

# 中华人民共和国国家发展和改革委员会

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尊敬的克里斯蒂娜·菲格里斯女士：

作为联合国气候变化框架公约中方国家联络人，我谨此转交  
后附《强化应对气候变化行动——中国国家自主贡献》。

顺致最崇高的敬意。



中国国家发展改革委应对气候变化司司长  
联合国气候变化框架公约中方国家联络人

2015年6月30日于北京

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# 中国国家发展和改革委员会应对气候变化司

DEPARTMENT OF CLIMATE CHANGE, NATIONAL DEVELOPMENT & REFORM COMMISSION OF CHINA

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Beijing, 30 June 2015

**To:** Christiana Figueres  
Executive Secretary  
UNFCCC secretariat  
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Germany  
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Dear Madam Christiana Figueres,

In my capacity as China's National Focal Point for UNFCCC, I am writing to communicate as attached China's intended nationally determined contribution: *Enhanced Actions on Climate Change*.

Please accept, Madam, the assurances of my highest consideration.



SU Wei  
National Focal Point for UNFCCC  
Director-General  
Department of Climate Change  
National Development and Reform Commission  
People's Republic of China

# 强化应对气候变化行动

## ——中国国家自主贡献

气候变化是当今人类社会面临的共同挑战。工业革命以来的人类活动，特别是发达国家大量消费化石能源所产生的二氧化碳累积排放，导致大气中温室气体浓度显著增加，加剧了以变暖为主要特征的全球气候变化。气候变化对全球自然生态系统产生显著影响，温度升高、海平面上升、极端气候事件频发给人类生存和发展带来严峻挑战。

气候变化作为全球性问题，需要国际社会携手应对。多年来，各缔约方在《联合国气候变化框架公约》（以下简称公约）实施进程中，按照共同但有区别的责任原则、公平原则、各自能力原则，不断强化合作行动，取得了积极进展。为进一步加强公约的全面、有效和持续实施，各方正在就 2020 年后的强化行动加紧谈判磋商，以期于 2015 年年底在联合国气候变化巴黎会议上达成协议，开辟全球绿色低碳发展新前景，推动世界可持续发展。

中国是拥有 13 多亿人口的发展中国家，是遭受气候变化不利影响最为严重的国家之一。中国正处在工业化、城镇化快

速发展阶段，面临着发展经济、消除贫困、改善民生、保护环境、应对气候变化等多重挑战。积极应对气候变化，努力控制温室气体排放，提高适应气候变化的能力，不仅是中国保障经济安全、能源安全、生态安全、粮食安全以及人民生命财产安全，实现可持续发展的内在要求，也是深度参与全球治理、打造人类命运共同体、推动全人类共同发展的责任担当。

根据公约缔约方会议相关决定，在此提出中国应对气候变化的强化行动和措施，作为中国为实现公约第二条所确定目标做出的、反映中国应对气候变化最大努力的国家自主贡献，同时提出中国对 2015 年协议谈判的意见，以推动巴黎会议取得圆满成功。

## **一、中国强化应对气候变化行动目标**

长期以来，中国高度重视气候变化问题，把积极应对气候变化作为国家经济社会发展的重大战略，把绿色低碳发展作为生态文明建设的重要内容，采取了一系列行动，为应对全球气候变化作出了重要贡献。2009 年向国际社会宣布：到 2020 年单位国内生产总值二氧化碳排放比 2005 年下降 40%-45%，非化石能源占一次能源消费比重达到 15%左右，森林面积比 2005 年增加 4000 万公顷，森林蓄积量比 2005 年增加 13 亿立方米。积极实施《中国应对气候变化国家方案》、《“十二五”控制温室气体排放工作方案》、《“十二五”节能减排综合性工

作方案》、《节能减排“十二五”规划》、《2014—2015 年节能减排低碳发展行动方案》和《国家应对气候变化规划（2014—2020 年）》。加快推进产业结构和能源结构调整，大力开展节能减碳和生态建设，在 7 个省（市）开展碳排放权交易试点，在 42 个省（市）开展低碳试点，探索符合中国国情的低碳发展新模式。2014 年，中国单位国内生产总值二氧化碳排放比 2005 年下降 33.8%，非化石能源占一次能源消费比重达到 11.2%，森林面积比 2005 年增加 2160 万公顷，森林蓄积量比 2005 年增加 21.88 亿立方米，水电装机达到 3 亿千瓦（是 2005 年的 2.57 倍），并网风电装机达到 9581 万千瓦（是 2005 年的 90 倍），光伏装机达到 2805 万千瓦（是 2005 年的 400 倍），核电装机达到 1988 万千瓦（是 2005 年的 2.9 倍）。加快实施《国家适应气候变化战略》，着力提升应对极端气候事件能力，重点领域适应气候变化取得积极进展。应对气候变化能力建设进一步加强，实施《中国应对气候变化科技专项行动》，科技支撑能力得到增强。

面向未来，中国已经提出了到 2020 年全面建成小康社会，到本世纪中叶建成富强民主文明和谐的社会主义现代化国家的奋斗目标；明确了转变经济发展方式、建设生态文明、走绿色低碳循环发展的政策导向，努力协同推进新型工业化、城镇化、信息化、农业现代化和绿色化。中国将坚持节约资源和保

保护环境基本国策，坚持减缓与适应气候变化并重，坚持科技创新、管理创新和体制机制创新，加快能源生产和消费革命，不断调整经济结构、优化能源结构、提高能源效率、增加森林碳汇，有效控制温室气体排放，努力走一条符合中国国情的经济发展、社会进步与应对气候变化多赢的可持续发展之路。

根据自身国情、发展阶段、可持续发展战略和国际责任担当，中国确定了到 2030 年的自主行动目标：二氧化碳排放 2030 年左右达到峰值并争取尽早达峰；单位国内生产总值二氧化碳排放比 2005 年下降 60%—65%，非化石能源占一次能源消费比重达到 20% 左右，森林蓄积量比 2005 年增加 45 亿立方米左右。中国还将继续主动适应气候变化，在农业、林业、水资源等重点领域和城市、沿海、生态脆弱地区形成有效抵御气候变化风险的机制和能力，逐步完善预测预警和防灾减灾体系。

## **二、中国强化应对气候变化行动政策和措施**

千里之行，始于足下。为实现到 2030 年的应对气候变化自主行动目标，需要在已采取行动的基础上，持续不断地做出努力，在体制机制、生产方式、消费模式、经济政策、科技创新、国际合作等方面进一步采取强化政策和措施。

**（一）实施积极应对气候变化国家战略。**加强应对气候变化法制建设。将应对气候变化行动目标纳入国民经济和社会发展规划，研究制定长期低碳发展战略和路线图。落实《国家应

对气候变化规划（2014—2020 年）》和省级专项规划。完善应对气候变化工作格局，发挥碳排放指标的引导作用，分解落实应对气候变化目标任务，健全应对气候变化和低碳发展目标责任评价考核制度。

（二）完善应对气候变化区域战略。实施分类指导的应对气候变化区域政策，针对不同主体功能区确定差别化的减缓和适应气候变化目标、任务和实现途径。优化开发的城市化地区要严格控制温室气体排放；重点开发的城市化地区要加强碳排放强度控制，老工业基地和资源型城市要加快绿色低碳转型；农产品主产区要加强开发强度管制，限制进行大规模工业化、城镇化开发，加强中小城镇规划建设，鼓励人口适度集中，积极推进农业适度规模化、产业化发展；重点生态功能区要划定生态红线，制定严格的产业发展目录，限制新上高碳项目，对不符合主体功能定位的产业实行退出机制，因地制宜发展低碳特色产业。

（三）构建低碳能源体系。控制煤炭消费总量，加强煤炭清洁利用，提高煤炭集中高效发电比例，新建燃煤发电机组平均供电煤耗要降至每千瓦时 300 克标准煤左右。扩大天然气利用规模，到 2020 年天然气占一次能源消费比重达到 10% 以上，煤层气产量力争达到 300 亿立方米。在做好生态环境保护和移民安置的前提下积极推进水电开发，安全高效发展核电，大力

发展风电，加快发展太阳能发电，积极发展地热能、生物质能和海洋能。到 2020 年，风电装机达到 2 亿千瓦，光伏装机达到 1 亿千瓦左右，地热能利用规模达到 5000 万吨标准煤。加强放空天然气和油田伴生气回收利用。大力发展分布式能源，加强智能电网建设。

（四）形成节能低碳的产业体系。坚持走新型工业化道路，大力发展循环经济，优化产业结构，修订产业结构调整指导目录，严控高耗能、高排放行业扩张，加快淘汰落后产能，大力发展服务业和战略性新兴产业。到 2020 年，力争使战略性新兴产业增加值占国内生产总值比重达到 15%。推进工业低碳发展，实施《工业领域应对气候变化行动方案（2012—2020 年）》，制定重点行业碳排放控制目标和行动方案，研究制定重点行业温室气体排放标准。通过节能提高能效，有效控制电力、钢铁、有色、建材、化工等重点行业排放，加强新建项目碳排放管理，积极控制工业生产过程温室气体排放。构建循环型工业体系，推动产业园区循环化改造。加大再生资源回收利用，提高资源产出率。逐渐减少二氟一氯甲烷受控用途的生产和使用，到 2020 年在基准线水平（2010 年产量）上产量减少 35%、2025 年减少 67.5%，三氟甲烷排放到 2020 年得到有效控制。推进农业低碳发展，到 2020 年努力实现化肥农药使用量零增长；控制稻田甲烷和农田氧化亚氮排放，构建循环型农业体系，



推动秸秆综合利用、农林废弃物资源化利用和畜禽粪便综合利用。推进服务业低碳发展，积极发展低碳商业、低碳旅游、低碳餐饮，大力推动服务业节能降碳。

**（五）控制建筑和交通领域排放。**坚持走新型城镇化道路，优化城镇体系和城市空间布局，将低碳发展理念贯穿城市规划、建设、管理全过程，倡导产城融合的城市形态。强化城市低碳化建设，提高建筑能效水平和建筑工程质量，延长建筑物使用寿命，加大既有建筑节能改造力度，建设节能低碳的城市基础设施。促进建筑垃圾资源循环利用，强化垃圾填埋场甲烷收集利用。加快城乡低碳社区建设，推广绿色建筑和可再生能源建筑应用，完善社区配套低碳生活设施，探索社区低碳化运营管理模式。到 2020 年，城镇新建建筑中绿色建筑占比达到 50%。构建绿色低碳交通运输体系，优化运输方式，合理配置城市交通资源，优先发展公共交通，鼓励开发使用新能源车船等低碳环保交通运输工具，提升燃油品质，推广新型替代燃料。到 2020 年，大中城市公共交通占机动化出行比例达到 30%。推进城市步行和自行车交通系统建设，倡导绿色出行。加快智慧交通建设，推动绿色货运发展。

**（六）努力增加碳汇。**大力开展造林绿化，深入开展全民义务植树，继续实施天然林保护、退耕还林还草、京津风沙源治理、防护林体系建设、石漠化综合治理、水土保持等重点生

态工程建设，着力加强森林抚育经营，增加森林碳汇。加大森林灾害防控，强化森林资源保护，减少毁林排放。加大湿地保护与恢复，提高湿地储碳功能。继续实施退牧还草，推行草畜平衡，遏制草场退化，恢复草原植被，加强草原灾害防治和农田保育，提升土壤储碳能力。

（七）倡导低碳生活方式。加强低碳生活和低碳消费全民教育，倡导绿色低碳、健康文明的生活方式和消费模式，推动全社会形成低碳消费理念。发挥公共机构率先垂范作用，开展节能低碳机关、校园、医院、场馆、军营等创建活动。引导适度消费，鼓励使用节能低碳产品，遏制各种铺张浪费现象。完善废旧商品回收体系和垃圾分类处理体系。

（八）全面提高适应气候变化能力。提高水利、交通、能源等基础设施在气候变化条件下的安全运营能力。合理开发和优化配置水资源，实行最严格的水资源管理制度，全面建设节水型社会。加强中水、淡化海水、雨洪等非传统水源开发利用。完善农田水利设施配套建设，大力发展节水灌溉农业，培育耐高温和耐旱作物品种。加强海洋灾害防护能力建设和海岸带综合管理，提高沿海地区抵御气候灾害能力。开展气候变化对生物多样性影响的跟踪监测与评估。加强林业基础设施建设。合理布局城市功能区，统筹安排基础设施建设，有效保障城市运行的生命线系统安全。研究制定气候变化影响人群健康应急预

案，提升公共卫生领域适应气候变化的服务水平。加强气候变化综合评估和风险管理，完善国家气候变化监测预警信息发布体系。在生产布局、基础设施、重大项目规划设计和建设中，充分考虑气候变化因素。健全极端天气气候事件应急响应机制。加强防灾减灾应急管理体系建设。

（九）创新低碳发展模式。深化低碳省区、低碳城市试点，开展低碳城（镇）试点和低碳产业园区、低碳社区、低碳商业、低碳交通试点，探索各具特色的低碳发展模式，研究在不同类型区域和城市控制碳排放的有效途径。促进形成空间布局合理、资源集约利用、生产低碳高效、生活绿色宜居的低碳城市。研究建立碳排放认证制度和低碳荣誉制度，选择典型产品进行低碳产品认证试点并推广。

（十）强化科技支撑。提高应对气候变化基础科学研究水平，开展气候变化监测预测研究，加强气候变化影响、风险机理与评估方法研究。加强对节能降耗、可再生能源和先进核能、碳捕集利用和封存等低碳技术的研发和产业化示范，推广利用二氧化碳驱油、驱煤层气技术。研发极端天气预报预警技术，开发生物固氮、病虫害绿色防控、设施农业技术，加强综合节水、海水淡化等技术研发。健全应对气候变化科技支撑体系，建立政产学研有效结合机制，加强应对气候变化专业人才培养。

（十一）加大资金和政策支持。进一步加大财政资金投入力度，积极创新财政资金使用方式，探索政府和社会资本合作等低碳投融资新机制。落实促进新能源发展的税收优惠政策，完善太阳能发电、风电、水电等定价、上网和采购机制。完善包括低碳节能在内的政府绿色采购政策体系。深化能源、资源性产品价格和税费改革。完善绿色信贷机制，鼓励和引导金融机构积极开展能效信贷业务，发行绿色信贷资产证券化产品。健全气候变化灾害保险政策。

（十二）推进碳排放权交易市场建设。充分发挥市场在资源配置中的决定性作用，在碳排放权交易试点基础上，稳步推进全国碳排放权交易体系建设，逐步建立碳排放权交易制度。研究建立碳排放报告核查核证制度，完善碳排放权交易规则，维护碳排放交易市场的公开、公平、公正。

（十三）健全温室气体排放统计核算体系。进一步加强应对气候变化统计工作，健全涵盖能源活动、工业生产过程、农业、土地利用变化与林业、废弃物处理等领域的温室气体排放统计制度，完善应对气候变化统计指标体系，加强统计人员培训，不断提高数据质量。加强温室气体排放清单的核算工作，定期编制国家和省级温室气体排放清单，建立重点企业温室气体排放报告制度，制定重点行业企业温室气体排放核算标准。积极开展相关能力建设，构建国家、地方、企业温室气体排放

基础统计和核算工作体系。

（十四）完善社会参与机制。强化企业低碳发展责任，鼓励企业探索资源节约、环境友好的低碳发展模式。强化低碳发展社会监督和公众参与，继续利用“全国低碳日”等平台提高全社会低碳发展意识，鼓励公众应对气候变化的自觉行动。发挥媒体监督和导向作用，加强教育培训，充分发挥学校、社区以及民间组织的作用。

（十五）积极推进国际合作。作为负责任的发展中国家，中国将从全人类的共同利益出发，积极开展国际合作，推进形成公平合理、合作共赢的全球气候治理体系，与国际社会共同促进全球绿色低碳转型与发展路径创新。坚持共同但有区别的责任原则、公平原则、各自能力原则，推动发达国家切实履行大幅度率先减排并向发展中国家提供资金、技术和能力建设支持的公约义务，为发展中国家争取可持续发展的公平机会，争取更多的资金、技术和能力建设支持，促进南北合作。同时，中国将主动承担与自身国情、发展阶段和实际能力相符的国际义务，采取不断强化的减缓和适应行动，并进一步加大大气变化南南合作力度，建立应对气候变化南南合作基金，为小岛屿发展中国家、最不发达国家和非洲国家等发展中国家应对气候变化提供力所能及的帮助和支持，推进发展中国家互学互鉴、互帮互助、互利共赢。广泛开展应对气候变化国际对话与交流，

加强相关领域政策协调与务实合作，分享有益经验和做法，推广气候友好技术，与各方一道共同建设人类美好家园。

### 三、中国关于 2015 年协议谈判的意见

中国致力于不断加强公约全面、有效和持续实施，与各方一道携手努力推动巴黎会议达成一个全面、平衡、有力度的协议。为此，对 2015 年协议谈判进程和结果提出如下意见：

（一）总体意见。2015 年协议谈判在公约下进行，以公约原则为指导，旨在进一步加强公约的全面、有效和持续实施，以实现公约的目标。谈判的结果应遵循共同但有区别的责任原则、公平原则、各自能力原则，充分考虑发达国家和发展中国家间不同的历史责任、国情、发展阶段和能力，全面平衡体现减缓、适应、资金、技术开发和转让、能力建设、行动和支持的透明度各个要素。谈判进程应遵循公开透明、广泛参与、缔约方驱动、协商一致的原则。

（二）减缓。2015 年协议应明确各缔约方按照公约要求，制定和实施 2020—2030 年减少或控制温室气体排放的计划和措施，推动减缓领域的国际合作。发达国家根据其历史责任，承诺到 2030 年有力度的全经济范围绝对量减排目标。发展中国家在可持续发展框架下，在发达国家资金、技术和能力建设支持下，采取多样化的强化减缓行动。

（三）适应。2015 年协议应明确各缔约方按照公约要求，

加强适应领域的国际合作,加强区域和国家层面适应计划和项目的实施。发达国家应为发展中国家制定和实施国家适应计划、开展相关项目提供支持。发展中国家通过国家适应计划识别需求和障碍,加强行动。建立关于适应气候变化的公约附属机构。加强适应与资金、技术和能力建设的联系。强化华沙损失和损害国际机制。

**(四) 资金。**2015 年协议应明确发达国家按照公约要求,为发展中国家的强化行动提供新的、额外的、充足的、可预测和持续的资金支持。明确发达国家 2020—2030 年提供资金支持的量化目标和实施路线图,提供资金的规模应在 2020 年开始每年 1000 亿美元的基础上逐年扩大,所提供资金应主要来源于公共资金。强化绿色气候基金作为公约资金机制主要运营实体的地位,在公约缔约方会议授权和指导下开展工作,对公约缔约方会议负责。

**(五) 技术开发与转让。**2015 年协议应明确发达国家按照公约要求,根据发展中国家技术需求,切实向发展中国家转让技术,为发展中国家技术研发应用提供支持。加强现有技术机制在妥善处理知识产权问题、评估技术转让绩效等方面的职能,增强技术机制与资金机制的联系,包括在绿色气候基金下设立支持技术开发与转让的窗口。

**(六) 能力建设。**2015 年协议应明确发达国家按照公约

要求，为发展中国家各领域能力建设提供支持。建立专门关于能力建设的国际机制，制定并实施能力建设活动方案，加强发展中国家减缓和适应气候变化能力建设。

（七）行动和支持的透明度。2015 年协议应明确各缔约方按照公约要求和有关缔约方会议决定，增加各方强化行动的透明度。发达国家根据公约要求及京都议定书相关规则，通过现有的报告和审评体系，增加其减排行动的透明度，明确增强发达国家提供资金、技术和能力建设支持透明度及相关审评的规则。发展中国家在发达国家资金、技术和能力建设支持下，通过现有的透明度安排，以非侵入性、非惩罚性、尊重国家主权的方式，增加其强化行动透明度。

（八）法律形式。2015 年协议应是一项具有法律约束力的公约实施协议，可以采用核心协议加缔约方会议决定的形式，减缓、适应、资金、技术开发和转让、能力建设、行动和支持的透明度等要素应在核心协议中平衡体现，相关技术细节和程序规则可由缔约方会议决定加以明确。发达国家和发展中国家的国家自主贡献可在巴黎会议成果中以适当形式分别列出。



**ENHANCED ACTIONS ON CLIMATE CHANGE:  
CHINA'S INTENDED NATIONALLY DETERMINED CONTRIBUTIONS<sup>1</sup>**

Climate change is today's common challenge faced by all humanity. Human activities since the Industrial Revolution, especially the accumulated carbon dioxide emissions from the intensive fossil fuels consumption of developed countries, have resulted in significantly increasing the atmospheric concentration of greenhouse gases, exacerbated climate change primarily characterized by global warming. Climate change has significant impacts on global natural ecosystems, causing temperature increase and sea level rise as well as more frequent extreme climate events, all of which pose a huge challenge to the survival and development of the human race.

Climate change is a global issue that requires the collaboration of the international community. For years, in accordance with the principles of equity and common but differentiated responsibilities and respective capabilities, the Parties to *the United Nations Framework Convention on Climate Change* (hereinafter referred to as the Convention) have been working to enhance cooperation and achieved positive progress in the implementation of the Convention. To further enhance the full, effective and sustained implementation of the Convention, negotiations and consultations are now under way on enhanced actions beyond 2020, so as to reach an agreement at the Conference of the Parties to the Convention in Paris at the end

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<sup>1</sup> This is an unofficial translation. In case of any divergence, the official text in the Chinese language shall prevail.

of 2015. This will open up a new prospect for green and low-carbon development across the globe and promote sustainable development worldwide.

As a developing country with a population of more than 1.3 billion, China is among those countries that are most severely affected by the adverse impacts of climate change. China is currently in the process of rapid industrialization and urbanization, confronting with multiple challenges including economic development, poverty eradication, improvement of living standards, environmental protection and combating climate change. To act on climate change in terms of mitigating greenhouse gas emissions and enhancing climate resilience, is not only driven by China's domestic needs for sustainable development in ensuring its economic security, energy security, ecological security, food security as well as the safety of people's life and property and to achieve sustainable development, but also driven by its sense of responsibility to fully engage in global governance, to forge a community of shared destiny for humankind and to promote common development for all human beings.

In accordance with relevant decisions of the Conference of the Parties to the Convention, China hereby presents its enhanced actions and measures on climate change as its nationally determined contributions towards achieving the objective set out in Article 2 of the Convention, which represent its utmost efforts in addressing climate change, and contributes its views on the 2015 agreement negotiations with a view to making the Paris Conference a great success.

## **I. ENHANCED ACTIONS ON CLIMATE CHANGE**

China attaches great importance to addressing climate change since long, making it a significant national strategy for its social and economic development and promoting green and low-carbon development as important component of the

ecological civilization process. It has already taken a series of climate actions which represent a significant contribution to combating the global climate change.

In 2009, China announced internationally that by 2020 it will lower carbon dioxide emissions per unit of GDP by 40% to 45% from the 2005 level, increase the share of non-fossil fuels in primary energy consumption to about 15% and increase the forested area by 40 million hectares and the forest stock volume by 1.3 billion cubic meters compared to the 2005 levels. In this connection, China has

enacted and implemented *the National Program on Climate Change, the Work Plan for Controlling Greenhouse Gas Emissions during the 12<sup>th</sup> Five-Year Plan Period, the Comprehensive Work Plan for Energy Conservation and Emission Reduction for the 12<sup>th</sup> Five Year Plan Period, the 12<sup>th</sup> Five Year Plan for Energy Conservation and Emission Reduction, the 2014-2015 Action Plan for Energy Conservation, Emission Reduction and Low-Carbon Development, and the National Plan on Climate Change (2014-2020)*. China has accelerated the adjustment of its industry and energy structures and invested great efforts in improving energy efficiency, lowering carbon emissions and enhancing the ecosystem. China has initiated carbon emission trading pilots in 7 provinces and cities and low-carbon development pilots in 42 provinces and cities to explore a new mode of low-carbon development consistent with its prevailing national circumstances. By 2014 the following has been achieved:

- Carbon dioxide emissions per unit of GDP is 33.8% lower than the 2005 level;
- The share of non-fossil fuels in primary energy consumption is 11.2%;
- The forested area and forest stock volume are increased respectively by 21.6 million hectares and 2.188 billion cubic meters compared to the 2005 levels;
- The installed capacity of hydro power is 300 gigawatts (2.57 times of that for 2005);
- The installed capacity of on-grid wind power is 95.81 gigawatts (90 times of that for 2005);

- The installed capacity of solar power is 28.05 gigawatts (400 times of that for 2005); and
- The installed capacity of nuclear power is 19.88 gigawatts (2.9 times of that for 2005).

China is accelerating the implementation of *the National Strategy for Climate Adaptation*, and improving its capacity to respond to extreme climatic events and making positive progress in key areas of climate change adaptation. Capacity building on combating climate change is further strengthened. Supports in terms of science and technology are further enhanced by implementing *China's Science and Technology Actions on Climate Change*.

Looking into the future, China has defined as its strategic goals to complete the construction of a moderately prosperous society in an all-round way by 2020 and to create a prosperous, strong, democratic, culturally developed and harmonious modern socialist country by the middle of this century. It has identified transforming the economic development pattern, constructing ecological civilization and holding to a green, low-carbon and recycled development path as its policy orientation. New industrialization, urbanization, informatization, agricultural modernization and greenisation will be promoted in a coordinated manner. Resource conservation and environmental protection have become the cardinal national policy, placing mitigation and adaptation on equal footing, promoting innovation in science and technology and putting in place the necessary management and regulatory mechanisms and systems. China will accelerate the transformation of energy production and consumption and continue to restructure its economy, optimize the energy mix, improve energy efficiency and increase its forest carbon sinks, with a view to efficiently mitigating greenhouse gas emissions. China is making efforts to embark on a sustainable development path that is in line with its national circumstances and leads to multiple wins in terms of economic development, social progress and combating climate change.

Based on its national circumstances, development stage, sustainable development strategy and international responsibility, China has **nationally determined** its actions by **2030** as follows:

- To achieve the **peaking of carbon dioxide emissions around 2030** and making **best efforts to peak early;**
- To **lower carbon dioxide emissions per unit of GDP by 60% to 65% from the 2005 level;**
- To **increase the share of non-fossil fuels in primary energy consumption to around 20%; and**
- To **increase the forest stock volume by around 4.5 billion cubic meters on the 2005 level.**

Moreover, China will continue to proactively **adapt** to climate change by enhancing mechanisms and capacities to effectively defend against climate change risks in key areas such as agriculture, forestry and water resources, as well as in cities, coastal and ecologically vulnerable areas and to progressively strengthen early warning and emergency response systems and disaster prevention and reduction mechanisms.

## **II. POLICIES AND MEASURES TO IMPLEMENT ENHANCED ACTIONS ON CLIMATE CHANGE**

A one-thousand-mile journey starts from the first step. To achieve the nationally determined action objectives on climate change by 2030, China needs, building on actions already taken, to make a sustained effort in further implementing enhanced policies and measures in areas such as regime building, production mode and consumption pattern, economic policy, science and technology innovation and international cooperation.

### **A. Implementing Proactive National Strategies on Climate Change**

- To strengthen laws and regulations on climate change;
- To integrate climate-change-related objectives into the national economic and social development plans;
- To formulate China's long-term strategy and roadmap for low-carbon development;
- To implement *the National Program on Climate Change (2014-2020)* and provincial climate programs; and
- To improve the overall administration of climate-change-related work and to make carbon-emission-related indicators play guiding role, by subdividing and implementing climate change targets and tasks, and improving the performance evaluation and accountability system on climate change and low-carbon development targets.

### **B. Improving Regional Strategies on Climate Change**

- To implement regionalized climate change policies to help identify differentiated targets, tasks and approaches of climate change mitigation and adaptation for different development-planning zones;
- To strictly control greenhouse gas emissions in Urbanized Zones for Optimized Development;
- To enhance carbon intensity control in Urbanized Zones for Focused Development and to accelerate green and low-carbon transformation in old industrial bases and resource-based cities;
- To enhance the control of development intensity, to limit large-scale industrialization and urbanization, to strengthen the planning and construction of medium-and-small-sized towns, to encourage moderate concentration of population and to actively push forward the appropriate **scale production and industrialization of agriculture in Major Agricultural Production Zones;**

- To define ecological red lines, to formulate **strict criteria for industrial development** and to constrain the development of any new carbon intensive projects in Key Ecological Zones; and
- To introduce a withdrawal mechanism for those industries that do not match with functions of development-planning zones and to develop **low-carbon industries** in line with local conditions and circumstances.

### C. Building **Low-Carbon Energy System**

- To control total coal consumption;
- To enhance the clean use of coal;
- To increase the share of concentrated and highly-efficient electricity generation from coal;
- To lower coal consumption of electricity generation of newly built coal-fired power plants to around 300 grams coal equivalent per kilowatt-hour;
- To expand the use of **natural gas: by 2020, achieving more than 10% share of natural gas consumption in the primary energy consumption and making efforts to reach 30 billion cubic meters of coal-bed methane production;**
- To proactively promote the development of hydro power, on the premise of ecological and environmental protection and inhabitant resettlement;
- To develop nuclear power in a safe and efficient manner;
- To scale up the development of wind power;
- To accelerate the development of solar power;
- To proactively develop geothermal energy, bio-energy and maritime energy;
- To achieve the installed capacity of **wind power reaching 200 gigawatts, the installed capacity of solar power reaching around 100 gigawatts and the utilization of thermal energy reaching 50 million tons coal equivalent by 2020;**
- To **enhance the recovery and utilization of vent gas and oilfield-associated gas;** and
- To scale up distributed energy and strengthen the construction of smart grid.

#### D. Building Energy Efficient and Low-Carbon Industrial System

- To embark on a new path of industrialization, developing a circular economy, optimizing the industrial structure, revising the guidance catalogue of the adjustment of industrial structure, strictly controlling the total expansion of industries with extensive energy consumption and emissions, accelerating the elimination of outdated production capacity and promoting the development of service industry and strategic emerging industries;
- To promote the share of value added from strategic emerging industries reaching 15% of the total GDP by 2020;
- To promote low-carbon development of industrial sectors, implementing *Action Plan of Industries Addressing Climate Change (2012-2020)* and formulating carbon emission control target and action plans in key industries;
- To research and formulate greenhouse gas emission standards for key industries;
- To effectively control emissions from key sectors including power, iron and steel, nonferrous metal, building materials and chemical industries through energy conservation and efficiency improvement;
- To strengthen the management of carbon emissions for new projects and to actively control greenhouse gas emissions originating from the industrial production process;
- To construct a recycling-based industrial system, promoting recycling restructure in industrial parks, increasing the recycling and utilization of renewable resources and improving the production rate of resource;
- To phase down the production and consumption of HCFC-22 for controlled uses, with its production to be reduced by 35% from the 2010 level by 2020, and by 67.5% by 2025 and to achieve effective control on emissions of HFC-23 by 2020;



- To promote the low-carbon development in agriculture, making efforts to achieve zero growth of fertilizer and pesticide utilization by 2020;
- To control methane emissions from rice fields and nitrous oxide emissions from farmland;
- To construct a recyclable agriculture system, promoting comprehensive utilization of straw, reutilization of agricultural and forestry wastes and comprehensive utilization of animal waste; and
- To promote low-carbon development of service industry, actively developing low-carbon business, tourism and foodservice and vigorously promoting service industries to conserve energy and reduce carbon emissions.

#### **E. Controlling Emissions from Building and Transportation Sectors**

- To embark on a new pattern of urbanization, optimizing the urban system and space layout, integrating the low-carbon development concept in the entire process of urban planning, construction and management and promoting the urban form that integrates industries into cities;
- To enhance low-carbonized urbanization, improving energy efficiency of building and the quality of building construction, extending buildings' life spans, intensifying energy conservation transformation for existing buildings, building energy-saving and low-carbon infrastructures, promoting the reutilization of building wastes and intensifying the recovery and utilization of methane from landfills;
- To accelerate the construction of low-carbon communities in both urban and rural areas, promoting the construction of green buildings and the application of renewable energy in buildings, improving low-carbon supporting facilities for equipping communities and exploring modes of low-carbon community operation and management;
- To promote the share of green buildings in newly built buildings of cities and towns reaching 50% by 2020;

- To develop a green and low-carbon transportation system, optimizing means of transportation, properly allocating public transport resources in cities, giving priority to the development of public transportation and encouraging the development and use of low-carbon and environment-friendly means of transport, such as new energy vehicle and vessel;
- To improve the quality of gasoline and to promote new types of alternative fuels;
- To promote the share of public transport in motorized travel in big-and-medium-sized cities reaching 30% by 2020;
- To promote the development of dedicated transport system for pedestrians and bicycles in cities and to advocate green travel; and
- To accelerate the development of smart transport and green freight transport.

#### **F. Increasing Carbon Sinks**

- To vigorously enhance afforestation, promoting voluntary tree planting by all citizens, continuing the implementation of key ecological programs, including protecting natural forests, restoring forest and grassland from farmland, conducting sandification control for areas in vicinity of Beijing and Tianjin, planting shelter belt, controlling rocky desertification, conserving water and soil, strengthening forest tending and management and increasing the forest carbon sink;
- To strengthen forest disaster prevention and forest resource protection and to reduce deforestation-related emissions;
- To strengthen the protection and restoration of wetlands and to increase carbon storage capacity of wetlands; and
- To continue to restore grassland from grazing land, to promote mechanism of maintaining the balance between grass stock and livestock, to prevent grassland degradation, to restore vegetation of grassland, to enhance grassland

disaster prevention and farmland protection and to improve carbon storage of soil.

#### **G. Promoting the Low-Carbon Way of Life**

- To enhance education for all citizens on low-carbon way of life and consumption, to advocate green, low-carbon, healthy and civilized way of life and consumption patterns and to promote low-carbon consumption throughout society;
- To encourage public institutes to take the lead to: advocate low-carbon government buildings, campuses, hospitals, stadiums and military camps, advocate moderate consumption, encourage the use of low-carbon products and curb extravagance and waste; and
- To **improve waste separation and recycling system.**

#### **H. Enhancing Overall Climate Resilience**

- To improve safe operation of infrastructure of water conservancy, transport and energy against climate change;
- To properly develop and optimize the allocation of water resources, implementing the strictest water management regulation, building water-saving society in all aspects and intensifying the development and utilization of unconventional water resources, including recycled water, desalinated sea water and rain and flood water;
- To improve the construction of water conservation facilities for farmlands, to vigorously develop water-saving agricultural irrigation and to cultivate heat-resistant and drought-resistant crops;
- To enhance resistance to marine disasters and management of coastal zones and to improve the resilience of coastal areas against climatic disasters;
- To track, monitor and assess the impact of climate change on biodiversity;
- To strengthen the construction of forestry infrastructure;

- To properly lay out functional zones in cities, to make overall arrangements in developing infrastructure and to effectively safeguard city lifeline system;
- To formulate contingency plan for public health under the impacts of climate change and to improve the capacity of public medical services to adapt to climate change;
- To strengthen comprehensive assessment and risk management of climate change and to improve the national monitoring, early warning and communication system on climate change;
- To take full consideration of climate change in the planning, engineering and construction of the distribution of productive forces, infrastructures and major projects;
- To improve the emergency response mechanism for extreme weather and climatic events; and
- To strengthen the development of disaster reduction and relief management system.

#### **I. Innovating Low-Carbon Development Growth Pattern**

- To advance low-carbon pilots in provinces and cities;
- To conduct low-carbon cities (towns) pilots as well as low-carbon industrial parks, low-carbon communities, low-carbon business and low-carbon transport pilots;
- To explore diversified patterns of low-carbon growth;
- To research on effective approaches to control carbon emissions in different regions and cities;
- To facilitate the emerging of low-carbon cities with rational space distribution, intensive utilization of resources, low-carbon and efficient production and livable green environment; and

- To research on and establish carbon emission accreditation and low-carbon honor system, to carry out low-carbon certification pilots and promotion of selected products.

#### **J. Enhancing Support in terms of Science and Technology**

- To improve the fundamental research into climate change, conducting research on climate change monitoring and forecasting and strengthening research on the mechanisms and assessment methodology of climate change impacts and risks;
- To strengthen research and development (R&D) and commercialization demonstration for low-carbon technologies, such as energy conservation, renewable energy, advanced nuclear power technologies and carbon capture, utilization and storage and to promote the technologies of utilizing carbon dioxide to enhance oil recovery and coal-bed methane recovery;
- To conduct R&D on early warning systems for extreme weather;
- To develop technologies on biological nitrogen fixation, green pest and disease prevention and control and protected agriculture;
- To strengthen R&D on technologies for water saving and desalination of sea water; and
- To improve the technical supporting system for addressing climate change, to establish a mechanism that effectively integrates government, industries and academic and research institutes and to strengthen professional personnel training for addressing climate change.

#### **K. Increasing Financial and Policy Support**

- To further increase budgetary support;
- To actively innovate the application of funds and explore new investment and financing mechanisms for low-carbon development, such as public-private partnerships;

- To implement preferential taxation policies for promoting the development of new energy and to improve mechanisms of pricing, grid access and procurement mechanisms for solar, wind and hydro power;
- To improve green government procurement policy systems including that on procurement of low-carbon and energy-conservation products;
- To advance the reform in the pricing and taxation regime for energy-and-resource-based products;
- To improve the green credit mechanisms, to encourage and guide financial institutions to operate energy-efficiency crediting business and to issue asset-securitized products for green credit assets; and
- To improve disaster insurance policy against climate change.

#### **L. Promoting Carbon Emission Trading Market**

- To build on carbon emission trading pilots, steadily implementing a nationwide carbon emission trading system and gradually establishing the carbon emission trading mechanism so as to make the market play the decisive role in resource allocation; and
- To develop mechanisms for the reporting, verifying and certificating of carbon emissions and to improve rules and regulations for carbon emission trading to ensure openness, fairness and justice in the operation of the carbon emission trading market.

#### **M. Improving Statistical and Accounting System for GHG Emissions**

- To further strengthen the work on statistics of climate change;
- To improve greenhouse gas emission statistics covering areas including energy activity, industrial process, agriculture, land-use change, forestry and waste treatment;
- To improve the statistical indicator systems for climate change, to strengthen personnel training and to constantly improve the quality of data;

- To strengthen the work on greenhouse gas emission inventory accounting;
- To prepare greenhouse gas inventories at the national and provincial level on a regular basis;
- To establish a greenhouse gas emission reporting mechanism for key enterprises;
- To formulate greenhouse gas emission accounting standards for enterprises in key sectors; and
- To build a fundamental statistics and accounting system for greenhouse gas emissions at national, subnational and enterprise levels.

#### **N. Broad Participation of Stakeholders**

- To enhance the responsibility of enterprises for low-carbon development and to encourage them to explore low-carbon development modes that are resource-saving and environment-friendly;
- To strengthen the role of public supervision and participation in low-carbon development;
- To use platforms such as National Low Carbon Day to raise public awareness of low-carbon development throughout society;
- To encourage voluntary actions of the public to combat climate change;
- To let media play the role of supervision and guidance; and
- To enhance related education and training and to fully utilize the function of schools, communities and civil organizations.

#### **O. Promoting **International Cooperation** on Climate Change**



As a responsible developing country, China will stand for the common interests of all humanity and actively engage in international cooperation to build an equitable global climate governance regime that is cooperative and beneficial to all. Together with other Parties, China will promote global green low-carbon transformation and development path innovation. China will adhere to the

principles of equity and common but differentiated responsibilities and respective capabilities and urge developed countries to fulfill their obligations under the Convention to take the lead in substantially reducing their emissions and to provide support of finance, technology and capacity building to developing countries, allowing developing countries more equitable access to sustainable development and more support of finance, technology and capacity building and promoting cooperation between developed and developing countries. China will take on international commitments that match its national circumstances, current development stage and actual capabilities by enhancing mitigation and adaptation actions and further strengthening south-south cooperation on climate change. It will establish the Fund for South-South Cooperation on Climate Change, providing assistance and support, within its means, to other developing countries including the small island developing countries, the least developed countries and African countries to address climate change. China will thereby promote mutual learning, mutual support and mutual benefits as well as win-win cooperation with other developing countries. China will engage in extensive international dialogue and exchanges on addressing climate change, enhance policy coordination and concrete cooperation in related areas, share positive experiences and good practice, promote climate friendly technologies and work together with all Parties to build a beautiful homeland for all human beings.

### III. CONTRIBUTIONS TO 2015 AGREEMENT NEGOTIATION



China is committed to the full, effective and sustained implementation of the Convention and to working with other Parties to achieve a comprehensive, balanced and ambitious agreement at the Paris Conference. In this connection, China submits its views regarding the process and outcome of the 2015 agreement negotiation as follows:



## **A. General View**

The negotiation on the 2015 agreement shall be under the Convention and guided by its principles, aiming at enhancing the full, effective and sustained implementation of the Convention in order to achieve the objective of the Convention. The outcomes of negotiation shall be in accordance with the principles of equity and common but differentiated responsibilities and respective capabilities, taking into account differentiated historical responsibilities and distinct national circumstances, development stages and the capabilities of developed and developing countries. It should reflect all elements in a comprehensive and balanced way, including mitigation, adaptation, finance, technology development and transfer, capacity building and transparency of action and support. The negotiation process should be open, transparent, inclusive, Party-driven and consensus-based.

## **B. Mitigation**

The 2015 agreement shall stipulate that the Parties, in accordance with the provisions of the Convention, shall formulate and implement programs and measures to reduce or limit greenhouse gas emissions for the period 2020-2030 and promote international cooperation on mitigation. Developed countries shall, in accordance with their historical responsibilities, undertake ambitious economy-wide absolute quantified emissions reduction targets by 2030. Developing countries shall, in the context of sustainable development and supported and enabled by the provision of finance, technology and capacity building by developed countries, undertake diversifying enhanced mitigation actions.

## **C. Adaptation**

The 2015 agreement shall stipulate that the Parties shall, in accordance with the provisions of the Convention, strengthen international cooperation on adaptation

as well as the implementation of adaptation plans and projects at both regional and national levels. Developed countries shall provide support for developing countries to formulate and implement national adaptation plans as well as other related projects. Developing countries will identify their adaptation needs and challenges in their national adaptation plans and take enhanced actions. A subsidiary body on adaptation to climate change should be established. The linkage between adaptation and finance, technology and capacity building shall be strengthened. The Warsaw International Mechanism on Loss and Damage shall also be strengthened.

#### **D. Finance**

The 2015 agreement shall stipulate that developed countries shall, in accordance with the provisions of the Convention, provide new, additional, adequate, predictable and sustained financial support to developing countries for their enhanced actions. It shall provide for quantified financing targets and a roadmap to achieve them. The scale of financing should increase yearly starting from 100 billion U.S. dollars per year from 2020 which shall primarily come from public finance. The role of the Green Climate Fund (GCF) as an important operating entity of the financial mechanism of the Convention shall be strengthened. The GCF shall be under the authority of, guided by and accountable to the Conference of the Parties to the Convention.

#### **E. Technology Development and Transfer**

The 2015 agreement shall stipulate that developed countries shall, in accordance with the provisions of the Convention, transfer technologies and provide support for the research, development and application of technologies to developing countries based on their technology needs. The function of the existing technology mechanism shall be strengthened to help address the intellectual property right issue and assess technology transfer performance, and its linkage with the

financial mechanism shall be enhanced, including creating a window for technology development and transfer in the GCF.

## **F. Capacity Building**

The 2015 agreement shall stipulate that developed countries shall, in accordance with the provisions of the Convention, provide support to developing countries in capacity building in all areas. An international mechanism on capacity building shall be established to develop and implement action plans for capacity building and to enhance capacity building for climate change mitigation and adaptation in developing countries.

## **G. Transparency of Action and Support**

The 2015 agreement shall stipulate that the Parties shall, in accordance with the provisions of the Convention and relevant COP decisions, improve the transparency of enhanced actions of all Parties. Developed countries shall, in accordance with the provisions of the Convention as well as relevant provisions of the Kyoto Protocol, enhance the transparency of their actions through existing reporting and review systems. Rules on enhancing the transparency of finance, technology and capacity-building support by developed countries as well as the relevant review shall further be elaborated. Developing countries shall, with support by developed countries in terms of finance, technology and capacity building, enhance the transparency of their enhanced actions through existing arrangements on transparency and in a way that is non-intrusive, non-punitive and respecting national sovereignty.

## **H. Legal Form**

The 2015 agreement shall be a legally binding agreement implementing the Convention. It can take the form of a core agreement plus COP decisions, with mitigation, adaptation, finance, technology development and transfer, capacity

building and transparency of action and support being reflected in a balanced manner in the core agreement and relevant technical details and procedural rules being elaborated in COP decisions. The nationally determined contributions by developed and developing countries can be listed respectively and separately in the Paris outcome.