

Leadership in Energy and Environmental Design

绿色能源与环境设计先锋



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一、LEED 介绍



Leadership

+

Energy

+

Environment

+

Design



LEED

绿色能源
环境设计先锋

USGBC: 美国绿色建筑委员会The U.S.

Green Building Council (USGBC) and its community are changing the way buildings and communities are designed, built and operated

. 成立于1993年，第三方非营利组织，是LEED的发起机构。

www.usgbc.org





GBCI: 美国绿色建筑协会 Green

Building Certification Institute was established in January 2008 with the support of the (USGBC) to provide independent oversight of the Leadership in Energy and Environmental Design (LEED) project certification.

成立于2008年，主要支持USGBC并对LEED认证过程进行独立监管。

GBCI administers the LEED certification program, performing third-party technical reviews and verification of LEED-registered projects to determine if they have met the standards set forth by the LEED rating system.

GBCI管理LEED认证程序，对LEED注册项目进行第三方技术审查和验证，确定项目达到LEED评级体系设定的标准。www.gbci.org



LEED Online

Streamline your LEED project management experience, organize your work, and engage with your whole team.

Now available for LEED v4 and LEED 2009 projects.

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NO USGBC ACCOUNT?

No problem—just fill in some basic information and a USGBC login will be yours in a flash.

CREATE AN ACCOUNT

LEED 发展史

- 1993→ USGBC formed
- 1998→ Released LEED 1.0
- 2000→ Released LEED 2.0
- 2002→ Launch LEED 2.1
- 2004→ Introduce LEED to new markets
 - Commercial Interiors→ LEED-CI
 - Existing Buildings→ LEED-EB
 - Core & Shell→ LEED-CS
- 2005→ Launch LEED 2.2

• 2009→LEED v2009

• 2013→LEED v4

2018 ---V 4.1 0 + M

LEED认证级别



40-49 LEED认证级

50-59 LEED银级

60-79 LEED金级

≥ 80 LEED铂金级

LEED评估体系有100分基础分，6分创新分和4分地域优先分，一共110分。

LEED 认证体系

建筑设计与施工
(8个评级体系)

LEED FOR Building Design and Construction

LEED BD+C: New Construction
LEED BD+C: Core and Shell
LEED BD+C: Schools
LEED BD+C: Retail
LEED BD+C: Healthcare
LEED BD+C: Data Centers
LEED BD+C: Hospitality
LEED BD+C: Warehouses and Distribution Centers
LEED BD+C: Homes
LEED BD+C: Multifamily Midrise

室内设计与施工
(3个评级体系)

LEED FOR Interior Design and Construction

LEED ID+C: Commercial Interiors
LEED ID+C: Retail
LEED ID+C: Hospitality

建筑运行与维护
(6个评级体系)

LEED FOR Building Operations and Maintenance

LEED O+M: Existing Buildings
LEED O+M: Data Centers
LEED O+M: Warehouses and Distribution Centers
LEED O+M: Hospitality
LEED O+M: Schools
LEED O+M: Retail

社区规划
(2个评级体系)

LEED FOR Neighborhood Development

LEED ND: Plan
LEED ND: Built Project

住宅设计与施工
(2 个评级体系)

LEED FOR Homes Design & Construction

LEED for HD+C: Homes and Multifamily Lowrise⁺
LEED for HD+C: Multifamily Midrise⁺

LEED NC 新建建筑

New buildings -- Office, factory, institutional building, residential building

新建建筑包括综合体、办公楼、厂房、医院、零售等公共建筑以及住宅建筑

Major renovation – Major HVAC replacement

or modification; building mechanical or envelope and structural renovation

大改造包括对主要的空调系统替换，机械系统，

维护结构的改造

Note: 新建建筑和大改造建筑都属于LEED NC体系。

国内首座LEED-NC白金级公共建筑——新奥智能大厦



Note: 新建建筑和大改造建筑都属于LEED NC体系



秦皇岛中信戴卡创新中心

项目标准：绿色建筑**设计标识三星级+LEED NC铂金级**

咨询方：绿建之窗

服务商：中信戴卡股份有限公司

物业类型：综合性办公楼





北京爱之园（IBG）幼儿园

项目标准：LEED NC 金级+WELL金级

物业类型：学校

咨询方：绿建之窗

LEED EB 既有建筑



- 1、已在运行中的商业和公共建筑
2. 小改造包括系统升级，空间功能改变，小范围变更和增加.
3. 针对整个楼的认证，局部空间不行
4. 至少连续运行 12 个月的能耗数据
5. 之前取得 LEED NC, CS 认证或未取得认证的 建筑都可以申请 LEED EB。



中国人寿大厦

项目标准：LEED EB O+M 金级

咨询方：绿建之窗



Tenant space fit-out (office, retail, institutional building) 针对租户局部空间装修 (如办公楼、零售等) LEED CI can be achieved both for LEED certified and non-certified building 不管主楼有没有获得 LEED CS 认证, 局部空间装修都可以申请 LEED CI; 如果 LEED CI 项目在 LEED CS 认证楼里, 可以直接贡献 LEED CI 5 分

RTKL 办公室

项目标准:

LEED CI 金级

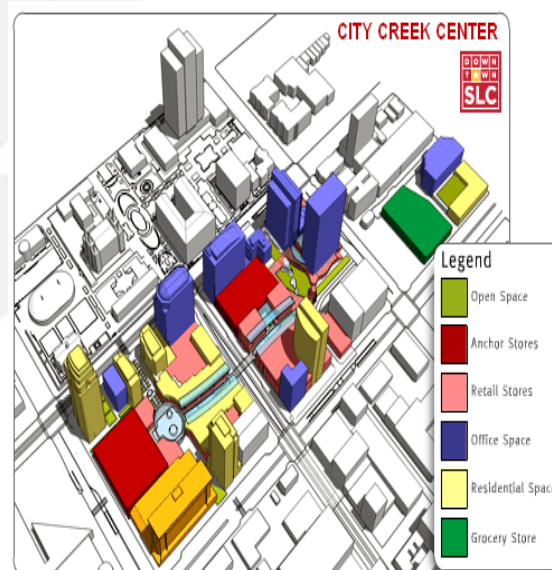
咨询方: 绿建之窗

LEED ND 社区规划

■ LEED ND侧重整个社区的土
地

使用规划包括建筑布局、配套设施、街道设计、开放空间、社区连通等（例如：北京奥林匹克公园）

■ 主要针对理性增长、城市化和绿色建筑，可能包括整个社区、部分社区和多个社区



LEED认证最低要求MPR

- 1、必须是现有土地上的永久场地
- 2、必须采用合理的边界
- 3、必须符合最小面积要求，即除
LEED CI 250平方英尺，其他为
1,000平方英尺。

LEED体系得分项归类

1. 整合设计 (IP) ;
2. 位置与交通 (LT) ;
3. 可持续选址 (SS) ;
4. 节水增效 (WE) ;

5. 能源与大气 (EA) ;
6. 材料与资源 (MR) ;
7. 室内环境品质 (EQ) ;
8. 创新 (IN) ;
9. 因地制宜 (RP) ;



INTEGRATIVE
PROCESS



LOCATION AND
TRANSPORTATION
(LT)



SUSTAINABLE
SITES
(SS)



WATER
EFFICIENCY
(WE)



ENERGY AND
ATMOSPHERE
(EA)



MATERIALS AND
RESOURCES
(MR)



INDOOR
ENVIRONMENTAL
QUALITY (EQ)



INNOVATION
(IN)



REGIONAL
PRIORITY
(RP)

LEED认证过程

1. 选评级系统。首先要为项目挑选合适的LEED评级系统，挑选原则见前文说明。
2. 注册。完成项目关键表格填写并付费。
3. 申请(递交)。通过LEED Online递交认证申请并支付认证审阅费。
4. 审阅。GBCI审阅递交的LEED申请。



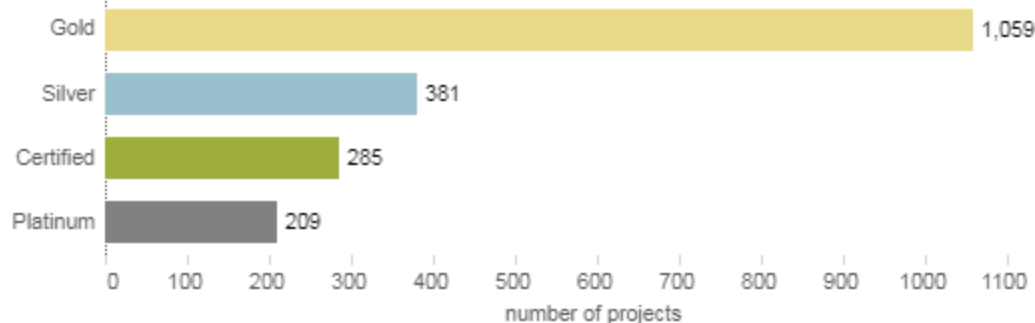
Country/Region

China

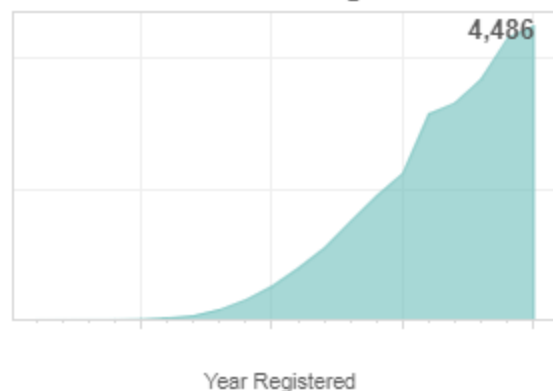
LEED project data only includes commercial rating systems and does not include projects registered in Arc. The underlying data does not include LEED ND or LEED for Homes projects.

Country Market Brief: China

LEED® Achievement



Cumulative LEED® Registrations



Cumulative LEED® Certifications



Summary

(last updated 2020/3/3 22:20:23)

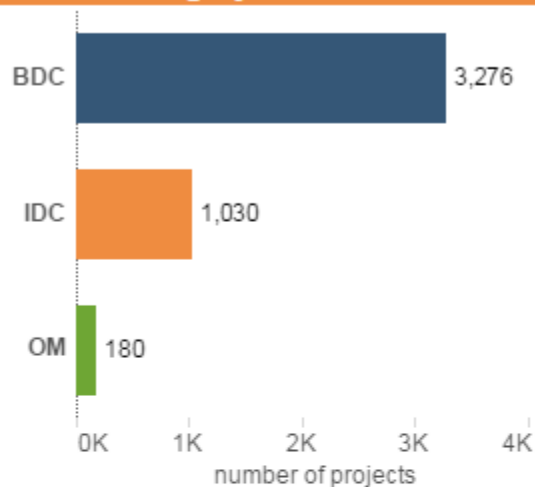
Project Status	number of projects	gross square meters
Certified	1,934	79,503,326
Registered	2,552	194,442,914
总和	4,486	273,946,240

Certified square meters equivalent to Taipei 101.



LEED in china

LEED® Rating Systems*



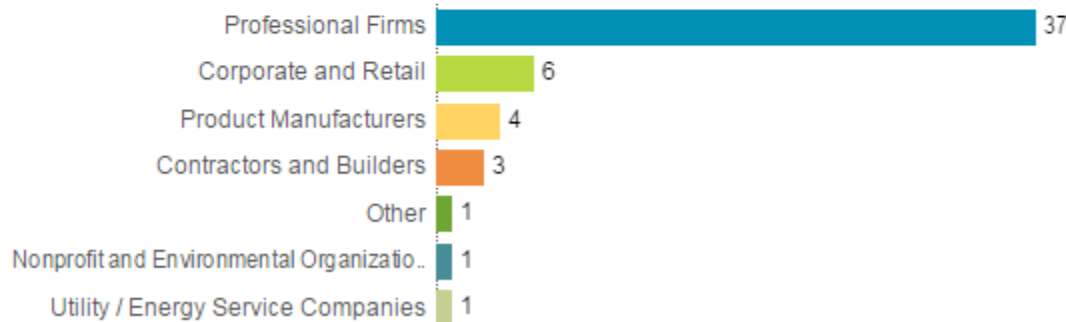
Space Type*

Office	2,615
Retail	647
Industrial Manufacturing	271
Lodging	173
Multi-Family Residential	164
Warehouse and Distribution	151
Public Assembly	129
Other	56
Laboratory	53
K-12	43
Datacenter	40
Service	33
Health Care	31
Higher Ed	16
Office: Mixed Use	12
Educational Facilities	4
Military Base	1
Public Order and Safety	1

Owner Sector*

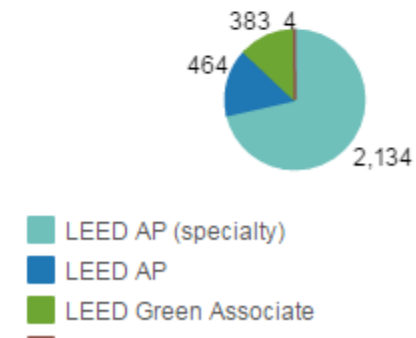
Corporate	2,877
Investor	641
Local Government	212
Higher Ed	41
Non-Profit	19
K-12	17
Federal Government	12
State Government	9
Residential	1

USGBC member organizations based in China



*Counts include both registered & certified projects.

LEED Credentialed Professionals



LEED in china

二、LEED AP介绍



Tier 1: LEED Green Associate

第一级：LEED助理级，通过考试获得资格

Tier 2: LEED AP+

BD+C/ID+C/HOMES/ND/EB

第二级：LEED专业级，通过考试获得资格
新建建筑/ 装修/ 低层住宅/ 社区/ 既有建筑

Tier3: LEED Fellow

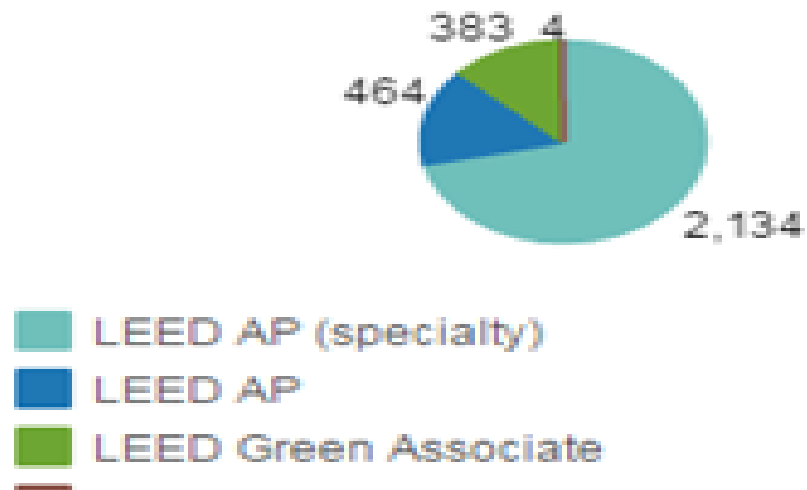
第三级：LEED专家级，通过提名获得资格
8 years LEED AP, 10 years experience
>8年LEED AP, 且>10年可持续行业经验

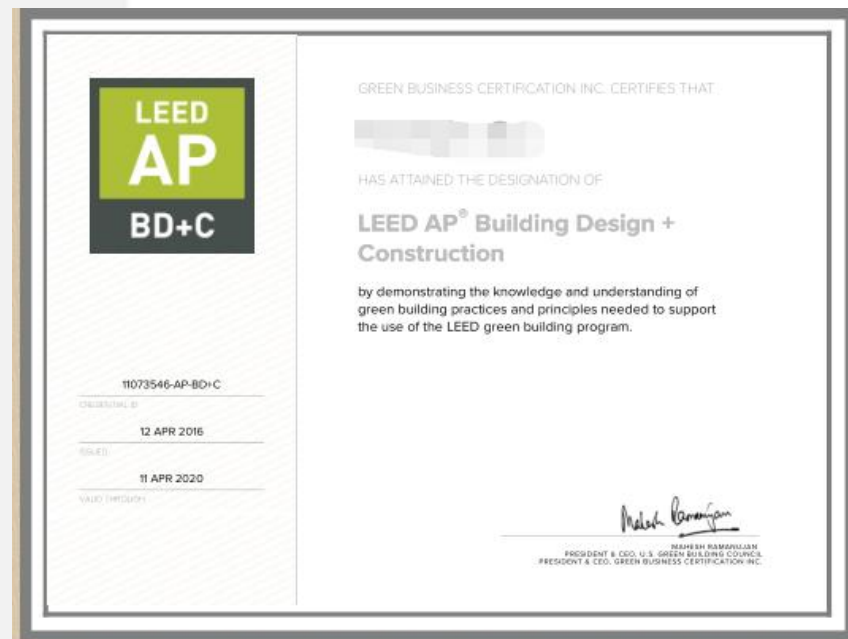


中国LEED GA与 AP 数量统计



LEED Credentialed Professionals

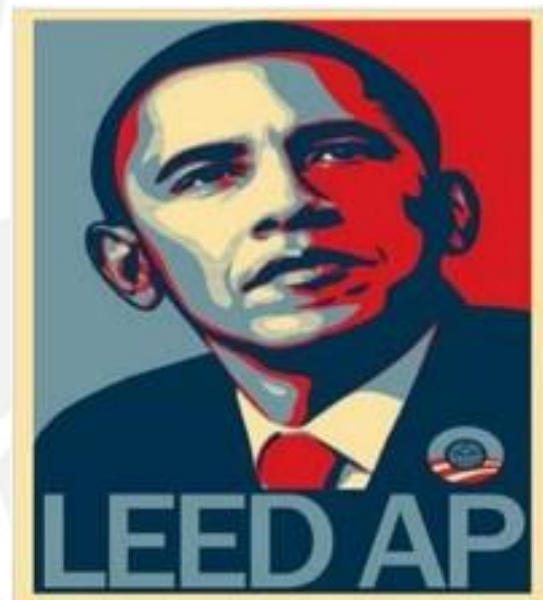




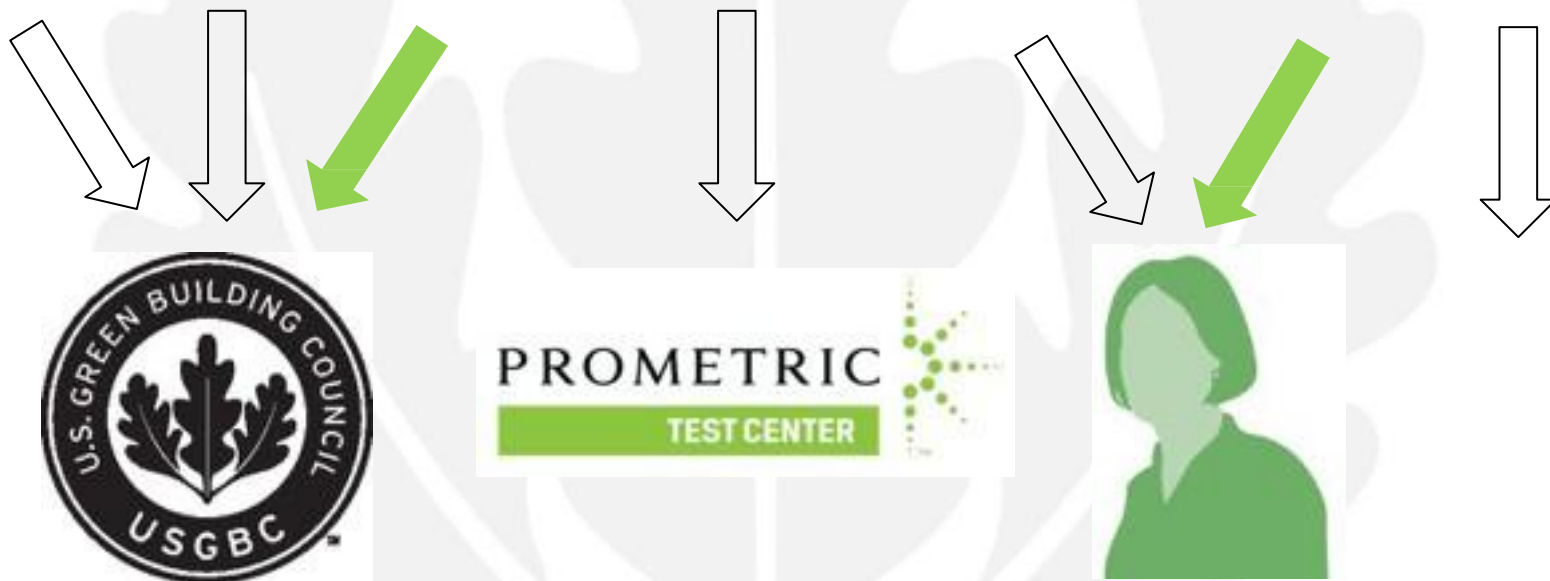
LEED GA与AP证书样本

LEED AP 持有对象

- ◆ Students(学生)
- ◆ Planners (规划师)
- ◆ Designers(设计师)
- ◆ Architects (建筑师)
- ◆ Engineers (工程师)
- ◆ Consultants (顾问)
- ◆ Project manager(项目管理)
- ◆ Construction manager (施工经理)
- ◆ Energy Service (节能经理)
- ◆ Contractors (总包)
- ◆ Builders(施工人员)
- ◆ Product representatives(产品代表)
- ◆ Facility managers(设施经理)



LEED GA/AP 考试流程



LEED GA/AP 考试流程

1. 100个随机选择题；
2. 2个小时考试时间；
3. 分数范围125-200，170为及格分数线；



注意事项

1. 提前预约，记住考试时间，了解到达考点的交通路线，切勿迟到；
2. 带好身份证或护照+带签名的信用卡；
3. 除了身份证件其他(书、手机、食物、饮料等)不要带入考场；
4. 考点提供铅笔或记号笔，纸张和计算器；

LEED GA/AP 考试成绩单与考试内容

Exam Information

Candidate:	jie li
Exam Track:	LEED Green Associate Exam
Exam Date:	Wednesday, July 02, 2014
Candidate ID:	0010932759
Test Site:	8516

Score Information

Minimum Passing Score:	170
Score Achieved:	177
Result:	Pass

Section Performance

Category	Percent Correct
LEED Process	75%
Integrative Strategies	38%
Location and Transportation	86%
Sustainable Sites	57%
Water Efficiency	78%
Energy and Atmosphere	70%
Materials and Resources	78%
Indoor Environmental Quality	88%
Project Surroundings and Public Outreach	36%

If you have questions or concerns please contact Green Building Certification Institute
www.gbci.org/contact

LEED PROCESS

LEED过程

Integrative Strategies

整合策略

Location and Transportation

位置与交通

Sustainable Sites 可

持续选址 Water

Efficiency 节水增

效

Energy and Atmosphere

节能增效

Materials and Resources

材料与资源

Indoor Environmental Quality

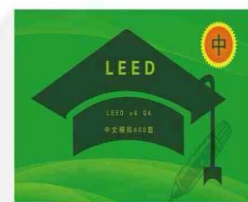
室内环境品质

Project Surrounding and Public Outreach

项目环境与公共传



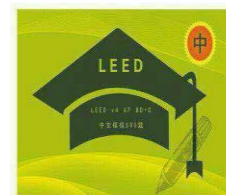
LEED v4 GA 中文模拟600题
陈铁鑫 主编



2015
绿建之窗 (北京) 科技有限公司
第一版



LEED v4 AP BD+C 中文模拟500题
陈铁鑫 主编



2015
绿建之窗 (北京) 科技有限公司
第一版



北京班



武汉班



南京班



重庆班



上海班



长春班



深圳班



山西班



Baidu

THANKS FOR YOUR ATTENTION



王丽 TEL:13520326520