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Impact Investing for Climate Solutions

Investors have the capacity to move the U.S. economy toward a low-carbon path by providing capital for innovative new technologies and infrastructure. The International Energy Agency (IEA) estimates that \$1 trillion per year in investment is needed to get us on the path to renewable energy at the scale needed to respond to current energy consumption. These investments include technology to develop renewable energy, improve energy efficiency, and develop the infrastructure to utilize renewable energy. A “portfolio-wide” approach to climate finance presents opportunities that span beyond the energy sector to sustainable agriculture, adaptation to help communities respond, and water management.

The goal of this document is to provide information to faith-based and Socially Responsible Investors about “**Impact Investing for Climate Change**” and to serve as a resource and tool for discussion with appropriate leadership and your institution’s financial advisors. Every investor has a role to play in climate finance, but given the existing commitment to active ownership that SRI investors have, assessment of appropriate asset allocation in climate solutions provides an opportunity to serve as a catalyst in this evolving – and critically needed – space.

If impact investing is something your institution chooses to explore, a strategy around asset allocation for climate finance will complement the other socially responsible investing initiatives you are undertaking, including engaging in dialogue with companies and voting your proxies. This movement is similar to community investing, where investors provided loans to underserved communities that had difficulty accessing traditional financial services in order to support affordable housing, job creation for women and people of color, healthcare, or education. As with community investing, we believe there is an opportunity for faith-based and socially responsible investors to be at the forefront of climate impact investing. We believe there is an opportunity, and perhaps a responsibility, for faith-based and socially responsible investors to be at the forefront of climate impact investing, especially given the urgent need for a market shift to support climate solutions. However, as the ICCR Climate Finance Roundtable will make clear, there are strong investment opportunities with competitive financial performance available in this space.

This overview provides background and resources on how to begin conversations with your Investment Committees, Leadership Teams and Investment Professionals about investing in green technology, adaptation, energy efficiency, and other alternatives that support a transition to a low-carbon future (collectively hereinafter “climate solutions”). First, we provide context for this conversation and why action is needed now. Second, we will go further into depth in describing the challenges, opportunities, and pertinent questions to ask when considering climate-solutions investments in a number of asset classes. We then provide links and names of resources for additional information on why more investment is needed now in climate solutions as well as links to resources that give an overview of climate solutions within different asset classes.

There are two annexes to this document: The first is an illustrative chart presenting some investment opportunities by asset class; second, the Low Carbon Investment Registry Taxonomy created by the Global Investor Coalition on Climate Change. .

Your financial advisor can help you determine the appropriate level of risk for your portfolio and understand how this initiative corresponds with maximizing your long-term financial returns.

I. Context for Impact Investing for Climate Solutions

Why are we encouraging this initiative to invest in climate solutions?

If we are to make the serious progress needed to address climate change, we need a new generation of fuels to shift our sources of energy away from fossil fuels to low-carbon sources including renewable energy. Currently, renewable energy represents only a small fraction of the overall energy mix in the United States - about 13 percent of net generation in 2013 according to the U.S. Energy Information Administration, and 22% worldwide according to REN21's Renewables 2014 Global Status Report. Significant investments are needed to finance the transition to clean technology, including solar and wind technology and infrastructure to bring this energy onto the grid. The International Energy Agency (IEA) estimated that \$36 trillion is needed by 2030 – representing an investment of \$1 trillion/year. There is a lot of progress to be made in reaching that goal: internationally \$310 billion was invested in clean energy in 2014, up from \$268.1 billion in 2013.

As engaged shareholders, we have been working with companies for decades, asking them to reduce their emissions in operations and products, develop a new generation of low-carbon fuels, to increase investment in renewable energy, to stop funding climate deniers and support appropriate climate change legislation. Many companies estimate that the transition to renewable energy will be realistic in 2050, and until that time, we will depend on a mix of oil and natural gas, produced through hydraulic fracturing. This timetable is too protracted to respond to the current realities of climate change and the urgency to reduce greenhouse gas (GHG) emissions to levels that would limit warming to the 2°C agreed by the international community to mitigate the most harmful impacts of climate change. There are strong corporate interests to maintaining our current dependence on fossil fuels, and this has had ramifications in first establishing that climate change is happening and then in developing policy solutions and incentives to propel us on the transition to low carbon fuels.

Faith-based investors have a legacy of prophetic engagement that has initiated profound shifts in corporate behavior in the past 4 decades. However, we have been absent from this critical pro-active investment space. Therefore, to be part of the solution, we are encouraging this initiative for faith based investors through a collective commitment to pro-active financing of climate solutions. The Global Investor Coalition for Climate Change launched a database of low-carbon investments by institutional investors in coordination with the UN Climate Summit in September 2014, and we may want to make a commitment together to enter our investments here. More information is available here: <http://www.ceres.org/files/investor-files/lci-registry>.

How does the impact investing in climate solutions initiative fit within our role as socially responsible investors?

As shareholder advocates, we have been speaking with companies about the business case for addressing climate change for decades, and this active ownership and engagement will always be a critical part of our strategy. We work with companies to maximize their efficiencies and opportunities, as well as to address climate risk and the implications of stranded assets on long-term financial performance. In order to stay below 2°C warming, it will be impossible for fossil fuel companies to burn all of their proven fossil fuel reserves. The return on investments in exploration and accompanying infrastructure are at risk as fossil fuel reserves may never be used due to expected regulations to limit GHG emissions or place a tax on carbon. Investors wrote to 70 companies last year about the risks of stranded assets. Yet companies' responses show that they do not take this risk seriously. Companies like ExxonMobil and Shell responded with reports that say in short, while climate change exists, the world needs energy, and oil and gas are the best option to provide this energy. They continue that the transformation to renewables will require new infrastructure that will take years to develop. We will continue to engage with them to take these risks into account.

Yet, as investors committed to meaningful and urgent action on climate change, we believe we also need to propel investment in renewables in order to provide an option that will leave these fossil fuels in the ground. This will impact our asset allocations to increase our investments in the variety of solutions available. When considering the climate impacts of an institution's investment portfolio, there are two distinct, but complementary approaches that can be addressed: company engagement and investment in climate solutions. These initiatives will further the same goals through different channels, both of which are necessary in this transition. Corporate engagement by socially responsible investors across a wide range of sectors, including technology, utilities, manufacturing, retail, and others has helped mobilize billions of dollars of corporate investment into renewables and energy efficiency. In the same way, investors can directly contribute to the low-carbon transition through their portfolios, taking a portfolio-wide approach to explore opportunities.

What constitutes an investment in climate solutions or green investments?

There are no set "green criteria" that identify suitable investment opportunities. The [Low Carbon Investment Registry Taxonomy, found in Annex 2](#), provides a more complete treatment of what constitutes a climate solution. Generally, these include the different elements and infrastructure needed to transition from fossil fuels: renewable energy generation (wind, solar, marine, hydro, geothermal, biomass), biofuels, energy storage, energy smart technology or energy efficiency (including digital energy, power storage, hydrogen, fuel cells, advanced transportation and energy efficiency on both the demand and supply side), cleaner fossil fuel processes (e.g. carbon capture and storage technology), water purification and management, waste water treatment, and recycling.

There are market grade opportunities that are available in this space across the whole portfolio. Various options include investments in companies that sell the necessary tools

and technology, financing the retrofitting undertaken by municipalities, or venture capital to support innovation. There is also an emerging field of opportunities that might serve developing countries with emerging renewable technology, which might be similar to the work that has been done in community investment in the past at small and local scales. There are ways to accelerate "leapfrog technologies" to transcend the use of fossil fuels in the developing world. There are also public equities that are low carbon, which can be identified on a host of indexes have also been created to benchmark environmentally friendly stocks. For example, the Cleantech Index is composed of leading companies that derive at least 50% of their revenues or profit from clean tech products and services.

Are investments in climate solutions consistent with maximizing long term financial returns?

Investment consultants and advisors are in the best position to assess the risk profile of these kinds of investments. There is extensive research produced by MSCI and Asset Managers that demonstrates that a low-carbon or fossil free portfolio matches or outperforms the S&P500 Index, with some information available here: <http://gofossilfree.org/risk-performance>. Innovative investment vehicles like Green or Climate Bonds also provide risk-return profiles that many investors, including mainstream investors with no special concern for climate change, have found favorable. It is clear that you do not have to sacrifice performance in order to invest in solutions. Your asset manager will assess the appropriate equities or tools to help you meet your climate solutions goals.

However, there is an important factor that faith-based investors must consider when discussing our readiness to invest in climate solutions. As faith-based investors aware of the social and environmental implications of our portfolios, we believe that it is part of our fiduciary responsibility as long-term investors to consider climate change risk when assessing the risk of our investments. We consider the potential impact of climate change on vulnerable populations a risk that should be taken into account when allocating our assets. These risks are rarely found in investment analysis or a company's 10K or Annual Report. We consider the risk to our planet a risk that should be taken into account. Our investment policies can articulate these considerations to guide our investment managers in making decisions consistent with the definition of risk we feel accurately reflects our fiduciary obligations.

One resource is from the June 19, 2014 Tri-State Coalition for Responsible Investment meeting on impact investing in climate, which could be helpful as you begin to consider some of these questions.

<http://new.livestream.com/accounts/2417728/June19ClimateChangeMeeting>.

How do we assess environmental performance?

Investors want to be sure that an asset allocation to Climate Finance will have a meaningful impact in supporting the transition to a Green Economy. There is not necessarily a robust infrastructure to assess environmental performance and impact toward this transition and meaningful examination of these questions will require additional due diligence.

For example, as Annex 2 illustrates, further work is required to determine the eligibility of a number of technologies as climate solutions. In addition, specific criteria and restrictions may be necessary to qualify the investment as a climate solution. For example, bioenergy may be considered a climate solution in general, yet bioenergy feedstock that depletes old-growth forest may not be considered a low-carbon investment by many.

Given these complexities and uncertainties, a number of approaches to assessing investments for environmental criteria have started to emerge, including the Green Bond Principles and impact investing metrics like the [GIIRS Ratings](#). These metrics and approaches are still in the relatively early stages of development, yet they helping to increase transparency and lower the barriers to investing in climate solutions. The relevant metrics and criteria to consider will vary depending on the type of climate solution (i.e., energy, transportation, etc.) as well as the investment asset class.

II. Overview Of Climate Solutions Investment Across Asset Classes

Many resources are available to identify appropriate investments in different asset classes that are low-carbon or support other solutions. There are specific financial services companies that are part of the "Green Business Network" that have an expertise in these opportunities. Below is a brief overview of the challenges, opportunities, and questions to consider when contemplating investing for climate solutions in some of the main asset classes.

Fixed Income:

Fixed income has emerged as an important source of climate-solutions finance, with strong growth in particular in the "Green Bond" market. Socially Responsible Investors have long screened corporate bonds in a similar way to public equities, with negative and positive screens available. Thus, one option for climate-solutions oriented fixed income investment is "avoiding bonds in carbon-intensive companies, for instance, in favor of bonds in companies that offer energy efficiency solutions, generate renewable energy or are actively reducing their carbon footprints"

(http://www.ussif.org/files/Publications/Institutional_Climate.pdf). Some managers, such as Breckenridge Capital Management, even engage with bond issuers to improve incorporation of ESG considerations.

The Green Bond market has opened up a new avenue for pursuing climate solutions bonds, with multinational, municipal, state, and corporate green bonds all being issued. These initiatives may include financing for infrastructure projects: brownfield redevelopment, energy efficient housing, green jobs, environmentally-friendly businesses, water conservation, and the use of recycled materials.

Green Bonds and Environmental Performance

Despite the tremendous growth of the Green Bond Market and the wide range of offerings, in terms of yield, duration, and risk, the label of Green Bond should perhaps be seen more as a necessary, but not sufficient, requirement for climate solutions fixed-income investment. By focusing on disclosure and transparency, the Green Bond Principles do not by themselves necessitate a particular environmental outcome. Furthermore, Green Bonds may finance activities that, while perhaps laudatory and environmentally positive, would not necessarily be considered climate solutions as laid out in Annex 2. It is therefore advisable to ask managers and consultants to specifically consider Green Bonds in renewable energy, energy efficiency, low-carbon transportation, and other climate solutions described in Annex 2. Additionally, managers and consultants should investigate the "Use of Proceeds" for any Green Bonds to ensure (as much as possible) that the bond will indeed finance climate solutions.

There are creative, investment grade opportunities in this space that are evolving, many of which have an intermediate duration. For example, SolarCity used a bond issuance to finance the installation of rooftop solar systems for customers, and more recently the company began issuing Solar Bonds to both retail and institutional investors. This area is also getting more developed, and systems are emerging to provide guidance and clarity. To that end, the [Green Bond Principles](#) were developed in January 2014 by a group of banks with guidance from issuers, investors and environmental groups and serve as voluntary guidelines on recommended process for the development and issuance of Green Bonds. They encourage transparency, disclosure and integrity in the development of the Green Bond market.

As the Green Bond market matures, it has the potential to offer tremendous climate benefits as well as dependable returns to investors. These financial instruments are particularly well-suited to funding specific climate solutions, especially where new infrastructure and large-scale transformations are needed. This is crucial because other investment vehicles like equities, while a necessary part of the solution, cannot necessarily finance such endeavors. With favorable investment profiles suitable to institutional investors and strong climate solutions potential, Green Bonds will likely play an important role in financing the low-carbon economy of the future.

Equities:

Both public and private equities provide opportunities for investing in climate solutions.

Private Equity/Venture Capital:

While many of the low-carbon and clean-tech solutions we need already exist, innovation will be critical for the clean energy transition. And although innovation comes from many sources, including large, established companies, it is likely that venture and private capital will be key to identifying and scaling the best low-carbon solutions. Energy storage, for example, is still in very early stages, and truly visionary companies will be needed to make this crucial technology cost-effective and widespread. In terms of environmental outcomes, private equity and venture capital therefore have the potential to be most impactful. However, as with mainstream private equity and venture capital, each investor will need to decide whether or not the elevated level of risk such investments entail is acceptable.

Public Equities:

Many listed public equities are available in the climate solutions space, including companies involved in renewable energy, resource efficiency, and waste control. In addition, there are a variety of Mutual Funds and Exchange Traded Funds that invest in this space, as described below.

Mutual Funds and Exchange Traded Funds:

Mutual Funds, in which actively managed portfolios provide an opportunity for investment managers to implement their best ideas and change the portfolio as

Mutual Fund Approaches to Climate Solutions

There are a variety of mutual fund strategies for addressing climate risk and investing in climate solutions. The main approaches include low/zero carbon funds, which employ negative screening to avoid companies with large reserves of fossil fuels, positive screens for clean-tech equities, or some combination. Priorities to consider when deciding which approach to take include whether or not divestment is a concern, the extent to which carbon reserves represent a financial risk, and factors around how the fund handles proxy voting and engagement.

necessary, have been a focus of many investors engaged in this space. This [chart](#) of mutual funds is a good place to start. It assesses the environmental, social, and governance performance and indicates those funds with a positive performance on climate and clean tech, available here: <http://charts.ussif.org/mfpc/>.

Exchange-traded funds (ETFs) provide another way to finance climate solutions. Unlike mutual funds, ETFs are passively managed investments that often track benchmark indexes. In the green space, there are ETFs that track indexes related to producing green and renewable energy, the transition from old to new technologies, nuclear power, technological innovation and more. See Annex 1 for more specific information on ETFs and climate solutions.

Shifting investments from non-climate related ETFs or Mutual Funds to those mentioned above may send financial signals supporting the low-carbon transition; however, such investments represent relatively indirect ways of supporting climate solutions. While this may reduce the risk of such investments, it also potentially limits the climate outcomes. That said, green ETFs, when combined with other climate solutions investments, can materially support new low-carbon projects and send positive signals through the capital markets in support of climate solutions. In addition, they offer the opportunity to align investments with your institution's values, through both positive and negative screening.

Real Estate:

This is an emerging space of investment. LEED and other standards have been developed to provide benchmarks and metrics. Some opportunities include building retrofits, renovations, and construction of new buildings, all of which offer opportunities for cost and energy savings. Sustainability in real estate is not simply an environmental concern, but a practical business opportunity. See: http://www.worldgbc.org/files/1513/6608/0674/Business_Case_For_Green_Building_Report_WEB_2013-04-11.pdf. This resource includes a number of case studies of investments: <http://www.ceres.org/resources/reports/energy-efficiency-and-real-estate-opportunities-2009>.

As in many categories, this work involves both investing with Real Estate Investment Trusts (REITs) and other instruments that offer sustainable property management, which present an opportunity to engage with asset managers on issues such as energy efficiency.

In addition to property, there are opportunities to consider in sustainable land use, including timber and ranchland management and nature conservation. Sustainable Land Use is a critical part of solving the climate crisis, particularly if an investor is taking a "whole portfolio approach". There are also opportunities to leverage shareholder engagement with companies on related issues of sustainable palm oil sourcing, sustainable agriculture, forestry, and sustainable commodities sourcing more generally.

Cash and Cash Equivalents:

Investing cash and cash equivalents in climate solutions is still a nascent activity and the space is relatively under-developed. Despite this, opportunities do exist. As argued in a US SIF report, "Banks and financial institutions can be part of the climate change

Engaging Advisors on the Environmental Performance of Real Estate Investments: Questions to Consider

- Are any buildings under management LEED certified?
- How do managers take energy efficiency into consideration?
- Particular areas to consider are lighting, insulation, appliances, and building materials.
- Is on-site renewable energy considered?

solution—by financing transit-oriented development and clean energy alternatives, for example—or part of the problem" (http://www.ussif.org/files/Publications/Institutional_Climate.pdf).

The most viable options in this asset class are "sustainability" or "green" banks, which include sustainability in their mission statement, and credit unions and community development financial institutions that consider sustainability. As US SIF explains, "These banks and credit unions have a commitment to financing small businesses, non-profits, commercial real estate and affordable housing, which may include loans for energy efficiency retrofits, in low-and middle- income communities." For faith-based and socially responsible investors engaged in community investing, this will likely feel familiar.

Some sustainability banks are now beginning to offer savings products, such as certificates of deposit, that directly support clean energy and energy efficiency projects. Although the climate solutions that can be financed by such instruments are limited mainly to building efficiency and renewable energy, they are a perfect example of how investing for climate solutions can involve traditional asset classes and be implemented with relative ease, where products exist.

Ultimately, products like Green CDs will become more common and accessible once demand increases. Although there is a slight chicken-and-egg dilemma at play, we encourage investors to play a catalytic role, spurring demand in order to make such instruments more widespread. This may be how socially responsible investors can have the largest impact--by popularizing such investment products and making them commonplace among mainstream investors.

III. Further Resources To Understand Investments in Climate Solutions

If you are interested in learning more, below are analytical reports on the importance of investing in green energy and climate risk mitigation:

Reports

- **Ceres Clean Trillion Report**, This report by Ceres, an advocacy group that brings together investors, companies and public interest groups for sustainable business practices and solutions, makes the case for increasing commitment to climate change solutions and provides recommendations for investors interested in investing in clean energy opportunities that offer competitive risk-adjusted returns across asset classes. At: <http://www.ceres.org/resources/reports/investing-in-the-clean-trillion-closing-the-clean-energy-investment-gap/view>
- **Resilient Portfolios and Fossil Free Pensions**, This paper provides a set of fossil-free investing choices that can deliver solid returns, as well as help address the climate crisis, advance clean energy development, and increase the health and wellness of communities. At: <http://gofossilfree.org/files/2013/05/Resilient-Portfolios-and-Fossil-Free-Pensions.pdf>
- **Investing to Curb Climate Change**, This Guide produced by USSIF highlights strategies available for institutional investors to manage climate change risks in their investment portfolios and help generate solutions. The guide highlights strategies that investors can utilize across all asset classes, including private equity. At:

http://www.calvert.com/nrc/literature/documents/SRI_Climate_GuideInstitutional.pdf

- **OECD resource page on investing for Green Growth**, This website provides white papers, case studies, and reports on investing in green technology. Available at: <http://www.oecd.org/investment/green.htm>.
- **The Greening of the Corporate Bond Market**, This report by S&P Ratings Services analyzes several industries involved in the green bonds market, pointing to a number of new 'mega deals' to highlight how the sector is growing. : http://twitdoc.com/upload/lisa_nugent/green-bond.pdf
- **Financing Climate Change: Carbon Risk in the Banking Sector**, this report by Boston Common Asset Management encourages banks to take three action steps: Recalibrate risk management to integrate climate change, Drive financial innovation, Develop a long-term climate strategy. <http://www.bostoncommonasset.com/news/ClimateChangePR.php>.

Organizations Working On Climate Finance and Policy:

- **Finance for Resilience** ("FiRe") identifies the best potential climate, clean energy, green growth or sustainability ("CEGGS") financing solutions and help them get to scale. FiRe aims to help the international community reach a tipping point in climate and clean energy investment by ensuring that all key stakeholders are focused on a manageable number of scalable, actionable opportunities, within a dynamic, action-oriented process: financeforresilience.com
- **Clean Energy Ministerial** (CEM) is a global forum to share best practices and promote policies and programs that encourage and facilitate the transition to a global clean energy economy. CEM initiatives help reduce emissions, improve energy security, provide energy access, and sustain economic growth: cleanenergyministerial.org
- **Global Green Growth Institute** works with partners in the public and private sector in developing and emerging countries around the world to put green growth at the heart of economic planning: ggi.org
- **Global Investor Coalition on Climate Change** provides a global platform for dialogue between and amongst investors and governments on international policy and investment practice related to climate change: globalinvestorcoalition.org
- **International Renewable Energy Agency** seeks to make an impact in the world of renewable energy by maintaining a clear and independent position, providing a range of reliable and well-understood services that complement those already offered by the renewable energy community and gather existing, but scattered, activities around a central hub: www.irena.org

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