

2030 挑战——
2030 Challenge --

全球低碳城市和建筑发展（中国）倡议

CHINA ACCORD

Global Cities, Architecture, Low-Carbon Development

概述

INTRODUCTION

城镇化建设是 21 世纪全球发展的一大趋势。今天，全球一半以上的人口生活在城市，城市和城市地区的温室气体排放量占到全球的 70% 以上；到 2050 年，超过三分之二的世界人口将居住在城市。

Urbanization is a major trend in the 21st century with cities and urban areas worldwide accounting for over seventy percent (70%) of global greenhouse gas emissions. Today, over half of the world's population lives in cities, by 2050, over two-thirds of the world's population will be urban.

中国目前的城镇化建设正引领这一全球性的浪潮。其城市人口预计至 2030 年将增加 3 亿，从而达到创纪录的 10 亿。人口超过 100 万的城市将有 221 个，相比全欧洲只有 35 个。为了适应这种新型城镇化建设的趋势，中国预计每年将新增住宅和商业等公共建筑约 20 亿平方米，占全球同期新增建筑量的 38%。

China is leading this global trend with its urban population projected to increase by 300 million reaching one billion in 2030. To accommodate this new urbanization, China is expected to add about 2 billion square meters (21.5 billion square feet) of residential, commercial, and institutional buildings each year accounting for 38% of worldwide building construction during this period.

要将如此庞大的人口融入城市，中国面临着前所未有的机遇和挑战。要求我们去创建一套健康、灵活、强健和综合性强的区域性城市基础设施和建筑，为可持续的经济和城市发展树立典范。

As it accommodates this massive influx of new urban residents, China has an unprecedented opportunity to create healthy, resilient, and integrated regional infrastructure, cities, towns, and buildings that are models of economic and urban sustainability.

最近发布的政府间气候变化专门委员会第五次评估报告指出，如果全球平均升温要维持在国际社会预期的 2°C 之内，全球温室气体的排放必须在本世纪下半叶中之前达到顶峰继而下降到零。中国未来 20 年城市发展的规模之大，使其处于一个很独特而重要的地位，且应同国际社会一道为达到这个目标而努力。

The recently released Intergovernmental Panel on Climate Change (IPCC) *Fifth Assessment Report* concludes that in order to keep the global average temperature increase below the 2°C threshold established by the international community, global greenhouse gas emissions must peak and then reach zero by the middle of the second half of the century. The magnitude of its urban development over the next two decades puts China in a unique position to lead the international community in meeting this target.

作为 2015 年联合国气候变化框架公约承诺的一部分，中国政府已同意至迟在 2030 年达到二氧化碳排放值的顶峰；增加非化石能源的份额以达到其能源生产总量的 20%。在中国经济持续增长和城镇化建设推进的同时实现二氧化碳排放增长速度减缓、达到峰值后急速下降是一个巨大的挑战，尤其是那些长期依赖于能源消耗、二氧化碳排放体量巨大的城市基础设施和建筑不动产。

As part of its UNFCCC pledge this year, China has agreed to peak its CO₂ emissions by 2030 or sooner, and increase the share of non-fossil generated energy to 20% of its total energy production. Slowing the rate of emissions growth, and achieving a rapid decline after the emissions peak will present a significant challenge as China continues to grow and urbanize, especially since buildings and infrastructure are extremely long-lived assets that create long-term energy consumption and emissions dependencies.

中国政府的城镇化建设策略致力于开创城市发展的新格局，主张把低碳发展理念融入城市规划、建筑设计、建筑施工和建筑物业管理的全过程。中国正致力于寻求提高其建筑的品质、延长建筑物的寿命、加速其既有建筑的节能改造、建设节能和低碳的基础设施以及促进建筑工程垃圾的再利用。

As part of its urbanization strategy, China has committed to embark on a new pattern of urban growth that integrates concepts of low-carbon development into the entire process of urban planning, building design, construction, and building management. China will look to increase the quality of its building construction, extend buildings' life spans, intensify the energy conservation transformation of its existing building stock, build energy-saving and low-carbon infrastructures, and promote the reutilization of construction wastes.

换句话说，中国正面临一个独特的机遇去推行和实践低碳和可持续的城镇规划、建筑开发和设计、非化石燃料能源的利用和环境保护等一系列的政策，以达到二氧化碳排放量急剧下降这个目标。鉴于中国快速的城镇化进程，有关城市规划和建筑设计的决策将长期影响未来二十年的能源消耗和碳排放形式；这些决策是确保中国实现其减排承诺的关键因素，同时使城市变得更可持续、更宜居、更美观和更高效。

In other words, China has a unique opportunity to implement low-carbon and sustainable planning, building design and development, non-fossil fuel generated energy, and environmental protection policies that lead to a steep decline in CO₂ emissions. Given the extraordinary urbanization underway in China, urban planning and architectural design decisions made over the next two decades will have long-lasting implications; they can ensure that China meets its emissions commitments, and its cities are habitable, sustainable, engaging, and efficient.

作为在中国从事建筑设计的专业人士，我们认识到支持中国和世界各国城市发展是我们义不容辞的社会责任，也是一个千载难逢的机会，面对这些前所未有的矛盾、机遇和挑战，中勘协建筑设计分会主要成员中的规划/建筑设计公司与建筑2030组织以及在中国有业务的主要国际建筑/工程/规划设计公司共同提出倡议，以推进可持续、低碳/碳中和的城市规划和建筑设计，加强保护自然资源、环境和野生动物栖息地；提供清洁的空气和水资源；利用就地可再生能源；促进建设更智能化、更宜居的城市社区。

As building sector professionals working in China, we understand the responsibility and rare opportunity we have to support urban development in China and throughout the world. In response to these unprecedented events, opportunities, and commitments, the key member firms of the China Exploration and Design Association - Architecture Branch (CEDAAB), Architecture 2030 and international Architecture/Engineering/Planning (A/E/P) firms working in China are establishing a new initiative – the “China Accord” – to advance the planning and design of sustainable, low carbon/carbon-neutral built environments that protect and enhance natural resources and wildlife habitats, provide clean air and water, generate on-site renewable energy and promote smarter, more livable communities.

作为第一步，我们于2015年10月22日在中国沈阳召开了一个圆桌会议，大家一致同意并向中国的同行提出《2030挑战-全球低碳城市和建筑发展（中国）倡议》，承诺努力践行下列目标：

As a first step, we convene a Roundtable on 22nd October 2015 in Shenyang, China, to endorse the China Accord, initiate the Accord to our industry counterparts, and commit to working hard towards the following goals:

- 城市规划、市政建设开发、新建建筑以及大型既有建筑改造工程应努力采取碳中和的规划和设计理念：即在同一年内所使用的能源不超过其生产或输入的可再生能源。
- **Cities, towns, urban developments, new buildings, and major renovations shall be planned and designed to be carbon neutral, meaning they use no more energy over the course of a year than they produce, or import, from renewable energy sources.**
- 当达到碳中和不可行或不现实时，城市规划、市政建设开发、新建建筑和大型既有建筑改造工程应采取高能效的设计，并具备未来自身生产或接驳输入可再生能源以满足其所有能源需求的潜力。
- **When reaching carbon neutral is not feasible or practical, cities, towns, urban developments, new buildings, and major renovations shall be designed to be highly efficient with the capability to produce, or import, all their energy from renewable energy sources in the future.**

同时，为推进《（中国）倡议》的落实，各方承诺加强合作：加快现有的、先进的设计和规划工具本地化的建设，推进减排和节能的目标设定和建立中国2030系列培训课程的框架。

To promote the implementation of the China Accord, we further commit to strengthen our collaboration in: accelerating the localization of existing, advanced design and planning tools, advancing the setting of emissions reductions and energy saving goals, and establishing the framework for the 2030 China professional training program.

（以下无正文）

倡议单位(排名不分先后)

Signatories of the China Accord (in no particular order):

中国勘察设计协会建筑设计分会
China Exploration and Design Association - Architecture
Branch

建筑 2030
Architecture 2030

中国建筑设计研究院
China Architecture Design & Research Group

上海现代建筑设计（集团）有限公司（章）
Shanghai Xian Dai Architectural Design (Group) Co., Ltd

中国建筑西南设计研究院有限公司（章）
China Southwest Architectural Design and Research
Institute Corp. Ltd

北京市建筑设计研究院有限公司（章）
Beijing Institute of Architectural Design (Group) Co., Ltd.

中国建筑西北设计研究院有限公司（章）
China Northwest Architecture Design and Research
Institute Co. Ltd

中国建筑东北设计研究院有限公司（章）
China Northeast Architectural Design & Research
Institute Co., Ltd

清华大学建筑设计研究院有限公司（章）
Architectural Design and Research Institute of Tsinghua
University Co. Ltd

同济大学建筑设计研究院（集团）有限公司（章）
Tongji Architectural Design (Group) Co., Ltd

中南建筑设计院股份有限公司（章）
Central-South Architectural Design Institute Co., Ltd

天津市建筑设计院（章）
Tianjin Architecture Design Institute

大连市建筑设计研究院有限公司（章）
Dalian Architectural Design & Research Co., Ltd.

广东省建筑设计研究院（章）
Architectural Design and Research Institute of
Guangdong Province

深圳市建筑设计研究总院有限公司（章）
Shenzhen General Institute of Architectural Design and
Research Co., Ltd

哈尔滨工业大学建筑设计研究院（章）
The Architectural Design and Research Institute of HIT

中元国际工程设计研究院（章）
China IPPR International Engineering Co., Ltd

山东省建筑设计研究院（章）
Shandong Provincial Architectural Design Institute

江苏省建筑设计研究院有限公司（章）
Jiangsu Provincial Architectural D&R Institute Ltd.

四川省建筑设计研究院（章）
Sichuan Provincial Architectural Design and Research
Institute

浙江省建筑设计研究院（章）
Zhejiang Prov. Institute of Architectural Design and
Research

江西省建筑设计研究总院（章）
Jiangxi Province Architectural Design & Research
General Institute

山东同圆设计集团有限公司（章）
Shandong Tong Yuan Design Group Co. Ltd

黑龙江省建筑设计研究院（章）
Heilongjiang Institute of Architectural Design

新疆维吾尔自治区建筑设计研究院（章）
Xinjiang Uygur Autonomous Region Architectural Design
& Research Institute

安徽省建筑设计研究院有限责任公司（章）
Anhui Provincial Architectural Design and Research
Institute Co., Ltd

福建省建筑设计研究院（章）
Fujian Provincial Institute of Architectural Design and
Research

广西华蓝设计（集团）有限公司（章）
Guangxi Hualan Design and Consulting Group

吉林省建苑设计集团有限公司（章）
Jilin Provincial Architecture Design Institute Co., Ltd

深圳市建筑科学研究院股份有限公司（章）
Shenzhen Institute of Building Research Co. Ltd

International firms:

ARUP

CallisonRTKL

Skidmore, Owings & Merrill

Perkins Eastman

Cunningham Group Architecture, Inc.

DLR Group

FENTRESS

Perkins + Will

Gensler

GLUMAC

HDR, Inc.

HKS Architects

KMD

NBBJ

Leo A Daly

Moore Ruble Yudell

Mott MacDonald

Lake|Flato

CBT Architects

FKP Architects

Calthorpe Associates

tvdesign

Cannon Design

VOA