上海建筑节能工作简介

A brief introduction of Shanghai building energy conservation solutions

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Government guiding, multiple partnership and promoting building energy conservation service industry

1

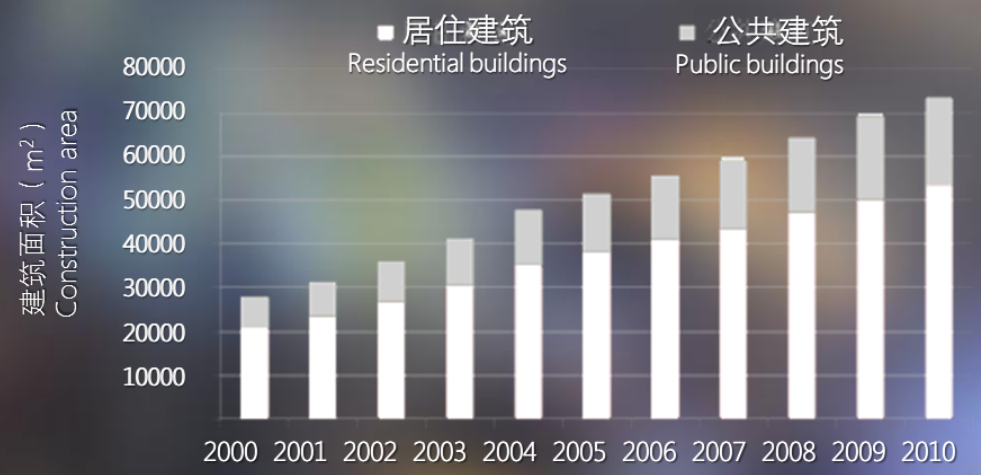
上海建筑能耗现状与发展趋势

The present status and develop trend of Shanghai building energy consumption

- 上海城市建筑规模与能耗现状
  The building scale and energy consumption status in Shanghai
- 上海城市建筑能耗发展趋势
  The building energy consumption development trend in Shanghai
- 上海城市建筑能耗的增长因素与控制目标
  The building energy consumption growth and controlling target in Shanghai

上海建筑能耗现状与发展趋势

The present status and develop trend of Shanghai building energy consumption



10.7%

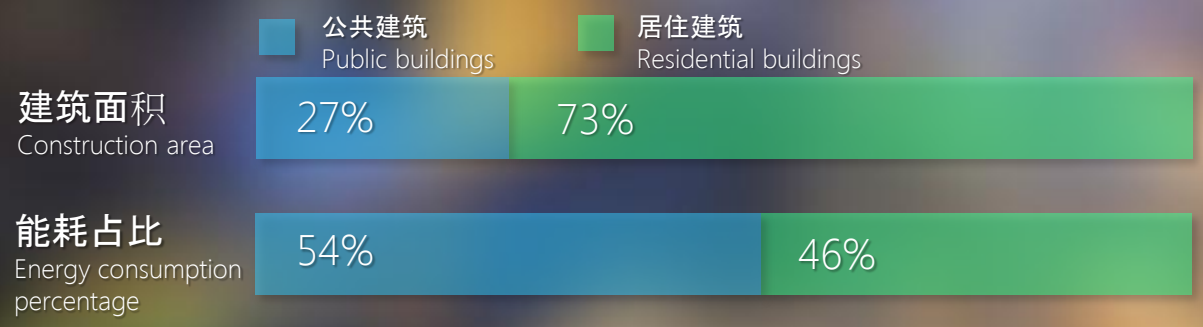
建筑年均增长率

average annual growth rate

- 规模快速扩大
  Rapid growth
- 2010**年民用建筑**总面积达到7.3亿平方米
  Gross area: 730 million m² (by the end of 2010)

预测建筑能耗

Prediction of building energy consumption



5000
万吨标煤
50 million *tce*

按照目前的发展方式，预测2030**年末，上海全市能耗将翻一番，达到**5000**万吨**标煤

According to the present development mode, the gross building energy consumption will be 50 million *tce*, which is two times of the present quantity

上海城市建筑能耗的增长因素与控制目标

The building energy consumption growth and controlling target in Shanghai

上海市建筑能耗需求刚性增长的主要因素

Key Factors: the rigid demand growth of building energy demand in Shanghai

上海市政府发布了《**上海市**节能减排和应对气候变化**重点工作安排**》，**将全市建筑**总量与增量控制目标分**解到全市**17**个区**县

The government decomposed the building energy consumption growth and total amount controlling target to the 17 districts relatively

- **重点在于将技**术措施控制调整为用能总量**控制**

  The future building energy conservation work will turn the focus from technical controlling to the total amount controlling

- **十二五期**间，上海地区民用建筑能耗增量应控制在800**万吨**标煤以内

  The building energy consumption growth is set as no more than 8 million tce in the "12th Five-year Plan" of Shanghai

2

上海建筑节能工作开展情况介绍

The building-energy-conservation efforts of Shanghai

- 总述：上海市建筑节能工作
  Introduction: The building-energy-conservation efforts of Shanghai
- 政策、法规、标准
  Policies, Rules and regulations, Standards
- 上海建筑能耗监管体系
  The building energy consumption monitoring system in Shanghai
- 上海建筑节能的具体措施
  Detailed introduction of the building energy conservation solutions

总述：上海市建筑节能工作

Introduction: The building-energy-conservation efforts of Shanghai

地方法规
Local laws

政策与规定
Regulations and policies

标准与导则
Standards and guidelines

政策
policies

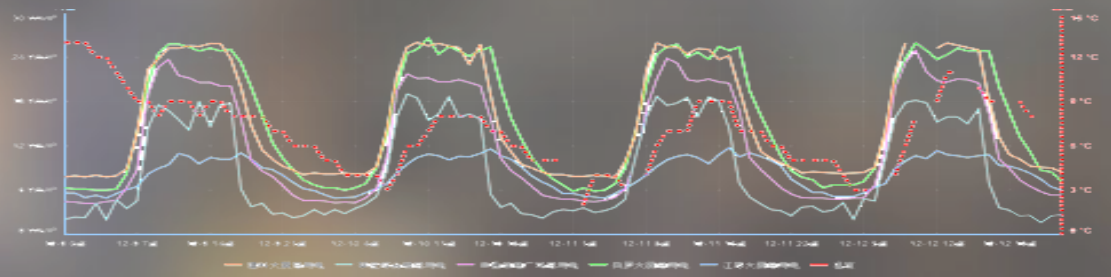
政策制定，制度建设，长效推动建筑节能开展

Government policies to ensure the long-term-effective building energy conservation

监管
Monitoring

扩容开发市区联网，进一步完善能耗监管体系建设

Extending the building energy consumption monitoring network, furthering the citywide-scale monitoring system



措施
Solutions

绿色建筑
Green buildings

既有建筑节能改造
Energy-saving renovation of existing building

可再生能源
Renewable energy

低碳城区
Low-carbon city

创新绿色建筑发展模式、**启**动公共建筑节能**改造**、扩大可再**生能源**应用范围，研究低碳城区建设

Developing green buildings, conducting energy-saving renovation of existing building, enlarging the field of renewable energy application, researching the construction of low-carbon city

政策、法规、标准
Policies, Rules and regulations, Standards

政策与规定
Regulations and policies

上海市政府发布文件，**分**别明确了**“十二五”期**间上海全市用能总量控制目标值、各区县用能总量控制和下降目标分**解任**务以及**“十二五”期**间全市建筑节能降耗目标。
Shanghai government regulated the target of the total amount of energy consumption growth in the 12th five-year plan and decomposed to 17 districts and main energy consuming industries.

2013年主要政策激励：

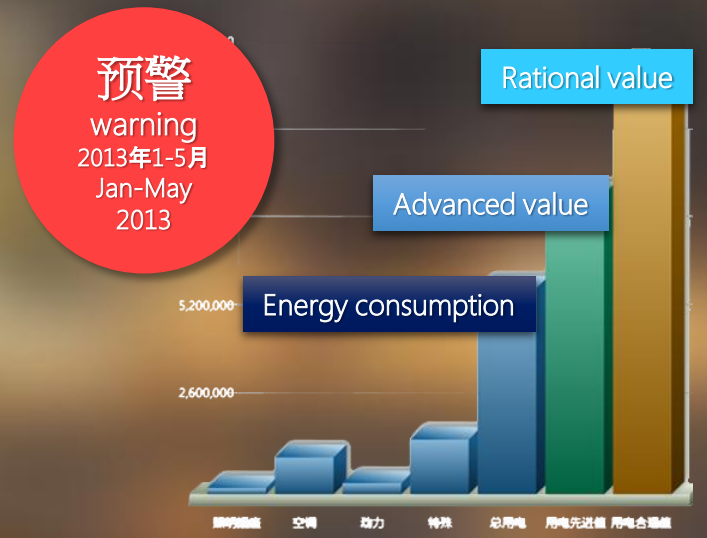
- 《**上海市建筑**节能项目专项扶持办法》(**沪**发改环资〔2012]088**号**)
- 《**关于**组织申报上海市公共建筑节能改造重点城市示范项目的通知》(**沪建交**联〔2013]311**号**)
- 《**关于开展**2013**年度第一批本市大型公共建筑用能分**项计量装置安装项目市级资金扶持申报工作的通知》(**沪建市管**[2013]101**号**)

- Main policies and regulations announced in 2013 by Shanghai Municipal government and relative departments
- Promotion in the field of Green buildings, Energy-saving renovation of existing building and the installation of energy consumption monitoring equipment

标准与导则
Standards and guidelines

建筑能耗对标管理：上海市建筑合理用能指南
The benchmark management of building energy consumption:
Rational Use of Building Energy Guide

DB31/T550-2011《**市**级机关办公建筑合理用能指南》(Municipal agency office buildings)
DB31/T551-2011《**星**级饭店建筑合理用能指南》(Star-rated hotels)
DB31/T552-2011《**大型商**业建筑合理用能指南》(Large-scale commercial buildings)
DB31/T553-2012《**高校建筑合理用能指南**》(College buildings)
DB31/T554-2012《**市**级医疗机构建筑**合理用能指南**》(Medical buildings)
DB31/T555-2013《综合办公建筑**合理用能指南**》(Comprehensive office buildings)



上海建筑能耗监管体系
The building energy consumption monitoring system in Shanghai

上海市建筑能耗监管体系
The building energy consumption monitoring system

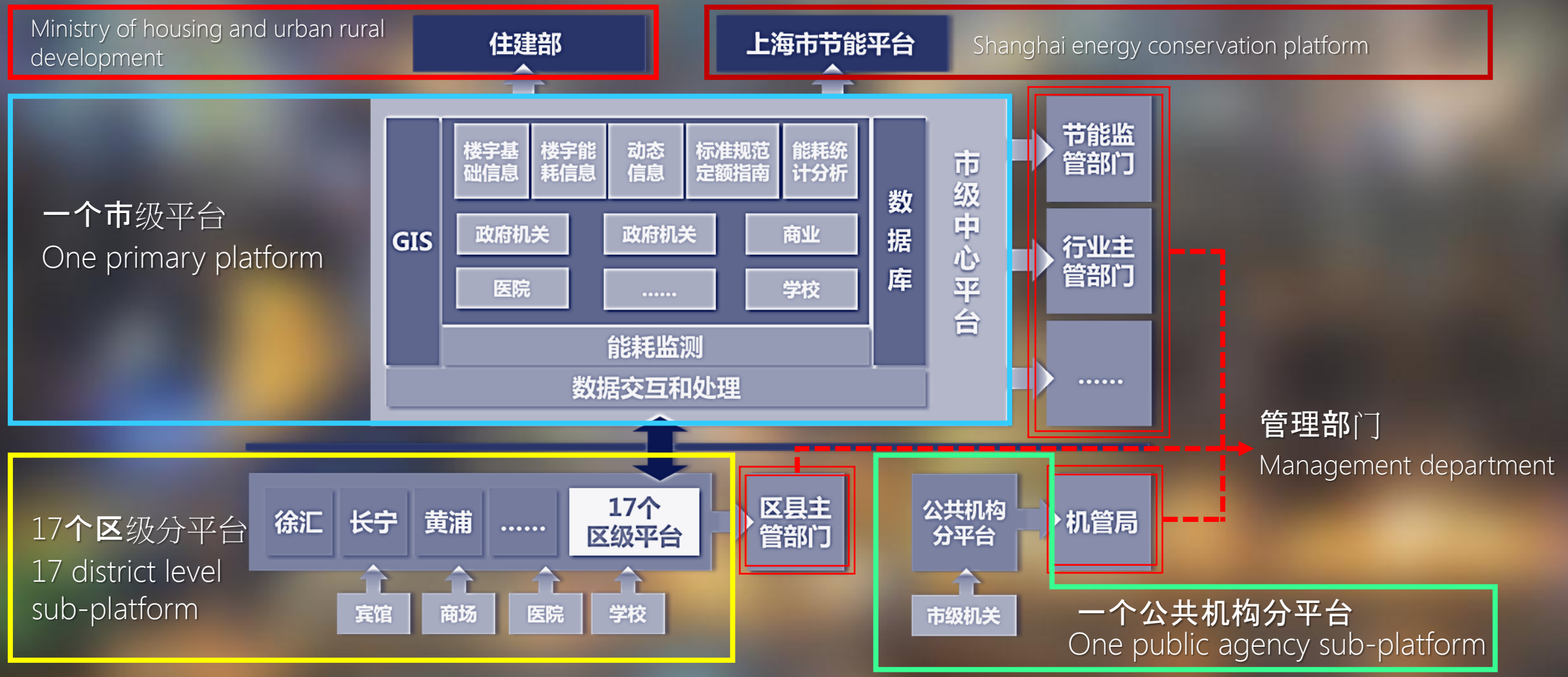
- 以建筑物实际用能为基础，开展建筑用能分项计量与实时监测
  Conducting the building energy real-time monitoring
- 以建筑分项计量为核心，通过建筑开展全面建筑能耗统计与典型建筑能源审计
  Comprehensive building energy consumption statistics and energy auditing of typical energy consuming building
- 展开建筑能效公示，并在建筑实际用能数据基础上制定合理的能耗定额
  Annually energy efficiency publishing and set reasonable energy consumption quota
- 制定以能耗定额为依据的超定额加价，通过价格机制推动建筑节能服务产业发展
  Promoting energy conservation industry by the super-fixed fare, especially in the field of green building, renewable energy application and the energy conservation renovation

上海建筑能耗监管体系

The building energy consumption monitoring system in Shanghai

"1+17+1"架构

"1+17+1" framework of the platform



上海建筑能耗监管体系

The building energy consumption monitoring system in Shanghai

上海市国家机关办公建筑和大型公共建筑能耗监测信息平台

Shanghai building energy consumption monitoring platform of government buildings and large scale public buildings

7

信息调查，数据收集工作已经持续开展7年

Basic investigation and data collection work has been continuously kept for 7 years

1500

上海全市1500余幢大型公共建筑能耗统计全覆盖

The energy consumption database covers more than 1500 large-scale public buildings all over the city

700

700余幢典型建筑能源审计，涵盖楼宇信息与能耗数据

Energy audit reports of 700 typical buildings including building equipment information and energy consumption data

900

900余幢全市各区县建筑能耗实时监测数据，2015年前全面覆盖

Connecting around 900 building energy real-time data, cover all 1500 buildings by the end of 2015

上海建筑节能的具体措施

Detailed introduction of the building energy conservation solutions

2013年
总体情况
2013
Annual status

70%

我市获得绿色建筑标识建筑30**个**， 总建筑面积253.53**万平方米**
高星级绿色建筑所占比例超过70%
30 buildings awarded green building label, total area 2.53 million m^2
70% high level green building

20%

完成既有公共建筑节能改造309.41**万平方米**
超过100**万平方米的既有公建**节能改造单位面积降耗达到20%**以上**
3.09 million m^2 area accomplished energy-saving renovation of existing building
1 million m2 area achieved 20% energy conservation rate

4.5
Million m^2

实现可再生能源建筑应用456.94**万平方米**
Renewable energy applied in 4.5 million m^2 area

189
能源审计
Energy audit

21
能耗公示
Energy publish

60
能效测评-**星**级标示
Star-rated energy efficiency

¥199 million
1.99亿**元**专项资金
Governmental funding

上海建筑节能的具体措施----发展绿色建筑

Detailed introduction of the building energy conservation solutions----development of green buildings

上海是全国最早开展绿色建筑标识评价的城市之一，从2008**年起就开展**绿色建筑推进**工作**

Shanghai is one of the earliest cities focusing on green building promoting since 2008.

1

10 million m²

《**上海市**绿色建筑发展**三年行**动计划》--**政府引**导、市场推动、因地制宜、经济**适用**

提出"十二五"期间创建绿色建筑面积不少于1000**万平方米的**总体**目**标

Government guiding, market promoting, adoptable, economical

10 million m² green building area in the "12th Five-year Plan"

2

指导虹桥商务区、南桥新城开展低碳实践**区建**设，获批国家绿色生态示范**城区**

Low carbon practical zone construction:

Hongqiao business area, Nanqiao new town

3

15%

根据《关于2013**年在本市保障性住房建**设中加快推进绿色建筑发展的通知》

完成了新开工量15%**以上的保障性住房建**设按照绿色建筑标准设计建造的**目**标

Achieved the goal that 15% of new-built indemnificatory house meet green building standard

4

完善标准体系**建**设

- ✓ 《**住宅建筑**绿色设计标准》（报批稿）
- ✓ 《**公共建筑**绿色设计标准》（**征求意**见稿）

Improved the standard system

5

加强能力**建**设

建立绿色建筑和建筑节能专家**名**录

Improved the technical and practical ability

上海建筑节能的具体措施----推进建筑节能改造

Detailed introduction of the building energy conservation solutions----promotion of energy conservation renovation

上海市在2012年8月被住房城乡建设部列为国家第二批公共建筑节能改造重点**城市**

Shanghai was listed as the Key City of Public Building Energy Conservation Renovation in 2008

¥40 per m^2

4 Million m^2

20% Energy Conservation rate

政府政策

由市建设交通委、市发展改革委、市财**政局**联合发布《**关于**组织申报上海市公**共建筑**节能改造重点城市示范项目的通**知》（沪建交**联[2013]311**号）**

Governmental funding policy
"2013 NO. 311 Document"

制度管理

《审核办法》--进一步规范示范项目管理
《**管理**办法》--规范资金与项目流程

Government manage regulations
Management of projects and funding

目标与成效

两年内落实400**万平方米**
已完成评审40**余**项，**面**积200**余万**m^2

Goals and achievements
Total area 4 million m^2
Accomplished 40 projects
about 2 million m^2

上海建筑节能的具体措施----应用可再生能源

Detailed introduction of the building energy conservation solutions----application of renewable energy

以《上海市可再生能源建筑应用专项规划》为指导，以《上海市建筑节能项目专项扶持办法》（沪发改环资[2012]088号）为激励，以可再生能源建筑一体化应用示范项目为抓手，全面推进上海市可再生能源建筑规模化应用。

Under the guiding of relative government policies, Shanghai has comprehensively promoted the application of renewable energy in the field of public buildings

4.5

million m^2

2013年以来完成可再生能源建筑应用面积450余万平方米

Accomplished the application of renewable energy in the area of 4 million m^2 in 2013

上海市建筑节能示范项目7项，涉及地源热泵、太阳能光伏发电、太阳能热水等示范类型

安排市级示范补贴资金2560万元

7 municipal level demonstration projects
Diversified technics involved
25.6 million governmental funding

3

政府引导，多方协作，培育建筑节能服务产业

Government guiding, multiple partnership and promoting building energy conservation service industry

- **政府政策引导的作用**
  The guiding effect of government policies

- **多方协作，打造节能服务产业伙伴关系**
  Coordinating with diversified aspects, creating partnership of the energy-conservation industry

政府政策引导的作用
The guiding effect of government policies

实时监测
Energy consumption
real-time monitoring

建筑能耗
对标管理
The benchmark
management

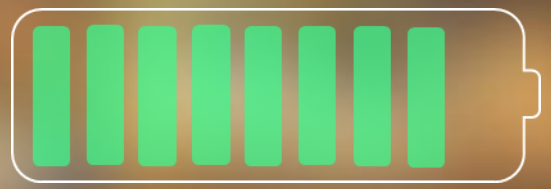
能耗管理政策
Energy consumption
Manage policies

政策激励（如：311号文）
funding policy such as
"2013 NO. 311 Document"

节能激励政策
Energy conservation
encourage policies

业主
节能意愿
Proprietor
The willingness of
energy conservation

服务商
业务发展
Service company
Industry development



节能量
Energy conservation

多方协作，打造节能服务产业伙伴关系

Coordinating with diversified aspects, creating partnership of the energy-conservation industry

银企对接 Bank-enterprise partnership

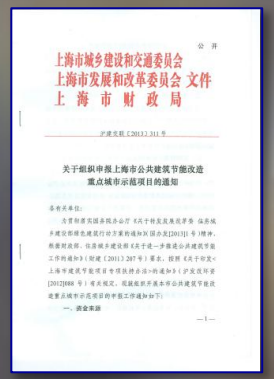
为合同能源管理项目提供
总额130亿元绿色融资

中国银行 BANK OF CHINA
北京银行 BANK OF BEIJING
上海银行 Bank of Shanghai
交通银行 BANK OF COMMUNICATIONS
上海农村商业银行 Shanghai Rural Commercial Bank
ICBC 中国工商银行
中国农业银行
浦发银行 SPD BANK
中国光大银行 CHINA EVERBRIGHT BANK
兴业银行
中信银行 CHINA CITIC BANK
招商银行 CHINA MERCHANTS BANK

十多家银行共同参与 12 banks participated

绿色信贷 Green Credit

首次在国内大规模推出合同能源管理未来收益权质押


公开

上海市城乡建设和交通委员会
上海市发展和改革委员会 文件
上 海 市 财 政 局

沪建交联〔2013〕311号

关于组织申报上海市公共建筑节能改造重点城市示范项目的通知

各有关单位：

为贯彻落实国务院办公厅《关于转发发展改革委 住房城乡建设部绿色建筑行动方案的通知》（国办发[2013]1号）精神，推荐财政部、住房城乡建设部《关于进一步推进公共建筑节能工作的通知》（财建〔2011〕207号）要求，按照《关于印发《上海市建筑节能项目专项扶持办法》的通知》（沪发改环资[2012]088号）有关规定，现就组织开展本市公共建筑节能改造重点城市示范项目的申报工作通知如下：

一、资金来源

—1—

政府政策：沪建交联[2013]311号文件

Governmental support:2013 NO. 311 Document

支持标准：经改造后单位建筑面积能耗下降20%（含）以上的项目

Funding condition: 20% energy conservation

公共建筑节能改造示范城市与合同能源管理

Energy conservation renovation and EMC partnership

EMC partnership ￥40 per m²	none partnership ￥35 per m²
合同能源管理方式	其他方式
中央财政：20元/m²	中央财政：20元/m²
市级财政：20元/m²	市级财政：15元/m²

谢谢
Thank you