



**ASSET WORLD**  
CORPORATION

---

# **Task Force on Climate-related Financial Disclosures (TCFD)**

---

  
**BUILDING  
A BETTER FUTURE**



# Introduction

Asset World Corporation (AWC) is a leading real estate and hotel company in Thailand which climate change is one amongst the company's sustainability materiality.

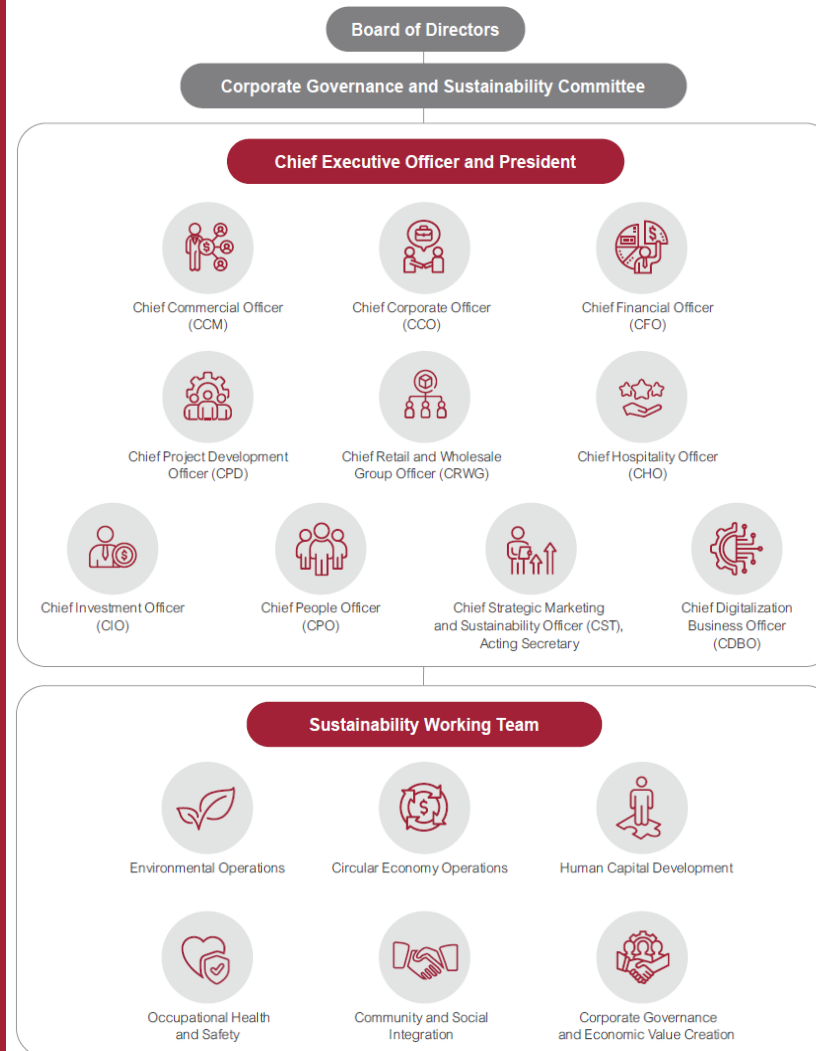
The company pledges its strong and measurable commitment to become carbon neutral by 2030. The company has taken a more vigilant approach to climate change, which is now escalated into a climate crisis. With this urgent call, the company strives to minimize and eliminates climate-related physical impacts. These are, for example, the EEP, water stress monitoring, circular economy through different interventions - sustainable packaging, and zero waste commitment.

AWC became the TCFD's supporter in August 2021 where the company will set up the target that decisively addresses imminent climate risks. AWC has also adopted the recommendations of the Task Force on Climate-Related Financial Disclosure (TCFD), together with climate actions of the Sustainable Development Goal 13 to integrate into our cooperate strategy.

This TCFD report is designed to describe how climate change may impact our business and how AWC can address and mitigate climate risks whether current, potential, emerging, and future one. The content of the report aligns with the TCFD framework - Governance, Strategy, Risk Management, and Metrics and Targets. The report discloses the date for the year 2023 and covers the AWC's GHG performance in all AWC assets.



# Governance



Asset World Corp Public Company Limited (AWC) understands that strong governance, transparency in business conduct, and integration of sustainability in all that we do is fundamental to resilient and successful business operations. Hence, AWC has a Board of Directors (BoD) that is comprised of members with profound experience and who are from diverse backgrounds, in order to successfully lead AWC toward its vision, mission, and goals.

Additionally, To echo AWC's commitment to creating sustainable value for all stakeholders, a sustainability committee, or SC, sits under the Corporate Governance Committee (CG), and is appointed by the BoD to oversee the overall sustainability management of all business units, to set targets, establish policies, monitor performances, and ensure the accuracy of sustainability information disclosures. The SC is chaired by the Chief Executive Officer and President and also includes all members of the Management Committee, or MACO, as committee directors.

In 2023, several sustainability-related topics were brought into the committee's quarterly meetings, such as the sustainability strategy, the refinement of targets, and AWC's sustainability position in the national and international arena.

# Strategy

As a leading national real estate developer, with over 30 assets across the country, AWC is obliged to minimize the environmental impacts from our operations throughout the value chain, including investment, project development, construction, asset management, and service/product usage by customers and consumers. To reduce the impacts on the environment, AWC has set the long-term target to **become a carbon-neutral organization by 2030** in apart of corporate sustainability development strategy that has approved and oversight by Board of Director committee. We have also established management team that collaborate across all business unit to set up GHG emission assessment, short-term targets, reduction approaches, and monitoring plan to ensure achieving yearly the progress.

For building the engagement in each operational units and continuous achievement, AWC has incorporated energy consumption reduction targets into the corporate's KPI by determining monetary reward incentives to be apart of annual performance assessment by that tied to the executive and employee compensation including

- 1) CEO and other chief management committee member that have relevant role and responsibility should hold both individual and executive team KPIs by achieving GHG emission reduction target as part of Corporate KPI 5.3 of driving corporate's sustainable value through incorporating energy initiatives such as implementation of Energy Efficiency Plan (EEP), LEED and/or WELL Criteria in AWC's flagship projects.
- 2) The climate-related KPIs including energy reduction and GHG emission reduction also cascaded down from management level to the Head of Project Management & Technical Support (SPM&TS) who is responsible for developing energy efficiency solutions and clean energy transformation.
- 3) Employees of the sustainability development team, who are responsible for developing GHG reduction strategies and raising awareness about climate-related risks and opportunities, have both individual and team KPIs related to achieving GHG reduction targets.

We believe that these incentive impacts their positive performance and innovation to build up climate solutions both short-term and long-term goals

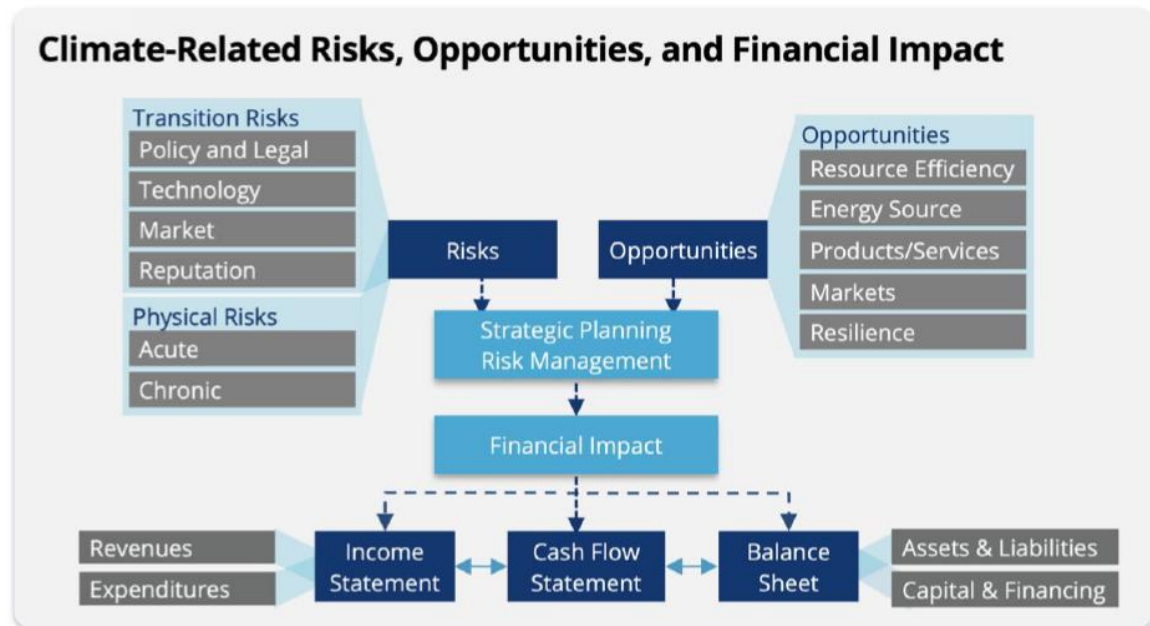


# Risk Management

Given global trends and the potential impacts of climate issues on both the company and our stakeholders, AWC recognizes the importance of effective climate strategy management and the assessment of climate-related risks and opportunities from both internal and external drivers. The company has incorporated climate-related risks into its corporate risk management process to identify potential risks and opportunities for all existing and developing properties in pipeline.

This strategy also supports the development and implementation of management and adaptation plans to address the identified risks at all AWC's assets and future development. In the hospitality and retail development industry, climate change can lead to increased operational costs due to higher energy consumption, physical damage from extreme weather events, water scarcity affecting service quality, and disruptions in supply chains.

Additionally, changing consumer preferences towards sustainability and stricter environmental regulations necessitate investments in green technologies and sustainable practices. AWC's proactive approach ensures these risks are managed effectively, safeguarding assets, maintaining service quality, and meeting stakeholder expectations.



# Key Driver of Physical Risks

## Acute

Short term (Less than 5 years)

- The manifestations of climate change have caused natural disasters in several areas of Thailand such as flooding or windstorms which damaged the Company's properties and services. The Company's business may also be affected by the outbreak of public health epidemics, or even the fear of such an outbreak, in Thailand or elsewhere.
- Operation costs and raw material prices are increased.

## Chronic

Medium term (5 - 10 years)

- Increasing flooding, windstorms, extreme temperature, drought, and rising sea levels
- Changing of precipitation pattern
- Impact of water stress on production.

## Chronic

Long term (More than 10 years)

- Increasing flooding, windstorms, extreme temperature, drought, and rising sea levels
- Impact of water stress on production.
- Impact of extreme weather on health and wellness

## Potential Financial Impact

- Increased insurance cost
- Increased costs associated with building construction/maintenance
- Increased cost for the operational expenditure of HVAC system.

# Key Driver of Transition Risks

Key Drivers	TCFD Risk Categories	Description
<b>Thailand Government's Climate Commitment</b>	Policy&Legal Risks (Current Regulation)	Thailand has committed to achieve Carbon Neutrality by 2050 and Net-Zero Emission by 2065, although not enforced, private sector is expected to reduce GHG and contribute both monetary and non-monetary action towards the national target.
<b>Climate Change Act</b>	Policy&Legal Risks (Emerging Regulation)	Climate Change Act has projected as a national long-term development strategy to tackle climate change by achieving national target e.g. Carbon Tax, Emission Trading Scheme (ETS), and mandatory carbon footprint disclosure.
<b>Thailand Taxonomy</b>	Policy&Legal Risks (Emerging Regulation)	A classification system of economic activities deemed as environmentally-sustainable that affected to investment
<b>Carbon Capture Utilization and Storage (CCUS)</b>	Technology	Failure to embrace and integrate new technology/method to reduce emission and carbon sequestration.
<b>Energy Efficiency and Renewable Energy Transition</b>	Technology	Financial and operational challenges from regulatory changes, market shifts, and technological disruptions that company need to avoid asset devaluation and maintain competitiveness.
<b>New Construction Technology</b>	Technology	Adopt a new array of compelling construction technologies, while investors and customers are paying attention to the profound impacts on their health and well-being and the environment rather than just the service quality and fee.
<b>Sustainable Investment</b>	Market	Stakeholders demand for real estate companies where climate risks are included in the investment.
<b>Low-Carbon Tourism</b>	Market	Global trends and customer expectations increasingly favor environmentally responsible practices, hotels and resorts must adopt low-carbon strategies to meet these demands and maintain a competitive edge in the market.
<b>Procurement of Low Carbon Materials and Services</b>	Market	Involve selecting products with a lower carbon footprint, verified by reliable standard. It reduces environmental impact and supports compliance, while the choice of low carbon suppliers also influences the overall supply chain's carbon footprint, driving broader sustainability improvements.
<b>Stakeholder Expectation</b>	Reputational	External stakeholders expect company to develop climate adaptation approach and disclose climate-related activities and impact publicly.

# Scenario Analysis for Climate-related risk

The climate-related risk management has been analyzed from the high-emission scenarios which are considered by business as usual (Above 2°C) and Low carbon future (Below 2°C) to understand potential climate change will have impacts on business.

## Identified risks and opportunity in 2023

### Physical Risks

- Flooding
- Extreme Heat

### Transition Risk

- Climate Change Act

### Transition Opportunity

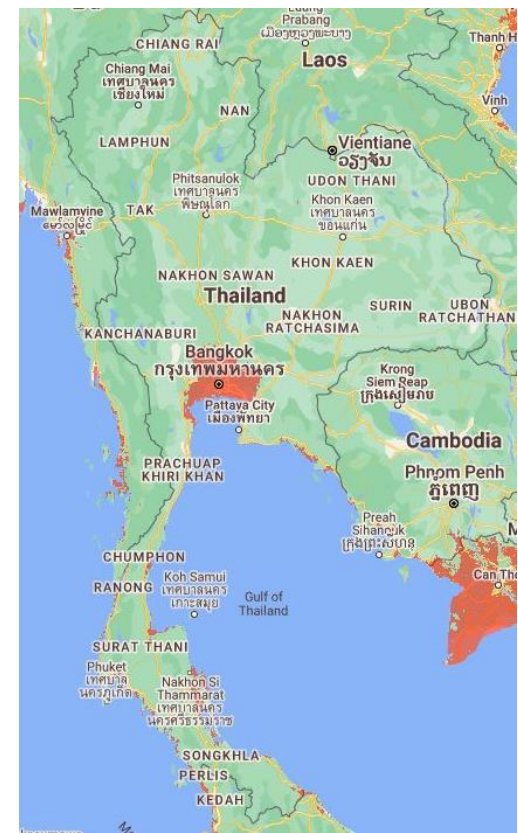
- Energy Efficiency and Renewable Energy Transition

Scenario Type	Above 2°C	2°C and below 2°C
Scenario Analysis References	<div>Transition Scenario</div> <ul style="list-style-type: none"><li>• IEA STEPS</li><li>• NGFS (Above 2°C scenarios)</li></ul> <div>Physical Scenario</div> <ul style="list-style-type: none"><li>• Representative Concentration pathway (RCP 8.5)</li></ul>	<div>Transition Scenario</div> <ul style="list-style-type: none"><li>• IEA SDS</li><li>• NGFS (Below 2°C scenarios)</li></ul> <div>Physical Scenario</div> <ul style="list-style-type: none"><li>• Representative Concentration pathway (RCP 2.6)</li></ul>
Time Horizon	<div>Short-term</div> <div>Medium-term</div> <div>Long-term</div>	<div>&lt; 5 years</div> <div>5 – 10 years</div> <div>&gt; 10 years</div>



# Physical Risk Scenario : Flooding

Scenario analysis of flooding is conducted to evaluate the impact of key physical risks under selected climate scenarios using information specific to AWC operations. We have identified risk level by mapping sea level raising and coastal threaten (Coastal Risk Screening Tool) based on 2 scenarios; 1. Business as usual scenario (SSP2 RCP8.5) 2.Optimistic scenario (SSP2 RCP2.6)



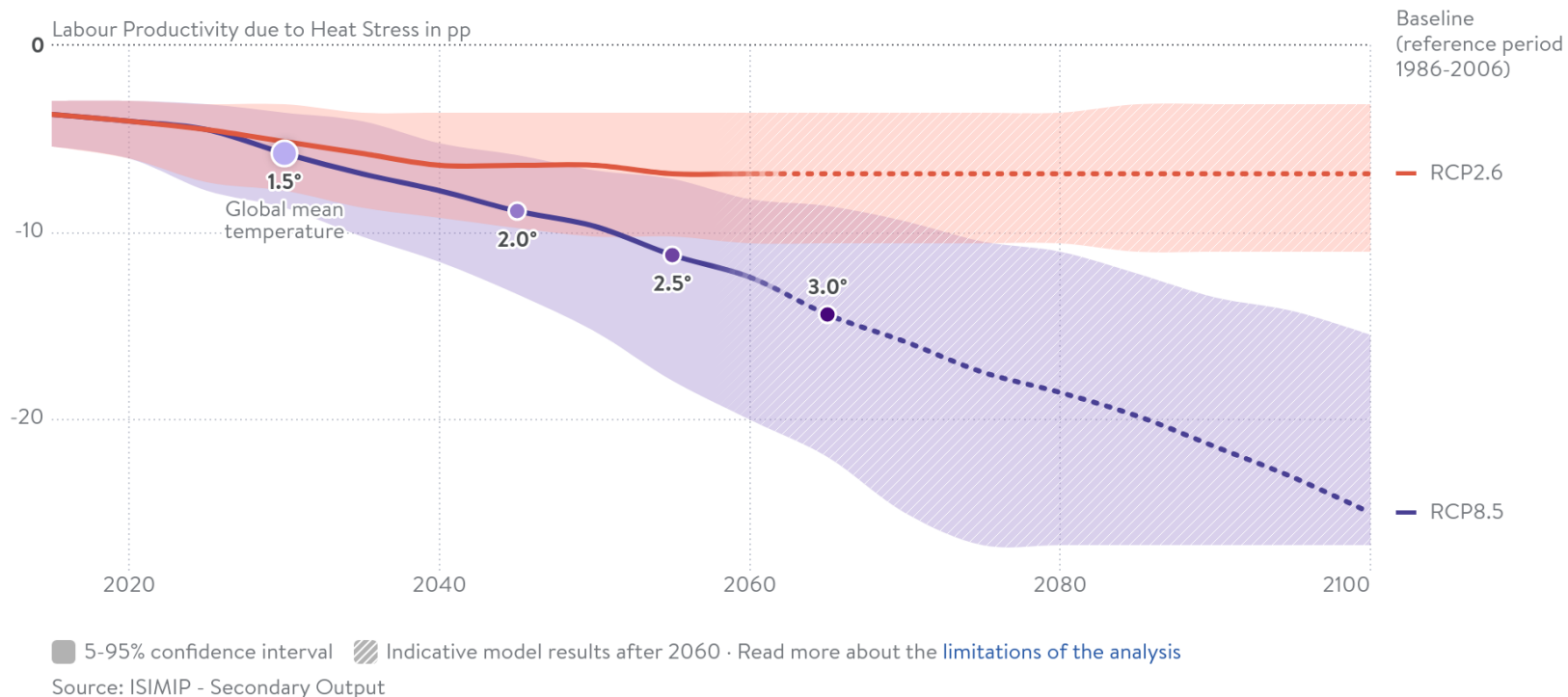
Location	No. of Hospitality	No. of Commercial	No. of Retail & Wholesale	2030		2050	
				RCP2.6	RCP8.5	RCP2.6	RCP8.5
Bangkok	9	4	6	High	High	High	High
Nonthaburi	-	-	1	High	High	High	High
Chaing Mai	3	-	1	Low	Low	Low	Low
Hua Hin	1	-	-	High	High	High	High
Krabi	1	-	-	High	High	High	High
Surat Thani	4	-	-	High	High	High	High

Source: <https://coastal.climatecentral.org/>

# Physical Risk Scenario : Extreme Heat

The company assessed labor productivity impacts due to heat stress in Thailand using the Climate Impact Explorer, based on Representative Concentration Pathways (RCP) 8.5 and 2.6. Under RCP 8.5, which represents a high-emission scenario, labor productivity is projected to decline significantly, with losses of up to 8 percentage points by 2030 and up to 10 percentage points by 2050 due to increased frequency and intensity of heatwaves. This impact will be most pronounced in outdoor and manual labor-intensive sectors.

Conversely, under the low-emission scenario RCP 2.6, the decline in labor productivity is more moderate, estimated at around 2-3 percentage points, as global efforts to mitigate climate change lead to fewer and less severe heat stress events. The analysis highlights the critical importance of climate mitigation efforts to safeguard labor productivity and economic stability in Thailand.



Source: <https://climate-impact-explorer.climateanalytics.org/>

Copyright 2023, ASSET WORLD CORPORATION

# Transition Risk Scenario

The risk levels represent the risks and opportunities associated with each driver in the 2030 and 2050 timeframes, highlighting the impact of climate-related risks and opportunities on AWC's hospitality and retail sectors. By comparing the NGFS Above 2°C and Below 2°C scenarios, along with the IEA SDS and IEA STEPS scenarios, we can gain insights into how climate policies and actions influence these sectors under different climate futures.

- **Climate Change Act**

Higher carbon taxes could increase operational costs, pushing the hospitality sector to adopt energy-efficient technologies and renewable energy, while the retail sector might face higher prices and need to adjust pricing strategies. However, AWC could drive early investments in sustainability, offering long-term benefits and market advantages

- **Energy Efficiency and Renewable Energy Transition**

These strategies will mitigate rising operational costs and carbon tax impacts, while gradual improvements in energy efficiency and renewable energy adoption will help manage increasing costs and align with evolving regulatory and market demands.

Identified Transition Risk & Opportunity	Time Frame	
	2030	2050
Climate Change Act	High risk	Moderate risk
Energy Efficiency and Renewable Energy Transition	Low opportunity	High Opportunity

# Financial Implication on Risks and Opportunities

Risk/ Opportunities	Physical Risk	Transition Risk	Transition Opportunity
Key Drivers	Natural Disasters	Climate Change Act	Energy Efficiency and Renewable Energy Transition
<b>Business Impacts</b>	Most climate-change related significant risk is natural disasters in Thailand such as flooding or windstorms which could cause potential physical damage to AWC properties and services and affect to the company to reimburse insurance premium for non covering loss of or damage to the property including natural disaster.	The mechanism for reducing greenhouse gas emissions under the Climate Change Act in Thailand includes setting the carbon reduction targets for private sector emissions and/or mandatory carbon footprint reporting that significantly affect to the cost of business operation and profitability.	The most significant opportunity resulting from climate change to business operations is cost savings from energy efficiency improvements and the adoption of renewable energy sources. With high anticipation of the energy initiative programs, AWC has developed an “Energy Efficiency Plan” (EEP), with projects to reduce energy consumption in its hospitality assets which adopt the different specific “Energy saving Initiatives” (ESIs) across a set timeframe.
<b>Prediction of risks/opportunity action (years)</b>	8	6	8
<b>Financial Implications</b>	3,465 million THB by assumption of flooding event has effect on company’s operating asset worth of FY23.	As of 2023, AWC has not yet accounted for additional costs for the carbon tax in its financial statement because the government is still in the process of consideration and establishing an appropriate enforcement plan, which is expected to be implemented in 2025.  AWC has estimated cost of carbon tax for Scope 1+2 emission 183.95 million THB based on estimation of FY25 - FY30 annual emission and carbon tax price 200 THB per tCO2e.	AWC has estimated cost saving of over THB 49.26 million THB per year, we expect contribution for total cost saving by 394.08 million THB (FY23-FY30)
<b>Cost of Actions</b>	AWC has provided insurance premium around 22.77 million THB to mitigate financial impact before risk tackle which will be total 182.16 million THB for insurance premium for all business units in FY23 – FY30.	In 2023, AWC invested 33.06 million THB in Energy Saving Initiatives (ESIs) to reduce carbon emissions, which will in turn lower carbon tax costs and energy consumption in the long term. The total estimated investment in ESIs for FY23–FY30 is 264.48 million THB.	



# Management Measures and Adaptation Plan

- Physical Risks

Risk/Opportunity	Timeframe	Management Measures	Adaptation Plan
<b>1. Flooding</b> (Caused by Sea Level Rise and Coastal Flood Threats)	Short Term (Less than 5 years)	<ul style="list-style-type: none"> <li>- Conduct flood risk assessments</li> <li>- Begin upgrading infrastructure (e.g., elevated foundations)</li> </ul>	<ul style="list-style-type: none"> <li>- Acquire flood insurance</li> <li>- Develop emergency preparedness and evacuation plans</li> </ul>
	Medium Term (5-10 years)	<ul style="list-style-type: none"> <li>- Retrofit existing buildings with flood-proofing measures</li> <li>- Enhance floodplain zoning and planning</li> </ul>	<ul style="list-style-type: none"> <li>- Regularly review and update flood risk projections</li> <li>- Invest in advanced flood prevention technologies</li> </ul>
	Long Term (> 10 years)	<ul style="list-style-type: none"> <li>- Implement large-scale infrastructure improvements</li> <li>- Continue to enhance and innovate flood mitigation strategies</li> </ul>	<ul style="list-style-type: none"> <li>- Integrate climate resilience into long-term strategic planning</li> <li>- Explore options for relocation or redesign of high-risk areas</li> </ul>
<b>2. Labor Productivity Impacts Due to Heat Stress</b>	Short Term (Less than 5 years)	<ul style="list-style-type: none"> <li>- Implement cooling systems and improve ventilation</li> <li>- Develop and enforce heat stress protocols</li> </ul>	<ul style="list-style-type: none"> <li>- Adjust work hours to avoid peak heat periods</li> <li>- Educate employees on heat stress management</li> </ul>

# Management Measures and Adaptation Plan

- **Transition Risk**

Risk/Opportunity	Timeframe	Management Measures	Adaptation Plan
<b>Climate Change Act</b>	Short Term (Less than 5 years)	<ul style="list-style-type: none"><li>- Stay informed about and comply with the Climate Change Act</li><li>- Implement systems for accurate climate-related reporting</li></ul>	<ul style="list-style-type: none"><li>- Develop internal policies to ensure regulatory compliance</li><li>- Engage with stakeholders and industry groups</li></ul>
	Medium Term (5-10 years)	<ul style="list-style-type: none"><li>- Conduct scenario analysis for policy impacts</li><li>- Enhance reporting and disclosure practices</li></ul>	<ul style="list-style-type: none"><li>- Integrate climate change considerations into strategic planning</li><li>- Adapt business operations to align with evolving regulations</li></ul>
	Long Term (> 10 years)	<ul style="list-style-type: none"><li>- Continuously update compliance strategies as regulations evolve</li></ul>	<ul style="list-style-type: none"><li>- Advocate for favorable policies and adapt to regulatory changes</li></ul>

# Management Measures and Adaptation Plan

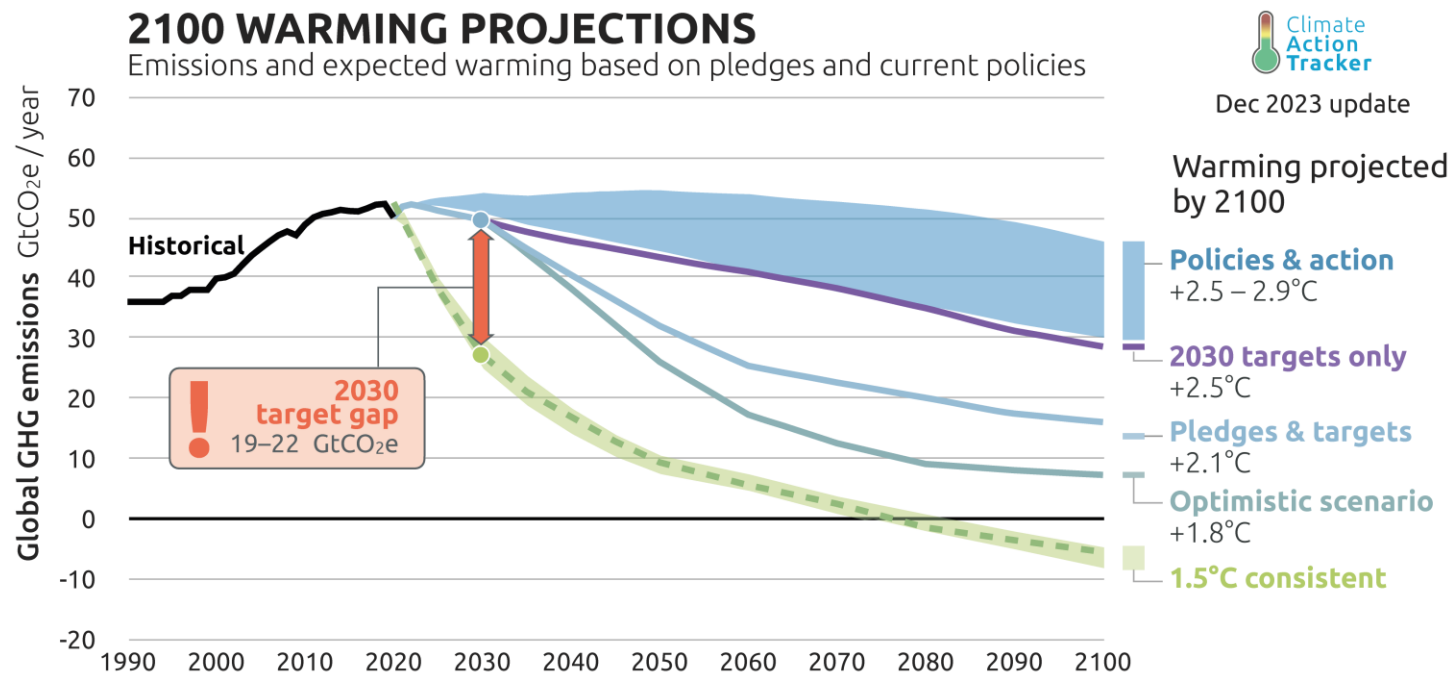
- Transition Opportunity

Risk/Opportunity	Timeframe	Management Measures	Adaptation Plan
<b>Energy Efficiency and Renewable Energy Transition</b>	Short Term (Less than 5 years)	<ul style="list-style-type: none"> <li>- Conduct energy audits as part of the EEP to identify efficiency opportunities</li> <li>- Start small-scale renewable energy projects (e.g., solar panels)</li> </ul>	<ul style="list-style-type: none"> <li>- Implement immediate ESIs projects for quick wins in energy savings</li> <li>- Develop a strategic plan for integrating renewable energy with EEP</li> </ul>
	Medium Term (5-10 years)	<ul style="list-style-type: none"> <li>- Expand ESIs projects based on audit findings and technology advancements</li> <li>- Monitor and assess energy efficiency and renewable energy performance</li> </ul>	<ul style="list-style-type: none"> <li>- Refine and enhance the EEP to include larger-scale renewable projects</li> <li>- Seek funding and incentives to support ESIs and renewable projects</li> </ul>
	Long Term (> 10 years)	<ul style="list-style-type: none"> <li>- Continue investing in advanced energy-efficient technologies and renewable energy solutions</li> <li>- Innovate in new energy technologies and efficiency solutions</li> </ul>	<ul style="list-style-type: none"> <li>- Maintain a long-term commitment to energy efficiency and renewable energy, ensuring EEP and ESIs are adaptive and forward-looking</li> <li>- Lead industry initiatives for sustainability and energy innovation</li> </ul>

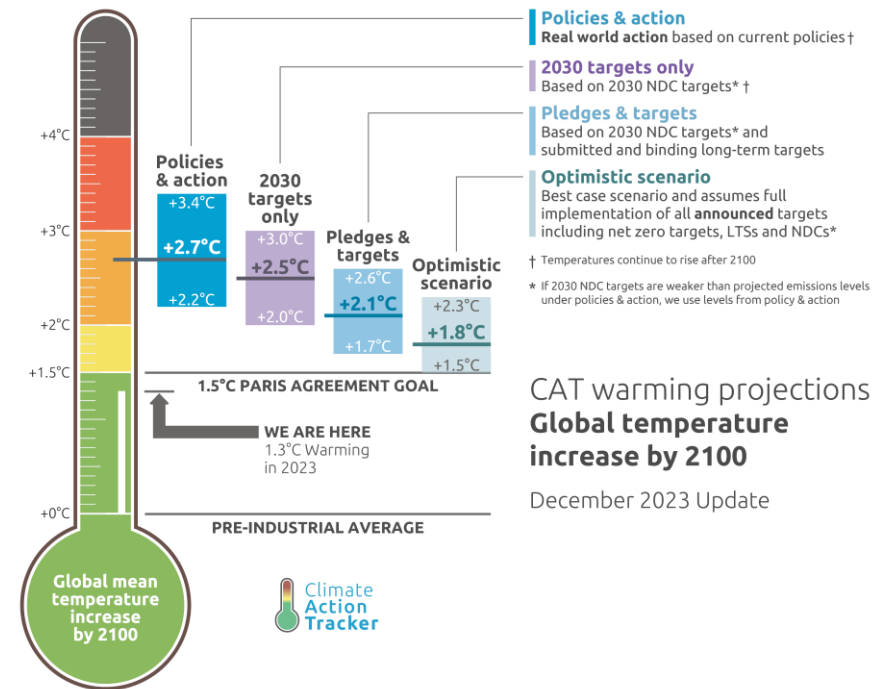
*Remarks; Energy Efficiency Plan (EEP) and Energy Saving Initiatives (ESIs)*

# Evaluating progress towards the Paris Agreement

In the case of the 2°C target, the Paris Agreement's "median" language has been interpreted as ensuring that there is no more than a 50% chance of exceeding 2°C – and, therefore, a 50% chance of staying below it. Only with stricter emission targets, including long-term net zero goals, is there a chance of keeping warming below 2°C, but there's still a high probability of exceeding 1.5°C.



Source: <https://climateactiontracker.org/global/temperatures/>







## Metrics and Targets

# TARGET BECOME CARBON-NEUTRAL WITHIN 2030

## Strategic initiatives towards carbon neutrality target

Working under the Better Planet Pillar, AWC developed the Strategic Initiatives on Climate Strategy, underpinning the company's target **to become a carbon-neutral business by 2030**. The Climate Strategy focuses on monitoring and measuring the volume of greenhouse gas emissions across all AWC operations, starting from raw material sourcing to the delivery of our low-carbon products and services. To leverage the AWC's capacity to help combat climate change and reduce GHG with measurable and progressive outcomes, our energy efficiency plan is designed in according to international recognized green building standard such as LEED and EDGE etc. The projects have been certified including 1. Inside by Melia Bangkok Sukhumvit (EDGE), 2. InterContinental Chiang Mai Mae Ping Hotel (LEED: BD+C), and 3. Okura Prestige (located in Park Venture Building that is certified by LEED). For All existing AWC's commercial properties, They are currently in the process of upgrading their building systems and management to comply with LEED standards, aiming to achieve certification by 2025. For developing assets, AWC is aiming to develop assets and achieve international sustainability certifications which include 1. Pattaya Marriott Resort & Spa at Jomtien Beach, 2. Melia Pattaya, 3. Kimpton Chiang Rai Golden Triangle 4. Kimpton Hua Hin Beach Club, 5. Hotel Plaza Athénée New York, 6. InterContinental Chiang Rai Golden Triangle Resort, 7. Okura Prestige Chiang Mai, 8. The Ritz-Carlton Bangkok, Riverside Verengnakharnkhasem, 9. Pattaya Jomtien Beach Resort and Spa, 10. Asiatique 2.1 and 11. Aquatique Pattaya. In 2023, the low-carbon services have generated 21.24 % of total revenue and reduce GHG emission 2,247.8 tCO<sub>2</sub>e.

In addition, we shape our investment strategy towards energy technology projects and renewable energy transition - the result of which helps reduce energy costs. In line with this, the company will launch a green purchasing and low carbon tourism program contributing to low-carbon products and services. With the intention to reduce our carbon emissions, carbon storage and carbon offsetting activities are to be integrated in AWC's tree planting activities, expansion of green spaces, and carbon credit trading. Engaging with the local community and generating more incomes from low carbon products and services are also enablers to create value.

# Targets to Achieve Carbon Neutrality by 2030

AWC has established baseline GHG emissions in 2019, covering Scope 1 and 2. This includes direct fuel combustion activities, methane leakage, and the use of purchased electricity, accounting for 100% of the total GHG emissions. AWC has aligned GHG reduction targets with the Science Based Targets initiative (SBTi) and the Paris Agreement’s goal of limiting global warming to 1.5 degrees Celsius which aims to achieve Net-Zero Emissions by 2065, aligning with Thailand’s climate action goals. In addition to reducing GHG emissions, we aim to achieve carbon neutrality by 2030. To reach this goal, the company will also engage in offsetting projects that reduce or sequester CO2.

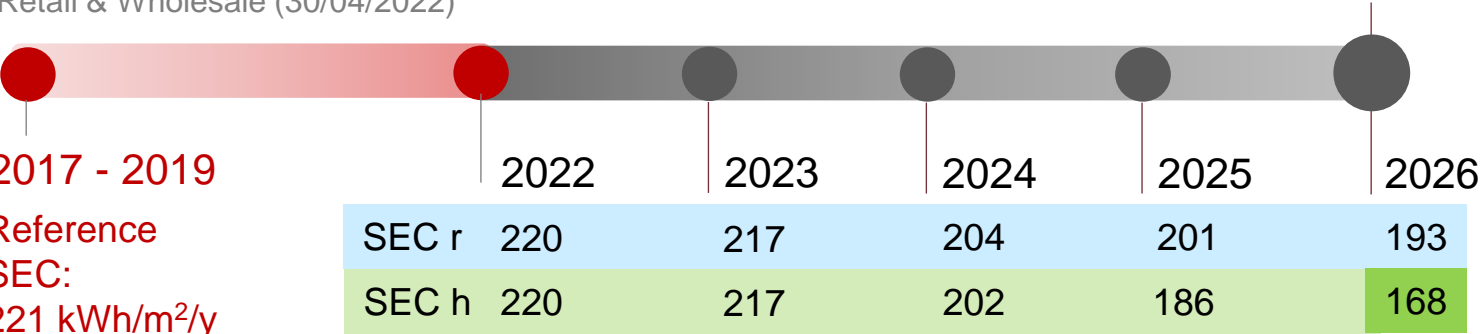
Remark; Scope 3 emissions were not included in this baseline calculation due to the predominance of Scope 2 emissions in the organization's GHG accounting and the challenges in collecting and accessing high-quality data for Scope 3

Year	Baseline Year	Baseline Year Emission (tCO2e)	% Emission Reduction Target	
			Short-term: 2026	Long-term: 2030
Scope 1	2020	8,700	25.2%	42%
Scope 2	Avg emission of 2017-2019	90,466	29.4%	46.2%
Total GHG Emission	2019	99,166	29.10%	45.8%

# Targets to Achieve Carbon Neutrality by 2030

## EEP v1 (Y2021 – 2026)

Hospitality (27/08/2021),  
Commercial (31/03/2022),  
Retail & Wholesale (30/04/2022)



กรมพัฒนาพลังงานทดแทนและอนุรักษ์พลังงาน กระทรวงพลังงาน แผนงานยกระดับเกณฑ์มาตรฐานอาคารด้านพลังงาน

Table 3.4: Net Energy Consumption Derived from Modeling Each Building Type under Each Level of Energy Saving Capability.

Building Type	Energy Consumption under Each Level of Energy Saving Capability (kWh/m <sup>2</sup> /y)				
	Reference	BEC	HEPS	Econ	ZEB
Office building	219	171	141	82	57
Department store	308	231	194	146	112
Retail & wholesale business facility	370	298	266	161	126
Hotel	271	199	160	116	97
Condominium	256	211	198	132	95
Medical center	244	195	168	115	81
Educational institution	102	85	72	58	39
Other general buildings	182	134	110	66	53

SEC (Realistic Target)
SEC (HEPS Target)

HEPS  
(High Energy Performance Standard)

The high energy efficiency standard of various systems which can be achievable by using current technologies

## EEP v2 (Y2023 – 2030)

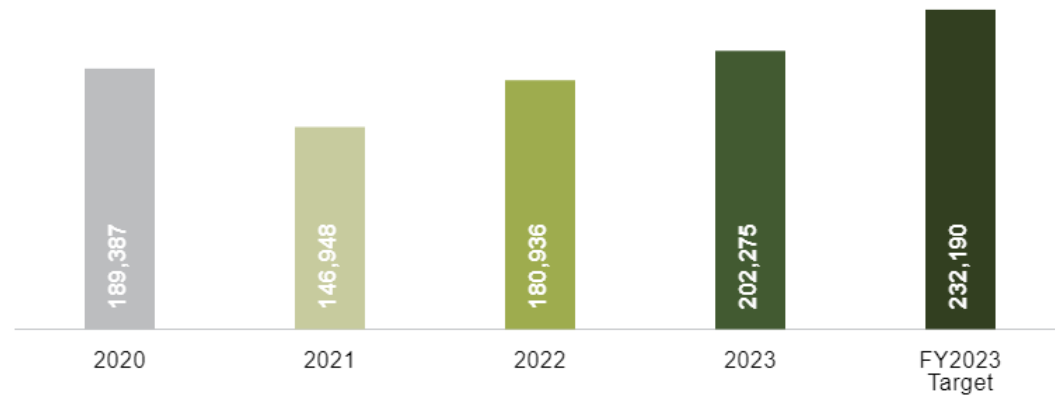
All AWC (31/08/2023)



# Energy and Greenhouse Gas Emission Performance

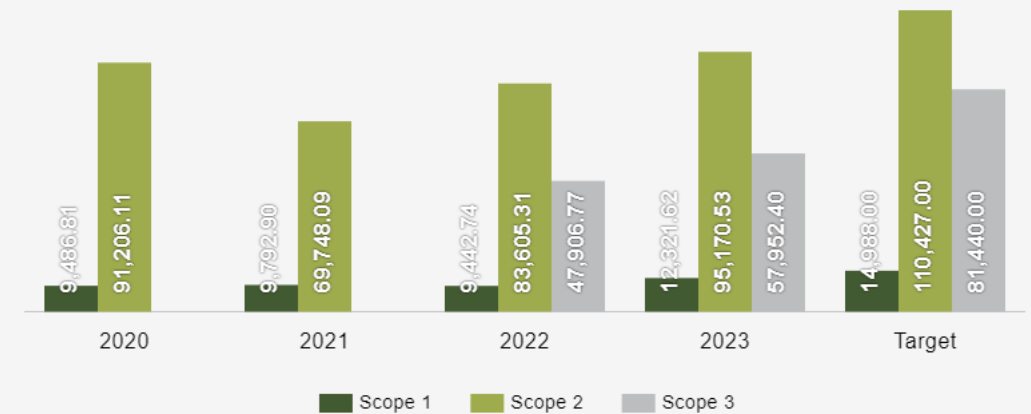
## Total Energy Consumption

(Unit: MWh)



## Total Greenhouse Gas Emission (Scope 1 & 2)

(Unit: Ton CO<sub>2</sub>eq)





# 30 ESIs under EEP v2

**Anticipated Electricity Consumptions of All AWC in Y2030 shall reduce 29.96 GWh/y  
(10.86% from All AWC SEC Reference Baseline)**

(Note: 29.96 GWh/y Electricity Saving = THB 133.02 mil. Saving = 14,977 Ton CO<sub>2</sub>eq Emission Reduction)

<b>O</b> Operation Management (No Investment)	<b>S</b> Short Term ESIs (Low Complexity)	<b>L</b> Long Term ESIs (High Complexity)
<p>                     O1: Increase 1°F in Chilled water                      O2: Turnover rate of pump at swimming pool                      O3: Minimize operating Cooling Tower at Night                      O4: Close AHU/ A/C at Lobby at Night                      O5: Reduce Lighting bulb or Lighting Management                      O6: Open Hood on demand and Close after use within 15 mins                      O7: Electric Water Boiler: Unplug immediately after not use / Set Temp 100°C to boiling and 85°C for Warming                      O8: Minimize operating VSD CHP&amp;CDP                      O9: Operate Higher Efficiency Chiller / Cooling tower / CDP / CHP on Baseload                      O10: Decrease 1°C in Heat Pump                      O11: Turn off Equipment after use by participant motivation                      O12: Minimize Operating Time of Chiller / CHP / CDP / Cooling Tower / A/C                      O13: Minimize Operating Time of Lighting                      O14: Increase 1°C in Package Unit / Split type                 </p>	<p>                     S1: Clean Chiller / Cooling Tower / Split type / Package Unit                      S2: Change Boiler to Heat Pump                      S3: Install VSD CHP&amp;CDP                      S4: LED                      S5: Motion Sensor for Corridor/ Toilet                      S6: Dimmer Switch for Lighting in Corridor / Lobby / Toilet                      S7: Categorized type of food by appropriate temp required                      S8: Demand – controlled Kitchen Ventilation (DCKV)                      S9: Temp sensor + VSD for AHU in Corridor / Lobby                      S10: Demand – controlled Escalator (DCE)                      S11: High Efficiency Refrigerator and Freezer                 </p>	<p>                     L1: Hi-Eff. Chiller Replacement                      L2: Solar PV Rooftops                      L3: HVACO / Chiller Plant Optimization                      L4: Hi-Eff. Split type / Package Unit Replacement                      L5: Renovate of Building Envelop                 </p> <div data-bbox="1666 819 1989 1033"> </div> <div data-bbox="2015 819 2321 1033"> </div> <div data-bbox="1666 1062 1989 1276"> </div> <div data-bbox="2015 1062 2321 1276"> </div>

# Major Energy Saving Initiatives

## HVACO / CHILLER PLANT OPTIMIZATION

Implementations of HVACO Initiatives at The Empire, Athenee Tower Building, and Pantip Plaza at Ngamwongwan continued in 2022. In addition to the above the installation of HVACO at The Athenee Hotel, A Luxury Collection Hotel Bangkok was completed in October 2022. As a result, the total forecasted energy saving per year from the implementation of Chiller Plant Optimization at AWC is 7,132,705 kWh or equivalent to 3,565.64 Ton CO<sub>2</sub>e.

## SOLAR PV ROOFTOP

AWC has installed a total of 6 solar rooftops at its operating assets (Hua Hin Marriott Resort & Spa, Phuket Marriott Resort & Spa, Nai Yang Beach, Gateway at Bangsue, Lasalle's Avenue, Pantip Plaza at Ngamwongwan, and Pantip Plaza in Chiang Mai) and the COD in 2022 for 4 properties (Hua Hin Marriott Resort & Spa, Phuket Marriott Resort & Spa, Nai Yang Beach, Lasalle's Avenue, and Pantip Plaza at Ngamwongwan) were energized and solar rooftops at Gateway at Bangsue and Pantip Plaza in Chiangmai will be COD early 2023. Total projected reduction in energy consumption from the grid is 5,027,100 kWh/year or equivalent to 2,513 Ton CO<sub>2</sub>e/year.



# Introduction on Responsible Climate Lobbying

Asset World Corporation (AWC) is dedicated to growing our business responsibly by reducing our negative impacts and creating positive impacts on Thailand's economy, society, and environment. To ensure achievement, we actively participate in and contribute to national and international associations that support sustainable growth across these dimensions.

AWC supports associations and organizations that create and advocate for public policies and regulations. These groups assist policymakers by providing research, insights, and information on sustainable development for Thailand, various industries, health and safety, environmental impact reduction, and the implementation of the United Nations Sustainable Development Goals (SDGs).

In line with the Paris Agreement, AWC is committed to achieving carbon neutrality by 2030 and has established both short-term and long-term GHG reduction targets. These targets are managed and measured based on national and international standards such as SBTi and TGO etc. Our decarbonization strategy is driven by three pillars: efficiency, portfolio diversification, and compensation. To ensure our contributions align with Thailand's Nationally Determined Contributions (NDC) and the Paris Agreement, AWC has implemented robust governance and oversight processes.

AWC's contribution management system is aligned with the UNGC's [Guide for Responsible Corporate Engagement in Climate Policy](#), ensuring that our efforts support sustainable growth and responsible climate action.



# Responsible Climate Lobbying and Policy Framework

Framework	Actions
<b>1. Public commitment to align all climate change lobbying with carbon neutrality</b>	AWC commits to conducting all climate change-related activities, including lobbying, in alignment with the Paris Agreement and carbon neutral company by 2030. AWC's climate-related policies, strategies, and trade association sponsorship are applicable to all subsidiaries, jurisdictions, and business areas, ensuring a unified approach across hospitality and retail operations.
<b>2. Public commitment to ensure alliances, and coalitions conduct their lobbying</b>	AWC collaborates with associations and alliance organizations to advocate for sustainable public policies. These groups aid policymakers by sharing information and research on sustainable growth, health and safety, and environmental impact mitigation.
<b>3. Assign responsibility at board level for oversight of climate change lobbying approach and activities</b>	The Corporate Governance and Sustainability Committee (CGSC) oversees the Management Committee, which provides updates from the Sustainability Working Team. The CGSC monitors progress against climate goals and targets and approves climate-related actions, including lobbying. The CGSC is accountable for reviewing and implementing the management system for climate change-related lobbying activities and trade association memberships.
<b>4. Establish an annual monitoring and review process to ensure that all direct and indirect climate change lobbying activities are consistent</b>	AWC conducts quarterly reviews to assess alignment of public policy engagements, trade association climate position, and lobbying with the Paris Agreement. AWC's climate lobbying activities are approved by the board, ensuring consistency with Paris Agreement, Thailand's Nationally Determined Contributions (NDC) and national long-term targets to become carbon neutral by 2050 and Net-zero by 2065. Moreover, AWC is involved in monitoring systems within trade associations to ensure their activities align with these goals and engages stakeholders to monitor policies and activities that results are approved by the board through the CGSC.
<b>5. Establish a clear framework for addressing misalignments between the climate change lobbying positions of associations and AWC's own climate position</b>	AWC engages in regular reviews and discussions with trade associations to ensure alignment with Thailand's NDC and the Paris Agreement. If misalignments are identified, AWC addresses them through discussions and may reconsider its membership in the association if necessary to maintain alignment.
<b>6. Recognize and report on actions to address any misalignments</b>	AWC has not identified any misalignments between its climate change lobbying activities and those of its trade associations. Any discrepancies would be addressed through discussions and potential reassessment of memberships. Additionally, climate policy positions and activities of trade associations, as well as climate-related direct lobbying activities, are reported to the Corporate Governance and Sustainability Committee or the Management Committee on a regular basis.
<b>7. Publicly disclose membership, support, and involvement in all associations, alliances, and coalitions engaged in climate change-related lobbying</b>	AWC engages in climate change-related lobbying through memberships and support in trade associations focusing on sustainability and climate change, including: 1. Global Compact Network Thailand (GCNT): AWC collaborates with GCNT to advance sustainable business practices and advocate for climate policies of Thailand aligned with the Paris Agreement. 2. United Nations Global Compact (UNGC): AWC is an active member of UNGC, committing to its Ten Principles and participating in initiatives that support climate action and sustainable development goals (SDGs). AWC supports public movements and operations to resolve and mitigate negative impacts from climate change, applying circular economy principles and responsible resource consumption.





# BUILDING A BETTER FUTURE



**ASSET WORLD**  
CORPORATION

# THANK YOU

  
BUILDING  
A BETTER FUTURE