

# When climate change mitigation rhymes with technological innovation



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The world and the economy today are facing long-term challenges such as resource security, a need to keep ecosystems healthy, and climate stability. Since there is no Planet B to turn to, it is a matter for all to work for the environmental and energy transition's acceleration. Finance is no exception and has a role to play to reach carbon neutrality in 2050 and therefore limit temperatures increase to 1.5°C<sup>1</sup>. Investments can also contribute to the transition to an economy that gives back to the planet more than it takes out in resources, and helps improving biodiversity.

This is the purpose of the Mirova Global Environmental Equity strategy, a theme-based equity strategy aiming to invest in companies which develop robust solutions and cutting-edge services that generate a significant impact on the environmental value chain, in particular in energy and the rapid reduction of greenhouse gas emissions.

## *The Mirova Global Environmental Equity strategy at a glance<sup>2</sup>*

- ▶ **1. Goal:** Support the energy and environmental transition to reach the **Net Zero by 2050 target**.
- ▶ **2.** Financing requirements estimated at **4 trillion dollars to reach carbon net zero by 2050<sup>3</sup>**.
- ▶ **3. An approach focusing on 6 eco-activities:** Sustainable waste and water management, sustainable agriculture, green buildings, industrial energy efficiency, renewable energy, clean transport.
- ▶ **4. Disruptive technologies** from all over the world, mainly in North America, Europe and Asia.
- ▶ **5. 40 to 60 companies** in the portfolio to achieve a dual goal of financial performance and positive environmental impact<sup>4</sup>.

## CARBON DIOXIDE EMISSIONS: HEADING TOWARDS AN ALL-TIME RECORD

In spite of the many promises and the pledges of governments to address the causes of global warming, **CO2 emissions from energy and industry have increased by 60% since the signature of the United Nations Framework Convention on Climate in 1992<sup>5</sup>**. While the pledges are there for all to see: the 2015 Paris Agreement, hydrogen plans in Europe and Korea, the Biden Infrastructure Plan in the USA launched in 2021 (with targets including the installation of 500,000 charging points and 50% clean car sales in 2030<sup>6</sup>); this is still insufficient: in-

deed, **despite an increasing number of actions all over the world, they still fall considerably short of what is required to limit the global temperature rise to 1.5% C.**

If this trajectory continues unabated, emissions will rise by 16% by 2030 compared with 2010, resulting in a 2.7% temperature increase by the end of the century<sup>7</sup>.

Of the nearly **34 Gt of carbon dioxide emitted worldwide in 2020**, more than a third - representing 13.5 Gt - of this is due to electricity generation and heating. 8.5 Gt is emitted by industry, 7.2 Gt by the transport sector and approximately 3 Gt by buildings<sup>8</sup>.

These figures and percentages vary, however, from one country to another. In the United States, for example,

1. The Paris Agreement's central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius.

2. The specific risks of investing in the strategy are linked to: Capital loss, Equity securities, Global Investing, Emerging Markets, ESG Driven Investments, Small, Mid and Large Capitalization Companies, Exchange rates, Portfolio concentration, Changes in laws and/or tax regimes, Financial Derivatives

3. Source: <https://www.iea.org/reports/net-zero-by-2050>

4. Source: Mirova as of 09/30/2021. The information provided are subject to change without notice.

5. Source: <https://www.iea.org/reports/net-zero-by-2050>

6. Source: [https://www.lemonde.fr/international/article/2021/08/07/aux-etats-unis-le-gigantesque-plan-de-modernisation-des-infrastructures-voulu-par-joe-biden-franchit-une-etape-cle\\_6090870\\_3210.html](https://www.lemonde.fr/international/article/2021/08/07/aux-etats-unis-le-gigantesque-plan-de-modernisation-des-infrastructures-voulu-par-joe-biden-franchit-une-etape-cle_6090870_3210.html)

7. Source: United in Science 2021

8. Source: <https://www.iea.org/reports/net-zero-by-2050>

transport is responsible for a third of carbon emissions, while a quarter is caused by power generation<sup>9</sup>.

And while the International Energy Agency forecasts a record emissions increase for 2023, it reminds us that, to attain Net Zero in 2050, **our emissions should not be allowed to rise above 27.9 Gt... in 2025<sup>10</sup>!**



*With the Mirova Global Environmental Equity strategy, we invest in companies whose innovative solutions contribute to reducing emissions along their entire value chain. This involves using biowaste valorization, thereby avoiding emission-generating extraction processes, but also substituting polluting products. These companies, their solutions and their services can contribute to meeting the goal of Net zero by 2050, while helping preserve resources and biodiversity.*

**Hadrien Gaudin-Hamama,**  
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Reversing this trend has therefore become a matter of urgency.

## Innovate to decarbonise

**Reaching the Net Zero target therefore entails massively and urgently decarbonising the entirety of our economy, with a priority focus on the highest emitting sectors.**

Annual clean energy investment will need to more than triple by 2030 to around **\$4 trillion<sup>11</sup>**.

Between now and 2030, we must also massively deploy all the renewable energy technologies already available on the market today. In 2050, almost half of the emissions reductions will be achieved by technology which is only at the demonstration or prototype stage today.

**Substantial innovation efforts must therefore be deployed during the coming decade** so that these new technologies can be brought to market in a timely manner and on a wide scale.

**Mirova Global Environmental Equity Strategy: capturing opportunities offered by the energy and environmental transition, precisely where they arise.**

**The Mirova Global Environmental Equity strategy** is designed with this in mind. It is a **global equity portfolio invested in companies which operate all over the world and provide, according to Mirova, cutting-edge solutions and disruptive services capable of having a positive impact on the planet and society.** Its aim: to engage in taking and effective action in response to global warming by aiming for a **100% zero carbon economy by 2050**, while promoting the **protection of resources** and the **resilience of ecosystems.**

**The Mirova Global Environmental Equity strategy thus combines strong environmental and social impact with the goal of financial performance by investing in green technology** that provides structural growth opportunities over several decades.



*There is a major difference between companies with good environmental practices and those that bring solutions to the table, notably disruptive solutions, to address the challenges of global warming. These are the companies that we are seeking to identify with the Mirova Global Environmental Equity strategy. With this solution, investors can place the environmental and energy transition at the centre of their portfolio by participating in decarbonisation through innovation.*

**Anna Vaananen,**  
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9. Source: <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions>

10. Source: <https://www.futura-sciences.com/planete/actualites/rechauffement-climatique-vers-nouveau-record-emissions-co2-92584/>

11. Source: <https://www.iea.org/reports/net-zero-by-2050>

# AT THE CORE OF THE MIROVA GLOBAL ENVIRONMENTAL EQUITY STRATEGY

## DARLING INGREDIENTS

*United States*

**Global leader in biofuels and leading global producer of natural sustainable ingredients.**

In order to reach Net Zero by 2050, the production of liquid biofuels must quadruple between 2020 and 2050, supported by the development of sustainable biomass supply chains.

It is this target - among others - that Darling, established across five continents, seeks to address by optimising natural resources to cater to growing demand for food and fuel.

### **The solution to feed the circular economy:**

Made from repurposed animal fats, organic residuals or oil and grease collected from restaurants, Darling's biofuels contribute towards a paradigm shift in the world's long-term energy balance. Darling thereby contributes to reducing competition in the use of agricultural land prompted by increased interest in vegetable oil as an alternative to petrochemical inputs, and in so doing, reduces the impact of intensive agriculture on biodiversity and water.

*“Renewable diesel reduces life cycle greenhouse gas emissions Up to 80% vs carbon based alternatives.”*

(Source: Diamond Green Diesel)

## *Key figures*

- ▶ **71%:** US renewable diesel production Compound Annual Growth Rate (2020 -2024)<sup>12</sup>
- ▶ **36%:** Darling's renewable diesel production: Compound Annual Growth Rate (2019-2022)<sup>13</sup>

**Find out more about Darling:**  
[www.darlingii.com](http://www.darlingii.com)

12. Energy Information Administration

13. Source: Darling Ingredients. This data relates to Diamond Green Diesel, which is part of Darling Ingredients.

## SUNRUN

*United States*

**A leading residential solar, storage and energy services company.**

In order to reach Net Zero by 2050, **solar and photovoltaic power must account for 33% of power generation in 2050**, versus 3% in 2020.

This is the target - among others - that Sunrun seeks to address, by helping its customers become energy self-sufficient using solar.

### **The standout solution:**

Converting to solar power and turning your house into a “power plant” is a big step that many people might not easily take.

By deploying an array of personalised services and tailored solutions (on-line training, incentives and tax breaks, the sizing and customisation of the solar system [solar panels, generators, batteries, EV charger], lease plans, warranty and insurance), Sunrun facilitates and accelerates the adoption and development of solar energy.

*“Sunrun's systems have prevented greenhouse gas (GHG) emissions totaling 8.1 million metric tons.”* (Source: Sunrun)

## *Key figures*

- ▶ **15%:** US solar panel Compound Annual Growth Rate (2011 -2031)<sup>14</sup>
- ▶ **32%:** Number of customers Compound Annual Growth Rate (2019-2025) for Sunrun<sup>15</sup>

**Find out more about Sunrun:**  
[www.sunrun.com](http://www.sunrun.com)

14. Source: Bank of America

15. Source: Sunrun

## DOOSAN FUEL CELL *Korea*

### One of the biggest manufacturers of stationary fuel cells.

In order to reach Net Zero by 2050, the **production of low-carbon hydrogen must reach 520 Mt in 2050**, versus 9Mt only in 2020.

It is this target - among others - that Doosan Fuel Cell seeks to address by manufacturing hydrogen-based electricity production/storage systems.

### Disruptive technology:

Among the services and products developed by Doosan Fuel Cell, "Pure-Cell® Model 400 Hydrogen" is a stationary module powered by hydrogen, with the capability to produce electricity with a rated power of 440kW, as well as a heat supply to 120°C.

*"Combined with fuel cell, hydrogen is an energy vector without local CO<sub>2</sub> emission, that only releases water."*

## Key figures

- ▶ **14%:** Korean fuel cell market Compound Annual Growth Rate (2020-40)<sup>16</sup>
- ▶ **55%:** Revenue Compound Annual Growth Rate(2019-22)<sup>17</sup>

**Find out more about Doosan:**  
[www.doosanfuelcell.com](http://www.doosanfuelcell.com)

16. Source: Bernstein estimate

17. Source: Bloomberg consensus



## About: The Mirova Global Environmental Equity strategy

### 3 interconnected global challenges

- ▶ Climate stability
- ▶ Resource security
- ▶ Healthy ecosystems

### 3 investment zones targeting leaders in green, innovative and economic technology

- ▶ **North America**
  - Distributed solar power and storage
  - Fuel cells
  - Industrial eco-efficiency
- ▶ **Europe**
  - Onshore and offshore wind turbines
  - Electrolysers
  - Bioplastics and Recycling
- ▶ **Asia**
  - Battery Electric Vehicles (BEV) and Fuel Cell Vehicles (FCV)
  - Batteries
  - Hydrogen

### 6 themes to contribute to the environmental and energy transition in a global way

- ▶ **Sustainable waste and water management:** sustainable water resource management, waste processing and recycling, biogas, circular economy
- ▶ **Sustainable agriculture:** organic and integrated agriculture, sustainable forestry
- ▶ **Green buildings:** insulation, renewable energy construction technology
- ▶ **Industrial energy efficiency:** low-consumption electric engines, process optimisation
- ▶ **Renewable energy:** solar, hydropower, geothermal, wind – and storage
- ▶ **Clean transport:** electric vehicles, hydrogen-powered buses and rail / maritime / road transportation

### 1 portfolio made up of 40 to 60 companies offering structural growth and a competitive advantage

- ▶ Preferably exposed to disruptive innovation
- ▶ Evaluated according to the competitive merits of the proposed technology or service, the quality and supportability of their management, their business model, balance sheet and upside potential



## About Mirova

Mirova is an asset-management company dedicated to sustainable investment and an affiliate of Natixis Investment Managers. Thanks to its conviction-led management style, Mirova's objective is to combine a quest for long-term value creation with sustainable development. Pioneers in many areas of sustainable finance, Mirova's talents are committed to innovation in order to provide their clients with high environmental and social impact solutions. Mirova manages €23.6 billion as of June 30th 2021. Mirova has been awarded the B Corp\* label and the status of "Entreprise à Mission" (mission led company). All Mirova's funds covered by SFDR regulation are classified "Article 9".

\*References to a ranking, award or label do not prejudice the future performance of the strategies/or the managers.

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