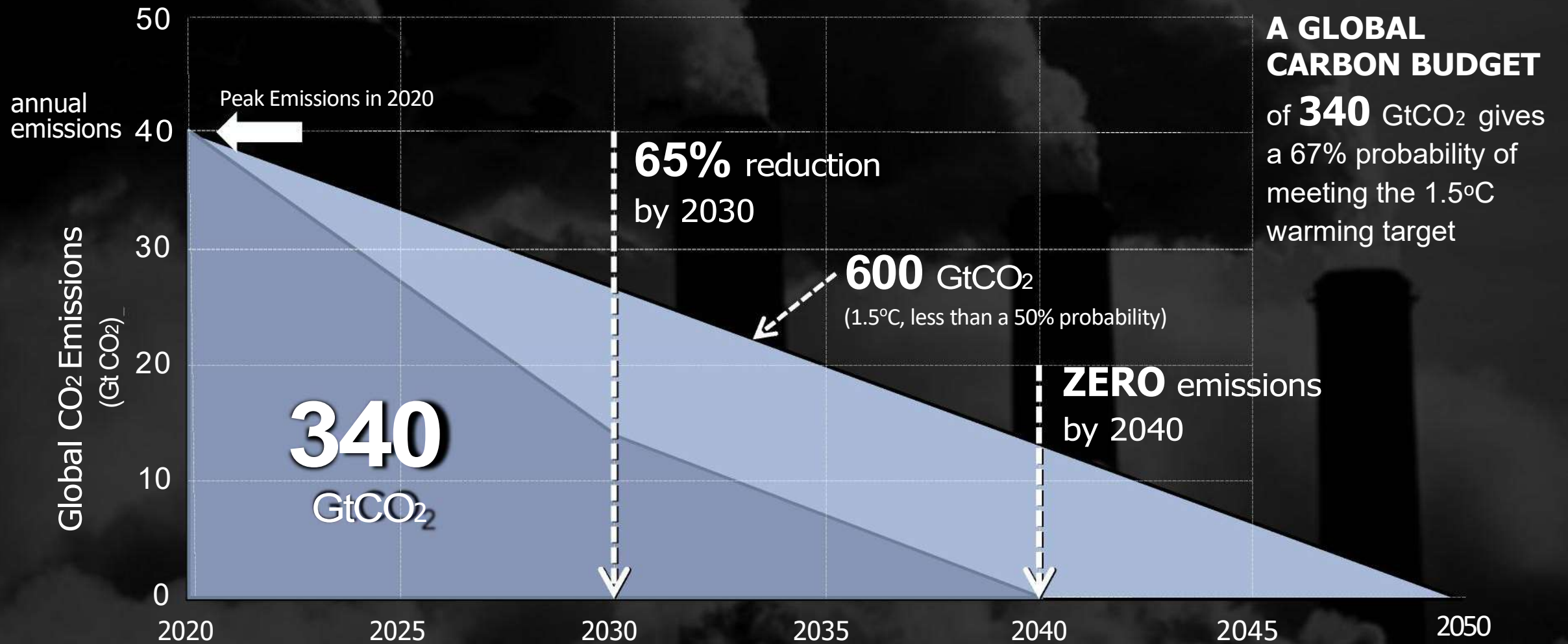




ZERO CODE™

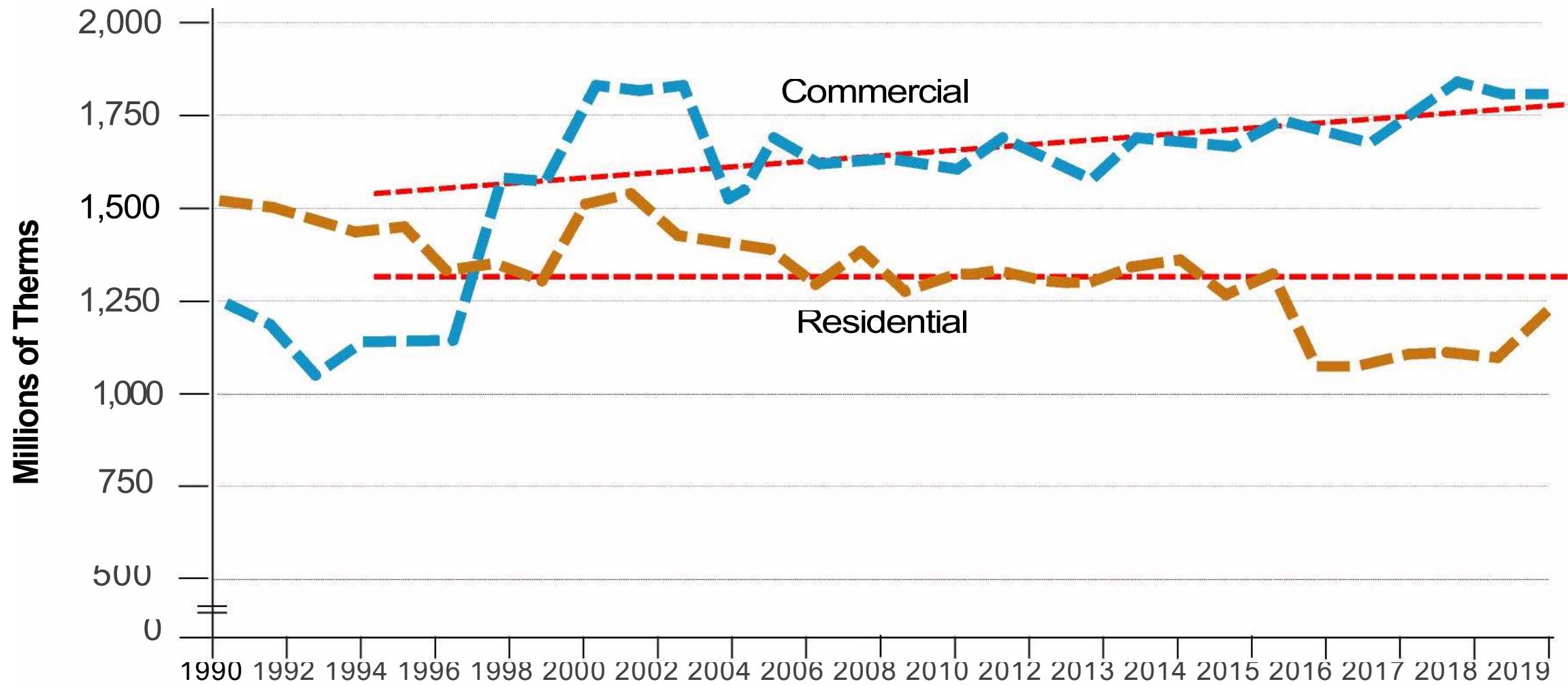
ZERO Code for California
Edward Mazria, FAIA, FRAIC, CEO

GLOBAL CARBON BUDGET



Source: Architecture 2030 and IPCC SR15, Table 2.2

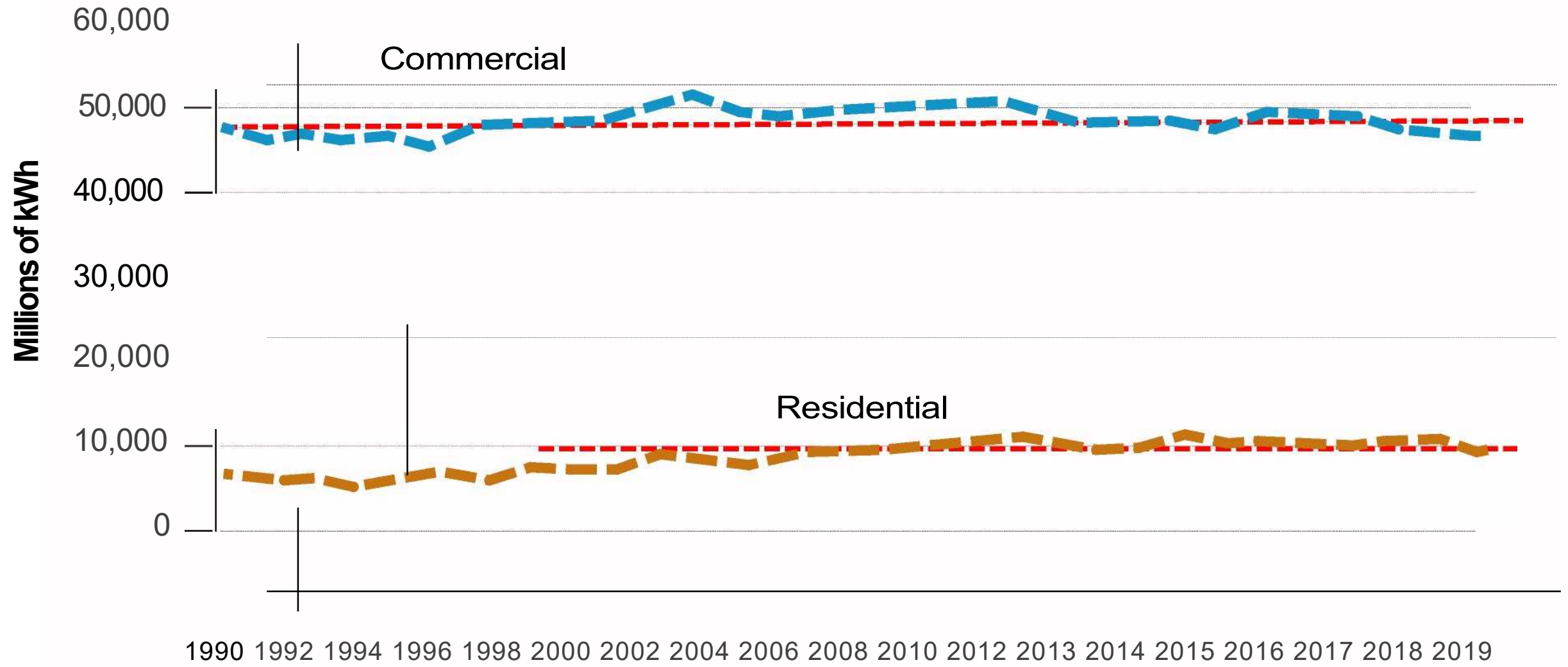




LOS ANGELES COUNTY GAS CONSUMPTION (Buildings 1990 - 2019)

Source: California Energy Commission

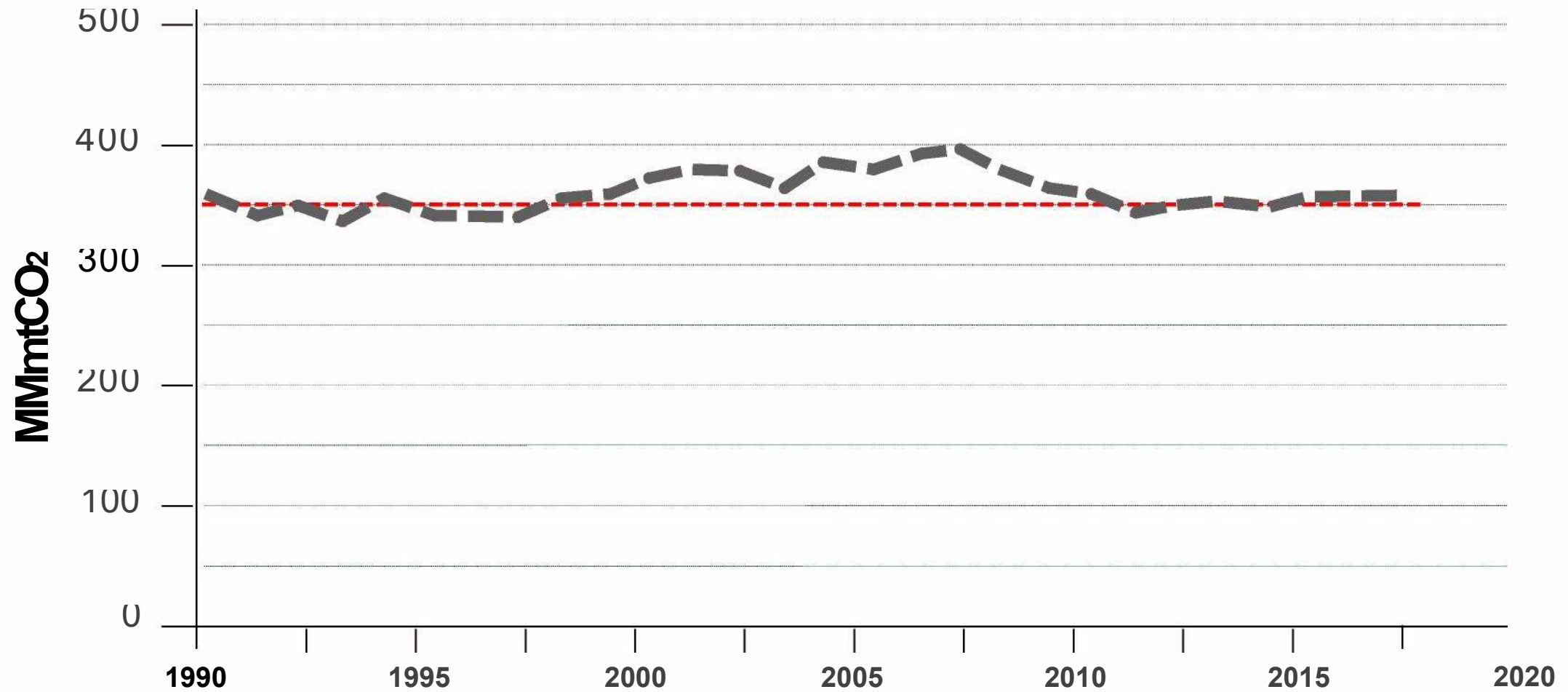




LOS ANGELES COUNTY ELECTRICITY CONSUMPTION (Buildings 1990 - 2019)

Source: California Energy Commission

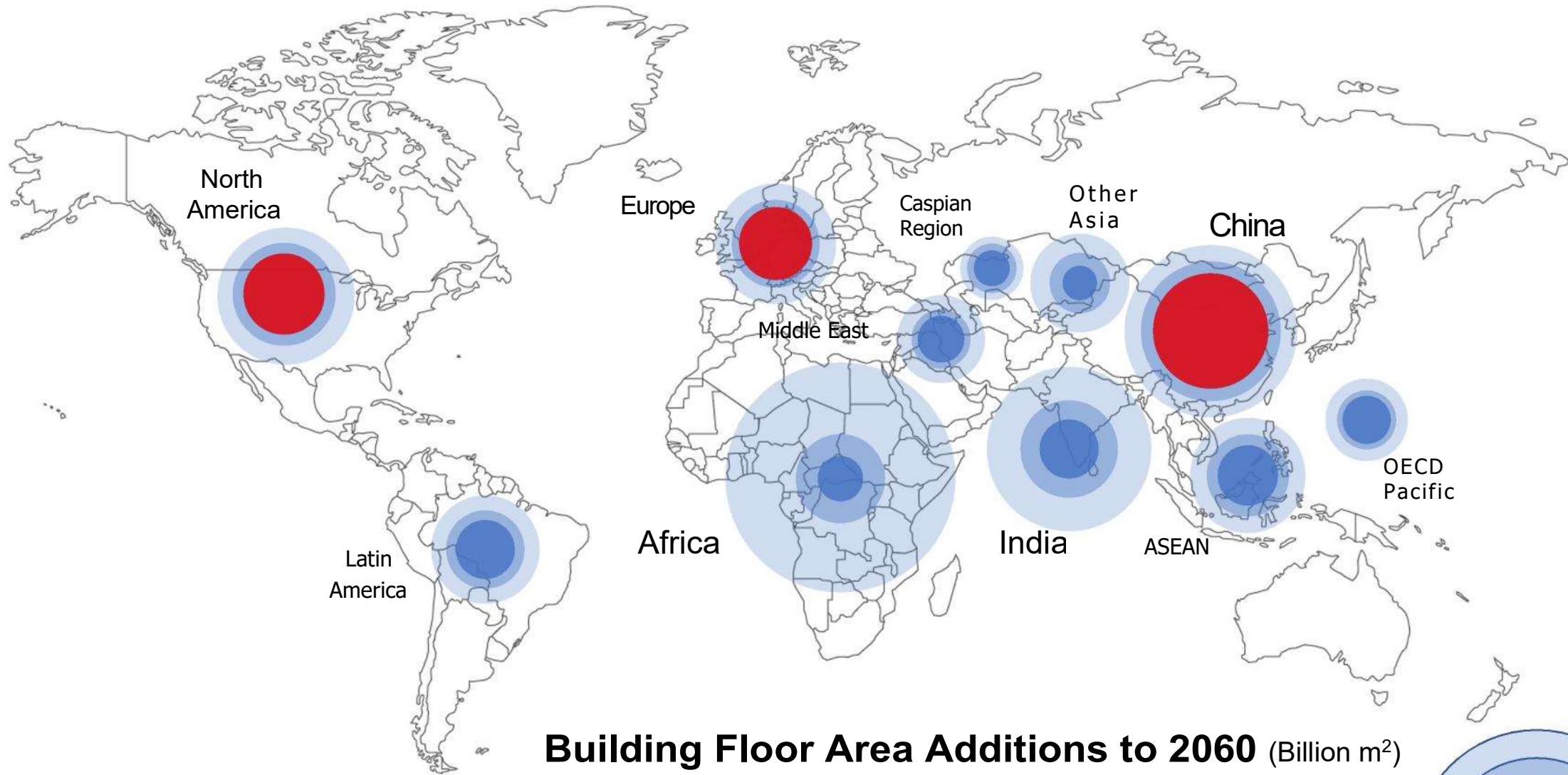




**CALIFORNIA CO₂ EMISSIONS (Energy Consumption)
1990 - 2017**

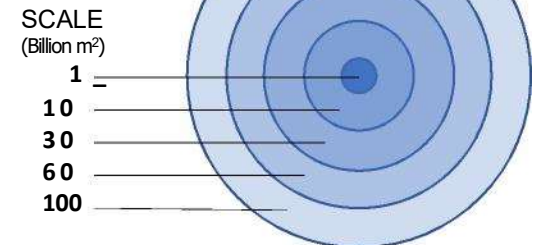
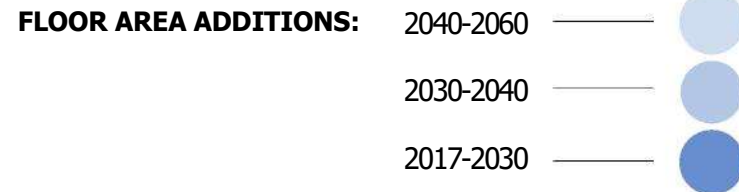
Source: US Energy Information Administration

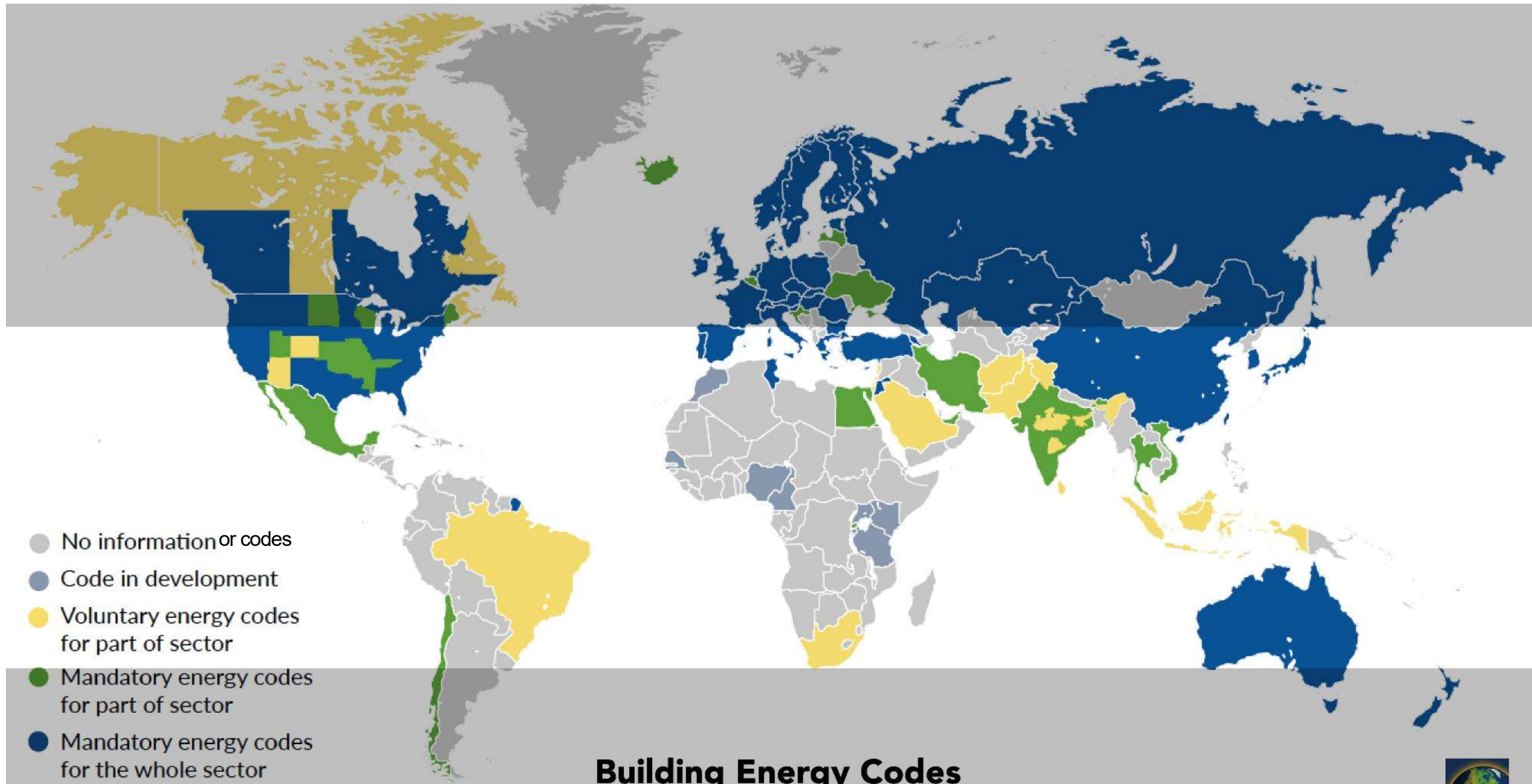




Building Floor Area Additions to 2060 (Billion m²)

Source: Architecture 2030; Global ABC, Global Status Report 2017





- No information or codes
- Code in development
- Voluntary energy codes for part of sector
- Mandatory energy codes for part of sector
- Mandatory energy codes for the whole sector

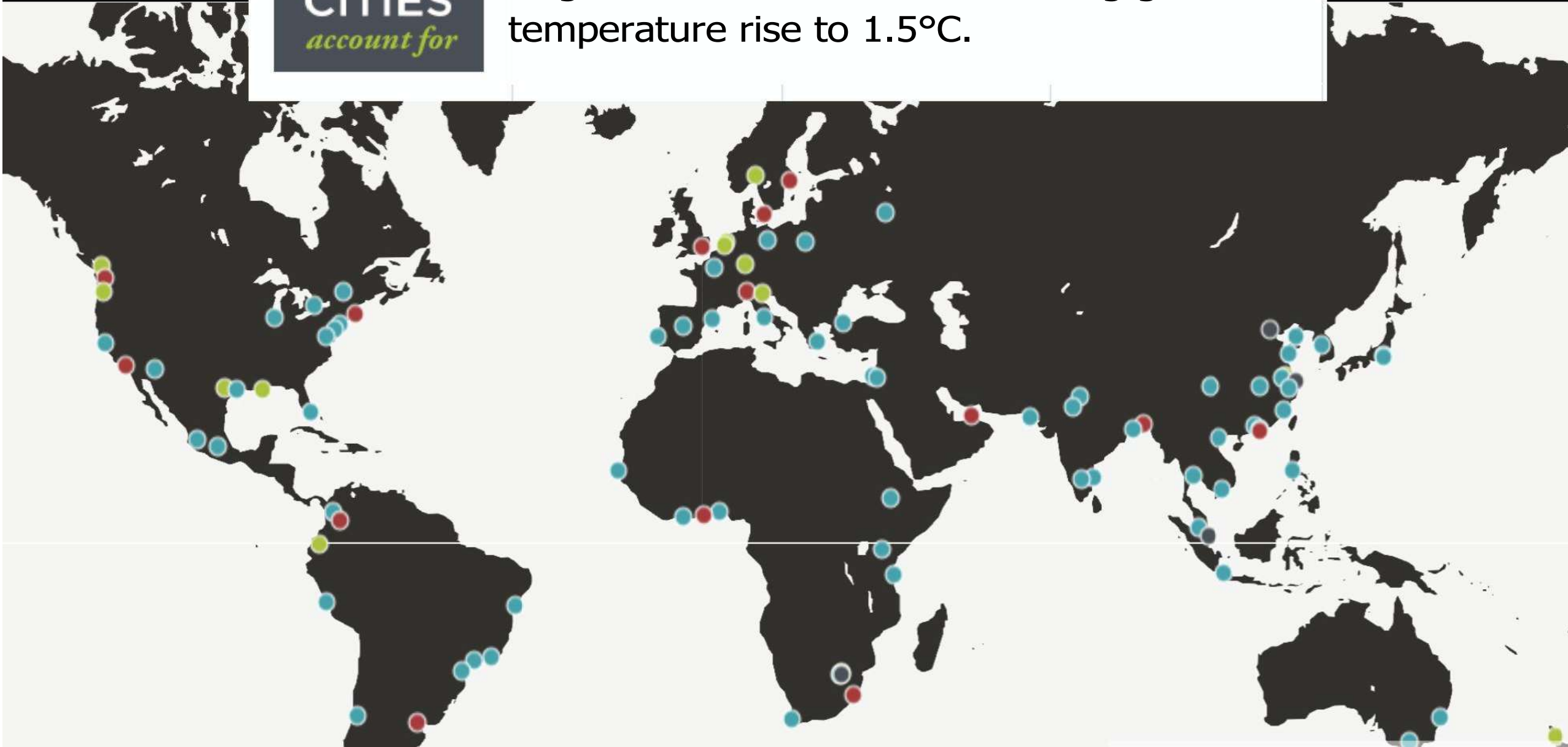
Building Energy Codes

Source: Architecture 2030, Adapted from IEA – Tracking Clean Energy Progress 2017



C40
CITIES
account for

Adopted a science-based emission reduction target consistent with constraining global temperature rise to 1.5°C.



ZEROCODE™

Commercial • Institutional • Mid-Rise/High-Rise **Residential Buildings**

Design an energy efficient building

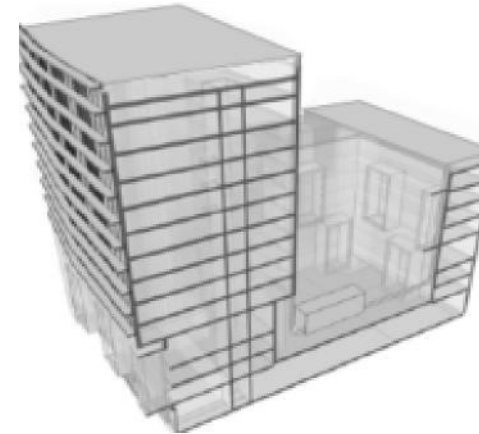
Title 24 2019; Title 24 2022; 2021 IECC

**Address
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remainin**

Efficient building envelope daylighting

Passive heating / cooling / ventilation

Efficient systems / equipment / controls



O g
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energy needs with:

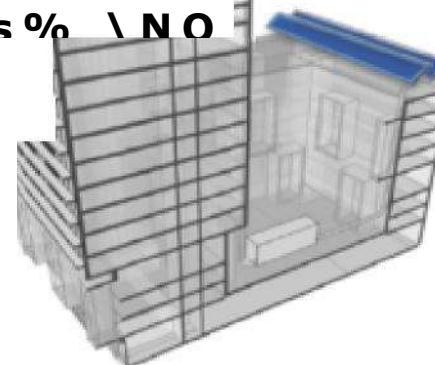
... mmm



11111PW

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**on-site
renewable
energy**



and/or off-site
renewable energy
wind • solar • hydro
(other non-CO₂ emitting sources)

mom ;
impipmagii

azr



ZERO CODE
**Creates jobs and a
predictable and
reliable market for renewable
energy.**





ZERO Code (Appendix)
2021 International Energy Conservation Code



European
Commission

DIRECTIVE 2010/31/EU

New public buildings **NZEB** Dec. 31 2018
All new buildings **NZEB** by Dec. 31, 2020

UDC

P

中华人民共和国国家标准
GB 50XXX□201×

GB

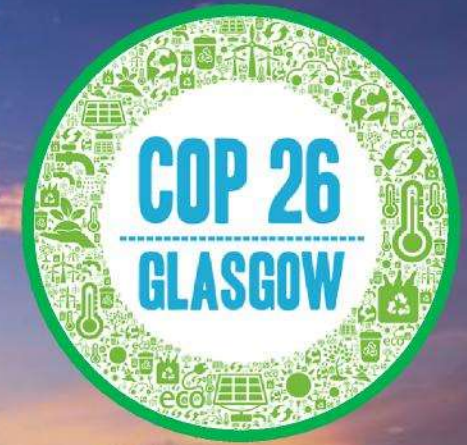
近零能耗建筑技术标准
Technical Standard for Nearly Zero Energy Building

Nearly Zero Energy + On-site/Offsite
Renewables

20XX-XX-XX 发布 20XX-XX-01 实施
中华人民共和国住房和城乡建设部 联合发布
中华人民共和国国家市场监督管理总局

中华人民共和国国家标准
近零能耗建筑技术标准
Technical Standard for Nearly Zero Energy Building

2019



Built Environment SUMMIT 1.5° Climate Actions

London: October 27th – 29th, 2021

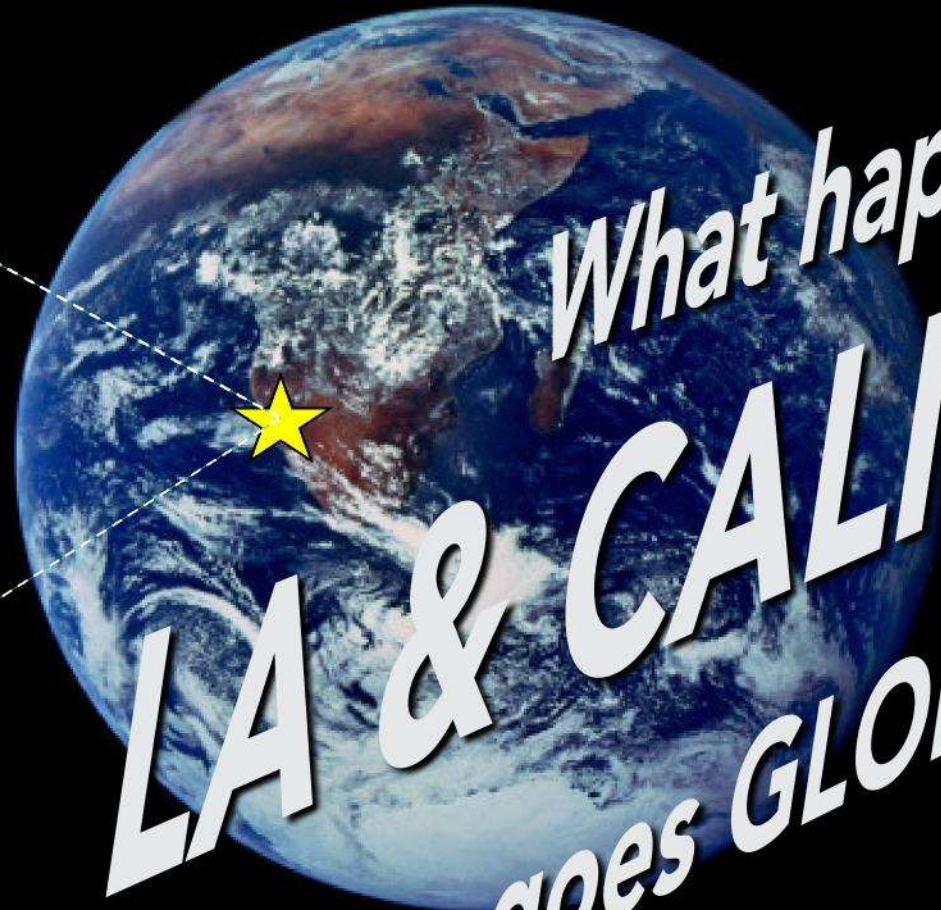


RIBA



ZERO CODET
for
CALIFORNIA

A California building energy standard for
new nonresidential, high-rise residential and
hotel/motel buildings.



What happens in
LA & CALIFORNIA
goes GLOBAL!