Goldman Sachs | Asset Management

Pitchbook | Q1 2024

Goldman Sachs Clean Energy Income Fund

A thoughtful approach to investing in the clean energy sector

Goldman Sachs Fundamental Equity: Liquid Real Assets Team

Team Overview

Fundamental Equity Team

~$80+ Bn franchise with 110+ investors across 10 locations; a key pillar of GS Asset Management's Public Equity business, that oversees ~$340+ bn of client capital in aggregate

Fundamental Equity

Steve Barry
Managing Director (39)
Chief Investment Officer, Fundamental Equity

Research & Portfolio Management (110+ Total Investors)

US Large & Mid Cap

Steve Barry
Managing Director (39)
Co-CIO & Co-Lead PM, US Equity

Steve Becker
Managing Director (25)
Co-CIO & Co-Lead PM, US Equity

International Developed

Alexis Deladerrière
Managing Director (22)
Head of Int'l Dev Markets Equity

Maarten Geerdink
Managing Director (23)
Head of European Equity

Ichiro Kosuge
Managing Director (33)
Head of Japan Equity

Technology

Brook Dane
Managing Director (33)
Co-Lead PM, Technology

Sung Cho
Managing Director (22)
Co-Lead PM, Technology

US Small Cap

Greg Tuorto
Managing Director (31)
Co-Lead PM, US Small Cap

Robert Crystal
Managing Director (27)
Co-Lead PM, US Small Cap

Emerging Markets

Hiren Dasani
Managing Director (23)
Co-Lead PM, Emerging Markets

Basak Yavuz
Managing Director (24)
Co-Lead PM, Emerging Markets

Liquid Real Assets

Kyri Loupis
Managing Director (31)
Co-Lead PM, Liquid Real Assets

Kristin Kuney
Managing Director (24)
Co-Lead PM, Liquid Real Assets

Client Portfolio Management

Luke Barrs
Managing Director (15)
Global Head of CPM, Fundamental Equity

Stewardship & ESG

Catherine Winner
Managing Director (20)
Head of Public Equity Stewardship

Tim Verheyden
Managing Director (10)
Head of Public Equity ESG

Source: Goldman Sachs Asset Management. Latest data available as of March 31, 2024. PM: Portfolio Manager. Assets Under Supervision (AUS) includes assets under management and other client assets for which Goldman Sachs does not have full discretion.

Liquid Real Assets Team

One of the largest liquid real asset franchises with more than 13 portfolio managers/analysts, averaging over sixteen years of experience and managing nearly $10 Bn in AUM

FUNDAMENTAL EQUITY LIQUID REAL ASSETS INVESTMENT TEAM

Steve Barry | MD
Fundamental Equity Chief Investment Officer

Tim Ryan | MD
US Real Estate

Akif Irfan | VP
US & Global Energy

Ben Okin | VP
Global Clean Energy & Utilities

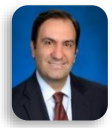
Lili Peng | VP
US Real Estate

Kristin Kuney | MD
Liquid Real Assets Co-CIO

Abhinav Zutshi | VP
Pan-European Real Estate & Infrastructure, & Global Communications Infrastructure

Matthew Cooper | VP
US & Global Energy & Global Infrastructure

Arun Bhatt | VP
Singapore, SE Asia & Canadian Real Estate & Infra



Kyri Loupis | MD
Liquid Real Assets Co-CIO

Frankie Chun Wah Lee | VP
Greater China, Australian Real Estate & Infra

Vikrum Vora | VP
Global Clean Energy & Utilities

Chris Schiesser | VP
US & Global Energy

CLIENT PORTFOLIO MANAGERS

Luke Barrs | MD

Jen Nusser | VP

Charles Sturges | VP

Tiara Hawkins| AS

Supported by 110+ Fundamental Equity Investors and 5+ Client Portfolio Managers

Source: Goldman Sachs Asset Management. As of March 31, 2024. For illustrative purposes only.

Why Does The Team Focus On Infrastructure?

We believe infrastructure offers the most attractive risk-adjusted returns with assets that are essential to allowing the economy and society to function

Relatively Stable Demand

Essential assets make demand stable and relatively inelastic

+

High Barriers To Entry

Capital intensity & government regulation can create monopoly-like features

+

Historically Predictable Cash Flows

Cash flows are tied to long-term, fee-based contracts with inflation escalators

=

Differentiated Investment Attributes

Favorable yield, lower volatility vs. equities, and low correlation to traditional assets

Source: Goldman Sachs Asset Management. Latest data available as of March 31, 2024. For illustrative purposes only. **Past performance does not guarantee future results, which may vary.** For illustrative purposes only. There is no guarantee that objectives will be met. The portfolio risk management process includes an effort to monitor and manage risk, but does not imply low risk.

Our Investment Approach In Clean Energy

Why Consider A Clean Energy Investment?

Clean energy is expected to become the world's primary energy source by 2050 driven by government policy and improving economics

Non-Cyclical Secular Growth

- The clean energy transition may offer one of the largest, multi-decade secular growth opportunities.
- There's $100+ trillion of investment needed to reach net zero emissions.
- Renewable energy sources (wind, solar, hydro, etc.) are expected to become one of the largest energy sources, growing 165% through 2050 in a conservative scenario.

Renewables Are Cheap & Getting Cheaper

- Since 2014, we have seen a 36% decline in the cost of wind and solar, driven by efficiencies, innovation, and scale.
- Today, building new renewable energy sources is more economical than building traditional energy sources (coal, oil, gas, etc.).
- New clean energy technology incentives (e.g. hydrogen, biofuels, carbon capture, etc.) could help drive down costs further and increase adoption, like wind and solar.

Policy Is Intently Focused On Climate

- Since energy and industrial processes account for 70% of total greenhouse gases, they're a major target for long-term policy changes, irrespective of economic cycle.
- The U.S. passed the Inflation Reduction Act, which is expected to mobilize more than $3 trillion dollars of clean energy spending over the next decade.
- European Union and Japan have also set forth climate-action with the "EU Green Deal" and the "Japan Green Transformation".

Sources: Goldman Sachs Asset Management and Bloomberg. Data as of March 31, 2024. **Past performance does not guarantee future results, which may vary.**

What Companies Are In The Clean Energy Universe?

Companies that are capitalizing on the opportunities created by the decarbonization of energy and industrial processes

---

Clean Power

Renewable asset and grid owners I leading the shift to clean electrification

Wind Tech

Wind component manufacturer | wind may be the largest energy source by 2050

Solar Tech

Solar component manufacturers | solar may be the 2nd largest energy source by 2050

Bioenergy

Renewable fuel producers | specialty solution for non-electrified sectors

Energy Storage

Battery producers | critical solution for renewables intermittency

H_2

Hydrogen

Fuel cell/electrolyzer provider | solution for heavy transport and hard-to-abate industries

Energy Transition Materials & Mining

Produce/mine metals | critical for renewable power technologies

Electrified Transport/Mobility

EV manufacturers & infrastructure | advancing EV technology and adoption

Other Enablers

Other companies that are enabling the decarbonization of energy

Clean Infrastructure

Sources: Bloomberg and Merrill Lynch. Latest data available as of March 31, 2024. For illustrative purposes only, but not an exhaustive list. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved.

We Favor Clean Infrastructure Companies

Infra. companies earn revenue based on regulated rates or long-term contracts with governments and/or commercial and industrial customers driving consentient earnings growth with low volatility

Representative Companies[1]

Onshore/Offshore Wind	Utility-Scale Solar
Ørsted, Northland Power, Boralex	AES, Atlantica Sustainable Infrastructure, NextEra Energy

Grid Owners	Hydroelectric
American Electric Power, SSE, Enel	EDP, China Yangtze Power Co., Ltd., Innergex

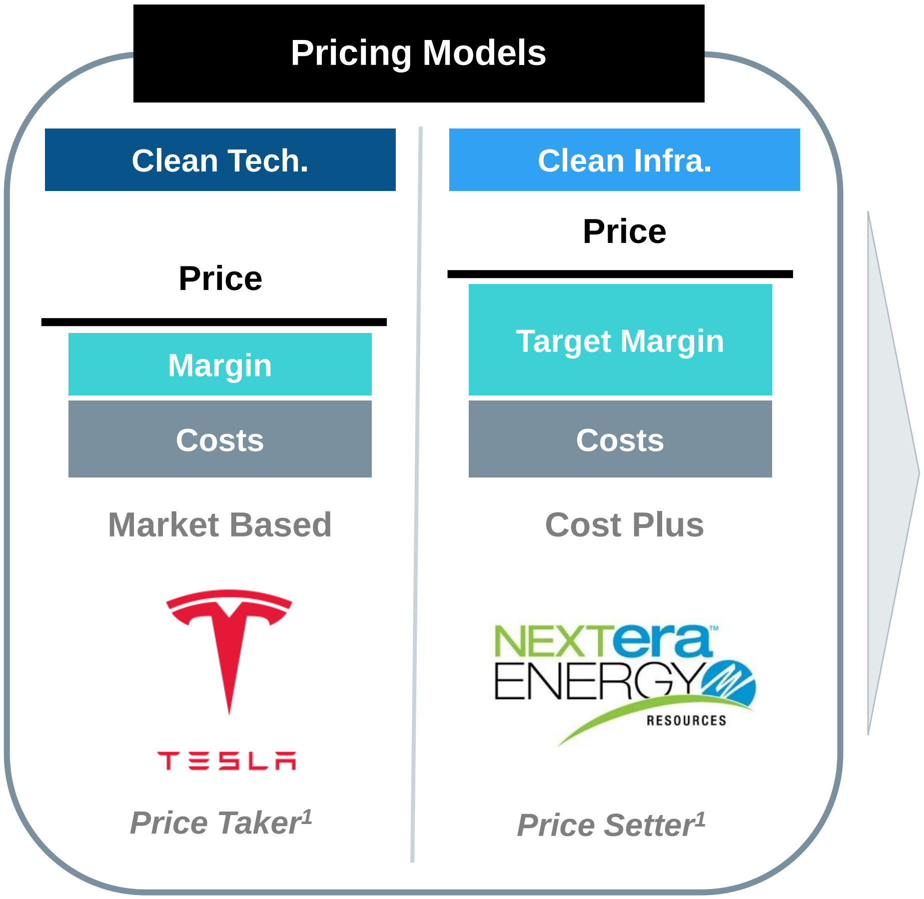
Regulated and/or Contract Characteristics

Regulated Rates of Return on Equity	5 - 20 Year Contractual Offtake w/ Inflation Adjusters

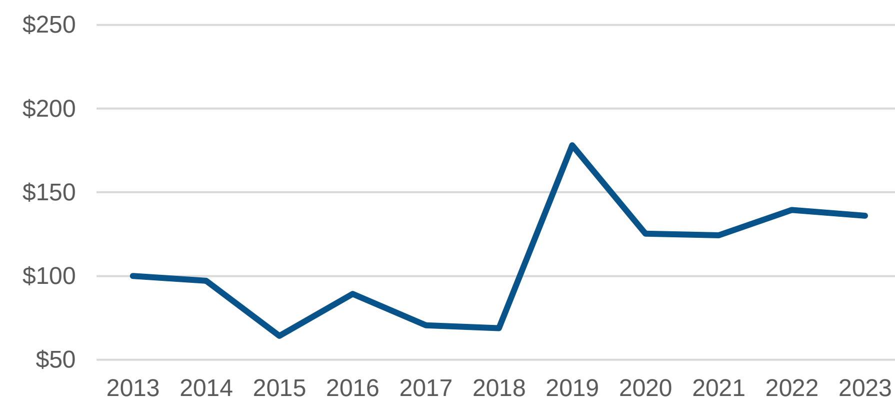
Source: Goldman Sachs Asset Management. Latest data available as of March 31, 2024. Goldman Sachs does not provide accounting, tax or legal advice [1]Many of these companies are involved in multiple renewable technologies as well as some non-renewables. "Most clean power asset owners own a variety of assets so categorizations reflect the primary assets within their clean power business. Companies selected are the largest by market capitalization in each category. Fund holdings and allocations shown are unaudited, and may not be representative of current or future investments. Fund holdings and allocations may not include the Fund's entire investment portfolio, which may change at any time. Fund holdings should not be relied on in making investment decisions and should not be construed as research or investment advice regarding particular securities. Current and future holdings are subject to risk. Company names and logos, excluding those of Goldman Sachs and any of its affiliates, are trademarks or registered trademarks of their respective holders. Use by Goldman Sachs does not imply or suggest a sponsorship, endorsement or affiliation. Any reference to a specific company or security does not constitute a recommendation to buy, sell, hold or directly invest in the company or its securities. For illustrative purposes only.

Clean Infra. Earnings Are Less Volatile Than Clean Tech

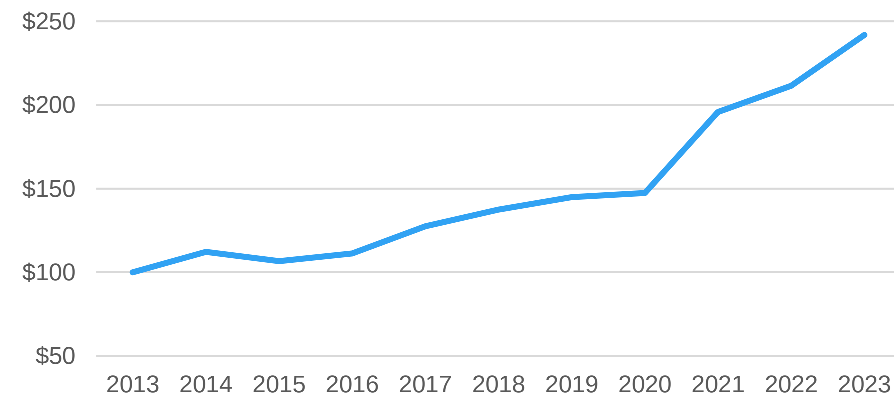
Clean energy infrastructure companies operate with a cost-plus pricing model which drives lower earnings volatility and consistent earnings growth vs. clean tech companies



CLEAN TECH: EBITDA/SHARE GROWTH (INDEXED TO $100)



CLEAN INFRA: EBITDA/SHARE GROWTH (INDEXED TO $100)



Sources: Goldman Sachs Asset Management and Bloomberg. Latest year end data available as of March 31, 2024. [1]Representative company reflects the largest company (by market cap) domiciled in developed markets within the mentioned sector, as defined by MSCI, within the overall clean energy universe as defined by GS Asset Management. Clean Tech and Clean Infra are represented through the full investable universe as defined by Goldman Sachs Asset Management. Clean Tech includes 82 names while Clean Infra includes 355 names. Any reference to a specific company or security does not constitute a recommendation to buy, sell, hold or directly invest in the company or its securities. For illustrative purposes only. **Past performance does not guarantee future results, which may vary. The value of investments and the income derived from investments will fluctuate and can go down as well as up. A loss of principal may occur.**

GS Clean Energy Income Fund Snapshot

Our total return portfolio (income + growth) offers exposure to accelerating clean energy demand through regulated and/or contracted assets with low GDP sensitivity and high pricing power

95% Clean Infrastructure | 5% Clean Tech

Overarching Portfolio

Defensive Growth

Focus on clean infra. (as opposed to clean tech); sustainable operating models/pricing power, and net-zero capex, leads to lower earnings volatility.

Energy Transition Leaders

Emphasize companies progressing the energy transition; global footprint, strong balance sheets, and deep market share.

Rate of Change Stories

Identify credible "transitioning" companies, which may be undervalued by the market and present a compelling alpha opportunity.

Overview

Investment Approach

Emphasize clean independent power producers & power infrastructure companies, which have historically provided strong risk adjusted returns vs. more volatile segments such as "clean tech".

Case for the Fund

One of the first dedicated clean infrastructure funds with attractive risk-adjusted returns; outperforming its benchmark by 45 bps since launch.

Portfolio Fit

Potential fit for global alternative energy, real assets, infrastructure and/or equity income allocations.

Credentials

Morningstar ESG Fund designation, included in Sustainability universe.[1]

Portfolio has an AA MSCI Rating with high exposure to sustainable impact solutions.[2]

Experienced team managing over $10 Bn in AUM as part of the broader infrastructure & real assets team.

Team engages with company management to create shareholder value through the lens of environmental change.

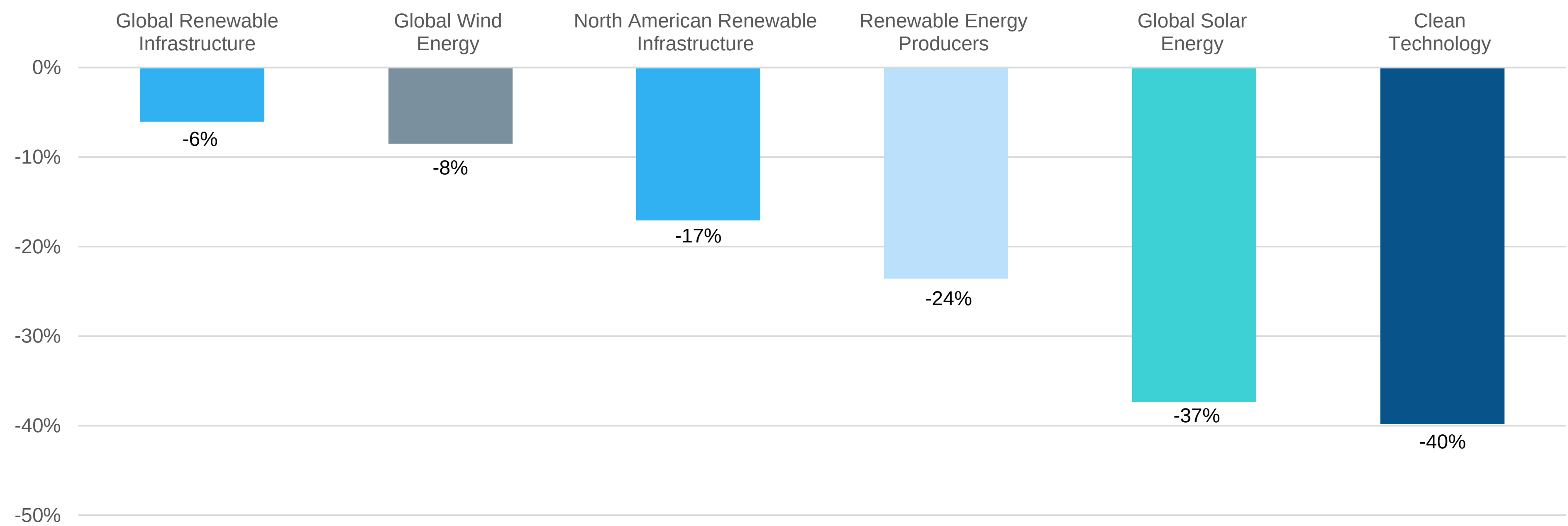
Sources: Goldman Sachs Asset Management, MSCI, Bloomberg. Latest data available as of March 31, 2024. [1]Please see Morningstar disclosures. [2]See MSCI emissions trend data at the end of the presentation. GDP: Gross Domestic Product. There is no guarantee that objectives will be met. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Your capital is at risk and you may lose some or all of the capital you invest. Complete information on the risks of investing in the Fund are set out in the Fund's prospectus. The engagement/proxy voting highlights presented here outline examples of Goldman Sachs Asset Management initiatives, there is no assurance that Goldman Sachs' engagement/proxy voting directly caused the outcome described herein.

Market Review & Outlook

2023 Clean Energy Market Review

While performance for the entire clean energy theme has been challenged since 2022, renewable infrastructure has been able to outperform within the category

CLEAN ENERGY INDEX PERFORMANCE



The rapid rise in global interest rates sparked a wave of technical selling in addition to fundamental concerns within the sector as a significant amount of financing is needed to meet global clean energy mandates/targets, with concerns driving stocks lower.

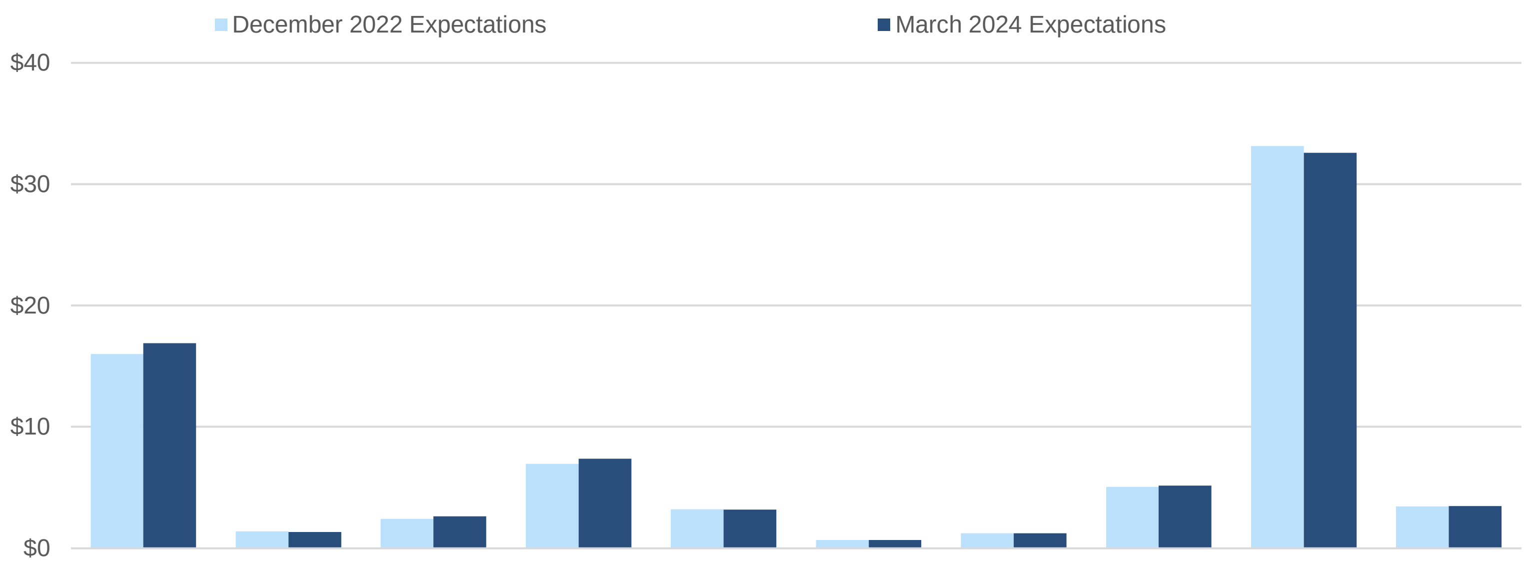
In an elevated rate environment, companies across all sectors with development pipelines are at risk of higher financing costs, however clean energy infra. businesses operate with a "cost-plus" model, passing through higher rates (inflation protected contracts, higher energy prices for new assets, etc.).

Sources: Goldman Sachs Asset Management. Bloomberg. Data and views as of March 31, 2024. *Cumulative performance from including FY 2023 & YTD 2024 as of March 31, 2024. Global Renewable Infrastructure: RENEW Index North American Renewable Infrastructure: RENEWNA Index. Renewable Energy Producers: IYLCOREC Index. Clean Technology: ECO Index. Global Solar Energy: SUNIDX Index. Global Wind Energy: ISE Global Wind Energy Index.

Clean Infra. Fundamentals Have Remained Strong

Despite weak price performance, 2025 EBITDA expectations are largely unchanged, though equity prices have suffered from P/CF valuation compression, leaving equities down double-digits

CONSENSUS 2025 EBITDA EXPECTATIONS ($ BILLIONS, TOP 10 HOLDINGS AS OF MARCH 31, 2024)



	NEE	NPI	BEP-U	EIX	H	BLX	CWEN/A	RWE	ORSTED	SSE	Median
2025 EBITDA Change	5.5%	-4.3%	7.9%	6.1%	-0.7%	2.9%	-1.0%	2.0%	-1.7%	1.3%	**1.7%**
Total Return[1]	-20.7%	-36.9%	-1.8%	17.4%	13.2%	-26.7%	-22.2%	-22.7%	-37.7%	3.1%	**-21.4%**

Near-term, we believe there are three factors that will improve sector sentiment and equity prices:

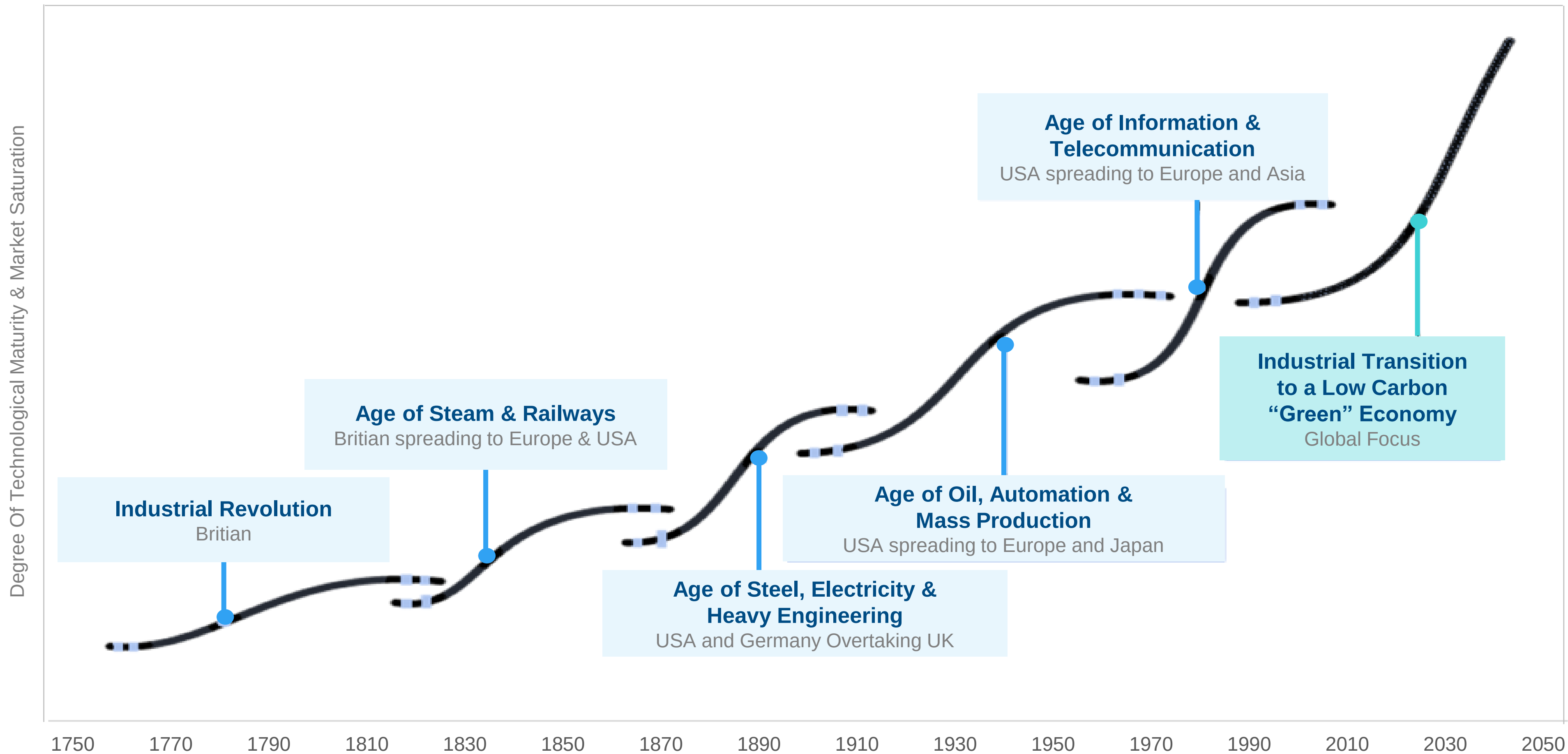
- The stabilization in interest rates as the sector has been negatively correlated to the move higher in rates.
- Recognition that governments will continue to support renewable buildout.
- Growth in electricity demand being driven by AI, data centers, and electrification, which results in a massive need for new power assets.

Sources: Goldman Sachs Asset Management and Bloomberg Latest data available as of March 31, 2024. GS Clean Energy Income Fund top 10 holdings (by weight) as of March 31, 2024. AES has been excluded from the top ten as the company is currently selling assets, which has impacted valuations and equity prices. [1]Total return line-item reflects performance data from the start of 2023 through 31-Mar-2024.

The World Is Transitioning To A Low Carbon Economy

We're in the early innings of a major industrial transition amidst accelerated growth in digitalization, artificial intelligence, and deglobalization

250 YEARS OF INDUSTRIAL DEVELOPMENT



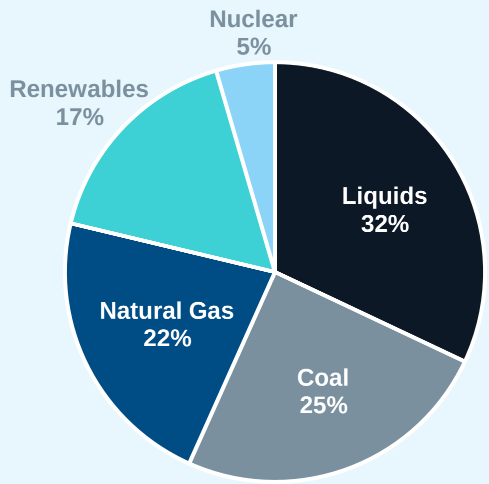
Sources: Goldman Sachs Asset Management and Technological Revolutions and Financial Capital. Latest data available as of March 31, 2024. For illustrative purposes only.

The World Continues To Demand More Energy

Most of the world is still "energy poor" and global population increases, and economic prosperity will drive significant demand for energy with outsized growth expected in renewables sources

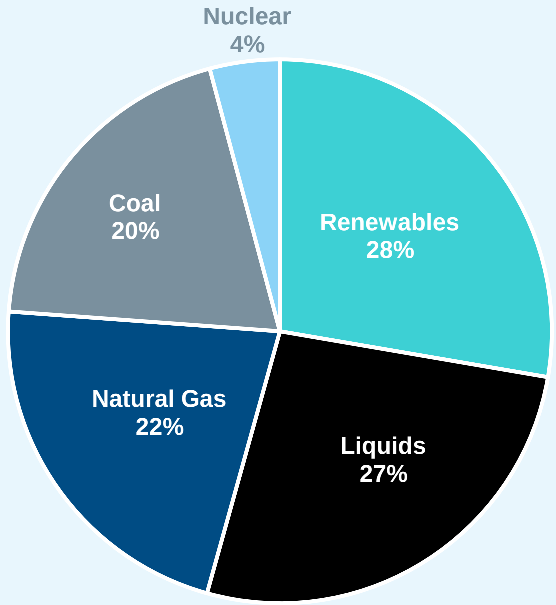
2022 Energy Consumption

638 Quadrillion BTUs



2050E Energy Consumption

855 Quadrillion BTUs



Total Consumption Growth

Consumption Growth: 47%

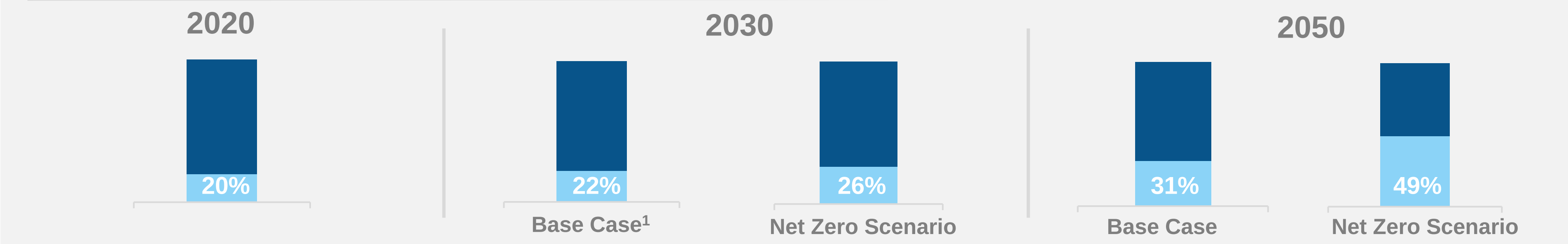
Fuel Type	2020 – 2050E
Renewables	+137%
Natural Gas	+42%
Nuclear	+32%
Liquids	+19%
Coal	+14%

Sources: Goldman Sachs Asset Management and BP Statistical Review. Latest year end data available as of March 31, 2024. The economic and market forecasts presented herein have been generated by Goldman Sachs Asset Management for informational purposes as of the date of this presentation. They are based on proprietary models and there can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation. BTU: British Thermal Units.

The World Is “Electrifying” Everything

Clean energy growth is being driven by the “electrification of everything” with an electricity sector that is increasingly powered by clean energy sources

ELECTRICITY (% OF DELIVERED ENERGY) | 2050 BASE CASE ELECTRICITY CAGR: 2.0% | 2050 NET ZERO ELECTRICITY CAGR: 2.5%



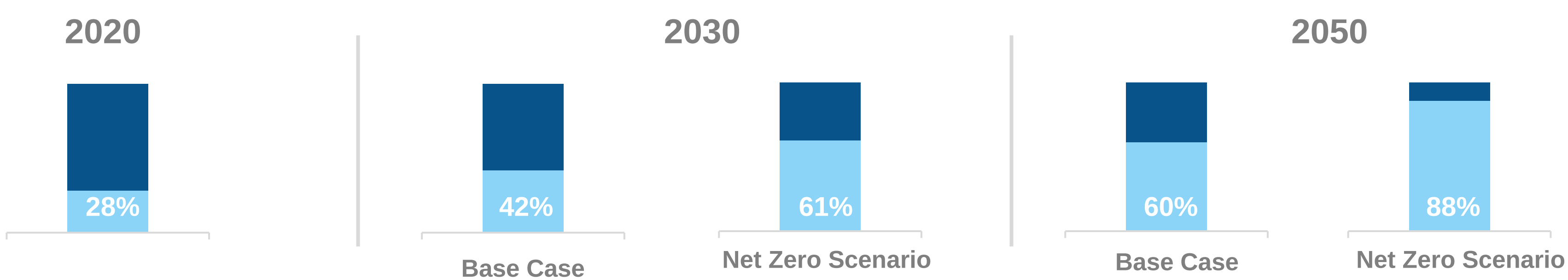
WHAT IS BEING ELECTRIFIED?

Transport

Residential & Commercial

Industrial

RENEWABLES (% OF ELECTRICITY GENERATION) | 2050 BASE CASE RENEWABLES CAGR: 4.4% | 2050 NET ZERO RENEWABLES CAGR: 7.3%

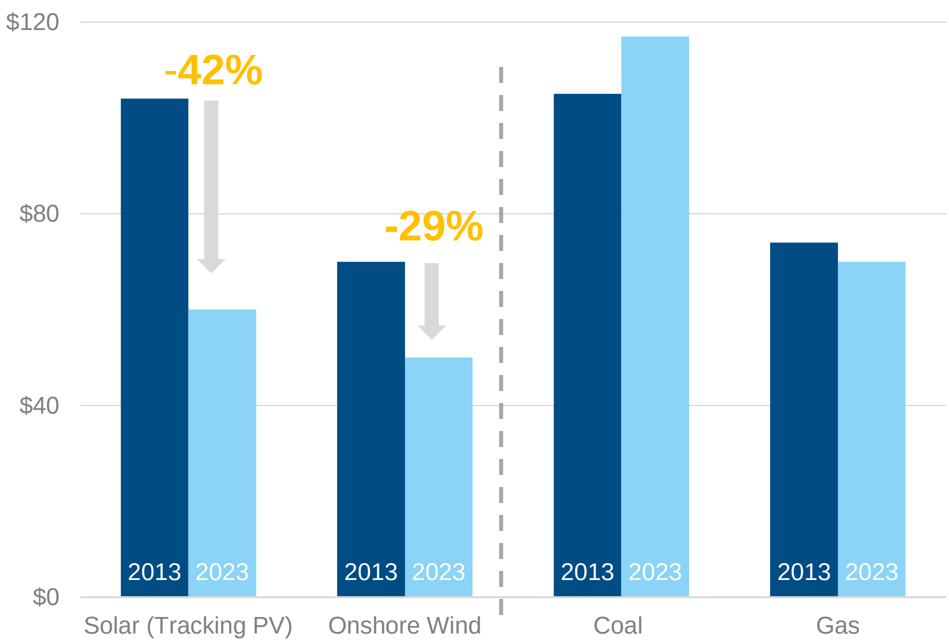


Sources: Goldman Sachs Asset Management, 2023 IEA World Energy Outlook. Base Case and Net Zero Scenario assumptions sourced from the IEA. Latest year end data available as of December 31, 2023. CAGR: Compounded annual growth rate. [1]Base cases assume stated policy plus announced pledges. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. For illustrative purposes only.

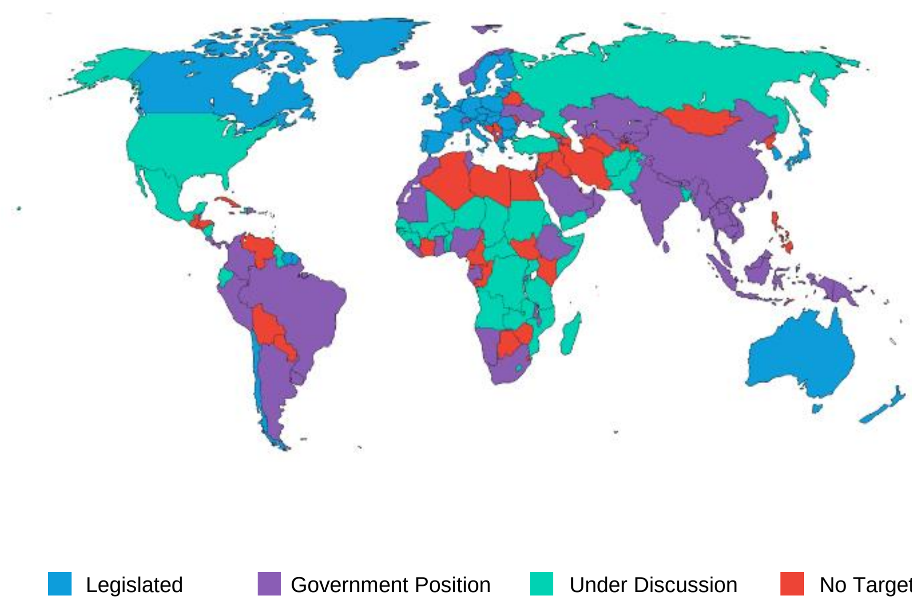
Economics & Government Policy Support Growth

We believe more government mandates, increasing demand for investment capital, and declining clean technology costs creates a compelling investment backdrop

CHANGE IN GLOBAL NEW BUILD LEVELIZED COST OF ENERGY ($/MWH)[1]



GOVERNMENT NET-ZERO EMISSION TARGETS



Renewable generation costs have fallen quickly with solar and onshore wind costs down 42% and 29%, respectively since 2014, and now cheaper than new build gas.

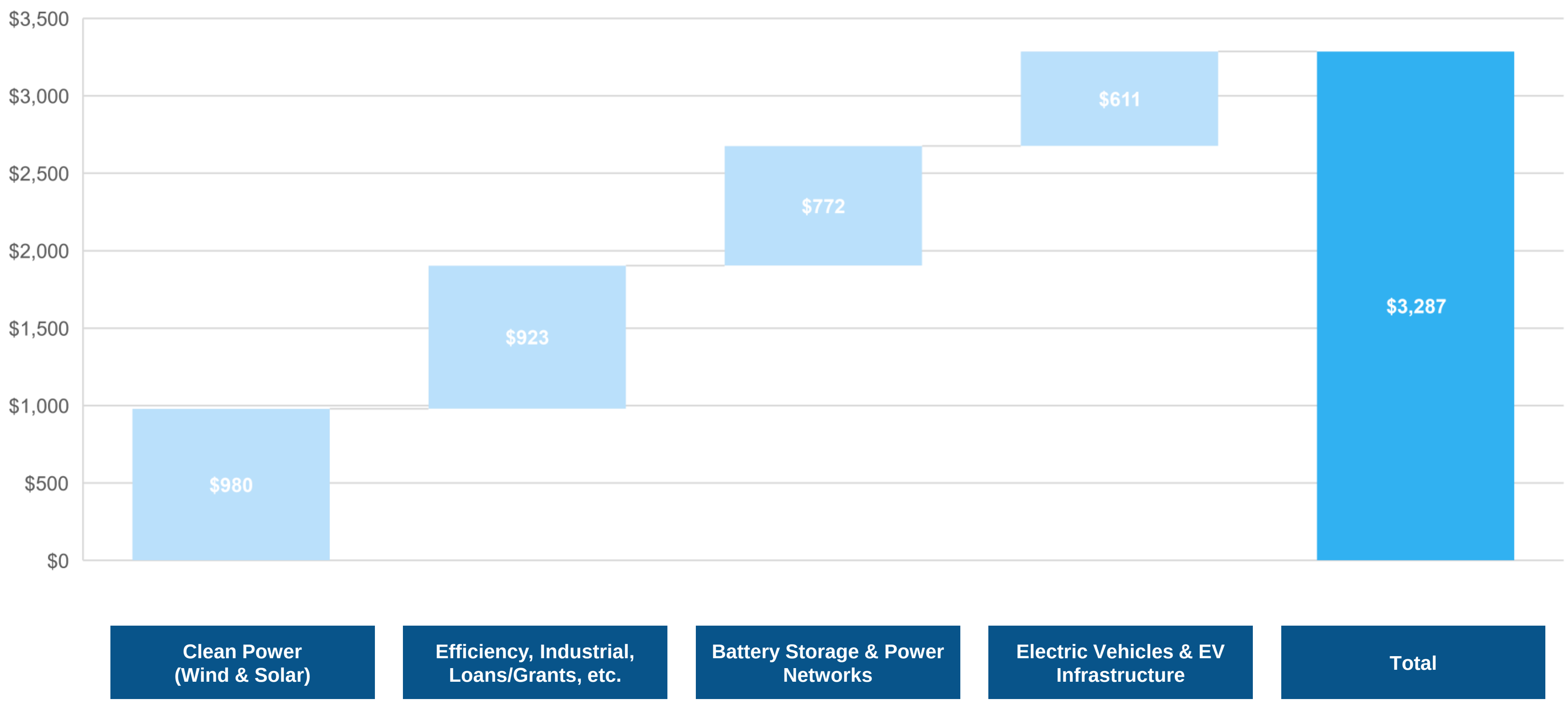
Over the past 2 years, government net zero emissions targets have grown 5x and now cover more than 70% of GHG emissions, a trend we believe will be increasingly backed by legislative mandates.

Source: BloombergNEF. Latest data available as of March 31, 2024. [1]Levelized cost is the average for the calendar year unless otherwise noted. UK Levelized cost is the average for the calendar year. Mwh: Megawatt Hour. Solar Tracking PV: Solar Tracking Photovoltaic. For illustrative purposes only.

IRA Has Created Significant Tailwinds for Clean Energy

The U.S. Inflation Reduction Act (IRA) marks game changing legislation, mobilizing more than $3 trillion dollars of spending over the next 10 years, supporting a wide range of clean energy sectors

TOTAL MOBILIZED INVESTMENT ASSOCIATED WITH THE INFLATION REDUCTION ACT (2023 – 2032, $BN)



Sources: Goldman Sachs Asset Management and Goldman Sachs Global Investment Research (GIR). Latest data available as of March 31, 2024. For illustrative purposes only. Clean Power: Other renewables, capacity expansion, onshore wind, offshore wind, distributed solar, utility-scale solar. Battery Storage & Power Networks. EVs (includes EV infrastructure + EVs). Other: Hydrogen, Energy Efficiency in buildings, Industrial processes, Biofuels, Heat pumps, CCUS, Loans/Grants.

Major Corporations Are Committed To "Going Green"

There are over 400 members of RE100, a global corporate renewable energy initiative, with companies committing to 100% renewable electricity

Already sourcing 100% of energy through renewables

J.P.Morgan
Microsoft
Meta

Committed to source 100% of energy through renewables

amazon
PEPSI
AMERICAN EXPRESS
gm
Adobe

Additionally, we'd highlight the recent announcement from Brookfield and Microsoft, which are collaborating to deliver over 10.5 GW of new renewable power capacity globally over the next five years – almost eight times larger than the largest single corporate PPA ever signed.

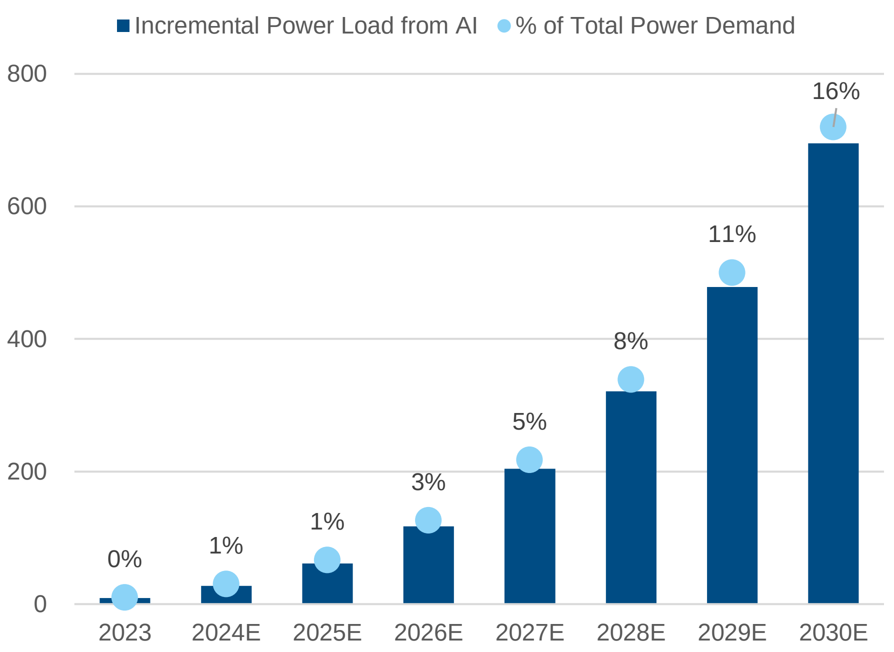
This marks a first of its kind global framework agreement that will accelerate the expansion of renewable energy capacity and may be a key growth catalyst for the sector over the next few years.

Sources: Goldman Sachs Asset Management, BloombergNEF, Bloomberg. Latest data available as of March 31, 2024. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation. Any reference to a specific company or security does not constitute a recommendation to buy, sell, hold or directly invest in the company or its securities.

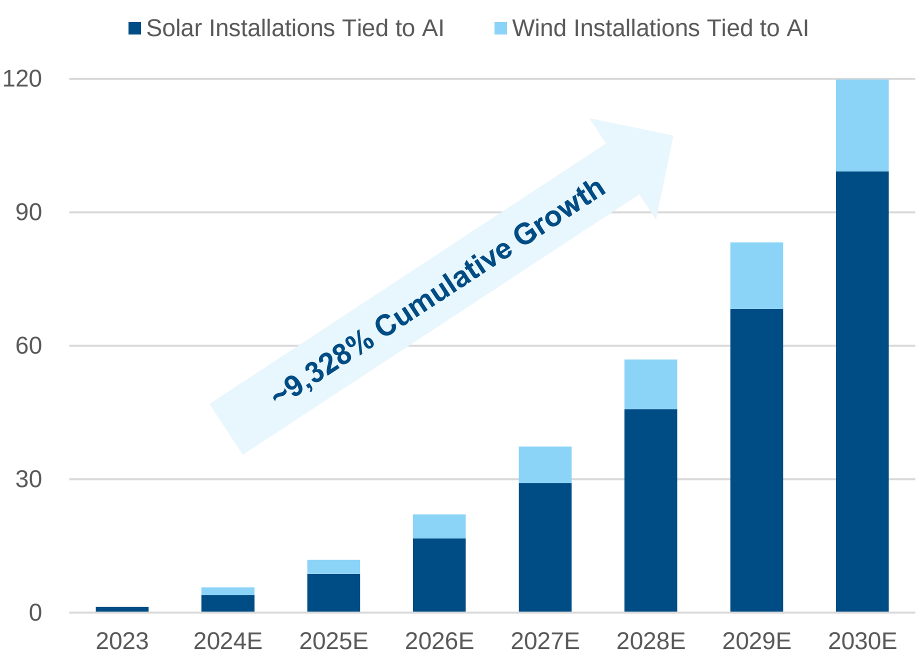
AI Advancements Are Driving U.S. Power Demand Growth

The rapid development of AI is driving meaningful growth in electricity demand with renewable energy generation being a key input for expansion

U.S. ELECTRICITY GROWTH TIED TO AI (TWH, LEFT AXIS)



WIND + SOLAR NEEDED TO MEET AI POWER LOAD (GWS)



The rapid buildout of AI & data centers is expected to add significant U.S. power demand with the incremental power load from AI growing from 9 Twh in 2023 to nearly 700 Twh by 2030, representing ~7500% growth.

Renewable energy will play a significant roll in allowing for data center & AI expansion, with wind and solar installations expected to experience 50% and 16% CAGRs through 2030.

Sources: Goldman Sachs Asset Management and Wells Fargo. Latest data available as of March 31, 2024. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation. **Past performance does not guarantee future results, which may vary.**

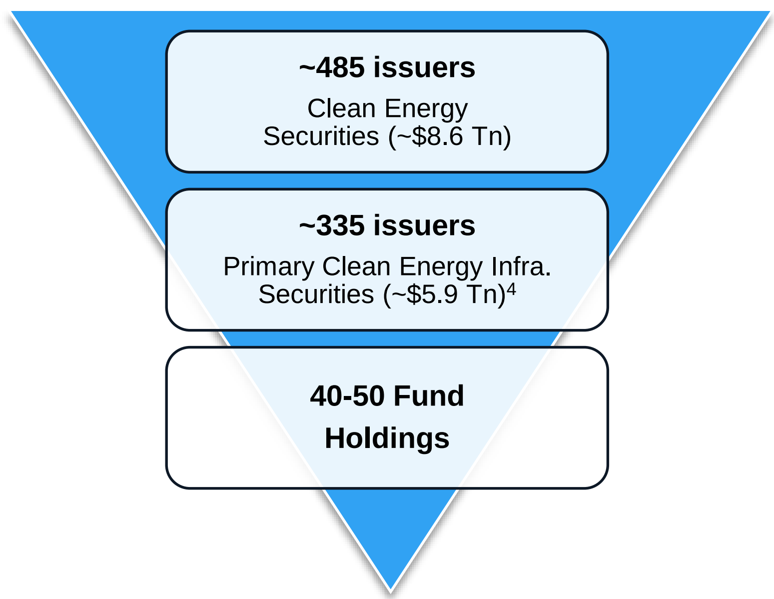
Fund Snapshot & Performance

Infrastructure Accounts For More Than Half of The Universe

$8.6 trillion total investable universe of companies with over half building and owning contracted and regulated clean energy infrastructure assets

CLEAN ENERGY UNIVERSE BREAKOUT BY SEGMENT

Segment[1]	Approximate Assets ($Bn)	Number of Securities	Volatility Level[2]
Clean Power	$2,430	200	
Other Enablers[3]	$3,000	90	
Energy Transition Materials & Mining	$770	45	
Solar Tech	$170	40	
Electrified Transport/Mobility	$950	25	
Energy Storage	$385	25	
Bioenergy	$90	20	
Hydrogen	$380	20	
Wind Tech	$410	20	
Total	**$8,585**	**485**	



We believe focusing the Fund's investments in companies with contracted/regulated assets provides a better line of sight into company cash flows, especially when companies have higher counterparty quality, asset diversification, and stated de-carbonization targets.

Sources: Goldman Sachs Asset Management and Bloomberg. Latest data available as of March 31, 2024. Tn: Trillions of dollars.[1]Universe is defined by GS Asset Management, for further information on how renewable energy companies are defined please see the appendix. Clean power includes hydropower and geothermal focused companies. [2]Volatility is a historical measure using the average standard deviation on a trailing 162 week basis for each respective bucket, green indicates less relative volatility, while red indicates more relative volatility. [3]Other Enablers includes Digitization, Networks, Energy Efficiency, Carbon Capture, Broad Electrification, etc. [4]Clean energy infrastructure includes clean power, other enablers, energy storage, and bioenergy. [5]Universe is defined by GS Asset Management's clean energy infrastructure benchmark: 50% Eagle North America Renewables Infrastructure Gross Index (RENEWNA), 35% Indxx Yieldco and Renewable Energy Income Net Index (IYLCOREC) & 15% Eagle Global Renewables Infrastructure Gross Index (RENEW). The only benchmark component with an ETF is IYLCOREC, which is tracked by the Global X Renewable Energy Producers ETF (RNRG). Fund holdings are subject to change.

How Do We Pick Clean Infrastructure Stocks?

Process combines top-down and bottom-up analysis with a focus on managing risk

MACRO ENERGY TRENDS

- Renewable technology costs vs. traditional energy sources.
- Government de-carbonization targets and incentives.
- Regional energy supply/demand and reliability; customer wallet share.

QUANTITATIVE/QUALITATIVE ANALYSIS

- Renewable mix; regulatory/contractual framework; customer quality.
- Valuation (DCF, EV/EBITDA, yield + growth, TAM) & stress tests[1].
- Management quality and potential ESG characteristics.

PORTFOLIO CONSTRUCTION

- Seeks total returns consisting of income and capital appreciation.
- Evaluate companies based on risk-adjusted return potential.
- Risk management team seeks to avoid unintended risks and help balance risk vs. reward.
- Central trading desk seeks to implement investment ideas with minimal market impact and limiting transaction costs.

WHAT DO WE LOOK FOR IN COMPANIES?

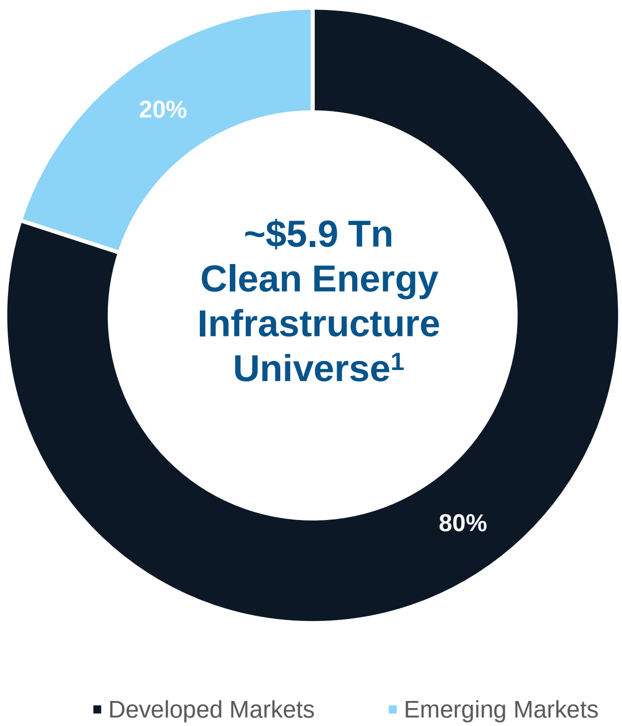
The portfolio risk management process includes an effort to monitor and manage risk, but does not imply low risk. Complete information on the risks of investing in the Fund are set out in the Fund's prospectus. Complete information on the risks of investing in the Fund are set out in the Fund's prospectus.

Source: Goldman Sachs Asset Management. Latest views and data available as of March 31, 2024. [1]DCF: Discounted Cash Flow. EV/EBITDA: Enterprise Value-to-Earnings before interest, taxes, depreciation, and amortization. Yield + Growth: valuation method that values a company based on current yield + earnings growth. a yield. TAM: Total addressable market. As part of our investment process, we may integrate ESG factors alongside traditional factors. The identification of a risk related to an ESG factor will not necessarily exclude a particular investment that, in our view, is otherwise suitable and attractively priced for investment, and we may invest in an issuer without integrating ESG factors or considerations into our investment process. Moreover, ESG information, whether from an external and/or internal source, is, by nature and in many instances, based on a qualitative and subjective assessment. An element of subjectivity and discretion is therefore inherent to the interpretation and use of ESG data. The relevance and weightings of specific ESG factors to or within the investment process vary across asset classes, sectors and strategies and no one factor or consideration is determinative. Goldman Sachs Asset Management in its sole discretion and without notice may periodically update or change the process for conducting its ESG assessments and implementation of its ESG views in portfolios, including the format and content of such analysis and the tools and/or data used to perform such analysis. Accordingly, the type of assessments depicted here may not be performed for every portfolio holding. The process for conducting ESG assessments and implementation of ESG views in portfolios, including the format and content of such analysis and the tools and/or data used to perform such analysis, may also vary among portfolio management teams.

95% Of Portfolio Is Invested In Developed Markets

Clean energy infrastructure is a global theme, but we believe the most compelling risk-adjusted opportunities are in developed markets

Developed markets tend to provide a **larger opportunity set** with potentially **better risk-adjusted returns**, due to government incentives and alignment with key stakeholders.



- In developed markets today, the opportunity set for clean energy infrastructure is well defined, and one of the leading ways in which those economies intend to decarbonize, with many setting legally binding renewables targets.
- In emerging markets, we believe the energy transition will be slower, as economic and population growth leads to increased energy intensity, and as a result potentially increased hydrocarbon demand.
- Additionally, we believe the regulatory regime in emerging markets is still developing, creating risks and uncertainty for developers in these regions.

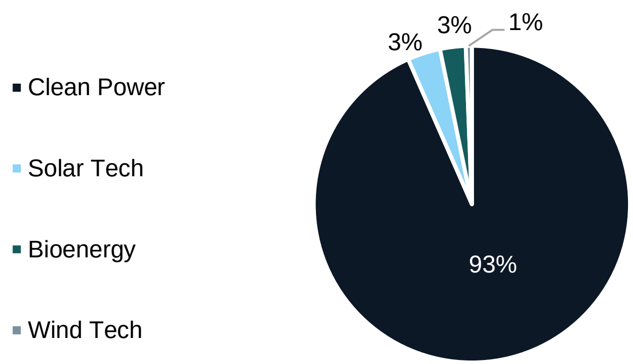
Your capital is at risk and you may lose some or all of the capital you invest

Sources: Goldman Sachs Asset Management, Bloomberg and MSCI. Latest data available as of March 31, 2024. [1]Universe is defined by Goldman Sachs Asset Management. Emerging markets securities may be less liquid and more volatile and are subject to a number of additional risks, including but not limited to currency fluctuations and political instability. There is no guarantee that objectives will be met.

GS Clean Energy Income Fund Highlights

Focused on clean power companies with contracted and/or regulated cash flows and varied geographic revenue exposure

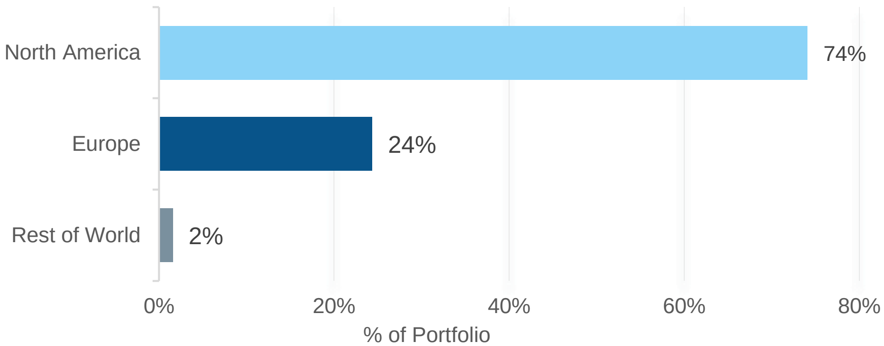
Primary Exposure to Clean Power



Top 10 Fund Holdings

Name	Ticker	Weight
NextEra Energy Inc.	NEE	8.1%
AES Corp.	AES	6.7%
Northland Power Inc.	NPI	6.0%
Brookfield Renewable Partners L.P.	BEP	5.5%
Edison International	EIX	5.3%
Hydro One Ltd.	H	4.9%
Boralex Inc.	BLX	4.5%
Clearway Energy Inc.	CWEN	3.1%
RWE AG	RWEG	3.1%
Orsted AS	ORSTED	3.1%

Own Developed Market Issuers with Global Footprint



Fund Characteristics

	Portfolio
# of Holdings	42
Weighted Average Market Cap	$25.4 Bn
Weighted Median Market Cap	$12.0 Bn
Price to Earnings Ratio	16.2x
3-5 Year Earnings Per Share (EPS) Growth	13.5%
Gross Yield[1]	4.1%

Sources: Goldman Sachs Asset Management and Bloomberg. Latest data available as March 31, 2024. Benchmark: 50% Eagle North America Renewables Infrastructure Gross Index (RENEWNA), 35% Indxx Yieldco and Renewable Energy Income Net Index (IYLCOREC) & 15% Eagle Global Renewables Infrastructure Gross Index (RENEW). [1]The gross yield is the yield earned on an investment before taxes and other expenses are deducted and is calculated by taking the weighted average yield of the Fund's underlying holdings. Yield is calculated by annualizing the company's most recent dividend per share and then dividing that figure by the company's share price. **Please see the following slide for standardized total returns and other important disclosures. Past performance does not guarantee future results, which may vary.**

Standardized Total Returns

GS Clean Energy Income Fund, Class I Shares (GCEDX) – Net of Fees

Standardized Total Returns (as of 31-Mar-2024)	Inception	1 Year (%)	3 Year (%)	5 Year (%)	Annualized Since Inception (%)
GS Clean Energy Income Fund	June 26, 2020	-21.82	-10.76	N/A	-0.07
Benchmark[1]	--	-16.64	-10.18	N/A	-0.52

Expense Ratio (as of 31-Mar-2024)	GS Clean Energy Income Fund
Gross Expense Ratio	1.02%
Net Total Expense Ratio	0.89%

Yields (as of 31-Mar-2024)	GS Clean Energy Income Fund
Gross Portfolio Yield[2]	4.05%
Net Portfolio Yield[3]	3.16%
Standardized 30-Day Subsidized Yield[4]	2.59%
Standardized 30-Day Unsubsidized Yield	2.04%

The returns represent past performance. Past performance does not guarantee future results. The Fund's investment return and principal value will fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance may be lower or higher than the performance quoted above. Please visit our Web site at: www.GSAMFUNDS.com to obtain the most recent month-end returns.

The Standardized Total Returns are average annual total returns or cumulative total returns (only if the performance period is one year or less) as of the most recent calendar quarter-end. They assume reinvestment of all distributions at net asset value. Because Institutional Shares do not involve a sales charge, such a charge is not applied to their Standardized Total Returns.

The expense ratios of the Fund, both current (net of any fee waivers or expense limitations) and before waivers (gross of any fee waivers or expense limitations) are as set forth above. Pursuant to a contractual arrangement, the Fund's waivers and/or expense limitations will remain in place through at least March 29, 2024, and prior to such date the Investment Adviser may not terminate the arrangements without the approval of the Fund's Board of Trustees.

[1]Benchmark: 50% Eagle North America Renewables Infrastructure Gross Index (RENEWNA), 35% Indxx Yieldco and Renewable Energy Income Net Index (IYLCOREC) & 15% Eagle Global Renewables Infrastructure Gross Index (RENEW). [2]The gross yield is the yield earned on an investment before taxes and other expenses are deducted and is calculated by taking the weighted average yield of the Fund's underlying holdings. Yield is calculated by annualizing the company's most recent dividend per share and then dividing that figure by the company's share price. [3]The net yield is the gross yield less the net expense ratio. [4]The 30-Day Standardized Subsidized Yield does not include the portion of net income that is expected to be deemed return of capital. The method of calculation of the **30-Day Standardized Subsidized Yield** is mandated by the Securities Exchange Commission and is determined by dividing the net investment income per share earned during the last 30 days of the period by the maximum public offering price of the Fund ("POP") per share on the last day of the period. This number is then annualized. The 30-Day Standardized Subsidized Yield reflects fee waivers and/or expense reimbursements recorded by the Fund during the period. Without waivers and/or reimbursements, yields would be reduced. This yield does not necessarily reflect income actually earned and distributed by the Fund and, therefore, may not be correlated with the dividends or other distributions paid to shareholders. **The 30-Day Standardized Unsubsidized** Yield does not adjust for any fee waivers and/or expense reimbursements in effect. If the Fund does not incur any fee waivers and/or expense reimbursements during the period, the 30-Day Standard Subsidized Yield and 30-Day Standardized Unsubsidized Yield will be identical.

Clean Infrastructure Risk Overview

Government policy changes, rising rates, customer health and construction delays are the key risks to monitor

Macro Risks

Government policy/regulatory changes

- If government policy no longer focuses on renewables growth and/or reduces allowable rates of return, there could be a slowdown in investment capital focused on clean energy infrastructure.

Rising interest rates

- If interest rates increase, this could lead to a higher cost of capital for clean energy infrastructure developers, lowering returns on investment.

Global slowdown

- The risk of a recession could lead to a slowdown in the economy, which in turn could reduce capital investment and energy demand.

Trade wars/tariffs

- Trade wars and tariffs could lead to increased development costs and/or less demand for clean energy infrastructure.

Inflationary periods

- During inflationary periods, renewable developers may face higher input costs, however, these costs can potentially be offset by higher power prices or passed through to customers.

Micro Risks

Customer health

- As many clean energy infrastructure companies sign long-term contracts for energy off-put, economically stressed counterparties could raise contractual concerns.

Construction delays

- Any construction delays, created by permitting issues and/or exogenous events, could impede cash flow generation, reduce returns and decrease the pace of renewables growth.

Weather

- Poor weather conditions could lead to lower-than-expected asset utilization.

Increased competition

- As increased capital enters the space, combined with decreasing costs, there will be pressure on pricing, which in turn can lower rates of returns on projects.

Lagging technological advancements

- A key source of long-term clean energy infrastructure growth is dependent on battery storage technology, which today is insufficient and remains cost prohibitive to meet long-term policy goals.

Sources: Goldman Sachs Asset Management. Data and views as of March 31, 2024.

Fund Risk Disclosures

Clean Energy Income Fund invests primarily in U.S. and non-U.S. equity securities issued by clean energy companies. The Fund's investments are subject to **market risk**, which means that the value of the securities in which it invests may go up or down in response to the prospects of individual companies, particular sectors or governments and/or general economic conditions. Because the Fund **concentrates its investments in the clean energy sector**, the Fund is subject to greater risk of loss as a result of adverse economic, business or other developments affecting industries within that sector than if its investments were more diversified across different industries. The securities of **mid- and small-capitalization companies** involve greater risks than those associated with larger, more established companies and may be subject to more abrupt or erratic price movements. **Foreign and emerging markets investments** may be more volatile than investments in U.S. securities and are subject to the risks of currency fluctuations and adverse economic, social or political developments. **Investments in master limited partnerships ("MLPs")** are subject to certain risks, including risks related to limited control and limited rights to vote, potential conflicts of interest, cash flow risks, dilution risks, limited liquidity and risks related to the general partner's right to force sales at undesirable times or prices. Investing in **Real Estate Investment Trusts ("REITs")** involves certain unique risks in addition to those risks associated with investing in the real estate industry in general. REITs whose underlying properties are concentrated in a particular industry or geographic region are also subject to risks affecting such industries and regions. The securities of REITs involve greater risks than those associated with larger, more established companies and may be subject to more abrupt or erratic price movements because of interest rate changes, economic conditions and other factors. **Investments in energy infrastructure companies** are susceptible to various factors that may negatively impact their businesses or operations, including changes in environmental, governmental and other regulations, rising interest costs, surplus capacity and depletion concerns, increased competition from other providers of services and high leverage. **Investments in the utilities industry** can be very volatile and can be impacted significantly by supply and demand for services or fuel, government regulation, conservation programs, commodity price fluctuations and other factors. The Fund may make **private investments in public equities ("PIPEs")**, which may be deemed illiquid. The Fund's investments in pooled investment vehicles (including other investment companies, exchange-traded funds, REITs and MLPs) subject it to additional expenses. The Fund is **non-diversified** and may invest a larger percentage of its assets in fewer issuers than "diversified" mutual funds. Accordingly, the Fund may be more susceptible to adverse developments affecting any single issuer held in its portfolio and to greater losses resulting from these developments.

Portfolio Sustainability, Engagement & Impact

Approach to Sustainability

The GS Clean Energy Income Fund has a three-fold approach to sustainability

Filter

- Filter the global investable universe for companies that are either:
  - Dedicated renewable businesses
  - Transitioning to clean energy companies, excluding natural gas and nuclear power generation

Integrate

- Incorporate both qualitative and quantitative assessments
- May consider environmental, social, and governance factors as an integrated part of the fundamental research and stock selection process

Engage

- As part of our focus on long-term, active ownership, we may, in certain circumstances, use proxy voting and engagement as some of the tools available to encourage positive corporate decision making and productive change, where possible

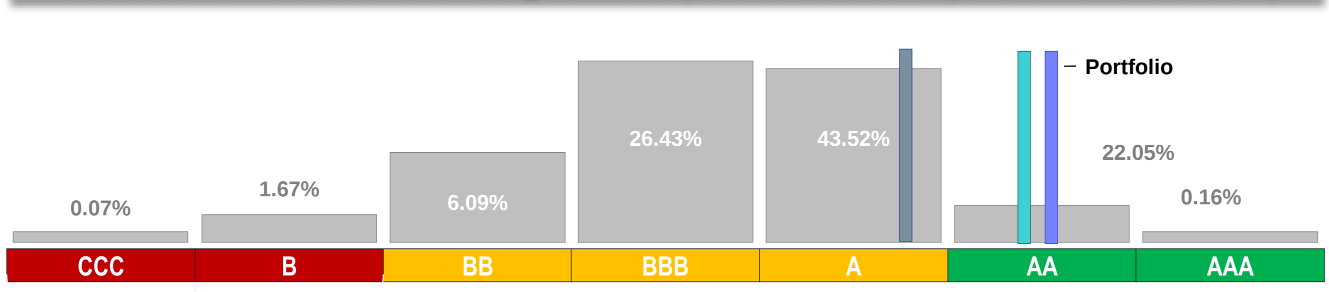
Source: Goldman Sachs Asset Management. Latest views and data available as of March 31, 2024. For informational purposes only and should not be construed as research, investment advice or a recommendation. There is no guarantee that these objectives will be met.

MSCI ESG Reporting

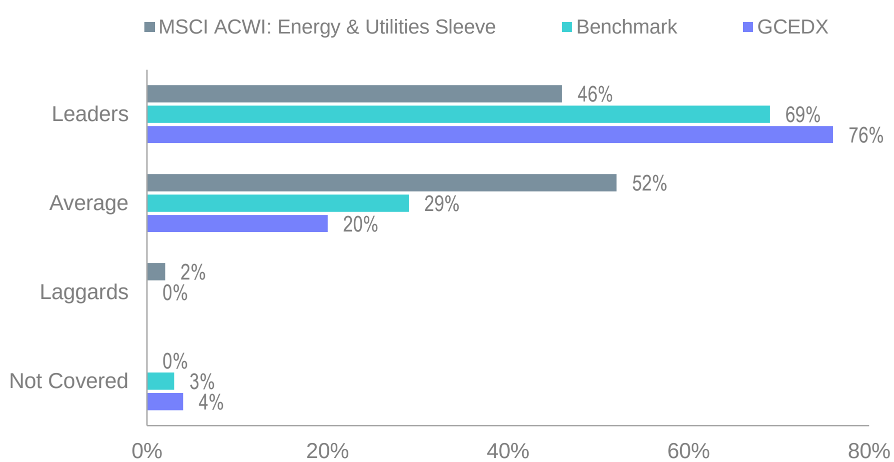
GCEDX achieved an ESG Rating of AA

GCEDX	AA
Benchmark[1]	AA
MSCI ACWI: Energy & Utilities Sleeve[2]	A

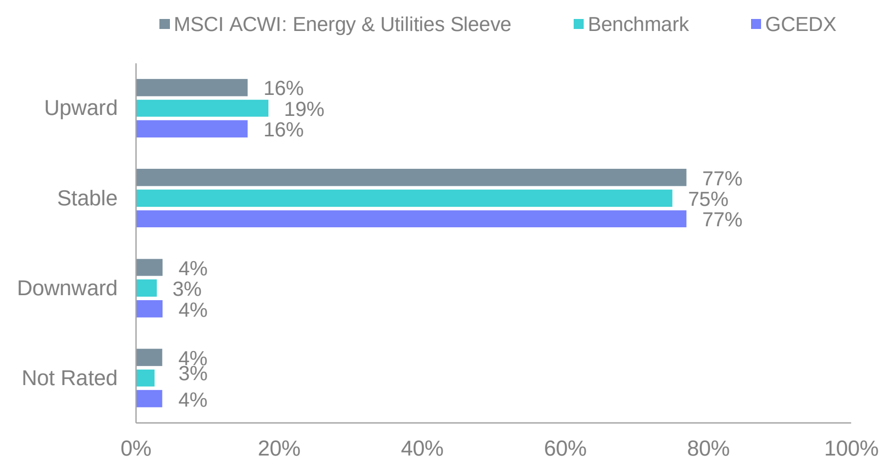
Distribution of MSCI ESG Fund Ratings Universe (Colored Bars Correspond to Portfolio and BM)



ESG Ratings Distribution



ESG Ratings Momentum

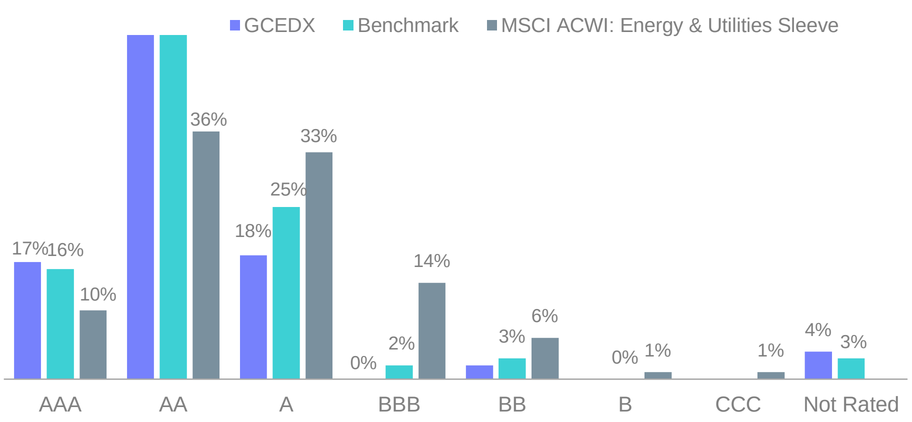


Source: MSCI. Latest data available as of March 31, 2024. [1]Benchmark: 50 Eagle North America Renewables Infrastructure Gross Index (35 Indxx Yieldco and Renewable Energy Income Net Index (15 Eagle Global Renewables Infrastructure Gross Index). [2]The MSCI ACWI Energy Utilities Sleeve reflects the energy and utilities sector of the MSCI ACWI benchmark grossed up to 100. Please note that metrics are sourced from third party data providers as opposed to our proprietary ESG analysis. For the information presented above, we look only at the portion of the portfolio that is covered by MSCI ESG Manager discarding securities that are not. ESG scores for the portfolios and securities therein may change over time. Unscored securities do not necessarily indicate low quality. Goldman Sachs Asset Management may invest in a security prior to completion of the ESG scorecard. Instances in which ESG scorecards may not be completed for a specific security prior to investment include but are not limited to IPOs, in-kind transfers, corporate actions, and/or certain short-term holdings. Please see additional disclosures at the end of the presentation.

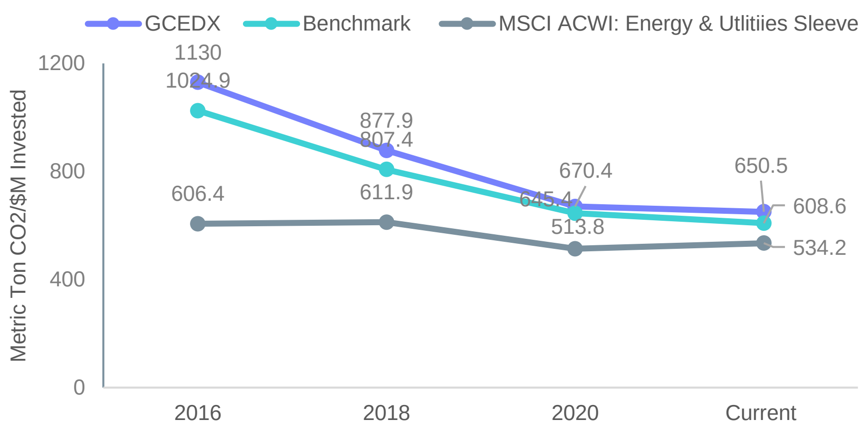
MSCI ESG Reporting

An environmental leader with constituent carbon emissions declining nearly ~50% since 2015, a trend which we expect will accelerate on the race to net zero

Overall ESG Rating Breakdown by Weight



Carbon Emissions Trend of Current Holdings



ESG Scores

	GCEDX (%)	Benchmark[1] (%)	MSCI ACWI: Energy & Utilities[2] (%)
ESG Score	**7.8**	**7.6**	**6.8**
Environment Score	7.5	7.7	5.9
Social Score	5.5	5.2	6.2
Governance Score	6.7	6.4	6.1

Key ESG Metrics

	GCEDX (%)	Benchmark[1] (%)	MSCI ACWI: Energy & Utilities[2] (%)
ESG Leaders	76.0	68.5	45.9
ESG Laggards	0.0	0.0	2.0
Governance Leaders	57.5	48.9	40.3
Governance Laggards	3.8	10.1	6.5

Source: MSCI. Latest data available as of March 31, 2024. [1]Benchmark: 50 Eagle North America Renewables Infrastructure Gross Index (35 Indxx Yieldco and Renewable Energy Income Net Index (15 Eagle Global Renewables Infrastructure Gross Index). [2]The MSCI ACWI Energy Utilities Sleeve reflects the energy and utilities sector of the MSCI ACWI benchmark grossed up to 100. Please note that metrics are sourced from third party data providers as opposed to our proprietary ESG analysis. For the information presented above, we look only at the portion of the portfolio that is covered by MSCI ESG Manager discarding securities that are not. ESG scores for the portfolios and securities therein may change over time. Unscored securities do not necessarily indicate low quality. Goldman Sachs Asset Management may invest in a security prior to completion of the ESG scorecard. Instances in which ESG scorecards may not be completed for a specific security prior to investment include but are not limited to IPOs, in-kind transfers, corporate actions, and/or certain short-term holdings. Please see additional disclosures at the end of the presentation.

MSCI ESG Reporting

Carbon emissions are in line with the MSCI ACWI: Energy & Utilities Sleeve

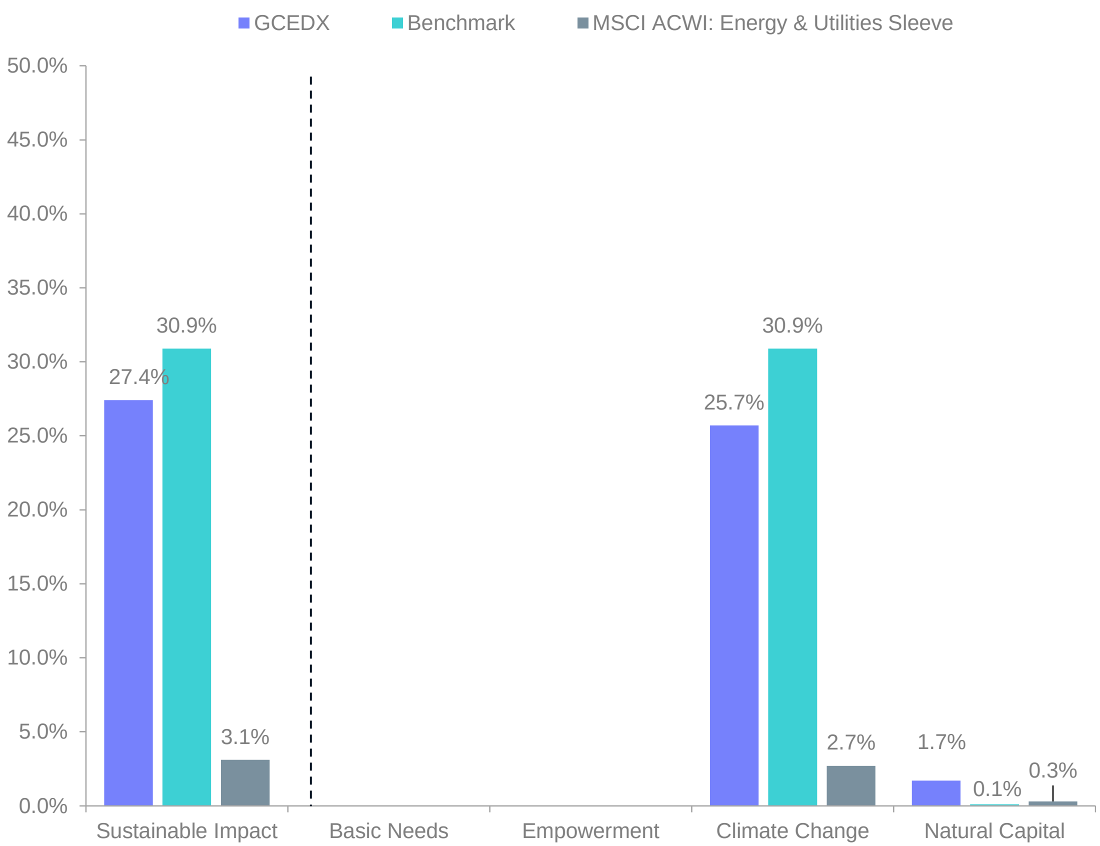
	Carbon Emissions	Weighted Avg. Carbon Intensity
	Tons CO2e / $M invested	Tons CO2e / $M sales
GCEDX	650.5	900.4
Benchmark[1]	608.6	915.2
MSCI ACWI: Energy & Utilities Sleeve[2]	534.2	806.3
Aim / Purpose	What is my portfolio's normalized carbon footprint per million dollars invested?	What is my portfolio's exposure to carbon intensive companies?
Description	Normalized measure of a portfolio's contribution to climate change that enables comparisons with a benchmark, between multiple portfolios, and over time, regardless of portfolio size.	Since companies with higher carbon intensity are likely to face more exposure to carbon related market and regulatory risks, this metric indicates a portfolio's exposure to potential climate change-related risks relative to other portfolios or a benchmark. Agnostic to ownership share, it also facilitates comparison with non-equity asset classes.

Sources: MSCI and United States Environmental Protection Agency. Latest data available as of March 31, 2024. [1]Benchmark: 50 Eagle North America Renewables Infrastructure Gross Index (35 Indxx Yieldco and Renewable Energy Income Net Index (15 Eagle Global Renewables Infrastructure Gross Index). [2]The MSCI ACWI Energy Utilities Sleeve reflects the energy and utilities sector of the MSCI ACWI benchmark grossed up to 100. Please note that metrics are sourced from third party data providers as opposed to our proprietary ESG analysis. For the information presented above, we look only at the portion of the portfolio that is covered by MSCI ESG Manager discarding securities that are not. ESG scores for the portfolios and securities therein may change over time. Unscored securities do not necessarily indicate low quality. Future investments may or may not be profitable. Goldman Sachs Asset Management may invest in a security prior to completion of the ESG scorecard. Instances in which ESG scorecards may not be completed for a specific security prior to investment include but are not limited to IPOs, in-kind transfers, corporate actions, and/or certain short-term holdings. Please see additional disclosures on slides 37-39.

MSCI Impacting Reporting

Squarely focused on de-carbonization and climate change

Revenue Exposure to Sustainable Impact Solutions



Active Revenue Exposure to Impact Solutions[1]	Sustainable Impact Assessment
+24.4%	**VERY HIGH**

Active Revenue Exposure to Impact Solutions vs. MSCI ACWI: Energy & Utilities Sleeve

Social Impact	**Basic Needs 0.0%**	greater revenue exposure of companies providing healthcare, nutrition, housing or sanitation products and services
Social Impact	**Empowerment 0.0%**	greater revenue exposure of companies providing SME finance or educational products and services
Environmental Impact	**Climate Change +23.0%**	greater revenue exposure of companies providing climate friendly technologies
Environmental Impact	**Natural Capital +1.4%**	greater revenue exposure of companies providing sustainable water or pollution prevention technologies

Source: MSCI. Latest data available as of March 31, 2024. [1]Active revenue exposure to impact solutions versus MSCI ACWI: Energy & Utilities Sleeve. Benchmark: 50 Eagle North America Renewables Infrastructure Gross Index (35 Indxx Yieldco and Renewable Energy Income Net Index (15 Eagle Global Renewables Infrastructure Gross Index). The MSCI ACWI Energy, 2024. Utilities Sleeve reflects the energy and utilities sector of the MSCI ACWI benchmark grossed up to 100. Please note that metrics are sourced from third party data providers as opposed to our proprietary ESG analysis. For the information presented above, we look only at the portion of the portfolio that is covered by MSCI ESG Manager discarding securities that are not. ESG scores for the portfolios and securities therein may change over time. Unscored securities do not necessarily indicate low quality. Goldman Sachs Asset Management may invest in a security prior to completion of the ESG scorecard. Instances in which ESG scorecards may not be completed for a specific security prior to investment include but are not limited to IPOs, in-kind transfers, corporate actions, and/or certain short-term holdings. Please see additional disclosures on slides 37-39.

Appendix & Disclosures

General Disclosures

Sustainable Impact Solutions Coverage

Social Impact research covers the constituents of the MSCI ACWI Index. Environmental Impact research covers the constituents of the MSCI ACWI IMI Index.

Report Inclusion Criteria

Companies must generate >=0 percent of revenue from Sustainable Impact Solutions to contribute towards a portfolio's Exposure to Sustainable Impact Solutions Revenue and the Issuer Revenue Generated from Sustainable Impact Solutions. Additionally, contributions from companies with negative externalities are excluded from both metrics. Negative externalities refer to ESG controversies with a score of 2 or below (very severe and severe controversies), ESG Ratings of CCC and B, direct involvement in predatory lending, involvement in controversial weapons, more than 5% revenue from conventional weapons or firearms, and more than 10% revenue from alcohol or tobacco production.

Portfolio Sustainable Impact Assessment

An index or portfolio's Sustainable Impact Assessment is determined by its exposure to Sustainable Impact Solutions Revenue as defined by the MSCI ESG Sustainable Impact Metrics methodology and associated definitions. The classifications are defined by the following table:

Classification		Exposure
Very High	●●●●	>20%
High	●●●○	>10% and <=20%
Moderate	●●○○	>5% and <= 10%
Low	●○○○	>1% and <=5%
Negligible	○○○○	<=1%

Revenue Exposure to Sustainable Impact Solutions - Calculation

An index or portfolio's exposure to Sustainable Impact Solutions Revenue is the portfolio weighted average of each company's percent of revenue generated by sustainable impact solutions goods and services. To avoid the possibility of overstating revenue exposure, companies outside of the coverage universe are treated as having 0% revenue from Sustainable Impact Solutions.

	Portfolio Weight	Sustainable Impact Solutions Revenue	Contribution to Exposure to Portfolio Sustainable Impact Solutions Revenue
Company A	50%	20%	10%
Company B	30%	60%	18%
Company C	20%	0%	0%
Total	**100%**		**28%**

General Disclosures

Estimated Annual Revenue Generated by Companies from Products & Services Providing Sustainable Impact solutions – Calculation

An index or portfolio's Estimated Annual Revenue Derived from Products & Services Providing Sustainable Impact Solutions is the sum of each company's Sustainable Impact Solutions revenue represented by an investor's ownership stake. As most fixed income securities do not represent an ownership stake, they are excluded from this calculation.

	Issuer Market Capitalization	Portfolio Market Value	Portfolio Ownership Stake	Issuer Sustainable Impact Solutions	Contribution to Issuer Revenue Generated from Sustainable Impact Solutions
Company A	$50,000,000	$500,000	1.0%	$30,000,000	$300,000
Company B	$60,000,000	$300,000	0.5%	$20,000,000	$100,000
Company C	$10,000,000	$200,000	2.0%	$0	$0
Total	**$120,000,000**	**$1,000,000**		**$50,000,000**	**$400,000**

Revenue Exposure to Sustainable Impact Solutions - Calculation

Definitions

Exposure to ESG Leaders	The percentage of market value exposed to issuers with AAA or AA ratings.
Exposure to ESG Laggards	The percentage of market value exposed to issuers with CCC or B ratings.
Weighted Average Carbon Intensity	The portfolio weighted average of each company's most recently reported or estimated Scope 1 + Scope 2 greenhouse gas emissions normalized by sales in USD.
Exposure to severe Biodiversity controversies	The percentage of market value exposed to issuers with severe or very severe controversies related to a firm's non-GHG emissions, or its use or management of natural resources.
Exposure to companies facing Water Stress	The percentage of market value exposed to issuers where more than 20% of the company's assets or key facilities are located in water basins where water stress levels are high, and devoted lines of business are typically moderately to highly water intensive.
Exposure to severe Product Safety controversies	The percentage of market value exposed to issuers with severe or very severe controversies related to the quality/safety of a firm's products and services.
Exposure to severe Marketing controversies	The percentage of market value exposed to issuers with severe or very severe controversies related to a firm's marketing and advertising practices.
Exposure to severe Employee Relations controversies	The percentage of market value exposed to issuers with severe or very severe controversies related to a firm's union relations practices, workforce diversity, or labor-management relations.
Exposure to companies facing Major Layoffs	The percentage of market value exposed to issuers that have undergone substantial layoffs (>1,000 employees or 10% of the workforce) in the past three years.
Exposure to Predatory Lending	The percentage of market value exposed to issuers that provide products and services associated with certain controversial lending practices.

General Disclosures

MSCI Carbon Emissions and Weighted Average Carbon Intensity

Total Carbon Emissions: MSCI calculates the portfolio carbon emissions by summing up all the emissions in the portfolio based on the investor's ownership share. The metric can also be expressed as per dollar invested.

Weighted average carbon intensity: A measure of a portfolio's exposure to carbon related potential market and regulatory risks and is computed as the sum product of the portfolio companies' carbon intensities and weights.

MSCI ESG Quality Score

Assesses the resilience of a fund's aggregate holdings to long term ESG risks. Highly rated funds consist of issuers with leading or improving management of key ESG risks, based on a granular breakdown of a company's business: its core product or business segments, the locations of its assets or revenues, and other relevant measures such as outsourced production. The "ESG Quality Score" is provided on a 0-10 score, with 0 and 10 being the respective lowest and highest possible fund scores.

MSCI ESG Rating

Each fund or ETF scores a rating on a scale from CCC (laggard) to AAA (leader). The rating is based first on the weighted average score of the holdings of the fund or ETF. MSCI then assesses ESG momentum to gain insight into the fund's ESG track record, which is designed to indicate a fund's exposure to holdings with a positive rating trend or worsening trend year over year. Finally, MSCI reviews the ESG tail risk to understand the fund's exposure to holdings with worst-of-class ESG Ratings of B and CCC.

MSCI leverages their ESG ratings and research coverage of over 7,500 companies (13,000 total issuers including subsidiaries) and more than 650,000 equity and fixed income securities to create ESG Ratings, scores and metrics for approximately 32,000 multi-asset class Mutual Funds and ETFs globally. To be included in Fund Ratings, a fund must pass the following three criteria: 1) 65% of the fund's gross weight must come from covered securities, 2) Fund holdings date must be less than one year old, and 3) Fund must have at least ten securities.

ESG Ratings Momentum

Represents the percentage of a portfolio's market value coming from holdings that have had an ESG Ratings upgrade, and those with a downgrade, since their previous ESG Rating assessment.

ESG Ratings	What it Means	
AAA, AA	Leader	The companies that the fund invests in show strong and/or improving management of financially relevant environmental, social and governance issues. These companies may be more resilient to disruptions arising from ESG events.
A, BBB, BB	Average	The fund invests in companies that show average management of ESG issues, or in a mix of companies with both above average and below average ESG risk management.
B, CCC	Laggard	The fund is exposed to companies that do not demonstrate adequate management of the ESG risks that they face, or show worsening management of these issues. These companies may be more vulnerable to disruptions arising from ESG events.

General Disclosures

This document and all of the information contained in it, including without limitation all text, data, graphs, charts (collectively, the “Information”) is the property of MSCI Inc. or its subsidiaries (collectively, “MSCI”), or MSCI’s licensors, direct or indirect suppliers or any third party involved in making or compiling any Information (collectively, with MSCI, the “Information Providers”) and is provided for informational purposes only. The Information may not be modified, reverse-engineered, reproduced or redisseminated in whole or in part without prior written permission from MSCI.

The Information may not be used to create derivative works or to verify or correct other data or information. For example (but without limitation), the Information may not be used to create indexes, databases, risk models, analytics, software, or in connection with the issuing, offering, sponsoring, managing or marketing of any securities, portfolios, financial products or other investment vehicles utilizing or based on, linked to, tracking or otherwise derived from the Information or any other MSCI data, information, products or services.

The user of the Information assumes the entire risk of any use it may make or permit to be made of the Information. NONE OF THE INFORMATION PROVIDERS MAKES ANY EXPRESS OR IMPLIED WARRANTIES OR REPRESENTATIONS WITH RESPECT TO THE INFORMATION (OR THE RESULTS TO BE OBTAINED BY THE USE THEREOF), AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, EACH INFORMATION PROVIDER EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES (INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF ORIGINALITY, ACCURACY, TIMELINESS, NON-INFRINGEMENT, COMPLETENESS, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) WITH RESPECT TO ANY OF THE INFORMATION.

Without limiting any of the foregoing and to the maximum extent permitted by applicable law, in no event shall any Information Provider have any liability regarding any of the Information for any direct, indirect, special, punitive, consequential (including lost profits) or any other damages even if notified of the possibility of such damages. The foregoing shall not exclude or limit any liability that may not by applicable law be excluded or limited, including without limitation (as applicable), any liability for death or personal injury to the extent that such injury results from the negligence or willful default of itself, its servants, agents or sub-contractors.

Information containing any historical information, data or analysis should not be taken as an indication or guarantee of any future performance, analysis, forecast or prediction. Past performance does not guarantee future results.

The Information should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. All Information is impersonal and not tailored to the needs of any person, entity or group of persons.

None of the Information constitutes an offer to sell (or a solicitation of an offer to buy), any security, financial product or other investment vehicle or any trading strategy.

It is not possible to invest directly in an index. Exposure to an asset class or trading strategy or other category represented by an index is only available through third party investable instruments (if any) based on that index. MSCI does not issue, sponsor, endorse, market, offer, review or otherwise express any opinion regarding any fund, ETF, derivative or other security, investment, financial product or trading strategy that is based on, linked to or seeks to provide an investment return related to the performance of any MSCI index (collectively, “Index Linked Investments”). MSCI makes no assurance that any Index Linked Investments will accurately track index performance or provide positive investment returns. MSCI Inc. is not an investment adviser or fiduciary and MSCI makes no representation regarding the advisability of investing in any Index Linked Investments.

Index returns do not represent the results of actual trading of investible assets/securities. MSCI maintains and calculates indexes, but does not manage actual assets. Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the index or Index Linked Investments. The imposition of these fees and charges would cause the performance of an Index Linked Investment to be different than the MSCI index performance.

Constituents of MSCI equity indexes are listed companies, which are included in or excluded from the indexes according to the application of the relevant index methodologies. Accordingly, constituents in MSCI equity indexes may include MSCI Inc., clients of MSCI or suppliers to MSCI. Inclusion of a security within an MSCI index is not a recommendation by MSCI to buy, sell, or hold such security, nor is it considered to be investment advice.

Data and information produced by various affiliates of MSCI Inc., including MSCI ESG Research LLC and Barra LLC, may be used in calculating certain MSCI indexes. More information can be found in the relevant index methodologies on www.msci.com.

References to indices, benchmarks or other measures of relative market performance over a specified period of time are provided for your information only and do not imply that the portfolio will achieve similar results. The index composition may not reflect the manner in which a portfolio is constructed. While an adviser seeks to design a portfolio which reflects appropriate risk and return features, portfolio characteristics may deviate from those of the benchmark. This material is provided at your request for informational purposes only. It is not an offer or solicitation to buy or sell any securities.

General Disclosures

THIS MATERIAL DOES NOT CONSTITUTE AN OFFER OR SOLICITATION IN ANY JURISDICTION WHERE OR TO ANY PERSON TO WHOM IT WOULD BE UNAUTHORIZED OR UNLAWFUL TO DO SO.

Prospective investors should inform themselves as to any applicable legal requirements and taxation and exchange control regulations in the countries of their citizenship, residence or domicile which might be relevant.

This material is provided for informational purposes only and should not be construed as investment advice or an offer or solicitation to buy or sell securities. This material is not intended to be used as a general guide to investing, or as a source of any specific investment recommendations, and makes no implied or express recommendations concerning the manner in which any client's account should or would be handled, as appropriate investment strategies depend upon the client's investment objectives.

MSCI receives compensation in connection with licensing its indexes to third parties. MSCI Inc.'s revenue includes fees based on assets in Index Linked Investments. Information can be found in MSCI Inc.'s company filings on the Investor Relations section of www.msci.com.

MSCI ESG Research LLC is a Registered Investment Adviser under the Investment Advisers Act of 1940 and a subsidiary of MSCI Inc. Except with respect to any applicable products or services from MSCI ESG Research, neither MSCI nor any of its products or services recommends, endorses, approves or otherwise expresses any opinion regarding any issuer, securities, financial products or instruments or trading strategies and MSCI's products or services are not intended to constitute investment advice or a recommendation to make (or refrain from making) any kind of investment decision and may not be relied on as such. Issuers mentioned or included in any MSCI ESG Research materials may include MSCI Inc., clients of MSCI or suppliers to MSCI, and may also purchase research or other products or services from MSCI ESG Research. MSCI ESG Research materials, including materials utilized in any MSCI ESG Indexes or other products, have not been submitted to, nor received approval from, the United States Securities and Exchange Commission or any other regulatory body.

Any use of or access to products, services or information of MSCI requires a license from MSCI. MSCI, Barra, RiskMetrics, IPD, FEA, InvestorForce, and other MSCI brands and product names are the trademarks, service marks, or registered trademarks of MSCI or its subsidiaries in the United States and other jurisdictions. The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and Standard & Poor's. "Global Industry Classification Standard (GICS)" is a service mark of MSCI and Standard & Poor's.

Certain information ©2024 MSCI ESG Research LLC. Reproduced by permission; no further distribution. Although Goldman Sachs Asset Management's information providers, including without limitation, MSCI ESG Research LLC and its affiliates (the "ESG Parties"), obtain information (the "Information") from sources they consider reliable, none of the ESG Parties warrants or guarantees the originality, accuracy and/or completeness, of any data herein and expressly disclaim all express or implied warranties, including those of merchantability and fitness for a particular purpose. The Information may only be used for your internal use, may not be reproduced or disseminated in any form and may not be used as a basis for, or a component of, any financial instruments or products or indices. Further, none of the Information can in and of itself be used to determine which securities to buy or sell or when to buy or sell them. None of the ESG Parties shall have any liability for any errors or omissions in connection with any data herein, or any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages.

Neither MSCI nor any other party involved in or related to compiling, computing, or creating the MSCI data makes any express or implied warranties or representations with respect to such data (or the results to be obtained by the use thereof), and all such parties hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability, or fitness for a particular purpose with respect to any of such data. Without limiting any of the foregoing, in no event shall MSCI, any of its affiliates or any third party involved in or related to compiling, computing or creating the data have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages. No further distribution or dissemination of the MSCI data is permitted without MSCI's express written consent.

General Disclosures

Definitions

Index Benchmarks

Indices are unmanaged. The figures for the index reflect the reinvestment of all income or dividends, as applicable, but do not reflect the deduction of any fees or expenses which would reduce returns. Investors cannot invest directly in indices.

The indices referenced herein have been selected because they are well known, easily recognized by investors, and reflect those indices that the Investment Manager believes, in part based on industry practice, provide a suitable benchmark against which to evaluate the investment or broader market described herein.

Equities – S&P 500 Index (SPX) – an index of 500 stocks chosen for market size, liquidity and industry grouping, among other factors. The S&P 500 is designed to be a leading indicator of US equities and is meant to reflect the risk/return characteristics of the large cap universe.

Traditional Energy Infrastructure – AMNA Index – The Alerian Midstream Energy Index is a broad-based composite of North American energy infrastructure companies. The capped, float-adjusted and capitalization-weighted index is disseminated real-time on a price-return basis (AMNA) and on a total-return basis (AMNAX).

Clean Energy Infrastructure – From 2015 through 2017, 100% Eagle North America Renewables Infrastructure Gross Index (RENEWNA). From 2018 through current, 50% Eagle North America Renewables Infrastructure Gross Index (RENEWNA), 35% Indxx Yieldco and Renewable Energy Income Net Index (IYLCOREC) & 15% Eagle Global Renewables Infrastructure Gross Index (RENEW).

RENEWNA Index – The Eagle North American Renewables Infrastructure Index provides a benchmark that is designed to track the performance of renewables infrastructure or renewables related infrastructure assets, primarily wind, solar, hydro, biomass, and electric transmission lines. Constituents are companies whose stocks trade in either the USA and Canada, though assets owned by these companies can have a global reach. The index is a capped, float-adjusted, capitalization-weighted index developed by Eagle Global Advisors, and disseminated real-time on a price-return basis (RENEWNA) and on a total-return basis (RENEWNAT).

IYLCOREC Index – a Net Total Return Index designed to track the performance of income-paying renewable energy companies (RECs) and companies categorized as YieldCos listed in Developed and Emerging Markets.

RENEW Index – The Eagle Global Renewables Infrastructure Index provides a benchmark that is designed to track the performance of renewables infrastructure or renewables-related infrastructure assets, primarily wind, solar, hydro, biomass, and electric transmission lines. Constituents are companies whose stocks trade globally in OECD countries. The index is a capped, float-adjusted, capitalization-weighted index developed by Eagle Global Advisors, and disseminated real-time on a price-return basis (RENEW) and on a total-return basis (RENEWTR).

Clean Tech – ECO Index – The WilderHill Clean Energy Index is a modified equal dollar weighted index comprised of publicly traded companies whose business's stand to benefit substantially from societal transition toward the use of cleaner energy and conservation. The index benchmark value is 100.00 at the close of trading on December 30, 2002.

Real Estate Investment Trusts (REITS) – FTSE/NAREIT North America Index – gauges the performance of companies that develop and own real estate in North America.

Utilities – PHLX Utility Sector Index (UTY) – a market capitalization-weighted index composed of geographically diverse public utility stocks.

High Yield Bonds – ICE BofA US High Yield Index (H0A0) – tracks the performance of US dollar denominated below investment grade corporate debt publicly issued in the US domestic market. Qualifying securities must have a below investment grade rating (based on an average of Moody's, S&P and Fitch), at least 18 months to final maturity at the time of issuance, at least one year remaining term to final maturity as of the rebalancing date, a fixed coupon schedule and a minimum amount outstanding of $250 million.

General Disclosures

Definitions (Cont.)

Investment Grade Bonds – Bloomberg Barclays US Agg Corporate Bond Index (LUACYW) – is a broad base, market capitalization-weighted bond market index representing intermediate term investment grade bonds traded in the United States. Investors frequently use the index as a stand-in for measuring the performance of the US bond market.

Global Infrastructure – Dow Jones Brookfield Global Infrastructure (DJBGI) – Global index of companies with >70% of cash flows derived from infrastructure lines of business. Components must be domiciled in a country with a liquid listing & must pass screens for minimum float market cap and trading volume. The index is float market cap weighted. Calculated in USD.

MSCI ACWI – MSCI ACWI Index (MXWD) -- The MSCI ACWI Index is a free-float weighted equity index. It was developed with a base value of 100 as of December 31 1987. MXWD includes both emerging and developed world markets, for developed markets only.

MAC Global Solar Energy Index -- Tracks globally-listed public companies that specialize in providing solar energy products and services.

NASDAQ Clean Edge U.S. Liquid Series Index -- Modified market capitalization weighted indexes designed to track the performance of clean-energy companies that are publicly traded in the U.S.

The Solactive Global Lithium Index -- Tracks the performance of the largest and most liquid listed companies active in exploration and/or mining of Lithium or the production of Lithium batteries. The index is calculated as a total return index in USD and adjusted semi-annually.

The S&P Global Clean Energy Index -- Provides liquid and tradable exposure to 30 companies from around the world that are involved in clean energy related businesses. The index is comprised of a diversified mix of Clean Energy Production and Clean Energy Equipment & Technology companies. The S&P Global Clean Energy Index is part of the S&P Global Thematic Indices. The series is designed to provide liquid exposure to emerging investment themes of water, clean energy and infrastructure that cut across traditional industry definitions and geographical boundaries. The series incorporates a unique selection and weighting scheme that provides diversified and tradable exposure for these themes.

Municipal Bonds – BVAL Muni Benchmark 10Y (049M10Y) – the curve is the baseline curve for BVAL tax-exempt munis. It is populated with high quality US municipal bonds with an average rating of AAA from Moody's and S&P. The yield curve is built using non-parametric fit of market data obtained from the Municipal Securities Rulemaking Board.

10 Year Treasury – BofA Merrill Lynch US Treasuries (10Y) Index – an unmanaged index that tracks the performance of the three most recently issued 10-year US Treasury notes

Upstream: Upstream investments include companies that are engaged in the manufacturing and development of clean energy technology, including solar panels, wind turbines, batteries and fuel cells.

Midstream: Midstream clean energy infrastructure companies include companies that primarily own, operate and in some cases develop clean energy assets (solar, wind, hydro, biomass, ethanol) often selling clean energy to a purchaser under long term contracts.

Downstream: Downstream energy companies include companies that are engaged in the distribution, use and deployment of clean energy.

Spread: A spread is the difference between two numbers, usually between two types of yields such as the yield of a security above a 10 year treasury bill.

CAGR: Compound annual growth rate is a business and investing specific term for the geometric progression ratio that provides a constant rate of return over the time period.

Basis point (BPS): refers to a common unit of measure for interest rates and other percentages in finance. One basis point is equal to 1/100th of 1%, or 0.01%, or 0.0001, and is used to denote the percentage change in a financial instrument.

General Disclosures

Definitions (Cont.)

Stocks: Stock investments are subject to market risk, which means that the value of the securities may go up or down in response to the prospects of individual companies, particular sectors and/or general economic conditions.

Bonds: Fixed income investing involves interest rate risk. When interest rates rise, bond prices generally fall.

High Yield: Below investment grade (high yield) bonds are more at risk of default and are subject to liquidity risk.

Sharpe Ratio: Measures the performance of an investment compared to a risk-free asset, after adjusting for its risk. It is defined as the difference between the returns of the investment and the risk-free return, divided by the standard deviation of the investment.

High Yield: Below investment grade (high yield) bonds are more at risk of default and are subject to liquidity risk.

10-Year US Treasuries: A 10-Year Treasury is a debt obligation backed by the United States government and its interest payments are exempt from state and local taxes. However, interest payments are not exempt from federal taxes.

EV/EBITDA: Enterprise Value (EV) divided by earnings before interest, taxes, depreciation, and amortization (EBITDA). EV is calculated as follows: Market Capitalization + Preferred Shares + Minority Interest + Debt – Total Cash.

Offtake Agreement: An agreement between a producer and customer to buy an agreed upon amount of the producer's future output.

Weighted Average Market Cap: the weighted average value of the companies in the index or portfolio.

Price to Earnings Ratio (P/E): The ratio of a company's share price to the company's earnings per share.

Earnings Per Share: Net earnings available to common shareholders by the average outstanding shares.

Capital Expenditure: funds used by a company to acquire, upgrade, and maintain physical assets such as property, plants, buildings, technology, or equipment.

Morningstar Sustainable Investment – Overall: Morningstar defines "Sustainable Investment" as a fund that explicitly indicates any kind of sustainability, impact, or ESG strategy in their prospectus or offering documents. "ESG Funds" incorporate environmental, social, and governance (ESG) principles into the investment process or engagement activities. "Impact Funds" seek to make a measurable impact with investments on specific issue areas like Gender Diversity or Community development alongside financial return. "Environmental Sector Funds" are non-diversified funds that invest in environmentally oriented industries like renewable energy or water.

Morningstar Sustainable Investment - ESG Fund Overall: Sustainable funds incorporate environmental, social, and governance (ESG) principles into the investment process or through engagement activities.

Morningstar Sustainable Investment – Environmental Sector Overall: These are non-diversified funds that invest in environmentally-oriented industries, such as renewable energy or water.

Morningstar Sustainable Investment – Renewable Energy: These are funds that intend to invest in companies involved in the renewable energy sector.

General Disclosures

Master Limited Partnerships ("MLPs") may be generally less liquid than other publicly traded securities and as such can be more volatile and involve higher risk. Investments in securities of an MLP involve risks that differ from investments in common stocks, including risks related limited control and limited rights to vote on matters affecting the MLP, risks related to potential conflicts of interest between the MLP and the MLP's general partner, cash flow risks, dilution risks and risks related to the general partner's right to require unit holders to sell their common units at an undesirable time or price. MLPs are also generally considered interest-rate sensitive investments. During periods of interest rate volatility, these investments may not provide attractive returns.

Investments in MLPs are subject to certain risks, including risks related to limited control and limited rights to vote, potential conflicts of interest, cash flow risks, dilution risks, limited liquidity and risks related to the general partner's right to force sales at undesirable times or prices.
MLPs may also involve substantially different tax treatment than other equity-type investments, and such tax treatment could be disadvantageous to certain types of investors, such as retirement plans, mutual funds, charitable accounts, foreign investors, retirement accounts or charitable entities. In addition, investments in MLPs may trigger state tax reporting requirements. Generally, a master limited partnership ("MLP") is treated as a partnership for Federal income tax purposes. Therefore, investors in an MLP may be subject to certain taxes in addition to Federal income taxes, including state and local income taxes imposed by the various jurisdictions in which the MLP conducts business or owns property. In addition, certain tax-exempt investors in an MLP, such as tax-exempt foundations and charitable lead trusts, may incur unrelated business taxable income ("UBTI") with respect to their investment. UBTI may result in increased Federal, and possibly state and local, tax costs, and may also result in additional filing requirements for tax exempt investors. Non-US investors may be subject to US taxation on a net income basis and have US filing obligations as a result of investing in MLPs. The tax reporting information for MLPs generally is provided to investors on an annual IRS Schedule K-1, rather than an IRS Form 1099. To the extent the Schedule K-1 is delivered after April 15, you may be required to request an extension to file your tax returns.

Views and opinions expressed are for informational purposes only and do not constitute a recommendation by Goldman Sachs Asset Management to buy, sell, or hold any security. Views and opinions are current as of the date of this presentation and may be subject to change, they should not be construed as investment advice.

Indices are unmanaged. The figures for the index reflect the reinvestment of all income or dividends, as applicable, but do not reflect the deduction of any fees or expenses which would reduce returns. Investors cannot invest directly in indices.

Economic and market forecasts presented herein reflect a series of assumptions and judgments as of the date of this presentation and are subject to change without notice. These forecasts do not take into account the specific investment objectives, restrictions, tax and financial situation or other needs of any specific client. Actual data will vary and may not be reflected here. These forecasts are subject to high levels of uncertainty that may affect actual performance. Accordingly, these forecasts should be viewed as merely representative of a broad range of possible outcomes. These forecasts are estimated, based on assumptions, and are subject to significant revision and may change materially as economic and market conditions change. Goldman Sachs has no obligation to provide updates or changes to these forecasts. Case studies and examples are for illustrative purposes only.

General Disclosures

This material is not authorized for distribution to prospective investors unless preceded or accompanied by a current Prospectus or summary prospectus, if applicable. Investors should consider a Fund's objective, risks, and charges and expenses, and read the summary prospectus, if available, and/or the Prospectus carefully before investing or sending money. The summary prospectus, if available, and the Prospectus contain this and other information about a Fund and may be obtained from your authorized dealer or from Goldman Sachs & Co. LLC by calling (retail—1-800-526-7384) (institutional—1-800-621-2550).

Past performance does not guarantee future results, which may vary. The value of investments and the income derived from investments will fluctuate and can go down as well as up. A loss of principal may occur.

Goldman Sachs does not provide legal, tax or accounting advice, unless explicitly agreed between you and Goldman Sachs (generally through certain services offered only to clients of Private Wealth Management). Any statement contained in this presentation concerning U.S. tax matters is not intended or written to be used and cannot be used for the purpose of avoiding penalties imposed on the relevant taxpayer. Notwithstanding anything in this document to the contrary, and except as required to enable compliance with applicable securities law, you may disclose to any person the US federal and state income tax treatment and tax structure of the transaction and all materials of any kind (including tax opinions and other tax analyses) that are provided to you relating to such tax treatment and tax structure, without Goldman Sachs imposing any limitation of any kind. Investors should be aware that a determination of the tax consequences to them should take into account their specific circumstances and that the tax law is subject to change in the future or retroactively and investors are strongly urged to consult with their own tax advisor regarding any potential strategy, investment or transaction.

This information discusses general market activity, industry or sector trends, or other broad-based economic, market or political conditions and should not be construed as research or investment advice. This material has been prepared by Goldman Sachs Asset Management and is not financial research nor a product of Goldman Sachs Global Investment Research (GIR). It was not prepared in compliance with applicable provisions of law designed to promote the independence of financial analysis and is not subject to a prohibition on trading following the distribution of financial research. The views and opinions expressed may differ from those of Goldman Sachs Global Investment Research or other departments or divisions of Goldman Sachs and its affiliates. Investors are urged to consult with their financial advisors before buying or selling any securities. This information may not be current and Goldman Sachs Asset Management has no obligation to provide any updates or changes.

Fund holdings and allocations shown are unaudited, and may not be representative of current or future investments. Fund holdings and allocations may not include the Fund's entire investment portfolio, which may change at any time. Fund holdings should not be relied on in making investment decisions and should not be construed as research or investment advice regarding particular securities. Current and future holdings are subject to risk.

Although certain information has been obtained from sources believed to be reliable, we do not guarantee its accuracy, completeness or fairness. We have relied upon and assumed without independent verification, the accuracy and completeness of all information available from public sources.
The portfolio risk management process includes an effort to monitor and manage risk, but does not imply low risk.

General Disclosures

Confidentiality

No part of this material may, without Goldman Sachs Asset Management's prior written consent, be (i) copied, photocopied or duplicated in any form, by any means, or (ii) distributed to any person that is not an employee, officer, director, or authorized agent of the recipient.

Goldman Sachs & Co. LLC is the distributor of the Goldman Sachs Funds.

- No Bank Guarantee
- May Lose Value
- Not FDIC Insured

Date of First Use: May 8, 2024.

Compliance Code : 370209