

U.S.-China Clean Energy Research Center (CERC)

Joint Research Project on Building Energy Efficiency (BEE)

Newsletter

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Center of Science and Technology of Construction of MOHURD (CSTC)
Center for Building Energy Efficiency of MOHURD (CBEE)

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Project Area News:

Project Area 3: Actively Promotes China-U.S. Exchanges

1. Low-carbon Green Building International Joint Research Center (LCGBRC) has been established.

During the first phase of CERC-BEE, Project Area 3 Key Technology Research on Building Envelop Structure System led by Chongqing University built a good partnership with the U.S. counterpart, substantive joint research has been carried out. On the basis of this research partnership, Chongqing University has applied National level LCGBRC. On Nov. 9, director of International Cooperation Department, MOST, Ji Xiaoming and deputy general secretary of Chongqing Municipal Government Xu Jingping delivered the official approval by MOST.

LCGBRC combined the research strength on building energy efficiency, green building and eco-city construction of Chongqing University, along with MIT, LBNL of U.S., Cambridge University, Reading University,

London College of U.K. as well as some other top research institute around the world. LCGBRC will be focusing on building energy efficiency, green building urban environment building and repairing, indoor environment and health researches, apply joint efforts on key technology, policy and regulation, evaluation system researches, provides an excellent basis for future CERC-BEE cooperation and exchanges.

2. Visit of CERC-BEE U.S. counterpart

Doctor Ronnen of LBNL will visit China from Dec. 11 to 18. Researchers of Chongqing and CERC-BEE project area 2 will summarize the research result of the first phase with Ronnen and discuss cooperation in future. Meanwhile, Ronnen will introduce the latest research progress on cool roof by U.S. side, discuss with the China research team and industrial partners.

Project Area 4: Project Discussions

Data Center Energy Efficiency Discussion of CERC-BEE Project Area 3, Research and

Demonstration of Adaptability of Advanced Building Equipment Technologies has been held

in CABR on Sep. 9. Expert of LBNL Environment Energy Department Mr. Dale Sartor, Vigilent's Market Manager Mr. Dan Mascola and Asia Business Director Ms. Alice Kung, Vice-Director Zou Yu and CABR members were attended. Some industrial partners of interest were also attended.

During the discussion, U.S. experts introduced energy saving opportunities of data center and

the latest relevant U.S. technologies. Doctor Gao Caifeng of CABR summarized the CERC-BEE first phase research results. Some attended industrial partners has expressed willingness to join the China CERC-BEE IAB and participate in CERC-BEE research. The discussion substantively promoted the Data Center Energy Saving research work of CERC-BEE.

Project Area 5: Research Result Discussion

1. Project Area Research Update: Recently, Project Area 5 of CERC-BEE, Research and Demonstration of Technological Adaptability in Applying New and Renewable Energy to Buildings lead institute Tongji University has made great effort and strict requirements on research result summary. Research Result Discussion has been held in Tongji University on Nov. 30. Current results and encountered problems were discussed, the content and format of 3 key reports (Development Bottleneck Research Report, Practices Case Study Research Report, Renewable Energy Building Application Adaptability Report).

2. U.S.-China Cooperation Update: In mid Oct., Tongji University invited Tianjin University, Chongqing University, ORNL to convene the

GSHP Adpatability Simulation Evaluation Meeting. The performance of apply Equest simulation on GSHP was discussed. Later, with the help from ORNL, the performance simulation of GSHP application in 4 major climate zone in China was completed.

From Oct. to mid Nov., regular tele-conferences were carried out between Tongji University and LBNL. Meanwhile, LBNL visited Tongji University twice to discuss the Adpatability of Renewable Energy Application Evaluation Model. The two sides applied DER-CAM software to carry out renewable energy system optimisation analysis and case study.

Furthermore, project area group has discussed the second phase cooperation with ORNL, LBNL and Climte Master representatives.

Project Area 8: Research Result Summary

Project Area 8 Building Energy Efficiency Market Research and Commercialization lead institute CSTC analyzed the CERC-BEE's result on Building Envelop, Building Equipment and Renewable Energy Application, market barrier analysis was carried out, relevant advices have been given, in cooperate with China's current status, a report was formed. Project Area 8 has entered the summary phase, the modification and improvement of CERC-BEE website will be completed soon.

中美清洁能源联合研究中心

建筑节能合作项目简报

2012年第8期

住房和城乡建设部科技发展促进中心
住房和城乡建设部建筑节能中心

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课题研究动态:

课题三：积极增进中美合作交流

1.成立国家级“低碳绿色建筑国际联合研究中心”

中美项目课题三“建筑围护结构体系关键技术研究”承担单位重庆大学在中美清洁能源联合研究中心建筑节能合作项目（以下简称“中美项目”）一期课题研究中，与美方合作研究伙伴建立了良好的合作关系，开展了实质性的科研合作，依托该合作基础，重庆大学组织申报了国家级“低碳绿色建筑国际联合研究中心”。11月9日，经国家科技部审核认定，科技部国际合作司司长靳晓明和重庆市人民政府副秘书长涂经平为重庆大学“低碳绿色建筑国际联合研究中心”授牌。

“低碳绿色建筑国际联合研究中心”依托重庆大学在建筑节能、绿色建筑和生态城镇建设等方面学科优势，联合了中美项目美

方研究单位美国麻省理工学院、美国劳伦斯伯克利国家实验室以及英国剑桥大学、英国伦敦大学学院、英国雷丁大学等世界一流研究机构。该基地重点围绕建筑节能与绿色建筑、城镇生态环境建设与修复、室内环境与健康等研究方向，开展关键技术研发和政策法规与评估体系研究合作，将为中美项目中美双方进一步的合作与交流奠定基础。

2、美方合作伙伴访华

美国劳伦斯伯克利国家实验室 Ronnen 博士将于2012年12月11~18号来华访问交流。重庆大学中美项目课题研究人员将与 Ronnen 博士总结一期的合作成果与合作经验，就下一阶段的深入合作进行讨论。同时，Ronnen 博士也将介绍美国在冷屋顶技术方面的研究现状与最新成果，与中方课题组及部分企业进行技术交流。

课题四：召开课题研讨会

2012年9月10日上午，中美项目课题四“先进建筑设备系统技术的适应性研究和示范”中美数据中心节能研讨会在中国建筑科

学研究院环能院召开。美方合作团队美国能源部劳伦斯伯克利国家实验室环境能源技术部的专家 Dale Sartor 先生、美国 Vigilent

公司总部产品市场经理 Dan Mascola 先生、Vigilent 公司亚太区业务董事 Alice Kung 女士出席，中国建筑科学研究院环能院邹瑜副院长，合同能源管理中心主任于震博士、吴剑林博士、高彩凤博士等出席。会议同时邀请了对参与中美合作课题研究有兴趣的中国数据中心相关企业代表出席。

会上美方专家介绍了数据中心的节能机

遇和美国数据中心的最佳节能技术，中方高彩凤博士总结了中国建筑科学研究院数据中心节能研究课题一期的研究工作及成果。到会的部分企业也表达了加入中方企业联盟，并参与中美项目合作研究的积极意愿。本次研讨会中美项目中开展中美数据中心节能的合作研究起到了实质性的推动作用，研讨会取得了圆满成功。

课题五：召开成果总结会

1、课题研究动态

近期，中美项目课题五“新能源及可再生能源建筑应用技术的适应性研究和示范”承担单位同济大学加强了课题汇总协调工作，并对各子课题单位提出了严格的成果汇总要求。11月30日，课题成果总结会议在同济大学召开，会议对已有成果及所遇到的问题进行了汇总和深入探讨，进一步明确了三大总结报告（发展瓶颈问题研究报告、案例实证研究报告及可再生能源建筑应用适应性评价报告）的内容及形式。

2、中美合作动态

10月中旬，同济大学组织天津大学、重庆大学和美国橡树岭国家实验室进行了地源热泵适应性模拟评价的讨论会。会上对模拟

软件 Equest 用于土壤源热泵性能模拟评价进行了深入的技术交流。并在美国橡树岭国家实验室的合作下，完成了中国四大气候区土壤源热泵应用的性能模拟分析。

10月至11月中旬，同济大学和美国劳伦斯伯克利国家实验室定期进行了电话会议，同时美国劳伦斯伯克利国家实验室两次来同济大学进行了可再生能源适应性评价的模型讨论。双方利用美方劳伦斯伯克利国家实验室研发的 DER-CAM 软件，实施了可再生能源系统优化配置模型研究和案例分析。

此外，课题组和美方橡树岭国家实验室、劳伦斯伯克利国家实验室及美国企业代表 Climate Master 分别对二期项目的合作申请进行了探讨和交流。

课题八：总结提炼研究成果

中美项目课题八“建筑节能市场化研究与推广”承担单位住房和城乡建设部科技发展促进中心近期针对中美项目关于建筑围护结构、建筑设备、可再生能源应用等研究进展与部分结论进行了分析，开展了相关技术市场化推广的障碍分析，给出了相关的建议，并基于我国以政府为主导的建筑节能发展情况，开展了市场化发展模式的研究，并形成

了相应的研究报告。目前课题组已全面进入研究成果总结提炼阶段，针对课题所包含的7个子课题的研究成果进行了认真的梳理，针对已搭建完成的中美清洁能源联合研究中心建筑节能领域网站正在进行进一步的完善与更新，更好的为项目信息交流与成果宣传扩散提供平台。

（根据各课题单位提供稿件编辑）