# W E L L I N G T O N M A N A G E M E N T ®

# **Global Impact report**

AIMING TO GENERATE COMPETITIVE RETURNS AND POSITIVE IMPACT THROUGH PUBLIC EQUITY MARKETS

June 2023



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# EVOLUTION OF OUR

The contents of this report showcase key developments in our Global Impact strategy in 2022, including sample engagements and investment spotlights to illustrate our investment process and the measurable outcomes we achieved.

For information on our overall impact commitment and approach, as well as deep dives and reporting on our fixed income strategy, please view our <u>impact</u> <u>platform page</u>.

# **Message of commitment**

We are pleased to share the seventh report for Wellington's Global Impact strategy. We believe the current global backdrop continues to underscore the need to invest across our impact themes. In our view, the European energy crisis adds momentum to the amplifying trend of decarbonization, while food insecurity drives demand for sustainable agriculture and nutrition. We also observe a steep rise in capital directed toward connectivity solutions and critical infrastructure (notably, for clean water, grid hardening, and climate resilience). We believe these and other areas of investment spending will persist and drive long-term growth opportunities for the strategy.

The challenges associated with climate change remain a primary focus. The research we conduct with our climatescience collaborators at Woodwell Climate Research Center (Woodwell Climate) and the Massachusetts Institute of Technology (MIT) Joint Program on the Science and Policy of Global Change shows the urgent need to boost climate resilience and mitigation efforts. With that in mind, we are pleased to see that expenditure aimed at increasing resource efficiency appears to hold up well despite recessionary fears. We believe that alternative energy and resource efficiency solutions have become even more essential amid the continued energy crisis and intensifying impact of climate change.

In our digital divide theme, we anticipate significant long-term demand for technologies addressing widening digital inequality in rural communities. In our health theme, we are finding more companies and issuers looking to solve health care-related challenges such as access to affordable care, inefficiencies in service delivery, and chronic underinvestment in health care infrastructure.

Across Global Impact, we are committed to setting a high bar for materiality, additionality, and measurability. Through engagement, we encourage companies to establish key performance indicators demonstrating positive social and environmental impact. Where appropriate, we collaborate with Wellington's impact bond team to amplify our engagements. As communities increasingly value solutions that benefit people and the planet, companies are incentivized to innovate. The result is an expanding impact opportunity set. We believe our approach of investing across 11 impact themes puts us in a robust position to capture promising new developments across public equity markets.

Thank you for your trust in our team and in Wellington. We look forward to generating positive impact and competitive investment returns for you, our clients, in 2023.

anofulue

TARA STILWELL, CFA Portfolio Manager, Global Impact

JASON GOINS, CFA Portfolio Manager, Global Impact



All investing involves risk. Investors should consider the risk that may impact their capital, before investing. The value of your investment may become worth more or less than at the time of original investment. Please refer to the Risks section for more information.

# **Impact highlights**

Investments in our equity portfolio have enabled companies to achieve the following impact:



# 125,000

165 million

of Africa<sup>4</sup>

8.000

and technologies

Protected 8,000 businesses or

breach victims in 2022<sup>7</sup>

individuals with cybersecurity tools

Compared to 392 million US data-

Enabled digital access for over 165

million people in developing countries

Equivalent to 11% of the population

Supplied or financed almost 125,000 units of affordable housing

Equivalent to 24% of Stockholm's housing stock1



# 142.4 billion

Provided or treated more than 142.4 billion cubic meters of water

Equivalent to 1.5 times the water consumption of Canada in 2022<sup>2</sup>



# 1.6 million

Provided education, training, and career support to nearly 1.6 million people

higher education student population of Japan in 2022<sup>5</sup>



# 123.2 TWh

Generated 123.2 terawatt hours of renewable energy

Equivalent to the average year-long electricity consumption of 10.4 million US households8



# 33.8 million

Supplied health care products and services to more than 33.8 million patients

Equivalent to 3 times the average number of patients admitted to hospitals annually in Australia<sup>3</sup>



# 64.7 million

Provided financial services to 64.7 million underserved people and businesses

Compared to 1.4 billion adults globally without bank accounts<sup>6</sup>



# 167.4 million

Avoided nearly 167.4 million tonnes of greenhouse gas (GHG) emissions through improved resource efficiency9

Equivalent to 37.3 million fewer cars on the road for a year<sup>8</sup>

Note: 51% of our holdings (as a percentage of market value) leverage a common KPI that can be aggregated. Market value % captures asset leg of a total return swap on one portfolio holding. If a company or issuer does not report a figure that we believe aligns with one of our aggregated KPIs, we still monitor and report the KPI over time, but do not include it in the above aggregated statistics which we believe provide a conservative estimate of the impact our funds enable. All reported impact KPIs are obtained from publicly available information. We do not account for fund ownership stakes in the above calculations which represent 100% of the impact of the companies or issuers in which we invest. For each aggregated KPI we provide what we believe to be a relevant reference point. These are for context only and do not imply any equivalence for our KPIs regarding benefits delivered for society and the environment. 2022 data has been used for all holdings included in the above aggregation excluding one holding, where 2021 data has been used as 2022 data is not yet available. | All investing involves risk. Investors should consider the risk to their capital, before investing. These impact highlights relate to our impact equity representative account, is for informational purposes only, is subject to change, and is not indicative of future portfolio characteristics or returns. The value of your investment may become worth more or less than at the time of original investment. Please refer to the Important disclosures on our website or at the end of this document for more information.

<sup>1</sup>"Number of dwellings in 2022", Statistics Sweden, May 2023. |<sup>2</sup> "Countries that waste the most water" and "Canada's population clock (real-time model), Canada statistics. | <sup>3</sup> Australian Institute of Health and Welfare. | <sup>4</sup> Worldometer. | <sup>5</sup> "FY2022 School Basic Survey." National Information Center for Academic Recognition, Japan, February 2023. | <sup>6</sup> "The Global Findex Database 2021," World Bank. | <sup>7</sup> "The 2022 Annual Data Breach Report," Identity Theft Resource Center. | <sup>8</sup> "Greenhouse Gas Equivalencies Calculator," United States Environmental Protection Agency. | <sup>9</sup> Unless otherwise indicated, we use tonnes for metric tons.



Equivalent to 61% of the entire



# **Engagement examples**

We believe that partnership and engagement with our portfolio companies can enhance the positive social and environmental impact of our investments, creating lasting value for our clients.

Overall, in 2022, we engaged with 71 portfolio companies on 239 topics, and had further engagements with 33 potential candidates for the portfolio.

Throughout the year, we revisited the investment thesis for each holding and used our engagements as a key mechanism to gain a deeper understanding of the companies we hold and validate the underwriting of our investments.

In 2023, we are devoting significant time to discussing ways in which inflation and lingering supply chain disruptions have affected our investee companies and their customers, particularly in lower-income groups. With travel now largely back to normal, we welcome the renewed opportunity to visit management teams, operations, and factories in person.

Learn more about our impact platform Approach to engagement

The examples described on the following page are presented for illustrative purposes only and are not to be viewed as representative of actual holdings. It should not be assumed that any client is invested in the (or similar) examples, nor that an investment in the examples has been or will be profitable. Actual holdings will vary for each client, and there is no guarantee that a particular client's account will hold the examples presented. Please refer to the Important disclosures section for information on investment examples. | The companies mentioned comprise a partial list of all engagement meetings in which Wellington's ESG Research and Impact Investing teams participated in 2022. The specific securities identified are not representative of all securities purchased, sold, or recommended for clients. This is not to be construed as investment advice or a recommendation to buy or sell any specific security. The engagement case studies presented are for illustrative purposes only. They are chosen based on meetings held during the year and our priorities' focus, with the aim of giving insight into our process. There is no assurance the fund would hold companies such as these or that they would be profitable in the future.

### SAMPLE ENGAGEMENTS FROM 2022

### ENVIRONMENT (E)

We met with a leading US low-cost supplier of renewable diesel feedstock. Its scalable offering can help reduce emissions from transport, which accounts for 14% of global greenhouse gas (GHG) emissions. Following a visit to the company's headquarters and one of its plants, we came away with a strong conviction regarding the prospects for innovation in new product lines. We also saw increased potential to return capital to shareholders alongside reinvestment in the company's newest renewable production facility. We believe the market underappreciates this production ramp-up, which should come to fruition in the coming years.

### SOCIAL (S)

We engaged with a company focused on providing quality vision care to low-income customers to understand the commitment to its demographics amid recent cost inflation.

The company reassured us that it remains focused on providing access to eye care at affordable prices. During a subsequent meeting, following disappointing quarterly results and retailmarket volatility, the management team acknowledged that inflation had forced them to raise the entry price for its eyewear for the first time in 15 years. They emphasized the strong value proposition the company retains with its core customers. A final engagement in late 2022 brought further reassurance in its ability to provide value to customers while maintaining margins over the long term.

### GOVERNANCE (G)

We met with one of the largest nonprime consumer finance companies in the US, following an earlier engagement in 2021 on governance. Subprime lending is one of the few options available for low-income consumers to obtain credit in the US, and this provider consistently extends credit at rates below alternatives. We are pleased with the work the company has done to understand and implement ESG best practices. We have shared new ideas for improvement, such as declassifying the board to enhance accountability and increasing transparency around diversity metrics.

### IMPACT (I)

We approached a digital technology company following its third-quarter earnings release to discuss its growth prospects in India and its impact measurement. The company was confident in its ability to grow the top line in India, thanks to network build-outs and the potential for associated operating leverage. We also discussed ways for the company to improve its margin trajectory and its ability to connect customers in remote areas. The company has been expanding its digital infrastructure, including with indigenous American tribes in the US. We believe management can do more to highlight and measure its digital connectivity enhancements for local communities and rural areas. We have been impressed by management's solicitation of, and receptiveness to, feedback.

For complete engagement descriptions and a list of companies we engaged with in 2022, please see our Impact engagement report.



# Thematic allocation and UN SDG alignment

Wellington's Global Impact and Global Impact Bond teams support the 17 United Nations Sustainable Development Goals (SDGs) and believes that the private sector has an integral role to play in bridging the funding gap to achieve them. In 2015, we launched Global Impact, our first impact approach. Through extensive research and consultation, we developed our 11 impact themes aimed at identifying the key forces driving a just transition to a sustainable future. When the SDGs were adopted, we were pleased to see how closely our themes overlapped.

We invest in companies and issuers aligned directly with our proprietary impact themes and denote the relevant SDG and

specific target(s) to which they contribute. We do this to better contextualize their activities alongside the efforts of other financial, government, and nongovernment organizations. In our view, reporting by asset managers on SDG alignment helps governments and market participants assess the amount of private capital that is funding progress toward the goals.

While our investments may not cover some SDGs, we believe they can represent indirect pathways to progress. Bridging the digital divide and expanding financial inclusion, for instance, may enhance gender equality and reduce inequalities (SDGs 5 and 10).

13.

Action

12.

Consumption

Sustainable Responsible Climate

Communities & Production

14

l ife

Below

Water

15.

l ife on

Land

16

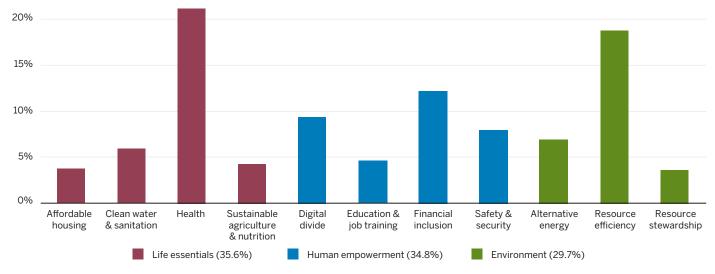
& Strong

Institutions

Peace Justice Partnerships

17.

for the Goals



### 2022 REPRESENTATIVE ACCOUNT EXPOSURES BY THEME (WEIGHT, %)

Data as of 31 December 2022 | Source: Wellington Management.

4

Good Health Quality

& Well-being Education

5

Gender

Equality

6

& Sanitation

0%

1

No

Poverty

2

7ero

Hunger

# 35% 30% 25% 20% 15% 10% 5%

## 2022 PRIMARY SDG DISTRIBUTION (WEIGHT, %)

The graph shows the distribution of the representative account for our impact equity strategy across each primary SDG as of 31 December 2022. Market value % for this graph captures asset leg of a total return swap on one portfolio holding. Our impact equity approach supports SDG 17 at the strategy level. We do not manage the portfolio to any targeted level of alignment with regard to the UN SDGs. | The data shown relates to a representative account, is for informational purposes only, is subject to change, and is not indicative of future portfolio characteristics or returns. | Totals may not agree due to rounding. Excludes cash, cash equivalents, interest-rate, and currency derivatives. | Sources: FactSet, Wellington Management. | Please refer to the Important disclosures page for additional information.

& Clean & Economic Innovation Inequalities

& Infrastructure 10.

Reduced

11.

Cities &

8

Growth

Clean Water Affordable Decent Work Industry

Energy

# Impact themes and investment spotlights



Wellington's impact investment teams invest globally across three broad impact categories — Life essentials, Human empowerment, and Environment — which we then divide into 11 impact themes. Impact opportunities can represent innovative solutions across sectors, asset classes, and market capitalizations. All impact investments must meet our thresholds for materiality, additionality, and measurability. That is, companies must generate most of their revenue from products and services related to at least one of our impact themes; the impact they generate must have a low prospect of being achieved by other means; and we must be able to track and measure the impact.

Once we determine whether a company meets our impact criteria, we add it to our opportunity set. In parallel, our fundamental analysis seeks to identify those investments with the most attractive long-term return potential.

Learn more about our impact platform Impact themes Impact measurement and management

On the following pages, we share sample 2022 equity investment spotlights, showcasing one theme in each category.

### **OUR IMPACT THEMES**



### LIFE ESSENTIALS

Affordable housing Clean water & sanitation Health Sustainable agriculture & nutrition HUMAN EMPOWERMENT Digital divide Education & job training Financial inclusion Safety & security



ENVIRONMENT Alternative energy Resource efficiency Resource stewardship

### IMPORTANT NOTE

Portfolio spotlight examples are based on non-performance-based criteria. For information on how we selected the portfolio spotlight examples, please see the Important disclosures section. Portfolio spotlight examples are for illustrative purposes only, are not representative of all investments made by the portfolio and should not be interpreted as specific security recommendations or advice. It should not be assumed that an investment in the examples has been or will be profitable. Actual holdings vary for each client, and there is no guarantee that a particular client's account will hold the examples presented. Key Performance Indicator data is based on issuer or company reporting, press releases and websites, proxy data, and Wellington analysis. While data is believed to be reliable, no assurance is being provided as to its accuracy or completeness.

For all investment spotlights, Wellington's impact investment teams determine the UN SDG goals and targets that, in our view, each portfolio company or issuer is aligned with. Language for the goals and targets has been abbreviated, but not otherwise altered, from UN.org. Sources for SDG logos and targets: Wellington Management, www.un.org | Wellington Management supports the UN SDGs.

### THEME OVERVIEW

# Affordable housing

### SCALE | ACCESSIBILITY | RESOURCES

### LIVING CONDITIONS

Approximately 40% of the world's population may need adequate housing by 2030, driven by the increase in urban dwelling. This translates to demand for 96,000 new housing units per day.<sup>1</sup>

### POVERTY REDUCTION

Access to affordable housing is one of the most cost-effective strategies for reducing childhood poverty.  $^{\rm 2}$ 

Demand for affordable housing intensified in 2022 as families grappled with economic uncertainty, inflated rental prices, and higher mortgage rates. With inflation driving up the cost of goods and services across the board, low-income households, which typically spend a higher proportion of their income on essentials such as housing costs, are hit hardest.<sup>3</sup> Government responses to housing vulnerability have been patchy and slow, exposing many households to increasingly precarious situations.

We see affordable housing as an ongoing essential need that can accrue health and wellness benefits to families and communities while creating and sustaining economic value. We believe access to safe, affordable housing allows people to focus more on their overall well-being — health, education, and career-building — and less on basic survival. Put another way: Access to safe, affordable housing may lead to better educational outcomes, higher earning potential, and lower health care costs.

In 2022, we invested in companies combating homelessness and addressing the need for safe, affordable shelter. Specifically, we owned shares of a manufactured-home community operator with sites across the US and Canada. The company offers single-family homes for sale or rent at approximately one-half to one-third of the rental or purchasing cost of local two-bedroom apartments. The provider is also making a concerted effort to improve the energy efficiency of its units. In Japan, we invested in a company that rehabilitates dilapidated or abandoned homes (which would otherwise be torn down) and resells them to first-time and low-income home buyers at affordable prices.

<sup>1</sup>The United Nations Human Settlements Programme; UNstats for the Sustainable Development Goals.

<sup>2</sup> Multiple studies cited in "A Place to Call Home: The Case for Increased Federal Investments in Affordable Housing," Campaign for Housing and Community Development Funding.

<sup>3</sup> "The impact of the recent rise in inflation on low-income households," ECB Economic Bulletin, July 2022.



# Sun Communities

### IMPACT THEORY OF CHANGE

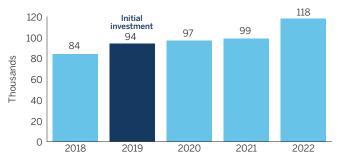
Much of the US population is rent burdened, with over 40% of renter households spending more than 30% of their income on annual housing costs between 2017 and 2021.<sup>1</sup> Sun Communities' manufactured homes offer a quality solution at approximately 50% less cost per square foot than other rental options.<sup>2</sup> The company's offering helps to address the lack of affordable housing.

### FIVE DIMENSIONS OF IMPACT

What	Improved lives and strengthened communities through access to affordable housing
Who	Individuals who gained access to 118,000 affordable housing units in 2022 <sup>2</sup>
How much	Approximately 95% occupancy rate <sup>2</sup>
Contribution	Units typically cost 50% less per square foot than other rental options <sup>2</sup>
Risk	Execution: Maintaining a balance between home quality and affordability

### **PROGRESS OF CORE KPI**

Affordable housing units provided



Source: Sun Communities Investor Presentation, March 2023.

Year of initial investment: 2019

Three-year annualized change in core KPI: 8.0% Assessment: Meets expectations



**UN SDG ALIGNMENT** Making cities and human settlements inclusive, safe, resilient and sustainable

**TARGET 11.1** By 2030, ensure access for all to adequate, safe and affordable housing, basic services, and upgrade slums

### QUALITATIVE ASSESSMENT

Approximately half of US adults (49%) cite the availability of affordable housing as a major problem where they live, an increase of 10 percentage points from 2018.<sup>3</sup> Rising interest rates and homebuilders' labor costs, along with supply chain volatility, have negatively impacted supply. Today, just 38% of single-family homes are considered affordable for families earning US\$90,000, the median household income.<sup>4</sup>

Sun Communities, one of the largest US operators of manufactured homes, has a significant opportunity to help solve the growing need for quality affordable housing. The company's units cost about half as much per square foot and typically provide 25% more space than other rental options.<sup>5</sup> Reducing inequality in home ownership is an important social equalizer that we believe contributes to good health and well-being.

We believe access to affordable housing ultimately leads to better education, economic, and health outcomes. While more affordable housing alone cannot ensure these longer-term social benefits, in our view, it can be a proxy for the positive impact we intend to have through our investment.

### ENGAGEMENT PRIORITIES

In 2022, we engaged with management to discuss the company's business mix in the context of recent acquisitions. We sought to understand the financial impact of climate change across the company's housing portfolio. We believe that Sun Communities enjoys a competitive advantage owing to its modern, climate-resilient housing units. We were encouraged by the company's conversion to LED lighting in its units and the initial installation of solar arrays in California — with the potential to expand solar capabilities in coming years.

We expect Sun Communities to maintain competitive pricing. We seek to engage with the head of sustainability to discuss advocating for enhanced public services for low-income tenants and potentially using its undeveloped land as a carbon sink.

<sup>1</sup> "More Than 19 Million Renters Burdened by Housing Costs," US Census Bureau, 8 December 2022.

- <sup>2</sup> Sun Communities Investor Presentation, March 2023.
- <sup>3</sup> Schaeffer, K. "A growing share of Americans say affordable housing is a major problem where they live," Pew Research Center, 18 January 2022.
- <sup>4</sup> "Boosting Housing Production is Best Way to Ease the Affordability Crisis," National Association of Home Builders, 9 February 2023.
- <sup>5</sup> Sun Communities Investor Presentation, March 2023.

### THEME OVERVIEW

# **Digital divide**

### INFORMATION ACCESS | COMMUNICATIONS INFRASTRUCTURE

### INTERNET ACCESS

In 2022, internet usage in high-income countries reached 92%, compared to 26% in low-income countries.<sup>1</sup>

### THE DIGITAL ECONOMY

An estimated 60% of global GDP relied on digital communication technologies in 2022.<sup>2</sup>

The digital divide across the globe is stark. The COVID-19 pandemic has emphasized how important digital connections now are for remote work, education, and financial services. Yet connectivity in many rural areas and developing countries remains highly unequal or entirely nonexistent. Despite the acceleration of digitalization during the pandemic, 2.7 billion people are still offline, of which an estimated 74% live in low-income countries.<sup>3</sup>

We believe internet access can improve social inclusion, reduce structural inequality, and provide opportunities for economic empowerment. People and businesses without access to reliable digital services, particularly those in less-developed countries, could fall further behind as the global digital economy becomes more embedded. In 2022, we made investments on your behalf in companies that increase access to digital communications and strengthen connectivity for underserved markets.

Investments included a Taiwanese specialist chipmaker that increases the availability of low-cost handsets. By designing, developing, manufacturing, and distributing chips for wireless communications and handheld mobile devices, the company benefits individuals who would otherwise lack digital connectivity. Recognizing the need to support small businesses in a digital world, we have also invested in a provider focused on helping small businesses and entrepreneurs establish an online presence.

We have maintained exposure to a South African company providing communication services and infrastructure to support digital access across Africa. Over the year, we initiated a position in a Finnish telecommunications equipment provider which supplies and services equipment essential to bringing together communities and companies across the world. We also built a position in a Brazilian provider of crucial fixed and wireless infrastructure/services that improve digital connectivity for individuals, households, and businesses.

<sup>&</sup>lt;sup>3</sup> "Our shared digital future: Building an inclusive, trustworthy and sustainable digital society," World Economic Forum, December 2018.



<sup>&</sup>lt;sup>1</sup>"Measuring digital development: Facts and figures 2022," International Telecommunication Union. <sup>2</sup>"A digital silver bullet for the world: digitalization," World Economic Forum.

# Nokia

### IMPACT THEORY OF CHANGE

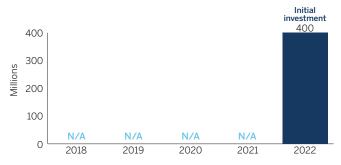
Achieving universal connectivity and internet access requires investment in critical telecommunications infrastructure and networks. As a global leader in telecommunications equipment, Nokia helps provide and maintain critical networks and technologies that connect individuals, businesses, and communities worldwide. With its significant presence in emerging markets and rural areas, Nokia helps "shorten" supply chains and narrow the digital divide.

### FIVE DIMENSIONS OF IMPACT

What	Provided digital services to previously unconnected and underserved customers
Who	Connected 400 million additional customers between 2021 and 2022, <sup>1</sup> a 6% increase from Nokia's total radio network subscriptions in 2020 <sup>2</sup>
How much	Rolled out 96 live 5G networks in 2022, an upgrade that could boost GDP growth in emerging markets between 0.3% and 0.46% through 2023 <sup>3</sup>
Contribution	One of the few global leaders in telecom equipment and 5G infrastructure, with products offered at scale <sup>4</sup>
Risk	Execution: Balancing connectivity at scale with speed and affordability <sup>5</sup>

### **PROGRESS OF CORE KPI**

Increase in number of mobile broadband subscriptions to Nokia radio customers' networks



Source: Nokia | This KPI measures annual net-new subscriptions. 2022 was the first time Nokia tracked this year-over-year growth.

### Year of initial investment: 2022

Three-year annualized change in core KPI: N/A Assessment: N/A (insufficient data)



UN SDG ALIGNMENT Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

**TARGET 9.C** Universal access to information and communications technology services, and upgrade slums

### QUALITATIVE ASSESSMENT

Nokia, which operates in 130 countries,<sup>6</sup> continues to roll out 5G networks worldwide. 5G connections can accelerate everyday communications and business operations, and enable transformative innovations, from remote medical access to smart grids and metering to remote devices that monitor crop health, air quality, or traffic patterns.<sup>7</sup>

The company also continues to improve connectivity and coverage in many emerging markets and rural areas, announcing new partnerships in Chile, Indonesia, and other areas during 2022. In addition to building critical infrastructure, Nokia delivers targeted solutions for underserved customers, including a fixed wireless-access solution that provided a rural school district in California with broadband internet connectivity. We believe that Nokia's global reach, increasing presence in emerging markets, and broad product portfolio all help close the digital divide.

While more connections reflect Nokia's contribution over time, they do not tell the full story. Additional data on the number of emerging markets or rural customers served would align more closely with our theory of change. However, our research and engagements with the company give us conviction in Nokia's expanding impact.

### ENGAGEMENT PRIORITIES

We engaged with Nokia on its growing operations in India and its ability to connect customers in remote areas to digital infrastructure. We also discussed the work the company has been doing with Native American tribes in the US. We shared our perspective that the company can improve how it highlights and communicates the impact of its efforts. We have been impressed by management's solicitation of, and receptiveness to, our feedback.

- <sup>3</sup> "Future value of mobile in emerging markets," report for Ericsson by Analysys Mason, 9 November 2022.
- <sup>4</sup> "Leading telecom infrastructure companies in the 5G theme," Verdict, 20 January 2023.
- <sup>5</sup> "Internet surge slows, leaving 2.7 billion people offline in 2022," International Telecommunication Union, 16 September 2022.
- <sup>6</sup> Nokia Annual Report on Form 20-F 2022.
- <sup>7</sup> "The Impact of 5G Creating New Value across Industries and Society," World Economic Forum in collaboration with PWC, January 2020.

<sup>&</sup>lt;sup>1</sup> "People & Planet 2022," Nokia.

<sup>&</sup>lt;sup>2</sup> Nokia\_Form\_20F\_2020.pdf

### THEME OVERVIEW

# Alternative energy

### RENEWABLE ENERGY GENERATION | STORAGE AND DISTRIBUTION

### GHG EMISSIONS

Electricity accounts for 28% of annual GHG emissions.<sup>1</sup>

### LOW-CARBON ELECTRICITY

Low-emissions sources of electricity, led by renewables, are poised to overtake fossil fuels by 2030, with renewables projected to generate 80% of the world's electricity by  $2050.^2$ 

In 2022, government representatives at the UN Climate Change Conference in Sharm el-Sheikh (COP 27) restated commitments to cap the increase in global temperatures to 1.5°C above preindustrial levels. At the G20 climate summit in Bali, governments also pledged an additional US\$20 billion to accelerate the clean-energy transition.<sup>3</sup>

A recent report from the Intergovernmental Panel on Climate Change (IPCC) highlighted the importance of alternative sources of energy.<sup>4</sup> The IPCC found that although 136 countries, accounting for 83% of global carbon emissions,<sup>5</sup> have committed to achieving net-zero emissions by 2050, significantly more needs to be done to avoid the irreversible social and environmental damage of greenhouse gas emissions (GHG). The urgent climate challenge and widespread policy shifts present an opportunity for investors to participate in the attractive potential for financial returns and positive impact associated with investments in alternative energy.

Generating more energy from renewable sources helps reduce GHG emissions, slow the global temperature rise, and gradually clear polluted air. Billions of people still breathe air heavily polluted by fossil-fuel emissions or rely on dirty, often dangerous, home heating and cooking fuels. Shifting to clean energy will also bring about social and health benefits, including a likely reduction in premature deaths.<sup>6</sup> Geopolitical developments and growing policy momentum — most notably, the passing of the Inflation Reduction Act in the US — are likely to further accelerate the shift toward alternative energy.

In 2022, the investments we made helped provide capital to companies generating renewable energy, mostly through wind power and solar energy. The portfolios also invested in innovative solutions for power storage and distribution.

Investments included a US provider of an optimized inverter solution for photovoltaic (PV) systems that boosts their efficiency, as well as a solar energy company that designs, manufactures, markets, and distributes PV systems and modules. In addition, we took a position in a specialty lender focused on climate-solutions projects in the US. Other holdings we maintained include a Spanish company which invests in utility-scale renewable energy projects and a renewable-power producer with hydroelectric, wind, and solar assets across four continents.

<sup>1</sup> "The Five Grand Challenges," Breakthrough Energy.

- <sup>2</sup> "Net Zero by 2050," International Energy Agency.
- <sup>3</sup> Indonesia Just Energy Transition partnership.
- <sup>4</sup> "AR6 Synthesis Report: Climate Change 2023," IPCC.
- <sup>5</sup> "The Climate Action Monitor 2022: Helping Countries Advance Towards Net Zero," Organisation for Economic Co-operation and Development.
- <sup>6</sup> Emil Dimanchev, et al., "Health co-benefits of sub-national renewable energy policy in the US," Environmental Research Letters, 14 August 2019.



# **First Solar**

### IMPACT THEORY OF CHANGE

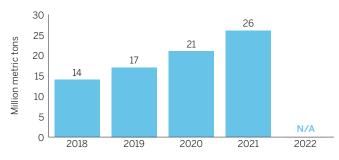
US-based First Solar is a leading global provider of responsibly produced, eco-efficient solar modules. Its products advance the transition to a low-carbon future. The company's proprietary thin-film photovoltaic (PV) modules represent the next generation of solar technologies. The modules are more efficient, produce higher yields, and have a lower carbon footprint than conventional technologies.<sup>1</sup>

### FIVE DIMENSIONS OF IMPACT

What	Mitigated climate change through the manufacturing of PV solar modules
Who	Customers in more than 45 countries; <sup>2</sup> people and the planet through decarbonization and CO2 mitigation
How much	Produced 7.9 GW of solar power in 2021, equivalent to powering more than 20 million homes <sup>3</sup>
Contribution	Has helped avoid 26 million metric tons of CO2 emissions as of 2021 <sup>3</sup>
Risk	External: Weather conditions may reduce both energy produced and associated emissions avoided

### **PROGRESS OF CORE KPI**

CO2 emissions avoided



Source: Annual sustainability documents, First Solar.

Year of initial investment: 2015

Three-year annualized change in core KPI: 22.9% Assessment: Meets expectations



**UN SDG ALIGNMENT** Affordable and Clean Energy

**TARGET 7.2** By 2030, increase substantially the share of renewable energy in the global energy mix.

### QUALITATIVE ASSESSMENT

We are pleased with the 22.9% annualized growth rate in CO2 emissions avoided with First Solar's PV modules through 2021. We also appreciate the company's disclosure regarding its emissions-avoidance calculation methodology, which uses average worldwide irradiance and grid emissions and a 30-plusyear assumed product lifetime.

We are encouraged by First Solar's recent announcement to invest up to US\$1.2 billion to scale and upgrade its module production.<sup>4</sup> The investment is expected to boost the company's annual capacity by 4.4 GW, a 56% increase relative to December 2021. Greater production capacity should enable the company to boost emissions avoided in the coming years. More broadly, we believe investments in First Solar will help accelerate adoption of solar production worldwide, supporting the global energy transition.

### ENGAGEMENT PRIORITIES

In 2022 we spoke with company management to understand the potential effect of the US Inflation Reduction Act (IRA) on First Solar's addressable market, as more government subsidies and tax breaks should raise demand. We believe the company plays an important role in growing domestic energy supply through increasing solar adoption.

We also discussed the ways in which First Solar is working through supply chain challenges to ensure continued growth and provision of low-cost solar modules. Our discussions on its plans to build more factories and accelerate R&D investment to increase efficiencies strengthen our belief that First Solar's differentiated technology allows customers to install more power at a lower cost than alternate technology solutions.

<sup>1</sup> "Our Technology: The Advantages of CadTel PV Technology," First Solar.

- <sup>2</sup> "Leading the World's Sustainable Energy Future," First Solar, 2022.
- <sup>3</sup> Sustainability Report 2022, First Solar.
- <sup>4</sup> "First Solar to Invest up to \$1.2 Billion in Scaling Production of American-Made Responsible Solar by 4.4 GW," press release, 30 August 2022.

# **Important disclosures**

### **ABOUT THIS REPORT**

Data provided is as of 31 December 2022.

The views expressed herein are those of the author(s), are based on available information, and are subject to change without notice. Individual portfolio management teams may hold different views and may make different investment decisions for different clients. The material and/or its contents are current as of 31 December 2022. Forward-looking statements or estimates may be made. Actual results and occurrences may vary significantly. Certain data provided is that of a third party. While data is believed to be reliable, no assurance is being provided as to its accuracy or completeness. Wellington determines the goals and targets that, in our view, each portfolio company is aligned with. Language for the goals and targets has been abbreviated, but not otherwise altered, from UN.org. Wellington Management supports the United Nations Sustainable Development Goals. These are not to be construed as a recommendation of any of the specific securities presented or indicative of their past or future performance.

Investment examples are based on holdings of the representative account from 1 January to 31 December 2022. For Global Impact Equity, the representative account shown became effective on 1 September 2017 because it was the least restrictive account at the time of selection. Each client account is individually managed; individual holdings will vary for each account and there is no guarantee that a particular account will have the same characteristics as described.

Company examples are for illustrative purposes only, are not representative of all investments made by the portfolio, and should not be interpreted as a recommendation or advice. Portfolio spotlight examples are based on nonperformance criteria. For Global Impact Equity, the largest position in each impact theme is selected. If the largest position was highlighted last year, then a new position within the theme for 2022 is selected. If there is more than one additional company, or no new positions in the theme, the largest trade is highlighted (based on the number of shares).

- Holding was largest by size in a theme in the portfolio as of 31 December 2022: Sun Communities, First Solar.
- Largest holding had been previously highlighted, but for 2022, we used the largest trade in a theme: Nokia.

The Key Performance Indicators shown for each company have been developed by Wellington. These metrics are proprietary to Wellington and are used to assess a company's progress toward its particular business objectives. Company information is from multiple sources including the following: annual and quarterly reports; industry research pieces; company websites; press releases; case studies; and company engagements. Only holdings that had applicable and available KPI data were included. In cases where the 2022 data was not available at the time of publication, we have used 2021 or the nearest to 2022 data.

### **INVESTMENT RISKS**

All investing involves risk. If an investor is in any doubt as to the suitability of an investment, they should consult an independent financial adviser. Past results are not necessarily indicative of future results and an investment can lose value.

**Capital:** Investment markets are subject to economic, regulatory, market sentiment, and political risks. All investors should consider the risks that may impact their capital, before investing. The value of your investment may become worth more or less than at the time of the original investment.

**Concentration:** Concentration of investments in a relatively small number of securities, sectors or industries, or geographical regions, may significantly affect performance.

**Currency:** Investments in currencies, currency derivatives, or similar instruments, as well as in securities that are denominated in foreign currency, are subject to the risk that the value of a particular currency will change in relation to one or more other currencies.

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**Smaller-capitalization stocks:** The share prices of small- and mid-cap companies may exhibit greater volatility than the share prices of larger-capitalization companies. In addition, shares of small- and mid-cap companies are often less liquid than larger-capitalization companies.

**Sustainability:** An environmental, social, or governance event or condition that, if it occurs, could cause an actual or potential material negative impact on the value of an investment.

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