

China's Clean Energy Policies



China Sustainable Energy Program

The Energy Foundation

China has adopted a suite of clean energy policies in recent years and is taking significant actions to advance to a low-carbon growth path.



CHINA'S CLEAN ENERGY POLICIES

- **Renewable Energy Goal: 15% by 2020**
- **20% Economy-wide Energy Intensity Target**
- **Vehicle Fuel Economy & Electric Vehicles**
- **Energy Efficiency Targets for Top-1000 Chinese Companies**
- **Efficiency Standards and Labels for Appliances**
- **National Building Energy Codes**
- **Green Economic Stimulus**



RENEWABLE ENERGY

CHINA

National Renewable Energy Target: **15% by 2020**

Wind Energy Target: 100GW by 2020

- Wind installation doubled for four consecutive years

World's number two investor in renewable energy in 2008 - \$17 billion

U.S.

No Federal Target

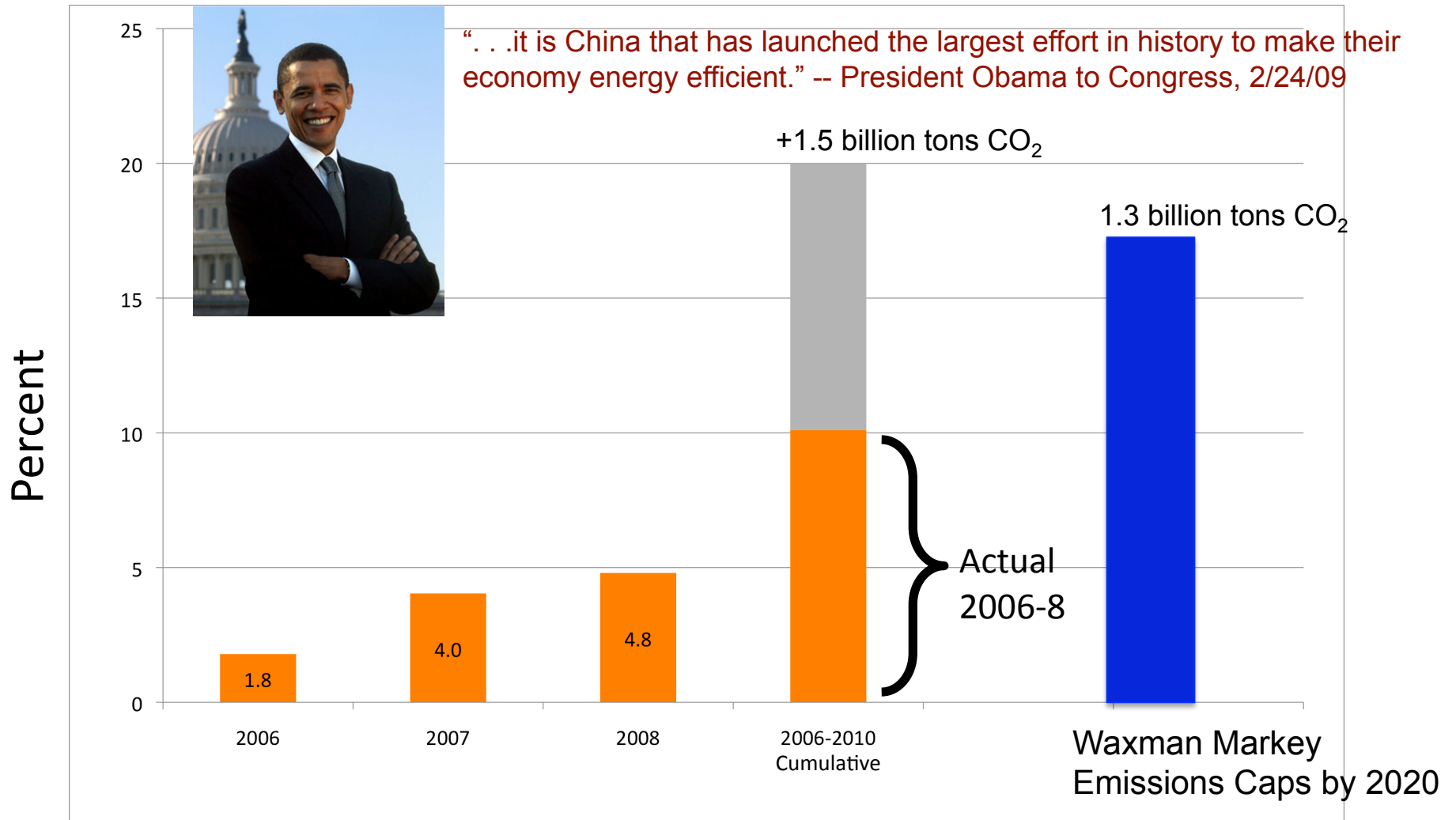
- State Renewable **Electricity** Standards (RES) exist in 25 states and D.C.
- Four other states have non-binding goals.

Wind production tax credit at 2.1 cents/kWh

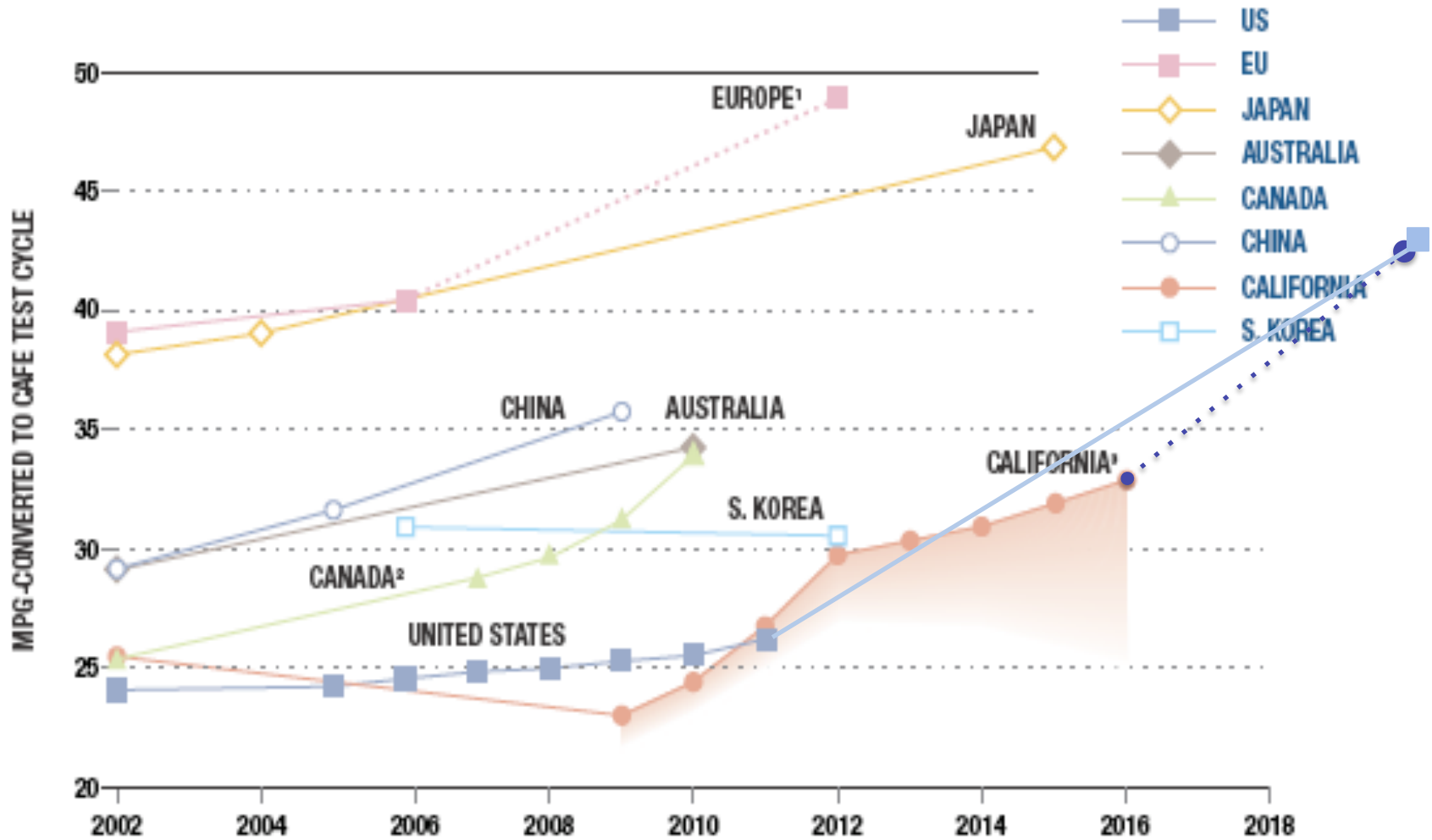
Investment leader in 2008 - \$20 billion



CHINA'S ECONOMY-WIDE 20% ENERGY INTENSITY TARGET



CHINA HAS MORE STRINGENT FUEL ECONOMY STANDARDS THAN THE U.S.



Source: ICCT 2007 (with updates for California and US standards).

CHINA'S INCENTIVES FOR EFFICIENT AND ELECTRIC VEHICLES

Excise Tax (“SUV Tax”)

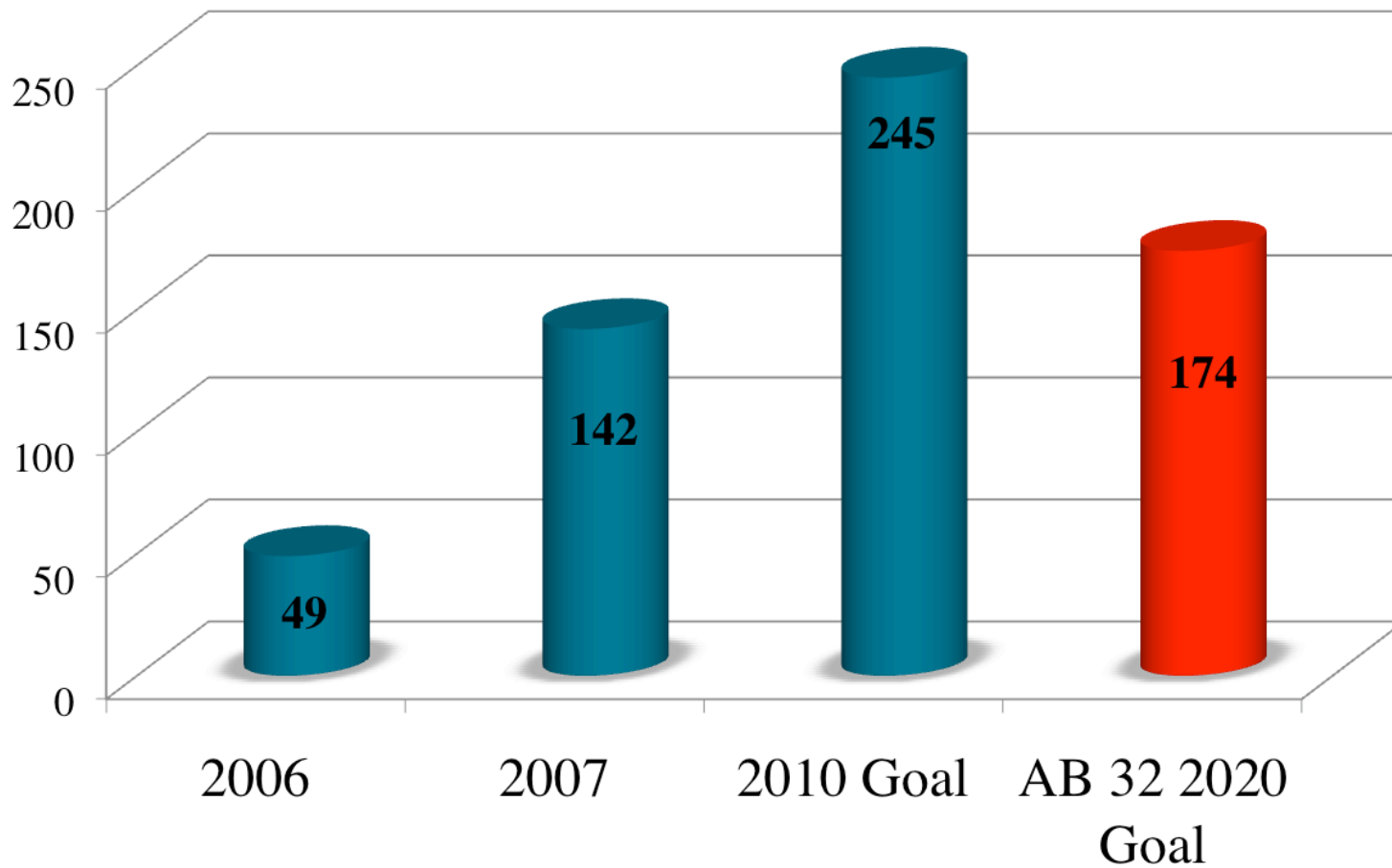
- 1% for Light Duty vehicles with engine smaller than 1 liter
- **40%** for Light Duty vehicles with engine larger than 4 liters

Major push on Electric Vehicle Development

- *Auto Industry Stimulus Plan*
 - “New Energy Vehicles” to make up 5% of new car sales
 - 500,000 Electric Vehicle production capacity by 2012
- *National Pilot Program*
 - 13 cities over the next three years
 - \$8,800 subsidy per electric car
 - \$73,500 subsidy per electric bus

CHINA: TOP-1000 INDUSTRY PROGRAM

Annual CO₂ reductions (million tons)



ENERGY EFFICIENCY STANDARDS AND LABELS FOR APPLIANCES

CHINA

Minimum Energy Efficiency Standard

(32 products in total)

Refrigerator; Air-conditioners; Water heaters; TV; lighting products; Motor; Power supply; pump etc.

Mandatory Information Label

(15 products in total)

Refrigerator; Motor; Air-conditioners; Water heaters; Household induction cookers; Computer monitors; Copy machines; Washing machine; Self-ballasted fluorescent lamps; high-pressure sodium vapor lamps; etc

Endorsement Label

(38 products in total)

Refrigerator; Air-conditioners; Household induction cookers; Motor; Copy machine; Computer; Electrograph; etc.

U.S.

Minimum Energy Performance Standard

Refrigerators; Microwaves; Clothes Washers; Fluorescent Tube Lamps; Reflector Lamps; Refrigerated Vending Machines; Residential Water Heaters; etc.

Energy Guide

Refrigerators & Freezers; Dishwashers; Clothes Washers; Air Conditioners & Heat Pumps; Pool Heaters; etc.

Energy Star

Refrigerators: 20% over minimum federal standards; Air Conditioners: 10% over minimum federal standards; Lighting: 75% less energy use and lasts 10 times longer than normal incandescent lights

NATIONAL BUILDING ENERGY CODES

China Codes:

Residential Codes

Severe Cold and Cold
Climate Zone (1995)

Hot-Summer Cold-Winter
Zone (2001)

Hot-Summer Warm-Winter
Zone (2003)

Commercial Codes

National Design Standard of
Commercial Buildings
(2005)

US Codes:

Two Model Codes

–International Energy
Conservation Code

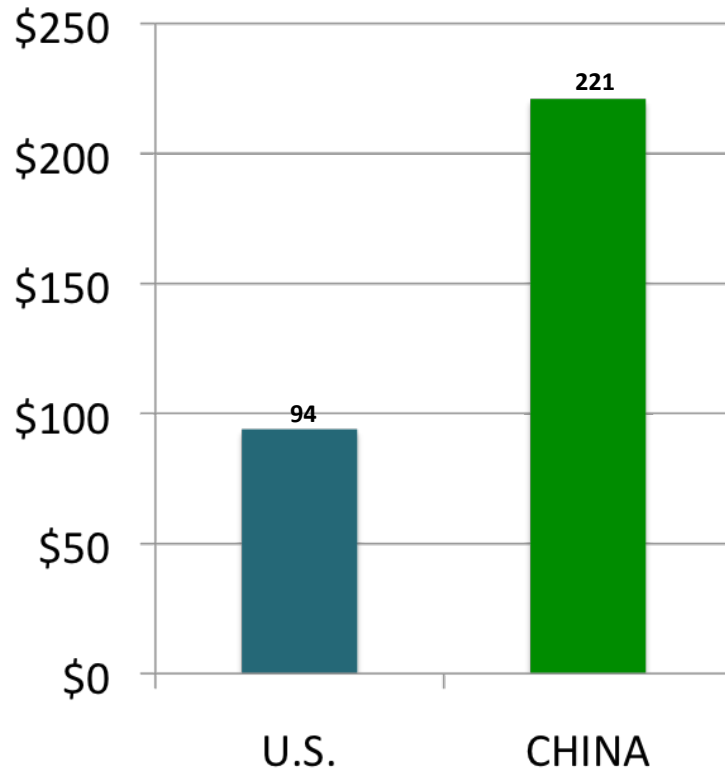
–ASHRAE

•*Code stringency and
compliance varies by state*

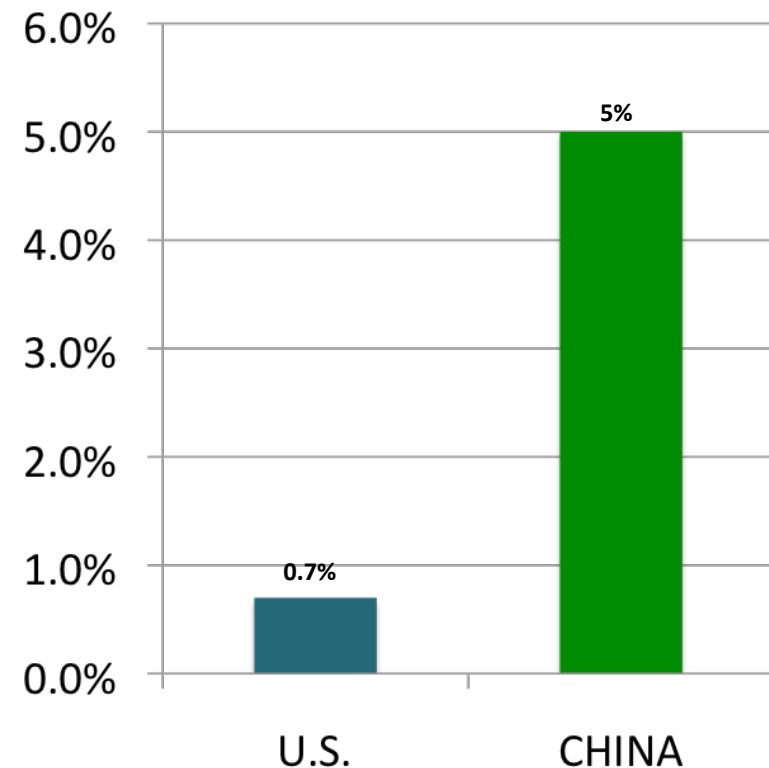


U.S. & CHINA GREEN STIMULUS

Economic Stimulus Dollars Devoted to Green Projects (Billion USD)



Green Stimulus Dollars as a ratio of 2008 GDP



Stimulus data from HSBC Global Research report "A Climate for Recovery: The Color of Stimulus Goes Green" (Feb 2009).

GDP data from IMF world economic outlook data, retrieved April 2009.