Has U.S. Regional Planning Helped Support a Multi-pollutant Approach to Air Quality?

What to Emulate and What to Avoid in Future Efforts to Reduce Air Pollution in China and the U.S.

美国区域规划组织是否采取多种污染物方法以解决空气质量问题？

未来在减少中美两国空气污染的工作中值得仿效之处和应避免的问题

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Presentation Overview

演示文档概述

- 1. Regional Planning Organizations (RPO):What They Do
- 2. NESCAUM as example of success
- 3. What's worked
- 4. What needs improvement
- 5. Recommendations

- 1. 区域规划组织(RPO)：业务范围
- 2. NESCAUM 成功案例
- 3. 成功之处
- 4. 不足之处
- 5. 建议

Regional Planning Organizations in United States

美国区域规划组织

- 1. Reach consensus on air policies and planning
- 2. Recommend, coordinate and collaborate with EPA on national air policy
- 3. Coordinate with energy regulators

- 1. 在空气政策与规划方面达成共识
- 2. 在国家空气政策方面向 EPA 提出建议并与之协调及协作
- 3. 与能源监管部门协调

Stages of RPO Evolution

RPO 发展历程

- 1. Data Gathering, Inventory
- 2. Air Quality Monitoring
- 3. Air Quality Modeling
- 4. Source Apportionment
- 5. Regulatory Development
- 6. Permits
- 7. Compliance/ Enforcement
- 8. Monitoring and Verification
- 9. Fees

- 1. 数据采集与库存
- 2. 空气质量监测
- 3. 空气质量建模
- 4. 源解析
- 5. 制定规程
- 6. 许可证
- 7. 合规/实施
- 8. 监测与审核
- 9. 费用

Iterative Process: Model of Continuous Improvement
迭代过程：持续改进模式

- 1. Assess Progress
- 2. Inform Future Planning
- 3. Improved Science
- 4. Improved Measurement

- 1. 评估进度
- 2. 宣传未来规划
- 3. 提升科学水平
- 4. 改进测评效果

NESCAUM Example of RPO
NESCAUM RPO 案例

- 1. Formed 1967: address cross-boundary pollution
- 2. One of several regional organizations now coordinating air policy and science in all 50 US states

- 1. 1967 年组建： 解决跨境污染问题
- 2. 众多区域组织之一，目前协调全美 50 个州的空气政策与科学

NESCAUM Successes (1980s)
NESCAUM 成果（20 世纪 80 年代）

- 1. Acid rain/acid deposition sampling
- 2. Reducing volatility of paints, coatings
- 3. Reducing volatility of gasoline sold

- 1. 酸雨/酸沉降采样
- 2. 降低涂料、涂层挥发性
- 3. 降低商品汽油挥发性

NESCAUM Successes (1990s)
NESCAUM 成果 （20 世纪 90 年代）

- 1. Adopting California vehicle emissions standards
- 2. Building the science and legal justification to sue upwind states and to petition EPA to reduce the quantity of transported air pollution
- 3. Diesel emissions reduction strategies

- 1. 采用加州车辆排放标准
- 2. 搜集科学与法律证据起诉上风向州，以及提请 EPA 减少传播空气污染量
- 3. 柴油减排策略

Section 126 Petitions
第 126 章 声请

- NE states adopted plans to reduce emissions.
- Plans approved by EPA
- NE states continue to experience unhealthy air quality
- Upwind states (in Ohio Valley) had less stringent requirements on their power plants
- Clean Air Act (section 126) allows states to petition EPA to require action to reduce pollution that contributes to another areas unhealthy air quality

- 东北部各州采取减排计划。
- 计划由 EPA 审核
- 东北部各州不良空气质量仍未改善
- 上风向州（俄亥俄河谷内）对其发电厂的要求不甚严格
- 各州通过《清洁空气法案》（第 126 章）声请 EPA 采取措施，以减少造成其他地区不良空气质量的污染

Parallel Actions to Reduce Pollution Transport
同步行动，减少污染传播

- The NESCAUM states also worked with EPA to initiate legal action against dozens of individual power plants in the Ohio Valley
- Allegations that these plants had increased their production without first obtaining a permit, and installing "best available" emissions controls

- NESCAUM 各州还与 EPA 携手对俄亥俄河谷内的数十座发电厂提出诉讼
- 据称，这些电厂在增加其发电量之前，并未获得许可，也未安装"最佳可用"排放控制设备

Result of 126 Petitions
126 结果声请

- EPA expanded boundaries of control requirements to include states in the Midwest and the Southeast.
- Expanded NO_X budget program: allowed emissions trading to comply with the more stringent requirements

- EPA 扩大了管制要求范围，从而将中西部与东南部各州纳入其中
- NO_X 预算计划扩大： 使排污权交易符合更为严格的要求

What Hasn't Worked
不足之处

- 1. Victim of own success
- 2. Missed and still missing opportunities from electricity restructuring
- 3. Budgets
- 4. Overlap between various regional organizations

- 1. 自身成功的牺牲品
- 2. 已经并且依旧在错失电业重组所带来的机遇
- 3. 预算
- 4. 不同区域组织重叠

How to Enable Integrated Multi-pollutant Strategies
如何实施多种污染物整体策略

- 1. Science and modeling
- 2. Connecting energy efficiency with NO_X and GHG reductions (for ozone attainment and GHG, i.e RGGI)
- Recognize that sole focus on smokestack as point of regulation may be expensive, and miss significant reductions
- 3. Air and energy regulators work together (RGGI, New England capacity market)

- 1. 科学与建模
- 2. 将能效与 NO_X 和温室气体减排相结合（针对臭氧合格与温室气体，即： RGGI）
- 认识到一味地将烟囱作为管制的对象不仅代价高昂，而且会错失大幅减排的机会
- 3. 空气与能源监管机构合作（RGGI, 新英格兰容量市场）

Recommendations
建议

- 1. Improved assessment and analytical techniques are critical
- 2. Environmental agencies need to become fully informed and involved is power sector reform and regulation
- 3 Integrated approach first could avoid unintended consequences
- 4. Energy efficiency /combined heat and power cost effective now
- 5. Environmental and energy agencies participate in joint planning and regulatory processes

- 1. 改进评估与分析技术至关重要
- 2. 环境机构需要掌握充分的情报，并且应参与电力行业改革与监管
- 3. 整体方法首先可避免出现不良后果
- 4. 节能/热电联产现已具有成本效益
- 5. 环境与能源机构参与联合规划与监管过程

Thank You!
谢谢您！
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