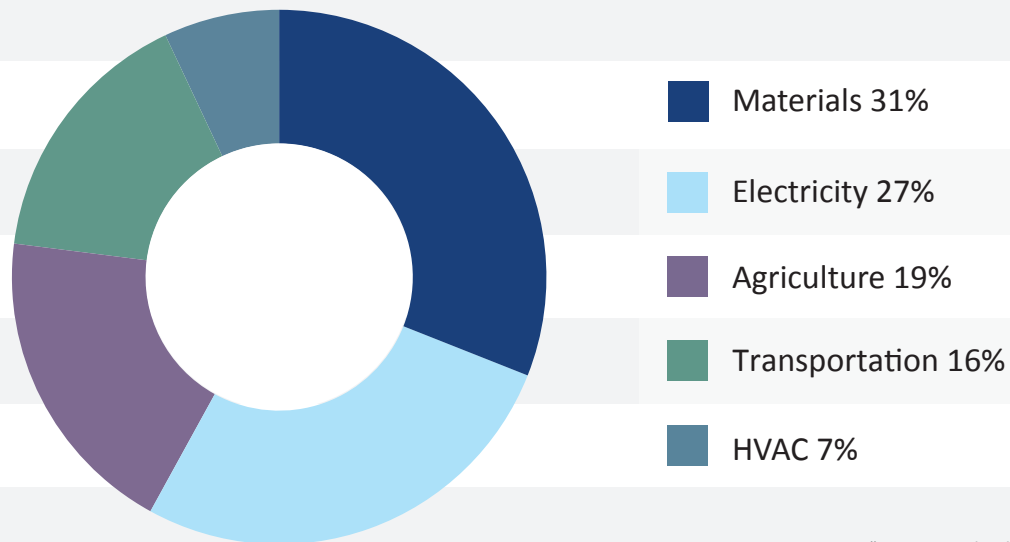




# NET ZERO EMISSIONS: GLA'S CLIMATE OPPORTUNITIES PORTFOLIO DELIVERS A NET ZERO SOLUTION FOR CLIENTS

We believe climate change and our collective response is a critical investment theme. If we are to get to net zero CO<sub>2</sub>e emissions to avoid the risks which come with climate change, we'll need the global equivalent of NASA's program to land mankind on the moon. Moving to electric cars, or replacing coal power plants with solar and wind power is not enough. Electricity, Materials and Manufacturing, Transportation, Agriculture, and HVAC systems will need to be completely revamped. Innovation is critical to achieving the goal, and where there's disruption, there's opportunity. This opportunity is attracting many of the world best scientists – and best investors.

## CO<sub>2</sub>e CONTRIBUTIONS ACROSS ECONOMIC SECTORS



Source: "How to Avoid a Climate Disaster", Bill Gates



Rather than a niche portfolio narrowly focused on fossil fuel divestment, renewable energy, or electric vehicles, we offer a diversified portfolio, appropriately benchmarked to the S&P 500 Index without increasing tracking error.

# COMPREHENSIVE CO<sub>2</sub>e REDUCTION

Divestment has been an important signaling mechanism for investors, letting the oil majors and coal-fired electric producers know business-as-usual has an expiration date.

Divestment, however, is insufficient for addressing a diverse problem like CO<sub>2</sub>e emissions. It does little to directly spur change by heavy emitters in other industries.

It also leaves little room for targeted companies to contribute solutions which leverage their expertise, assets, and workforce.

*We believe divestment isn't enough -  
the focus is too narrow for the diverse industries driving climate change.*

*We look to reduce emissions across all sectors, not just energy and utilities.*

**There's no question that Energy and Utility companies will play a key role in addressing climate change solutions.**

## ENERGY COMPANIES

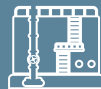
*Engineering expertise, distribution systems, skilled labor*



Carbon Dioxide Removal (CDR)



Geothermal



Pressurized underground storage



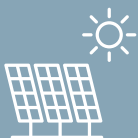
Pipelines, fleet for carrying CO<sub>2</sub>e clean synthetic fuels (including hydrogen)



Retail service stations with great real estate for electric charging

## UTILITY COMPANIES

*Deploy significant assets to long term solutions, offer skilled labor*



Solar PV at scale



Wind (onshore and offshore)



High voltage transmission



Battery storage technology



Load optimization

In the future, we can envision investing in the Energy and Utility companies which are helping spur significant innovation.



# INVESTORS NEED TO RECOGNIZE THAT LOW CO<sub>2</sub>e PORTFOLIOS CAN BE "GAMED"

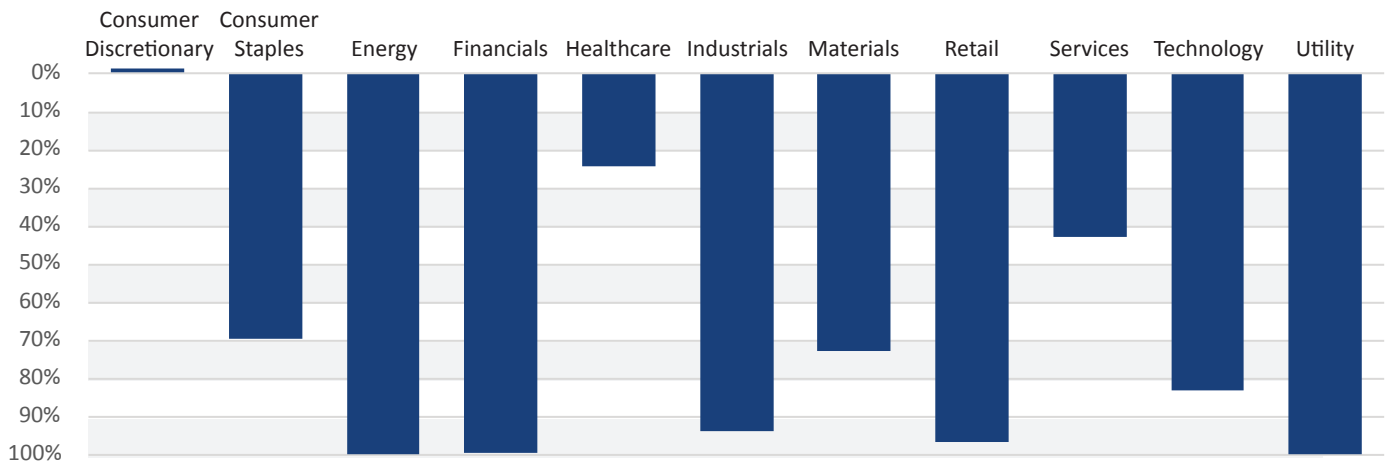
*The GLA solution aims to more comprehensively incorporate emissions reduction.*

1

**For example, simply eliminating Energy and Utility companies (divestment) reduces portfolio emissions by about 50%.**

- However, this ignores other significant sources of CO<sub>2</sub>e emissions
- The GLA solution reduces emissions across all sectors, not just the Energy and Utilities sectors

## CO<sub>2</sub>e REDUCTION BY SECTOR



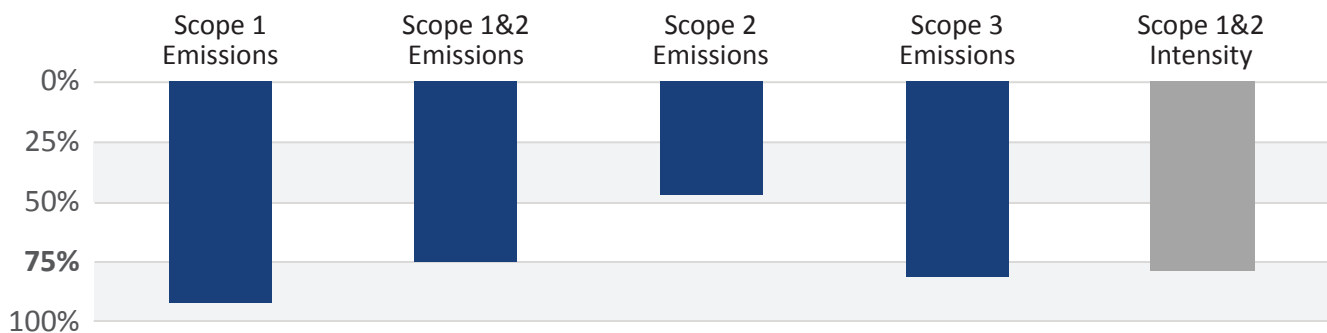
Sources: MSCI and GLA Disciplined Equity proprietary research. Data as of 6/30/2021.

2

**Tilting the portfolio toward smaller companies also can lower the CO<sub>2</sub>e emissions.**

- These smaller companies will generate less emissions simply due to the smaller scale of their business
- The GLA solution is a large cap portfolio that avoids a small-cap bias, yet still reduces CO<sub>2</sub>e intensity (emissions adjusted for revenues) by at least 75%

## % CO<sub>2</sub>e REDUCTION



Sources: MSCI and GLA Disciplined Equity proprietary research. Data as of 6/30/2021.

*Scope 1 emissions are direct greenhouse (GHG) emissions that occur from sources that are controlled or owned by an organization. Scope 2 emissions are indirect GHG emissions associated with the purchase of electricity, steam, heat, or cooling. Scope 3 emissions are the result of activities from assets not owned or controlled by the reporting organization, but that the organization indirectly impacts in its value chain.*

In the future, we anticipate companies across the S&P 500 becoming more efficient and reducing CO<sub>2</sub>e intensity, and a small handful of companies have announced their intent to become net negative emitters in the future (MSFT, for example).



# INNOVATION/SOLUTIONS

*Innovation at scale is necessary to achieve CO<sub>2</sub>e reduction, let alone Net Zero by 2050.*

We look for opportunities to invest in companies with more robust green patent portfolios (patents held and referenced).

We look for opportunities to invest in companies working on a diverse set of solutions:



Renewable Energy



Energy Efficiency



Green Buildings



Sustainable Water



Sustainable Agriculture



Pollution Prevention

## 5 TYPES OF RENEWABLE ENERGY

**Solar energy** - Solar energy comes from the sun, which supplies our entire planet with the energy we need to survive. Using solar panels, we can harvest energy directly from sunlight and convert it to electricity.

**Wind power** - We can capture the power of wind using massive turbines, which generate electricity when they spin.

**Hydropower** - We can produce renewable energy from moving water just like we can from moving air. Energy is generated when moving water runs through a turbine, spinning it to produce electricity.

**Geothermal energy** - Earth has a massive energy source contained within it. Heat trapped when our planet formed, combined with heat generated from radioactive decay in rocks deep beneath the crust, results in a massive amount of geothermal heat energy. Sometimes that heat escapes in large amounts all at once, which we see as volcanic eruptions on the surface.

**Biomass** - One last example of renewable energy is biomass. Biomass energy refers to any energy produced from recently living organic matter like plants or animals. Biomass is a renewable resource because plants can be regrown relatively quickly, and they grow using renewable energy from the sun. Fuels like ethanol and biodiesel (both used for cars and trucks) also come from biomass.



In the future, we anticipate a plethora of additional opportunities such as:

Carbon Capture/Storage

Green/Blue Hydrogen

Clean Steel

Clean Aluminum

Clean Concrete

Clean Chemicals

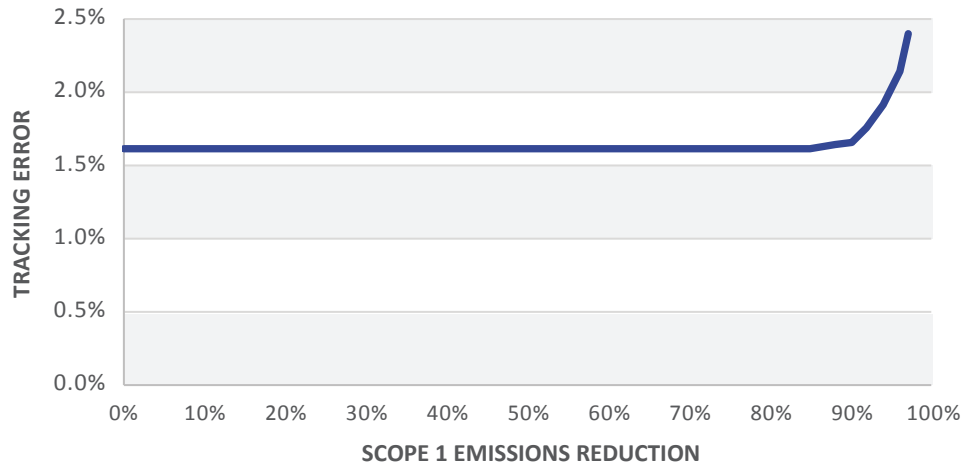
# EMISSIONS

It's possible to drive CO<sub>2</sub>e reduction of 85-90% without substantially impacting tracking error.

Reducing portfolio emissions by more than 90% results in a sharp increase in tracking error.

The remaining 10% of portfolio emissions are better reduced by carbon offsets:

## TRACKING ERROR VS. EMISSIONS REDUCTION



Sources: MSCI and GLA Disciplined Equity proprietary research. Data as of 6/30/2021.

Each \$1m invested in the S&P 500 Index owns about 66 tons of CO<sub>2</sub>e emissions

Each \$1m invested in the GLA portfolio owns only 6.6 tons of CO<sub>2</sub>e emissions

6.6 tons of carbon offsets per million dollars results in a Net Zero footprint for clients

We need carbon offsets in portfolios to get to net zero...  
but not all offsets are created equal.

### Purchased offsets should:

|  |  |
|--|--|
| <b>BE PERMANENT</b>                          | Trees for example, are not permanent – they will be felled at some point   |
| <b>HAVE ADDITIONALITY</b>                    | Should be for projects which would not have otherwise been built   |
| <b>BE TRACEABLE TO AVOID DOUBLE-COUNTING</b> | Blockchain can help address double counting by allowing for a non-fungible public ledger of these recorded offsets |
| <b>CREDITS MUST BE RETIRED</b>               | In order to truly net out the emissions offset, the credit cannot be resold  |



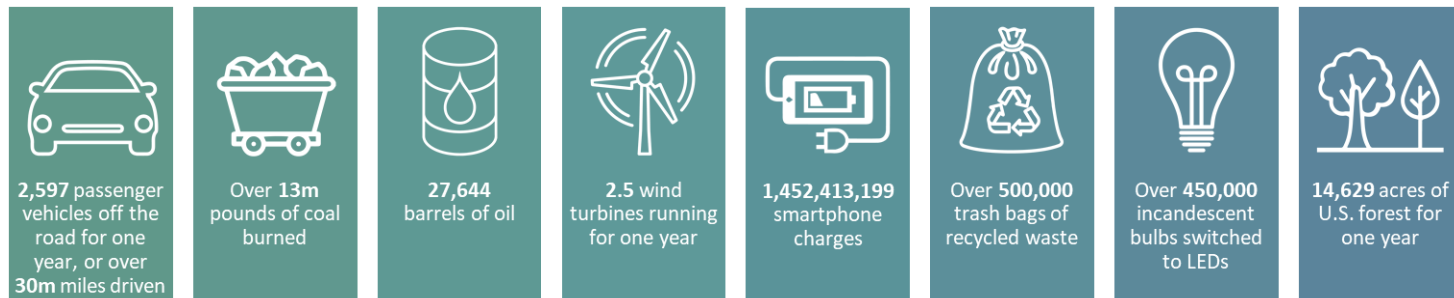
Financial Advisors please contact us at [sma@greatlakesadvisors.com](mailto:sma@greatlakesadvisors.com)  
Institutional Investors please contact us at [cr@greatlakesadvisors.com](mailto:cr@greatlakesadvisors.com)

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# EMISSIONS EQUIVALANCY REDUCTION

From an emissions equivalency perspective, **we plan to offset all emissions for clients since inception, and keep it rolling going forward.** Versus having client money in an S&P 500 Index fund during this time, we'll have reduced Scope 1 & 2 emissions by the equivalent of:

## DE CLIMATE OPPORTUNITIES STRATEGY SCOPE 1 & 2 EMISSIONS EQUIVALENT REDUCTION<sup>2</sup>



## ABOUT GREAT LAKES ADVISORS

Founded in 1981, Great Lakes Advisors is headquartered in Chicago, Illinois with an additional office in Tampa, Florida. We offer a wide range of fixed income and equity strategies across all market capitalizations and have deep portfolio management capabilities within ESG, Socially Responsible, Tax Managed, and Customized account solutions. Our clients include public funds, multi-employer plans, corporations, religious communities, endowments/foundations, health care plans, and private wealth management clients.

We are proud to have been the first quantitative investment team to sign the Principles for Responsible Investment, and we continue to be a pioneer and innovator in the ESG investment community. We've been providing investment advisory services for more than 35 years, Socially Responsible Investing strategies since 1989, and full ESG integration since 2008. We work closely with our clients to develop portfolios that align with their values and beliefs through customized screening, positive values-based portfolio tilts, and environmental, social, and governance (ESG) integration.

1. Source: <https://www.epa.gov/climateleadership>

2. <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

The information contained herein has been obtained from sources believed to be reliable. This information should not be relied upon by the reader as research or investment advice. To determine if this strategy is appropriate for you, carefully consider the investment objectives, risk factors, and expenses before investing.

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Portfolio holdings subject to change and should not be considered investment advice. To obtain a list of all securities recommended during the past year, contact Great Lakes Advisors (GLA) at 312.553.3700. Actual clients' portfolios may or may not hold the same securities depending on the guidelines, restrictions and other factors of the specific portfolios.

The S&P 500 Index is an unmanaged index that tracks the performance of 500 widely held, large-capitalization U.S. stocks. They are usually the 500 largest companies in terms of market capitalization and are chosen to represent the entire market's value. Index returns are provided to represent the investment environment existing during the time periods shown. The Russell 2500 index measures the performance of the 2,500 smallest companies in the Russell 3000 Index and represent less than 20% of the capitalization of the Russell 3000 Index. The Russell 3000 index contains 3,000 of the largest capitalization stocks of U.S. domiciled companies, which represents about 98% of the total U.S. equity market capitalization. All indexes are fully invested, which includes the reinvestment of income. The returns for the index do not include any transaction costs, management fees or other costs. The index is not available for direct investment. Industry sectors are presented to illustrate the diversity of areas in which we may invest, and may not be representative of current or future investments.

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