



Climate-related Financial Disclosures

We publish climate-related financial disclosure with reference to the recommendations of the TCFD under four categories of governance, strategy, risk management and metrics and targets.

Climate-related Financial Disclosures

In 2015, the Financial Stability Board (“FSB”)²⁹ established the Task Force on Climate-related Financial Disclosures (“TCFD”) to develop voluntary, consistent climate-related financial risk disclosures for use by companies when providing information to investors, lenders, insurers, and other stakeholders. In 2017, the TCFD published a set of recommendations for voluntary climate-related financial disclosures that are consistent, comparable, reliable, clear, and efficient, and which aim to provide decision-useful information to lenders, insurers, and investors.



GRI
102-30, 201, 305

HKEX
Aspect A2, A3, A4,
KPI A3.1, A4.1

We recognise the risks and opportunities presented by climate change to our business. In accordance with our [Climate Change Policy](#), we are committed to communicating our management approaches and strategies for climate mitigation, adaptation and resilience to our stakeholders. In 2018, we started to publish climate-related financial disclosures with reference to the recommendations of the TCFD under the four core categories of governance, strategy, risk management, and metrics and targets. In 2020, we completed the climate risk assessment for physical and transition risks and opportunities to our global portfolio. Our disclosures are set forth in the following pages.

Governance	Strategy	Risk Management	Metrics and Targets
SPL’s Governance around climate-related risks and opportunities	Addressing the actual and potential impacts of climate-related risks and opportunities related to the Company’s businesses, strategy, and financial planning	How we identify, assess and manage climate-related risks	The metrics and targets used to assess and manage relevant climate-related risks and opportunities material to SPL

²⁹ The FSB is an international body that monitors and makes recommendations about the global financial system.

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SPL's Governance around climate-related risks and opportunities

Our SD Steering Committee is chaired by our Chief Executive. Other members are the Finance Director and five members of our senior management from the development and valuations, human resources and administration, portfolio management and technical services and sustainable development departments. The Chairman of the SD Steering Committee reports relevant SD matters, including climate-related issues, to the Board on a quarterly basis.

The SD Steering Committee meets quarterly and, in accordance with its [terms of reference](#), has the following overall responsibilities related to climate change:

- Review the Company's SD 2030 Strategy, including approving targets or key initiatives related to climate change mitigation, adaptation and building climate resilience;
- Review any significant risks, opportunities and investments regarding climate change or energy/carbon management; and
- Review on an annual basis the performance of the Company in achieving our energy/carbon intensity reduction targets and other climate change- and energy-related KPIs.

The Board provides oversight of our [risk management framework](#) and SD risks, including climate-related risks. Our SD agenda and the progress of our SD 2030 Strategy are reported and discussed at quarterly board meetings. We also conduct regular risk identification and analysis and review management processes throughout the year through the Audit Committee and our ERM System; this includes our Corporate Risk Register in which climate change has been identified as an emerging risk.

Our [Climate Change Policy](#) guides our management approach and strategy on climate change mitigation, adaptation and resilience. We also support the Business Environment Council's efforts to develop and promote the Low Carbon Charter for the property and construction sector in Hong Kong.

In 2020, we conducted a [materiality review](#) to gather feedback from 570 internal and external stakeholders through qualitative interview and quantitative survey. The topics of green building construction and renovation, energy efficiency, decarbonisation, climate adaptation and resilience were identified as material issues to our business continuity and development. These issues align with the focus areas in the [Performance \(Environment\) Pillar](#) of our SD 2030 Strategy.

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Strategy

Addressing the actual and potential impacts of climate-related risks and opportunities related to the Company's businesses, strategy, and financial planning

We recognise that climate change poses different types of risks to our business. Apart from physical risks, such as flooding, extreme weather events and increasing temperatures, which can disrupt or negatively impact our employees, assets and supply chains; we also acknowledge the potential financial impacts that can result from transition risks, which include regulatory, market and reputational risks.

Climate change also presents us with opportunities to develop low-carbon and climate-resilient assets to meet the increasing market demand for climate-proof buildings and to mitigate the potential operational costs attributed to extreme weather conditions, such as maintenance and insurance premiums. Also, climate change helps stimulate business innovation and experimentation, which may aid the transition to a lower-carbon economy.

We are committed to creating climate resilient places and communities that are better able to cope with the physical impacts of climate change. We are also committed to developing [certified green buildings](#) that are energy-efficient and low-carbon by design and in operation. In 2020, 100% of new projects under development achieved the highest green building rating, 97% of all existing buildings were certified green buildings and over 98% of our 2020 gross rental income came from certified green buildings.

Under our SD 2030 Strategy, one of our 2020 KPIs is to generate 2 to 4% of landlord's energy from onsite [renewable energy sources](#) in selected new office developments. We are also committed to exploring new procurement options for offsite renewable energy for our portfolio, where feasible. In 2020, our Sino-Ocean Taikoo Li Chengdu development became powered by 100% renewable electricity, achieving net-zero carbon in its annual electricity consumption for both landlord and tenant operations.

To prepare for the transition to a low-carbon economy, we have established carbon reduction targets and initiatives under our SD 2030 Strategy for our Hong Kong and Chinese mainland portfolios. In 2019, our science-based targets ("SBTs") were officially approved, making us the first real estate developer from Hong Kong and the Chinese mainland to establish long-term decarbonisation goals in line with the Paris Agreement for our global portfolio.

These approved [SBTs](#) are:

- Reduce Scope 1 and 2 greenhouse gas ("GHG") emissions by 35% per sqm by 2025 and by 52% per sqm by 2030 (compared to the 2018 baseline).
- Reduce Scope 3 GHG emissions from downstream leased assets by 28% per sqm by 2030 (compared to the 2018 baseline).

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- Reduce Scope 3 GHG emissions from capital goods by 25% per sqm by 2030 (compared to the 2016-2018 baseline).

In December 2020, Swire Properties also committed to the Science Based Targets initiative’s Business Ambition for 1.5°C campaign, and we are working to ramp up our science-based targets to align with the 1.5°C trajectory, in order to contribute to the transition to a net-zero emissions economy.

Since 2011, we have worked with [Tsinghua University](#) through the Joint Research Centre for Building Energy Efficiency and Sustainability to develop and test new methods of increasing energy efficiency and improving environmental performance in our projects. This collaboration continues to generate substantial energy savings and allows us to communicate and share new ideas and practices with our employees, business partners, industry peers, and other researchers. In May 2019, we extended our partnership for another three years.

To reduce embodied carbon from our development projects and construction activities, we have established performance-based targets on embodied carbon for concrete, rebar and structural steel for future projects in Hong Kong. We have also specified that [low-carbon materials](#) should be adopted in our projects and activities such as concrete with pulverised fuel ash (“PFA”) or ground granulated blast-furnace slag (“GGBS”), rebar and structural steel with recycled content, and the optimisation of structural design to minimise material consumption.

We are committed to integrating sustainability considerations into our financing mechanisms. Since 2018, we have obtained green financing through a number of green bonds, green loans and sustainability-linked loans. These fund green projects related to renewable energy, energy efficiency and climate change adaptation. We issue an annual [Green Finance Report](#) that provides information on projects funded by the green bonds and their estimated quantitative environmental impacts, including energy and water savings, renewable energy generation and wastewater management impacts. In 2020, approximately 30% of the bond and loan facilities arranged by the Company’s Hong Kong head office were in a green format.

Our [new ventures](#) department works with investors, accelerators and experts from around the world to source new technologies that add strategic value to our operations, including low-carbon technologies. In 2019, we launched UrbanLab, the first corporate accelerator programme in the Chinese mainland to focus on property technology, to foster application of innovative technology solutions relevant to the real estate sector. In 2020, we established a new US\$50 million corporate venture capital fund which will be used to invest in relevant and innovative technology companies to help fuel the Company’s ongoing creative and digital transformation.

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How we identify, assess and manage climate-related risks

We assess the key physical and transition risks and opportunities posed by climate change to our global assets and business operations to help us develop long-term strategies that protect our business from climate-related risks. We have used quantitative and qualitative scenario analyses which consider impacts along a timescale which ranges from the immediate term to 2030 to as far ahead as 2100.

Physical Risks

In accordance with the TCFD's recommendations, we have conducted asset-level modelling of the acute and chronic physical risks associated with the four Representative Concentration Pathways (RCP 2.6, 4.5, 6 & 8.5) used by the Intergovernmental Panel on Climate Change. These pathways broadly represent comprehensive climate scenarios related to three projected global average temperature increases: 1.5°C, 2°C and 4°C.

We have collated historical data and projected climate variables, such as temperature, precipitation, sea level rise, and wind speed from suitable global climate models, and applied local meteorological data to predict local climate scenarios. This data has allowed us to accurately evaluate the exposure of specific assets and operations in selected timeframes, from the immediate term to the distant future, namely, 2025, 2030, 2050, and 2100.

We have also undertaken detailed asset-level assessments to evaluate the degree of sensitivity and adaptive capacity of individual buildings under the potential effects of the identified climate risks. These assessments consider system robustness, e.g. existing flood prevention systems and façade conditions; system redundancy, e.g. capacity of chillers and water supply; and susceptibility to past extreme weather events.

Our analysis showed that there is an overall low to moderate level of risk of flooding, heat stress, water stress, and extreme wind for our global portfolio in all assessed climate scenarios. This is attributed to the relatively robust adaptive capacity and mitigation measures we have integrated into our buildings.

We have identified short- and medium-term measures for individual buildings that will mitigate risks and building resilience across our portfolios. These include upgrading flood protection measures and alert systems, chiller efficiency improvements, glass façade inspections, and smart monitoring systems. Some of these resilience measures will also be incorporated into the planning and design stages of new developments. We believe that by doing this, we can ensure our assets will continue to be resilient under other future climate scenarios.

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Transition Risks and Opportunities

Regarding the global transition to a low-carbon economy, in accordance with the TCFD’s recommendations, we have reviewed global and local government policies, and regulatory, market and technological trends based on different climate scenarios such as the International Energy Agency’s 2°C Scenario (“IEA 2DS”). We have identified a number of risk and opportunity drivers that may have financial impact on our business under the IEA 2DS which are outlined in the table below.

Policies and Regulations

Risk and Opportunity Drivers	Potential Financial Impacts
1. Tightened building energy codes and guidelines	<ul style="list-style-type: none"> Increased capital investment and expenditures to meet these requirements
2. Increased ambition of national decarbonisation strategies and road maps	<ul style="list-style-type: none"> Increased capital investment and expenditures to support these strategies and concurrent energy efficiency programmes Decreased operating costs due to the improved energy efficiency of buildings
3. Introduction of carbon pricing in operating markets	<ul style="list-style-type: none"> Increased expenditures for compliance
4. More stringent public disclosure requirements	<ul style="list-style-type: none"> Increased expenditures for meeting these new requirements Need to attract green investment and diversify financing sources

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Market, Reputation and Liability

Risk and Opportunity Drivers	Potential Financial Impacts
1. Increased market demand for climate resilient properties	<ul style="list-style-type: none"> Increased revenue due to shift in market preference
2. Increased market demand for green and energy efficient properties	<ul style="list-style-type: none"> Increased revenue due to potentially higher rental premiums for green buildings
3. Increased tenant demand for energy efficiency and data transparency	<ul style="list-style-type: none"> Increased revenue due to improved tenant satisfaction and experience Lower operating costs due to improved energy efficiency
4. Growing investor demand for green and low-carbon finance and investment	<ul style="list-style-type: none"> Attract green investment and diversify financing sources
5. Potential increase in insurance premiums	<ul style="list-style-type: none"> Increased expenditures due to increased insurance premiums
6. Increased exposure to reputation and litigation risks	<ul style="list-style-type: none"> Decreased revenue due to shifts in market preferences

Supply Chain

Risk and Opportunity Drivers	Potential Financial Impacts
1. Greater adoption of low-carbon construction materials	<ul style="list-style-type: none"> Increased material procurement expenditures
2. Limited resource availability and higher pricing	<ul style="list-style-type: none"> Increased expenditures due to higher energy costs

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Technology and Innovation

Risk and Opportunity Drivers	Potential Financial Impacts
1. Increased adoption of green and low-carbon technology	<ul style="list-style-type: none"> Increased capital investments in technology Decreased operating costs due to improved energy efficiency
2. Increased adoption of renewable energy	<ul style="list-style-type: none"> Increased capital investment in renewable energy systems Increased revenue from selling generated renewable energy to power companies

Analysis shows that our current business and sustainability strategies will allow us to effectively manage these identified transition risks and capture the opportunities from the transition to a net-zero economy. These strategies include:

- Science-based Targets to drive long-term decarbonisation;
- Investment in and development of certified green buildings with best-in-class energy efficiency and climate resilience;
- Investment in renewable energy throughout our portfolio;
- Wide application of innovative green technologies;
- Commitment to green financing; and
- Engaging our supply chain, tenants and relevant stakeholders in climate resilience and sustainability.

In 2020, we initiated a quantitative assessment of the potential financial impacts of our key identified transition risks and opportunities that will inform our risk management and strategic planning.

We are also assessing our investments. We have integrated sustainability criteria into the due diligence risk assessment process for new acquisitions, including climate adaptation and resilience, flood risk assessment, energy efficiency and carbon emissions of the acquired assets.

We have had a Business Recovery Plan in place since 1997 to ensure that we maintain critical crisis planning and execution capabilities in the event of major incidents, including extreme weather events. We have also put in place local crisis response plans for all portfolios.

Through the ISO 14001 Environmental Management System and ISO 50001 Energy Management System, we manage our daily operational risks related to climate change, carbon and energy management.

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The metrics and targets used to assess and manage relevant climate-related risks and opportunities material to SPL

The table below provides key metrics related to the impacts of GHG emissions, energy, and green building development on the financial aspects related to revenue, capital and financing, expenditures, and assets.

Financial category	Climate-related category	Metric	Unit of measure	2018	2019	2020
Revenues	Risk Adaptation and Mitigation	Proportion of total attributable gross rental income by certified green building (office and retail properties)	%	>95%	>95%	>98%
Capital and Financing	Risk Adaptation and Mitigation	Proportion of bond and loan facilities from green financing (includes green bonds, green loans and sustainability-linked loans)	%	/	/	~30%
Expenditures	Risk Adaptation and Mitigation	Sustainable procurement spend	HK\$	217 million	48 million	1,196 million
Expenditures	Risk Adaptation and Mitigation	Expenditures on energy efficiency / low-carbon projects supported by green bond proceeds	HK\$	116 million	31 million	19 million
Expenditures	Risk Adaptation and Mitigation	Expenditures on renewable energy supported by green bond proceeds	HK\$	11 million	2 million	1 million
Expenditures	Risk Adaptation and Mitigation	Expenditures on sustainable water and wastewater management supported by green bond proceeds	HK\$	8 million	3 million	/
Expenditures	Energy/Fuel	Total electricity consumption	MWh	287,365	307,948	291,977

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Financial category	Climate-related category	Metric	Unit of measure	2018	2019	2020
Expenditures	Energy/Fuel	Proportion of electricity consumption from renewable sources	%	10.6%	13.2%	14.3%
Expenditures	Energy/Fuel	Building energy intensity by gross floor area	kWh/m ² /year	142 HK Portfolio	139 HK Portfolio	127 HK Portfolio
				101 Chinese mainland Portfolio	101 Chinese mainland Portfolio	96 Chinese mainland Portfolio
				221 U.S.A. Portfolio	237 U.S.A. Portfolio	204 U.S.A. Portfolio
Expenditures	Energy/Fuel	Building carbon intensity by gross floor area	Tonnes of CO ₂ e/ m ² /year	0.111 HK Portfolio	0.109 HK Portfolio	0.103 HK Portfolio
				0.074 Chinese mainland Portfolio	0.073 Chinese mainland Portfolio	0.053 Chinese mainland Portfolio
				0.102 U.S.A. Portfolio	0.109 U.S.A. Portfolio	0.085 U.S.A. Portfolio
Assets	Risk Adaptation and Mitigation	Percentage of existing buildings which are certified green buildings	%	92%	97%	97%
Assets	Risk Adaptation and Mitigation	Percentage of projects under development which are certified green buildings	%	100%	100%	100%
Assets	Risk Adaptation and Mitigation	Expenditures for green building development supported by green bond proceeds	HK\$	2,987 million	733 million	669 million