



TIAA-CREF Asset Management

# TIAA-CREF Global Natural Resources and Infrastructure Investments

An integrated approach to natural resource and infrastructure investing



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On-the-ground  
research informs our  
forward-thinking  
approach.

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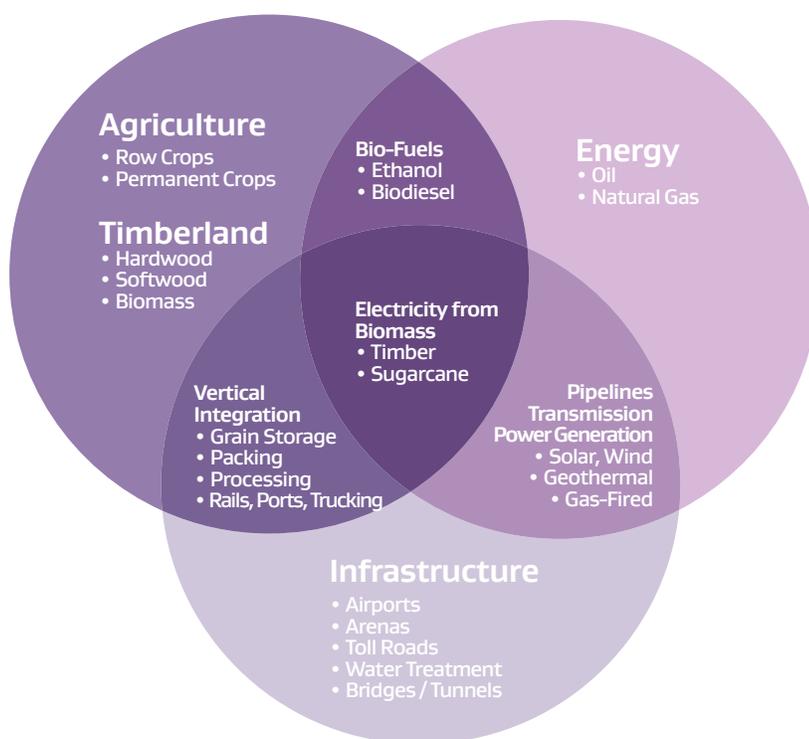
# Cultivating compelling opportunities in natural resources and infrastructure.

At TIAA-CREF, forward thinking is woven into our investment approach. As part of this philosophy, we are constantly seeking innovative and sustainable areas to drive growth. TIAA-CREF's Global Natural Resources and Infrastructure Investment capabilities are an example of this philosophy in action.

Starting with the view that the natural resources and infrastructure sectors are attractive investment areas due to positive supply and demand characteristics, TIAA-CREF developed integrated strategies across agriculture, agricultural operations, timber, energy and infrastructure to capitalize on these opportunities. With these real assets in finite supply, and demographic shifts such as population growth and urbanization on the rise, demand and therefore value should increase.

Dedicated, on-the-ground teams with extensive investment experience structure and evaluate assets. By following a long-term buy and hold strategy with focused asset optimization during the investment lifecycle, the team seeks to identify investments and build portfolios that will provide current income as well as capital appreciation.

## Opportunities in natural resources and infrastructure assets



## Capturing the value of real assets

The end products of natural resource and infrastructure investments are necessities that provide essential services and basic needs for society. Agricultural products feed people, are used in clothes and can be converted into energy. Timberland produces building material for housing, paper, packaging, sanitation products, and can also be converted into energy. Energy, oil and gas provide heat and fuel. Infrastructure projects help societies function and provide the underpinning for development and growth.

These asset classes are attractive to investors because they can provide portfolio diversification due to their low correlation to other traditional asset classes and protection

from inflation, along with the potential for competitive returns and capital appreciation. Further, these are typically stable investments because the physical assets have underlying asset value.

The TIAA-CREF Global Natural Resources and Infrastructure Investment Team recognizes the synergies that exist between these asset classes. For example, infrastructure investments can facilitate transportation for our timber assets. Energy and agriculture assets combine in the production of biofuels like ethanol and biodiesel. By embracing these interconnections, TIAA-CREF seeks to effectively enhance growth potential over the long term.



## Growing long-term results

TIAA's Global Agriculture Investment program seeks to capitalize on positive macroeconomic fundamentals by investing in farmland and related agricultural assets on a global basis. The portfolio, valued at approximately \$3.0 billion as of September 30, 2012, includes 600,000 gross acres under management across more than 400 properties in North America, Australia, South America and Europe.

The strategy uses a top-down approach that includes portfolio strategy and construction and oversight of external managers, as well as a bottom-up approach that involves close communication with asset managers to identify, source, underwrite, acquire and manage individual assets in the strategy's selected geographic markets.

The investments held by the agriculture portfolio are focused directly on farmland. TIAA's Global Agriculture team believes farmland offers a more attractive risk/reward exposure to the key factor in the production of food and fiber as compared to listed securities or commodity futures. Investments are diversified across a balance of row crops, permanent crops, geography, and operating strategy. The agriculture operating asset strategy seeks to further capitalize on positive trends in the agriculture space by investing in agricultural operating assets on a global basis. These assets serve a vital economic purpose and work in conjunction with our farmland portfolio since virtually all crops need to be processed, stored and transported.

## Harvesting opportunities in emerging markets

As the world embraces a lower carbon footprint and the demand for ethanol increases, Brazil has become an important part of TIAA's Global Agriculture strategy. Brazil's rich farmland makes it the largest sugarcane grower and the leading sugar exporter in the world.

Sugarcane is an important crop in Brazil as it can be used to produce food (sugar), fuel (ethanol), and electricity (biomass co-generation). Because of Brazil's ability to produce sugarcane at a low cost, Brazilian sugar-based ethanol is the most inexpensively produced ethanol in the world.

By investing in sugarcane farmland in Brazil, TIAA-CREF is helping to meet the global demand for food and alternative energy as well as local electricity needs in partnership with local farmers and operators.

## Sustainable timberland returns

TIAA's Global Timber investment strategy focuses on acquiring, developing and managing timber assets located in target markets across developed and emerging economies.

The investment strategy is focused on tree growth and tree improvement technology through deployment of better plant material and integrated investment and property management to serve attractive, growing conventional timber end-markets and emerging bioenergy demand in select markets to further add value to the portfolio.

These investment efforts have built a globally diversified portfolio of sustainably managed timber investments that can be held over the long term. The portfolio, valued at \$1.5 billion as of September 30, 2012, has exposure in 22 states in the United States and 8 other countries.

TIAA's timber investments are managed according to third-party certification programs such as the Forest Stewardship Council (FSC) or Programme for the Endorsement of Forest Certification (PEFC), which call for high social and environmental standards.





## The power of energy development

TIAA's Global Energy strategy seeks to capture the expected long-term growth in the demand for essential energy-related assets and commodities through direct ownership in oil and natural gas reserves as well as opportunities in alternative energy sources.

The portfolio of over \$1.6 billion in assets takes a long-term approach to investing to reduce the impact of short-term commodity price movements, while the direct ownership allows for the short-term option to reduce production from reserves in periods of low commodity prices and the ability to step up production when prices are favorable.

To evaluate potential investments and new technologies in energy, the team consults with in-house economists, geologists and engineers and thoroughly researches projects that require significant amounts of capital expenditure or that contain operating or construction risk.

Assets in the portfolio are used in the upstream, midstream and downstream production, transportation, distribution and storage of oil, natural gas, coal and electricity. To ensure stability, the geographic area of investment is limited to countries that are members of the Convention on the Organisation for Economic Co-operation and Development.

## Investments in sustainable energy operations

As the need for energy increases worldwide, so does the market for oil, coal, natural gas and alternative energy sources. TIAA-CREF is an active investor in oil and natural gas, recognizing that natural gas is one of the main sources of clean energy and recently, the fuel of choice for building new power plants. As the United States and the rest of the world continue to move toward more alternative energy projects, natural gas will be the bridge fuel used to advance toward a renewable energy solution.

In an effort to increase capital and advance sustainability and environmental initiatives, TIAA's Global Energy strategy focuses on opportunities that expand on energy-efficient operations and drilling processes. These practices help preserve the valuable resources that will continue to power the world for generations to come, while also meeting economic goals and creating value for investors.



TIAA-CREF's Global Natural Resources and Infrastructure investments are designed around meeting the needs of future economic and population growth.

## Infrastructure built to meet global demands

The global need for investment in building and repairing economic and social infrastructure has been stimulated by demand for services to meet economic and population growth, stretched state and municipal budgets and the need to address growing congestion or to repair aging assets. Infrastructure assets have distinctive characteristics such as inelastic demand, high barriers to entry, inflation-linked cash flow and a high degree of regulation. TIAA's Global Infrastructure strategy focuses on investing in the wide variety of investment areas that comprise the infrastructure sector, including regulated energy infrastructure, transportation, water services, communication systems and social services. The portfolio, which currently has over \$1.5 billion in high-yield debt, convertible debt and equity, seeks to provide contractually stable returns that should move in line with inflation.

## Benefit from innovative opportunities in natural resources and infrastructure

Partner with the diverse, global assets managed by a dedicated and experienced team with a deep understanding of the industry.

**To learn more about Global Natural Resources and Infrastructure, visit [www.tiaa-cref.org/assetmanagement](http://www.tiaa-cref.org/assetmanagement) or call your relationship manager.**



## Experienced leaders in Global Natural Resources and Infrastructure

TIAA's dedicated Global Natural Resources and Infrastructure Team has the specific knowledge set and depth of expertise to manage each asset class. The team's investment professionals are located on the ground in target markets to ensure growth and oversee daily operations.

**Heather Davis**, Senior Managing Director, leads the Global Private Markets Team of over 45 investment professionals responsible for TIAA's nonpublic investments in natural resources, energy, infrastructure, private placements, private equity and high yield corporate debt.

**Jose Minaya**, Managing Director, is Head of the Global Natural Resources and Infrastructure Team, a group of over 20 dedicated professionals that includes:

**Lisa Ferraro**, Managing Director, Portfolio Management, Energy

**Marietta Moshivilli**, Managing Director, Portfolio Management, Infrastructure

**John Goodreds**, Senior Director, Portfolio Management, Agriculture Operating Strategies

**Sandy LaBaugh**, Senior Director, Portfolio Management, Timber

**Justin "Biff" Ourso**, Director, Portfolio Management, Agriculture

## Majority-owned affiliates

### **GreenWood Resources, Inc.**

GreenWood Resources, Inc. (GWR) is one of the nation's leading timberland investment management organizations. Founded in 1998, GWR is known for being a vertically integrated investment management company executing on a global platform, focused on creating better risk-adjusted timberland returns for investors. With more than 80 employees throughout North America, South America, Central Europe and Asia, GWR strengthens the size, geographic diversification and scalability of TIAA-CREF's natural resources platform. TIAA-CREF acquired a majority stake in GWR in 2012.

### **Westchester Group, Inc.**

Established in 1986, the Westchester Group Inc. (Westchester) is a leading agricultural asset manager in the United States and Australia. With over 30 employees located in target markets, Westchester provides a complete range of agricultural real estate and management services, specializing in the acquisition, management and disposition of agricultural investments. Westchester began managing agricultural investments for TIAA in 2007, and in October 2010, TIAA-CREF acquired a majority interest in Westchester Group to enhance TIAA's agricultural investment platform and extend its leadership in agricultural investing.

### **Radar Propriedades Agrícolas SA**

Radar was established as a joint venture by TIAA and Cosan in August 2008, with the purpose of developing opportunities in the Brazilian agricultural industry by identifying and acquiring agricultural properties with strong investment potential. Radar uses a proprietary agricultural pricing model and state-of-the-art land analysis technology to achieve a higher degree of precision in the selection of the most productive agricultural land. Radar currently employs approximately 20 professionals in its São Paulo office, providing TIAA-CREF with on-the-ground information and access to the Brazilian market.



Financial Services

**Investments in natural resources and infrastructure investments may be subject to illiquidity and higher expenses than traditional investment vehicles. Commodity-related investments may be subject to substantial volatility. Foreign investments are subject to political risks and currency volatility. Real estate-related investments may be subject to fluctuations in property values, higher expenses or lower income than expected, and potential environmental problems and liability. Historic correlations may not persist into the future, and past performance is no guarantee of future results.**

TIAA-CREF Asset Management provides investment advice and portfolio management services to the TIAA-CREF group of companies through the following entities: Teachers Advisors, Inc., TIAA-CREF Investment Management, LLC, TIAA-CREF Alternatives Advisors, LLC, and Teachers Insurance and Annuity Association. Teachers Advisors, Inc., TIAA-CREF Investment Management, LLC, and TIAA-CREF Alternatives Advisors, LLC are registered investment advisors and wholly owned subsidiaries of Teachers Insurance and Annuity Association (TIAA).

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