

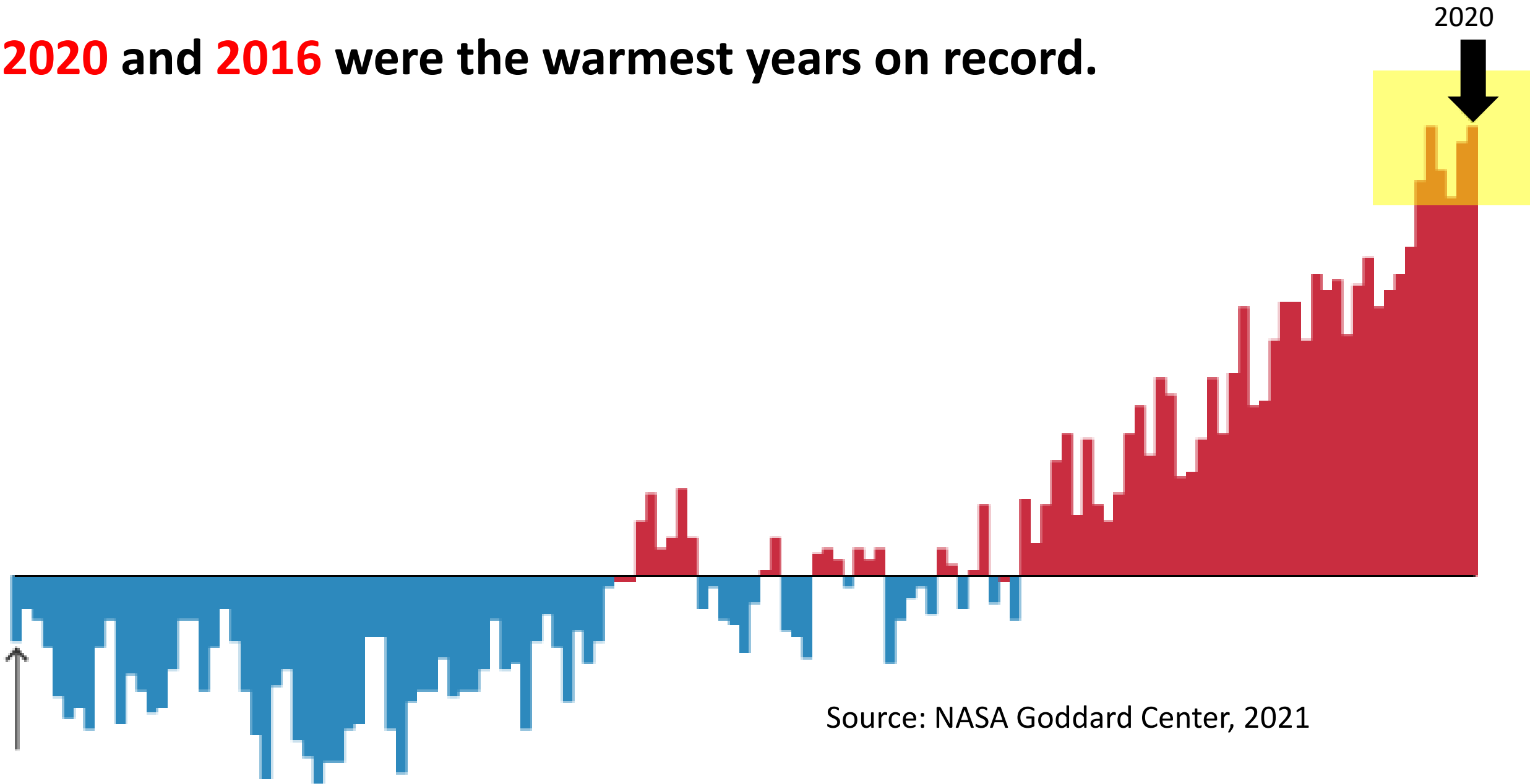
“Actions and Partnerships to Achieve Carbon Neutrality in the Asia Pacific Region”

Framing Presentation

TAKEUCHI Kazuhiko, President of IGES
23 March 2021



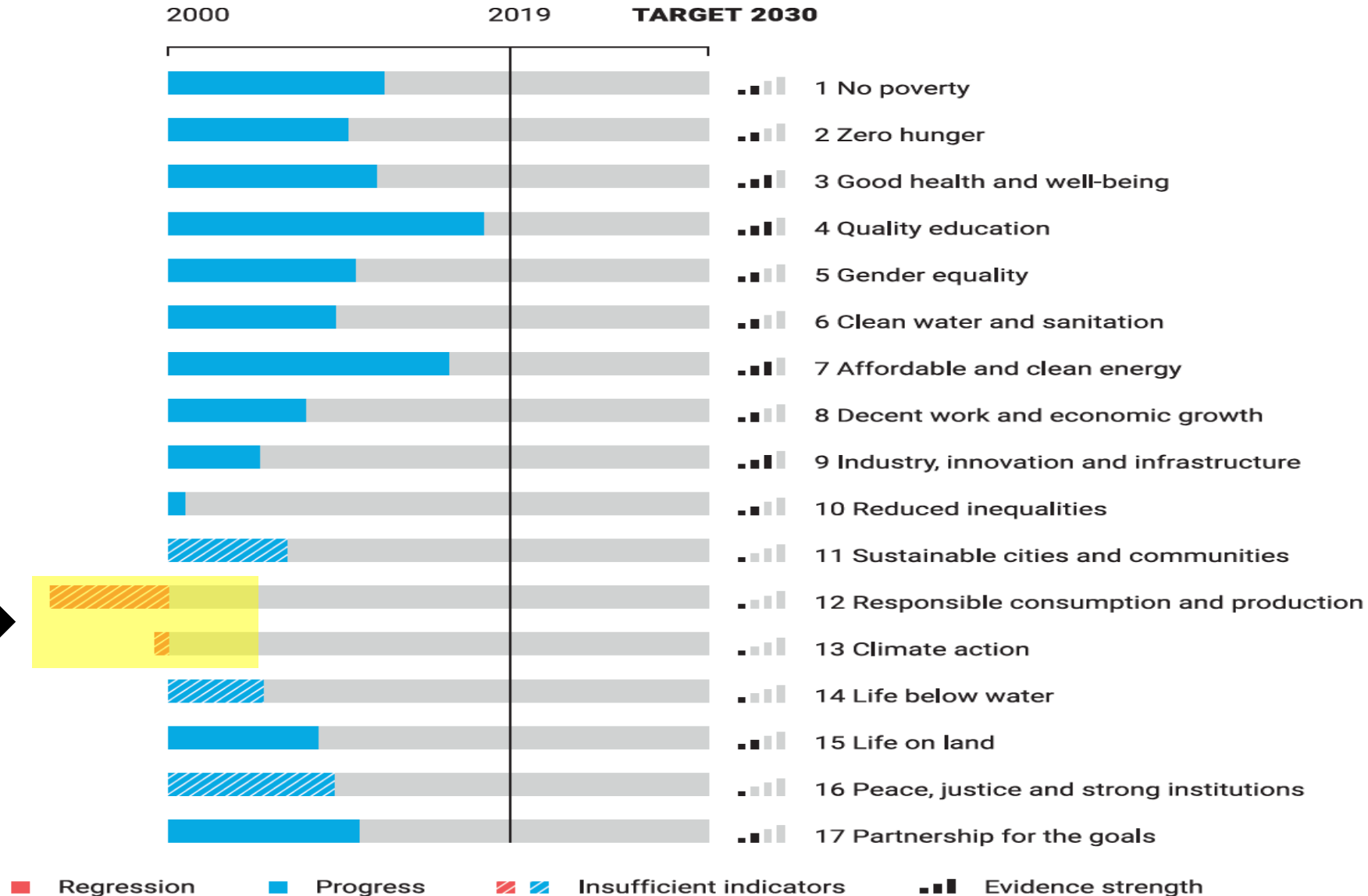
2020 and **2016** were the warmest years on record.



Source: NASA Goddard Center, 2021

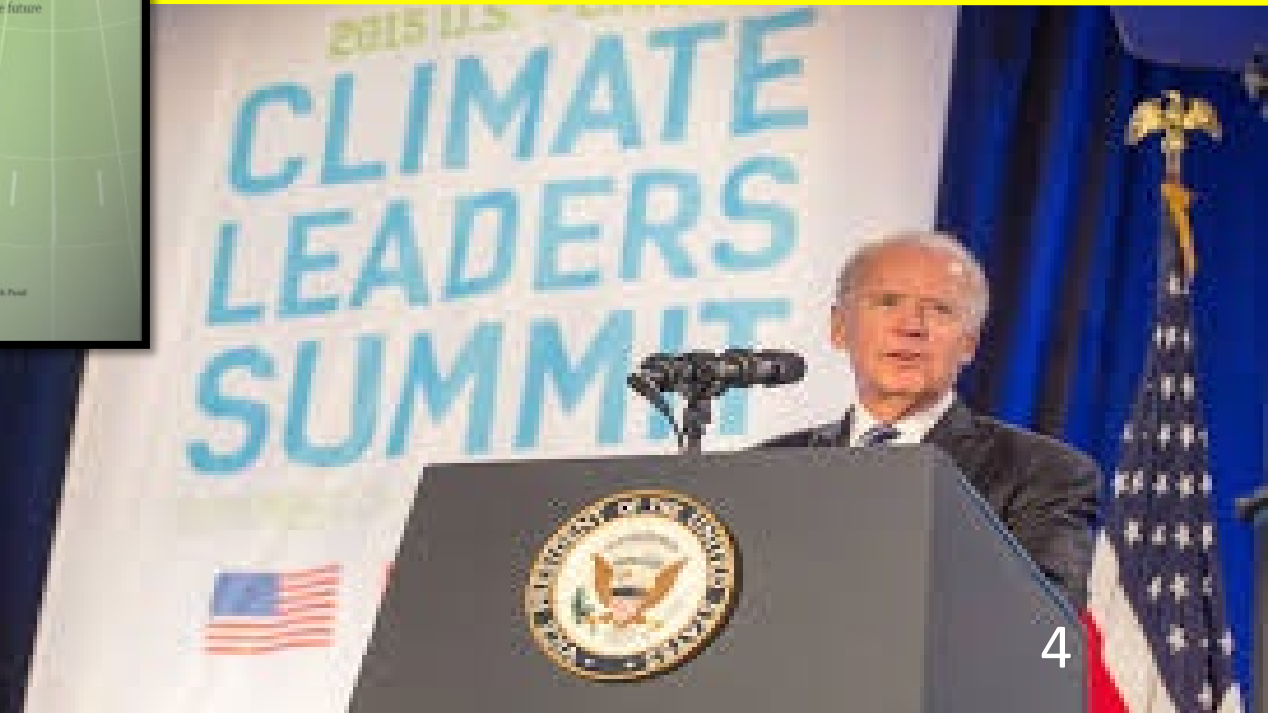
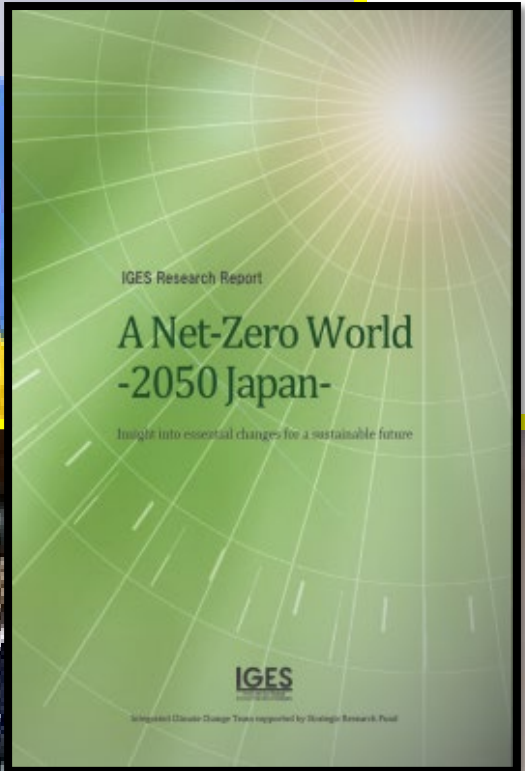
SDG 12 & 13 are two goals where Asia has regressed.

SDG 12
and 13



Drawing from research such as IGES *Net Zero-2050 Japan Report*, many countries are moving down **transformative pathways** needed for **carbon neutral futures**.





Tokyo is working with **Kuala Lumpur** on similar carbon neutral goals.



The two cities signed a **memorandum of understanding (MOU)** for collaboration in 2020.

Tokyo Metro Government

Tokyo declares that it will seek to become a **zero emission Tokyo** by 2050.

Kuala Lumpur City Hall

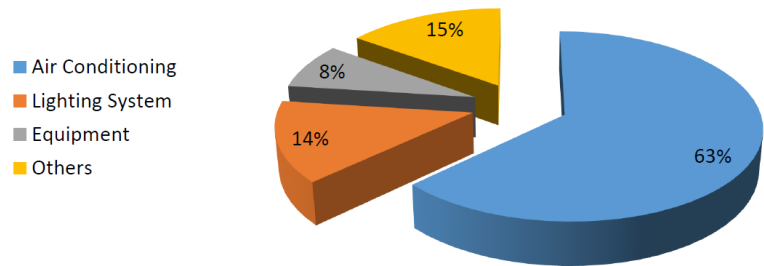
Kuala Lumpur aims to become **carbon neutral Kuala Lumpur** by 2050.

IGES is helping transmit knowledge on how Tokyo is reducing emissions with low costs solutions in key sectors such as **buildings**.

First year: Introduction of Tokyo Met. Government scheme.



Air conditioning is the largest energy use !



Reduction potential based on the solutions !

	Scenario 1	Scenario 2
CO ₂ EMISSION IMPROVEMENT	35%	47%
Approach	Moderate	Aggressive
CO ₂ EMISSION REDUCTION	12.5 million kgCO ₂ e/year	16.9 million kgCO ₂ e/year
Monetary saving	MYR 7 million/year	MYR 9 million/year

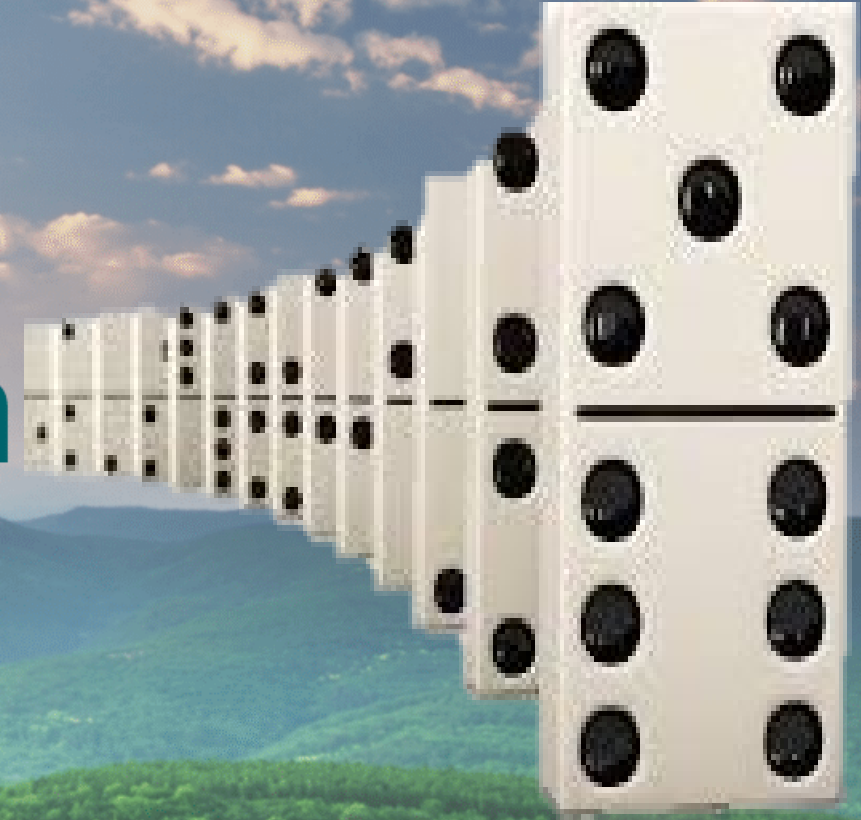
Technological solutions **with TMG suggestion**

Building Envelope	1	Infiltration - Airtight Building Envelope
	2	Reduce Direct Sunlight - Shading, Window Blind
	3	Insulation - Green Roof, Roof Insulation, Wall Insulation, Window Tinted, Window Glass
Air-Conditioning System	4	Outdoor Air Ventilation Control
	5	Zoning & Control of Air Distribution System - VAV, Temperature & Humidity Control, Setback & Shut-off Control, Off-hour control
	6	High Efficiency Fan System
	7	High Efficiency Air Filtration
	8	Effective Piping & Ducting Insulation
	9	High Efficiency Unitary Air Conditioning System - Single Split, Package, Multi Split, VRF
	10	High Efficiency Centralized Air Conditioning System - Chiller, Hydronic System, Cooling Tower
	11	Control of Centralized Air Conditioning System - Automation & Optimization
Lighting	12	Lighting Control - Daylight Control, luminance Control, Zoning Control, Motion Control, Off-hour Control
	13	High Efficiency Lighting System - Indoor & Outdoor
Energy Management Control System	14	Control of Equipment, Monitoring of Equipment, Integration of Equipment and Other Sub-systems, Energy related Data Collection and Analyses
Renewable Energy	15	Solar PV

Mainly TMG's no or low cost solutions !

Zero Carbon City International Forum

17 - 18 March 2021



IGES is contributing to fora that are helping decarbonization dominos to fall.



United Nations
Framework Convention on
Climate Change

