2018

中国国际太阳能十项全能竞赛

Solar Decathlon China 2018

8-10月，山东德州

August-October, Dezhou in Shandong

SOLAR DECATHLON CHINA

中国国际太阳能十项全能竞赛

光耀我能

LIGHT UP YOUR TALENT

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国际太阳能十项全能竞赛 （Solar Decathlon简称SD）是由美国能源部发起，以全球高校为参赛单位的太阳能建筑科技竞赛。借助世界顶尖研发、设计团队的技术与创意，将太阳能、节能与建筑设计以一体化的新方式紧密结合，设计、建造并运行一座功能完善、舒适、宜居、具有可持续性的太阳能住宅。

竞赛期间，太阳能住宅的所有运行能量完全由太阳能设备供给。大赛将全面考核每个参赛作品的节能、建筑物理环境调控及能源自给的能力，通过十个单项评比确定最终排名，因此称为“十项全能”竞赛。目前在全球范围内已有SD美国、中国、欧洲、中东、非洲、拉美六大组委会。

Initiated by the United States Department of Energy, Solar Decathlon (SD) is an international collegiate science and technology competition of solar-powered houses. With technologies and innovations from world-leading R&D and design teams, SD aims to integrate solar energy, energy conservation, and architecture design in a new way so as to design and build a comfortable, livable, and sustainable solar house with full functions.

During the competition, the operation of the house will be solely powered by solar energy. SD will make a comprehensive assessment on the houses' performance on energy saving, physical environment control, and power independency. The competing houses will be ranked based on the results of ten independently scored contests, thus it is named “Decathlon”. Currently, SD has expanded internationally, including six organizing committees worldwide, including the United States, China, Europe, Africa, Latin America and Caribbean, and the Middle East.

历届竞赛
History

2002
美国华盛顿
Washington D.C., United States

2005
美国华盛顿
Washington D.C.
United States

2007
美国华盛顿
Washington D.C., United States

2009
美国华盛顿
Washington D.C.
United States

2010
西班牙马德里
Madrid, Spain

2011
美国华盛顿
Washington D.C.
United States

2012
西班牙马德里
Madrid, Spain

2013
中国大同 / 美国尔湾
Datong, China; Irvine, United States

2014
法国凡尔赛
Versailles, France

2015
美国尔湾 / 哥伦比亚卡利
Irvine, United States; Cali, Colombia

2017
美国丹佛
Denver, United States

2018
阿联酋迪拜 / 中国德州 / 哥伦比亚卡利
Dubai, United Arab Emirates; Dezhou, China; Cali, Colombia

2019
匈牙利 / 摩洛哥
Hungary; Morocco

2020
美国
United States

中国国际太阳能十项全能竞赛
Solar Decathlon China

中国国际太阳能十项全能竞赛（简称SDC）以全球高校为参赛单位，借助世界顶尖研发、设计团队的技术与创意，将清洁能源、节能环保与建筑设计以一体化的新方式紧密结合，创造一个功能完善、舒适宜居、具有可持续性的居住空间。通过比赛推进绿色建筑的发展，增强人们的环保意识，并推进相关技术的创新发展和商业化。秉承以建筑为载体，以智能家居为核心，以世界公民理想为精神所在的理念，打造太阳能和绿色建筑领域的奥运会。

继2013年首次在山西大同成功举办之后，SDC作为“中国--美国第七届战略与经济对话”成果再次落户中国，经美国能源部授权，在中国国家能源局的指导下，中国产业海外发展协会承办，共青团中央学校部为支持单位，将于2018年在山东省德州市举办。大赛要求每支赛队以永久性使用为目标，建造一栋建筑面积为120m^2- 200m^{2}的单层或双层太阳能住宅，并通过以下十个单项来评比最终成绩。

With global universities as participants, and based on technologies and ideas of word-leading R&D teams, Solar Decathlon China (SDC) is established to create a fully functional, comfortable, livable, and sustainable living space by freshly integrating clean energy, energy conservation and environmental protection to architectural design. The competition is intended to promote green building development, to enhance people's environmental awareness, as well as to facilitate technology innovation and commercialization. Taking houses as the carrier, intelligent homes as the core, and global citizen ideals as the spirit, the competition is designed as the Olympic Games in the solar energy and green building industry.

After its successful inauguration in the City of Datong, Shanxi Province in 2013, SDC comes to China again as an achievement of the Seventh China-U.S. Strategic and Economic Dialogue. With the authorization of U.S. Department of Energy and guidance of China National Energy Administration, the second Solar Decathlon China (SDC) is organized by China Overseas Development Association and supported by the School Department of the Central Committee of the Communist Youth League. The final competition will be held in August- October, 2018, in Dezhou, Shandong Province. Aiming for permanent usage, the competition requires teams to build a single- or two-story solar house with a finished area of 120m^2-200m^2, and will be competing in the following ten contests.

承办城市
Host City

德州市是京津冀协同发展示范区的重点城市之一，位于山东省西北部，京沪高速铁和清太高铁交汇处，1小时可达北京，4小时可达上海。有“中国太阳城”之称的德州，通过太阳能产业链不断向上、下游延伸，成为中国目前最大的太阳能产业聚集区，是国家新能源示范和可再生能源建筑应用示范城市。

Dezhou is one of the major cities of Beijing-Tianjin-Hebei Integration. Located at the northwest of Shandong province, Dezhou is the place where Beijing-Shanghai high-speed railway and Qingdao-Taiyuan high-speed railway meets. From here, you can arrive in Beijing within 1 hour and Shanghai within 4 hours. Dezhou, known as “the Sun City in China”, has become the biggest solar industry clusters in China and the model city of the national new energy demonstration and the application of the renewable energy buildings by way of the solar energy industry chain upstream and downstream extension continuously.

高校赛队
Teams

2018年中国国际太阳能十项全能竞赛邀请了来自11个国家和地区44所高校组成的23支高校代表队参加。

Solar Decathlon China 2018 invited 23 global teams, consisting of 44 universities coming from 11 countries and regions.

编号 No.	队名 Team	学校 School
1	Team HKU 香港大学队	The University of Hong Kong 香港大学
2	Team SSA 持续可能太阳建筑队	Seoul National University 首尔大学
		Sungkyunkwan University 成均馆大学
		Ajou University 亚洲大学
3	Team THU 清华大学队	Tsinghua University 清华大学
4	Team XJTU-WNEU 西安交通大学-西新英格兰大学联队	Xi'an Jiaotong University 西安交通大学
		Western New England University 西新英格兰大学
5	Team YI 翼之队	Yantai University 烟台大学
		Illinois Institute of Technology 伊利诺伊理工学院
6	Team NJFJ 新泽西理工-福建工程学院联队	New Jersey Institute of Technology 新泽西理工学院
		Fujian University of Technology 福建工程学院
7	Team Istanbul 伊斯坦布尔队	Istanbul Technical University 伊斯坦布尔技术大学
		Yildiz Technical University 玉勒图兹技术大学
		Istanbul Kultur University 伊斯坦布尔文化大学
8	Team SUES-XD 上海工程技术大学-华建集团联队	Shanghai University of Engineering Science 上海工程技术大学
9	Team Shunya 团队零	Indian Institute of Technology, Bombay 印度理工学院孟买校区
10	Team Montreal 蒙特利尔队	McGill University 麦吉尔大学
		Concordia University 肯高迪亚大学
11	Team JIA+ 家+队	Xiamen University 厦门大学
		National School of Architecture of Britanny 布里塔尼国立建筑学院
		Technical School of Compagnons du Devoir of Rennes 雷恩技术大学
		European School of Arts of Brittanny 布里塔尼欧洲艺术学院
		National Institute of Applied Sciences of Rennes 雷恩国立应用科学学院
		University of Rennes 2 / Institute of Management and Urbanism of Rennes 雷恩第二大学城市规划与管理学院
		University of Rennes 1 / Superior School of Engineer of Rennes 雷恩第一大学高级工程师学院
		High School Joliot Curie of Rennes 雷恩约里奥-居里高等学校
		Shandong University 山东大学
12	Team Purdue (Exhibition Only) 普渡队（参展不参赛）	Purdue University 普渡大学
13	Team SEU-TUBS 东南大学-布伦瑞克工业大学联队	Southeast University 东南大学
		Technical University of Braunschweig 布伦瑞克工业大学
14	Team XAUAT 西安建筑科技大学队	Xi'an University of Architecture and Technology 西安建筑科技大学
15	Team SJTUIUC 上海交通大学-UIUC联队	Shanghai Jiao Tong University 上海交通大学
		University of Illinois at Urbana-Champaign 伊利诺伊大学厄巴纳香槟分校
16	Team BJTU 北京交通大学队	Beijing Jiaotong University 北京交通大学
17	Team SIE 沈阳工程学院队	Shenyang Institute of Engineering 沈阳工程学院
18	Team TJU-TUD 同济-达姆联队	Tongji University 同济大学
		Technical University of Darmstadt 达姆施塔特工业大学
19	Team Solar Offspring 太阳的后裔队	Hunan University 湖南大学
20	Team SCUT-POLITO 华南-都灵理工大学联队	South China University of Technology 华南理工大学
		Politecnico di Torino 都灵理工大学
21	Team UNNC Alpha 宁波诺丁汉大学队	The University of Nottingham, Ningbo, China 宁波诺丁汉大学
22	Team Israel 以色列队	College of Management Academic Studies 以色列学术管理研究学院
		Afeka College 阿夫卡学院
23	Team PKU (Exhibition Only) 北京大学队（参展不参赛）	Peking University 北京大学

参赛房屋

House Overview

S(L)OW House

香港大学队

Team HKU

S(L)OW House是以新型合院房屋作为设计原型，通过根据各地不同气候和用户使用需求调整具体的设计要素，来回应中国不断变化的广大农村地区的环境。设计采用主体木结构预制，围合墙体在地建造的建造方式，使项目在缩短工期和减少农村未经训练工人带来的不确定性的同时，体现出地域性的差别。通过在中间院子顶部加建可开合的玻璃顶，使其夏天是院子，冬天成为阳光房。中间的院子作为一个热缓冲空间，能有效降低能耗，增加使用舒适性。房屋定位于中国逐渐壮大的“新农民”群体。日益恶化的城市生活环境和田园梦的复苏，让乡村度假市场不断升温。越来越多希望逃离城市，在宁静美丽的乡下拥有独立度假房屋的家庭为项目提供了广阔的市场。

The S(L)OW House is conceived as a new courtyard house prototype, where design elements are calibrated for climate-specific and people-oriented needs. In this way, the project serves as a much-needed design research application of adaptive, comfortable, and environmentally-responsive housing strategies for an ever-evolving rural China. The main timber structure is prefabbed to reduce construction period and uncertainty of untrained workers, while the enclosed wall is in-situ made to keep the regional identity. The yard is covered by a glazed operable roof. The operable panel is tilted up for ventilation in hot summer, and enclosed to serve as sunlight room in cold winter. The yard space is turned into a thermal buffering zone to mediate the temperature and reduce the energy consumption. The house targets at the increasing “new farmer” in China. People who are willing to escape from the aggravating city and embrace the rural will be the possible consumer of the house. With more and more families willing to have their own vacation homes, the market for the project is huge.

PURe+ house的形式来自东亚共有的传统庭院形式。以庭院为中心的PURe+ house保持了几个世纪以来在东亚的传统民居建筑形式。PURe+ house 将配备现代建材、有线/无线传感器和先进的建筑技术。所有技术已经通过先进的建筑模拟工具进行了虚拟测试和最佳设计。用于 PURe+ house 设计的工具和方法包括以下内容：

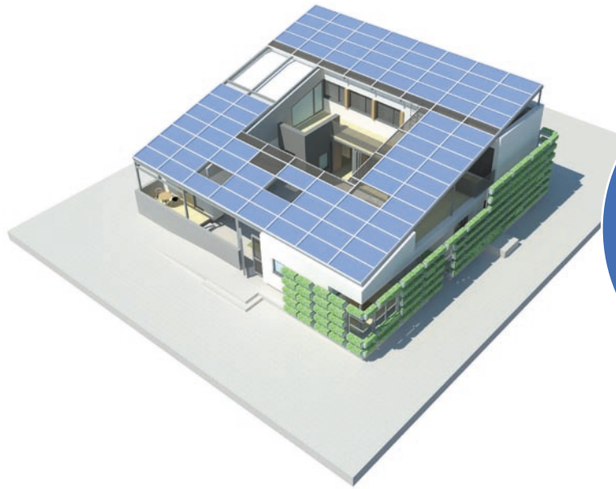
- PHPP 2007（基于ISO 13790）：估算 PURe+ house 的供暖和制冷需求（每月，每年）
- Therm6：分析建筑围护结构的热桥现象
- RETScreen：分析太阳辐射和光伏系统的能源生产
- EnergyPlus & MATLAB：设计变量的敏感度和不确定性分析

为了PURe+ house市场的可行性，引入了模块化建设。每个模块，大小为3.580（M）和1.780（M），这里包括地板，墙壁和天花板/屋顶与预先安装的管道和电气系统，和内部和外部装饰。

PURe+ house takes its form from traditional courtyard houses that have been common throughout East Asia. PURe+ house centered by a courtyard keeps an architectural form of vernacular houses that have stood in East Asia for centuries. PURe+ house will be equipped with contemporary building materials, wired/wireless sensors and cutting-edge building technologies. All aforementioned technologies have been virtually tested and optimally designed with advanced building simulation tools. The tools and methods used for the PURe+ house design include the following:

- PHPP 2007 (ISO 13790 based): to estimate heating and cooling demand of PURe+ house
- Therm6: to analyze heat bridge phenomena in building envelopes
- RETScreen: to analyze solar radiation and energy production of PV system
- EnergyPlus & MATLAB: sensitivity and uncertainty analysis for design variables

To make PURe+ house market-viable, modular construction was introduced. Modular construction is an industrialized construction system. Each module, a size of 3.580 (m) by 1.780 (m), includes the floor, walls and ceiling/roof with pre-installed plumbing and electrical systems, and interior and exterior finishes.



PURe+ House

持续可能太阳建筑队

Team SSA

W.H.A.O. House

清华大学队

Team THU

WHAO House面向老年群体而设计，是一幢位于中国北方的可持续退休住宅。WHAO House为中国典型三代家庭构想了一种居住模式：祖孙两代生活在城郊社区中的退休住宅，忙碌的中年人则在周末来此度假。WHAO House的基本设计策略是“Module & Cover”，包含两种模数的预制箱体模块，若干箱体模块成组构成居住空间，随着时间变化，现有的平面形式可以发生改变，每组箱体模块都覆盖了全套生活设施。WHAO House由Cover限定出家庭领域，并在公共与私密之间形成了半透明的边界，同时塑造了局部微气候。WHAO House努力达到能源、资源收集的最大化，也追求更少的能源消耗。WHAO App应用AR技术使建筑智能地响应用户需求。面向可持续，人居，以及未来，WHAO House正是我们深思熟虑后给出的答案。

WHAO House is a sustainable retire house located in northern China, targeting at a typical Chinese family of one senior couple with pre-school grandchildren, and an adult couple who visit occasionally. We propose WHAO House, an ideal living model, to meet the challenge of exceeded urbanization and overwhelming environmental problems. The basic strategy of WHAO House is “module & cover”. Modules are prefabricated boxes. They are functionally specialized, each covering one or several functions. As the family structure changes, current layout can be developed. Each group of modules covers a whole set of functions. The cover, the outer layer of WHAO House, marks the boundary and provides a transition between privacy and publicity. The cover also contributes to a comfortable micro-climate. We maximize the collection of energy and resources. Also, rainwater and grey water is gathered and recycled. We try to reduce consumption by appliances of high efficiency. With AR interface, the house becomes intelligent and responds to users' need. Despite self-sufficient, WHAO House is not isolated, but a component of a dynamic community and a part of a larger energy, resource and information exchanging network. It is our deliberate answer toward sustainability, living and future.

四世同堂

西安交通大学

西新英格兰大学联队

Generations

Team XJTU-WNEU

四世同堂房符合关中地区以庭院为中心，院墙与房屋围合院落的传统。外观造型上，关中民居以单坡屋顶为最大特点，具有排水、防尘等综合功能。因此我们延续了传统的院落布局，屋面采用中国传统坡屋顶的形式，符合农村居民的传统观念。生活形态上适应于关中地区传统民居的平面布局、空间尺度和生活习惯。关中农村一般多代同堂，家庭人口众多，我们设计了四个卧室来满足农村两位老人、夫妻二人及两个孩子的人口结构。能源利用方面，本方案对太阳能进行了充分利用：房屋南侧阳光房的保温效果可降低冬天的采暖能耗；二楼的露台不仅提供了开放的亲近阳光的空间，也很好地满足农村住户对于晾晒的需求；而住户日常生活所需要的所有能源均来自于光伏发电。

The Generations solar house is designed to bring affordable, energy-efficient homes to rural areas of China. We integrate modern solar and building technologies with traditional Chinese architecture designs. The solar system is designed to work seamlessly in the background with little maintenance. There are two floors with four bedrooms in this house, which is suited for a family of six that includes a couple with two children and two elders. The bedrooms are strategically placed so that maximum privacy is given to the couple and minimum mobility is needed for the elders. A water garden links the bedroom and the sunlight, so occupants can enjoy the warmth of the sun even in the cold winter. The living room and master bedroom are also lighted directly from the sun. The heat preservation effect of the winter garden can reduce the overall heating energy consumption in winter. The roof adopts traditional Chinese roof design in rural areas, which is conducive to drainage. The building roof is inclined to the central courtyard, so the rainwater can be collected and reused for landscaping applications.

SO&CO House立志追求一种本土化，传统化与现代技术结合的模式，探讨全新的“地域化生态住宅”。中国传统建筑中，合院是一个特有的民居形态，我们也尝试从合院的布局出发，力图将传统建筑的形态优势加以创新，用现代手法与起居模式融入到新建筑形体中，以创造符合新中国居住模式与体验方式。中庭设置自然景观，并将东侧形体打开，将外部景观与中庭景互相呼应。建筑北侧主体为两层，南侧玄关为一层，形成良好的北高南低的中国传统建筑形体特点。建筑北侧二层南侧一层，并形成一个整体的单坡式屋顶，最大化的提供太阳能板所需的面积；建筑功能形体为一简洁的“L”型，最大化的降低建筑的形体系数，降低热消耗。

SO&CO House tries to pursue a model that combining localization, traditional and modern technology and to explore the new “regional eco-houses”. We are trying to attempt it in this program. In Chinese traditional architecture, the courtyard is a unique architectural form, we also try starting from the courtyard layout, to form the advantages of traditional architectural innovation, using modern techniques and living mode into the new building form, to create Chinese in line with the new residential model and experience. On the north side of the main building is divided into two layers, one layer is formed on the south side of the entrance, the north south high low China traditional architectural form characteristics. The second floor of the north side and the first floor of the south, which are combined as a single slope roof, to maximize the area required providing solar panels; architectural function of the body is a simple "L" type Reduce the building of the form factor, reduce heat consumption. The west side gable and the north side wall, in the case of meeting the ventilation requirements, to maximize the reduction of the window area.

SO&CO House

翼之队

Team YI

DOTTIE – Enclosing Harmonious House

新泽西理工-福建工程学院联队

Team NJFJ

DOTTIE的英文释义为数字化、操作化、构造化、集成化和生态化，是Enclosing Harmonious House的五大系统。房屋设计的目标人群是四代同堂式家庭，目的是利用五大系统，结合中国传统四合院及现代化技术，营造促进多代人和睦相处，人与自然和谐共生的太阳能式节能住宅——“合•和”居。“合”代表空间围合，“和”代表家庭和美，人与自然和谐共生。住宅中央是为“回忆屋”，家人可在此聚餐、交流、娱乐，它由四周的“回忆墙”所围合。墙上的纪念物、家人合影等，体现了多代家庭的多样性。同时，这些的纪念物被视为多代家庭和美生活的象征，展现四代人间的有趣关系。为了建造被动式节能住宅，房屋设计密切关注能耗、建筑与环境等问题。身为模块化集成建筑，它可被容易地建在世界各地。

DOTTIE is an abbreviation of Digitally, Operated, Tectonic, Integrated and Environment. They were five systems of this Enclosing Harmonious House. The target population of this design are four generations of family, aims to building the solar-saving House – “Enclosing Harmonious House” that use five systems and combine a modern approach and traditional Chinese dwellings to let multi-generational live together and harmony between human beings and nature. At the center of the house is a collective space named “memory room”. The central space is wrapped by an inclusive wall layer that brings various activities into the central space. From this central space, inhabitants can view special framed moments that circulate around the center. The memory wall stores and displays objects of memory within the central space. It is the ultimate symbol of unity within a multi-generational home. Framing the various programs surrounding the central space are nooks and openings. The nooks frame important objects of different scales within the house, ranging from the smallest of family portraits to the kitchen. In order to make the house passive, our design pays attention to low energy consumption, building orientation. Furthermore, this energy efficient house can be easily built anywhere in the world.

The Algaetech House

伊斯坦布尔队

Team Istanbul

Algaetech House是一个藻类动力生态屋。微藻类将会在放置于屋顶的“藻池”中进行生产，该生物质与固体厨余垃圾和棕色水混合用以生产甲烷。甲烷用于小规模的热电联产系统。房屋主要的电能需求将由光伏板提供。产生的氧气有助于清洁城市大气环境。二氧化碳（ CO^2 ）用于饲养微藻。可循环废水将用于水库和花园。同时，这些废物产生的废物会被用作花园的肥料。此外，对于HVAC（供热通风与空气调节系统），会采用不同种类的高效节能措施。建筑的加热-冷却所需能量由聚光太阳能发电和热泵提供，蒸发冷却机制用于提升热泵的效率。除此之外，在夏季，蒸发冷却机制用于回风。热回收装置将用于获取蒸发冷却回流空气产生的能量。

Algaetech House is an algae powered eco-house. Microalgeas will be produced in the “algae pool” which is placed on the roof of the house; this biomass will be mixed with solid kitchen waste and brown water for methane production. Methane will be used in small scale cogeneration system. The main electricity energy demand of the house will be met by PV Panels. While O^2 production, which is 5 times more than conventional plants and trees, helps to clean the urban atmosphere, CO^2 will be used to feed microalgae. Recycled waste water from the house is to be used in reservoirs and in the garden. Meanwhile, the resulting wastes of these wastes will be used as fertilizer for the garden. In addition, for HVAC systems there will be used different types of energy efficient strategies. Heating-Cooling Energy demand of the building will be met with CSP and Heat Pump. Evaporative Cooling will be used to increase the efficiency of Heat Pump. Also evaporative cooling will be applied to return air in summer time. Heat recovery unit will be used to get benefit the energy of evaporatively cooled return air.

光影律动

上海工程技术大学-华建集团联队

Dancing Sunlight

Team SUES-XD

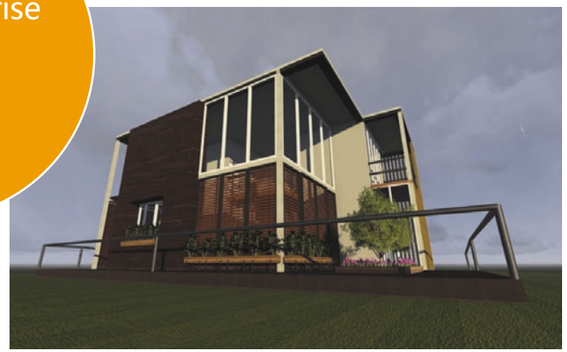
Dancing Sunlight solar house希望可以解决一个中等大小的家庭的居住的问题：人们需要什么来实现一个满意的生活方式，对于来自不同领域的学生，该房屋提供了一个机会。在建筑系统中使用的所有材料必须仔细选择他们的组合对建筑物的影响，对整个组件生命周期的影响。通过我们与中国制造业公司的合作，我们有很好的访问新技术、示范性产品和先进的系统。我们的建筑目标与我们认为是市场吸引力作为概念原型的“独特卖点”一致。具体的原型针对单身和个人。原型由轻质的，基于木材的建筑构件构成，可根据需要进行组装。我们将提供一个模型变化手册，以展示该概念对潜在居民的潜在应用范围，以便他们了解如何应用它以满足他们的个人需求和愿望。

Dancing Sunlight solar house tries to address functional issues of living a modestly sized home: What do people essentially need for a satisfying lifestyle. For student participants coming from different fields of study, the house affords a unique opportunity. All the materials used in the construction system must be carefully selected for their combined impact on the building over the entire component lifecycle. Through our connections with Chinese manufacturing companies, we have excellent access to new technologies, exemplary products, and advanced systems for potential implementation in the prototype. Our architectural aims are tightly aligned with what we consider to be the “unique selling points” of the prototype in terms of market appeal as a concept. The concrete prototype targets both single and coupled individuals who are looking to live in a house of modest size. The prototype is built of lightweight, wood-based construction components that can be assembled in various combinations as needed. We will provide a manual of model variations to demonstrate the concept's potential range of applications for potential residents so that they can see how to apply it to meet their individual needs and desire.

Project Solarise

团队零

Team Shunya



文化、气候和科技是Solarise solar house的三大支柱。房屋的重点是在尽量保留现有绿地的条件下建造住宅，通过采用垂直堆叠并在每一层提供花园来实现，这些花园可以用作阳台农场或者露台，它们还将提供自然遮挡以此来减少来自太阳的热量并且减少用在为房屋制冷上的能源。基于中心服务核心，功能空间，半开放空间和保护性立面四种元素，每一间房子都会被设计为具有功能性、可访问性、娱乐性和安全性的最佳组合。阳台和围合设计可以保护结构免受太阳直射和暴雨的侵蚀。围合部分还可以使建筑的内部空间保持凉爽。窗口和可开启式的窗扇以及jaali建筑的应用可以为室内提供交叉通风和最大化的内部照明。节省电力和能源——使Solarise solar house成为一个环境友好型和可持续型的住宅。

Culture, Climate and Technology form the 3 main pillars of Solarise solar house. Design focuses on providing housing with minimal reduction of existing green area. This is achieved by using vertical stacking and providing gardens at each level. These gardens can be used as balcony farms or patios. They would also provide natural shading thus decreasing the heat gain from sun and saving considerable amount of energy spent in cooling the house. Based on four basic elements, viz., central service core, functional spaces, semi-open spaces and protective facade, each house is designed to provide optimal combination of functionality, accessibility, entertainment and security. A veranda and envelope is designed to protect the structure from harsh sun rays and torrential rain. The envelop will also help in keeping the interiors of the house cool. Windows and open-able fenestrations along with the use of jaali Architecture will provide for cross ventilation and maximum internal illumination, thus, saving electricity and energy—making Project Solarise an environment friendly and sustainable housing structure.

深•性能住宅

蒙特利尔队

Deep-Performance Dwelling (DPD)

Team Montreal

深•性能住宅（DPD）力求“净零能耗”、低碳或零碳和就地运用资源，以打造高性能，净零能耗的住宅。DPD寻求从根本上重新想象和创新城市生活方式。DPD从类型上用独特的设计，并且明确地肯定和一体化可持续发展和绿色建筑理论。仅仅占地20%，DPD不仅用其在灵活度和适应度上的创新确保给予不同家庭组合舒适的室内膳宿空间，并且提供了多元的室外活动区域和生态景观。若占地100%，DPD排状的住宅楼设计可轻松被复制为住宅区并提供给30个居民。DPD是为了在蒙特利尔的寒冷北方气候中生活的家庭而设计的住宅。此设计联姻了蒙特利尔当地的连排住宅楼和中国传统的四合院类带庭院住宅。两种不同的房屋类型的组合适应不同的现代家庭组合结构。

The Deep-Performance Dwelling (DPD) is conceived as a Net-Zero Energy (NZE) and Low or Zero Carbon (LZC) system-built residential construction that manages its primary resources onsite. DPD seeks to radically reimagine and reinvent the way in which we live in cities. DPD responds to this imperative as a typologically unique design. It seeks to explicitly acknowledge and incorporate the socio-cultural and qualitative dimensions alongside the measurable and quantitative metrics in Sustainable Development and Green Building discourses. The innovative flexibility and adaptability of DPD ensures the comfortable accommodation of various family configurations all within only twenty percent of the allotted site. Within an urban context, this replication could occur over entire blocks. This adjoining of independent residences in a dense urban situation creates the opportunity for social interaction and a more collective form of living. DPD is designed for a family living in the cold northern climate of Montreal. It has emerged through a marrying of the local Montreal row house typology and the traditional Siheyuan house of China. These different influences have informed a home flexible and adaptable to a variety of configurations relevant to a growing modern family.

“自然之间”（Nature•Between）一方面旨在通过有机的建筑材料，可持续的建筑技术和设备，以及亲近自然的建筑空间来营造一种自然友好的居住环境。另一方面，假设在厦门的一个城中村，爷爷奶奶居住在房屋基地后面的老房子里，新的三口之家居住在新建住宅中。通过新老建筑之间空间的处理，三代人创造更多的交往机会，让三代人之间的关系更加融洽。

设计亮点：

- 100%建筑能源来自太阳能；
- 90%以上的建筑材料为自然有机的建筑材料；
- 工厂预制、平板车运输、施工现场拼装的局部3D模块化建造；
- 建筑设备、遮阳、天窗、家电等全部智能控制；
- 通过室内、室外庭园，营造人工空间之间多种形式的自然空间；
- 从空间层面关注新旧家庭中三代人之间的交往问题。

The Nature •Between solar house reflects the intention of creating a naturally friendly sense of living environment. The base is supposed to be at a site in Xiamen's old urban district. The grandparents are living in the old house part, northern of the site, while the young three-member-family is living in the newly built house. Through special design of the space between the old and new houses, we attempt to create more opportunities to communicate and share. The mending of family gap among generations is also a guiding concept of the design.

Design highlights:

- 100% of the building energy consumption can be covered by solar energy.
- 90% of the architectural materials are natural organic.
- Partial 3D modular construction, with the prefabricate components being transported by flat truck and assembled at the construction site.
- Entire intelligent control of architectural equipment, sunshade, skylight and home appliances.
- Create of various natural spaces among artificial rooms in the form of gardens inside and outside, making connections between human and nature.
- Pay close attention to the fixing of the gap among the three generations within old or new households from the aspect of special design.

自然之间

家+队

Nature•Between

Team JIA+

C-house

东南大学-布伦瑞克工业大学联队

Team SEU-TUBS

C-house中的字母C代表建筑形式上简洁的两层“立方体”和技术上的“核心”。“立方体”的建筑形式使C-house成为一个紧凑的形体，并使它拥有一个令人印象深刻的外观，可以适应不同的环境。技术“核心”是C-house的心脏，容纳所有的主要功能和建筑服务。C-house的一层拥有自由浮动的空间，并且因为“核心”的存在，一层空间的功能被明确的定义。同时，我们的二楼有三个房间，可以设置为共享空间或卧室。此外，我们把电动汽车停放在C-house中，使它成为我们房子中一个激动人心的展览。C-house的结构是基于我们团队专利设计的框架钢结构。它具有可以模块化预制，快速组装和拆卸，并反复100次以上的优势。钢结构是灵活的，给予我们适应“核心”周围不同布局的可能性。

The word C stands for a concise two-floor Cube house and a technical Core.The Cube shape can make our house to be a compact volume, and give it an impressive appearance and can fit to different circumstances. The Core is the heart of the C-house, which accommodates all the primary functions and building services. According to this, we place the core, which will be a prefabricated piece and integrate all the equipment and pipes, in the central to solve all the technical requirements.Due to this feature, we have got a free floating space on the ground floor and the function is defined clearly because of the core. Meanwhile, we have three rooms on the second floor which can be adjusted to a sharing space or bedroom. Furthermore, we park the electric car into our house and make it as an exciting exhibition of our house. The construction is based on the frame steel structure, which is the patent of our team. It has the advantage of modular prefabricated, rapid assembly and repeatedly disassembling more than 100 times. The steel structure is flexible and gives us possibilities to fit different layouts around the core.

栖居2.0

西安建筑科技大学队

Qiju 2.0

Team XAUAT

栖居2.0针对中国传统 “三代居”家庭设计，可满足大多数家庭的使用需求，建筑强调人、生活、技术的和谐统一，创造舒适、经济、绿色、健康的家。设计结合德州气候条件与中国传统空间特色。南侧设置室外庭院利用收集的雨水形成景观；入口设置被动式太阳房提供冬季采暖；卧室、起居室布置在建筑南侧获得良好的日照；充分考虑自然通风和天然采光，舒适节能。主体采用“木格构”承重体系，建筑主体采用钢、胶合木、木塑等绿色环保材料，低碳、可回收、易降解。绿色适用技术整合市场成熟的设备、强调性价比高的适用技术，着重绿色技术与建筑空间一体化。全屋的智能系统让建筑使用更加节能和人性化。

Qiju 2.0 is based on the traditional Chinese living pattern, three generations with one roof, meeting the needs of most families in China. Considering the “people, life and technology” together is one of our important design philosophies, to create a comfortable, economic, green, and healthy home. The design combines climate conditions in Dezhou with traditional Chinese spatial characteristics. The outdoor landscape garden in the south side uses the collection of rainwater. The passive solar space at entrance to provide winter heating. Bedrooms and living room are distributed in the south side of the building to obtain good sunshine. There is a full consideration of natural ventilation and natural lighting in the house to provide a comfortable and energy saving environment. The main structure employs the "wood lattice" load-bearing system. The main construction is consisted of steel, glued wood, wood and other green materials which are low carbon, recyclable and easily degradable. Green technology: integrating the market equipment; emphasizing the application of cost-effective technology; focusing on the integration of green technology and building space which shall get a great development. The intelligent system for the whole building leads more energy efficient and humane.

V-bnb Home

上海交通大学-UIUC联队

Team SJTUIUC

V-bnb Home基于中国新农村建设大背景，着眼于解决农村中较为凸显的社会问题，包括房屋闲置以及迎合新农村规划中的生态旅游和新型社区的解决方案等问题。Team SJTUIUC以德州市待转型开发的百余农村为原型，以发展未来新农村、探索未来居住方式为目标，以解决农村中普遍存在的“隔代居”——“三代居”——“隔代居”的房屋使用情况为理念，以单体构建未来新型社区为方向，并引入“民宿（bnb）”的概念以适应农民房屋用途的周期性变化，通过该商业形式迎合农民经济增收的基本需求。“隔代居”：留守老人和孩子，成年人外出务工，部分房屋空闲，可用于“民宿”；“三代居”：农忙或者逢年过节时，成年人归来，“民宿”停止。

V-bnb Home's target is mainly focused on “The left-behind families” in Chinese villages upon the background of rapid urbanization. Based on our detailed and persuasive market research, we defined our direction of market promotion. We put Dezhou's villages as prototypes, set the goal of exploring the future ways of living and the status of new countryside and try to solve the widespread problems in rural areas: The Cyclical changes in the using way of rural house – “two generations” – “three generations” – “two generations”. Therefore, we put forward the concept of “V-bnb” as a solution to the cyclical change of house using way. Since “bnb” has become extensively popular in China, Therefore, we choose the “bnb” as an idea and direction in the developing of our house. Regarding for “V”, it means three kinds of relationship of the house: it's for Villagers (to increase income), it's for Visiting (by neighbors or visitors, it's a start point of turning the state of houses from completely private to semi private and semi-public) and it’s for Vacation (for city people who need an ecotourism to experience the rural life).

i-Yard 2.0的设计灵感来源于TEAM BJTU对中国当下的环境恶化和老龄化社会问题的关注和思考，我们提出“新城镇养老社区”的概念，让退休老人远离城市，回到风景优美的乡村生活中去。i-Yard 2.0是一栋包含多重庭院的两层住宅，一层满足老人生活所需的空间，全方位考虑老年生活的便利与舒适，二层是屋顶平台和临时空间，用以满足子女居住和休闲娱乐需求。

- “工业化”是设计的基础，预制装配式模块便于运输和快速搭建，经济节能，利于养老社区的普及和推广。
- “定制化”是设计的核心，针对不同的老人，提供最具关怀的精细化设计和多种能源解决方案，打造田园生态住宅。
- “智慧化”是设计的亮点，结合高效节能的现代科技手段，让老人在宜人的环境里，度过最幸福的晚年生活。

The design of i-Yard 2.0 is based on the environmental issues and aging problems. Escaping from cities and diving into the charming countryside, which exactly our concept is, can be a dream of so many senior citizens in China. Multiple dimensions yards penetrate into the house; all essential living spaces are located in the first floor. Considering the desire to a convenient and comfortable life, we come up with the idea of “moving back line” that the moving routine is no need of backward.

- Industrialization is the design foundation. So we choose prefabricated module, which is beneficial to market promotion, to pursue the advantages in transport, fast construction and energy conservation.
- Customization is the design core. We pour love and care to optimize our design for different individuals. A variety of energy solutions including ecological yard is also taken into consideration.
- Intelligence is the design highlight. Less is more. So we are going to present advanced energy saving technology in the simplest way to show the real meaning of smart life.

i-Yard 2.0
北京交通大学队
Team BJTU

智巢
沈阳工程学院队
Smart Nest
Team SIE

Smart Nest这个名字的灵感来源于小鸟窝，虽然鸟窝很小但是无比的温馨。鸟巢一般只有一个出口，这大大提升了鸟巢的保温效果，大自然赋予了万物以灵性，更是我们最好的导师，而我们的太阳能小屋Smart Nest正与这一理念巧妙的相结合。Smart Nest运用环保节能的材料，通过精心的设计提升房子的保温性能来降低能耗，通过建筑本身的一体化高效太阳能技术就能解决建筑的所有能源需求，即便是在北方寒冷冬季，也不需要通过任何辅助能源，仅靠绿色的太阳能，就能为房子供暖。Smart Nest以“家”为核心，同时解决了居家养老、育儿和年轻夫妇休闲减压的问题。

The name of the model “Smart Nest” was inspired by the bird nests which are small but cozy. Moreover, with only one exit, the level of insulation of the bird nests is highly improved. Hence, more energy is saved. The concept of our solar house “Smart Nest” is a subtle combination of nature and modern construction. With elaborate design, Smart Nest takes full advantage of environmentally friendly and energy-saving materials to improve the heat insulation property of the house. Especially in winter, the heating supply of the house relies solely on clean solar energy. No any other auxiliary energy is needed. With “Family” as its core, Smart Nest helps address the issues of home-based care for the aged, children rearing and decompression of young couples at the same time.

EnergyPLUS Home 4.0

同济-达姆联队

Team TJU-TUD

正能量房4.0的概念不仅仅是一座独栋小屋，也考虑了中国市场现状，具备成为公寓楼中一户单元的可能。我们将东西两侧设计为封闭，南北两侧开敞，使得这一原型保留横向拼接的潜能。除了本身具备极佳热工性能的南北立面，我们加设了两个缓冲区来提高技术和建筑性能。寒冷的冬季，它们成为气候缓冲层，若在晴天，还可成为阳光房。夏季缓冲区打开，天花板则成为遮阳构件。过渡季节人们是可以直接进入缓冲区的，坐到阳台上，阅读，喝咖啡，就像房间本身扩大了一样。除了可以现场建造的缓冲区，建筑主体结构会由12个预制钢盒子组成，让功能更加灵活，建造过程更可持续。

The EnergyPLUS Home 4.0 is based on not only a one family house, but the concept to fit a unit of an apartment building for the Chinese market status quo. We designed the floorplans closed on west and east sides, and opened on north and south sides, to remain the prototype the possibility to join several homes into one amalgamated dwelling. Beyond the north and south facades which already have perfect thermal performance, there are two buffer zones added to make the home perform better both technically and architecturally. The zones could act as climate buffer layers in cold winter and even winter gardens when there is comfortable sunshine. In summer, the windows could be open, and then ceilings on south buffer zone turn to be sun-shading panels. In transfer seasons, people could directly go out and sitting, reading, or enjoying their coffee on the balconies, then the zones would be additional space just to enlarge the room area. Besides the buffer zones which could be built on site, the main part structure would be made of 12 prefabricated steel boxes, let the function even more flexible and the whole construction process more sustainable.

真之家

太阳的后裔队

R.E.A.L House

Team Solar Offspring

以太阳能为唯一能源的“真之家”希望能够解决能源危机问题以及老龄化的社会问题。我们的设计理念是“真”，设计一栋老年住宅，“真”字包含了“呼吸”、“生态”、“智能”、“灵活” 四个主题，分别对应我们的四个核心技术“新风系统”、“太阳能系统”、“智能家居”和“可变式模块化建造”。室内整体色调采用冰咖啡色系，棕色可暖可冷，黄白互衬，让人深觉经典和余味。空间设计中用葡萄酒深红点缀浅棕，希望打造出咖啡般的生活情怀。家具的选用主要以圆角、灵活、自然为主，给老人带去安心亲近的感觉。

The R.E.A.L House which uses solar power as the only energy source hopes to solve the energy crisis and the aging problem. The concept of our design is “real” and we plan to build a senior housing. The word “real” represents four ideas – respiring, ecological, smart and flexible, corresponding to our four core technologies – Central Ventilation System, Solar System, Smart House and Variable Modular Building. The indoor tonal basically uses the iced coffee color, which can be either warm or cool with the yellow and white against each other, leaving people endlessly classic and agreeable aftertaste. As for the space design, we intersperse light brown with wine red in the hope that it can create an elegant and delicate feeling of life. In order to make the elderly feel ease and closeness, we choose the furniture with rounded corner, natural sense and flexible function.

LONG PLAN

华南-都灵理工大学联队

Team SCUT-POLITO

LONG PLAN是一种新型的狭长型住宅。它的设计理念是基于这样一个现实，即现代青年人具有巨大的住房需求，并追求新型的生活模式。然而现代城市为追求高容积率，盲目建造高层住宅，难以满足青年群体日益增长的居住生活质量需求。LONG PLAN的灵感来源：传统的狭长式住宅，能形成低层高密度的社区，具有容纳大量人口活动和激化街区活力的优势。基于“服务”和“被服务”空间的理性划分，LONG PLAN引入了“集成体”概念，将服务性设施与辅助性空间高度集成，以获得更为舒适的居住环境和灵活自由的空间功能。LONG PLAN定位于创客、艺术家、设计师等富有创造力与行动能力的新时代青年群体，从能源、生产、生活三个方面营造一个极具活力的青年集合共享社区。

LONG PLAN is a new model of long and narrow house. Its concept is based on the fact that new generation has great housing demands and pursues new living style. However, so many high-rise buildings can be found in most modern cities in order to satisfy the largest plot ratio. The consequences of it lead to tedious and indifferent living pattern which is contradictory to the demands of younger generation for high living quality. Initial Inspiration: Conventional long and narrow residences which are popular in low-level but high density communities have advantages of accommodating mass of population and providing sufficient space for social communication. On account of the concept of “serving” and “being served”, LONG PLAN proposes feasible and rational space partition leads in the idea of “integration”, which can closely combine serving facilities and assisting space to achieve a more comfortable and flexible free space. LONG PLAN locates in young groups of new era such as makers, artists and designers who have creativity and action capability and constructs a dynamic and communal community from three aspects of energy, production and living.

乐龄雅居

宁波诺丁汉大学队

Duo Pension Sustainer

Team UNNC Alpha

“乐龄雅居”是为针对50、60后知识老人面临的空巢家庭现象，在中国老龄化，新城镇化等大背景下而提出的可持续、低成本，高功能性的居家养老模式。整栋建筑通过7个回收的集装箱模块化改建而成，通过的可移动建筑模块和避难所的使用，来应对不同气候及居住模式的变化。建筑设计充分考虑了目标群体的生活习性及其需求，针对性地设计了室内的空间和布局。我们从园艺疗法，生态及多功能设计出发，通过建筑的景观设计来满足老人对自然与居住环境的紧密结合和室内舒适度的需求。“乐龄雅居”通过创新技术如BIM平台，ETFE薄膜发电，鱼菜共生系统以及雨水回收和生态墙等的应用，意在为从城市返乡的退休老人提供一个舒适，可持续的空间和生活方式。

Duo Pension Sustainer will deliver an optimal AIP (Aging-in-Placing) housing option to foster a sustainable, low-cost, multi-functional living style among active Chinese retirees under the imminent social topic of senior being faced with the phenomenon of empty nest family in china. The house will be modularity constructed with 7 recycled shipping containers that can be combined into a unique solution to not only diverse family living modes (through moveable component) but also against extreme weather (through shelter). Architectural design in the perspectives of interior space and layout shows the completely consideration for the lifestyle and their demand of target Consumers. In terms of landscape design, our team highly respects the elderly's desire on the interconnection between the nature and the built environment with the consideration of biophilic design and horticulture therapy. The innovation technologies involved consist of the BIM platform implement, innovative ETFE-PV film pillow, the aquaponics system, the energetic biophilic wall and the recirculating rainwater irrigation cycle, are beneficial to the comfortable and sustainable living space and lifestyle to the target retire people.

The Cactus Home

以色列队

Team Israel

Cactus Home的理念是基于共享社区创立一个共同住宅项目，这个想法来源于以色列的“kibbutz（集体农场）”。为参加本次竞赛，团队将在一间仓库为一对夫妻设计并建造一间公寓，并且与在另一间的共享空间区分开。公共空间的选择由竞赛要求决定，例如洗衣房，同时也会考虑到个人和设计的决策。房屋设计用于优化太阳能和集成技术元素，如光伏、太阳能集热器、光伏建筑一体化等一些开拓性和创新性的系统、技术和产品。除此之外，团队还会综合进一些独特的文化特征，例如植被，或者是“mashrabiya（阿拉伯传统窗花）”。设计将使用循环水为家庭种植的食物和草药提供垂直系统，家具设计成融合了几种职能的多功能家具，其由可持续并且经久耐用的材料制成，如竹子和纤维水泥板。

The design concept of Cactus Home is to create a cohousing project based on a sharing community. This idea was inspired by the Israeli "kibbutz". For the competition, the team will plan and build one apartment for a young couple in one store, and parts from shared spaces on the other one. The choice for public spaces will be determined by contest needs, like laundry room for example, and from personal and designed decision making. The design approach of the group deals with the integration of a multi-disciplinary work in order to achieve an innovative solution. As designed for optimal solar power and integrated technological elements such as photovoltaics, solar thermal collectors and building-integrated PV, among other pioneering and innovative systems, technologies and products. Alongside these modern technologies, the team will also include distinctive cultural features, such as vegetation, or the “mashrabiya”.The design will provide a vertical system for home-grown food and herbs, using recycled water. The furniture will be designed to be multi-purpose, combining several functions. It will be produced from sustainable and long-lasting materials such as bamboo and fiber-cement boards.

竞赛场地

Competition Site

2018中国国际太阳能十项全能竞赛场地，山东 . 德州

Solar Decathlon China 2018, Dezhou, Shandong

2018年中国太阳能十项全能竞赛场地位于德州重点打造的第三代新城---德州高铁新城的核心区，距高铁德州东站2.8公里，总占地934亩，分为竞赛区、企业示范区和服务配套区三部分，赛后将打造成全球首个集分布式光伏、绿色住宅、智能生活等最新技术、产品和实践的太阳能德州小镇。

The competition site of SDC 2018 is situated at the third generation city---core area of Dezhou High Speed Railway New City on whose construction Dezhou gives main efforts. It is 2.8km away from Dezhou East Railway Station and covers 934 mu, and can be divided into three parts, namely competition area, enterprise demonstration area and related service center. After the competition, it will be made into the first solar town in the globe integrating the latest technologies, products and practices such as distributed photovoltaic power generation system, green house, intelligent life etc.

园区鸟瞰
Aerial View of the Competition Site

太阳翼
Solar Wings

光明阁
Guangming Pavilion

企业展示区AB配套区
Corporate Pavilions and Supporting Area A&B

超级大棚
Super Tent

商业配套与大棚区效果图
Commercial Supporting Area and Super Tent Expo Area

赛事亮点

Highlights of Competition

市场导向

- 符合中国市场的双层建筑
- 新增电动汽车及充电桩能源平衡考核
- 新增储能技术提高再生能源利用率
- 为解决中国环境挑战新增创新（空气质量、水、供暖等）

教育与人才

- 1,000+经过实际项目运作考验的人才
- 近50所国际知名大学的专家库及智力支持
- 22支中外联合赛队，国际视野本地化

智能低碳园区实体

- 参赛作品永久保留在赛场
- 将赛场内的住宅、公建、电桩、能源系统互连，打造中国第一个智能低碳园区示范实体

更大影响力

- 3个月公众展期
- 10,000+m^2独立展示区域
- 9个主题周（能源、教育、生活……）
- 360度全媒体宣传
- SD低碳发展系列峰会

创新与创业

- 鼓励学校以市场需求为导向进行创新
- 创立SD创新基金

后SD运作

- 成立由战略合作伙伴、政府、高校、金融机构等组成的“SDC低碳发展联盟”
- 以SD为起点，实际参与中国新型城镇化、美丽乡村等实体项目

Market-Oriented

- Two-storey houses meeting the demand of China
- Energy balance assessment of electric vehicle and charging equipment
- Energy storage technology increasing the utilization of renewable energy
- Innovations responding to the environmental challenges in China (air quality, water, space heating, etc.)

Education and Talents

- 1,000+ talents with practical and research experience in real projects
- Intellectual support from expert databases of nearly 50 internationally renowned universities
- 22 Chinese and international teams, localization of international vision

Intelligent Low-Carbon Park Entity

- Competing houses will be permanently retained on site
- Linking the residential houses, public buildings, charging equipment, energy system together, build China's first intelligent low-carbon park demonstration entity

Greater Influence

- 3-months public exhibition period
- 10,000+m^2 independent exhibition area
- 9 theme weeks (energy, education, life...)
- 360° media publicity
- Summits on SD low carbon development

Innovation and Entrepreneurship

- Encourage market-oriented innovations
- Initiate SD Innovation Funds

Post SD Operation

- Establish "SDC Low-carbon Development Alliance" consisting of strategic partners, government, colleges, financial institutions, etc.
- Starting from SD, participate in China's new urbanization, Beautiful Villages and other real projects

日程规划

Schedule

2015.7	承办城市招标 Host City Bidding
2016.1	承办城市发布、赛队招募正式通知 Host City Announcement; Teams Recruitment
2016.2	赛队方案提交 Schematic Design Submission
2016.4	全球启动会、入围赛队发布 Global Launching Ceremony; Teams Announcement
2016.7	第一次培训会及SDC发展论坛 First Training Session; SDC Development Forum
2016.7 – 2017.10	房屋方案扩初设计 Design Development
2016.11	房屋扩初设计图纸提交 Design Development Submission
2017.1	第二次培训会 Second Training Session
2017.2 – 2017.8	房屋方案深化设计 Detailed Design
2017.3	SDC全球实习生计划启动 SDC Global Internship Initiative
2017.7	房屋地基图纸提交 Foundation Drawing Submission
2017.9 – 2018.6	房屋预搭建和测试 Preliminary House Assembly and Testing
2018.1 – 2018.7	房屋运输 House Transportation
2018.7	房屋现场搭建 On-Site House Assembly
2018.8 – 2018.10	开幕式、竞赛、主题周、公众参观、颁奖礼、闭幕式 Opening Ceremony; Competition; Theme Weeks; Public Visiting; Awards Ceremony; Closing Ceremony

启动仪式
Launching Ceremony

2018年中国国际太阳能十项全能竞赛全球启动仪式于2016年4月28日在北京举办，中国国家能源局、美国能源部、美国驻华大使馆、中国产业海外发展协会、德州市人民政府、参赛院校代表、各企业代表等到场参加。陈飞市长在启动会上强调：“我们希望用更好的能源，更好的技术，来改变我们的城市，来改造我们的乡村”。

天泰集团董事长、前中城联盟主席王若雄，大成集团董事局主席、前阿拉善SEE生态协会主席韩家寰，远大科技集团董事长兼总裁、泰山会成员张跃，美国能源部太阳能十项全能竞赛创始人理查德金通过视频传达了对此次竞赛的期盼和祝福。

The launching ceremony of SDC 2018 was held in Beijing on April 28th, 2016, on which occasion presented representatives from China National Energy Administration, United States Department of Energy, U.S. Embassy, China Overseas Development Association, government of Dezhou City, participating universities and enterprises. During the ceremony, Fei Chen, mayor of Dezhou City, stressed, “We hope to change our city and countryside with more favorable energy and more sophisticated technologies.”

Peter Wang, chairman of Tiantai Group and former Chairman of China Urban Realty Association, Mark Han, chairman of Dachan Group and former chairman of SEE Conservation, Yue Zhang, chairman and president of Broad Group and fellow of Mount Tai Industry Research Institute, and Richard King, founder of United States Department of Energy Solar Decathlon, sent their expectations and blessings to this competition through video.

原国家能源局副局长 张玉清

Yuqing Zhang, Former Deputy Director of National Energy Administration

中国产业海外发展协会会长 胡卫平

Weiping Hu, Sectary-General of China Overseas Development Association

德州市市长　陈飞

Fei Chen, Mayor of Dezhou City

美国驻华大使馆能源办公室主任 傅维君

Helena Fu, China Office Director of United States Department of Energy

SDC2018正式启动

SDC 2018 Officially Launched

第一次培训会
First Training Session

SDC第一次培训会于2016年7月27-29日在德州成功举办，300名参赛队代表参会，近500名企业人士参加了同期举行的“SDC与新型城镇化论坛”。论坛上来自政府、高校、企业的各方人士对“新城镇新能源”、“新城镇新模式”、“新城镇新交通”、“新城镇新德州”等方面进行了富有成效的研讨。

The First SDC Training Session was held in Dezhou from July 27th to 29th, 2016, in which about 300 representatives from competing teams participated. Meanwhile, nearly 500 representatives from various enterprises took part in the SDC Low-Carbon Smart Urbanization Forum. During the forum, representatives from government, colleges, and enterprises made a fruitful discussion on issues such as “New City, New Energy”, “New City, New Model”, “New City, New Transportation”, and “New City, New Dezhou”, etc.

国家能源局新能源司副司长梁志鹏

Zhipeng Liang, Deputy Director of New and Renewable Energy Department of National Energy Administration

参赛队第一次培训会现场

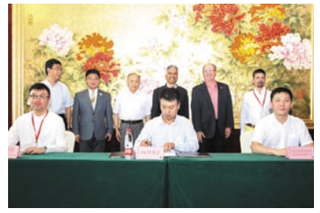
The First Training Session Scene

SDC与低碳智能城镇化论坛

SDC Forum: Low-Carbon Smart Urbanization

赛队团队建设

Team-Building Activities



SDC与ECP、东润环能签订合作协议

SDC Signed Cooperation Agreement with ECP and East Environment Energy

赛队赛场考察

Site Survey

第二次培训会
Second Training Session

SDC第二次培训会于2017年1月14日-15日在德州成功举办，组委会人员分别就本次竞赛场地、竞赛规则、电网连接以及测量与积分系统进行了充分讲解；各参赛队对房屋进行详细介绍。组委会诚邀都市实践者刘晓都及SOM设计合伙人Brian Lee为赛队进行城镇化发展中的建筑讲座。此次培训会上各参赛队房屋模型首次亮相德州，引起媒体广泛关注和报道。

The Second SDC Training Session was held in Dezhou from January 14th to 15th. Staff from SDC organizing committee made comprehensive presentations about the competition site, competition rules, grid connection and measurement, and scoring system. Teams demonstrated their houses in details. Xiaodu Liu, co-founder of Urbanus, and Brian Lee, design partner of SOM, were invited to give lectures on the topic of Architecture and Urbanization. During the training session, Teams' 3D house models made their first public appearance in Dezhou, which attracted extensive attention of the media and was reported widely.



房屋模型展示现场

House Model Demonstration



组委会、专家技术培训

Technical Training from SDC Organizing Committee Experts



赛队学生房屋设计介绍

House Design Presentation by Solar Decathletes

SDC大家庭

SDC Family

媒体宣传
Media

纸质媒体

白宫新闻、法新社、新华社、人民日报海外版、中华工商时报、科技日报、中国青年报、中国能源报、北京科技报、中国经济导报、中国新闻社、人民日报、光明日报、中国改革报、中国电力报、中华工商时报、经济日报、21世纪经济导报、经济参考报、能源评论、光伏产业观察报、光伏信息报、中国房地产包、中国产经新闻、今日财富报、北京竞报等。

电视广播媒体

中央电视台-1、中央电视台-4、中央人民广播电台、中央电视台新闻频道、CCTV-NEWS、内蒙古电视台、民生大同电视台、江苏教育电视台、南京电视台、凤凰卫视、东方卫视、伊朗国际新闻电视台、SVT Vastnytt、TV4 Göteborg。

Paper Media

White House Press, Agence France Presse, the Xinhua News Agency, People's Daily Overseas Edition, China Business Times, Science and Technology Daily, China Youth News, China Energy News, Beijing Science and Technology News, China Economic Herald, China News Service, People's Daily, Guangming Daily, China Reform Daily, China Electric Power News, Economic Daily, 21st Century Business Herald, Economic Information Daily, Energy Review, Photovoltaic Energy Industry Observer, Photovoltaic Newspaper, China Real Estate Business, CIEN, Fortune Today, the First, etc.

TV & Broadcasting Media

CCTV-1, CCTV-4, China National Radio, CCTV-13, CCTV-NEWS, Inner Mongolia TV, Datong TV, JSETV, NJTV, Phoenix Satellite Television, Dragon TV, Press TV, SVT Vastnytt,, TV4 Goteborg.

往届回顾

SD China 2013

第一届中国国际太阳能十项全能竞赛于2013年8月2-13日在山西大同举办。

Solar Decathlon China 2013 was held from August 2nd to 13th in Datong, Shanxi Province.

来自 **13** 个国家的 **35** 所高校组成 **22** 支代表队
32 个国籍的 **800** 多名学生聚首大同
20 所太阳能房屋最终落成联网
430 家企业和机构赞助支持大赛
包括 **180** 家 中国企业和 **70** 家美国企业
接待 **20** 余人次国家和省级领导、驻华大使视察
6000 多名工作人员参与大赛筹备和现场工作
450 名实习生和志愿者为大赛服务

接待 **26** 万观众参观
超过 **53** 万人次房屋参观
国内外网络媒体报道超过 **1200** 篇
国内外近百家纸质媒体报道 **600** 余篇
国内外电视广播报道 **85** 条
新浪微博粉丝超过 **7200** 个
100 多家企业期间与承办城市洽谈项目投资
签订投资意向书 **11** 份，总金额达 **110** 亿人民币

22 teams consisting of 35 universities from 13 countries participated
Over 800 decathletes with 32 nationalities meeting at Datong
20 houses built and gridded
430 sponsor enterprises and organizations, including 180 from China and 70 from the US
More than 20 national and provincial level leaders and ambassadors visited
Over 6000 organizers and sta serving for the competition
Over 450 volunteers from all over the world

Around 260,000 visitors
Over 530,000 house visits
Over 1,200 online articles covered SD China
Over 600 articles in nearly 100 publications worldwide
85 television and radio interviews worldwide
More than 7,200 Sina Micro Blog fans
Over 100 enterprises visited for investment opportunities
11 investment agreements worth RMB 11 billion in total signed

往届参与企业（部分）

Previous Participating Enterprises (Partial)

MONIER
Autodesk
Boloni 科宝·博洛尼
dasso 大庄 全球竹应用推进者
APPLIED MATERIALS
ARDEX
ABB
NATIONAL INSTRUMENTS
CSR
DAIKIN
Schneider Electric
WGC CRANES
reece
doka
suez environnement
Dow
NICHIHA
PODIO
GCL 协鑫新能源
清华同方 TSINGHUA TONGFANG
IBM
MUROBOND
GM
Tons:
Trinasolar The power behind the panel
中国建筑第四工程局有限公司
GITECH 伟景行
Panasonic ideas for life
HERON'S WING VICARY'S WINERY
FOSROC
招商局集團 CHINA MERCHANTS GROUP
BIAD
科逸 COZY
FOTILE
Honeywell
Ducalus 贝克洛
VELUX
BAODING TIANWEI GROUP

המרכז האקדמי ויצו חיפה
THE NERI BLOOMFIELD SCHOOL OF DESIGN

The College of Management Academic Studies
Dept. of Interior Design

TEL AVIV UNIVERSITY
THE PORTER SCHOOL OF ENVIRONMENTAL STUDIES

Shenkar College of Engineering and Design

RAMBOLL

akt II

WILLIAM GREY.

superfusionlab

ebb

ecobuild the future

HunterDouglas

GT gardiner&theobald

urban future organization

NOL

hansgrohe

BDSP

bd

BCA

jtc Corporation

METROPOLITAN WORKS

AECB the sustainable building association

ACCLAIM LIGHTING

Greenbuild NEWS

AgFacadesign

Jarrett & Lam CONSULTING

accoya

NORTHROP

LS

DHI

ENERGYMATTERS.COM.AU

三雄·极光照明

BLUESCOPE LYSAGHT

NEXTEK Power Systems

NIPPON PAINT

phoenix SOLAR

CLIPSAL by Schneider Electric

DUPONT

GRUNDFOS

SILKROAD

KELI

REHAU Unlimited Polymer Solutions

Multi-Contact MC STÄUBLI GROUP

ROXUL FIRESAFE INSULATION

SINGAPORE SAFETY GLASS PTE LTD

SMB SMB Electric Pte Ltd

Intumex ASIA PACIFIC

dB Acoustics Pte Ltd delivering Best sustainable acoustic solutions

power-one Changing the Shape of Power

VENTO

Evorich Flooring "the leader in eco floors"

SERIS

BCA ACADEMY of the built environment

RIGEL

Ecophon SAINT-GOBAIN A SOUND EFFECT ON PEOPLE

SIEMENS

VZUG The Swiss Leader

JA SOLAR 晶澳太阳能

GE

BOSE

Johnson Controls

tyco

SAINT-GOBAIN

nationalgrid HERE WITH YOU. HERE FOR YOU.

KNAUF 可耐福

ahj architectural hardwood JOINERY

力诺瑞特

MANTON AIR-SEA

ZTT 中天科技

steves JOINERY

BOC A Member of The Linde Group

weathertex timber made perfect, naturally

Keeler Hardware architectural ironmongers

SE 興業太陽能 SINGYES SOLAR

JinKO Solar Building Your Trust in Solar

AUTODESK.

First Solar

LINUO POWER 力诺光伏

山东普元建设集团

BETA CELEBRATING 35 YEARS

SUNGROW Green and Effective

微信二维码
SDC WeChat

微博二维码
SDC Weibo

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