第一届中美气候领袖峰会介绍及启示

Introduction and Inspirations from the First Session of U.S.-China Climate Leaders Summit

朱跃中

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主要内容
Major Contents

- 会议背景与达成的成果
- Background and Reached Achievements of Summit
- 中国城市推进低碳发展的主要做法
- Major Approaches of Promoting Low-carbon Development in Chinese Cities
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- Major Approaches of Promoting Low-carbon Development in American Cities
- 主要启示
- Major Inspirations

会议背景与基本情况
Background and Basic Introduction of Summit

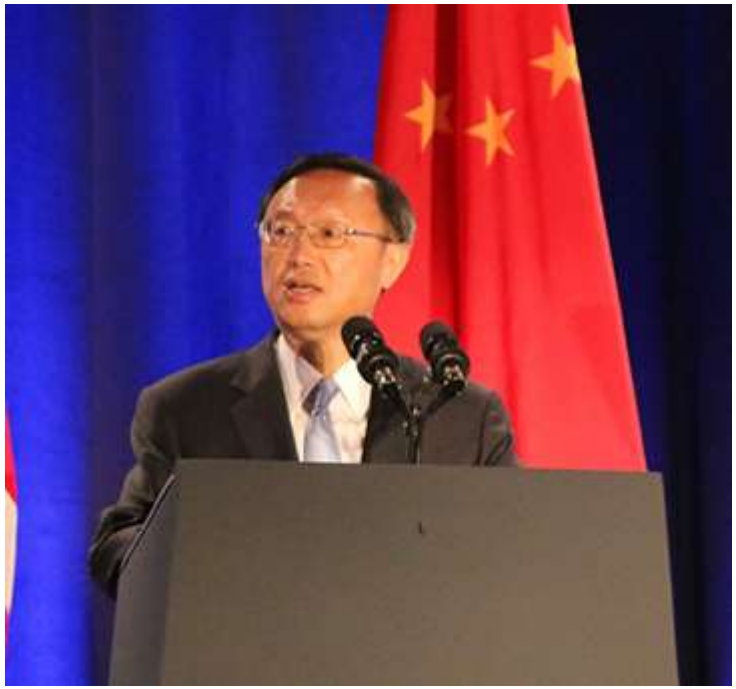
- 落实去年11月习近平主席和奥巴马总统共同发表的《中美气候变化联合声明》
- Implement the *U.S.-China Joint Announcement on Climate Change* jointly released by President Xi Jinpin and President Obama in November 2014
- 推进中美应对气候变化合作
- Promote cooperation between China and the U.S. fighting climate change
- 9.15-9.16 洛杉矶
- Los Angeles during September 15-16
- 分论坛：低碳城市规划、碳市场、低碳交通、低碳建筑、低碳能源和适应气候变化等主题
- Sub-Forum: Low-carbon urban planning, low-carbon markets, low-carbon transportation, low-carbon architecture, low-carbon energy, and adaptation to climate change etc.

会议基本情况
Basic Introduction of Summit

能源所与美国落基山研究所（RMI）、劳伦斯伯克利国家实验室（LBNL）共同举办了低碳城市论坛

The Forum of Low-Carbon Urban was held by Energy Research Institute, Rocky Mountain Institute (RMI) of the U.S., and Lawrence Berkeley National Laboratory (LBNL).

会议基本情况
Basic Introduction of Summit



- 习近平主席特别代表、国务委员杨洁篪和美国副总统拜登出席峰会闭幕式并做重要讲话
- Yang Jiechi, State Councilor and Special Representative of President Xi Jinping, as well as US Vice-President Joe Biden together attended the Closing Ceremony of the Summit and made important speeches.
- 中国气候变化事务特别代表解振华、美国国务卿科技顾问图里奇、美国国务院气候变化特使斯特恩、美国总统高级顾问迪斯等两国气候事务高级别官员参加会议
- High-level officials engaging in climate affairs of both countries also participated in the Summit, including Xie Zhenhua, China's Special Representative on Climate Change Affairs; Turich, Science and Technology Advisor to U.S. Secretary of State; Todd Stern, Special Envoy for Climate Change at the US State Department; and Brian Deese, Senior Advisor to the President of the United States etc.

参会人员和省市

Participating Personnel, Cities and Provinces

- 中国：北京市、四川省、海南省、深圳市、武汉市、广州市、贵阳市、镇江市、金昌市、延安市、吉林市等
- China: Beijing City, Sichuan Province, Hainan Province, Shenzhen City, Wuhan City, Guangzhou City, Guiyang City, Zhenjiang City, Jinchang City, Yan'an City and Jilin City etc.
- 美国：加利福尼亚州、洛杉矶市、休斯敦市、康涅狄格州、西雅图、亚特兰大、卡梅尔、凤凰城、盐湖城、迈阿密、得梅因等
- U.S.: State of California, City of Los Angeles, City of Houston, State of Connecticut, City of Seattle, City of Atlanta, City of Carmel, City of Phoenix, City of Salt Lake, City of Miami and City of Des Moines etc.

中美气候领导宣言
U.S.-China Climate Leaders Declaration

- 设定富有雄心的目标
- Set ambitious goals
  - 每个城市、郡，或地区计划设定或重新设定如附录所述的富有雄心的、可实现的目标和行动，以控制温室气体排放，促进低碳发展，加强气候适应能力。
  - Plan to set or re-set ambitious and feasible goals and actions in each city, prefecture or region as stated in Attachments so as to control greenhouse gas emission, promote low-carbon development, and strengthen climate adaptability.

- 报告温室气体排放清单
- Report lists of greenhouse gas emission
  - 每个城市、郡或地区计划通过常规的温室气体清单跟踪和报告温室气体排放。
  - Plan to follow up and report situations of greenhouse gas emission in each city, prefecture or region according to routine lists of greenhouse gases.

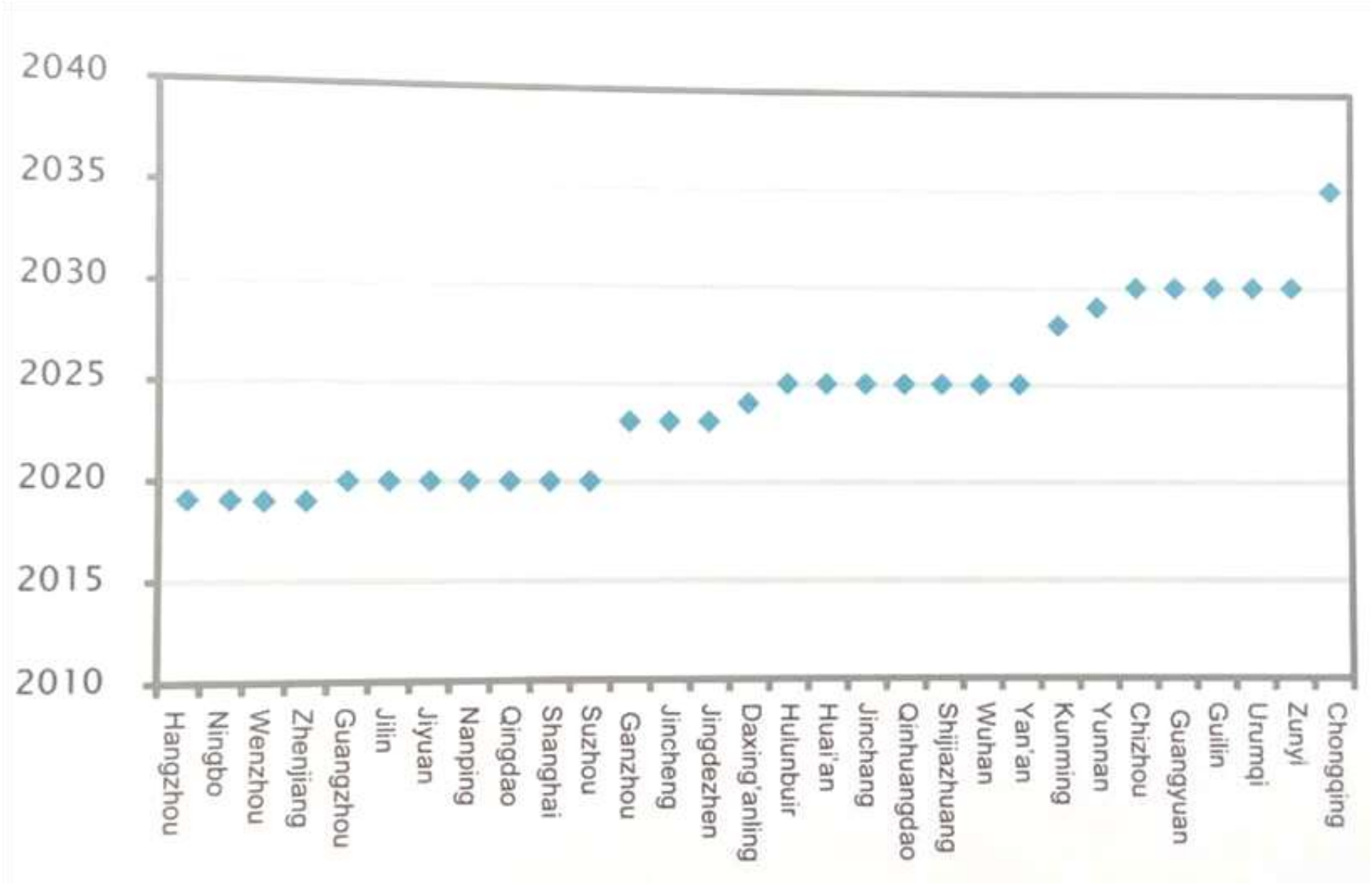
中美气候领导宣言
U.S.-China Climate Leaders Declaration

- 建立气候行动方案
- Establish Climate Action Plans
  - 每个城市、郡或地区计划建立城市或地区级气候行动方案，以减少温室气体排放和提高气候适应能力。
  - Plan to establish city-level or region-level Climate Action Plans in each city, prefecture or region so as to reduce greenhouse gas emission and enhance climate adaptability.

- 加强双边伙伴关系与合作
- Strengthen bilateral partnership and cooperation
  - 认识到定期的双边对话与合作对分享最佳实践和经验、低碳技术的创新、示范和应用至关重要，我们将在中美气候智慧型/低碳城市峰会框架下建立由城市、郡或地区组成的中美气候领导网络，以支持发展持续的伙伴关系和知识共享。
  - We have recognized bilateral dialogues and cooperation will play a significant role in sharing optimal practices and experiences as well as innovation, demonstration and application of low-carbon technology. And we will establish Sino-US climate leadership networks formed by bilateral cities, prefectures or regions under the frameworks of the U.S.-China Climate-Smart/Low-Carbon Cities Summit so as to support sustainable development of bilateral partnerships and knowledge sharing.

- 第二届气候领袖峰会将在中国北京举行
- The Second Session of the Climate Leaders Summit will be held in Beijing

中国城市达峰时间表
Peak Schedule for China's Cities



中国省市做法
Approaches Adopted in China's Cities and Provinces

- 北京：在2020年左右达峰。在推动区域协同发展中提高城市可持续发展水平;持续推进经济结构调整和优化升级;继续完善市场化减排机制; 大力发展和应用先进低碳技术和产品。
- Beijing: Reach peak around 2020. Enhance sustainable development level in cities during promotion of regionally coordinated development; continue pushing economic structural adjustment as well as optimization and upgrading; continue perfecting market-oriented emission reduction mechanism; strive to develop and apply advanced low-carbon technology and products.

- 四川：在2030年前达峰。实施清洁能源与智能电网、低碳交通与新能源汽车、绿色建筑与低碳社区等绿色低碳发展行动计划，努力推动国际和地区间和合作。
- Sichuan Province: Reach peak before 2030. Implement action plans of green low-carbon development such as clean energy and smart power grids, low-carbon transportation, new energy vehicles, green architecture and low-carbon communities, and strive to promote regional and international cooperation.

- 海南：在2030年达峰。大力调整产业结构，加快发展以旅游业为龙头的现代服务业；加大生态环境保护力度，在全省范围内开展低碳发展试点示范，推进绿色发展、循环发展、低碳发展。
- Hainan Province: Reach peak in 2030. Strive to adjust industrial structure, accelerate development of modern service industry led by tourist industry; strengthen ecological environmental protection; implement demonstrative pilots of low-carbon development across provinces, promote green development, cyclic development and low-carbon development.

中国省市做法
Approaches Adopted in China's Cities and Provinces

- 深圳：在2022年达峰。制定实施低碳发展规划和路线图；积极调整能源结构，推广使用清洁能源；控制交通和建筑领域排放，积极推广新能源汽车，大规模推广绿色建筑；完善碳排放权交易机制。
- Shenzhen City: Reach peak in 2022. Make and implement low-carbon development planning and roadmap; actively adjust energy structure and promote utilization of clean energy; control emission in transportation and architecture, actively promote new energy vehicles and large-scale green architecture; perfect trading mechanism of carbon emission permit.

- 广州：在2020年底前达峰。制定2020年控制温室气体排放具体行动方案；大幅提升能源效率，积极发展绿色建筑，建设低碳交通体系；组织开展碳排放权交易，优先发展低碳技术和相关产业。
- Guangzhou City: Reach peak before the end of 2020. Make detailed action plans for controlling greenhouse gas emission in 2020; greatly enhance energy efficiency, actively develop green architecture and establish low-carbon transportation system; organize and implement carbon emissions permit trading and develop low-carbon technology and relevant industries as a priority.

- 武汉：在2022年左右达峰。积极调整产业结构，优化能源结构，推广绿色建筑，发展绿色交通，推进碳排放权交易，引导市民低碳生活消费。
- Wuhan City: Reach peak around 2022. Actively adjust industrial structure, optimize energy structure, promote green architecture, develop green transportation, promote carbon emissions permit trading, and guide citizens to make a low-carbon living consumption.

中国省市做法
Approaches Adopted in China's Cities and Provinces

- 贵阳：在2025年前达峰。加快构建以大数据为引领的现代产业体系，积极倡导低碳交通、低碳消费、低碳建筑、低碳社区等全民低碳行动。
- Guiyang City: Reach peak before 2025. Accelerate to build a modern industrial system led by big data, and actively advocate low carbon activities involving all the people such as low-carbon transportation, low-carbon consumption, low-carbon architecture, and low-carbon communities.

- 镇江：在2020年左右达峰。建设碳排放管理平台，从城市、区域和行业、企业及项目这三个层级构建完善的城市低碳发展综合管理体系，促进产业碳转型，实施区域碳考核，开展项目碳评估，推行企业碳管理。
- Zhenjiang City: Reach peak around 2020. Build carbon emission management platforms and build perfect urban integrated management system of low-carbon development from three levels of cities, regions and industries, enterprises and projects; promote industrial carbon transformation, implement regional carbon examination, implement project carbon assessment, and promote enterprise carbon management.

- 吉林：在2025年前达峰。加快推进产业结构调整和发展方式转变，优化能源结构，增加森林碳汇，倡导绿色消费模式和低碳生活方式，建立和完善低碳发展体制机制。
- Jilin City: Reach peak before 2025. Accelerate promotion of adjustment of industrial structure and transformation in development mode, optimize energy structure, increase forest carbon-sink, advocate green consumption mode and low-carbon lifestyle, establish and perfect low-carbon development mechanism.

中国省市做法
Approaches Adopted in China's Cities and Provinces

- 延安：在2029年前达峰。加快产业结构调整、开展大气污染综合治理、提高能源利用效率、改变能源消费结构、推进低碳重点项目、打造低碳新区，积极创新低碳体制机制，培养全民低碳消费习惯，增加森林碳汇。
- Yan'an City: Reach peak before 2029. Accelerate adjustment of industrial structure, implement comprehensive treatment on atmospheric pollution, enhance energy utilization efficiency, change energy consumption structure, promote key low-carbon projects, create new low-carbon zones, actively innovate low-carbon mechanism, cultivate all the people to form low-carbon consumption habit, and increase forest carbon-sink.

- 金昌：在2025年前达峰。继续培育和发展以风光电为主的清洁能源；推动重点排放行业低碳化升级改造；积极发展现代智能交通，提高运输组织化程度和集约化水平；推广绿色节能建筑。
- Jinchang City: Reach peak before 2025. Continue to cultivate and develop clean energy dominated by wind power and PV power, promote low carbon upgrading and transformation in key emission industries; actively develop modern intelligent transportation, enhance organized transportation degree and intensification level; and promote green and energy-saving architecture.

中国省市做法 总结
Summaries of Approaches Adopted in China's Cities and Provinces

- 建立碳排放峰值倒逼结构调整
- Establish adjustment of forced structure in peak value of carbon emission
- 探索市场机制，推动低碳发展
- Explore market mechanism and promote low-carbon development
- 加快低碳发展制度创新
- Accelerate innovation in low-carbon development
- 探索建立企业碳排放报告制度和碳排放管理平台
- Explore and establish carbon emission system of enterprise reporting and management platforms of carbon emission

- 为支持中国在2030年左右二氧化碳排放达到峰值，上述省/市将共同发起成立**“率先达峰城市联盟”（APPC）**。
- The above cities and provinces have initiated **APPC** in order to support China to reach peal value of carbon dioxide emission around 2030.

美国州市减排路线图
Emission Reduction Roadmap in States and Cities of U.S.

- 加州：到2020年将会降低17%的温室气体排放，达到1990年排放水平(4.31亿吨二氧化碳排放)；至少33%的电量通过可再生资源产生；到2030年，温室气体减排40%，降至1990年排放水平以下； 到2050年，减排80%。
- State of California: 17% of greenhouse gas emission will be reduced by 2020, reaching emission level of 1990 (431 million tons of carbon dioxide emission); at least 33% of electricity will be generated by renewable resources; 40% of greenhouse gas emission will be reduced by 2030, falling below the emission level of 1990; 80% of greenhouse gas emission will be reduced by 2050.

- 康乃狄克州：到2020年减排10%的温室气体(1990年基准)。承诺到 2050年减排80%的温室气体(2001年基准)。
- State of Connecticut: 10% of greenhouse gas emission will be reduced by 2020 (with emission level of 1990 as benchmark); promise to reach 80% of greenhouse gas emission by 2050 (with emission level of 2001 as benchmark).

- 亚特兰大：到2020年减排20%，到2030年减排40%，到 2040年减排80%(2009基准)；波士顿承诺到2020年温室气体减排25%，到2050年减排80% (2005年基准)。
- City of Atlanta: 20% of greenhouse gas emission will be reduced by 2020, 40% reduced by 2030 and 80% reduced by 2040 (with emission level of 2009 as benchmark); Boston has promised to reach 25% of greenhouse gas emission by 2020 and 80% by 2050 (with emission level of 2005 as benchmark).

美国州市减排路线图
Emission Reduction Roadmap in States and Cities of the U.S.

- 洛杉矶：到2025年温室气体减排45%，到2030年减排60%，到2050年减排80%(1990年基准)。到2017年，将会扩展“更好建筑项目”至超过6千万平方英尺的面积，减少1250 GWh的能源使用。到2025年，洛杉矶将消除燃煤发电。该市市长 Eric Garcetti最近发布一项承诺，将租用160辆纯电力汽车，这使得洛杉矶成为美国市政府拥有纯电力汽车最多的城市。洛杉矶将会在2015年12月发布气候行动计划草案。
- City of Los Angeles: 45% of greenhouse gas emission will be reduced by 2025, 60% reduced by 2030 and 80% reduced by 2050 (with emission level of 1990 as benchmark). By 2017, the city will expand “Better Architecture Projects” beyond 60 million square feet and reduce 1250 GWh energy usage. By 2025, the city will eliminate coal-fired power generation. Eric Garcetti, Mayor of the city has promised recently that Los Angeles will rent 160 pure electric vehicles, which will make Los Angeles become the city with the most pure electric vehicles in American municipal governments. The city will release its drafts on Climate Action Plans in December 2015.

- 华盛顿特区：到2032年减排50%，到2050年减排 80%(2006年基准)。市长近期签署了一项能源购买协议，将会使用4.6千万瓦的风能提供35%的特区政府的电力，从而每年减少10万吨碳排放。
- Washington DC: 50% of greenhouse gas emission will be reduced by 2032, 80% reduced by 2050 (with emission level of 2006 as benchmark). The Mayor has recently signed an energy purchase agreement in which 46 million watts of wind energy will supply 35% of electricity to Government of the Washington DC, and thus reduce 100,000 tons of carbon emission yearly.

美国州市减排路线图
Emission Reduction Roadmap in States and Cities of U.S.

- 西雅图：到2050年达到碳中性(碳封存和碳排放的量基本一致)。中期目标：到2030年温室气体减排58%。
- City of Seattle: Reach carbon neutral (carbon sequestration and carbon emission volume almost the same) by 2050. Medium-term goal: 58% of greenhouse gas emission will be reduced by 2030.

- 波特兰：到2050年，温室气体减排 80%(1990年基准)。到2030年，温室气体减排40%(1990年基准)。到2020年，波特兰城的太阳能设施加倍。实现100%的可再生能源发电。
- City of Portland: 80% of greenhouse gas emission will be reduced by 2050 (with emission level of 1990 as benchmark), 40% reduced by 2030 (with emission level of 1990 as benchmark). By 2020, the city will multiply its solar energy facilities and realize 100% of power generation by renewable energy sources.

- 休斯顿：到2016年减排42%，到2050年减排80%(2007年基准)。市长Parker承诺继续保持休斯顿在美国国内作为最大可再生能源购买城市的领导地位，保持50%的城市能源来自可再生资源，以及不久将会批准一个3千万瓦的太阳能项目。
- City of Houston: 42% of greenhouse gas emission will be reduced by 2016, and 80% reduced by 2050 (with emission level of 2007 as benchmark). Mayor Parker has promised to continue keeping Houston as the leading position of the biggest purchasing city of renewable energy sources within the U.S. and keep 50% of city energy coming from renewable resources. And soon the 30 million watts of solar energy project will be approved.

美国州市减排路线图
Emission Reduction Roadmap in States and Cities of U.S.

- 盐湖城2015目标：通过交通能源手段，使社区温室气体减排10%，达到每年470万吨碳排放。到2015年市政业务方面减排15%(8.4万吨碳排放)(2008年基准)。
- Goals of City of Salt Lake in 2015: 10% of greenhouse gas emission will be reduced in communities by means of transportation energy so as to reach 4.7 million tons of carbon emission yearly. By 2015, 15% of greenhouse gas emission (84,000 tons of carbon emission) will be reduced in municipal services.

- 纽约：到2050年减排80%(2005年基准)，到2030年减排 40% (1990年基准)。到2025年，建筑物排放量降低30%。签发RFI使得100%的城市电力来自于可再生资源。到2025年，所有市政府建筑物进行翻新，提高能源利用率。
- New York: 80% of greenhouse gas emission will be reduced by 2050 (with emission level of 2005 as benchmark), 40% reduced by 2030 (with emission level of 1990 as benchmark), and 30% of architecture emission will be reduced by 2025. The signing of RFI will make 100% of city electricity come from renewable resources. By 2025, all the municipal government architecture will be completely renovated to enhance energy utilization ratio.

美国州市减排路线图
Emission Reduction Roadmap in States and Cities of U.S.

- 奥克兰：到2020年，温室气体减排36%(2005年基准)，到 2050年减排83%(2005年基准)；卡梅尔到2040年减排40%；得梅因到2015年减排25%(2012年基准)。
- City of Oakland: 36% of greenhouse gas emission will be reduced by 2020 (with emission level of 2005 as benchmark), 83% reduced by 2050 (with emission level of 2005 as benchmark); in City of Carmel, 40% of greenhouse gas emission will be reduced by 2040; in City of Des Moines, 25% of greenhouse gas emission will be reduced by 2015 (with emission level of 2012 as benchmark).

- 迈阿密-戴德县：在2008年，戴德县致力于美国优秀郡县目标，到2050年温室气体减排80%(2008年基准)。作为 2016 年迈阿密戴德县社区可持续计划(绿色印记)更新的一部分，本县建立了一个中期温室气体减排目标，即到2020年减排20%(2008年基准)。
- City of Miami-Dade County: In 2008, Dade County was committed to reaching the goal of an outstanding county in the U.S., it would reduce 80% of greenhouse gases (with emission level of 2008 as benchmark). As a part of updated sustainable plan (Green Marks) in communities of Dade County of City of Miami in 2016, the county has established a middle-term goal of gas emission reduction, namely, 20% of reduction by 2020 (with emission level of 2008 as benchmark).

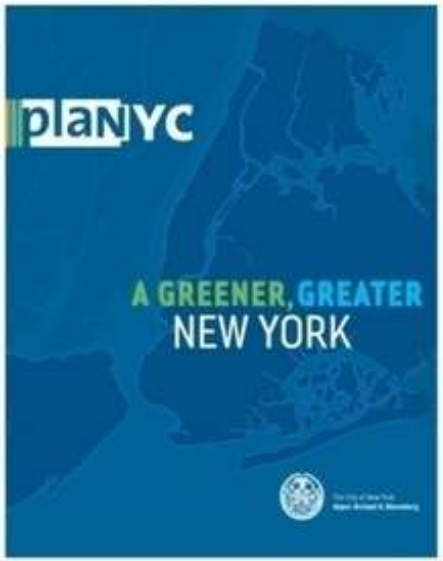
美国州市减排路线图
Emission Reduction Roadmap in States and Cities of U.S.

- 菲尼克斯：到2050年减排80%(2000年基准)。到2015年城市运作产生的排放减少15%(2009年基准)。到2020年，城市拥有建筑物排放减少20%(2009年基准)。到2025年，可再生能源提供15%的城市建筑施工能源消耗。
- City of Phoenix: 80% of greenhouse gas emission will be reduced by 2050 (with emission level of 2000 as benchmark). By 2015, 15% (with emission level of 2009 as benchmark) of greenhouse gas emission will be reduced in city operations. By 2020, 20% of city architecture emission will be reduced (with emission level of 2009 as benchmark). By 2025, renewable energy sources will be supplied for 15% energy consumption of urban architecture construction.

- 旧金山：到2017年减排25%，到2025年减排40%，到2050 年减排80%(1990年基准)。城市能源供应已经超过40%不产生温室气体。
- San Francisco: 25% of greenhouse gas emission will be reduced by 2017, 40% reduced by 2025 and 80% reduced by 2050 (with emission level of 1990 as benchmark). 40% of city energy supply will not produce greenhouse gases.

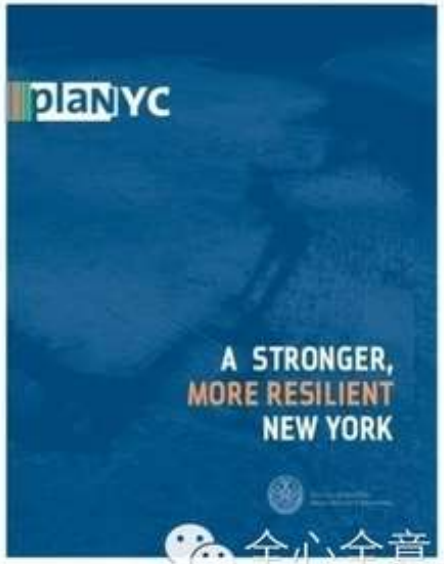
美国州市做法总结
Summaries of Approaches Adopted in States and Cities of U.S.

- 加强规划
- Strengthen planning
- 设定详细的路线图
- Establish detailed roadmap
- 注重可再生能源的应用
- Focus on application of renewable energy sources



2007

2011



2013

基本判断和启示
Basic Judgments and Inspirations

- 气候变化问题中美两国加强交流合作、推进绿色低碳发展的重大机遇和重点领域；
- Strengthen exchange and cooperation on climate affairs between the two countries, promote significant opportunities and key areas of green low-carbon development;
- 中国国家发改委、北京市政府等9个单位与美国对口合作单位签署低碳发展合作协议或谅解备忘录，意味着两国在绿色低碳合作方面可开展务实合作；
- 9 Chinese institutions such as Beijing Municipal Government and National Development and Reform Commission of the PRC have signed cooperation agreement or memorandum of understanding on low-carbon development with counterparts of the U.S., which signifies the two countries will conduct pragmatic cooperation in green low-carbon cooperation;
- 中国城市相继提出碳排放的达峰时间，一方面标志着地方实践将有可能推动中国全社会碳排放提前达到峰值；另一方面在提高能效和发展可再生能源的步伐会继续前行；
- Chinese cities have successively put forward peak schedule of carbon emission, which on the one hand signifies local practices will push carbon emission across Chinese society to reach peak value in advance; on the other hand, continue moving ahead in enhancing energy efficiency and developing renewable energy sources;
- 在经济新常态下，推进能源绿色转型，推动能源生产和消费革命将成为未来中国经济新的增长点。
- Under new normal of China’s economy, new growth points in China's economy in the future will go to pushing green transformation of energy, pushing energy production and consumption revolution.

谢谢!

Thanks!