMBtu}}{\text{mmscf}} * \frac{53.02 \text{ kg CO}_2}{\text{MMBtu}} * \frac{0.0011023 \text{ short tons}}{\text{kg}} +$$

$$34,190,245 \text{ kg} * \frac{10^{-6} \text{ Gg}}{\text{kg}} * \frac{43 \text{ TJ}}{\text{Gg}} * \frac{77,400 \text{ kg CO}_2}{\text{TJ}} * \frac{0.0011023 \text{ short ton}}{\text{kg}} +$$

$$463,096 \text{ kg} * \frac{10^{-6} \text{ Gg}}{\text{kg}} * \frac{44 \text{ TJ}}{\text{Gg}} * \frac{74,100 \text{ kg CO}_2}{\text{TJ}} * \frac{0.0011023 \text{ short ton}}{\text{kg}}$$

2014 Emissions Estimate

Contour Global Togo's 2014 emissions estimate of **55,467 short tons CO₂e** was calculated using the following information:

Data	Value	Source
Natural Gas Consumption	383,164 m ³	Project Sponsor
Natural Gas Higher Heating Value	1,028 MMBtu/mmscf	TCR 2014
Natural Gas Emission Factor	53.02 kg CO ₂ /MMBtu	TCR 2014
Heavy Fuel Oil (HFO) Consumption	14,827,389 kg	Project Sponsor
HFO Gross Calorific Value	43 TJ/Gg	National Physical Laboratory, 2015
HFO Emission Factor	77,400 kg CO ₂ /TJ	IPCC 2006. Vol. 2, Chap. 1
Light Fuel Oil (LFO) Consumption	71,442 kg	Project Sponsor
LFO Gross Calorific Value	44 TJ/Gg	National Physical Laboratory, 2015
LFO Emissions Factor	74,100 kg CO ₂ /TJ	IPCC 2006. Vol. 2, Chap. 1
Conversion Factor	0.0011023 short ton/kg	
Conversion Factor	35.314 scf/m ³	

Emissions = 55,467 short tons of CO₂e per year =

$$383,164 \text{ m}^3 * \frac{35.314 \text{ ft}^3}{\text{m}^3} * \frac{10^{-6} \text{ mmscf}}{\text{scf}} * \frac{1,028 \text{ MMBtu}}{\text{mmscf}} * \frac{53.02 \text{ kg CO}_2}{\text{MMBtu}} * \frac{0.0011023 \text{ short tons}}{\text{kg}} +$$

$$14,827,389 \text{ kg} * \frac{10^{-6} \text{ Gg}}{\text{kg}} * \frac{43 \text{ TJ}}{\text{Gg}} * \frac{77,400 \text{ kg CO}_2}{\text{TJ}} * \frac{0.0011023 \text{ short ton}}{\text{kg}} +$$

$$71,442 \text{ kg} * \frac{10^{-6} \text{ Gg}}{\text{kg}} * \frac{44 \text{ TJ}}{\text{Gg}} * \frac{74,100 \text{ kg CO}_2}{\text{TJ}} * \frac{0.0011023 \text{ short ton}}{\text{kg}} +$$

2015 Emissions Estimate

Contour Global Togo's 2015 emissions estimate of **210,901 short tons CO₂e** was calculated using the following information:

Data	Value	Source
Natural Gas Consumption	37,671,209 m ³	Project Sponsor
Natural Gas Higher Heating Value	1,028 MMBtu/mmscf	TCR 2014
Natural Gas Emission Factor	53.06 kg CO ₂ /MMBtu	TCR 2015
Heavy Fuel Oil (HFO) Consumption	34,704,085 kg	Project Sponsor
HFO Gross Calorific Value	43 TJ/Gg	National Physical Laboratory, 2015
HFO Emission Factor	77,400 kg CO ₂ /TJ	IPCC 2006. Vol. 2, Chap. 1
Light Fuel Oil (LFO) Consumption	1,000,688 kg	Project Sponsor
LFO Gross Calorific Value	44 TJ/Gg	National Physical Laboratory, 2015
LFO Emissions Factor	74,100 kg CO ₂ /TJ	IPCC 2006. Vol. 2, Chap. 1
Conversion Factor	0.0011023 short ton/kg	
Conversion Factor	35.314 scf/m ³	

Emissions = 210,901 short tons of CO₂e per year =

$$37,671,209 \text{ m}^3 * \frac{35.314 \text{ ft}^3}{\text{m}^3} * \frac{10^{-6} \text{ mmscf}}{\text{scf}} * \frac{1,028 \text{ MMBtu}}{\text{mmscf}} * \frac{53.06 \text{ kg CO}_2}{\text{MMBtu}} * \frac{0.0011023 \text{ short tons}}{\text{kg}} +$$

$$34,704,085 \text{ kg} * \frac{10^{-6} \text{ Gg}}{\text{kg}} * \frac{43 \text{ TJ}}{\text{Gg}} * \frac{77,400 \text{ kg CO}_2}{\text{TJ}} * \frac{0.0011023 \text{ short ton}}{\text{kg}} +$$

$$1,000,688 \text{ kg} * \frac{10^{-6} \text{ Gg}}{\text{kg}} * \frac{44 \text{ TJ}}{\text{Gg}} * \frac{74,100 \text{ kg CO}_2}{\text{TJ}} * \frac{0.0011023 \text{ short ton}}{\text{kg}} +$$

Gaza Private Generating PLC

Maximum Potential-to-Emit Estimate

Gaza Private Generating PLC's maximum PTE estimate of **481,485 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Fuel Type	Natural Gas	Project Description
Capacity	140 MW	Project Description
Emission Factor	390 g CO ₂ /kWh	IFC 2012

Maximum Potential-to-Emit = 481,485 short tons of CO₂e per year =

$$140 \text{ MW} * \frac{1000 \text{ kW}}{\text{MW}} * \frac{8000 \text{ hr}}{\text{yr}} * \frac{390 \text{ g CO}_2}{\text{kWh}} * \frac{0.0000011023 \text{ short tons}}{\text{g}}$$

2007 Emissions Estimate

Gaza Private Generating PLC's 2007 emissions estimate of **293,804 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Fuel Type	Natural Gas	Project Description
Capacity	136.4 MW	Project Sponsor
2007 Emissions	266,539 metric tons	Project Sponsor

Emissions = 293,804 short tons of CO₂e per year =

$$266,539 \text{ metric tons} * \frac{\text{short ton}}{0.9072 \text{ metric tons}}$$

2008 Emissions Estimate

Gaza Private Generating PLC's 2008 emissions estimate of **303,535 short tons CO₂e** was calculated using the following information:

Data	Value	Source
Fuel Type	Natural Gas	Project Description
Capacity	136.4 MW	Project Sponsor
2008 Emissions	275,367 metric tons	Project Sponsor

Emissions = 303,535 short tons of CO₂e per year =

$$275,367 \text{ metric tons} * \frac{\text{short ton}}{0.9072 \text{ metric tons}}$$

2009 Emissions Estimate

Gaza Private Generating PLC's emissions estimate of **325,926 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Fuel Type	LFO No.2	Project Description
Capacity	80 MW (2009 Capacity)	Project Sponsor
2009 Emissions	295,680 metric tons	Project Sponsor

Emissions = 325,926 short tons of CO₂e per year =

$$295,680 \text{ metric tons} * \frac{\text{short ton}}{0.9072 \text{ metric tons}}$$

2010 Emissions Estimate

Gaza Private Generating PLC's emissions estimate of **228,627 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Fuel Type	LFO No.2	Project Description
Capacity	80 MW (2009 Capacity)	Project Sponsor
2010 Emissions	207,410 metric tons	Project Sponsor

Emissions = 228,627 short tons of CO_{2e} per year =

$$207,410 \text{ metric tons} * \frac{\text{short ton}}{0.9072 \text{ metric tons}}$$

2011 Emissions Estimate

Gaza Private Generating PLC's emissions estimate of **405,262 short tons of CO_{2e}** was calculated using the following information:

Data	Value	Source
Fuel Type	LFO No.2	Project Description
Capacity	80 MW (2009 Capacity)	Project Sponsor
2011 Emissions	367,654 metric tons	Project Sponsor

Emissions = 405,262 short tons of CO_{2e} per year =

$$367,654 \text{ metric tons} * \frac{\text{short tons}}{0.9072 \text{ metric tons}}$$

2012 Emissions Estimate

Gaza Private Generating PLC's emissions estimate of **192 short tons of CO_{2e}** was calculated using the following information:

Data	Value	Source
Fuel Type	Natural Gas	Project Sponsor
Natural Gas Consumption	99,093 m ³	Project Sponsor
Natural Gas Emission Factor	0.05 kg CO ₂ /sfc	TCR 2013
Unit Conversion	35.31 scf/ m ³	
Unit Conversion	0.001 metric tons/kg	
Unit Conversion	1.1 short ton/metric ton	

Emissions = 192 short tons of CO_{2e} per year =

$$99,093 \text{ m}^3 * \frac{35.31 \text{ scf}}{\text{m}^3} * \frac{0.05 \text{ kg CO}_2}{\text{sfc}} * \frac{0.001 \text{ metric tons}}{\text{kg}} * \frac{1.1 \text{ short ton}}{\text{metric ton}}$$

2013 Emissions Estimate

According to Amnesty International news, the Gaza power plant ran at a capacity of 60 MW approximately 12 hours per day up until November 1, 2013, at which point the plant completely shut down. The curtailment in operating days is reflected in the 2013 emissions estimate of **161,215 short tons of CO_{2e}** for Gaza Private Generating PLC.

Data	Value	Source
Fuel Type	Diesel	Project Sponsor
Capacity	60 MW	Project Sponsor
Hours of operation	12 hours/day	Amnesty International News, 2013
Days of year in operation	305	Amnesty International News, 2013
Emission Factor	666 kg CO ₂ /MWh	IFC 2012
Unit Conversion	0.0011023 short tons/kg	

Emissions = 161,215 short tons of CO_{2e} per year =

$$60 \text{ MW} * \frac{12 \text{ hours}}{\text{day}} * 305 \text{ days} * \frac{666 \text{ kg CO}_2}{\text{MWh}} * \frac{0.0011023 \text{ short tons}}{\text{kg}}$$

2014 Emissions Estimate

Gaza Private Generating PLC's 2014 emissions estimate of **193,406 short tons CO_{2e}** was calculated using the following information:

Data	Value	Source
Fuel Type	Diesel	Project Sponsor
Diesel Consumption	65,074 m ³	Project Sponsor
Conversion Factor	264.172 gallons/m ³	
Conversion Factor (Diesel)	0.138 MMBtu per gallon Diesel	
Emissions Factor (Diesel)	73.96 kg CO ₂ /MMBtu	TCR 2014

Emissions = 193,406 short tons of CO_{2e} per year =

$$65,074 \text{ m}^3 * \frac{264.172 \text{ gallons}}{\text{m}^3} * \frac{0.138 \text{ MMBtu}}{\text{gallon}} * \frac{73.96 \text{ kg CO}_2}{\text{MMBtu}} * 0.0011023$$

2015 Emissions Estimate

Gaza Private Generating PLC's 2015 emissions estimate of **253,808 short tons CO_{2e}** was calculated using the following information:

Data	Value	Source
Fuel Type	Diesel	Project Sponsor
Diesel Consumption	85,397 m ³	Project Sponsor
Conversion Factor	264.172 gallons/m ³	
Conversion Factor (Diesel)	0.138 MMBtu per gallon Diesel	
Emissions Factor (Diesel)	73.96 kg CO ₂ /MMBtu	TCR 2014

Emissions = 253,808 short tons of CO_{2e} per year =

$$85,397 \text{ m}^3 * \frac{264.172 \text{ gallons}}{\text{m}^3} * \frac{0.138 \text{ MMBtu}}{\text{gallon}} * \frac{73.96 \text{ kg CO}_2}{\text{MMBtu}} * 0.0011023$$

Power Finance Trust Ltd. (formerly ISAGEN S.A.)

Maximum Potential-to-Emit Estimate

Power Finance Trust Ltd.'s initial maximum PTE estimate of 687,835 short tons of CO_{2e} was calculated using the information below. In subsequent inventories, the maximum PTE was set to the peak emissions year. For Power Finance Trust Ltd., emissions peaked at **980,011 short tons of CO_{2e}** in CY 2014.

Data	Value	Source
Fuel Type	Natural Gas	Project Description
Capacity	200 MW + 100 MW from steam turbine	Project Description
Natural Gas Emission Factor	390 g CO ₂ /kWh	IFC 2012

Maximum Potential-to-Emit = 687,835 short tons of CO_{2e} per year

$$200\text{MW} * \frac{1000\text{kW}}{\text{MW}} * \frac{8000\text{hr}}{\text{yr}} * \frac{390 \text{ gCO}_2}{\text{kWh}} * \frac{0.0000011023 \text{ short tons}}{\text{g}}$$

2007 Emissions Estimate

Power Finance Trust Ltd.'s 2007 emissions estimate of **203,010 short tons of CO_{2e}** was calculated using the following information:

Data	Value	Source
Fuel Type	Natural Gas	Project Description
Capacity	300 MW	Project Description
2007 Emissions	184,171 metric tons	Project Sponsor

Emissions = 203,010 short tons of CO_{2e} per year

$$184,171 \text{ metric tons} * \frac{\text{short tons}}{0.9072 \text{ metric tons}}$$

2008 Emissions Estimate

Per project sponsor feedback, emissions were below the 100,000 short tons CO_{2e} threshold and, thus, were not included in the 2008 inventory.

2009 Emissions Estimate

Power Finance Trust Ltd.'s 2009 emissions estimate of **300,706 short tons of CO_{2e}** was calculated using the following information:

Data	Value	Source
Fuel Type	Natural Gas	Project Description
Capacity	300 MW	Project Description
2009 Emissions	272,800 metric tons	Project Sponsor

Emissions = 300,706 short tons of CO_{2e} per year



$$272,800 \text{ metric tons} * \frac{\text{short tons}}{0.9072 \text{ metric tons}}$$

2010 Emissions Estimate

Power Finance Trust Ltd.'s 2010 emissions estimate of **305,181 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Fuel Type	Natural Gas	Project Description
Capacity	300 MW	Project Description
2010 Emissions	276,860 metric tons	Project Sponsor

Emissions = 305,181 short tons of CO₂e per year

$$276,860 \text{ metric tons} * \frac{\text{short tons}}{0.9072 \text{ metric tons}}$$

2011 Emissions Estimate

No additional data were available. The 2011 emissions estimate defaulted to the 2010 emissions estimate.

2012 Emissions Estimate

No additional data were available. The 2012 emissions estimate defaulted to the 2010 emissions estimate.

2013 Emissions Estimate

Power Finance Trust Ltd.'s 2013 emissions estimate of **775,357 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Natural Gas Consumption	13,179,287 MMBtu	Project Sponsor
Emissions Factor (Natural Gas)	53.02 kg CO ₂ /MMBtu	TCR, 2013
Jet Fuel Consumption	267,083 Gallons	Project Sponsor
Conversion Factor (Jet Fuel)	0.135 MMBtu/gallon	Project Sponsor
Emissions Factor (Jet Fuel)	72.22 kg CO ₂ /MMBtu	TCR, 2013
Diesel Consumption	198,811 Gallons	Project Sponsor
Conversion Factor (Diesel, low sulfur)	0.138 MMBtu/gallon	Project Sponsor
Emissions Factor (Diesel, low sulfur)	73.96 kg CO ₂ /MMBtu	TCR, 2013

Emissions = 775,357 short tons CO₂e per year =

$$\left[13,179,289 \text{ MMBtu} * \frac{53.02 \text{ kg CO}_2}{\text{MMBtu}} + 267,083 \text{ gallons} * \frac{0.135 \text{ MMBtu}}{\text{gallon}} * \frac{72.22 \text{ kg CO}_2}{\text{MMBtu}} + 198,811 \text{ gallons} * \frac{0.138 \text{ MMBtu}}{\text{gallon}} * \frac{73.96 \text{ kg CO}_2}{\text{MMBtu}} \right] * \frac{0.0011023 \text{ short tons}}{\text{kg}}$$

2014 Emissions Estimate

Power Finance Trust Ltd.'s 2014 emissions estimate of **980,011 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Natural Gas Consumption	16,730,040 MMBtu	Project Sponsor
Emissions Factor (Natural Gas)	53.02 kg CO ₂ /MMBtu	TCR, 2014
Jet Fuel Consumption	208,589 Gallons	Project Sponsor
Conversion Factor (Jet Fuel)	0.135 MMBtu/gallon	Project Sponsor
Emissions Factor (Jet Fuel)	72.22 kg CO ₂ /MMBtu	TCR, 2014
Diesel Consumption	0 Gallons	Project Sponsor
Conversion Factor (Diesel, low sulfur)	0.138 MMBtu/gallon	Project Sponsor
Emissions Factor (Diesel, low sulfur)	73.96 kg CO ₂ /MMBtu	TCR, 2014

Emissions = 980,011 short tons CO₂e per year =

$$\left[16,730,040 \text{ MMBtu} * \frac{53.02 \text{ kg CO}_2}{\text{MMBtu}} + 208,589 \text{ gallons} * \frac{0.135 \text{ MMBtu}}{\text{gallon}} * \frac{72.22 \text{ kg CO}_2}{\text{MMBtu}} + 0 \text{ gallons} * \frac{0.138 \text{ MMBtu}}{\text{gallon}} * \frac{73.96 \text{ kg CO}_2}{\text{MMBtu}} \right] * \frac{0.0011023 \text{ short tons}}{\text{kg}}$$

2015 Emissions Estimate

Power Finance Trust Ltd.'s 2015 emissions estimate of **963,992 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Natural Gas Consumption	16,357,113 MMBtu	Project Sponsor
Emissions Factor (Natural Gas)	53.06 kg CO ₂ /MMBtu	TCR, 2015
Jet Fuel Consumption	85,374 Gallons	Project Sponsor
Conversion Factor (Jet Fuel)	0.135 MMBtu/gallon	Project Sponsor
Emissions Factor (Jet Fuel)	72.22 kg CO ₂ /MMBtu	TCR, 2015
Diesel Consumption	566,967 Gallons	Project Sponsor
Conversion Factor (Diesel, low sulfur)	0.138 MMBtu/gallon	Project Sponsor
Emissions Factor (Diesel, low sulfur)	73.96 kg CO ₂ /MMBtu	TCR, 2014



Emissions = 963,992 short tons CO₂e per year =

$$\left[16,357,113 \text{ MMBtu} * \frac{53.06 \text{ kg CO}_2}{\text{MMBtu}} + 85,374 \text{ gallons} * \frac{0.135 \text{ MMBtu}}{\text{gallon}} * \frac{72.22 \text{ kg CO}_2}{\text{MMBtu}} + 566,967 \text{ gallons} * \frac{0.138 \text{ MMBtu}}{\text{gallon}} * \frac{73.96 \text{ kg CO}_2}{\text{MMBtu}} \right] * \frac{0.0011023 \text{ short tons}}{\text{kg}}$$

TIER B PROJECTS

Pannonia Ethanol

Maximum Potential-to-Emit Estimate

Pannonia's initial maximum PTE estimate of 110,543 short tons of CO₂e was calculated using the information below. In subsequent inventories, the maximum PTE was set to the peak emissions year. Pannonia's emissions peaked at **113,785 short tons of CO₂e** in CY 2015.

Data	Value	Source
Natural Gas Throughput	7,100 m ³ /hr	Project Description
Natural Gas Emission Factor	0.05 kg CO ₂ /scf	TCR 2013
Operating Assumption	8,000 hr/yr	
Conversion Factor	0.02832 m ³ /scf	
Conversion Factor	907.18 kg/short tons	

Maximum Potential-to-Emit = 110,543 short tons of CO₂e per year =

$$\frac{7,100 \text{ m}^3}{\text{hr}} * \frac{8,000 \text{ hr}}{\text{yr}} * \frac{1 \text{ scf}}{0.02832 \text{ m}^3} * \frac{0.05 \text{ kg CO}_2}{\text{scf}} * \frac{1 \text{ short tons}}{907.18 \text{ kg}}$$

2012 Emissions Estimate

Pannonia's 2012 emissions estimate of **64,244 short tons of CO₂e** was based on the project sponsor's certified 2012 Environmental and Social Compliance Report:

Data	Value	Source
Emissions	58,282 metric tons CO ₂ e	Project Sponsor
Conversion Factor	0.9072 metric ton/short ton	

Emissions = 64,244 short tons of CO₂e per year =

$$58,282 \text{ metric tons CO}_2\text{e} * \frac{1 \text{ short ton}}{0.9072 \text{ metric ton}}$$

2013 Emissions Estimate

Pannonia's 2013 emissions estimate of **93,251 short tons of CO_{2eq}** was based on the project sponsor's certified 2013 Environmental and Social Compliance Report:

Data	Value	Source
Emissions	84,597 metric tons CO _{2e}	Project Sponsor
Conversion Factor	0.9072 metric ton/short ton	

Emissions = 93,251 short tons of CO_{2e} per year =

$$84,597 \text{ metric tons CO}_2\text{e} * \frac{1 \text{ short ton}}{0.9072 \text{ metric ton}}$$

2014 Emissions Estimate

Pannonia's 2014 emissions estimate of **101,474 short tons of CO_{2e}** was based on project sponsor's feedback.

Data	Value	Source
Emissions	92,057 metric tons CO _{2e}	Project Sponsor
Conversion Factor	0.9072 metric ton/short ton	

Emissions = 101,474 short tons of CO_{2e} per year =

$$92,057 \text{ metric tons CO}_2\text{e} * \frac{1 \text{ short tons}}{0.9072 \text{ metric ton}}$$

2015 Emissions Estimate

Pannonia's 2015 emissions estimate of **113,785 short tons of CO_{2e}** was based on project sponsor's feedback.

Data	Value	Source
Emissions	103,226 metric tons CO _{2e}	Project Sponsor
Conversion Factor	0.9072 metric ton/short ton	

Emissions = 113,785 short tons of CO_{2e} per year =

$$103,226 \text{ metric tons CO}_2\text{e} * \frac{1 \text{ short tons}}{0.9072 \text{ metric tons}}$$

Various Egypt Subsidiaries (Apache)

Maximum Potential-to-Emit Estimate

Various Egypt Subsidiaries (Apache)'s initial maximum PTE estimate of 2,429,543 short tons of CO_{2e} was originally calculated for the CY 2007 GHG inventory using an example from API for a similar oil and gas extraction and processing facility. The API example produced 6,100 barrels of oil per day and 30 mmscf natural gas per day for annual emissions of 108,000 metric tons of CO₂, approximately one-tenth the amount of Apache's estimated footprint. In subsequent GHG inventories, it became evident that Apache's maximum potential-to-emit is commensurate to added production capacity, so

the maximum PTE was set to the peak emissions year. Various Egypt Subsidiaries' emissions peaked at **4,438,554 short tons of CO₂e** in CY 2011.

Data	Value	Source
Fuel Type	Oil and Natural Gas	Project Description
Production Volumes	29,934,702 barrels oil per year 89,910 mmscf natural gas per year	Project Description
"Emissions Factors"	108,000 metric tons CO ₂ per year for a facility that produces 6100 barrels oil per day and 30 mmscf natural gas per day	API 2004, Table 7-4
Multiplication Factor	10	Factor applied to account for approximate size discrepancy between Apache and example
Operating Capacity Adjustment	49%	Project Sponsor

Maximum Potential-to-Emit = 2,429,543 short tons of CO₂e per year =

$$\frac{108,000 \text{ metric tons CO}_2}{\text{yr}} * \frac{\text{short tons}}{0.9072 \text{ metric tons}} * 10 * \frac{1}{0.49}$$

2007 Emissions Estimate

Various Egypt Subsidiaries (Apache)'s 2007 emissions estimate of **3,071,932 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
2007 Emissions	1,365,560 metric tons	Project Sponsor
Operating Capacity Adjustment	49%	Project Sponsor

Emissions = 3,071,932 short tons of CO₂e per year =

$$1,365,560 \text{ metric tons} * \frac{\text{short ton}}{0.9072 \text{ metric tons}} * \frac{1}{0.49}$$

2008 Emissions Estimate

Various Egypt Subsidiaries (Apache)'s 2008 emissions estimate of **3,244,189 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Net Emissions	1,464,566 metric tons	Project Sponsor
Operating Capacity Adjustment	49%	Project Sponsor

Emissions = 3,244,189 short tons of CO₂e per year =

$$1,464,566 \text{ metric tons} * \frac{\text{short tons}}{0.9072 \text{ metric tons}} * \frac{1}{0.49}$$

2009 Emissions Estimate

Various Egypt Subsidiaries (Apache)'s 2009 operational emissions of **3,294,654 short tons of CO₂e** were calculated using the following information:

Data	Value	Source
Net Emissions	1,464,566 metric tons	Project Sponsor
Operating Capacity Adjustment	49%	Project Sponsor

Emissions = 3,294,654 short tons of CO₂e per year =

$$1,464,566 \text{ metric tons} * \frac{1 \text{ short ton}}{0.9072 \text{ metric ton}} * \frac{1}{0.49}$$

2010 Emissions Estimate

Various Egypt Subsidiaries (Apache)'s 2010 emissions estimate of **3,465,842 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Net Emissions	1,540,664 metric tons	Project Sponsor
Operating Capacity	49%	Project Sponsor

Emissions = 3,465,842 short tons of CO₂e per year

$$1,540,664 \text{ metric tons} * \frac{1 \text{ short ton}}{0.9072 \text{ metric ton}} * \frac{1}{0.49}$$

2011 Emissions Estimate

Various Egypt Subsidiaries (Apache)'s 2011 gross emissions estimate of **4,438,554 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Gross Emissions	4,026,656 metric tons	Project Sponsor

Emissions = 4,438,554 short tons of CO₂e per year

$$4,026,656 \text{ metric tons} * \frac{1 \text{ short ton}}{0.9072 \text{ metric ton}}$$

2012 Emissions Estimate

Various Egypt Subsidiaries (Apache)'s 2012 gross emissions estimate of **4,178,447 short tons of CO₂e** was calculated using the following information:



Data	Value	Source
Gross Emissions	3,790,687 metric tons	Project Sponsor

Emissions = 4,178,447 short tons of CO₂e per year =

$$3,790,687 \text{ metric tons} * \frac{1 \text{ short ton}}{0.9072 \text{ metric ton}}$$

2013 Emissions Estimate

Various Egypt Subsidiaries (Apache)'s 2013 gross emissions estimate of **4,056,437 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Gross Emissions	3,680,000 metric tons	Project Sponsor

Emissions = 4,056,437 short tons of CO₂e per year =

$$3,680,000 \text{ metric tons} * \frac{1 \text{ short ton}}{0.9072 \text{ metric ton}}$$

2014 Emissions Estimate

Various Egypt Subsidiaries (Apache)'s 2014 gross emissions estimate of **4,012,346 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Gross Emissions	3,640,000 metric tons	Project Sponsor

Emissions = 4,012,346 short tons of CO₂e per year =

$$3,640,000 \text{ metric tons} * \frac{1 \text{ short ton}}{0.9072 \text{ metric ton}}$$

2015 Emissions Estimate

Various Egypt Subsidiaries (Apache)'s 2015 gross emissions estimate of **3,891,093 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Gross Emissions	3,530,000 metric tons	Project Sponsor

Emissions = 3,891,093 short tons of CO₂e per year =

$$3,530,000 \text{ metric tons} * \frac{1 \text{ short ton}}{0.9072 \text{ metric ton}}$$

West African Gas Pipeline

Maximum Potential-to-Emit Estimate

The West African Gas Pipeline's maximum PTE calculation of **189,800 short tons of CO₂e** accounts for both combustion emissions from the compression and transmission of natural gas, as well as venting and fugitive emissions, using the following information:

Data	Value	Source
Pipeline Throughput	190 mmscf per day	Project Description
Operating Assumption	333 days per year	
Conversion Factor	0.02832 10 ⁶ m ³ per mmscf	
Fugitive Emissions Factor (CH ₄)	1.1x10 ⁻³ Gg per 10 ⁶ m ³	2006 IPCC. Vol. 2, Ch. 4
Fugitive Emissions Factor (CO ₂)	2.0x10 ⁻⁶ Gg per 10 ⁶ m ³	2006 IPCC. Vol. 2, Ch. 4
Venting Emissions Factor (CH ₄)	7.4x10 ⁻⁴ Gg per 10 ⁶ m ³	2006 IPCC. Vol. 2, Ch. 4
Venting Emissions Factor (CO ₂)	7.3x10 ⁻⁶ Gg per 10 ⁶ m ³	2006 IPCC. Vol. 2, Ch. 4
Storage Emissions Factor (CH ₄)	5.8x10 ⁻⁵ Gg per 10 ⁶ m ³	2006 IPCC. Vol. 2, Ch. 4
Storage Emissions Factor (CO ₂)	2.6x10 ⁻⁷ Gg per 10 ⁶ m ³	2006 IPCC. Vol. 2, Ch. 4
CH ₄ Global Warming Potential	21	SAR
Fraction of pipeline throughput used to power the system	0.02925	EIA 2008
Natural Gas Combustion Factor	0.05444 kg CO ₂ per scf	TCR 2015
Conversion Factor	0.0011023 short tons per kg	

Total Emissions = 189,800 short tons of CO₂e = Fugitive + Combustion Emissions

Fugitive Emissions = 78,743 short tons of CO₂e =

$$\begin{aligned}
 & 190 \text{ mmscf} * \frac{333 \text{ days}}{\text{year}} * \frac{0.02832 * 10^6 \text{ m}^3}{\text{mmscf}} * \\
 & \left[\frac{(1.1 * 10^{-3} \text{ Gg CH}_4 * 21)}{10^6 \text{ m}^3} + \frac{(2.0 * 10^{-6} \text{ Gg CO}_2)}{10^6 \text{ m}^3} + \frac{(7.4 * 10^{-4} \text{ Gg CH}_4 * 21)}{10^6 \text{ m}^3} + \right. \\
 & \left. \frac{(7.3 * 10^{-6} \text{ Gg CO}_2)}{10^6 \text{ m}^3} + \frac{(5.8 * 10^{-5} \text{ Gg CH}_4 * 21)}{10^6 \text{ m}^3} + \frac{(2.6 * 10^{-7} \text{ Gg CO}_2)}{10^6 \text{ m}^3} \right] * \\
 & \frac{10^6 \text{ kg}}{\text{Gg}} * \frac{0.0011023 \text{ short tons}}{\text{kg}}
 \end{aligned}$$

Combustion Emissions = 111,057 short tons of CO₂e =

$$\frac{190 \text{ mmscf}}{\text{day}} * \frac{333 \text{ days}}{\text{year}} * \frac{10^6 \text{ scf}}{1 \text{ mmscf}} * 0.02925 * \frac{0.05444 \text{ kg CO}_2}{\text{scf}} * \frac{0.0011023 \text{ short tons}}{\text{kg}}$$

2007 Emissions Estimate

The West African Gas Pipeline was under construction and not operational during 2007. Since emissions from construction would have been below the 100,000 short ton threshold, this project was omitted from the 2007 inventory.

2008 Emissions Estimate

The West African Gas Pipeline was not operational during 2008. Since emissions would have been below the 100,000 short ton threshold, this project was omitted from the 2008 inventory.

2009 Emissions Estimate

No additional data were available. 2009 data defaulted to the maximum potential-to-emit.

2010 Emissions Estimate

West African Gas Pipeline's 2010 emissions estimate of **70,925 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Pipeline Throughput	71 mmscf per day	Project Description
Operating Assumption	333 days per year	
Conversion Factor	0.02832 10 ⁶ m ³ per mmscf	
Fugitive Emissions Factor (CH ₄)	1.1x10 ⁻³ Gg per 10 ⁶ m ³	2006 IPCC. Vol. 2, Ch. 4
Fugitive Emissions Factor (CO ₂)	2.0x10 ⁻⁶ Gg per 10 ⁶ m ³	2006 IPCC. Vol. 2, Ch. 4
Venting Emissions Factor (CH ₄)	7.4x10 ⁻⁴ Gg per 10 ⁶ m ³	2006 IPCC. Vol. 2, Ch. 4
Venting Emissions Factor (CO ₂)	7.3x10 ⁻⁶ Gg per 10 ⁶ m ³	2006 IPCC. Vol. 2, Ch. 4
Storage Emissions Factor (CH ₄)	5.8x10 ⁻⁵ Gg per 10 ⁶ m ³	2006 IPCC. Vol. 2, Ch. 4
Storage Emissions Factor (CO ₂)	2.6x10 ⁻⁷ Gg per 10 ⁶ m ³	2006 IPCC. Vol. 2, Ch. 4
CH ₄ Global Warming Potential	21	SAR
Fraction of pipeline throughput used to power the system	0.02925	EIA 2008
Natural Gas Combustion Factor	0.05444 kg CO ₂ per scf	TCR 2015
Conversion Factor	0.0011023 short tons per kg	

Total Emissions = 70,925 short tons of CO₂e = Fugitive + Combustion Emissions

Fugitive Emissions = 29,425 short tons of CO₂e =

$$71 \text{ mmscf} * \frac{333 \text{ days}}{\text{year}} * \frac{0.02832 * 10^6 \text{ m}^3}{\text{mmscf}} *$$

$$\left[\frac{(1.1 * 10^{-3} \text{ Gg CH}_4 * 21)}{10^6 \text{ m}^3} + \frac{(2.0 * 10^{-6} \text{ Gg CO}_2)}{10^6 \text{ m}^3} + \frac{(7.4 * 10^{-4} \text{ Gg CH}_4 * 21)}{10^6 \text{ m}^3} + \right.$$

$$\left. \frac{(7.3 * 10^{-6} \text{ Gg CO}_2)}{10^6 \text{ m}^3} + \frac{(5.8 * 10^{-5} \text{ Gg CH}_4 * 21)}{10^6 \text{ m}^3} + \frac{(2.6 * 10^{-7} \text{ Gg CO}_2)}{10^6 \text{ m}^3} \right] *$$

$$\frac{10^6 \text{ kg}}{\text{Gg}} * \frac{0.0011023 \text{ short tons}}{\text{kg}}$$

Combustion Emissions = 41,500 short tons of CO₂e =

$$\frac{71 \text{ mmscf}}{\text{day}} * \frac{333 \text{ days}}{\text{year}} * \frac{10^6 \text{ scf}}{1 \text{ mmscf}} * 0.02925 * \frac{0.05444 \text{ kg CO}_2}{\text{scf}} * \frac{0.0011023 \text{ short tons}}{\text{kg}}$$

2011 Emissions Estimate

West African Gas Pipeline's 2011 emissions estimate is **86,617 short tons of CO₂e**. According to project sponsor feedback, there were 38,505 short tons of emissions associated with combustion emissions and 48,112 short tons of emissions associated with fugitive emissions.

2012 Emissions Estimate

West African Gas Pipeline's 2012 emissions estimate is **86,617 short tons of CO₂e**. According to project sponsor feedback, there were 38,505 short tons of emissions associated with combustion emissions and 48,112 short tons of emissions associated with fugitive emissions, which represent the same emission levels asserted by the Project Sponsor for the 2011 GHG Inventory. The level of emissions claimed in 2012 represent 35% of the project's maximum potential-to-emit.

2013 Emissions Estimate

No additional data were available for 2013; therefore, emissions estimate defaulted to the 2012 emissions estimate of **86,617 short tons of CO₂e**.

2014 Emissions Estimate

No additional data was available for 2014; therefore, emissions estimate defaulted to the 2012 emissions estimate of **86,617 short tons of CO₂e**.

2015 Emissions Estimate

West African Gas Pipeline's 2015 emissions of **68,281 CO₂e** was calculated using the following information:

Data	Value	Source
2015 Pipeline Throughput	23,353,493.33 MMBtu	Project Sponsor
Natural Gas Heat Content	1026 MMBtu per mmscf	TCR 2015
Conversion Factor	0.02832 10 ⁶ m ³ per mmscf	
Fugitive Emissions Factor (CH ₄)	1.1x10 ⁻³ Gg per 10 ⁶ m ³	2006 IPCC. Vol. 2, Ch. 4
Fugitive Emissions Factor (CO ₂)	2.0x10 ⁻⁶ Gg per 10 ⁶ m ³	2006 IPCC. Vol. 2, Ch. 4
Venting Emissions Factor (CH ₄)	7.4x10 ⁻⁴ Gg per 10 ⁶ m ³	2006 IPCC. Vol. 2, Ch. 4
Venting Emissions Factor (CO ₂)	7.3x10 ⁻⁶ Gg per 10 ⁶ m ³	2006 IPCC. Vol. 2, Ch. 4
Storage Emissions Factor (CH ₄)	5.8x10 ⁻⁵ Gg per 10 ⁶ m ³	2006 IPCC. Vol. 2, Ch. 4
Storage Emissions Factor (CO ₂)	2.6x10 ⁻⁷ Gg per 10 ⁶ m ³	2006 IPCC. Vol. 2, Ch. 4
CH ₄ Global Warming Potential	21	SAR

Data	Value	Source
Fraction of pipeline throughput used to power the system	0.02925	EIA 2008
Natural Gas Combustion Factor	0.05444 kg CO ₂ per scf	TCR 2015
Conversion Factor	0.0011023 short tons per kg	

Total Emissions = 68,281 short tons of CO₂e = Fugitive + Combustion Emissions

Fugitive Emissions = 28,328 short tons of CO₂e =

$$23,353,493.33 \text{ MMBtu} * \frac{1 \text{ mmscf}}{1026 \text{ MMBtu}} * \frac{0.02832 * 10^6 \text{ m}^3}{\text{mmscf}} *$$

$$\left[\frac{(1.1 * 10^{-3} \text{ Gg CH}_4 * 21)}{10^6 \text{ m}^3} + \frac{(2.0 * 10^{-6} \text{ Gg CO}_2)}{10^6 \text{ m}^3} + \frac{(7.4 * 10^{-4} \text{ Gg CH}_4 * 21)}{10^6 \text{ m}^3} + \right.$$

$$\left. \frac{(7.3 * 10^{-6} \text{ Gg CO}_2)}{10^6 \text{ m}^3} + \frac{(5.8 * 10^{-5} \text{ Gg CH}_4 * 21)}{10^6 \text{ m}^3} + \frac{(2.6 * 10^{-7} \text{ Gg CO}_2)}{10^6 \text{ m}^3} \right] *$$

$$\frac{10^6 \text{ kg}}{\text{Gg}} * \frac{0.0011023 \text{ short tons}}{\text{kg}}$$

Combustion Emissions = 39,953 short tons of CO₂e =

$$23,252,493.33 \text{ MMBtu} * \frac{1 \text{ mmscf}}{1026 \text{ MMBtu}} * \frac{1,000,000 \text{ scf}}{1 \text{ mmscf}} * 0.02925 * \frac{0.05444 \text{ kg CO}_2}{\text{scf}}$$

$$\frac{0.0011023 \text{ short tons}}{\text{kg}}$$

TIER C PROJECTS

Tier C projects were not included in the 2007 and 2008 inventories. Emissions calculations for these projects have been included in all inventories from 2009 to the present.

Aga Khan and Medical College Foundation

Maximum Potential-to-Emit Estimate

Aga Khan's maximum PTE estimate of **72,965 CO₂e** was calculated using the following information:

Data	Value	Source
Small Boiler Rating	1 ton of steam/hr	Project Description
Small Boiler Count	2	Project Description
Large Boiler Rating	10 tons of steam/hr	Project Description
Large Boiler Count	4	Project Description
Conversion Factor	2,000 lbs/short tons	
Boiler Efficiency	0.80	Project Description
Steam Enthalpy at 212 °F and 0 psig	1,150 Btu/lbs	Saturated Steam Table
Conservative Operating Assumption	8,000 hr/yr	EIA Form 923 data, 2007
Conversion Factor	0.000001 MMBtu/Btu	
Electricity Generation Nameplate Capacity	4.8 MW	Project Description
Emission Factor: Generation w/ Natural Gas	390 g CO ₂ /kWh	IFC 2012
Emission Factor: Combustion of Natural Gas	53.02 kg CO ₂ /MMBtu	TCR 2014
Conversion Factor	1,000 kWh/MWh	TCR, Appendix C
Conversion Factor	0.000001 metric tons/g	
Conversion Factor	1.1023 short tons/metric ton	

Maximum Potential-to-Emit = 72,965 short tons of CO₂e per year

$$\left[\frac{[(1 \text{ tons} * 2) + (10 \text{ tons} * 4)]}{\text{hr}} * \frac{1}{0.8} * \frac{8,000 \text{ hr}}{\text{yr}} * \frac{1,150 \text{ Btu}}{\text{lb}} * \frac{2,000 \text{ lbs}}{\text{short ton}} * \frac{10^{-6} \text{ MMBtu}}{\text{Btu}} \right.$$

$$* \frac{53.02 \text{ kg CO}_2}{\text{MMBtu}} * \frac{10^{-3} \text{ metric ton}}{\text{kg}} + 4.8 \text{ MW} * \frac{8,000 \text{ hr}}{\text{yr}} * \frac{1,000 \text{ kWh}}{\text{MWh}} * \frac{390 \text{ g CO}_2}{\text{kWh}}$$

$$\left. * \frac{10^{-6} \text{ metric ton}}{\text{g}} \right] * \frac{1.1023 \text{ short tons}}{\text{metric ton}}$$

2014 Emissions Estimate

Aga Khan's 2014 emissions estimate of **25,064 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Natural Gas Consumption	12,879,049 m ³	Project Sponsor
Conversion Factor	35.31 scf/m ³	
Emission Factor Natural Gas	0.05 kg CO ₂ /scf	TCR 2014
Conversion Factor	0.001 metric tons/kg	
Conversion Factor	1.1023 short tons/metric ton	

Emissions = 25,064 short tons of CO₂e per year =

$$12,879,000 \text{ m}^3 * \frac{35.31 \text{ scf}}{\text{m}^3} * \frac{0.05 \text{ kg CO}_2}{\text{scf}} * \frac{10^{-3} \text{ metric ton}}{\text{kg}} * \frac{1.1023 \text{ short tons}}{\text{metric ton}}$$

2015 Emissions Estimate

Aga Khan's 2015 emissions estimate of **28,653 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Natural Gas Consumption	13,522,367 m ³	Project Sponsor
Conversion Factor	35.31 scf/m ³	
Emission Factor Natural Gas	0.05444 kg CO ₂ /scf	TCR 2015
Conversion Factor	0.001 metric tons/kg	
Conversion Factor	1.1023 short tons/metric ton	

Emissions = 28,653 short tons of CO₂e per year =

$$13,563,367 \text{ m}^3 * \frac{35.31 \text{ scf}}{\text{m}^3} * \frac{0.05 \text{ kg CO}_2}{\text{scf}} * \frac{10^{-3} \text{ metric ton}}{\text{kg}} * \frac{1.1023 \text{ short tons}}{\text{metric ton}}$$

CGLOB Astarta Zhadanivka Kyiv LLC

Maximum Potential-to-Emit Estimate

CGLOB Astarta Zhadanivka Kyiv LLC provided an estimate of the project's expected level of emissions. However, historic emissions indicate that the PTE is higher, so the maximum PTE was set as the peak emissions year in the available temporal series. CGLOB Astarta Zhadanivka Kyiv LLC's emissions peaked at **38,404 short tons of CO₂e** in CY 2014.

Data	Value	Source
Total Direct Emissions	25,000 short tons	Project Description

Maximum Potential-to-Emit = 25,000 short tons of CO₂e per year

2011 Emissions Estimate

CGLOB Astarta Zhadanivka Kyiv LLC's 2011 emissions estimate was found to be below the threshold of 25,000 short tons of CO₂e based on the following information:

Data	Value	Source
Fuel Type	Natural Gas and Coal	Project Description
Capacity	5.4 MW (Natural Gas)	Project Description
Emission Factor	395 g CO ₂ /kWh	IFC 2006
Conversion Factor	0.0000011023 short tons/g	TCR 2008
Coal Consumption	1,518 short tons Coal	Project Description
Emissions Factor	97.09 kg CO ₂ /MMBtu Coal	TCR 2008, Table 12.1
Conversion Factor	17.25 MMBtu/short ton Coal	TCR 2008, Table 12.1

Emissions = 21,612 short tons of CO₂e per year =

$$5.4 \text{ MW} * \frac{8,000 \text{ hr}}{\text{yr}} * \frac{395 \text{ g CO}_2}{\text{kWh}} * \frac{1000 \text{ kW}}{\text{MW}} * \frac{0.0000011023 \text{ short tons}}{\text{g}} +$$

$$1,518 \text{ short tons coal} * \frac{17.25 \text{ MMBtu}}{\text{short ton coal}} * \frac{97.09 \text{ kg CO}_2}{\text{MMBtu}} * \frac{0.0011023 \text{ short tons}}{\text{kg}}$$

2012 Emissions Estimate

CGLOB Astarta Zhadanivka Kyiv LLC's 2012 emissions estimate of **36,886 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Natural Gas Consumption	11,840 thousand m ³	Project Sponsor
Natural Gas Emissions Factor	0.05 kg CO ₂ /scf	TCR 2013
Coal Consumption	1,448 metric tons	Project Sponsor
Coal Emissions Factor	2098.89 kg CO ₂ /short ton	TCR 2013
Limestone Consumption (Ca CO ₃)	20,931 metric tons	Project Sponsor
CO ₂ / CaCO ₃ Molecular Weight Ratio	0.44	
Conversion Factor	35,310 scf/thousand m ³	
Conversion Factor	0.0011023 short tons/kg	
Conversion Factor	1.1023 short ton/metric ton	

Emissions = 36,886 short tons of CO₂e per year =

$$11,840 \text{ thousand m}^3 * \frac{35,310 \text{ scf}}{\text{thousand m}^3} * \frac{0.05 \text{ kg CO}_2}{\text{scf}} * \frac{0.0011023 \text{ short tons}}{\text{kg}} +$$

$$1,448 \text{ metric tons coal} * \frac{1.1023 \text{ short ton}}{\text{metric tons}} * \frac{2,098.89 \text{ kg CO}_2}{\text{short ton coal}} * \frac{0.0011023 \text{ short tons}}{\text{kg}} +$$

$$20,931 \text{ metric tons limestone} * \frac{1.1023 \text{ short ton}}{\text{metric tons}} * \frac{0.44 \text{ CO}_2}{\text{CaCO}_3}$$



2013 Emissions Estimate

CGLOB Astarta Zhadanivka Kyiv LLC's 2013 emissions estimate of **25,470 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Natural Gas Consumption	8,054 thousand m ³	Project Sponsor
Natural Gas Emissions Factor	0.05 kg CO ₂ /scf	TCR 2013
Coal Consumption	974 metric tons	Project Sponsor
Coal Emissions Factor	2098.89 kg CO ₂ /short ton	TCR 2013
Limestone Consumption (Ca CO ₃)	15,076 metric tons	Project Sponsor
CO ₂ / CaCO ₃ Molecular Weight Ratio	0.44	
Conversion Factor	35,310 scf/thousand m ³	
Conversion Factor	0.0011023 short tons/kg	
Conversion Factor	1.1023 short ton/metric ton	

Emissions = 25,470 short tons of CO₂e per year =

$$8,054 \text{ thousand m}^3 * \frac{35,310 \text{ scf}}{\text{thousand m}^3} * \frac{0.05 \text{ kg CO}_2}{\text{scf}} * \frac{0.0011023 \text{ short tons}}{\text{kg}} +$$

$$974 \text{ metric tons coal} * \frac{1.1023 \text{ short ton}}{\text{metric tons}} * \frac{2,098.89 \text{ kg CO}_2}{\text{short ton coal}} * \frac{0.0011023 \text{ short tons}}{\text{kg}} +$$

$$15,076 \text{ metric tons limestone} * \frac{1.1023 \text{ short ton}}{\text{metric tons}} * \frac{0.44 \text{ CO}_2}{\text{CaCO}_3}$$

2014 Emissions Estimate

CGLOB Astarta Zhadanivka Kyiv LLC's 2014 emissions estimate of **38,404 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Natural Gas Consumption	12,406 thousand m ³	Project Sponsor
Natural Gas Emissions Factor	0.05 kg CO ₂ /scf	TCR 2014
Coal Consumption	1,432 metric tons	Project Sponsor
Coal Emissions Factor	2,098.89 kg CO ₂ /short ton	TCR 2014
Limestone Consumption	21,873 metric tons	Project Sponsor
CO ₂ / CaCO ₃ Molecular Weight Ratio	0.44	
Conversion Factor	35,310 scf/thousand m ³	
Conversion Factor	0.0011023 short tons/kg	
Conversion Factor	0.9072 metric tons/short ton	

Emissions = 38,404 short tons of CO₂e per year =

$$12,406 \text{ thousand m}^3 * \frac{35,310 \text{ scf}}{\text{thousand m}^3} * \frac{0.05 \text{ kg CO}_2}{\text{scf}} * \frac{0.0011023 \text{ short tons}}{\text{kg}} +$$

$$1,432 \text{ metric tons coal} * \frac{1.1023 \text{ short ton}}{\text{metric tons}} * \frac{2,098.89 \text{ kg CO}_2}{\text{short ton coal}} * \frac{0.0011023 \text{ short tons}}{\text{kg}} +$$

$$21,873 \text{ metric tons limestone} * \frac{1.1023 \text{ short ton}}{\text{metric tons}} * \frac{0.44 \text{ CO}_2}{\text{CaCO}_3}$$

2015 Emissions Estimate

CGLOB Astarta Zhadanivka Kyiv LLC's 2015 emissions estimate of **32,202 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Natural Gas Consumption	9,668 thousand m ³	Project Sponsor
Natural Gas Emissions Factor	0.05444 kg CO ₂ /scf	TCR 2015
Coal Consumption	1,263 metric tons	Project Sponsor
Coal Emissions Factor	2,115.8745 kg CO ₂ /short ton	TCR 2015
Limestone Consumption	17,461 metric tons	Project Sponsor
CO ₂ / CaCO ₃ Molecular Weight Ratio	0.44	
Conversion Factor	35,310 scf/thousand m ³	
Conversion Factor	0.0011023 short tons/kg	
Conversion Factor	0.9072 metric tons/short ton	

Emissions = 32,202 short tons of CO₂e per year =

$$9,668 \text{ thousand m}^3 * \frac{35,310 \text{ scf}}{\text{thousand m}^3} * \frac{0.05444 \text{ kg CO}_2}{\text{scf}} * \frac{0.0011023 \text{ short tons}}{\text{kg}} +$$

$$1,263 \text{ metric tons coal} * \frac{1.1023 \text{ short ton}}{\text{metric tons}} * \frac{2,115.8745 \text{ kg CO}_2}{\text{short ton coal}} * \frac{0.0011023 \text{ short tons}}{\text{kg}} +$$

$$17,461 \text{ metric tons limestone} * \frac{1.1023 \text{ short ton}}{\text{metric tons}} * \frac{0.44 \text{ CO}_2}{\text{CaCO}_3}$$

Joshi Technologies / Parko Services

Maximum Potential-to-Emit Estimate

The maximum PTE for Joshi Technologies/ Parko Services is equal to the peak emissions year in the available temporal series. Project emissions peaked at **91,861 short tons of CO₂e** in CY 2014.

2009 Emissions Estimate

Joshi Technologies / Parko's 2009 project emissions estimate of **30,398 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Emissions	30,398 tons of CO ₂	Project Sponsor

2010 Emissions Estimate

Joshi Technologies / Parko's 2010 project emissions estimate of **57,826 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Internal Combustion Emissions (gas)	4,010 short tons CO ₂	Project Sponsor
External Combustion Emissions (gas)	9,789 short tons CO ₂	Project Sponsor
Flared Gas Emissions	25,927 short tons CO ₂	Project Sponsor
Internal Combustion Emissions (diesel)	18,100 short tons CO ₂	Project Sponsor

Emissions = 57,826 short tons of CO₂e per year =

4,010 short tons CO₂ + 9,789 short tons CO₂ + 25,927 short tons CO₂

+ 18,100 short tons CO₂

2011 Emissions Estimate

Joshi Technologies / Parko's 2011 project emissions estimate of **43,564 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Internal Combustion Emissions (gas)	4,918 short tons CO ₂	Project Sponsor
External Combustion Emissions (gas)	11,169 short tons CO ₂	Project Sponsor
Flared Gas Emissions	22,611 short tons CO ₂	Project Sponsor
Internal Combustion Emissions (diesel)	4,866 short tons CO ₂	Project Sponsor

Emissions = 43,564 short tons of CO₂e per year =

4,918 short tons CO₂ + 11,169 short tons CO₂ + 22,611 short tons CO₂

+ 4,866 short tons CO₂

2012 Emissions Estimate

Joshi Technologies / Parko's 2012 project emissions estimate of **52,894 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Natural Gas Combustion in Dehydration Process	203 mmscf	Project Sponsor
Natural Gas Combustion in Power Generation	124 mmscf	Project Sponsor
Natural Gas High Heat Value	1,028 MMBtu/mmscf	TCR 2013
Natural Gas Emission Factor	53.02 kg CO ₂ /MMBtu	TCR 2013
Natural Gas Flared	468*10 ⁶ scf	Project Sponsor
Natural Gas Flared Emission Factor	2*10 ⁻⁶ Gg CO ₂ /m ³	API 2009, Table 4-11
Diesel Combustion in Drilling Rigs	225,000 gal	Project Sponsor
Diesel Combustion in Workover Rigs	103,680 gal	Project Sponsor
Diesel Combustion in Vehicle Fleet	29,646 gal	Project Sponsor
Diesel Emission Factor	10.21 kg CO ₂ /gal	TCR 2013
Conversion Factor	0.028316 m ³ /scf	
Conversion Factor	1,000 metric ton/Gg	
Conversion Factor	0.9072 metric ton/short ton	

Emissions = 52,894 short tons of CO_{2e} per year =

$$\left[(203 + 124 \text{ mmscf}) * \frac{1,028 \text{ MMBtu}}{\text{mmscf}} * \frac{53.02 \text{ kg CO}_2}{\text{MMBtu}} * \frac{1 \text{ metric ton}}{1,000 \text{ kg}} + \right.$$

$$468 * 10^6 \text{ scf} * \frac{0.028316 \text{ m}^3}{\text{scf}} * \frac{2 * 10^{-6} \text{ Gg CO}_2}{\text{m}^3} * \frac{1,000 \text{ metric ton}}{\text{Gg}} +$$

$$\left. (225,000 + 103,680 + 29,646 \text{ gal}) * \frac{10.21 \text{ kg CO}_2}{\text{gal}} * \frac{1 \text{ metric ton}}{1,000 \text{ kg}} \right] * \frac{1 \text{ short ton}}{0.9072 \text{ metric ton}}$$

2013 Emissions Estimate

Joshi Technologies / Parko's 2013 project emissions estimate of **73,685 short tons of CO_{2e}** was calculated using the following information:

Data	Value	Source
Natural Gas Combustion in Dehydration Process	368 mmscf	Project Sponsor
Natural Gas Combustion in Power Generation	137 mmscf	Project Sponsor
Natural Gas High Heat Value	1,004 MMBtu/mmscf	Project Sponsor
Natural Gas Emission Factor	52.91 kg CO ₂ /MMBtu	TCR 2013
Natural Gas Flared	645*10 ⁶ scf	Project Sponsor
Natural Gas Flared Emission Factor	2*10 ⁻⁶ Gg CO ₂ /m ³	API 2009, Table 4-11
Diesel Combustion in Drilling Rigs	265,159 gal	Project Sponsor
Diesel Combustion in Workover Rigs	55,325 gal	Project Sponsor
Diesel Combustion in Vehicle Fleet	21,629 gal	Project Sponsor
Diesel Emission Factor	10.21 kg CO ₂ /gal	TCR 2013
Conversion Factor	0.028316 m ³ /scf	
Conversion Factor	1,000 metric ton/Gg	
Conversion Factor	1.1023 short ton/metric ton	

Emissions = 73,685 short tons of CO₂e per year =

$$\left[(368 + 137 \text{ mmscf}) * \frac{1,004 \text{ MMBtu}}{\text{mmscf}} * \frac{52.91 \text{ kg CO}_2}{\text{MMBtu}} * \frac{1 \text{ metric ton}}{1,000 \text{ kg}} + \right.$$

$$645 * 10^6 \text{ scf} * \frac{0.028316 \text{ m}^3}{\text{scf}} * \frac{2 * 10^{-6} \text{ Gg CO}_2}{\text{m}^3} * \frac{1,000 \text{ metric ton}}{\text{Gg}} +$$

$$\left. (265,159 + 55,325 + 21,629 \text{ gal}) * \frac{10.21 \text{ kg CO}_2}{\text{gal}} * \frac{1 \text{ metric ton}}{1,000 \text{ kg}} \right] * \frac{1.1023 \text{ short ton}}{1 \text{ metric ton}}$$

2014 Emissions Estimate

Joshi Technologies / Parko's 2014 project emissions estimate of **91,861 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Natural Gas Combustion in Dehydration Process	241.9 mmscf	Project Sponsor
Natural Gas Combustion in Power Generation	144.4 mmscf	Project Sponsor
Natural Gas High Heat Value	1,004 MMBtu/mmscf	Project Sponsor
Natural Gas Emission Factor	52.91 kg CO ₂ /MMBtu	TCR 2014
Natural Gas Flared	1,067.4 * 10 ⁶ scf	Project Sponsor
Natural Gas Flared Emission Factor	2 * 10 ⁻⁶ Gg CO ₂ /m ³	API 2009, Table 4-11
Diesel Combustion in Drilling Rigs	150,942 gal	Project Sponsor
Diesel Combustion in Workover Rigs	57,580 gal	Project Sponsor
Diesel Combustion in Vehicle Fleet	23,167 gal	Project Sponsor
Diesel Emission Factor	10.21 kg CO ₂ /gal	TCR 2014
Conversion Factor	0.028316 m ³ /scf	
Conversion Factor	1,102 short ton/Gg	
Conversion Factor	1.1023 short ton/metric ton	

Emissions = 91,861 short tons of CO₂e per year =

$$\left[(241.9 + 144.4 \text{ mmscf}) * \frac{1,004 \text{ MMBtu}}{\text{mmscf}} * \frac{52.91 \text{ kg CO}_2}{\text{MMBtu}} * \frac{1 \text{ metric ton}}{1000 \text{ kg}} + \right.$$

$$1,067.4 * 10^6 \text{ scf} * \frac{0.028316 \text{ m}^3}{\text{scf}} * \frac{2 * 10^{-6} \text{ Gg CO}_2}{\text{m}^3} * \frac{1,000 \text{ metric ton}}{\text{Gg}} +$$

$$\left. (150,942 + 57,580 + 23,167 \text{ gal}) * \frac{10.21 \text{ kg CO}_2}{\text{gal}} * \frac{1 \text{ metric ton}}{1,000 \text{ kg}} \right] * \frac{1.1023 \text{ short ton}}{1 \text{ metric ton}}$$

2015 Emissions Estimate

Joshi Technologies / Parko's 2015 project emissions estimate of **91,224 short tons of CO₂e** was calculated using the following information:

Data	Value	Source
Natural Gas Combustion in Dehydration Process	298.2 mmscf	Project Sponsor
Natural Gas Combustion in Power Generation	129.8 mmscf	Project Sponsor
Natural Gas High Heat Value	1,004 MMBtu/mmscf	Project Sponsor
Natural Gas Emission Factor	52.91kg CO ₂ /MMBtu	TCR 2015
Natural Gas Flared	1,047.5 * 10 ⁶ scf	Project Sponsor
Natural Gas Flared Emission Factor	2 * 10 ⁻⁶ Gg CO ₂ /m ³	API 2009, Table 4-11
Diesel Combustion in Drilling Rigs	27,409 gal	Project Sponsor
Diesel Combustion in Workover Rigs	18,260 gal	Project Sponsor
Diesel Combustion in Vehicle Fleet	22,906 gal	Project Sponsor
Diesel Emission Factor	10.21 kg CO ₂ /gal	TCR 2015
Conversion Factor	0.028316 m ³ /scf	
Conversion Factor	1,000 metric ton/Gg	
Conversion Factor	1.1023 short ton/metric ton	

Emissions = 91,224 short tons of CO₂e per year =

$$\left[(298.2 + 129.8 \text{ mmscf}) * \frac{1,004 \text{ MMBtu}}{\text{mmscf}} * \frac{52.91 \text{ kg CO}_2}{\text{MMBtu}} * \frac{1 \text{ metric ton}}{1,000 \text{ kg}} + \right.$$

$$1,047.5 * 10^6 \text{ scf} * \frac{0.028316 \text{ m}^3}{\text{scf}} * \frac{2 * 10^{-6} \text{ Gg CO}_2}{\text{m}^3} * \frac{1,000 \text{ metric ton}}{\text{Gg}} +$$

$$\left. (27,409 + 18,260 + 22,906 \text{ gal}) * \frac{10.21 \text{ kg CO}_2}{\text{gal}} * \frac{1 \text{ metric ton}}{1,000 \text{ kg}} \right] * \frac{1.1023 \text{ short ton}}{1 \text{ metric ton}}$$

Qalaa Holdings (formerly Citadel)

Maximum Potential-to-Emit Estimate

Qalaa Holdings' project description provided a range of expected emissions. The upper end of this range was used as the project's maximum potential-to-emit

Data	Value	Source
Direct Emissions	96,000 metric tons	Project Description
Conversion Factor	1.1023 short tons/metric ton	

Maximum Potential-to-Emit = 105,821 short tons of CO₂e per year =

96,000 metric tons * 1.1023 short tons/metric ton

2012 Emissions Estimate

Citadel is a private equity firm that invests in multiple platforms. In 2012, the Glenview Investment Holdings platform had an estimated carbon footprint estimate of **46,707 short tons of CO₂e** calculated using the following information:

Data	Value	Source
Natural Gas Consumption	24 million m ³	Project Description
Conversion Factor	1,000,000 m ³ / million m ³	
Conversion Factor	35.31 scf/ m ³	
Natural Gas Emission Factor	0.05 kg CO ₂ / scf	TCR 2013
Conversion Factor	0.001 metric tons/ kg	
Conversion Factor	1.1023 short tons/ metric ton	

Total emissions estimate = 46,707 short tons of CO₂e per year =

$$24 \text{ million m}^3 * \frac{1,000,000 \text{ m}^3}{\text{million m}^3} * \frac{35.31 \text{ scf}}{\text{m}^3} * \frac{0.05 \text{ kg CO}_2}{\text{scf}} * \frac{10^{-3} \text{ metric ton}}{\text{kg}} * \frac{1.1023 \text{ short ton}}{\text{metric ton}}$$

2013 Emissions Estimate

In 2013, Citadel changed its name to Qalaa Holdings, a private equity firm that invests in multiple platforms. In 2013, three platforms contributed to Qalaa Holdings' total emissions, including Glenview Investment Holdings, United Company for Foundries, ASEC Company for Mining, and Falcon for Agricultural Investments Ltd. The 2013 revised emissions estimate of **52,169 short tons of CO₂e** was calculated as follows.

Data	Value	Source
Natural Gas Consumption (Glenview Investment Holdings)	18 million m ³	Project Description
Natural Gas Consumption (other platforms)	8.807 million m ³	Project Sponsor
Conversion Factor	1,000,000 m ³ / million m ³	
Conversion Factor	35.31 scf/ m ³	
Natural Gas Emission Factor	0.05 kg CO ₂ / scf	TCR 2013
Conversion Factor	0.001 metric tons/ kg	
Conversion Factor	1.1023 short tons/ metric ton	

Total emissions estimate = 52,169 short tons of CO₂e per year =

$$(18 + 8.807) \text{ million m}^3 * \frac{1,000,000 \text{ m}^3}{\text{million m}^3} * \frac{35.31 \text{ scf}}{\text{m}^3} * \frac{0.05 \text{ kg CO}_2}{\text{scf}} * \frac{10^{-3} \text{ metric ton}}{\text{kg}}$$

$$\frac{1.1023 \text{ short ton}}{\text{metric ton}}$$

2014 Emissions Estimate

In 2014, four platforms contributed to Qalaal Holdings' total emissions, including Grandview Investment Holdings, United Company for Foundries, ASEC Company for Mining, and Falcon for Agricultural Investments Ltd. The 2014 emissions estimate of **47,437 short tons of CO₂e** was calculated as follows.

Data	Value	Source
Natural Gas Consumption (all platforms)	24.376 million m ³	Project Sponsor
Conversion Factor	1,000,000 m ³ / million m ³	
Conversion Factor	35.31 scf/ m ³	
Natural Gas Emission Factor	0.05 kg CO ₂ / scf	TCR 2014
Conversion Factor	0.001 metric tons/ kg	
Conversion Factor	1.1023 short tons/ metric ton	

Total emissions estimate = 47,437 short tons of CO₂e per year =

$$24.376 \text{ million m}^3 * \frac{1,000,000 \text{ m}^3}{\text{million m}^3} * \frac{35.31 \text{ scf}}{\text{m}^3} * \frac{0.05 \text{ kg CO}_2}{\text{scf}} * \frac{10^{-3} \text{ metric ton}}{\text{kg}}$$

$$\frac{1.1023 \text{ short ton}}{\text{metric ton}}$$

2015 Emissions Estimate

In 2015, two platforms contributed to Qalaal Holdings' total emissions, including Grandview Investment Holdings, United Company for Foundries, and ASEC Company for Mining. The 2015 emissions estimate of **34,279 short tons of CO₂e** was calculated as follows.

Data	Value	Source
Natural Gas Consumption (all platforms)	17.614 million m ³	Project Sponsor
Conversion Factor	1,000,000 m ³ / million m ³	
Conversion Factor	35.31 scf/ m ³	
Natural Gas Emission Factor	0.05 kg CO ₂ / scf	TCR 2014
Conversion Factor	0.001 metric tons/ kg	
Conversion Factor	1.1023 short tons/ metric ton	



Total emissions estimate = 34,279 short tons of CO₂e per year =

$$17.614 \text{ million m}^3 * \frac{1,000,000 \text{ m}^3}{\text{million m}^3} * \frac{35.31 \text{ scf}}{\text{m}^3} * \frac{0.05 \text{ kg CO}_2}{\text{scf}} * \frac{10^{-3} \text{ metric ton}}{\text{kg}}$$

$$\frac{1.1023 \text{ short ton}}{\text{metric ton}}$$

APPENDIX D – COMMON CONVERSIONS

Listed below are common emission and conversions factors used in the development of emission estimates.

UNIT CONVERSION		
Value	Unit of Measure	Source
8,000	Hours per Year	Conservative Operating Assumption – EIA Form 923, 2007
333	Days per Year	Calculated from Hours per Year
1,000,000	Btu per MMBtu	TCR 2008
0.001	metric tons per kg	TCR 2008
0.0011023	short tons per kg	TCR 2008
1,000,000	scf per Mcf	TCR 2008
0.02832	m ³ per scf	TCR 2008
0.9072	metric tons per short ton	TCR 2008
0.000001	metric tons per g	TCR 2008
0.0000011023	short tons per g	TCR 2008
907.18	kg per short ton	TCR 2008
2.2046	lbs per kg	TCR 2008
2,204.62	lbs per metric tonne	TCR 2008
2,000	lbs per short ton	TCR 2008
42	gallons per barrel	TCR 2008

HEAT CONTENT		
Value	Unit of Measure	Source
43	TJ/Gg HFO Gross Calorific Value	National Physical Laboratory, 2015
44	TJ/Gg LFO Gross Calorific Value	National Physical Laboratory, 2015
5.796	MMBtu per barrel diesel (fuel oil #2)	TCR 2013, TCR 2014
17.25	MMBtu per short ton coal (sub-bituminous)	TCR 2008
5.80	MMBtu per barrel diesel (fuel oil #2)	TCR 2013, TCR 2014
5.80	MMBtu per barrel crude oil	TCR 2013, TCR 2014
1,028	Btu per scf natural gas (U.S. weighted average)	TCR 2013, TCR 2014
1,026	Btu per scf natural gas (U.S. weighted average)	TCR 2015

EMISSION FACTORS FOR ELECTRICITY GENERATION		
Value	Unit of Measure	Source
901	g CO ₂ per kWh generated using coal	IFC 2012
666	g CO ₂ per kWh generated using oil	IFC 2012
390	g CO ₂ per kWh generated using natural gas	IFC 2012

EMISSION FACTORS FOR FUEL COMBUSTION		
Value	Unit of Measure	Source
53.02	kg CO ₂ per MMBtu natural gas	TCR 2013, TCR 2014, TCR 2015
53.06	kg CO ₂ per MMBtu natural gas	TCR 2015
52.91	kg CO ₂ per MMBtu natural gas (Btu/scf 1,000-1,025)	TCR 2013, TCR 2014, TCR 2015
73.96	kg CO ₂ per MMBtu diesel (fuel oil #2)	TCR 2013, TCR 2014, TCR 2015
97.09	kg CO ₂ per MMBtu coal (sub-bituminous)	TCR 2008
74.49	kg CO ₂ per MMBtu crude oil	TCR 2013
0.0544	kg CO ₂ per scf natural gas	TCR 2013, TCR 2014, TCR 2015
75.1	kg CO ₂ per MMBtu Residual Fuel Oil (#6)	TCR 2014, TCR 2015
2098.89	kg CO ₂ per short ton coal (mixed industrial sector)	TCR 2013, TCR 2014

EMISSION FACTORS FOR INDUSTRIAL PROCESSES		
Value	Unit of Measure	Source
0.44	Short tons CO ₂ per short ton limestone processed	IPCC 2006

APPENDIX E – ANNOTATED BIBLIOGRAPHY

Amnesty International 2013. "Amnesty International: News." *Israel/OPT: Gaza Power Crisis Has Compounded Blockade's Assault on Human Dignity*. 1 Dec. 2013. Accessed February 2015. <<http://www.amnesty.org/en/news/israelopt-gaza-power-crisis-has-compounded-blockade-s-assault-human-dignity-2013-11-29>>.

API 2004 (American Petroleum Institute). *Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Gas Industry*. February 2004. Accessed January 2008. <http://www.api.org/ehs/climate/new/upload/2004_COMPENDIUM.pdf>

Examples from API were used for those projects in Tier B [Accroven SRL, Various Egypt Subsidiaries (Apache), EP Interoil, RPK-Vysotsk (Lukoil II)] for which there were no consumption volumes or other data to base an emissions estimate on. The size of operations for these examples was compared to the size of the projects in Tier B, resulting in a multiplication factor which was applied to the API example's emissions estimate to arrive at an approximate estimate for the Tier B project. Additionally, a methane-fugitive emissions factor for compression, sourced from the API Compendium of Greenhouse Gas Emissions, Table 6-5, was used for the Wilpro Energy Services projects.

API 2009 (American Petroleum Institute). *Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Gas Industry*. August 2009.

SAR. Second Assessment Report. Climate Change 1995, The Science of Climate Change: Summary for Policymakers and Technical Summary of the Working Group I Report, page 22.

EIA 2008. Energy Information Administration (EIA) *U.S. Natural Gas Consumption by End Use*. 2003-2007. Accessed January 2008. <http://tonto.eia.doe.gov/dnav/ng/ng_cons_sum_dcunusa.htm>

Emissions from natural pipeline transport are very segment specific, varying by pipeline infrastructure, compression energy source, and segment distance. In order to define the related emissions for representative pipeline hauls in the absence of system specifications, Pace Global assumed pipeline-fuel consumption and both combustion and non-combustion CO_{2e} emissions, based on EIA natural gas consumption data and data from the U.S. GHG Inventory released by EPA in 2008. This data yielded an average fugitive-emission-loss rate of 1.7% (per unit volume), and fugitive emissions factor of 4,297 lbs of CO₂ per mmscfd. The emissions associated with combustion required to move natural gas were calculated to be 3,439 lbs of CO₂ per MMscd.

EIA 2013. Voluntary Reporting of Greenhouse Gas Coefficients. [Voluntary Reporting of Greenhouse Gases Program \(Voluntary Reporting of Greenhouse Gases Program Fuel Carbon Dioxide Emission Coefficients\)](#). January 2013. Accessed January 2013.

EPA 1985. United States Environmental Protection Agency (EPA). *AP 42: Compilation of Air Pollutant Emission Factors, Volume 1 Stationary Point and Area Sources. Appendix A: Miscellaneous Data & Conversion Factors*. September 1985. Accessed January 2008. <<http://www.epa.gov/ttn/chief/ap42/>>

Conversion factors not provided by The Climate Registry were obtained from U.S. EPA's AP 42 document, specifically for the density of natural gas and crude oil and the conversion of kilometers to miles.

EPA 2008. United States Environmental Protection Agency (EPA). *Inventory of U.S. GHG Emissions and Sinks, 1990-2006*. Tables 3-34 and 3-36. Accessed January 2008. <http://www.epa.gov/climatechange/emissions/downloads/08_CR.pdf>

Emissions from natural-gas-pipeline transport are very segment specific, and vary according to pipeline infrastructure, compression-energy source, and segment distance. In order to define the related emissions for representative pipeline hauls in the absence of system specifications, Pace Global assumed pipeline-fuel consumption and both combustion and non-combustion CO₂e emissions based on EIA natural gas consumption data and data from the U.S. GHG Inventory, released by EPA in 2008. This data yielded an average fugitive emission loss rate of 1.7% (per unit volume), and fugitive emissions factor of 4,297 lbs of CO₂ per mmscd. The emissions associated with combustion required to move natural gas was calculated to be 3,439 lbs of CO₂ per MMscd.

REET. The Greenhouse Gases, Regulated Emissions, and Energy Use In Transportation Model, REET 1.8d.1, developed by Argonne National Laboratory, Argonne, IL, released August 26, 2010.

Herrington, E.F.G. "Calorific Values of Solid, Liquid and Gaseous Fuels 3.11.4." *National Physical Laboratory*. 1 Jan. 2015. Web. 1 Feb. 2015. <http://www.kayelaby.npl.co.uk/chemistry/3_11/3_11_4.htm>.

IEA 2008a. International Energy Agency. *Coal in Indonesia in 2006*, accessed January 2008. <http://www.iea.org/Textbase/stats/coaldata.asp?COUNTRY_CODE=ID>

The coal profile for Indonesia in 2006 specifies the type of coal consumed and what it was combusted for. The table provided by IEA describes the volume of coal used in electricity plants as being 100% sub-bituminous. This information was necessary to calculate the emissions for Paiton Energy as each coal type has a different emissions factor and heat-content value.

IEA 2008b. International Energy Agency. *Coal in Morocco in 2006*. Accessed January 2008. <http://www.iea.org/Textbase/stats/coaldata.asp?COUNTRY_CODE=MA>

The coal profile for Morocco in 2006 specifies the type of coal consumed and what it was combusted for. The table provided by IEA describes the volume of coal used in electricity plants as being 100% bituminous. This information was necessary to calculate the emissions for Jorf Lasfar Energy as each coal type has a different emissions factor and heat-content value.

IFC 2008. International Finance Corporation (IFC). *Guidance Note 3: Pollution Prevention and Abatement*. July 31, 2007. Accessed January 2008.

<<http://www.ifc.org/ifcext/sustainability.nsf/Content/GuidanceNotes>>

This guidance note by the IFC provides suggested GHG emissions estimation methodologies for the energy and industrial sectors. The table in Annex A provides the capacity for electric-generating technologies (oil = 25MW, coal = 18MW, gas = 41MW) that would emit 100,000 metric tons of CO_{2e} per year. The table also provides the emissions factor that was applied to the electric generation projects for which no throughput or consumption volumes were available.

IFC 2012. International Finance Corporation (IFC). *Guidance Note 3: Resource Efficiency and Pollution Prevention*. January 1, 2012.

IPCC 2006. 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Prepared by the National Greenhouse Gas Inventories Programme, Eggleston H.S., Buendia L., Miwa K., Ngara T. and Tanabe K. (eds). Published: IGES, Japan.

Nye Thermodynamics Corporation. *Gas Turbine Specifications by Manufacturer*. Nuovo Pignone turbine specifications. Accessed January 2008.

<<http://www.gas-turbines.com/specs/manuf.htm>>

The project descriptions for Wilpro Energy Services (Pigap) and Wilpro Energy Services (El Furrial) indicate that the compression is driven by Nuovo Pignone Gas Turbines. Pace estimated energy requirements from compression levels depicted for each project and consulted specifications of the appropriately sized Nuovo Pignone gas turbines. Efficiency and other specifications of these turbines were collected from the Nye Thermodynamics Corporation website documenting gas turbine specifications by manufacturer.

OPIC 2007. Overseas Private Investment Corporation (OPIC). *2007 Greenhouse Gas Emissions Inventory Report*. March 2009.

<<http://www.opic.gov/doing-business-us/OPIC-policies/greenhouse-gas-accounting-reports>>

OPIC 2008. Overseas Private Investment Corporation (OPIC). *2008 Greenhouse Gas Emissions Inventory Report*. May 2010.

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<<http://www.opic.gov/doing-business-us/OPIC-policies/greenhouse-gas-accounting-reports>>

Oil and Gas Journal. "Special Report: Worldwide Ethylene Capacity Increases 2 Million TPY in 2007," Volume 106, July 28, 2008.

No information was provided in the project description for the Equate Petrochemical project indicating its size or energy consumption. The average size of petrochemical facilities in the Middle East, of ~850,000 tons per year, was sourced from the *Oil and Gas Journal*. Specific energy requirements and generation sources expected from a petrochemical facility of this size were sourced from the CEC report. This data enabled the qualified estimation of emissions from this project.

TAPSEIS. Trans-Alaska Pipeline System Environmental Impact Statement (TAPSEI). *Trans-Alaska Pipeline Environmental Impact Statement Document, Energy Requirements for Conservation Potential*. February 15, 2001. Accessed January 2008.

<http://tapseis.anl.gov/documents/docs/Section_4_9_May2.pdf>

Energy-demand factors for crude-pipeline transport were sourced from documents associated with the Environmental Impact Statement for the Trans Alaska Gas pipeline in order to calculate GHG emissions for the Baku-Tblisi-Ceyhan Pipeline.

TCR 2008. The Climate Registry (TCR). *General Reporting Protocol Version 1.1*. May 2008. Accessed January 2008. <<http://www.theclimateregistry.org/downloads/GRP.pdf>>

The Climate Registry is the broadest-reaching registry in North America with participation from all Canadian provinces, six Mexican states, and 40 U.S. states. The Climate Registry's General Reporting Protocol is based on the WRI/WBCSD GHG Protocol, the "gold" standard in GHG Accounting and Reporting. Emission, heat content, and conversion factors from this document were used in the analysis (Table 12.1 and Appendix C).

TCR 2013. The Climate Registry (TCR). *2013 Climate Registry Default Emissions Factors*. January 2013. Accessed March 2014.

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