

TCFD Recommended Disclosures	Our 2019 Response
 <p>Governance</p> <p>Disclose the organisation's governance around climate-related risks and opportunities</p>	<p>Climate-related issues are managed through our Climate Change Working Committee (CCWC), led by the head of our Renewables & Environment business. The CCWC reports to the Sustainability Steering Committee (SSC), which in turn reports to the board's Risk Committee on sustainability issues including climate change. The achievement of our climate change targets is monitored and incentivised via the performance scorecards of our Group President & CEO and other relevant senior executives. The CCWC oversees key initiatives on risk mitigation, opportunities, greenhouse gas (GHG) mitigation, GHG accounting, and engagements and disclosures.</p>
 <p>Strategy</p> <p>Disclose the actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning where such information is material</p>	<p>The key risks related to climate change that Sembcorp's businesses face are changes in policy and regulation, technology, customer demand, weather disruption and stakeholder expectations.</p> <p>We have evaluated our current and anticipated power generation portfolio using the IEA 2°C Scenario. The findings from our climate-related scenario analysis has shaped our strategy towards achieving a more balanced energy portfolio.</p> <ul style="list-style-type: none"> • We will restrict our investments in coal-fired power plants and improve the energy efficiency of our existing plants • We will focus on growing our gas and renewables portfolio as well as our green business lines while exploring new business models, products and services that focus on energy efficiency, digitalisation and new energy solutions
 <p>Risk Management</p> <p>Disclose how the organisation identifies, assesses, and manages climate-related risks</p>	<p>We evaluated our key climate-related risks (as mentioned above) and opportunities using near-term (2017 to 2022) and medium-term (2030) lenses, and also considered long-term (2050) trends such as a science-based target for the utilities sector by 2050.</p> <p>These key climate-related risks were mapped onto a risk matrix to give a clear view of short, medium and long term risks.</p> <p>We have also conducted a high level physical risk assessment of our energy generation and water assets based on Representative Concentration Pathway 4.5 and 8.5 scenarios for eight natural hazards (water stress, floods, landslides, wild fires, speeds, cyclones, sea level rise, and storm surges.) Based on the findings of this high-level assessment, we ranked the assets using a cumulative risk score. In 2020, we will be looking to prioritise and ascertain the need for further climate-related vulnerability assessment for higher risk assets.</p> <p>We manage climate related risks and opportunities through the:</p> <ol style="list-style-type: none"> a. Inclusion of climate-related metrics in our Group President & CEO's performance scorecard b. Transparent accounting and reporting of performance against climate-related metrics and set targets including responding to the CDP climate change programme and alignment of climate-related disclosures to TCFD recommendations c. Presentation and review of monthly GHG emissions performance in quarterly Senior Leadership Council meetings <p>We are in the midst of transitioning from the Governance Assurance Framework (GAF) to an Integrated Assurance Framework (IAF), which provides a more holistic and robust basis of assurance for the adequacy and effectiveness of our risk management and internal control system. For new investments, the Group has embedded climate considerations in our investment approval process through our Environmental and Social screening toolkit.</p>



Metrics and Targets

Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material

The key metrics and targets we have set relate to reductions in our GHG emissions intensity and the growth of our renewables portfolio.

Our direct GHG emissions (Scope 1) are from sources owned or controlled by the company. Our GHG emissions data is reported using an equity share approach. In 2019, our Scope 1 GHG emissions and GHG emissions intensity by equity share approach were 26 million tonnes of CO₂ equivalent and 0.54 tonnes of CO₂ equivalent per megawatt hour (tCO₂e/MWh), respectively .

We have set emissions intensity targets in line with the scale of reductions required to keep the increase in the global average temperature to below 2°C above pre-industrial levels as per projections in the IEA World Energy Outlook 2016.

Our target is to reduce our GHG emissions intensity from 0.54 tCO₂e/MWh in 2017 to 0.42 tCO₂e/MWh by 2022, and to less than 0.40 tCO₂e/MWh by 2030. We also aim to double our 2017 baseline renewables capacity from 2,000MW to 4,000MW by 2022.

We plan to achieve these targets through two key thrusts.

1. Reduce negative impact by reducing emissions;
2. Move towards a balanced portfolio of low-carbon energy assets by growing our renewables capacity

Our wind and solar energy assets generate low-carbon energy for customers. Our total renewables capacity accounts for over 20% of our total energy capacity. In 2019, our renewable energy generation capacity was 2,600MW. This is equivalent to taking approximately 550,000 cars off the road for a year² or avoiding 2.5 million tCO₂e emissions. Our global energy and water facilities also undertook a total of 22 energy optimisation projects which has led to greater efficiency in our plants and resulted in reduction of nearly 29,000MWh of electricity savings with GHG emission reduction of 12,695 tCO₂e.

¹ Emissions data covers entities that produce GHGs from the combustion of fossil fuels consumed in our Energy business' assets and urban business. It excludes emissions from our anaerobic wastewater treatment plants, chemical waste and maintenance and servicing equipment

² Based on an average car emitting 4.6 tonnes of carbon dioxide per year. Source: US Environmental Protection Agency, 2017