



中国建筑节能概况及其发展

Progress and Development on BEE in China

中国建筑节能协会

China Association of Building Energy Efficiency

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1. 协会简介

Introduction of CABEE

中国民政部注册，中国住建部主管，国家一级协会，现有
23个专业委员会、9个联盟、5个工程中心。

CABEE, registered by **China Ministry of Civil Affairs**, Charged by **China Ministry of Housing and Urban-Rural Development**, National **First-Class Association** , with **23** Professional Committees, **9** Alliances, and **5** Engineering Centres.



2. 中国建筑节能发展历史

Periodic Development on China BEE

建筑节能定义 Conception of BEE

建筑节能：指在居住建筑和公共建筑的规划、设计、建造和使用过程中，通过执行现行建筑节能标准，提高建筑围护结构热工性能，采用节能型用能系统和可再生能源利用系统，切实降低建筑能源消耗的活动。

During the process of planning, design, construction and usage of residential buildings and public buildings, by the implementation of building energy efficiency standards, improve the thermal performance of the building envelope, with energy efficiency systems and renewable energy utilization system, effectively reducing energy consumption in construction activities

中国建筑节能发展历程 Development Period of BEE

1986	正式启动，推行节能30% Launch, Energy Saving 30%
1995	推行节能50% Energy Saving 50%
2005	推行节能65% Energy Saving 65%
2011	推行节能75% Energy Saving 75%

建筑节能含义的三个阶段 Periods on BEE





3 . 中国建筑节能现状

Progress Status on China BEE

中国建筑节能总体概况 Brief Introduction on BEE in China

截至2016年底

(1) 全国城镇新建建筑全面执行节能强制性标准，累计建成节能建筑面积超过**150亿**平方米，节能建筑占比**47.2%**，其中2016年城镇新增节能建筑面积**16.9亿**平方米；

(2) 全国城镇累计建设绿色建筑面积**12.5亿**平方米，其中2016年城镇新增绿色建筑面积**5亿**平方米，占城镇新建民用建筑比例超过**29%**；

(3) 全国城镇累计完成既有居住建筑节能改造面积超过**13亿**平方米，其中2016年完成改造面积**8789万**平方米；

(4) 全国城镇太阳能建筑应用集热面积**4.76亿**平方米，浅层地热能应用建筑**4.78亿**平方米，太阳能光电装机容量**29420兆瓦**。

(5) 全国各省2016年完成公共建筑能源审计**2718**栋，能耗公示**6810**栋，对**2373**栋建筑的能耗情况进行监测，实施公共建筑节能改造面积**2760万**平方米。

By the end of 2016

- All new buildings in urban areas should reach the mandatory standards on BEE, the total accumulated buildings reach 15 billion m2, the proportion of Energy Efficient buildings raise to 47.2% in all new buildings scale, the incremental new energy efficient building in 2016 are request to at least 1.69 billion m2.
- The total accumulated green building in urban areas reach 1.25 billion m2. Among these, 0.5 billion of new green buildings built in 2016, which is more than 29% of total new buildings in urban areas.
- The total accumulated energy efficiency retrofitting on residential building is more than 1.3 billion m2 in urban areas, including 87.89 million m2 were completed in 2016.
- The total heat collecting area of solar application in urban areas reached 476 million m2, application of geothermal energy in building sector reached 478 million m2, the total Solar PV capacity reached 29420 MW.
- In 2016, the building amount of energy auditing is 2718, that of energy publicity is 6810, that of energy monitoring is 2373, and that of energy retrofitting is 27.6 million m2.

外墙外保温标准制定情况 Standards on External Wall Insulation

国标/National Standards : 38

行标/Building Industrial Standards : 82

其中/include : 1.产品行标/Products Standards : 54
2.工程行标/Construction Standards : 28

团标/Association Standards : 16

在编/Standards in preparation : 13 (两本已发布 , 未实施)

共计/Total : 149

其中/include :

外墙外保温标准/Standards on External Insulation : 53 ;

内保温标准/Standards on Internal Insulation : 4 ;

夹心保温、自保温等标准/Standards on Sandwich insulation & self insulation : 18

4. 中国建筑节能发展展望

Prospects on China BEE

总体目标 General Objectives

Main Objectives

主要目标

可再生能源建筑应用规模逐步扩大
Enlarge the application on renewable energy in buildings sector

农村建筑节能实现新突破
Make a breakthrough on energy efficiency in rural buildings

建筑节能标准加快提升
Speed the improvement on BEE standards

绿色建筑标准加快提升
Speed the improvement on Green building standards

既有建筑节能改造有序推进
Promote energy efficiency retrofitting for exist buildings

具体目标

- (1) 到2020年，城镇新建建筑能效水平比2015年提升**20%**，部分地区及建筑门窗等关键部位建筑节能标准达到或接近国际现阶段先进水平。
- (2) 城镇新建建筑中绿色建筑面积比重超过**50%**，绿色建材应用比重超过**40%**。
- (3) 完成既有居住建筑节能改造面积**5亿**平方米以上，公共建筑节能改造**1亿**平方米，全国城镇既有居住建筑中节能建筑所占比例超过**60%**。
- (4) 城镇可再生能源替代民用建筑常规能源消耗比重超过**6%**。经济发达地区及重点发展区域农村建筑节能取得突破，采用节能措施比例超过**10%**。

Detail objectives

Energy efficiency level for new buildings in urban area should increase 20% by 2020, and some of standards should reach or near international level, such as some local area or key-products in buildings. The proportion of Green Buildings should reach 50% of total new buildings in urban area, and that built by Green Building Materials should be 40% of total new buildings. Completed retrofitting on residential buildings for 500 million m2, and on commercial buildings for 100 million m2, and the energy efficient buildings should reach 60% of all exist residential building in urban areas. Renewable energy proportion in urban area should reach 6% of total regular energy consumption in civil building, rapid progress on rural areas' BEE in developed areas and have 10% of measures were used in these buildings.



4. 中国建筑节能发展展望

Prospects on China BEE

建筑总体能耗强度**持续下降**

Average energy intensity of buildings *Declines Constantly*

建筑能源消费结构**逐步改善**

Structure of building energy consumption *Improves Gradually*

建筑领域绿色发展水平**明显提高**

Level of green development in building sector *Promotes Significantly*



谢谢！
Thank you!