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# Why an Emissions Trading System? 为什么需要排放交易机制？

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**PMR Technical Workshop on  
Domestic Emissions Trading (ETS) PMR**  
国内排放交易（ETS）技术研讨会

Shenzhen, China 深圳，中国  
March 12, 2012 2012年3月12日

# Topics 主题

- **Remarkable diversity of ETS systems**  
ETS体系存在显著的多样性
- **Why Trading?** 为什么交易?
- **What is a cap?** 上限是什么?
- **Technical and political conditions**  
技术条件和政治条件
- **Lessons learned** 经验教训

# A Remarkable Set of Examples

## 一组显著的例子

- Kyoto Protocol: The correct global vision 京都议定书：正确的全球视野
- EU ETS: The pioneer and multi-state prototype 欧盟ETS：先行者和多国样板
- RGGI (Northeastern US states) 区域温室气体减排行动（美国东北部地区）
  - Truly volunteer multi-state effort (7 + 3 -1) 真正的志愿者多态努力（7+ 3 -1）
  - An auctioning path-breaker? 正在拍卖的开拓者？
- New Zealand 新西兰
  - Pioneering integration of land use into trading 开拓性地将土地使用与交易相融合
  - No explicit cap; regulatory obligation, free NZUs & linkage 没有明确的上限；监管义务、自由的NZUs和联系
- California 加利福尼亚
  - Only clear legislative mandate in US 只在美国有明确的立法授权
  - Revealing allocation and off-set debates 揭示了配额和补贴争论
- Australia 澳大利亚
  - Can agree on price and switch from tax to ET 能够就价格达成一致并从税收转向ET
- And one failure: US federal program 以及一个失败的例子：美国联邦计划
  - Good proposal, but bad politics (tactics and allocation) 好的建议，但糟糕的政治（战术和配额）

# Why Trading? 为什么交易？

- **The Grand Reasons 背景原因**
  - Ability to differentiate without sacrificing efficiency 有能力在不牺牲效率的情况下区分
  - Easier to propagate globally 更容易在全球范围内传播
- **What are the alternatives? 有什么替代方案？**
  - Tax: For all the theoretical advocacy, rarely chosen 税收：对于所有的理论主张，很少会选择
  - Default is always conventional regulation (“command & control”) 违约总是惯例性的规则（“指挥和控制”）
  - Subsidy a rising but fatally flawed contender 补贴上升的但却有致命缺陷的竞争者
- **Specifically 具体来说**
  - EU ETS: Salvaging Kyoto after US withdrawal 欧盟ETS：在美国退出后抢救京都议定书
  - RGGI: Building on NOx Program success 区域温室气体减排行动(RGGI)：基于NOx计划的成功
  - NZ: Full embrace of Kyoto logic; also ITQs 新西兰（NZ）：全盘接受京都议定书的理论；
  - CA: Price of bipartisan support (Schwarzenegger) 加利福尼亚（CA）：两党支持的价格（施瓦辛格）
  - Australia: The notable exception, but why not continue? 澳大利亚：明显的例外，但为什么不继续呢？
  - US (federal): Perceived presence of regulatory alternative detracted from political commitment 美国（联邦）：预感到的监管替代方案的出现妨害了政治承诺

# What is a cap? 什么是上限?

- **Classic formulation: the aggregate limit on emissions** 经典表述：温室气体排放量的总限额
  - **Determines allowances to be distributed to firms** 决定发给公司的补贴
- **Typically an absolute quantity, but not necessarily** 通常是一个绝对量，但不一定
  - **Could be an intensity-based cap, adjusted for GDP** 可能是基于强度的上限，就国内生产总值（GDP）做出调整
  - **Given expected GDP, any cap implies an intensity target** 鉴于预计的GDP，任何上限都意味着强度目标
  - **Cap can vary by realized GDP to achieve given intensity** 通过使实现的GDP达到一定的强度，上限可以发生变化
- **NZ is interesting example of no explicit cap** 新西兰是有趣的例子，它没有明确的上限
  - **Embedded in global system: NZUs and AAUs** 嵌入全球系统：NZUs和AAUs
- **Offsets adjust local cap while preserving global effect** 抵消调整了局部上限，并保持了全球效应
  - **Also reduces cost...enabling tighter cap?** 也降低了成本.....，并有助于更严格的上限？
  - **More importantly, propagates abatement & trading** 更重要的是，传播了减排与交易
  - **Projects can be seen as mini-ETS's** 项目可被视为小型 ETS的
  - **Not clear than offset limits are needed; just integrity** 模糊的抵消上限是必要的；仅仅是完整的

# Technical Conditions 技术条件

- **Measurement (aka MRV) 测量（又称MRV）**
  - Trading and taxes presume fairly exact measurability 交易和税收假定了相当确切的  
的可测性
  - Variety of measurement techniques: upstream vs. downstream, material balance or emissions monitoring approaches; all feasible & used 各种测量技术：上游与下游，物质平衡法或排放量监测法；所有可行的和使用的
  - Cost and administrative feasibility are main criteria 成本和行政上的可行性是主要的标准
  - Key determinant of coverage and phasing 覆盖面和分期发展的关键因素
- **Accounting and data handling capability 核算和数据处理能力**
  - Closely related to measurement 与测量密切相关
  - Going beyond visual inspection of “command and control” 超出了“指挥和控制”的目  
测检查
- **Enforcement 执法**
  - Common to all alternatives, including standard regulation 全部替代方案所共有的，  
其中包括标准规范
  - Non-fuzzy, binary nature of surrender obligation should help 非模糊的，应该有助  
于解约义务的二元性
  - Basic governance capability; goes with development & emissions 基本的治理能力  
；与发展及排放相伴
- **Institutional framework 机构框架**
  - “Market institutions” are not hard to develop “市场机制” 是不难发展的

# Political Conditions 政治条件

- **Perception of leadership 对领导权的看法**
  - EU ETS, RGGI, Calif, and (possibly) NZ see selves as leaders in climate policy 欧盟ETS、RGGI、加州和（可能的）新西兰把它们自己看作气候政策的领导者
  - Leadership rarely if ever invoked in failed US federal debate 失败的美国联邦辩论极少援引领导权
- **Maintaining broad bipartisan consensus 保持两党的广泛共识**
  - No partisan opposition in EU; only interest groups 欧盟中的没有反对党派；只有利益团体
  - Bipartisan collaboration in RGGI and California; & in earlier cap-&-trade RGGI和加利福尼亚中的两党合作；以及早期上限和交易中
  - Notably lacking for CO2 at US federal level. But, Australia also? 值得注意的是，美国联邦标准没有CO2。但是，澳大利亚也没有？
- **Providing expertise and education 提供专业知识和教育**
  - Impressive stake-holder processes in EU, RGGI, and Calif 欧盟、RGGI、加州令人印象深刻的利益相关者过程
  - Committed expertise avoids political blunders 致力于专业知识避免了政治上的错误
- **Avoiding allocation battles 避免配额上的斗争**
  - Largely avoided through delegation in EU ETS & RGGI 通过欧盟ETS和RGGI中的代表团，在很大程度上得以避免
  - Important cause of disagreement & failure in US federal proposal 在美国联邦提案中，分歧和失败的重要原因
  - California is the exception 加利福尼亚是个例外

# Lessons Learned 经验教训

- **Political feasibility is the big issue, not technical feasibility** 政治上的可行性是个大问题，而不是技术上的可行性
  - **Politics is local, depending on personalities, right moment, etc.** 政治是地方性的，这取决于人物、正确的时机等。
  - **Technical conditions are necessary, but not sufficient** 技术条件是必要的，但尚不足够
  - **Educating stake-holders and building expertise prepares the way and promotes understanding** 教育利益相关者并建立专门知识，从而准备好前期工作，并促进理解
- **Phasing in and trial periods seem order of the day** 逐步推进阶段和试点阶段似乎在议事之列
  - **Phasing in usually dictated by measurement and politics** 逐步推进通常取决于测量和政治
  - **Trial or warm-up periods educate, work out problems, and build confidence** 试点阶段或预热阶段教育、解决了问题，并建立了信任
  - **Relatively modest near-term ambition prevails; all that is required now** 通行的是相对温和的短期的目标；这是现在所需的一切
- **Free allocation: Relax, everybody does it!** 自由分配：放松，人人都是这样做的！
  - **Free allocation compensates & facilitates political agreement on a cap** 自由配额补偿了、促进了关于上限的政治协议
  - **But no need to be a perpetuity; EU ETS got it about right** 但不必是永久性的；欧盟ETS正合适
  - **RGGI is the notable exception; but now a de facto tax** RGGI 是一个值得注意的例外；但现在是一种事实上的税
  - **Objective is a price on carbon; not raising revenue** 目标是确定碳价格；而不是提高收入





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**Thank you very much for your attention**  
**非常感谢**

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