



RAP

Energy solutions
for a changing world

Cap-and-Trade Schemes in the US: An Overview of RGGI and California

美国总量管制与排放交易计划：
RGGI与加利福尼亚州计划概述

Workshop on Market Mechanisms to Support China's Energy and Climate Goals

Beijing - 25 & 26 May 2011

中国能源与气候目标配套市场机制研讨会

北京，2011年5月25日—26

Max Dupuy
戴翎松

The Regulatory Assistance Project

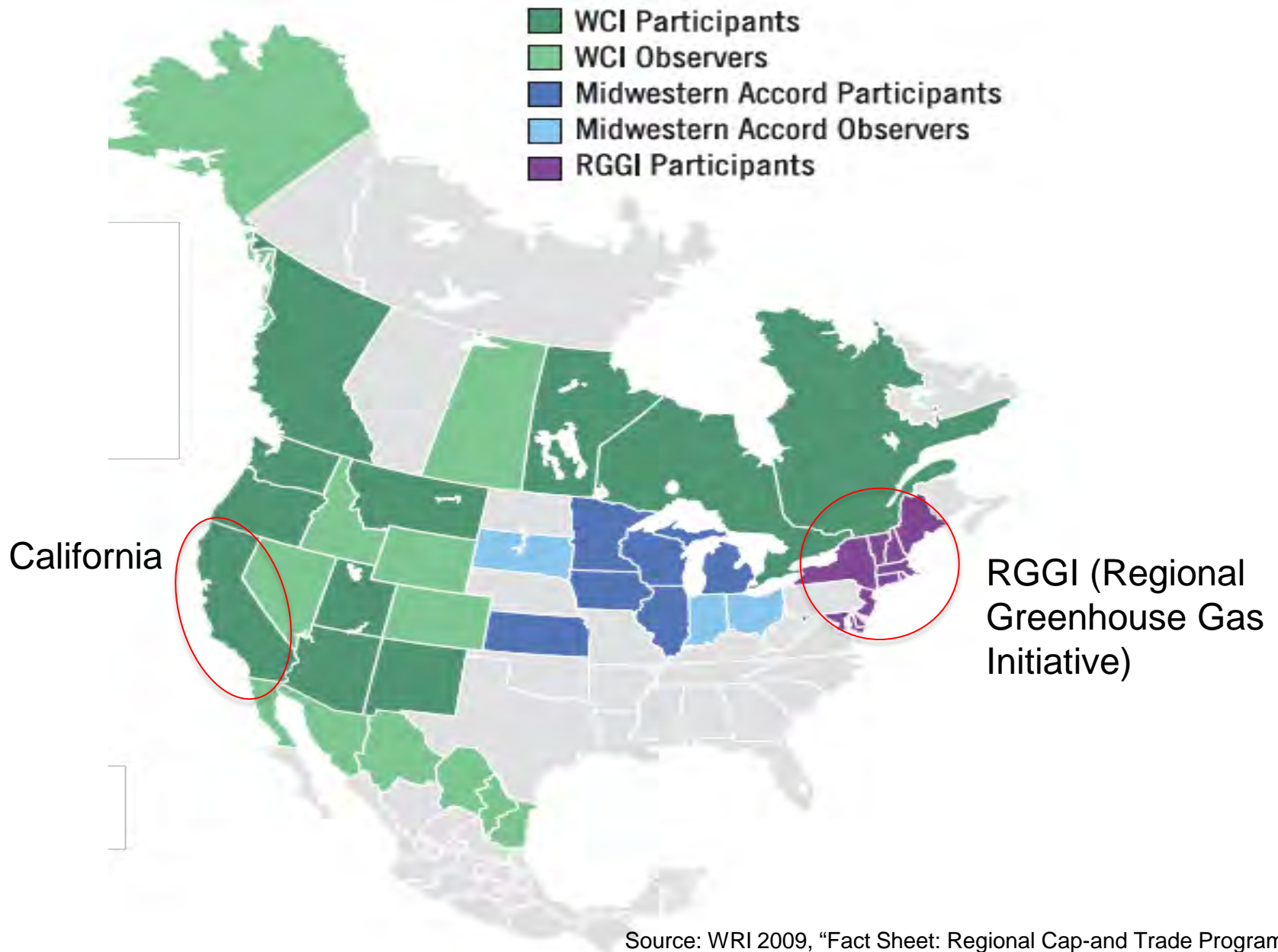
China

European Union

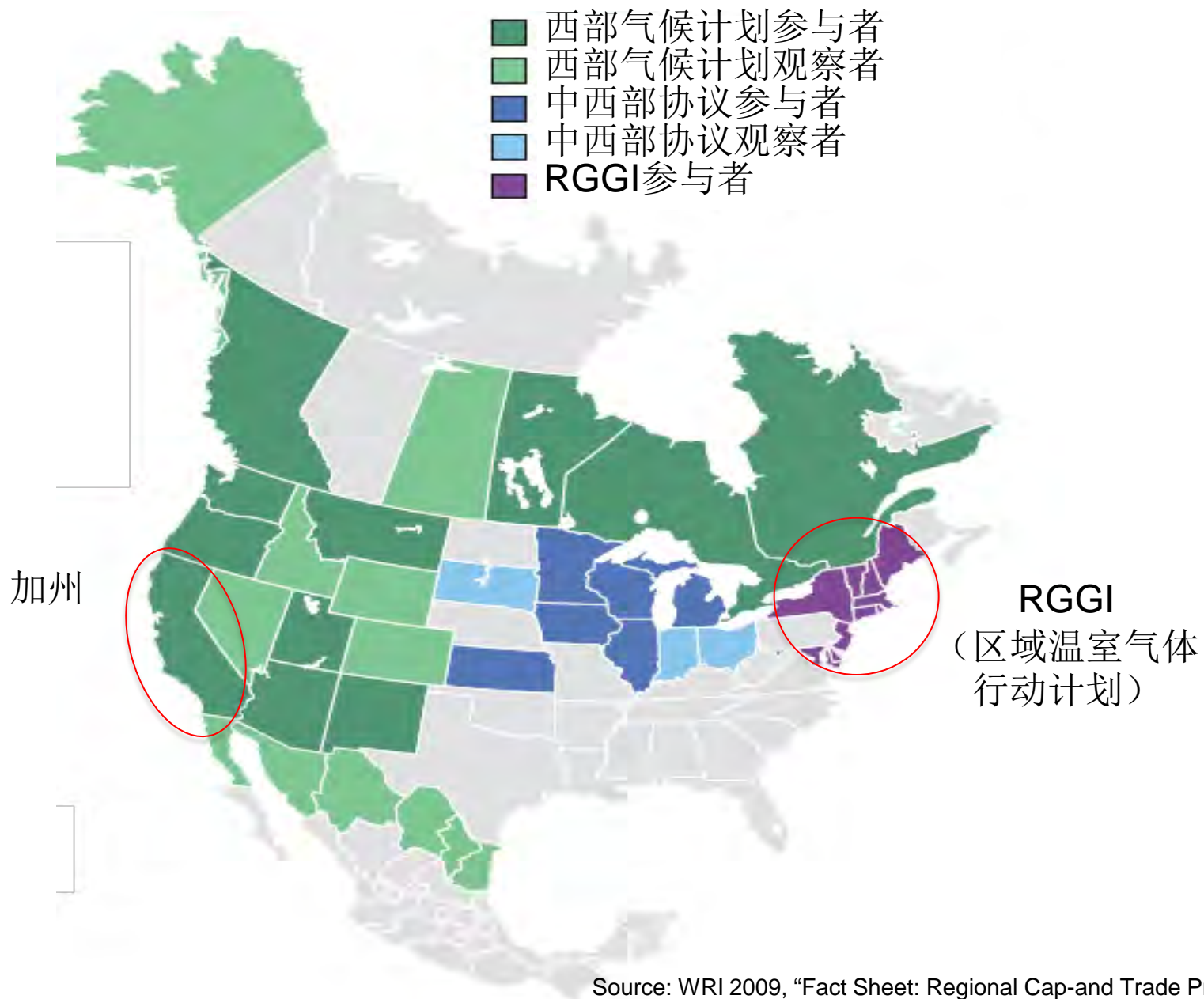
United States

www.raponline.org

North American GHG Cap-and-Trade Schemes



北美洲温室气体总量管制与排放交易计划



Overview介绍

RGGI

- 10 states, including New York
- About 20% of US GDP
- Launched in 2009

California

- The most populous state in the US
- About 13% of US GDP
- Proposed links to other states, Canada and Mexico
- Scheduled to begin in 2012, with full implementation in 2015

RGGI

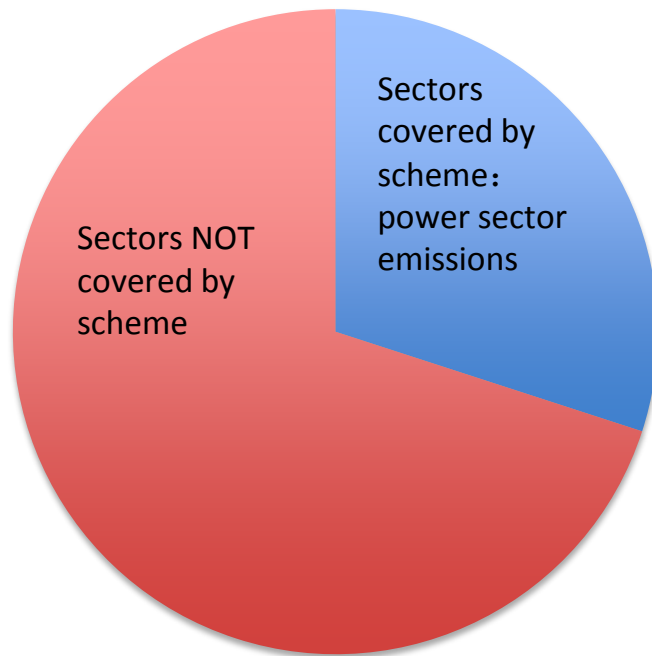
- 10个州，包括纽约
- 约占美国GDP的20%
- 2009年开始实施

加州

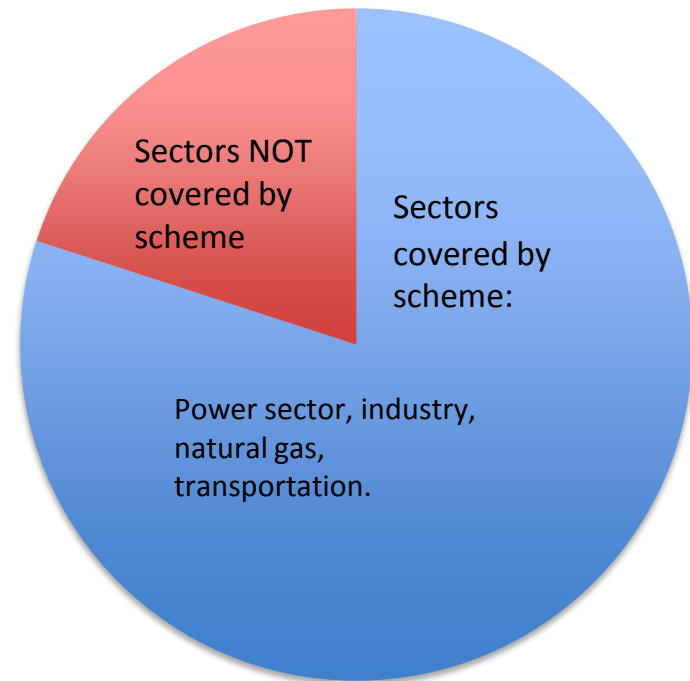
- 美国人口最多的州
- 约占美国GDP的13%
- 拟与其他州，以及加拿大和墨西哥相联系
- 预定从2012年开始，并在2015年完全实施

RGGI only covers power sector emissions; California's scheme is broader and will be a bigger challenge to implement

RGGI region total GHG emissions

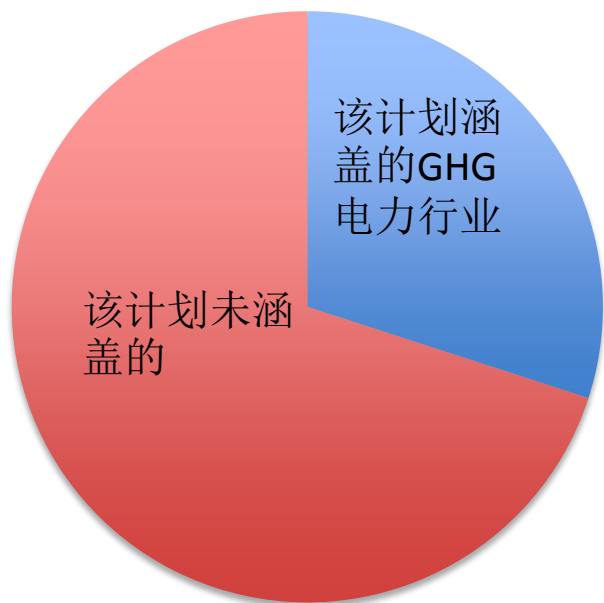


California total GHG emissions

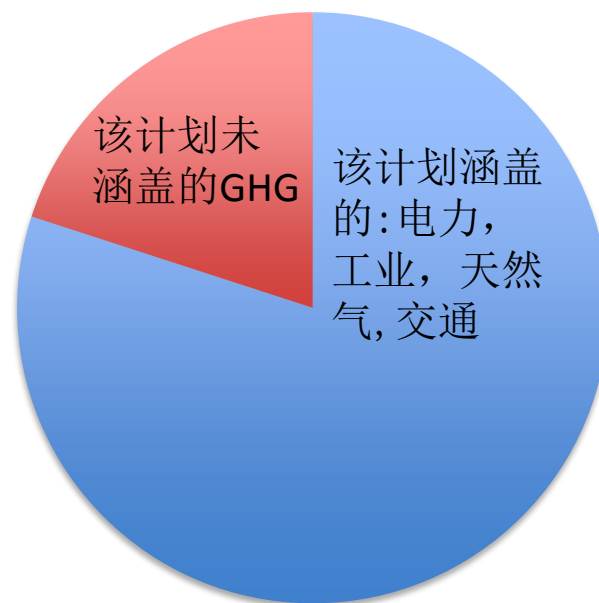


RGGI仅涵盖电力部门排放；加州计划范围更广泛， 执行该计划将面临更大挑战

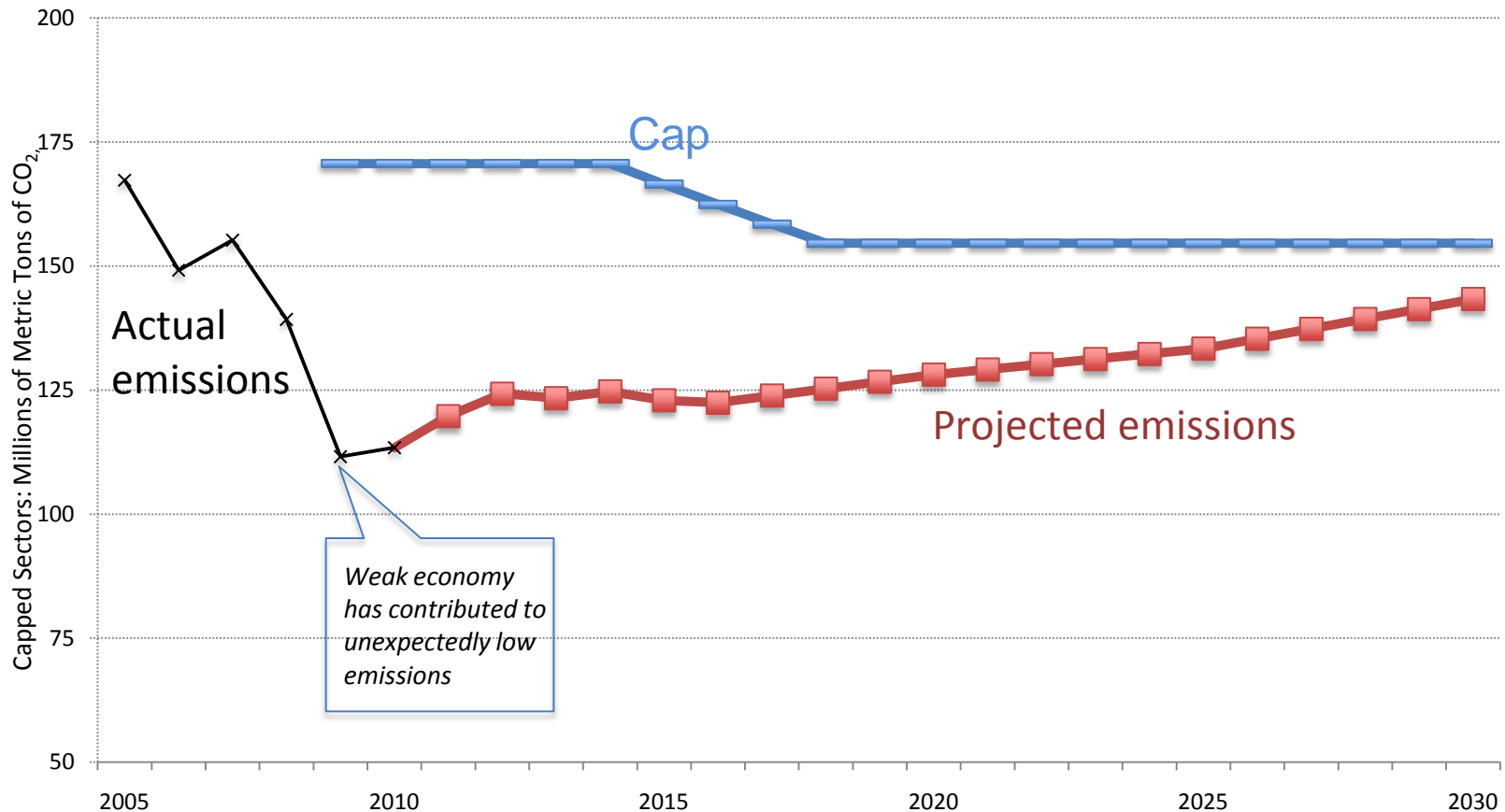
RGGI 温室气体总排放



加州 温室气体总排放

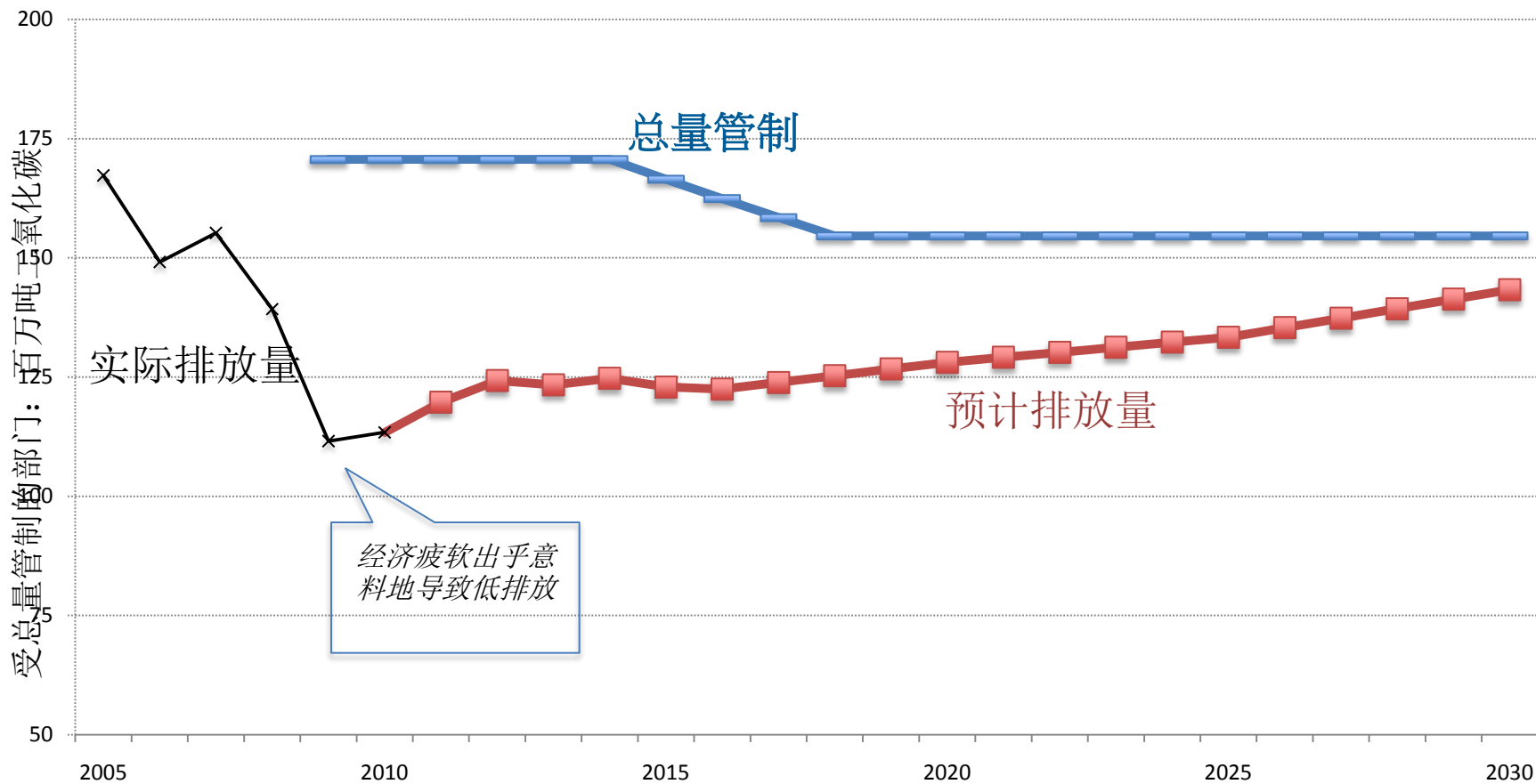


Due partly to the economic downturn, RGGI's cap is not constraining emissions



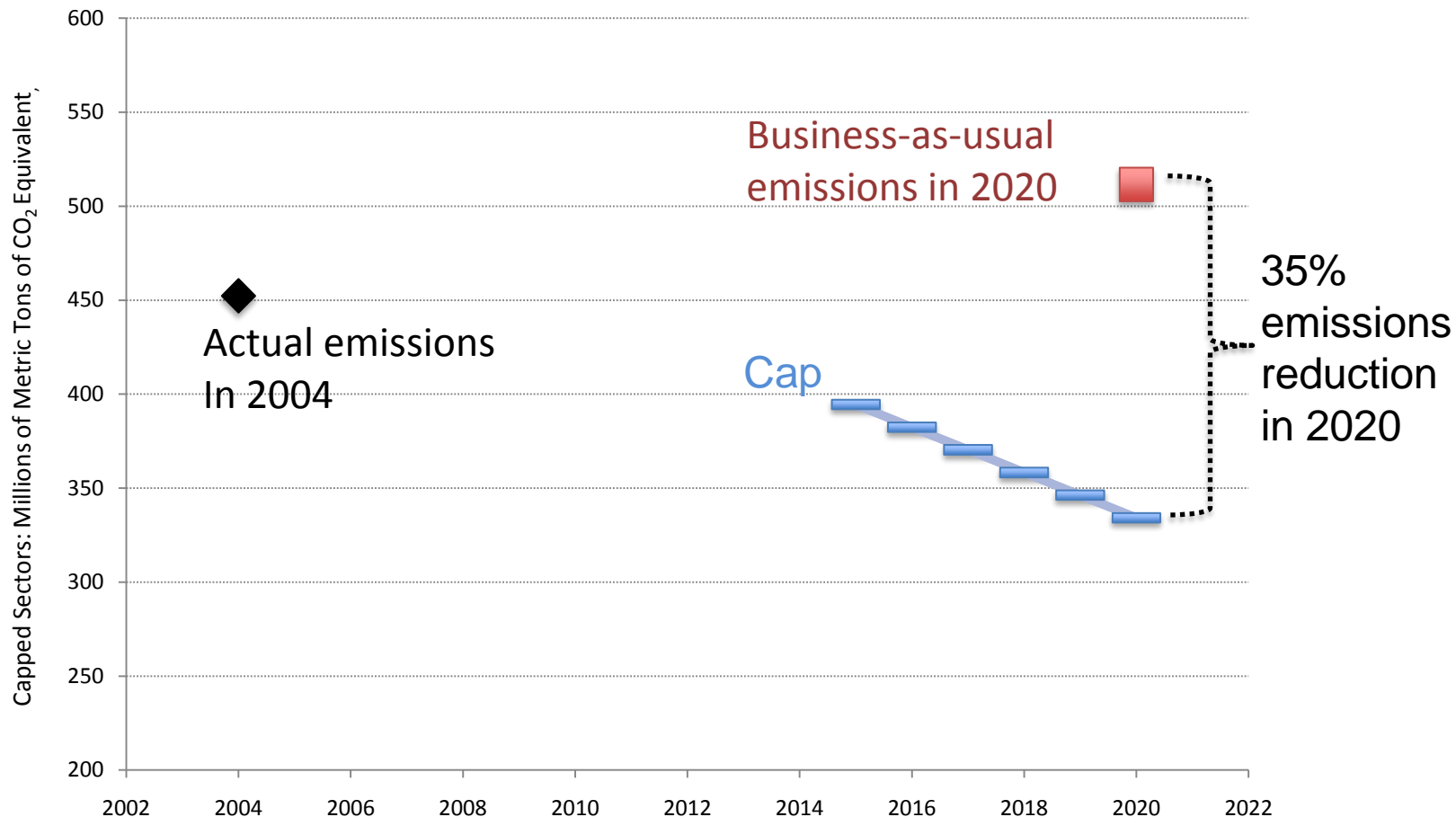
Source: RGGI Reference Case Results and Assumptions, November 2010.

很大程度上，由于经济衰退，**RGGI**的总量管制并未能限制排放



资料来源：RGGI Reference Case Results and Assumptions, 2010年11月

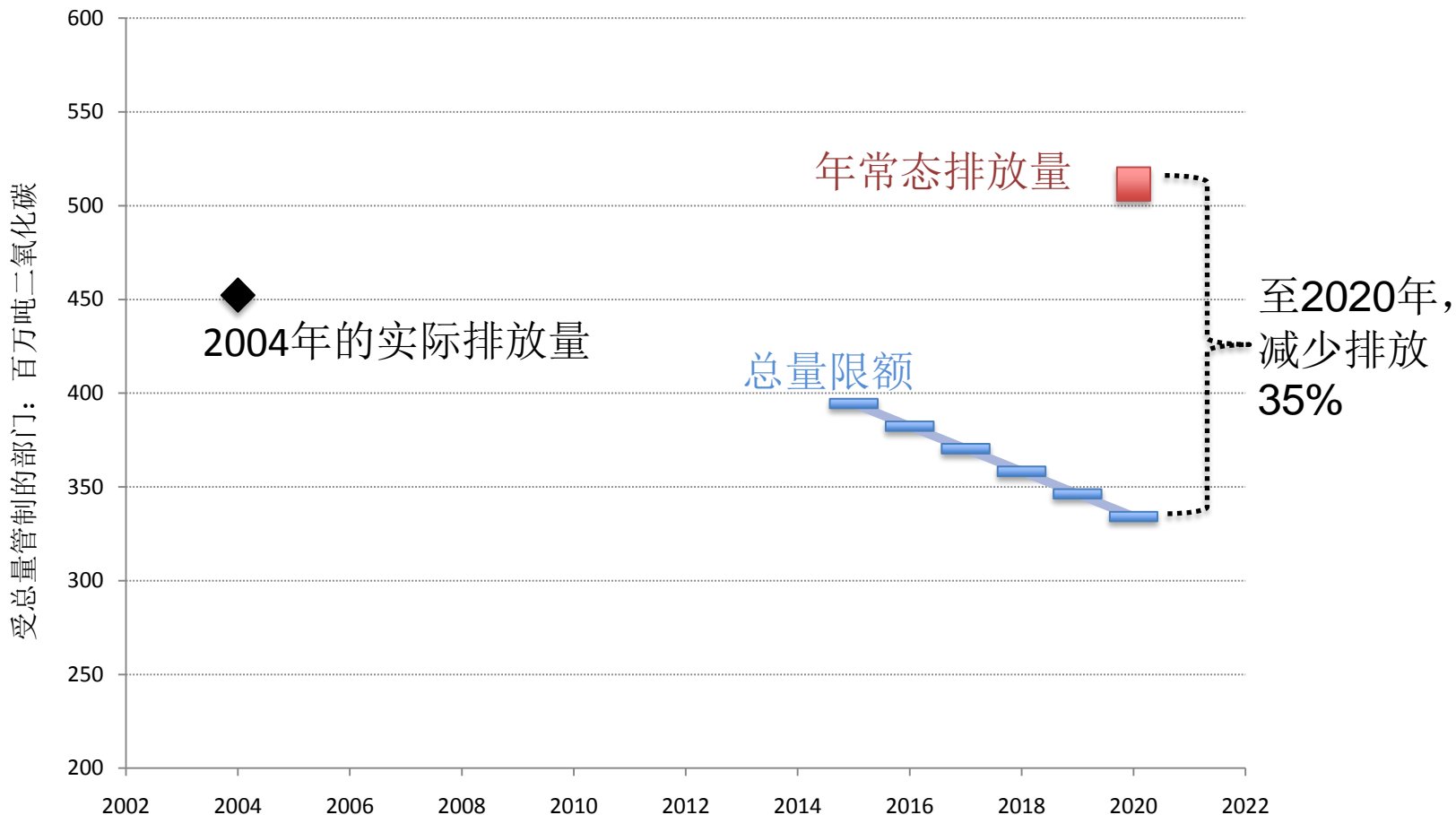
California's cap tightens gradually, with significant emissions reductions by 2020



Note: During 2012-14 a cap is to be applied to a subset of sectors; it is not shown here.

Source: Calif. Air Resources Board: *Climate Change Scoping Plan*, 2008; *Proposed Regulation to Implement Cap-and-Trade Program*, 2009.

加利福尼亚州逐步加强总量管制，截至2020年将实现显著减排



注：在2012年-2014年期间，将对各部门的子行业实行总量限额；本图表中并未显示。

资料来源：加利福尼亚州空气资源委员会：气候变化范围计划，2008年；总量管制与排放交易制度试行规定，2009年

RGGI has an excellent record of auctioning emission permits

RGGI拥有拍卖排放许可的优秀记录

- Over the initial two years of the program, **86%** of permits were auctioned.
- Low prices (close to reserve price) resulting in low auction revenue.
- Two year revenue of USD789 million: about \$8 per capita or 0.01% of the region's annual GDP.
- 在项目开始的前两年，共拍卖了**86%**的许可
- 低价格（接近最低价格）导致低拍卖收入
- 两年收入为**7.89**亿美元：约为人均**8**美元或占地区年度**GDP**的**0.01%**

RGGI also used this revenue well, “recycling” much of it into energy efficiency investments

RGGI充分利用这笔收入，将大部分收入“回收”重新用于能效投资

Of the two-year revenue:

- 52% went to state and utility programs to improve energy efficiency;
- 11% to deploy renewable energy resources;
- 14% to assist low-income households;
- 1% other GHG reduction programs;
- Remainder to fund other state programs.

两年的收入中：

- 52%用于州级和公用事业项目，以提高能效；
- 11%用于配置可再生资源；
- 14%用于援助低收入家庭；
- 1%用于其他GHG减排项目；
- 剩余收入用于为该州级其他项目提供资金支持

California plans to increase auctioning over time

加州计划逐步增加拍卖

- Full details of allocation have yet to be decided.
- Each firm in industry sector will receive free allocations adjusted for firm's level of energy efficiency.
- Transport sector and independent electricity generators likely will not receive any free allocations.
- There may eventually be a significant degree of "recycling" revenue into energy efficiency programs
- 关于配额的具体细节尚未确定。
- 工业部门的所有企业将根据其能效水平获得免费的配额。
- 运输部门和独立发电商无法得到免费配额。
- 可能会将收入“回收”，重新用于能效项目

MRV, enforcement and related issues: RGGI

三可、执行与相关问题：RGGI

- A non-profit body implements and supports the program, including maintenance of an online registry that records both permit ownership and transaction prices.
- Power sector focus means small number of regulated emitters.
- Real-time emissions monitors are required by law in each regulated power plant.
- Secondary market is under the authority of US Commodity Futures Trading Commission; independent consultant monitors for anti-competitive conduct.
- 该项目由一个非营利机构负责实施和提供支持，包括维护一个在线登记处，用于记录许可所有权情况和交易价格。
- 以电力部门为核心，意味着少量的管制排放源。
- 法律要求各管制发电厂进行实时排放监控。
- 二级市场由美国商品期货交易委员会管辖；独立顾问负责监控反竞争行为。

MRV, enforcement and related issues: California

三可、执行与相关问题：加州

- A state government agency will monitor scheme and design/implement any needed revisions.
- MRV will be a challenge due to the broad coverage of the scheme.
- Registry operation and other details not yet finalized.
- Power sector focus means small number of regulated emitters.
- Large emitters will be required to undergo third-party verification of reported emissions
- Substantial penalties for infractions.
- 州政府部门负责计划的监控，并设计/实施任何必要的修订。
- 由于该计划涵盖范围较为广泛，三可将成为挑战
- 关于注册操作办法以及其他细节尚未最终确定
- 以电力部门为核心，意味着少量的管制排放源。
- 大型排放源将被要求接受第三方对其申报的排放量进行核实
- 对违规行为处以大额罚款。

Conclusions

总结

- An unambitious cap can weaken an otherwise well-designed scheme.
- RGGI is a good model of auctioning and “recycling”. California is also headed in this direction.
- Both schemes recognize the importance of complementary policies to support direct investment in energy efficiency.
- Starting with limited coverage (eg, just power sector) can be a reasonable approach.
- Both RGGI and California are products of careful design, particularly in the areas of MRV and enforcement.
- 即便精心设计的计划，也会由于过低的总量限额而无法有效发挥作用
- **RGGI** 在拍卖与“回收”方面树立了很好的榜样。加州也在朝这个方向努力。
- 两个计划均承认，配套政策在支持直接投资能效方面的重要性。
- 从有限的范围（例如，仅电力部门）开始是一种合理的途径。
- **RGGI**与加州计划均是精心设计的产物，尤其是在三可和执行方面。