

#### SUSTAINABLE INVESTMENT

## **IMAX** presentation

Peter Michaelis & Mike Appleby

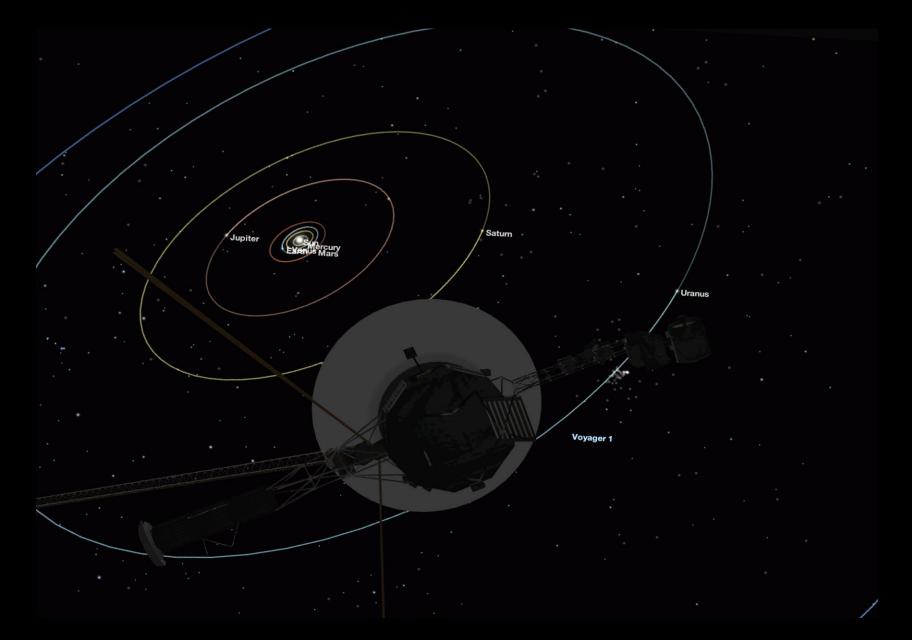
November 2024

For professional investors and advisers only

Why we already have the science to deliver a sustainable world

**Peter Michaelis** 

**Mike Appleby** 







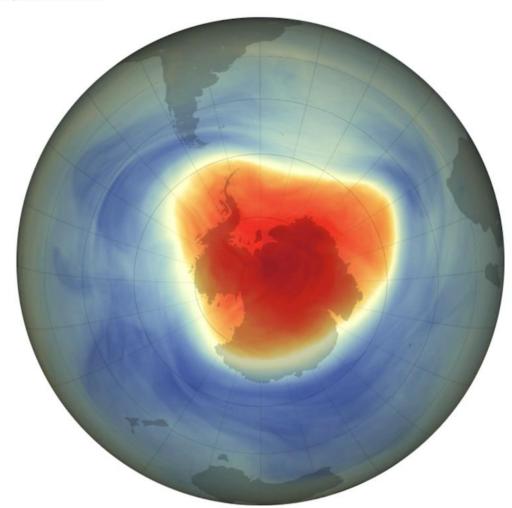
**Green algae and** cyanobacteria

**50** µm



#### **Ozone Hole Continues Healing in 2024**

September 28, 2024





The area of depleted ozone over the Antarctic ranked the seventh smallest since recovery began in 1992.

Image of the Day for October 31, 2024

Instrument: Model



#### View more Images of the Day:

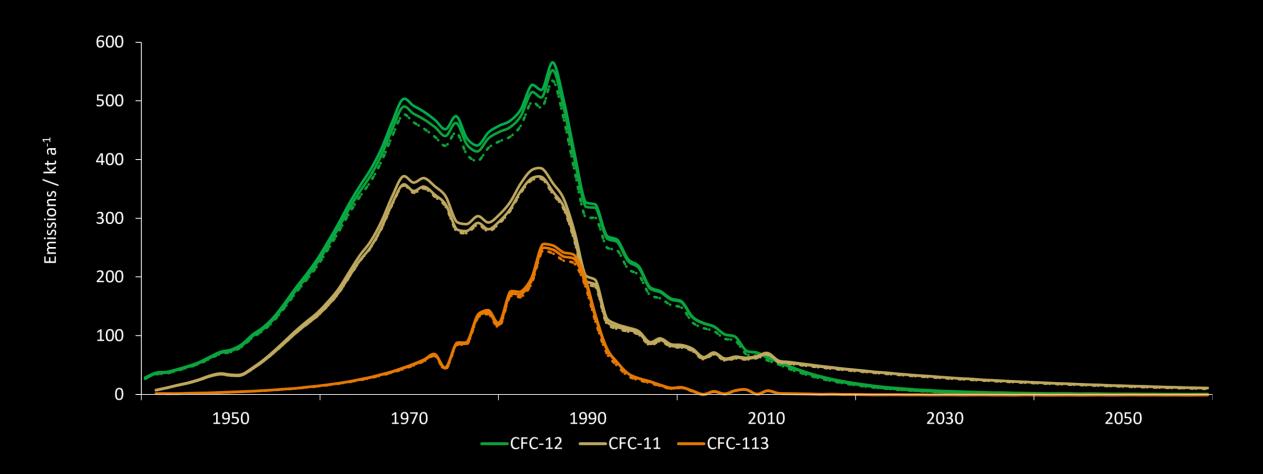




Oct 30, 2024

Nov 1, 2024

### CFC Concentrations in the atmosphere



Source: S. J. Allin et al.: Chlorine isotope composition in atmospheric, CFC-11, CFC-12 and CFC-113. Emissions estimates for CFC-11 (gold), CFC-12 (green) and CFC-113 (orange), based on global tropospheric mole fractions (SPARC, 2013). Each species is represented by three lines. The two emissions estimates from this study (solid lines) are produced using the stratosphere–troposphere exchange flux calculations of Holton (1990) and Appenzeller et al. (1996), with the latter giving slightly higher emissions. These are compared to values from Velders and Daniel (2014) (dashed lines)

## How progress happens



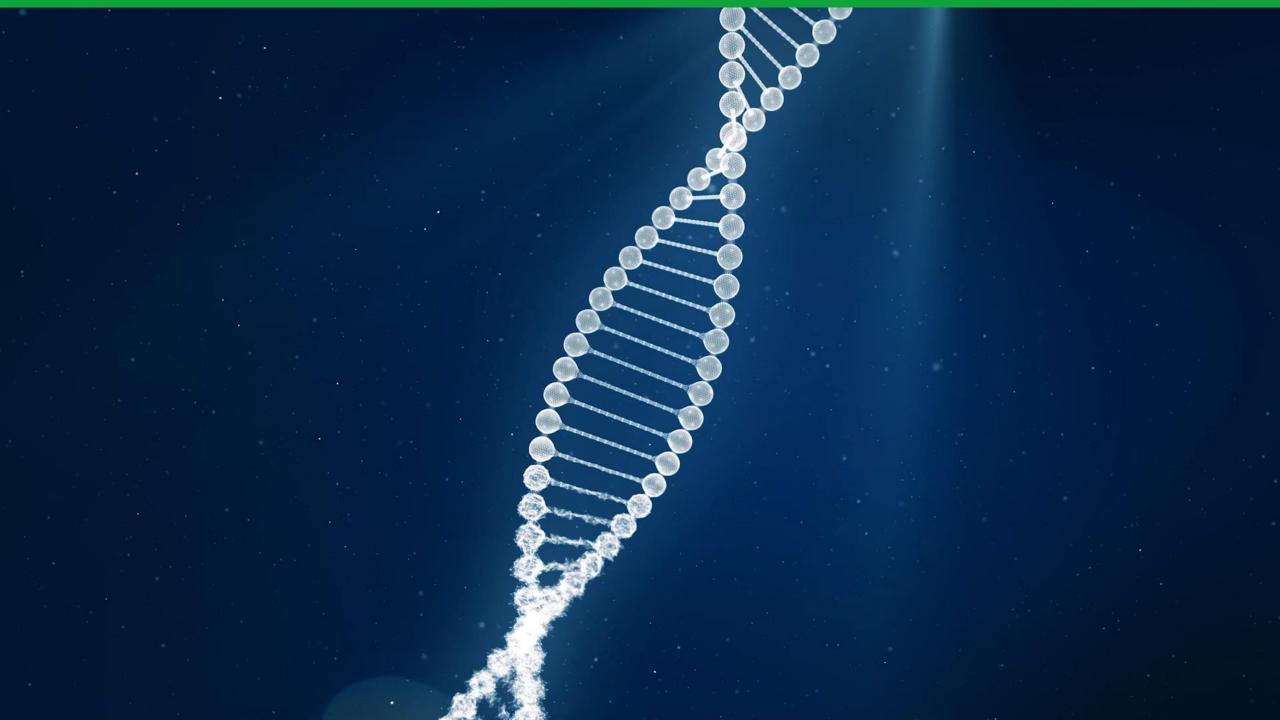


## **FAST-GROWING**

## **HIGH MARKET SHARES**

## **Revolution in healthcare**

## Transformation of our energy system



## Genome sequencing

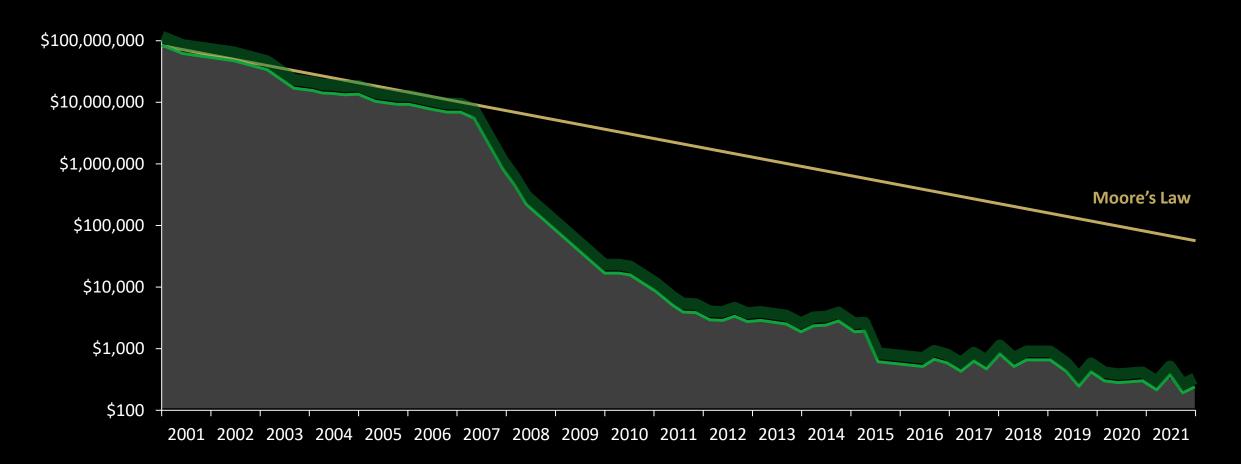


## March 2000

## April 2003

### Cost to sequence Human Genome

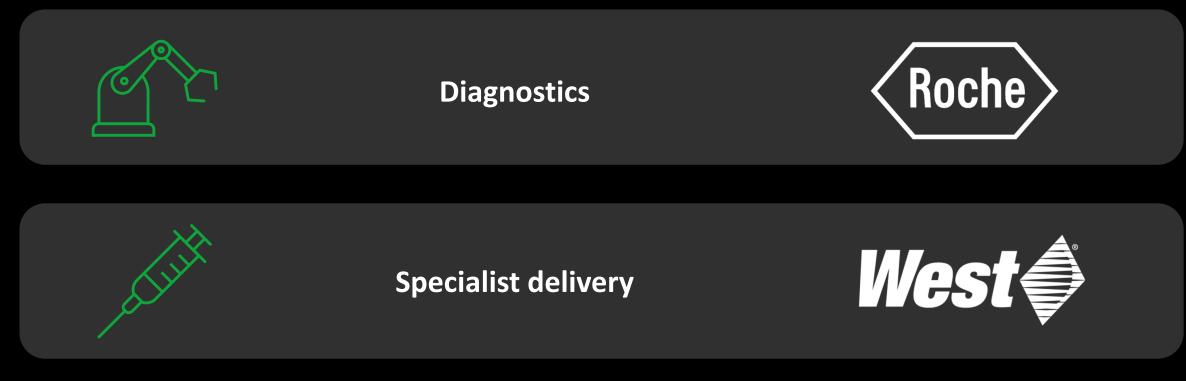
#### **Cost per Human Genome**





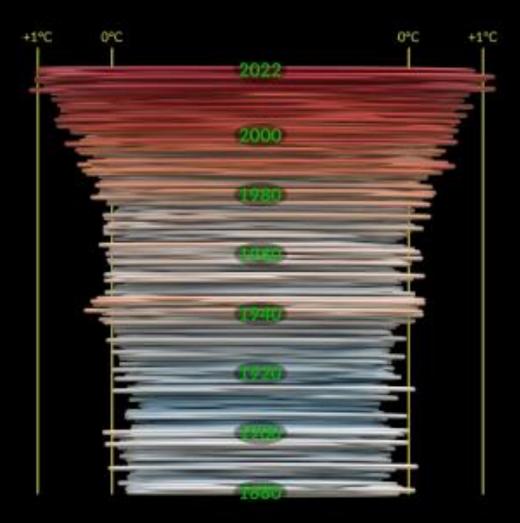
#### Research & development

#### **ThermoFisher** SCIENTIFIC

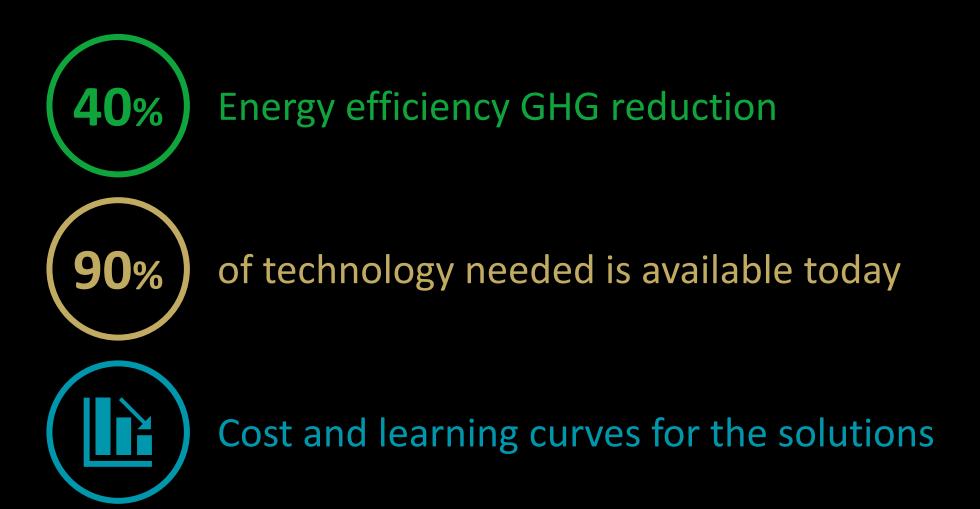


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## The energy transition to lower carbon, smarter energy use

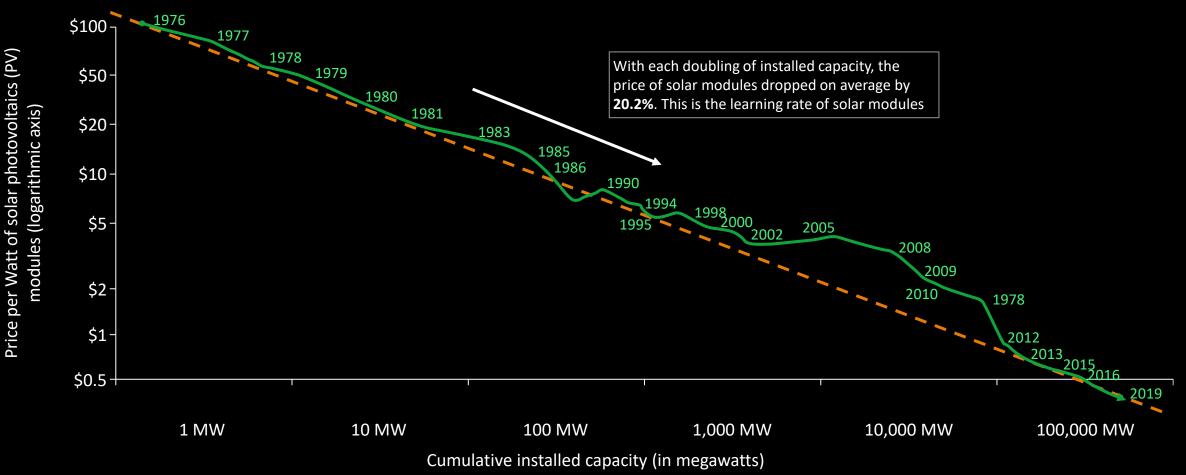


## Decarbonisation



### Learning curve – solar

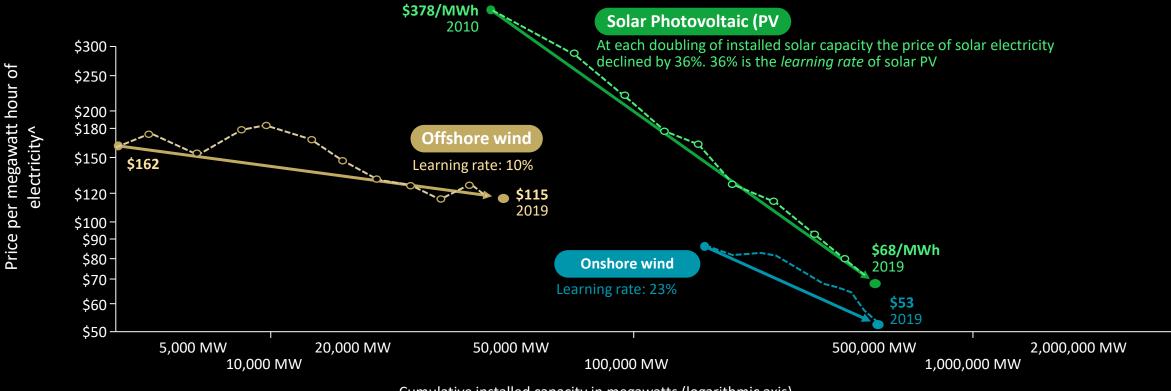
#### The price of solar modules declined by 99.6% since 1976^



Source: Lafond et al. (2017) and IRENA Database: the reported learning rate is an average over several studies reported by del La Tour et al (2013) in Energy. The rate remained very similar since then. OurWorldinData.org – Research and data to make progress against the world's largest problems. A The prices are adjusted for inflation and presented in 2019 US\$

## Wind and solar get cheaper

## Electricity from renewables became cheaper as we increased capacity – electricity from nuclear and coal did not



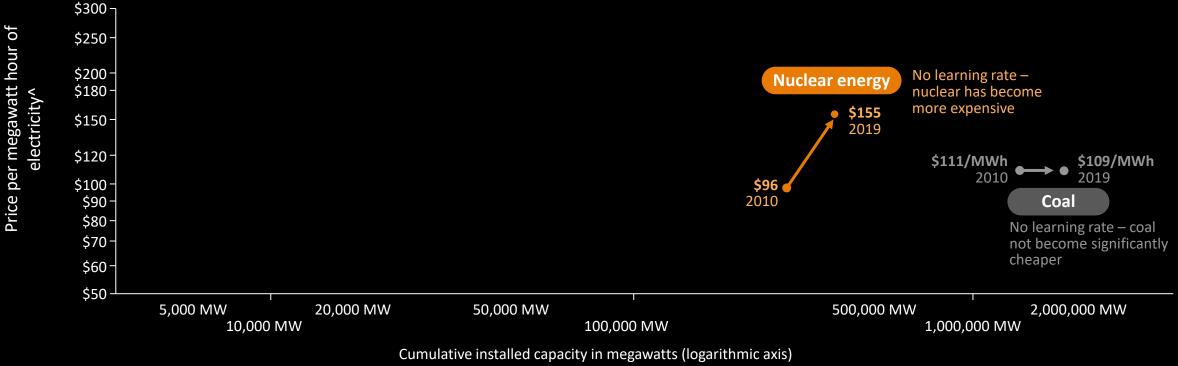
Cumulative installed capacity in megawatts (logarithmic axis)

#### while fossil fuels don't

Source: IRENA 2020 for all data on renewable sources; Lazard for the price of electricity from nuclear and coal – IAEA for nuclear capacity and Global Energy Monitor for coal capacity. Gas is not shown because the price between gas peaker and combined cycles differs significantly, and global data on the capacity of each of these sources is not available. The price of electricity from gas has fallen over this decade, but over the longer run it is not following a learning curve. OurWorldinData.org – Research and data to make process against the world's largest problems

### Wind and solar get cheaper

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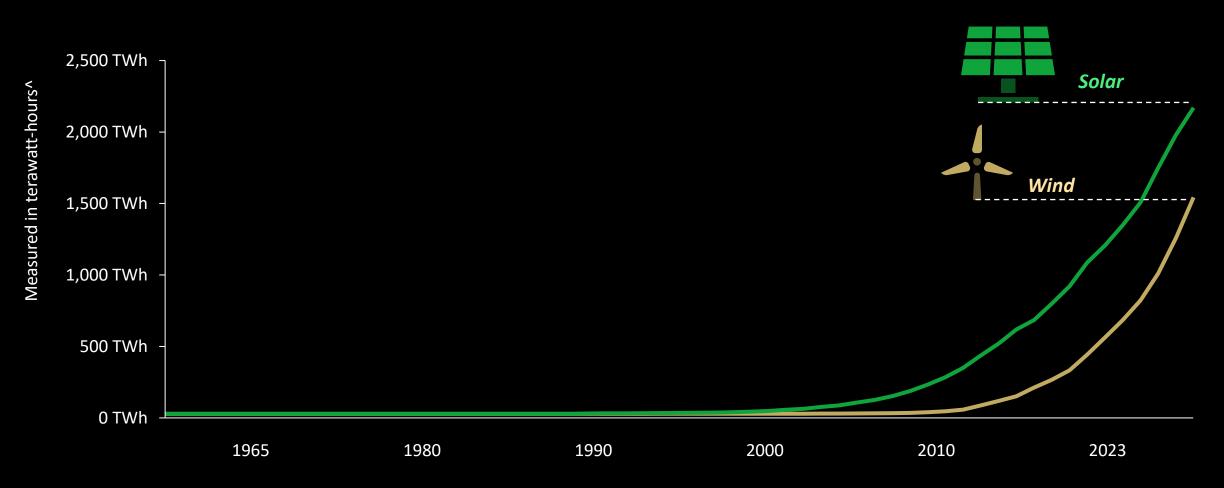


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Source: IRENA 2020 for all data on renewable sources; Lazard for the price of electricity from nuclear and coal – IAEA for nuclear capacity and Global Energy Monitor for coal capacity. Gas is not shown because the price between gas peaker and combined cycles differs significantly, and global data on the capacity of each of these sources is not available. The price of electricity from gas has fallen over this decade, but over the longer run it is not following a learning curve. OurWorldinData.org – Research and data to make process against the world's largest problems

## Cumulative wind and solar

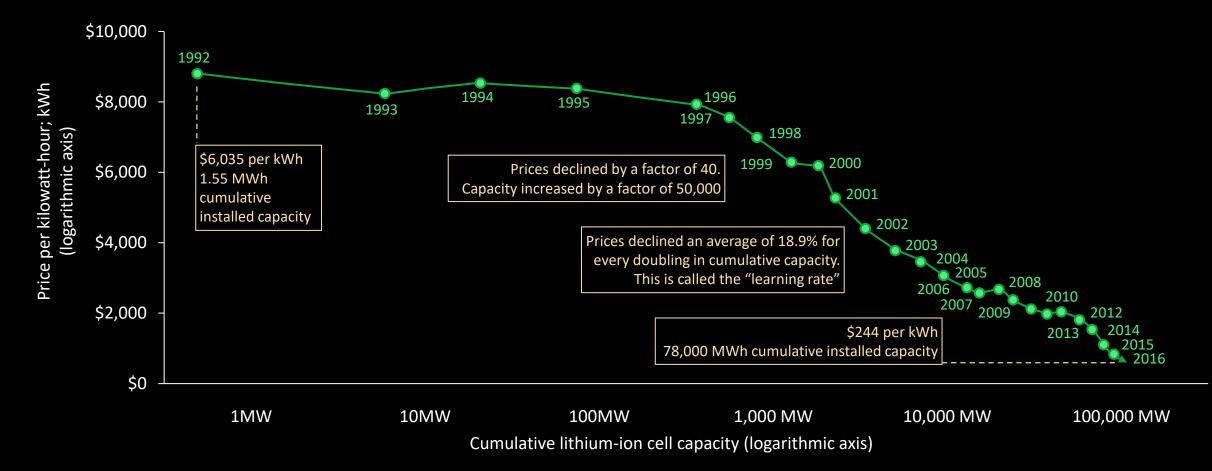
#### Modern renewable energy generation by source, World



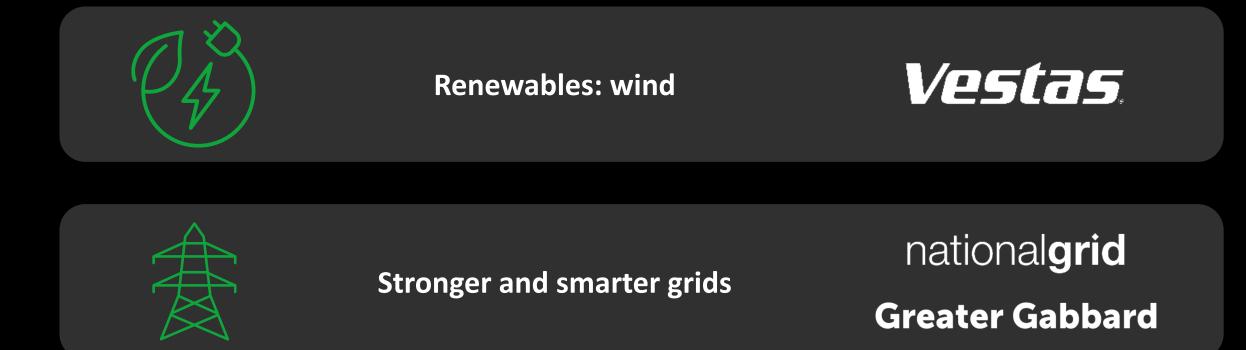
Source: Ember (2024); Energy Institute - Statistical Review of World Energy (2024), OurWorldinData.org/renewable-energy | CC BY. ^1. Watt-hour: A watt-hour is the energy delivered by one watt of power for one hour. Since one watt is equivalent to one joule per second, a watt-hour is equivalent to 3600 joules of energy. Metric prefixes are used for multiples of the unit, usually: - kilowatt-hours (kWh), or a thousand watt-hours. - Megawatt-hours (MWh), or a million watt-hours. - Gigawatt-hours (GWh), or a billion watt-hours. - Terawatt-hours (TWh), or a trillion watt-hours.

## Lithium-ion learning curve

#### Price and market size of lithium-ion batteries since 1992^

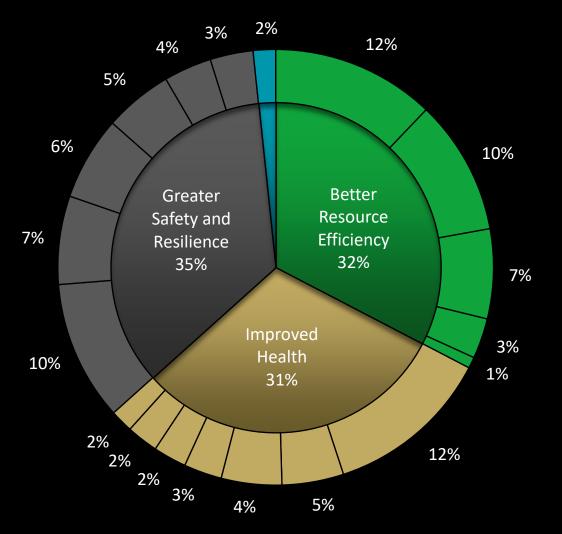


Source: Micah Ziegler and Jessika Trancik (2021). Re0-examining rates of lithium-ion battery technology improvement and cost decline. OurWorldinData.org – Research and data to make progress against the world's largest problems. Licensed under CC-BY by the author Hannah Ritchie. ^Prices are adjusted for inflation and given in 2018 US-\$ per kilowatt-hour (kWh).





## Thematic exposure: SF Global Growth

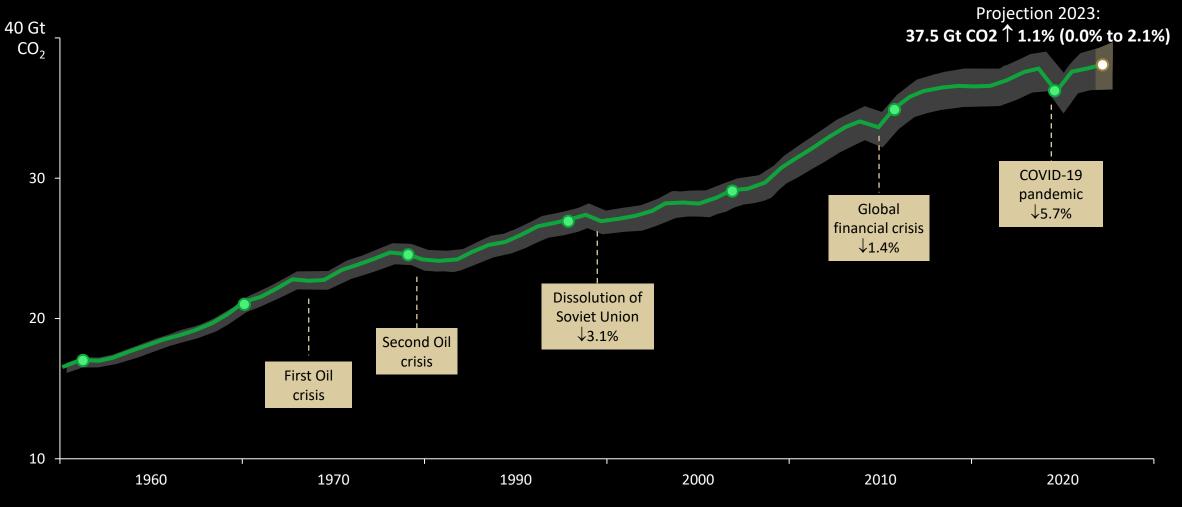


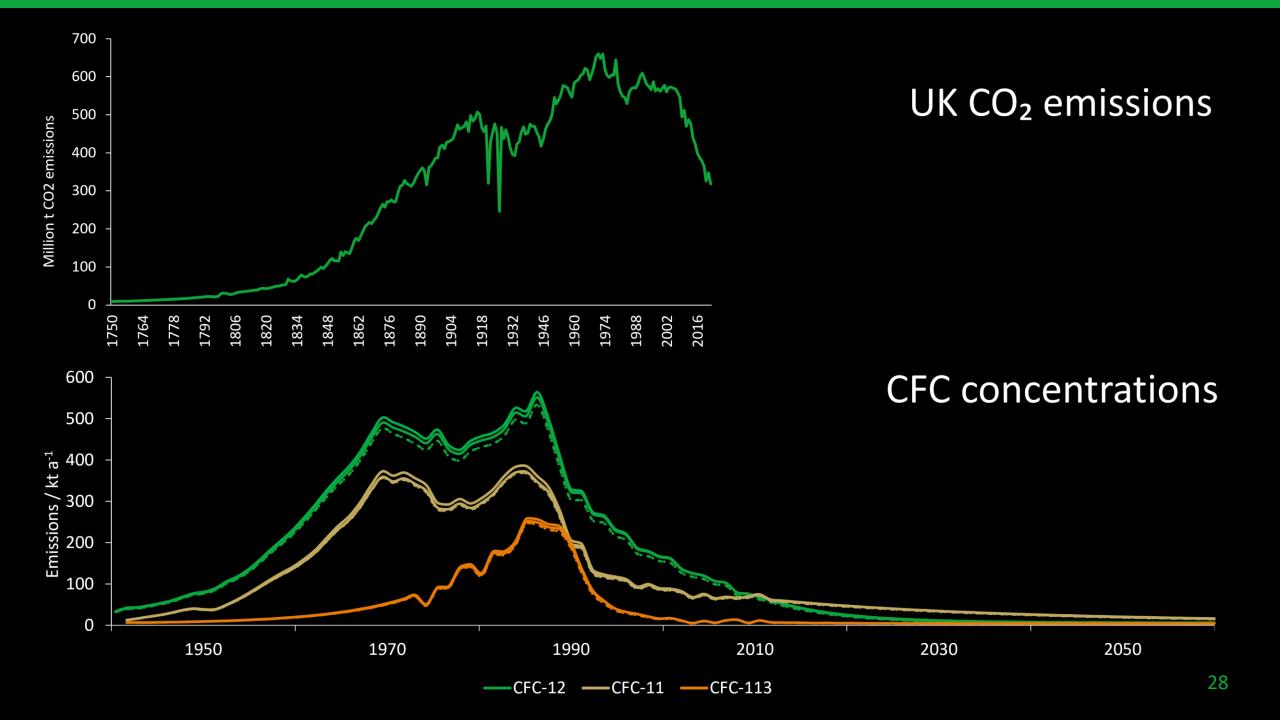
Themes						
12.1%		Improving the resource efficiency of industrial and agricultural processes				
10.0%		Improving the efficiency of energy use				
6.7%		Improving the management of water				
3.0%		Delivering a circular materials economy				
0.8%		Increasing electricity generation from renewable sources				
12.3%		Enabling innovation in healthcare				
4.6%		Providing education				
4.5%		Building better cities				
2.8%		Encouraging sustainable leisure				
2.5%		Connecting people				
2.3%		Enabling healthier lifestyles				
1.7%		Providing affordable healthcare				
10.4%		Enhancing digital security				
6.6%		Transparency in financial markets				
6.2%		Enabling SMEs				
5.1%		Better monitoring of supply chains and quality control				
3.6%		Leading ESG management				
3.2%		Saving for the future				
1.7%		Cash				

Source: Liontrust, Factset, as at 30.09.24. SMEs = Small- to Medium-sized enterprise; ESG = Environmental, Social & Governance

# Outlook

## Global CO2 emissions (fossil and land use) from the past three Global Carbon Budgets





## 22 areas of predictable and resilient growth

#### Better Resource Efficiency



- Improving the efficiency of energy use
- Improving the management of water
- Increasing electricity generation from renewable resources
- Improving the resource efficiency of industrial and agricultural processes
- Delivering a circular materials economy
- Making transportation more efficient or safer

Improved Health

- Enabling innovation in healthcare
- Building better cities
- Connecting people
- Providing affordable healthcare
- Providing education
- Enabling healthier lifestyles
- Delivering healthier foods
- Encouraging sustainable leisure

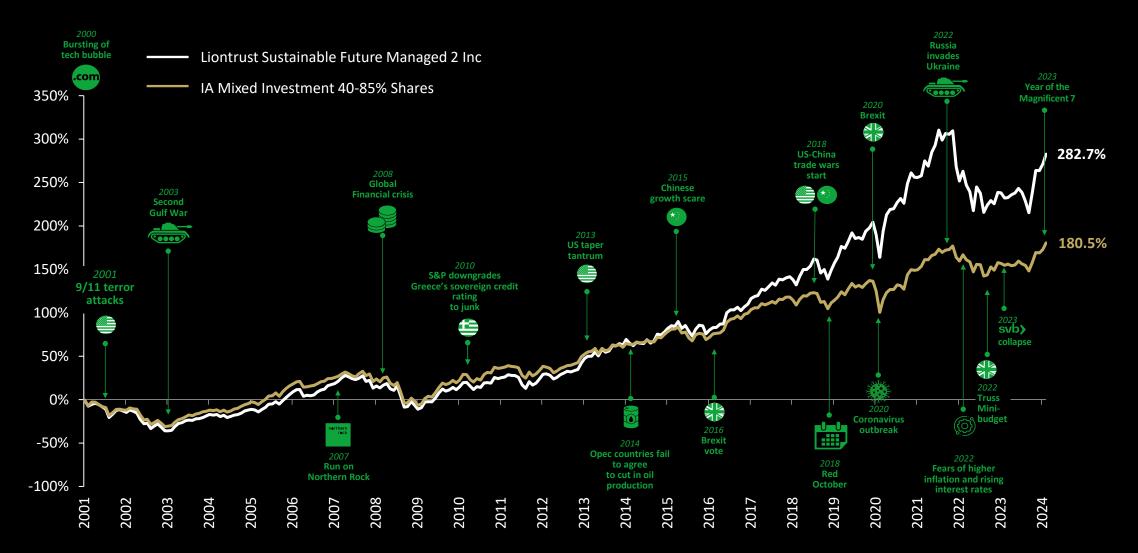


#### Greater Safety & Resilience



- Enhancing digital security
- Insuring a sustainable economy
- Saving for the future
- Enabling SMEs
- Financing housing
- Transparency in financial markets
- Better monitoring of supply chains and quality control
- Leading ESG management

## Market events | We focus on themes & fundamentals



Source: FE Analytics, data as at 19.02.01 – 29.03.24. Liontrust SF Managed Fund versus a comparator benchmark, IA Mixed Investment 40-85% Shares, primary share class, total return (net of fees, interest/income reinvested). All use of company logos, images or trademarks in this presentation are for reference purposes only

Past performance does not predict future returns. You may get back less than you originally invested. Please refer to the Key Risks slide for more information.

## Liontrust Sustainable Future | Quartile Performance



Source: FE Analytics as at 30.09.24, generated 07.10.24

Past performance does not predict future returns. You may get back less than you originally invested. Please refer to the Key Risks slide for more information.



## Discrete performance

To previous quarter 12 months ending (%)	Sep-24	Sep-23	Sep-22	Sep-21	Sep-20
Liontrust Sustainable Future Cautious Managed 2 Inc	13.5	2.2	-19.3	15.0	8.8
IA Mixed Investment 40-85% Shares	13.9	5.1	-10.2	16.6	-0.2
Liontrust Sustainable Future Corporate Bond 2 Inc	14.3	11.3	-26.1	2.4	4.0
IBOXX GBP Corporate All Maturities	10.7	8.7	-23.6	0.3	4.3
IA Sterling Corporate Bond	10.9	7.3	-20.5	1.3	4.2
Liontrust Sustainable Future Defensive Managed 2 Inc	12.5	1.9	-19.9	11.7	7.5
IA Mixed Investment 20-60% Shares	12.0	4.2	-10.6	12.2	-1.2
Liontrust UK Ethical 2 Acc	20.0	-2.2	-29.3	31.9	-2.7
MSCI UK	12.2	14.2	3.8	25.8	-19.8
IA UK All Companies	14.2	12.8	-15.3	32.4	-12.8
Liontrust Sustainable Future European Growth 2 Acc	16.4	6.3	-34.4	24.1	16.9
MSCI Europe ex UK	14.5	19.0	-12.8	20.9	-0.5
IA Europe Excluding UK	14.6	18.7	-16.1	22.4	3.1
Liontrust Sustainable Future Global Growth 2 Acc	17.1	2.7	-18.9	23.6	26.3
MSCI World	20.5	11.5	-2.9	23.5	5.2
IA Global	16.2	7.8	-8.9	23.2	7.2
Liontrust Sustainable Future Managed 2 Inc	15.9	4.1	-20.9	20.3	15.7
IA Mixed Investment 40-85% Shares	13.9	5.1	-10.2	16.6	-0.2
Liontrust Sustainable Future Managed Growth 2 Acc	16.8	3.1	-18.5	22.7	27.0
IA Flexible Investment	13.0	4.2	-9.2	18.3	0.9
Liontrust Sustainable Future Monthly Income Bond B Gr Inc	14.2	9.9	-22.4	4.7	3.7
iBoxx Sterling Corporates 5-15 years	12.4	9.8	-25.4	0.4	4.5
IA Sterling Corporate Bond	10.9	7.3	-20.5	1.3	4.2
Liontrust Sustainable Future UK Growth 2 Acc	20.6	3.0	-30.4	30.2	-0.3
MSCI UK	12.2	14.2	3.8	25.8	-19.8
IA UK All Companies	14.2	12.8	-15.3	32.4	-12.8

Source: FE Analytics, as at 30.09.24, primary share class, total return (net of fees, interest/income reinvested). Funds versus comparator benchmarks

Past performance does not predict future returns. You may get back less than you originally invested. Please refer to the Key Risks slide for more information.

## Key risks

#### Past performance does not predict future returns. You may get back less than you originally invested.

We recommend this fund is held long term (minimum period of 5 years). We recommend that you hold this fund as part of a diversified portfolio of investments.

The issue of units/shares in Liontrust Funds may be subject to an initial charge, which will have an impact on the realisable value of the investment, particularly in the short term. Investments should always be considered as long term.

The Funds managed by the Sustainable Future Team:

- Are expected to conform to our social and environmental criteria.
- May hold overseas investments that may carry a higher currency risk. They are valued by reference to their local currency which may move up or down when compared to the currency of a Fund.
- May hold Bonds. Bonds are affected by changes in interest rates and their value and the income they generate can rise or fall as a result; The creditworthiness of a bond issuer may also affect that bond's value.
  Bonds that produce a higher level of income usually also carry greater risk as such bond issuers may have difficulty in paying their debts. The value of a bond would be significantly affected if the issuer either refused to pay or was unable to pay.
- May encounter liquidity constraints from time to time. The spread between the price you buy and sell shares will reflect the less liquid nature of the underlying holdings.
- May invest in companies listed on the Alternative Investment Market (AIM) which is primarily for emerging or smaller companies. The rules are less demanding than those of the official List of the London Stock Exchange and therefore companies listed on AIM may carry a greater risk than a company with a full listing.
- May invest in smaller companies and may invest a small proportion (less than 10%) of the Fund in unlisted securities. There may be liquidity constraints in these securities from time to time, i.e. in certain circumstances, the fund may not be able to sell a position for full value or at all in the short term. This may affect performance and could cause the fund to defer or suspend redemptions of its shares.
- May, under certain circumstances, invest in derivatives, but it is not intended that their use will materially affect volatility. Derivatives are used to protect against currencies, credit and interest rate moves or for investment purposes. There is a risk that losses could be made on derivative positions or that the counterparties could fail to complete on transactions. The use of derivatives may create leverage or gearing resulting in potentially greater volatility or fluctuations in the net asset value of the Fund. A relatively small movement in the value of a derivative's underlying investment may have a larger impact, positive or negative, on the value of a fund than if the underlying investment was held instead. The use of derivative contracts may help us to control Fund volatility in both up and down markets by hedging against the general market.
- The use of derivative instruments that may result in higher cash levels. Cash may be deposited with several credit counterparties (e.g. international banks) or in short-dated bonds. A credit risk arises should one or more of these counterparties be unable to return the deposited cash.
- Outside of normal conditions, may hold higher levels of cash which may be deposited with several credit counterparties (e.g. international banks). A credit risk arises should one or more of these counterparties be unable to return the deposited cash.
- May be exposed to Counterparty Risk: any derivative contract, including FX hedging, may be at risk if the counterparty fails.
- Do not guarantee a level of income.

The risks detailed above are reflective of the full range of Funds managed by the Sustainable Future Team and not all of the risks listed are applicable to each individual Fund. For the risks associated with an individual Fund, please refer to its Key Investor Information Document (KIID)/PRIIP KID.

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For investment professionals

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