

G20 / IPEEC

最佳节能技术和最佳节能实践(双十佳)成果发布

The Release of the 2nd Round of G20/IPEEC TOP TEN

Best Available Technologies & Best Practices (TOP TENs) List

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一、“双十佳”简介

TOP TENs Brief Introduction

• (一) 背景

- 成立时间: 由IPEEC (国际能效合作伙伴关系组织) 于2013年设立
- 目 标: 旨在遴选和推广各领域最佳节能技术和最佳节能实践, 为促进参与国节能技术进步提供信息来源。
- 牵 头 国: 中国、澳大利亚
- 成 员 国: 美国、法国、日本、韩国、加拿大
- 执 行 机 构: 中国质量认证中心
- 技术支持机构: 美国太平洋西北国家实验室、美国劳伦斯伯克利实验室、日本节能中心、法国ADEME等

• (一) Background

- Date of setup: 2013, setup by IPEEC
- Objective: share and disseminate information on the BATs and BPs in use today, as well as to accelerate the widespread application.
- Leading countries: China, Australia
- Member countries: U.S., France, Japan, Korea, Canada
- Implementing agency: China Quality Certification Centre
- Technical supporters: LBNL, PNNL, ECCJ, ADEME, etc.

一、“双十佳”简介

TOP TENs Brief Introduction

- **(二) 基本定义**

- 1. 最佳节能技术：产业化技术，而不是研发阶段的技术。
- 2. 最佳节能实践：侧重于节能管理。
- 3. 评选领域涵盖：工业、建筑、交通、公共服务等领域。

- **(二) Basic Definition**

- 1.TOP TENs Best technologies requirement: in the phase of industrialization,not in research or development phase. That is why we called it ‘Best Available Technologies’.
- 2.TOP TENs Best Practices requirement: focus on energy efficiency management.
- 3.TOP TENs scope: industry, transportation, buildings and public services, etc.

二、“双十佳”评选准则、评价方法

TOP TENs Evaluation Criteria and Methodologies

- **(一) 评选准则**

- 1. 前置否决性指标
- (1) 环境、健康、安全
- (2) 技术成熟度
- 2. 定性、定量指标

(一) Evaluation Criteria

- 1. VETO Index
- (1) Environment, Health, Safety
- (2) Technical Maturity
- 2. Qualitative and Quantitative Index

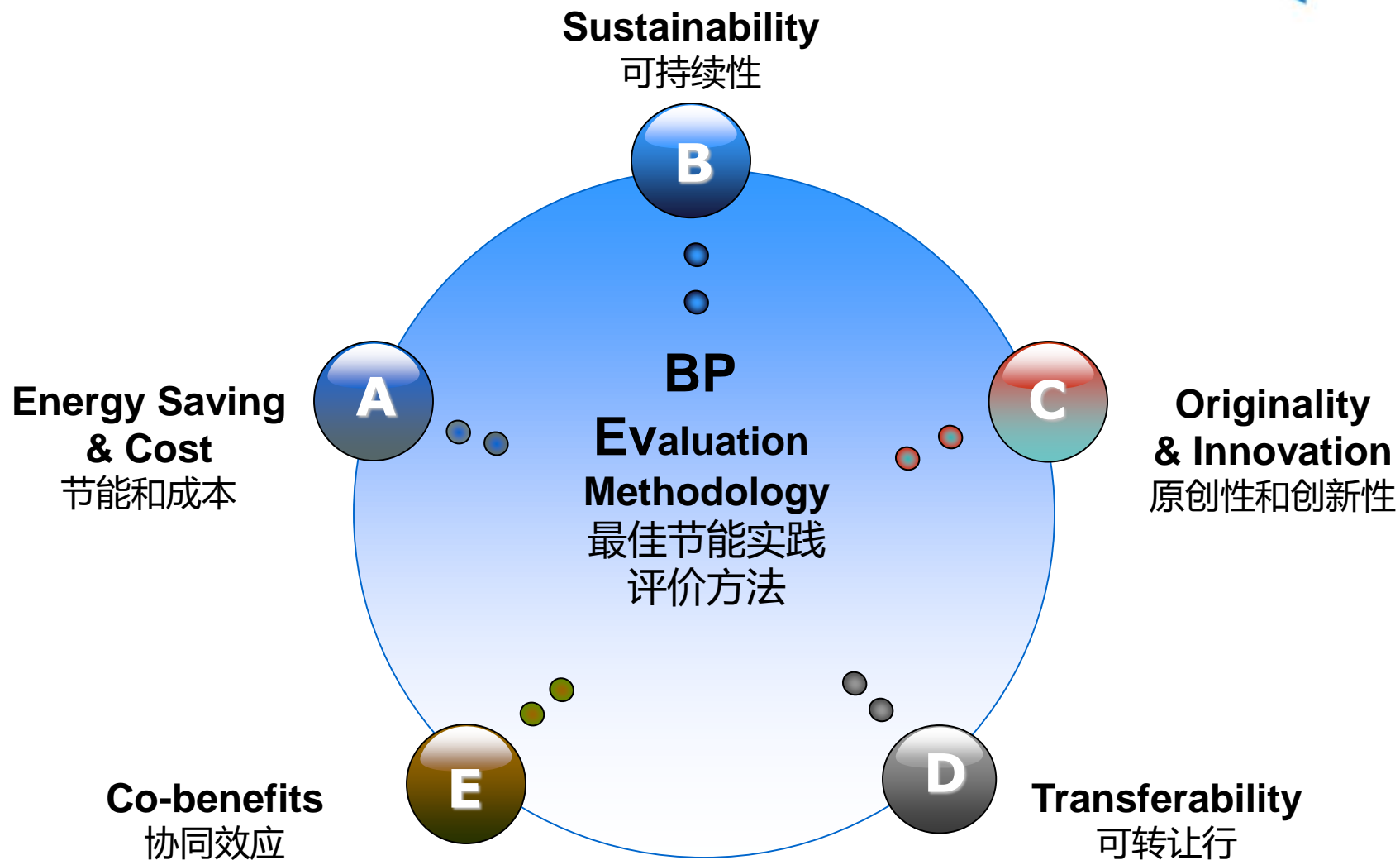
二、“双十佳”评选准则、评价方法

TOP TENs Evaluation Criteria and Methodologies



二、“双十佳”评选准则、评价方法

TOP TENS Evaluation Criteria and Methodologies



三、“双十佳”工作组进展和第二轮国际“双十佳”评选成果

TOP TENs Progress and Achievements of the 2nd round of Evaluation

(一) 工作进展 TOP TENs Progress



三、“双十佳”工作组进展和第二轮国际“双十佳”评选成果

TOP TENs Progress and Achievements of the 2nd round of Evaluation

(二) 第二轮国际“双十佳”评选成果

The Achievements of the Second Round of TOP TENs Evaluation

各国国内“双十佳”清单：各领域内技术/实践覆盖面更广、分类更细。

The 2nd batch of domestic TOP TENs lists: finer classification and wider coverage of BAT and BP within each sector.

工业BATs Industrial BATs

- 余热余能回收利用
- 电机系统
- 传热导热隔热
- 节能控制芯片技术
- 清洁煤气化技术
- 热电联产技术
- . . .

工业BPs Industrial BPs

- 汽车制造
- 钢铁行业
- 机场
- 纺织行业
- 石油、石化行业
- 食品行业
- . . .

建筑BATs Building BATs

- 热泵和热水器
- 空调
- 墙体
- 门窗
- 照明
- 用能管理
- . . .

建筑BPs Building BPs

- 酒店
- 零能耗建筑
- 生态园
- 商场
- 科技馆
- 学校
- 医院
- . . .

三、“双十佳”工作组进展和第二轮国际“双十佳”评选成果 TOP TENs Progress and Achievements of the 2nd round of Evaluation

- 工业领域 国际最佳节能技术清单

- International List of Top Ten Best Available Technologies (BATs)---Industrial sector

BATs Title	Nominator
Energy Saving Technology Based on Three-phase Sampling and Fast Response	China
Energy-saving control chip technology on body voltage sensor	China
Heat, cold and electricity generation by tri-generation	France
High-strength and low thermal conductivity heat insulating materials "ROSLIM™Board GH"	Japan
Infrared technologies for drying and baking thin products or coating	France
Matrix Converter U1000	Japan
Optimum Control of High Efficiency Inverter Centrifugal Chillers using a Heat Source Integrated Control System	Japan
Selective and mass heating by microwaves and infrareds	France
The high- effective energy- conservation recovery technology of the excavator' s potential energy	China
Variable Speed Drives (VSD) applied to centrifugal and other dynamic machine (pumps,fans, compressors)	France

三、“双十佳”工作组进展和第二轮国际“双十佳”评选成果 TOP TENs Progress and Achievements of the 2nd round of Evaluation

- 工业领域 国际最佳节能实践清单
- International List of Top Ten Best Practices (BPs)---Industrial sector

BPs Title	Nominator
Cooking of food products using Micro-waves	France
ECO activities to actualize “Visualization(energy audit)” and “Optimization” using EQS-AD10 (Environmental Andon System)	Japan
Energy Management System Construction Case	China
Energy-saving Practical Case Through Centralized Management and Control By Yanggu Xiangguang Copper	China
High frequencies for gelation of PVC coverings	France
High Frequency sticking of composite products	France
Promotion of energy conservation by circle activities at a paperboard manufacturing plant	Japan
Reducing CO2 emissions in the supply chain	Japan
Reduction of base-load energy usage	Japan
Shagang Group 2500kW dust exhausting fan energy-saving reconstruction project	China

三、“双十佳”工作组进展和第二轮国际“双十佳”评选成果 TOP TENs Progress and Achievements of the 2nd round of Evaluation

•建筑领域 国际最佳节能技术清单

•International List of Top Ten Best Available Technologies (BATs)---Building sector

BATs Title	Nominator
Building energy management and information systems	U.S.
Carbon Dioxide (CO2) Heat Pump Water Heaters for Home Use EcoCute “ESTIA Premium Model”	Japan
Condensing gas tankless water heaters	U.S.
Heat pump water heaters	U.S.
Intelligent District Heating platform with monitoring and operation optimization technology in heating system	China
Key technologies of centrifugal units based on temperature and humidity independent control system	China
Light-Weight, Small-Sized, Low-Cost High Efficiency LED High-Bay Lighting Fixtures	Japan
Occupant responsive lighting	U.S.
Split-type Air Conditioner “Kirigamine FZ Series”	Japan
Treatment Process of the Prefabricated Directly Buried Thermal Insulating Pipes	China

三、“双十佳”工作组进展和第二轮国际“双十佳”评选成果 TOP TENs Progress and Achievements of the 2nd round of Evaluation

- 建筑领域 国际最佳节能实践清单

- International List of Top Ten Best Practices (BPs)---Building sector

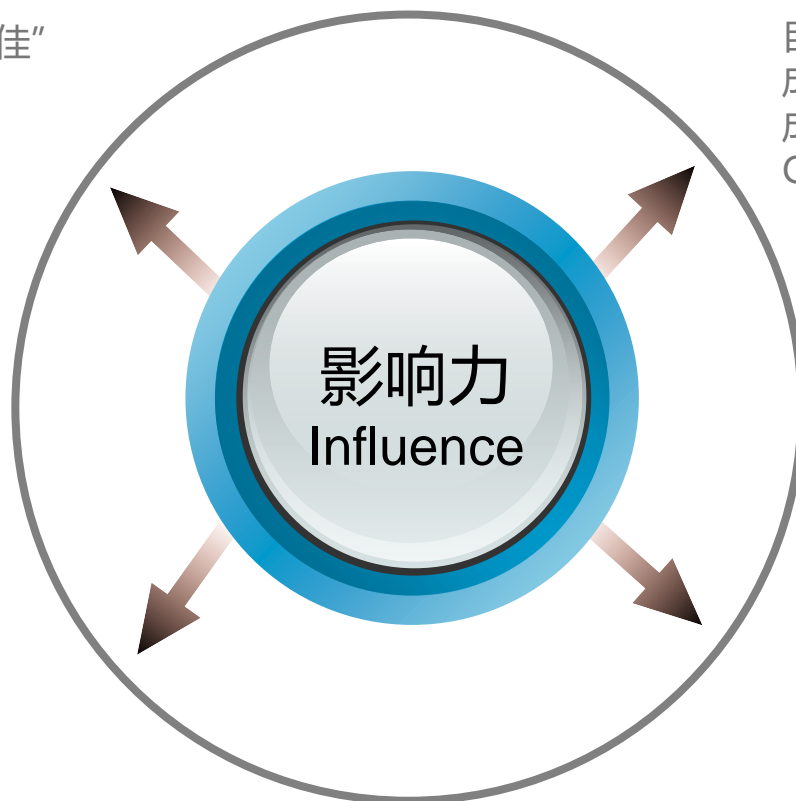
BP Title	Nominator
Application Case of the Whole-Process Management of Near-Zero Carbon Emission of No. 9 Building of Shanghai Hongqiao State Guest Hotel	China
Case of Guangzhou White Swan Hotel Energy Saving Reconstruction	China
China Academy of Building Research Nearly Zero Energy Building	China
Energy conservation activities at a next-generation green hospital	Japan
Energy conservation in the distribution of procured building products	Japan
Passive House Technology Center of Sino-German Ecopark	China
Promotion of super energy-saving construction by achieving "Japan' s first urban-style Zero Energy Building (ZEB)"	Japan
Life-cycle management of Energy Efficiency Target---"Joy City" Project in Chengdu	China
University-wide efforts to build a smart campus	Japan
Zhuhai Singyes Renewable Energy R&D Building	China

四、“双十佳”影响力

The Influence of TOP TENs

2016年杭州G20峰会将“双十佳”纳入《G20能效引领计划》，列为G20十一个重点能效合作领域之一。

加强了“双十佳”成员国之间及与非成员国间的合作。如，举办中日节能技术对接会、将最佳节能技术和最佳节能实践列为中俄能效合作重点领域之一等。



自2016年起，“双十佳”工作组成果作为G20能源转型工作组成果之一，已连续多年向G20能源部长会议汇报。

吸引了“双十佳”其他成员国的关注并拟参与下一轮评选，如加拿大等国家。

五、“双十佳”工作展望 Prospects of TOP TENs


(一) 扩增“双十佳”成员国、参与国和评选领域

(二) 加强“双十佳”宣传推广工作

(三) 进一步提升“双十佳”政治和经济效益

实现最佳节能技术和最佳节能实践的信息分享和应用推广。

Share and disseminate information on the BATs and BPs in use today, as well as to accelerate the widespread application.



Thank You !