

Financing for a sustainable future

Estimating the environmental benefits of Bank of America's Environmental Business Initiative

The EY logo is positioned in the bottom left corner of the page. It consists of the letters 'EY' in a bold, white, sans-serif font. The background of the entire page is a low-angle photograph of several tall, classical-style skyscrapers with many windows, set against a clear blue sky. A bright yellow diagonal stripe cuts across the lower right portion of the image. In the bottom left corner, there is a decorative graphic of vertical white lines of varying heights, and a small portion of an American flag is visible.

Building a better
working world

Foreword

At Bank of America, we know that our products, services and investments play an important role in the lives of individuals, businesses and communities. With that role comes a responsibility that we take very seriously.

As the effects of climate change continue to emerge as a business reality, financial services companies play an important role in accelerating society's transition to a lower-carbon energy future. Through hundreds of billions in capital commitments, we have a unique opportunity to make a powerful impact.

From investors to advocacy groups, our stakeholders are telling us that they want to know more about the environmental effects of our financing activities. For a decade, Bank of America has been measuring and reporting on the emissions intensity of our US electric utility loan portfolio. When we began our reporting in 2005, we hoped others would follow suit, but we continue to be the only financial institution to report on utility portfolio emissions. So, in 2013, we joined a group of companies, nonprofits and other stakeholders working with the Greenhouse Gas (GHG) Protocol (at the World Resources Institute) and the United Nations Environment Programme Finance Initiative (UNEP FI) to develop a method for measuring GHG emissions related to lending, investments and other financing activities. We believe our work is a crucial step in providing vital information to investors, advocates and other stakeholders. And we hope that when this work is complete, it will form the basis for an industry-wide standard.

While it's important to monitor the adverse impacts of our portfolios, we also want to understand the positive environmental effects of our financing activities. For instance, what's the benefit when we finance a lower-emissions energy project? Or what emissions do we help avoid by financing large energy efficiency upgrades like LED lighting retrofits?

Through our environmental business initiatives, we've committed \$70 billion over the course of 16 years to address climate change by financing a wide range of energy efficiency, renewable energy and other low-carbon projects. This represents the largest such commitment of any financial services company.

Traditionally, the bank and many of our peers have publicly reported on the amount of capital committed under our respective environmental business commitments. While capital is an important indicator of success, we need additional metrics to help us fully understand and quantify the benefits to the environment of our activities. That's why Bank of America teamed up with the well-respected consulting firm EY to create a methodology to calculate and provide a comprehensive look at the environmental impacts of our initiative. This paper outlines EY's approach. I want to acknowledge our consultants at EY for the tremendous work they put into outlining this approach and thank them for working with us over the past year to address a complex issue.

Tackling big challenges like this takes time, and no company can do it alone. We hope our financial industry peers and stakeholders will provide feedback on the methodology and, if appropriate, adopt it for their own business activities. Together, we can better understand our impact on the environment and the effectiveness of our efforts to accelerate the transition to a lower-carbon economy.



Alexandra Liftman, Global Environmental Executive, Bank of America



Executive summary

Today, leading companies want to understand the environmental impacts and benefits of their entire value chain. Suppliers are being asked to provide environmental data to their customers. Manufacturers are creating methods to measure the impacts of their products at end-of-life. Organizations across a variety of industries are developing approaches to understand their environmental impacts, and financial institutions are no different. In assessing their value chain, financial institutions have identified that the financial products they offer are an important component of their environmental impacts.

While there have been several working groups convened to create a methodology for measuring the impact of these “financed emissions,” there is currently not a standard approach. We assisted Bank of America (BAC) with designing a robust, consistent and credible way to measure the positive impact of a portion of their financed emissions – those related to their new \$50 billion commitment to a lower-carbon economy.

In developing the approach with BAC, we leveraged our Sustainability Impact Assessment (SIA) methodology, which is aligned with developing approaches for measuring financed emissions and incorporates life cycle assessment (LCA) methods. In building our approach, we adhered to project principles agreed upon by both the BAC and EY teams: be as transparent as possible, limit the burden on the business and be conservative when estimating environmental benefits. The approach and principles are further described throughout the paper.

We also employed an iterative process in developing our approach, using quarterly data to test calculation models, confirm proxy data and refine the data collection process. We believe that this approach will continue to evolve as we build on the success of this year’s efforts, looking forward to the next steps in our journey.

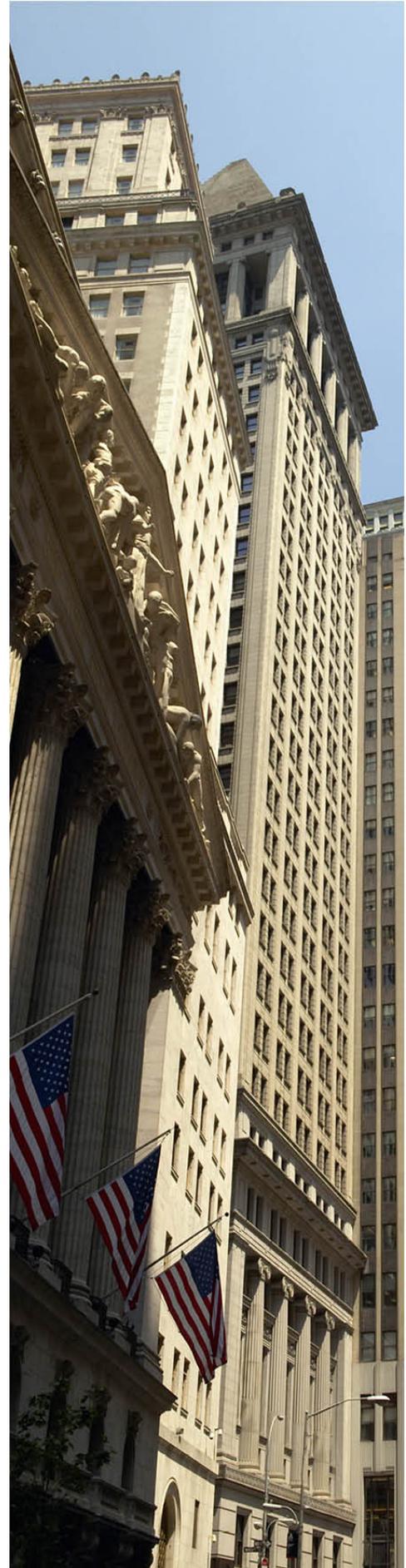


Background

In 2007, BAC was the first of the major US banks to announce an Environmental Business Initiative – a \$20 billion commitment to address climate change through the financing of a wide range of energy efficiency, renewable energy and other low-carbon projects. The 10-year commitment was completed in fewer than six years and was renewed beginning in 2013 with a new commitment of an additional \$50 billion. The cumulative \$70 billion represents the largest such commitment of any financial services company.

For the original \$20 billion commitment, progress was tracked in “economic” terms; that is, BAC collected and reported information on the total dollar amounts provided through their financing activities to address global climate change and demands on natural resources. However, BAC’s leadership was also interested in measuring the progress they were making from an environmental perspective. How could BAC more explicitly show that the financing it was undertaking contributed to lowering carbon emissions and reducing other environmental impacts, such as water usage and waste generation? Consequently, when beginning its new \$50 billion commitment, BAC decided to explore ways to develop a range of metrics that would create greater transparency across these impact areas.

BAC’s Global Environment Group oversees the company’s business and corporate environmental goals, as well as planning and execution of strategy related to existing and future goals and commitments. After researching available methods for measuring impact, BAC identified that there were no generally recognized standards, but a variety of methods available to measure the environmental benefits resulting from their \$50 billion commitment. Each of the available methods had limitations: few extended beyond GHG emissions and even fewer addressed additional potential benefits of financing “green” projects.



Solution

In order to address the interests of their stakeholders and begin to close the gap on reporting the impacts of their business activities, BAC engaged EY in a consulting role to assist with developing an approach that would be reasonable to execute, provide useful results, be transparent to their stakeholders and eventually be auditable.

BAC's objective was to develop a robust process to produce advanced metrics aimed at demonstrating the environmental benefit of transactions counted under the \$50 billion commitment. The EY Climate Change and Sustainability Services (CCaSS) team, whose members included subject-matter resources with experience in sustainability strategy, LCA, non-financial assurance and financial services organizations, decided to leverage their SIA methodology.



SIA methodology overview

The EY SIA methodology uses financial transaction information gathered internally by BAC, energy estimate models developed by EY and an environmentally extended input-output (EEIO) database to measure the environmental benefits of the included transactions. The methodology, which is described further below, leverages LCA methods and is aligned with existing GHG Protocol¹ standards, as well as emerging standards for financial institutions.

Alignment with the GHG Protocol

For the portion of the EY SIA methodology related to GHG emissions, the team aligned the methodology with the GHG Protocol's *Corporate Value Chain (Scope 3) Accounting and Reporting Standard*, which provides guidance for the calculation and reporting of emissions resulting from value chain activities.² Although our calculations are specifically focused on emissions avoided, not emissions generated, we decided to incorporate certain key concepts from the globally recognized standard in our approach. The SIA methodology also currently aligns with the GHG Protocol and UNEP FI Financial Sector Guidance supplement under development.³ EY and BAC both have representation on the Financial Sector Guidance Advisory Committee, and our committee members are contributors to this project.

The GHG Protocol Scope 3 standard provides high-level guidance for estimating GHG emissions related to investments. The emissions we are estimating are categorized in the Protocol's "Category 15 – Investments." **Table 1** describes how EY's SIA methodology aligns with this guidance.



¹ The GHG Protocol is a widely used international accounting tool for government and business leaders to understand, quantify, and manage GHG emissions, representing a decade-long partnership between the World Resources Institute and the World Business Council for Sustainable Development.

² *The GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard* (also referred to as the Scope 3 Standard) provides requirements and guidance for companies and other organizations to prepare and publicly report a GHG emissions inventory that includes indirect emissions resulting from value chain activities (i.e., Scope 3 emissions).

³ The GHG Protocol and the UNEP FI have begun the process for developing guidance to help financial intermediaries assess the emissions from their lending and investments portfolios and carbon asset risk exposure. We are conscious of the direction currently contemplated by the GHG Protocol and UNEP FI Financial Sector Guidance and have developed our methodology to align with this direction.

Table 1

Key concepts	Corporate Value Chain (Scope 3) Accounting and Reporting Standard extract	SIA methodology alignment
Proportional	Emissions from investments should be allocated to the reporting company based on the reporting company's proportional share of investment in the investee.	We allocate the estimated annual environmental benefits to BAC based on their proportional share of the total financing attributed to a specific project.
Relevant projects	Include those in GHG-intensive sectors (e.g., power generation), projects exceeding a specified emissions threshold (developed by the company or industry sector), or projects that meet other criteria developed by the company or industry sector.	We focus solely on projects that avoid traditional electrical grid consumption or produce alternative energy, thus including projects that are intended to replace GHG-intensive sectors (e.g., alternative energy power generation projects).
Total projected lifetime	Emissions are reported in the initial year the project is financed, not in subsequent years. Companies should report the assumptions used to estimate total anticipated lifetime emissions. Companies should provide appropriate context in the public report (e.g., by highlighting exceptional or nonrecurring project financing).	Since we are calculating environmental benefits (e.g., GHG emissions avoided, not emissions produced), we take a more conservative approach and calculate estimated annual environmental benefits rather than take credit for an entire project's lifetime of benefits. This helps avoid overestimation of benefits financed.

Incorporation of LCA methods

The EY SIA methodology is based on an input-output (IO) LCA approach and relies primarily on financial transaction data to support the assessment. The IO LCA approach was chosen because it is offered as an efficient, cost-effective approach that provides a reasonable basis for the assessment. Maintaining this balance of efficiency and accuracy was important to increase the possibility that other institutions might adopt and utilize a similar methodology. Other LCA approaches can be more costly or more difficult for a financial product.

For example, a process LCA, which is a common approach for assessing the impacts of a product across its entire life, relies heavily on engineering-level process data (e.g., kilograms of plastic) to produce an environmental analysis. Utilizing this approach to gather the required information from each investee for every single project financed would be nearly impossible.



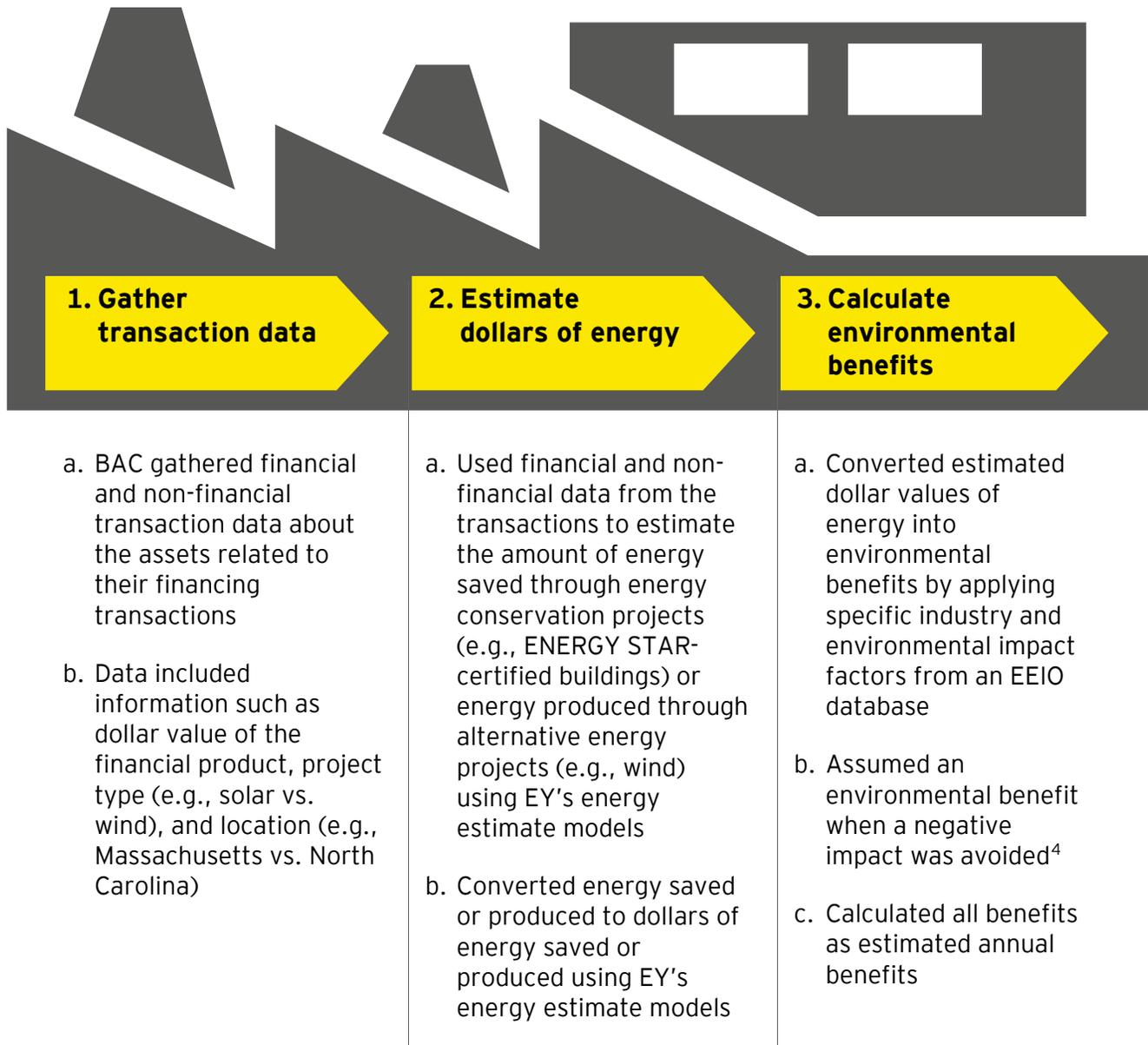
LCA measures the environmental impact of a “product” across some or all of its life cycle phases and is defined by the International Organization for Standardization (ISO) within the ISO series 14040 and 14044.

In this context, a product can take on many different forms (e.g., tangible product, process, service, company, financial instrument).

Each project that BAC finances through which energy is expected to be saved or alternative energy produced can be considered a unique product. The energy estimate models allow us to convert a variety of these products into one consistent product – energy use during a 12-month time period.

The SIA methodology covers upstream activities from where the energy is consumed.

SIA steps overview



⁴ The database allows us to calculate environmental impacts, not benefits. If a project avoids energy use in the form of electricity when compared to an established, equivalent baseline or if a project produces alternative energy (e.g., solar power), it is assumed that the traditional electrical grid consumption is forgone. Similarly, if a project avoids energy use in the form of petroleum-based fuel, it is assumed that the petroleum-based fuel production is forgone. The environmental benefits are therefore equivalent to the impacts calculated using the database for the forgone traditional electrical grid consumption or petroleum-based fuel production.

Step 1. Gather transaction data

Sources of data

BAC's \$50 billion portfolio contains financial products from multiple lines of business across the organization. The Global Environmental Group manages the data collection process and works with each line of business to gather accurate, relevant data. **Table 2** lists all lines of business that contributed to the \$50 billion commitment portfolio in 2013 and demonstrates the diversity of financial products included in the portfolio.

Financial transaction data is data associated with a project that contains a dollar value (e.g., value of a loan)

Non-financial transaction data is data associated with a project that does not contain a dollar value (e.g., location)

Table 2

Line of business	Description of \$50 billion commitment contribution
Commercial Real Estate Banking (CREB)	Provides financing for projects with LEED, ENERGY STAR and Green Globe Certification and Brownfield redevelopment
Leasing	Provides equipment and tax equity financing for energy efficiency and renewable energy projects in solar, wind, biomass and biofuel technologies for both utilities and end users
Public Finance	Delivers debt for municipal renewable energy projects
Dealer Financial Services	Loans for hybrid and electric vehicle purchases
Global Investment Banking	Provides equity and debt capital and advisory services to low-carbon clients
Global Commercial / Corporate Banking	Loans and credit extended to low-carbon companies
Commodities	Invests in transactions that finance emission reductions in the global carbon markets
Philanthropy & Community Development Financial Institutions (CDFI) Lending	Supports nonprofits focused on climate change and other environmental opportunities. Provides low-interest loans to Community Development Financial Institutions for energy efficiency retrofits in low- to moderate-income communities
Global Wealth and Investment Management (GWIM)	Environmental, Social and Governance (ESG) investment solutions for GWIM clients

Step 2. Estimate dollars of energy

Advantage of using energy estimate models

It was critical to not only gain insight into the environmental benefits achieved by the \$50 billion commitment, but to also do so efficiently. The use of energy estimate models allows BAC to obtain timely, consistent information about the progress of the \$50 billion commitment.

Financial and non-financial transaction data gathered in Step 1 are used to estimate the amount of energy saved through energy conservation projects or energy produced through alternative energy projects. Each model is designed to require less than 10 individual data inputs, relying on external reference data and proxies to fill in the gaps of difficult-to-obtain information. For example, it would be difficult for BAC to obtain the actual percent reduction in energy use for every LEED-certified building it finances. The LEED energy estimate model therefore uses proxies for the estimated percent reduction in energy use based on certification level (Certified, Silver, Gold, Platinum).

By converting financial products into energy, we're able to estimate environmental benefits enabled by a wide variety of projects in a consistent, comparable way. The conversion to a common value such as energy allows us to compare the environmental benefits achieved by a Gold LEED-certified building in California and those achieved by a new 200 megawatt onshore wind farm, a comparison that would otherwise be very difficult.

The estimated amount of energy saved or produced is calculated in terms of an annual amount of kilowatt hours (kWh). In order to move on to Step 3 of the methodology – calculation of the environmental benefits – a second conversion is required. Using the models, we convert the estimated annual amount of energy saved or produced for a project into an estimated annual dollar value of energy saved or produced by multiplying the kWh by an estimated cost/kWh.



Transparency

One of the considerations in developing this methodology was the need for transparency in the calculations, assumptions and data. The energy estimate models, associated definitions and data sources used by BAC have been well-documented and include well-respected governmental sources (e.g., US Department of Energy, US Environmental Protection Agency [EPA]) and non-governmental sources (e.g., US Green Building Council, International Energy Agency).

Energy estimates are calculated for two broad categories of projects

The projects that BAC's financial products were attributed to fell into one of two distinct, overarching categories: projects that produce alternative energy and projects that reduce the amount of energy an asset, such as a building, uses. Each category contains multiple energy estimate models built upon a similar approach and structure, as described below. These energy estimates are used in Step 3 to calculate the estimated environmental benefits.

Alternative energy projects

For alternative energy-producing projects, such as an onshore wind farm, the energy estimates calculated are the amount of energy anticipated to be produced by an asset over the course of one year and the related estimated dollar value of the energy. Energy estimates for alternative energy-producing assets are calculated using financial data, such as the value of the financial product used to support the project and non-financial data related to the project itself, such as the installed capacity in kilowatts. A project's estimated annual amount of energy produced is converted into an estimated annual dollar value of energy produced by multiplying the estimated kWh produced by an estimated cost/kWh.

During this first year, six energy estimate models were built:

- ▶ Wind
- ▶ Solar
- ▶ Hydro power
- ▶ Geothermal
- ▶ Bio power
- ▶ Nuclear

Principles for building the energy estimate models

- ▶ **Models are built to include data directly from BAC:** In the absence of certain data, reasonable proxy data is used to replace missing information.
- ▶ **The energy estimates are estimated for a 12-month time frame:** This provides consistent measurement across all energy estimate models and allows for consistent calculations of the estimated annual environmental benefits.
- ▶ **Data sources used in the models and as proxies are primarily from the US Government.**
- ▶ **Methodology and definitions of data points are designed to enable the pursuit of assurance should BAC seek assurance in the future:** EY has not performed independent assurance of these results, however, to support potential future independent assurance, we developed criteria for all projects, including, but not limited to: energy estimate model definitions, calculations, reference and proxy sources.

Energy conservation projects

For energy conservation projects, such as a new ENERGY STAR-certified building, the energy estimates calculated are the amount of energy saved from a project over the course of one year and the related estimated dollar value. Energy estimates for energy conservation projects stem from the project's ability to reduce energy demand as a result of its successful completion. Calculating energy estimates for energy conservation projects requires predicting both the non-energy efficient and energy-efficient states of the structures being built or modified. The pre-conservation energy use of the building (i.e., the average energy use of the building before the energy-saving project) is estimated first. Next, the post-conservation energy use of building is estimated (i.e., the expected energy use of the building after the energy-saving project has been completed). The difference between the pre- and post-conservation energy uses is the estimated energy saved. The estimated annual amount of energy saved for a project is converted into an estimated annual dollar value of energy saved by multiplying the estimated kWh saved by an estimated cost/kWh.

A similar approach is taken for hybrid and electric vehicle-related finance where the energy-efficient vehicle is compared to its non-energy-efficient equivalent. The difference between the two is the estimated energy saved. The estimated annual amount of energy saved for a vehicle financing is converted into an estimated annual dollar value of energy saved by multiplying the estimated fuel saved by the average cost of fuel.

During this first year, five energy estimate models were built:

- ▶ Energy conservation measures
- ▶ Hybrid vehicles
- ▶ ENERGY STAR-certified buildings
- ▶ Green Globes-certified buildings
- ▶ LEED-certified buildings and projects

Step 3. Calculate the environmental benefits

Using an IO database

Once the estimated annual dollar values of energy are calculated for an asset financed by a BAC financial product, the final step is to calculate the estimated annual environmental benefits using an EEIO database. While a variety of EEIO databases could be used to support our analysis, this year the assessment utilized the Comprehensive Environmental Data Archive (CEDA) database and applied database factors related to two sectors: the electric power generation, transmission and distribution sector and the petroleum refineries sector.

EEIO database

An EEIO database is a compilation of data sets that are aggregated into one consistent database, linking the supply chain activities of an economy with related environmental interventions. As a result, an EEIO database lists environmental impacts per dollar spent in a specific sector. Depending on the specific database, the aggregation methods and data sources may be peer-reviewed. Some well-known databases include the Economic Input-Output Life Cycle Assessment tool developed by the Green Design Institute at Carnegie Mellon University and CEDA developed by Dr. Sangwon Suh at the Bren School of Environmental Science and Management and the University of California, Santa Barbara.

These sectors were used because the former allows us to estimate environmental impacts for energy produced by the traditional electrical grid and the latter allows us to estimate the environmental impacts for petroleum-based vehicle fuel production, which is necessary only for hybrid vehicle financings. Activities driving the impact for these sectors include upstream activities from where the energy – electricity or petroleum-based vehicle fuel – is consumed.

As previously stated, the EEIO database allows us to calculate environmental impacts, not benefits. This is accomplished by applying the environmental impact factors associated with one of the two selected database sectors to the estimated annual dollar values of energy saved or produced determined in Step 2. Since database factors are being applied to dollar values that reflect energy use avoided or alternative energy produced, the resulting environmental impact value calculated instead represents an environmental benefit. An environmental benefit is assumed when a negative impact is avoided and includes impacts associated with traditional electrical grid production or petroleum-based vehicle fuel production that would have occurred had the energy use not been avoided through an energy conservation project or replaced with renewable energy.

CEDA

CEDA is a suite of EEIO databases that are designed to assist various environmental systems analyses and LCAs, including carbon footprinting, water footprinting and embodied energy analysis.

CEDA covers a comprehensive list of environmental interventions, including natural resource types (fossil fuels, water, metal ores and minerals) and various emissions to air, water and soil. CEDA quantifies the amount of natural resources used and environmental emissions of products throughout their life-cycles by connecting IO tables, which represent the entire supply-chain network of an economy, with a comprehensive list of environmental interventions.

The US version of CEDA alone contains more than 3 million data points, which were distilled from various raw data containing tens of millions of data points. Currently, CEDA covers the US, UK, and China, and all input data has gone through a consistent and rigorous quality control process.

CEDA was created by Dr. Sangwon Suh, a professor at the Bren School of Environmental Science and Management at the University of California, Santa Barbara and is used by the US EPA, international corporations and universities.

Source:

<http://cedainformation.net/>

Environmental impact categories

Input-output databases can list environmental impacts for thousands of substances, such as carbon dioxide (CO₂) or nitrous oxide (N₂O). Rather than working with a list in the thousands, the database typically characterizes the substances into more manageable impact categories, which represent the aggregation of one or more environmental impacts into a single, measurable impact. The CEDA database, for example, utilizes the Tool for the Reduction and Assessment of Chemical and other environmental Impacts (TRACI) developed by the US EPA. Using TRACI, the database is able to aggregate substances, such as carbon dioxide and nitrous oxide, into one category called global warming, which encompasses the contribution of the major GHGs toward anthropogenic climate change and can be measured in kilograms of carbon dioxide equivalents (kg CO₂e).⁵

Table 3 lists the TRACI categories and related measurements we used in our analysis of the \$50 billion commitment portfolio.

Table 3

TRACI categories	Environmental measures
Global warming	Metric tons (MT) of CO ₂ e
Water use	Thousands of gallons of water
Non-hazardous waste	Metric tons (MT) of non-hazardous waste
Hazardous waste	Metric tons (MT) of hazardous waste

⁵ Not all TRACI substances listed for inclusion in the impact categories are tracked by CEDA; however, the substances that are tracked and are noted as a part of TRACI categories are included in our analysis. The Global Warming category is not limited to only carbon dioxide and nitrous oxide.

Practical application

Case studies

Table 4 contains example results for two transactions completed by BAC in 2013 using the SIA methodology.

Table 4

2013 example case study results		
Metrics	Energy Conservation Measure (ECM)	Solar Technology
\$ Value of financial product ⁶	\$12,909,748	\$14,095,327
\$ Value of energy saved (ECM) or produced (solar technology) ^{7,8}	\$1,530,000	\$387,000
MWh saved from the energy conservation project ^{7,8}	15,000	N/A
MWh produced from alternative energy project ^{7,8}	N/A	3,900
Global warming MT CO ₂ e avoided ^{7,8}	11,000	2,900
Water use avoided (thousands of gallons) ^{7,8}	308,000	78,000
Non-hazardous waste avoided (MT) ^{7,8}	200	39
Hazardous waste avoided (MT) ^{7,8}	0.00	0.00

Project outcomes and value

The project resulted in the calculation and reporting of environmental benefits for hundreds of financial transactions, as well as the development of a more robust data collection process for \$50 billion commitment-related data. This data collection effort allowed BAC to more easily track previously disparate data, which can also be used for other purposes.

BAC's Global Environmental Group sees value in communicating this information both internally and externally. The process of collecting additional environmental benefits has brought more awareness regarding the impact of BAC's business activities, and BAC is exploring how this information could be incorporated into decision-making in the future. Additionally, BAC will continue to monitor and understand how to further use and implement this reporting methodology.

⁶ Information on 2013 transaction financings is based on data provided by BAC and summarized by EY.

⁷ Metrics are presented as estimated annual values.

⁸ Value rounded to nearest one, ten, hundred or thousand. For Hazardous Waste Avoided (MT), the metric tons avoided are greater than zero, but are shown as zero due to rounding.

Externally, this assessment provides BAC the data to demonstrate the broader impacts of its proactive financing activities. For its stakeholders, BAC will be able to support its commitment to a lower-carbon economy by reporting last year's annual assessment results in its 2013 Corporate Social Responsibility Report and other reporting.

In addition, the assessment and results provide metrics to support new environmental financial products and enable BAC to potentially recalibrate its business activity going forward to enhance its efforts in reducing Scope 3 GHG emissions or other environmental impacts.

Assumptions and limitations

The first year of pioneering any new approach includes its own set of challenges, and developing an approach to measure the environmental benefit of the \$50 billion commitment was no different. This section provides insight into some of the challenges faced in developing and implementing the approach.

Availability of data

The quality of the estimated annual environmental benefits is closely tied to the quality and completeness of the data related to each financing. Although financial transaction data had been collected since 2007 for the \$20 billion commitment, certain non-financial transaction data, such as wind speed or installed capacity in kilowatts needed for this assessment were not historically gathered by the organization.

Within the \$50 billion commitment portfolio, there is financing for a wide variety of financial products that contribute to a lower-carbon economy. While the majority of the portfolio consists of financial products or services aimed at energy conservation or supporting alternative energy production, there are some activities where the environmental benefits are more indirect. Examples of these activities include lending to businesses developing or manufacturing low-carbon products or services, the provision of capital and advisory services to help clients' climate change-related initiatives, which may include underwriting equity and debt issuances, or supporting non-profit organizations focused on addressing climate change and other environmental challenges and opportunities.

Early in the engagement, we conducted a preliminary analysis of existing \$50 billion commitment data collection processes to establish if the data required for the calculations was available. This effort included an assessment of data already being captured and interviews with data owners for lines of business contributing to the \$50 billion commitment. During this analysis, we discovered the following:

- ▶ Non-financial transaction data critical to the environmental benefit calculations was more readily available and complete for financial products attributable to projects that directly support energy conservation or produce alternative energy than for other financial products within the \$50 billion commitment portfolio.
- ▶ Reference and proxy data was more consistently available for the US.
- ▶ US projects were expected to make up the bulk of the projects directly supporting energy conservation or producing alternative energy during 2013⁹.

As a reminder:

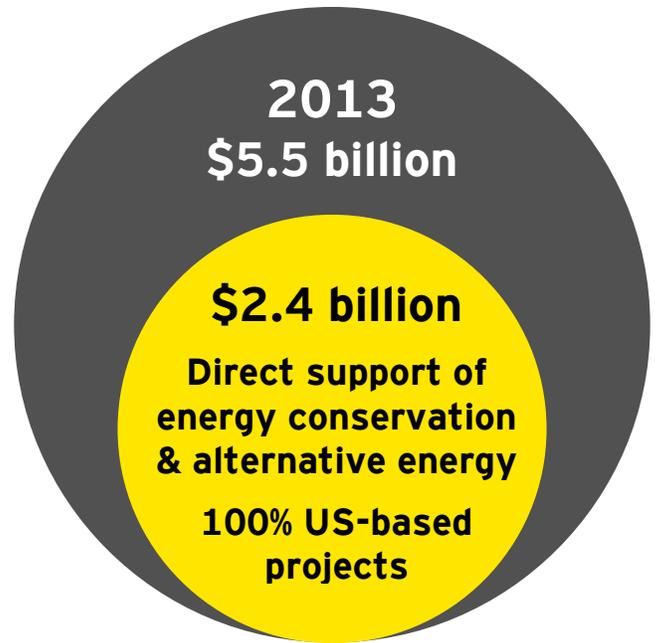
Financial transaction data is data associated with a project that contains a dollar value (e.g., value of a loan).

Non-financial transaction data is data associated with a project that does not contain a dollar value (e.g., location).

⁹ During 2013, 100% of the projects directly supporting energy conservation or alternative energy production within the \$50 billion commitment portfolio were US-based.

Based on these findings, BAC concluded that the assessment would focus on measuring the portion of its portfolio directly supporting energy conservation or producing alternative energy within the US. A description of the 2013 assessment is described in the preceding sections.

The financial projects attributed to US-based energy conservation or alternative energy projects represent approximately 44% of 2013 business counted under the \$50 billion commitment. The remaining 56% comprises business activities determined by BAC to provide indirect benefits. Examples of indirect financing include: credit that BAC extends to low-carbon companies, merger and acquisition advice provided to alternative energy equipment manufacturers and capital raised through IPOs and Green Bonds. While the dollar amount of the indirect activities is included in the \$50 billion commitment, it has not yet been determined if models to estimate the environmental benefit from either can readily be developed and deployed.



Continuing the journey

As with most sustainability journeys, our efforts so far represent steps on a much longer path. The EY/BAC team anticipates that we will build on our success with:

- ▶ Models to estimate the environmental benefit of a higher percentage of the BAC \$50 billion commitment portfolio
- ▶ Analysis that covers a wider variety of financial transactions and business activities that have both direct and indirect environmental impact
- ▶ A process that continues to reduce the burden on BAC lines of business while providing robust data for a meaningful analysis

Further development will include continuing to refine the data collection process, as well as the process for maintaining and updating data references and proxies. We will also consider the feasibility of expanding the scope to include non-US activities, equity and debt instruments, indirect investments and consumer lending.

The EY/BAC team looks forward to continuing and advancing the dialogue around transparency and improving the methodology and reporting of both financed emissions and financed environmental benefits. We also welcome input from investors, peers and other stakeholders on the methodology we have developed and its application to existing and future commitments of capital focused on addressing climate change and demands on critical natural resources. It's clear that we're all stakeholders when it comes to helping our society address these undeniable business realities.

To learn more about EY's sustainability impact assessment, please contact the following members of the Climate Change and Sustainability Services practice:



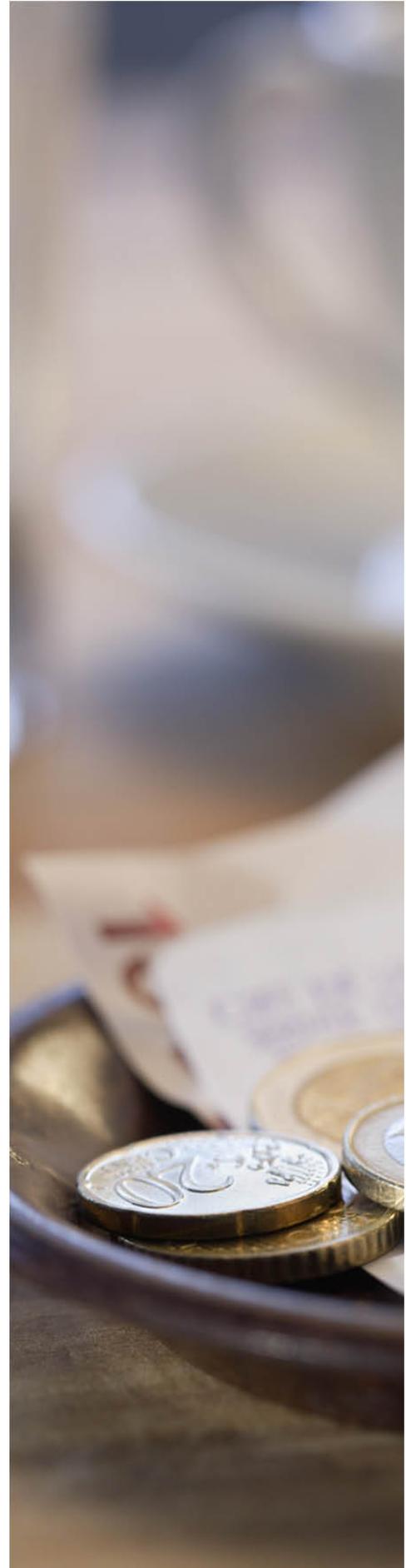
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