

The Best Performing Projects in 2014

2014年度
最佳表现贷款项目



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最佳表现贷款项目**

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The Second Loan Project Award Program

第二届亚行贷款项目评奖活动

Following the successful implementation of the first loan project award program in 2013, the biannual loan project award was again undertaken in 2015. As in 2013, the second loan project award program launched only one category of award, the Best Performing Projects in 2014. The award is to recognize projects with an effective institutional set up, timely start-up of implementation, smooth disbursement and procurement, strict compliance with loan covenants, and effective delivery of scheduled project outputs.

紧随着2013年第一届亚行贷款项目评奖活动的成功实施，两年一次的亚行贷款项目评奖活动再次于2015年开展。与2013相同，第二届亚行贷款项目评奖活动只推出一个类别的奖项，就是“2014年度最佳表现贷款项目奖”。该奖项是表彰这些项目其项目管理机构高效、项目实施启动及时、支出和采购进展顺利、严格遵守贷款协议，并能切实实现项目的预期产出。

In the second loan project award program, 75 ongoing projects in the PRC were eligible to participate, but only 25 PMOs submitted their self-evaluation results. The top two projects from each sector were selected as the best performing projects in 2014, based on the PMOs' self-evaluation results that were validated by ADB's project officers.

在第二届亚行贷款项目评奖活动，在中国的75个在建亚行贷款项目有资格参加评奖，但是只有25个项目办提交了对他们项目的自评结果。对项目办的自评结果，亚行项目官员进行了复核和确认。根据确认后结果的排名，每个行业的前两名被评选为“2014年度最佳表现贷款项目”。

The Best Performing Projects in 2014

2014年度最佳表现贷款项目

No. 序号	Loan No. 贷款号	Project Name 项目名称
Agriculture and Nature Resources 农业和自然资源		
1	Loan 2607-PRC	Shanxi Integrated Agricultural Development Project 山西农业综合开发项目
2	Loan 2744-PRC	Forestry and Ecological Restoration Project in Three Northwest Provinces 西北三省林业与生态恢复项目
Energy 能源		
1	Loan 2773-PRC	Guangdong Energy Efficiency and Environment Improvement Investment Program - Tranche 3 广东节能减排促进项目第三批
2	Loan 2835-PRC	Hebei Energy Efficiency Improvement and Emission Reduction Project 河北节能减排促进项目
Transport and Communications 交通和通信		
1	Loan 3014-PRC	Hubei-Yichang Sustainable Urban Transport Project 湖北宜昌可持续城市交通项目
2	Loan 2600-PRC	Anhui Integrated Transport Sector Improvement Project 安徽综合交通行业改善项目
Urban and Social Development 城市和社会发展		
1	Loan 2526-PRC	Xinjiang Urban Transport and Environmental Improvement Project 新疆城市交通和环境改善项目
2	Loan 3003-PRC	Gansu Jiuquan Integrated Urban Environment Improvement Project 甘肃酒泉城市环境综合治理项目

Agriculture and Nature Resources

农业和自然资源

Loan 2607-PRC:

Shanxi Integrated Agricultural Development Project

山西农业综合开发项目



A. Project Overview

项目简介

The project comprises livestock breeding, high-value perennial crop production, and high-value annual crop production—the bases of three major industries—in terms of strengthening links between farmers and markets, capacity building and training, and project management. In management terms, the project consists of four major categories and 14 subprojects. ADB loan for the project is \$100 million, and became effective on 9 September 2010. The project covers 26 counties of five municipalities in central and southern Shanxi Province: Yuncheng, Linfen, Lüliang, Changzhi, and Jinzhong municipalities. It is expected that 48,040 households and 216,180 farmers will benefit from the project. As of December 2014, 89.3% of the total investment had been achieved, with 38,811 households—about 80.8% of the overall target—benefitting, while \$79.5 million of the ADB loan had been disbursed, accounting for about 79.5% of the total loan amount.

项目建设内容包括良种养殖基地、特色高效优势农业基地和节水高效设施农业基地等三大类产业基地建设、基地农户与市场联结建设、能力建设与培训、项目管理4大类14个子项目。亚行贷款1亿美元，于2010年9月9日正式生效。项目覆盖山西省中南部的运城、临汾、吕梁、长治、晋中5市26县，直接支持贷款户48,040户，受益人口预计达216,180万人。截止2014年12月底，累计完成总投资的89.3%，直接受益户38,811户，占总计划目标的80.8%；累计完成提款报账7,950万美元，占总贷款金额的79.5%。

B. Achievements of the Project 项目取得的效益

1. Economic benefits 经济效益

By 2014, investments in livestock breeding under the project reached CNY577.9 million (\$90.4 million), with 8,752 households engaged in the business, 12.4 million animals for sale, and an output value of CNY1.3 billion. Investment in high-value perennial crop production had reached CNY326.2 million, with 20,883 farmer households engaged in the business, and an output value of CNY187.0 million. Meanwhile, investment in high-value annual crop production had reached CNY244.4 million, with 8,954 households engaged in the business, and an output value of CNY280.0 million.

截止2014年底，项目累计在良种养殖完成投资57,790万元，8,752户，出栏总数达1,240多万头，实现产值13亿元；特色高效优势农业产业基地累计完成投资32,624万元，涉及农户20,883户，实现产值1.87亿元；高效设施农业基地累计完成投资24,440万元，涉及8,954户，实现产值2.8亿元。

2. Social benefits 社会效益

With the implementation of the project, the livestock-breeding business, perennial crop production, and the promotion of annual crop production in the project areas have gained huge development momentum. This has led to restructuring of agriculture in the project areas, which in turn has advanced other associated sectors. Altogether, 99 bases for growing crops and breeding animals have been developed—50% above the set

target. With implementation of the project, the number of farmers involved directly has reached 38,811, with 175,000 beneficiaries, accounting for about 80.8% of the planned target. More than 100,000 job opportunities have been created, 70,000 of them for women—a participation rate exceeding 65%.

项目的实施促进了项目区养殖业、特色高效优势和农业高效设施农业的迅猛发展，推动了当地农业产业结构调整和相关产业发展，形成种植、养殖基地达99个，超目标任务完成50%以上。项目的实施直接带动农户38,811户，受益人口达17.5万人，占计划目标的80.8%；创造劳动就业机会10万多个，其中妇女参与达近7万人，参与率达65%以上。



Women Collecting Eggs in Chicken Breeding
Base of Jishan County
在稷山县养鸡场取鸡蛋的妇女

3. Ecological benefits 生态效益

The project has added 7,780 hectares (ha) of green area coverage, or a rate increase of 0.1%. Water and soil loss has been reduced by 2.96 million tons, loss of soil fertility by 29,600 tons, and solid dusts reduced by 38,900 tons. Water-conservation capacity has increased by 7.8 million tons annually, carbon (CO₂) sequestration capacity by 70,000 tons, generated O₂ by 52,900 tons; and organic

fertilizers as a result of developing breeding businesses by 1.2 million tons annually. Water-saving irrigation techniques, such as pipe irrigation, dripping irrigation, canal irrigation, and sprinkling irrigation have been applied to 90% of the greenhouse component, which saves about 30% of water compared to the traditional flood irrigation method, significantly increasing greenhouse air humidity, and greatly improving the efficiency of water usage.

项目的实施可增加绿地覆盖面积7,780公顷，提高绿地覆盖率0.1%，减少土地退化和水土流失296万吨，减少土壤肥力损失2.96万吨，年可降低固定粉尘3.9万吨，年增加水源涵养能力778.3万吨，年可增加固碳能力二氧化碳7万吨、放出氧气5.3万吨，养殖发展年增加有机肥还田120万吨。90%的温室项目户采用管灌、滴灌、渠灌、喷灌等节水灌溉技术，与传统的大水漫灌相比节水大约30%左右，有效增加了了棚内空气湿度，提高水资源使用率。

C. Project Management

项目管理

1. Effective Coordination Mechanism

有效的协调机制

Given the project's wide geographical coverage, coordinating implementation was challenging. From the start, a Project Leading Group was established, comprising the Provincial Finance Department, the Provincial Development and Reform Commission, the Provincial Auditing Department, the Provincial Agricultural Department, the Water Resources Department, the Environmental Protection Department, and the Poverty Alleviation and Development Office. The effective coordination and cooperation of all leading-group parties has ensured smooth and efficient implementation of the project. The finance departments and bureaus at all levels have provided required counterpart



Water-saving Lotus Roots Base in Hongdong County
洪洞县节水莲藕基地



A Ten Thousand-mu Apple Orchard
万亩苹果园

funds in a timely manner, and have acted likewise for withdrawal applications, and in obtaining disbursements from ADB. The Development and Reform Commission approved all subprojects and provided project-implementation assistance on time. The Auditing Department supervised the use of project funds. The agricultural, forestry, water resources, and poverty alleviation and development departments provided counterpart funds and technical support for the project. Environmental protection and women's agencies also provided counterpart funds, with the latter motivating women to participate in the project.

由于项目覆盖面广，项目实施中的协调难度较大。在项目一开始，省财政、发改委、审计、农业、水利、环保、扶贫等部门成立了领导实施领导小组。领导小组成员单位为项目提供了大量的支持，团结协作，紧密配合，保证了项目的顺利实施和高效进展。各级财政部门发挥财政资金配套支持，逐级转货并落实债

权债务关系，及时提交报账资料，开展支付工作；发改委发挥立项审批、综合管理和资金配套作用；审计部门发挥资金监督作用；农业、林业、水利、扶贫部门发挥资金配套、技术支持服务作用；环保、妇联部门发挥资金配套、动员妇女参与项目建设作用。

2. Systematic Implementation Management 系统的项目实施管理

To ensure smooth implementation of the project, the Project Management Office (PMO) formulated a series of project management regulations and procedures at the project preparation stage. These covered project engineering, finance, inspection, disbursement, training, and monitoring, which guaranteed the project implementation at an institutional level. By improving regulatory oversight over the entire project implementation process, three-level (i.e. experts, representatives of relevant

departments, and project-management personnel) inspection, acceptance, monitoring and evaluation systems were established. These systems aim to ensure the quality of the project and the safety of relending—and timely disbursement. By developing and adopting project management and finance software, the project has realized scientific and information-based management. Through regular project progress monitoring and project performance monitoring and evaluation, project implementation has been scientifically controlled and evaluated. Meanwhile, through various training and technical support activities, the capacity and quality of project personnel has improved, guaranteeing efficient execution of the project.

为推动项目顺利实施，项目办在项目准备阶段制定了项目工程、财务、验收、报帐、培训、监测等一系列管理方法，为项目实施提供制度保障；通过强化项目实施过程管控，建立专家、相关部门和项目管理人员相结合的省市县三级检查、验收、监测评价机制，确保工程质量合格、转贷安全和支付到位；通过开发运用《项目管理与财务软件》，实现项目科学化、信息化管理；通过开展项目进度监测、建立项目绩效指标评价体系，科学总结和评价项目执行情况；通过各种培训和技术支持，提升项目人员能力与个人素质，为项目的高效实施提供人力保障。

3. Application of Advanced Technology 先进管理技术的应用

In 2010, the PMO signed a contract with Beijing Hailixin Information Consulting to develop project and financial management software, which was implemented by the provincial PMO and by the PMOs and the finance bureaus of the 26 counties under

Shanxi's five municipalities. The software has two modules: project management and financial management. Over the past 5 years, the software has run smoothly and finance bureau personnel of various counties and municipalities can use it expertly. In short, it has played a positive role in strengthening the information-based management of the project, standardizing financial operations and enhancing working efficiency.

2010年，项目办委托北京海立信软件公司开发《项目管理与财务软件》，同年11月在全省5市26个项目办、财政局和省项目办投入使用。该软件包括2个模块，即项目管理系统和财务管理系统。经过近5年的运作，软件运行良好，各市县财务人员操作熟练，对加强信息化管理、规范财务操作、提高工作效率起到了积极作用。

4. Timely Project Performance Monitoring and Evaluation 及时的项目绩效监测与评价

Project monitoring and evaluation—key to monitoring project progress and the status and efficiency of disbursements—plays an important role in managing the project. Since implementation of the project got underway, specific monitoring- and evaluation-management personnel have been designated at county, municipality and provincial levels. Under the guidance of the provincial monitoring and evaluation team, they have successfully carried out various monitoring and evaluation tasks, and collected and verified relevant data. On the basis of field investigations of project implementation in various areas, the PMO has established a project monitoring and evaluation index system to comprehensively monitor project implementation. In addition,



Engineering Acceptance for Arched Shed
塑料大棚工程验收

efforts have been made to improve evaluation training for monitoring personnel at county and municipality levels to improve self-evaluations.

项目监测评价工作，作为监督工程进度、支付情况和效益发挥的重要手段和关键环节，在项目管理中发挥着重要作用。自项目启动以来，省市县三级均配备了专职的监测评价管理人员，在省办监测科指导下，积极开展监测评价工作，核实整理相关数据；在对项目实施进行实地调研基础上，建立项目监测评价指标体系，对项目实施情况进行全方位监测。此外，项目办开展了对市县项目监测人员完工评价培训，推动了山西农业综合开发项目自我评价。

D. New Initiatives

创新举措

1. Innovative Training Methods

培训方式新举措

To enhance the capacity of the project-execution personnel, project management professionals carried out capacity building and training sessions by combining classroom tutorials with on-the-ground experience, expert consultations complemented by services provided by relevant departments, and summaries of experience based on exchanges and inspections. The provincial PMO has published a textbook that has been distributed to 70,000 farmer households. Some counties participating in the project



A Walnut Planting Technical Training for Project Farmers
核桃栽培技术培训

have compiled their own agricultural technology training manuals in accordance with their respective localities, with the total number of manuals reaching several-hundred thousand. Meanwhile, the number of man-hours of attendance to technical training sessions by farmers has reached more than 260,000. The training sessions have made it possible for farmers to learn about advanced agricultural production technologies, modern agricultural production methods, operational and management concepts, and have also increased their incomes as a result.

项目采取课堂培训与现场实践结合、会议与培训结合、专家咨询与部门服务结合、经验总结与交流检查结合等方式，开展能力建设与培训工作，提升项目实施人员素质。省项目办编印教材7万册，发放农户7万户。部分项目

县根据各地特色产业，自行编印的农技培训手册达几十万册。农户参加各种技术培训活动达26万多人次，通过培训，农户掌握了先进的农业生产技术，接受了现代农业生产经营理念，增加了经济收入。

2. New Cooperation Method 新的合作模式

Given the fact that the project beneficiaries are poor farmers scattered around in various areas, the project identified special local produces in each area and worked to integrate farmers and fields. A loan guarantee contract is first signed between the finance bureau, an agricultural enterprise and farmers, and a product buyback contract is then signed between the guarantee enterprise and farmers to ensure that the former buys

the agricultural products from the latter at insured reserve prices. The construction of a high-quality agricultural product production base is further guaranteed by a joint production base construction contract signed between the agricultural enterprise and the farmers. The agricultural enterprise or cooperative provides services to the farmers prior to, throughout, and after the period of agricultural production, and the farmers steadily supply high-quality raw materials to the enterprise. In this way, not only are the interests of farmers protected, but the supply of raw materials to the enterprise is ensured, making the arrangement a win-win for both parties.

根据项目的受益群体是分散而又贫困的农户现状，项目办依托当地特色产业，采用企业+合作社+农户+科学培训模式，将分散的农户和地块尽可能结合起来，由财政、农企和农户签订项目贷款担保合同，担保企业和农户签订产品收购合同，企业用最低价收购农户产品。通过企业和农户签订基地共建合同方式，推动企农共建优质农产品原料生产基地建设，农企和合作社为项目农户提供产前、产中、产后服务，农户为企业稳定提供优质原料，既保护了农户利益，又为企业发展壮大提供了原料保障，达到双赢效果。

3. New Groundwater Management Approach Explored 探索地下水管理新模式

To address severe water shortages in Shanxi Province, the PMO applied for a \$500,000 ADB grant to study groundwater management at Qixian, Xixian, Lishi and Pingshun counties. After the project was implemented, water-saving equipment was purchased and installed, and 17 technical training sessions were carried out, directly benefitting 328 households, or 996 people, and indirectly benefitting more than 5,500 people. The project experience was shared at Asia Water Week held at the Manila ADB headquarters in March 2013—an event that contributed to ways of exploring adaptation to climate change through the management of groundwater.

为解决山西省水资源严重短缺问题，省项目办争取亚行贷款50万美元，在祁县、隰县、离石、平顺4县研究地下水管理新模式。项目完成节水设备的采购和安装，开展技术培训17期，直接受益户达328户，996人，间接受益人5,500余人。项目经验于2013年3月亚行总部举办的亚洲节水周会上进行了分享，为探索地下水资源管理与应对气候变化作出了贡献。

Loan 2744-PRC: Forestry and Ecological Restoration Project in Three Northwest Provinces

西北三省林业与生态恢复项目



A. Project Overview

项目简介

Shaanxi Province, Gansu Province and the Xinjiang Uygur Autonomous Region (XUAR) are the Silk Road's major economic, cultural, and trade corridors and gateways. Many counties in those provinces and the region are also focus areas for the national poverty-alleviation program of the People's Republic of China (PRC). This project involves large-scale mitigation of desertification and soil erosion, establishing economic tree crops and environmental forests, rehabilitating forest vegetation, and transforming land-usage practices, with the aim of improving overall land productivity.

The project includes three main components: establishing economic tree crops and environmental forests, as well as project-management support. The Asian Development Bank (ADB) loan for the project is \$100 million (\$33.34 million for Gansu, \$33.33 million for Shaanxi, and \$33.33 million for the XUAR). In addition, a \$5.1 million grant has been provided by the Global Environment Facility (GEF). The project implementation period is 2011–2016.

Specifically, economic forest crops encompass a 38,400-hectare (ha) production base for high-quality fresh and dried fruits, and expansion of fruit cold-storage facilities. The environmental reforestation component covers 4,744 ha of arid and degenerated land in high-altitude areas. Forest management involves capacity building in state-owned forest parks, while the project-management component oversees the establishment of climate-change mitigation capacity.

陕西、甘肃和新疆三省区是丝绸之路重要的经济、文化、商业通道和门户，沿线部分县（区）还是国家扶贫工作重点县。本项目通过在丝绸之路沿线开展大规模生态集中治理，以防沙治沙和治理水土流失为重点，营造经济林、生态林，恢复森林植被；转变土地利用方式，提高土地综合生产效率。

项目内容包括经济林建设、生态林建设和项目管理支持三部分。本项目利用亚行贷款1亿美元（甘肃3,334万美元、陕西3,333万美元、新疆3,333万美元），全球环境基金赠款510万美元。本项目建设期从2011年至2016年。

经济林部分建设3.84万公顷优质高效干鲜果品生产基地和扩建果品冷藏设施；生态林部分是在海拔较高的干旱地区山地和土地退化地区营建或封育4,744公顷的生态防护林；项目管理支持在部分国有林场开展森林经营，提高生态林应对气候变化方面的能力建设。

B. Effective Project Management 有效的项目管理

1. Well-established Project Management System 健全的项目管理系统

Project steering committees and implementation agencies at the national, provincial, municipal, and county levels have been established. The State Forestry Administration, which has rich experience in project implementation with international financial institutions (IFIs), has played a crucial role in the organization and coordination of the project. The provincial project management offices (PMOs) in Shaanxi, Gansu, and the XUAR also have experience in implementing projects with IFIs—understanding well the requirements of IFI projects—and have played an important role in the design and organization of the project. The project management manual



Ecological Forest – Windbreak Haloxylon Grass
生态林——新疆防风固沙的梭梭草



Economic Tree Crop – Walnut
经济林——核桃

is both practical and streamlined, laying a solid foundation for project implementation. Active cooperation and assistance by implementation agencies at various levels also helped to ensure efficient implementation of this project.

项目成立了国家、省、市、县各级领导小组和执行机构，组织机构健全。作为“打捆项目”，国家林业局有多年实施国际金融组织贷款项目的成熟经验，为组织和协调项目起着关键性作用；三省区项目办有执行外资项目经验，熟悉和掌握外资项目的要求，对于做好项目顶层设计、组织项目实施发挥了重要作用。项目制定的管理办法符合实际、操作性强，为实施好项目奠定了良好基础。各级项目执行机构积极协助、全力配合，保证了项目高效运转。

2. Active Stakeholder Participation 项目利害相关方的积极参与

Surveys and studies were undertaken meticulously in preparation for this project, with thorough analysis of the problems. The planning and design of the project involved representatives of all stakeholders. In accordance with local industries, the project used the cultivars and trees preferred by local governments and farmers, inspiring local participatory enthusiasm.

项目前期调研充分，问题分析透彻，参与式规划扎实认真，围绕当地特色产业，设计了当地群众喜爱的主栽经济林树种，品种优良，符合当地政府和农民意愿，群众参与积极性高。

3. Practical Regulations 可操作的规章制度

A project management team familiar with the project-implementation requirements and the participation of farmers and technical experts have been the foundation of the smooth implementation of this project. Various kinds of training for the project management team, finance staff, technical experts, and beneficiaries have improved their skills and guaranteed the project's successful implementation. In the course of implementing the project, the ADB project management office of the State Forestry Administration and the implementation agencies of the two provinces and one region have had staff undergo implementation-agency training in many fields, including procurements, disbursements, financial management, project-design planning, inspection, and archival management. The ADB project management office of the State Forestry Administration compiled "Project Management Methods" and "Financial Management Methods", among other regulations, in accordance with actual conditions, while provincial implementation agencies promulgated similar methodological regulations for project-management, disbursements, archival management, and inspections. This provided a systematic, targeted and practical operations guide, maintaining the same standards and methodologies throughout various project areas, improving the capacity of project management and implementation, and ensuring the successful implementation of the project.

掌握项目实施规范的管理人员、掌握实用技术的农户和技术人员的参与是本项目顺利实施的基础。通过对项目管理人员、财务人员、

工程技术人员、受益户的各种培训，提高了受训者的技能，为项目的顺利执行提供了保障。项目实施过程中，国家林业局亚行办、三省区项目办为实施机构人员提供多个方面的培训，内容涉及招标采购、支付报账、财务管理、项目规划设计、检查验收、档案管理等。国家林业局亚行办还结合项目省的实际情况，制定了《项目管理办法》、《财务管理办法》等规定，三省区项目办从本省实际出发，参照制定了本省的《项目管理办法》、《提款报账管理办法》、《项目档案管理办法》、《项目检查验收办法》，为项目提供了系统性、针对性、实用性强的操作管理办法，保持了项目实施机构执行标准和方法的一致性，提高了项目管理和执行能力，保证了项目顺利实施。培训提高了项目管理人员、财务人员、工程技术人员、受益户的各种技能，为项目的顺利执行提供了保障。

4. Effective Capacity Building 有效的能力建设

By the end of 2014, eight national training sessions had been organized for 1,800 participants on project management, financial management, procurements, disbursements, auditing, and information technology (IT) systems. At the same time, 712 provincial-level training sessions were also organized for 99,129 participants on project management, pest control, economic forest crop plantation, and ecological forest management. The training sessions have played an excellent role in the project implementation.

截止2014年底，开展国家级培训8次、累计培训1,800人，培训内容为：项目管理、财务管理、采购、支付、报账、审计、信息系统等；省级培训开展712期，参训人数99,129人次，培训内容为项目管理、病虫害防治、经济林栽培知识、生态林管护等。这些培训在项目推进过程中起到了很好的作用。



Field Training – Grafting
 田间培训——嫁接

C. Achievements of the Project 项目取得的效益

From the commencement of the project to yearend 2014, 37,715.5 ha of economic tree crops have been planted, 4,694 ha of ecological forest have been developed, four fruit storages and one reservoir have been built, and 6,746.5 km of drip irrigation, 157 motor-pumped wells, and 22 ordinary wells have been completed.

自项目启动至2014年底，累计营造经济林37,715.5公顷，累计完成生态林营造4,694公顷，建设果品储藏库4座，新建蓄水池1座、新建滴灌系统6,746.5公里、更新机井157眼和打井22眼。

1. Economic Benefits 经济效益

The "company plus farmer" model was

adopted in Gansu Province's Maiji district, Tianshui municipality, with land transfers undertaken via farmer specialized cooperative units. Using an ADB loan of CNY690,700 (\$108,000), and with a focus on planting 78.1 contiguous ha of apples, the annual yield was 1.28 million kg of apples, with an annual profit of CNY12.89 million, providing employment for local residents, and an annual average income of CNY24,000 for local households.

Hanbin district of Shaanxi Province utilized an ADB loan and a GEF grant to develop 566 ha of tea farms. The total investment was CNY14.8 million, which includes CNY7.6 million from ADB, CNY5.12 million in government counterparty funding, and CNY2.0 million in service allowances. Since the project inception in 2011, 116 ha—or 20% of the total plantation—has begun to yield results, earning an annual revenue of CNY1.74 million.

在甘肃省天水市麦积区，以农民专业合作社为实施主体，通过土地流转，以公司+农户的发展模式，利用亚行贷款69.07万元，集中连片种植苹果78.1公顷，年产苹果128.9万公斤，收益1,289万元。苹果林为当地农民提供了就业岗位，户均年增收收入2.4万元。

陕西省汉滨区利用亚行贷款和GEF赠款建设566公顷茶树生态林，项目总投资1,475.2万元。其中亚行贷款759.50万元，政府配套512.2万元，劳务折抵203.5万元。2011年开始实施，目前投产茶园116公顷，占完成总面积的20%，产生效益174万元。

2. Social Benefits 社会效益

With the expansion of fruit plantations and yields, storage of economic tree crops has become an increasingly pressing issue in Gansu Province. In order to change the tradition of emphasizing production over

storage, the project has constructed storage centers for produce in the cultivation areas, resolving a conflict between the longer consumption period and the shorter yield period of the fruit. For example, the storage facility in Gansu's Jingning county has a storage capacity of 2,000 tons, and has increased the economic value of the fruit by 2.8 times. The storage facility has promoted industry upgrading and driven comprehensive social-economic development in rural areas.

In the XUAR, infrastructure development has resolved problems in terms of electricity supply, roads, and irrigation, improved the agricultural environment in neighboring areas, boosted the comprehensive productivity of agriculture, and improved residential environments.

By the end of 2014, 259,960 households had benefited from the project, and 16.5% of the



Apple Orchard in Tianshui, Gansu
甘肃天水市苹果林

project area rural dwellers in Shaanxi, 20% in Gansu, and 9.6% in the XUAR had been lifted out of poverty. The project also emphasized gender equality, while enabling poor, underprivileged, ethnic minority households to participate with equal opportunity.

随着果树栽培面积的扩大, 产量的增加, 甘肃省经济林产品贮存、保鲜的问题更加突出。为了改变重生产轻储藏的传统观念, 亚行项目在经济林产品的主产区建设储藏库, 解决了水果产期集中消费期长的问题, 从时空角度挖掘了水果增收潜力, 利用贮藏加工手段延长上市期, 提高果品附加值, 仅甘肃省静宁县1座2000吨的果品储藏库, 使果品增值3.8倍。储藏库促进产业优化升级、实现产业化发展, 带动农村经济社会全面发展。

新疆基础设施建设, 为当地群众解决了供电、道路、灌溉等基本生活问题, 改善了周边地区农业生态环境、提高农业综合生产力、优化人们生活居住环境。

截止2014年底, 项目已有25.996万户农民家庭通过项目获益, 农户脱贫率分别为: 陕西16.5%、甘肃20%、新疆9.6%; 同时, 项目在执行中注重促进性别平等, 使贫困和弱势家庭、少数民族家庭以及社区有平等机会参与项目并获益。

3. Ecological Benefits

生态效益

The project attached great importance to environmental protection, strictly following environmental regulations, and carrying out ecological monitoring on impacts during implementation of the project. Through the plantation of ecological forests, the wind speed has been reduced by 20%–40%, the relative humidity has been reduced by

10%–20%, evaporation by 9%–25%, soil water content increased by 9%, soil humidity at 0–30 cm by 13%, organic matter in the soil by 20%, nitrogen content by 8%, and available phosphorus by 16%, while the yields of the wheat, corn, and cotton also improved by 10%–30%, 10%–20%, and 8% respectively. In other words, the project has made considerable contributions to the protection and management of ecologically fragile, degenerated, and deserted land in the Northwest of China.

项目建设中充分注重环保, 严格执行项目环境保护规程, 开展项目环境影响生态监测。通过营造生态林, 项目区内风速降低了20%~40%, 空气相对湿度相应地提高了10%~20%, 水的蒸发蒸腾减少了9%~25%。土壤含水量提高了9%, 土壤0~30厘米深度的湿度提高了13%, 土壤有机物含量增加了20%, 土壤氮含量增加了8%, 以及速效磷的含量增加了16%。农林间作物产量得到了明显提高, 小麦增产10%~30%, 玉米增产10%~21%, 棉花增产8%。项目为保护和治理我国西北地区生态敏感、退化和荒芜的土地做出了贡献。

D. Spillover Effects of the Project Implementation

项目管理经验推广

Through the implementation of this ADB financed project, staff at various levels of PMOs and project implementation units has become familiar with ADB's advanced management practices, ADB's emphasis on the wellbeing of local residents, its procurement, disbursement, and environmental monitoring, as well as its project assessment methods. The same ADB advanced management practices



Fruit Storage with Capacity of 250 Tons
甘肃省徽县250吨果品储藏库

have also been widely employed in major ecological projects, including returning farmland to natural forest and natural forest protection in Gansu, Shaanxi, and the XUAR, the construction of three ecological forests in three northern border areas, and an ecological forest along the Yangzi River. Domestic project management capacity has significantly improved. The procurement of goods and civil construction strictly follows ADB procurement guidelines so as to avoid fraud. All the above will serve as significant reference guides for the implementation of future domestic projects.

通过实施亚行项目，学到了亚行项目在关注民生、项目招标采购、提款报账、环境监测、项目评估等方面的先进理念和管理方法，在三省区退耕还林、天然林保护、三北防护林建设、长江防护林建设、千里绿色长廊建设等大型生态工程项目中先后得到推广应用，普遍提升了国内项目管理能力和建设水平。本项目货物和工程的采购，严格依照《亚行采购指南》和亚行批准的招标方式，实行规范的招标投标程序。在程序和规章制度上避免了招标中的弄虚作假和暗箱操作，从源头上预防腐败，这些都对国内项目有重要借鉴意义。

Energy
能源

Loan 2773-PRC: Guangdong Energy Efficiency and Environment Improvement Investment Program–MFF Tranche 3

广东节能减排促进项目第三批



A. Project Introduction

项目简介

The Guangdong Energy Efficiency and Environment Improvement Investment Program (EPP Program) was the first example of energy-efficiency cooperation between the People's Republic of China (PRC) and the Asian Development Bank (ADB), extending the concept of EPP from electricity savings to energy savings, with the aim of achieving energy efficiency and emissions reductions through retrofits and renewable-energy technologies. The subprojects included retrofits of motors and motor-drive systems, optimal power transmission, transformers and reactive-power compensators, and green lighting, air conditioning, ventilation, refrigeration and heating systems, air compressors and pumping systems, and recovery of industrial waste energy, among other energy-efficiency improvement projects. The majority of applicants for the EPP Program are small- and medium-sized enterprises (SMEs), including end-users—businesses that carry out energy-efficient retrofits to their own equipment or manufacturing lines, and middle-users—suppliers of energy-efficient equipment or energy service companies (ESCOs).

The ADB multitranche financing facilities (MFFs) for the program amounted to \$100 million, with a term of 15 years for each tranche at a LIBOR-based interest rate. The loan was converted to

CNY and transfer-loaned to sub-borrowers with a term of 3–5 years. The recovered sub-loan will be revolved and transferred to more sub-borrowers within 15 years. The interest rate for the sub-loan is the benchmark rate of a 6-month commercial loan by the People's Bank of China less 10%. The program was approved by ADB in June 2008. Tranche 3 was a loan of \$42.94 million. It went into effect on 20 February 2012 and was closed on 12 December 2013.

广东省亚行贷款节能减排促进项目（下称“广东能效电厂项目”）是中国政府与亚洲开发银行合作的首个能效融资项目。该项目将“能效电厂”从狭义的节电概念拓宽到广义的节能，通过采用各种提高能效及可再生能源的开发与利用的技术来达到节能减排的目的。技术范围包括但不限于：（1）电机及电机拖动系统的优化控制；（2）电力输配和调度的优化，如变压器及无功补偿；（3）绿色照明；（4）暖通空调系统等能源系统优化工程；（5）空气压缩系统及泵系统节能；（6）工业废弃能源回收利用；（7）工业锅炉和热电（冷）联供；（8）其他相关的符合国家和广东省节能规划的项目。项目主要面向中小企业，子项目单位既有终端用户（对自有设备或生产线进行节能改造的单位），也有中间用户（节能设备生产商或节能服务公司）。

该多批次融资模式（MFF）项目，贷款总额为1亿美元，分三批次实施。贷款利率基于伦敦同业拆借利率（LIBOR）。省内转贷款时将亚行贷款统一结汇成人民币后再转贷给各子项目实施单位，转贷期限为3~5年，在各批贷款的15年贷款期内，贷款资金可供广东省循环使用。转贷利率为中国人民银行公布的6个月商业贷款利率下浮10%。广东能效电厂项目在2008年6月得到亚行的批准。第三批项目利用亚行贷款4,294万美元，于2012年2月20日生效，于2013年12月12日关账。

Tranche 3 involves six subprojects—waste-heat recovery, power-grid efficiency, green lighting, heating, ventilating, and air-conditioning (HVAC) retrofits, and motor-system efficiency—for both industrial and commercial purposes, with a total investment of CNY655.9 million (\$80.7 million), of which CNY292.0 million was financed by ADB. Compared to tranches 1 and 2, Tranche 3 focused on financing to ESCOs. Over 50% of the loan proceeds financed two ESCOs, CNY100 million to Guangdong Cheria Energy Technology, and CNY50 million to Guangzhou Zhiguang Electric, with the counterpart funds provided by both companies, allowing 14 Energy Performance Contracting (EPC) subprojects to be carried out and completed. After measurement and verification (M&V), the benefits of Tranche 3 in energy savings and emission-reductions have greatly exceeded estimates.

第三批项目包含六个子项目，涵盖余热回收利用、电网节能、绿色照明、暖通空调节能及电机节能等技术，并跨越工业领域进军商业领域开展节能项目，总投资为6.56亿元（合美元8,077万美元），利用亚行贷款约2.9亿元（合4,294万美元）。与前两批项目相比，本项目的特点在于重点扶持节能服务公司，用于支持节能服务公司实施合同能源管理项目的资金超过本批项目贷款额度的50%，其中为广东诚亚节能科技有限公司提供贷款1亿元，为广州智光节能有限公司利用提供了贷款资金5,000万元人民币，并带动企业配套资金共开展了14个合同能源管理项目。经测评，第三批项目节能减排效果已远超出其预期值。

Table 1: Subprojects of Tranche 3
表1 第三批项目列表

Sub-borrower 子借款人	Subproject 子项目内容	Total Investment 总投资额	ADB Loan 贷款额度		Progress 实施情况
		CNY/元 '000	CNY/元 '000	\$/美元 '000	
Guangdong SGIS Songshan 广东韶钢松山股份有限公司	Recovery of low pressure saturated steam 低压饱和蒸汽回收利用技术改造项目	94,813	64,000	10,230	9MW waste-heat power generation unit was built and with a sound operation in SGIS 在韶钢本厂建成了一座9兆瓦的低温饱和蒸汽余热发电机组,运行良好
Guangdong Rizhao New Tech Application 广东日照新技术应用有限公司	Promote low-loss insulating copper bus-bar 推广低损耗绝缘薄壁铜管母线	45,000	30,000	4,412	Promoted 9,406 meters of insulating copper bus-bar 推广低损耗绝缘薄壁铜管9,406米
Guangdong Cheria Energy Technology 广东诚亚节能科技有限公司	Comprehensive energy-efficiency retrofits for power plants, industrial factories and commercial buildings 电厂、工业及建筑领域的综合节能改造项目	170,000	100,000	14,706	carried out 11 energy-efficiency Energy Management Contracting (EMC) projects 在电力行业、工业、酒店等领域开展11个合同能源管理项目
Guangzhou Zhiguang Electric 广州智光节能有限公司	Promote variable speed controllers of power on HV motors 大功率变频调速系统在高压电动机上的节能应用	75,000	50,000	7,353	37 sets of HVCs were installed for 4 end-users with a total capacity of 57,645kW 为4个终端用户安装高压变频装置37台,总容量为57,645千瓦
Borch Machinery 博创机械股份有限公司	Promote energy-efficient BS series injection-molding machines 高速节能全自动塑料成型机技术的推广	102,000	37,000	5,441	Promoted 263 sets of BS series injection-molding machines with a total capacity of 13,441千瓦 推广高效注塑机263台,总功率为13,441kW
Guangdong Real Faith Lighting 广东昭信照明科技有限公司	Promotion of LED lighting 高效LED路灯推广项目	15,714	11,000	800	LED road lamp promotion with 5 end-users, and a total capacity of 685.7kW 对5个终端用户进行LED路灯改造,新装LED灯具总功率约为685.7千瓦
合计 Total		702,241	292,000	42,941	

B. Innovative Project Management

项目管理创新

1. Project Management Structure 项目管理架构

The EPP Steering Committee consists of the Guangdong Economic and Information Technology Commission, the Guangdong Development and Reform Commission, the Guangdong Finance Department (GFD), and the Guangdong State Assets Supervision and Administration Commission. Under the steering committee is the EPP–Project Management Office (EPP-PMO), which includes technical engineers and other professionals from the Guangdong Energy Conservation Center.

To manage finances and meet the needs of managing a revolving fund over a loan term of 15 years, after competitive bidding, the GFD appointed the Guangdong Finance Trust Corporation (GFTC) as financial intermediary. The trust corporation was responsible for assessing the financial viability of sub-borrowers, sub-loan collaterals and guarantees, and administering the sub-loan portfolio.

专门成立了项目协调小组。成员单位包括广东省经济和信息化委、省发展改革委、省财政厅、省国资委，负责项目的总体决策及政策指引。项目协调小组下设广东省亚行贷款能效电厂项目执行中心（简称“项目执行中心”），其技术力量来自广东省节能中心。

引入中间金融服务机构。通过公开招标，确定广东粤财信托公司（简称“粤财信托”）作为项目的专职财务管理机构，受广东省财政

厅的委托，负责项目财务评估、抵押担保管理及贷款资金管理等工作。

2. Financial Management Model 财务管理模式

The MFF model made for flexible financing, and reduced waiting times, which resulted in lower investment costs. An innovative financial-management model was adopted, with a financial intermediary allowing the use of revolving funds, while also buttressing the independence and professionalism of management. Meanwhile, by appointing a trust company as the financial intermediary, risks were minimized and transparency was assured for the safe and effective use of ADB funds.

亚行的多批次融资（MFF）模式实现了更为灵活的融资安排，减少了子项目之间的等待时间，从而降低了融资成本。采用了创新的财务管理模式，其中间金融机构贷款模式具有资金可循环使用的优势，也强化了项目财务管理的独立性和专业。项目还采用了信托运作模式管理贷款资金，具有有效的风险隔离、严格的评审流程等优势，保证了贷款资金的安全高效运作。

3. Putting the Experts in Control 有效利用专业机构

The EPP-PMO is affiliated with the Guangdong Energy Conservation Center, Guangdong Province's authority on energy-efficiency project management, and one of 26 energy-saving M&V agencies certified by the national government. The conservation center boasts expertise in energy-efficient technologies and policies, and has rich experience in energy supervision. As stipulated by the Energy Savings Measurement and Verification Handbook, the

EPP Program was measured by a third-party energy-savings M&V agency,

项目执行中心与广东省节能中心合署办公。广东省节能中心在节能项目管理方面是广东省的权威机构，是国家26家节能量审核机构之一，熟悉各项节能技术及节能政策，又有节能监管经验。这对于项目有效运行提供了稳定支撑，是该项目管理中重要的创新之一。引入第三方节能测评机构，按照《项目节能量测量及确认手册》的要求对项目的节能效果进行测量及确认。

C. Project Benefits

项目实现的效益

1. Energy saving and emission reduction 节能减排效果

By Q3 2015, M&V energy savings from the EPP Program reached 1,295GWh/yr—equivalent to an installed generation unit with a capacity of 259MW—achieving about twice the energy savings and emissions reductions that were estimated. Tranche 3 achieved energy savings and emission reductions that exceeded estimates, as shown in detail in the chart below.

Some sub-loans for the first three tranches have been repaid to form a revolving fund to more sub-borrowers. By Q3 2015, 16 subprojects, including some of the sub-borrowers in the first three tranches, have used the revolving fund, and another two subprojects are under review. Moreover, many energy-efficiency projects are applying to use the revolving fund. The energy-saving benefits of such subprojects are estimated to eventually be three-to five-times greater than those resulting from the first three tranches of

investment. Overall, the project is expected to effectively solve energy shortfalls and improve the living environment in Guangdong, while also enhancing provincial energy security.

截至2015年三季度，已实施并经测评的项目年节电量已经达到13亿千瓦时，相当于一个装机容量为26万千瓦的发电机组的年发电量，已超出预期节能减排目标的2倍。其中第三批项目同样取得了超出预期的节能减排效果，其节能减排量预计与实际对比见下图：

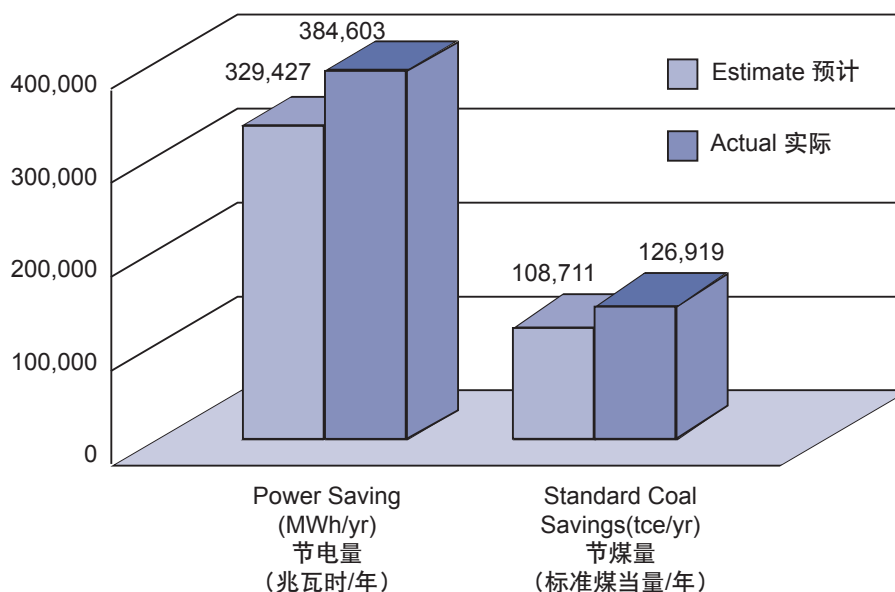
前期三批贷款项目中，一些子项目已经陆续到期并如约归还本息，形成了亚行贷款的循环资金。截至2015年三季度，已经推进了16个循环资金项目，其中包含曾参与过前三批项目的企业，另有2个在报批中。并且，目前还有很多的节能项目陆续申请参与到能效电厂项目的循环资金项目中。预计循环贷款项目的节能减排效益可达到前三批项目的3~5倍。该项目有利于缓解广东省的能源紧缺局面和改善当地的居住环境，巩固广东省的能源安全。

2. Enhanced Capacity 能力提升

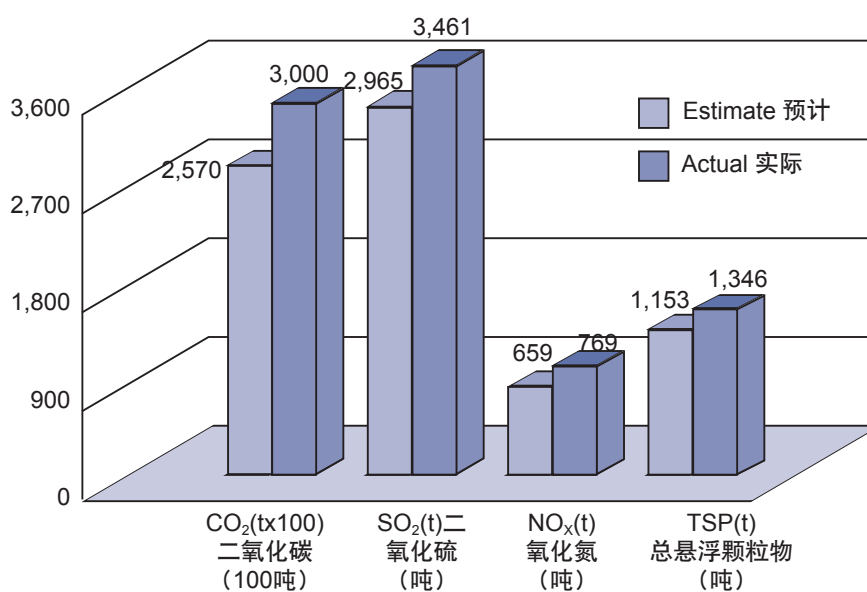
During implementation of the EPP Program, staff members of the PMO have learned to manage energy-efficient projects, energy-saving M&V agencies, ESCOs have developed, sub-borrowers have improved their self-management and learned international practices, forming a project-management team with high professional standards.

Sub-borrowers enjoy more abundant funding with EPP Program financing, and are able increase their lines of credit, which is conducive to obtaining more funds from other financial institutions. Moreover, the EPP

Energy Savings Comparison
节能效益对比



Emission Reduction Comparison
减排量对比



Program has provided a model for financial institutions to participant in energy-efficiency projects, thus widening access to financial support.

Energy-efficient subprojects bring energy-savings benefits to sub-borrowers, and reduce their energy costs. Meanwhile, the sub-borrowers improve their management, credit line, and reputation after participating in EPP Program, which in return enhances the competitiveness of the sub-borrowers.

通过实施能效电厂项目，培养了一批节能减排项目管理人才，培育了一批测评机构及能源服务机构，也提高了子项目单位自身的管理水平，学习到各种国际惯例，形成了一个素质较高的工作团队。

子项目单位在纳入能效电厂项目后，资金更为充裕，同时也提高了企业的资信程度，有利于企业从其他金融机构获取支持资金。此外，能效电厂项目的模式也对其他金融机构参与节能减排项目起到了示范作用，拓宽了节能减排项目的融资渠道。

开展节能项目本身会带来一定的节能收益，降低了企业成本。同时这些企业由于参与了能效电厂项目，管理水平、资信水平和企业形象等都得到了提升，从而提高了其市场竞争力。

3. Demonstration Effects 示范作用

Many sub-borrowers apply again for subsequent sub-loans, which has played a role in demonstrating the benefits to other potential applicants, and will drive more domestic funds into the energy-efficiency sector.

Successful implementation of the EPP Program is a good start for the PRC in terms of improving energy efficiency with foreign funds, and it is also a helpful step in the search for an energy-efficient project-operation model that is suitable to conditions in the PRC. Moreover, it also serves as a model for promoting and undertaking EPP programs in other parts of of the PRC. Shandong and Hebei provinces, for example, have learned from Guangdong and carried out their own EPP projects with ADB loans.

Implementation of the EPP Program is conducive to strengthening energy-efficiency awareness, drawing more people to pay attention to energy-efficiency policies, and both domestic and international trends in technology. The result is that more enterprises will carry out technological retrofits, and product research and development from an energy-efficiency perspective, which is conducive to creating a good environment and sustainable development.

从项目内部看，很多已参与项目的企业继续申请参与后续批次项目，这对其他企业存在很好示范作用，也带动了更多国内资金进入节能减排领域。

从外部而言，该项目的顺利开展是中国探索利用外资促进节能减排工作、摸索适合中国国情的节能减排运作模式的良好开端，为亚行能效电厂项目在中国其他省份进行推广、促进节能事业在中国发展起到了很好的示范效应。目前，山东、河北等地已经开始借鉴项目的成功经验，利用亚行贷款开展能效电厂项目。

项目的实施有利于增强全社会的节能减排意识，更多关注国际国内节能减排政策、先进技术发展趋势，也会更加重视从节能减排的角



Application of LED Street Lights
LED路灯改造

度进行技术改造、产品研发，有利于形成良好的社会氛围，有利于我国经济社会的可持续发展。

D. Experience Gained

经验总结

1. Strong government support and the cooperation of various departments of the PMO have created a favorable environment and conditions. In a preliminary study and during the implementation process of the EPP Program, PRC government departments provided great support in assisting Guangdong undertake systemic innovation, with the transfer-loan and implementation framework, continually improving the operation model of the EPP Program, and creating a favorable environment and conditions for the implementation of the investment program. Meanwhile, various departments of the EA have been cooperating closely to overcome various problems that arose during implementation, continually offering innovative ideas, which enabled the EPP Program—unique among traditional ADB projects—to be approved and implemented smoothly.

政府部门大力支持及项目执行机构各有关部门之间的通力配合为项目实施创造了有利的

环境和条件。项目前期研究及实施过程中，国家有关部门给予了大力支持，帮助广东在机制体制、贷款方式、实施框架上方面开拓创新，不断完善项目运作模式；同时执行机构各有关部门一直通力合作、密切配合，共同解决项目推进过程中所遇到的各种困难，不断提出一些创新思路，才使得与亚行传统项目具有明显区别的广东能效电厂项目得以顺利批准和实施。

2. Comprehensive preliminary research ADB by technical assistance laid a solid foundation for the successful and sustainable implementation of the EPP Program. ADB provided advisory technical assistance (ADTA) and project preparatory technical assistance (PPTA) during the preliminary study stage of the EPP Program, and later provided a \$2 million grant for capacity building. The technical assistance and the grant provided professional and sustainable consulting services to the EPP Program.

项目前期调查研究深入，技术援助到位，为项目顺利实施及持续开展奠定了良好的基础。亚行在项目前期研究阶段分别为项目提供了两个技术援助，在项目实施中，亚行又为项目提供了200万美元的赠款，用于项目管理能力建设，这些都为广东能效电厂项目运行提供了良好和可持续的技术支持。

3. Creative and practical arrangements have ensured smooth implementation and sound management. The MFF has been adopted to accelerate review and approval of each tranche, a distinctive financial intermediary modality has been used to carry out financial management, while a third party has been selected to conduct energy-saving M&V. Moreover, the PMO has compiled several regulatory handbooks for the EPP Program. All the above innovative arrangements were tailored

to suit the conditions of Guangdong Province, guaranteeing appropriate and effective implementation.

建立了创新并具有可操作性的良好制度管理，是项目运行和管理规范性的有力保证。广东能效电厂项目不仅采用了多批次融资模式加快各批次审批进度；还采用了有区别于亚行传统意义上的中间金融机构贷款模式进行财务管理；并聘请第三方测评机构对节能量进行实际测量与确认；此外，还为项目量身定制了多个规范性文件。这些管理架构及规范都极具创新性，也结合了广东省的实际情况，从而保证了项目实施和管理的规范性和有效性。

4. Capacity building for every shareholder is important in terms of implementation success. During implementation, various training sessions covering topics such as procurements, financial and economic analysis, energy-saving M&V, and legal knowledge, have been provided to sub-borrowers and management personnel. The training improved the management capacity of all shareholders, and is important for the successful and sustainable implementation of the EPP Program.

注重提高有关各方的能力建设是项目成功的重要条件。项目在实施过程中，针对子项目单位及管理人员，分别多次进行有侧重的培训，内容涵盖采购、经济财务分析、提款报账及财务管理、节能测评、法律知识等多方面，提高了项目有关各方的项目管理能力，形成了稳定的技术力量，有助于项目的顺利和持续开展。

5. The government bears management costs, reducing investment costs of the sub-borrower. An incentive mechanism was established, stipulating that retained earnings were awarded to the sub-borrowers. Those

measures have improved the attractiveness and sustainability of the EPP Program.

The Guangdong Provincial Government borrows from ADB in USD and transfer-loans to sub-borrowers in CNY at a local commercial bank-based interest rate. Sub-borrowers bear no risk relating to foreign-exchange or LIBOR-based interest rate fluctuations, with all risk undertaken by the Guangdong government. Meanwhile, "Interim Measures for Retained Earnings Management" were promulgated, stipulating that 70% of retained earnings (if any) were to be awarded to sub-borrowers who have achieved target energy savings and repaid the sub-loan principal and interest on time.

政府承担项目实施管理成本，减少企业的成本负担。制定奖励机制，将结余资金奖励给子项目单位，提高了项目吸引力，增强了项目的可持续性。

广东省在承接亚行美元贷款统一结汇后转贷，转贷利率与国内利率挂钩。子项目单位无需承担美元对人民币汇率变动或利率变动的风险。利率风险及汇率风险均由政府（财政）承担。同时制定《项目结余资金管理暂行办法》，每年在产生盈余的前提下，70%的盈余将用于奖励给达到预期节能量且及时还本付息的子项目借款人，增强了项目的吸引力。



Waste Heat Generating Unit
蒸汽余热发电机组

Loan 2835-PRC: Hebei Energy Efficiency Improvement and Emission Reduction Project 河北节能减排促进项目



A. Project Brief

项目简介

The project adopts the modality of "financial transfer loans and an intermediate financial institution service," with the Hebei Provincial Government (HPG) as the sole borrower. The Asian Development Bank (ADB) loan is \$100 million for the term of 15 years. The project loan was approved in December 2011 and the loan agreement was signed in March 2012. The project consists of a number of subprojects, the period and scale of which are relatively small and located in different areas of Hebei Province. Given this, the subprojects were grouped into several batches and the ADB loan was revolving. In principle, the loan term for each subproject does not exceed 5 years, and when the loan is repaid by the subborrowers, the next batch of subprojects are selected, allowing the loan funds to be revolved.

The first batch of projects included eight subprojects in various technical fields such as coke dry quenching (CDQ) power generation, comprehensive resources utilization for power generation, technical retrofitting of co-generation equipment, energy management centers, energy system optimizing, circulating water residual heat and pressure utilization, and mid-to-high temperature solar-heat concentration water-heating services. It is estimated that, after the completion of the first batch of projects, the annual energy savings will be 270,000 tons of coal equivalent (tce), CO₂ emissions reduction of 700,000 tons, SO₂ emissions reduction of 1,600 tons, and when the entire project has been completed it will bring economic and social benefits that are

approximately threefold the value of the investment.

Currently, all eight subprojects in the first batch have been basically developed, and \$97.8 million of the loan proceeds have been disbursed.

该项目贷款采用“财政转贷和中间金融机构服务”方式，由省政府统一借款。亚行贷款1亿美元，期限为15年。2011年12月贷款批准，2012年3月贷款签字。该项目由多个子项目组成，根据项目周期短、规模小且相对分散的具体情况，采取了分批实施、滚动使用的运作模式，子项目贷款期限原则上不超过5年，

子项目贷款资金回收后，继续选择后续子项目，以实现贷款资金的循环使用。

首批子项目包括干熄焦发电、资源综合利用发电项目、热电设备改造、能源管理中心、能量系统优化、循环水余热余压利用和中高温热集中式太阳能热水节能服务等8个子项目。经初步测算，首批子项目建成后，预计年节约标煤约27万吨，减排二氧化碳约70万吨，减排二氧化硫约1,600吨。项目全部完成后将会产生三倍以上经济效益和社会效益。

截至目前，首批8个子项目基本建设完成。实现累计提款9,780万美元。



CDQ Boiler
干熄焦余热锅炉

B. Project Management

项目管理

1. Study in Advance

提前研究

All work is ahead of schedule, and planning for later stages is being undertaken while the earlier stages are underway. To further promote energy efficiency and emission reductions, the HPG established special research groups to learn from the ideas and experience of constructing efficient power plants in Guangdong, Jiangsu, and Shandong provinces. During implementation of the project, the Project Management Office (PMO) undertook research into models of market-oriented operationally efficient power plant projects, also studying national policies on the subject. This was the basis of a proposal for an improved energy-efficiency and emissions-reduction (EPP) project using the ADB loan.

一切工作超前谋划，在前一个阶段就把后面的准备工作做好。为深入推进节能减排工作，省政府专门成立调研组先后到广东、江苏和山东等兄弟省份取经学习，开始实施能效电厂项目建设。在项目的实施中，开展了《能效电厂项目市场化运作模式的研究》等课题研究，并积极学习研究国家的相关政策，提出了利用亚行贷款建设节能减排促进（能效电厂）项目。

2. Leadership in Place

领导重视

Hebei Province has established a Project Steering Committee (PSC), with the Executive Vice Governor of Hebei Province as head of the committee. The PSC office was established in the Hebei Development Research Center, and the PMO was set up

under the the PSC and located in the Hebei Province Power Demand-Side Management and Instruction Office. Four overseeing roles were designated in the PMO for technology, procurements, disbursements, and environmental and social management, and each was filled with two personnel to work in A/B roles. The PMO also hired experts to form a well-staffed and diligent team, and also established a special internet service for complaints so as to guarantee oversight of ADB management policies. During implementation of the project, the PMO formulated various rules and regulations, such as project management and financial management methods, while also holding periodic meetings to discuss work associated with the program, which has been of assistance in forming a complete working system from bottom up.

河北省成立了以常务副省长任组长的省利用亚行贷款节能减排促进项目领导小组。领导小组下设办公室，设在省发改委；办公室下设项目执行中心，设在专门机构——河北省电力需求侧管理指导中心。项目执行中心设置技术、采购、支付及环境社会管理等四个专岗，以A/B角形式配备人员，同时聘请相关专家，形成了一支配备合理，勤奋敬业的工作团队，特别是在积极落实亚行保障政策管理方面，专门建立了网络申诉机制。在项目的实施中，研究出台了项目管理办法、资金财务管理办法等各项规章制度，项目办办定期召开专题会议研究部署项目工作，形成了一整套上下协调的工作机制。

3. Effective Communication and Coordination

有效协调和沟通

To strengthen the coordination and cooperation of various departments, the PSC



Hebei University Solar Energy Program
河北大学太阳能工程

and its office consists of leaders or directors of 14 governmental departments, such as the Provincial Development Research Center, the Finance Bureau, the Environmental Protection Bureau, and financial institutions. The PSC is responsible for reviewing any financial matters related to the project and for coordinating stakeholders, and the implementation of funds. Each of the member parties actively carry out the PSC's decisions in their own capacity. At the same time, a number of progress reports have been submitted to National Development and Reform Commission (NDRC) and the Ministry of Finance (MOF).

To make project progress compatible with ADB's reviewing procedures, the PMO placed great importance on communication with ADB. In the preparatory period of the project, ADB officials and consultants were invited to

conduct project investigations, evaluations, training sessions, and meetings more than 10 times, resulting in four memorandums of understanding (MOUs). During the implementation of the project, ADB officials and experts made many visits to Hebei Province and conducted on-site checks, and provided instructions for the subproject units, leaving satisfied with the project's achievements.

为便于加强协调配合，河北省在领导小组及其办公室成员的组成上，分别由发改、财政、环保、金融等14个相关部门的主管领导和主管处长组成。在项目实施中，领导小组办公室审定项目以及项目实施中的组织协调和资金安排。各成员单位按照各自职能，积极落实领导小组及办公室的重要决策。同时，多次向国家发改委、财政部沟通汇报项目进展情况，推进项目顺利建设。

为使国内的项目进度与亚行的审核程序能够有机结合，相互推进，项目办注重同亚行方面的沟通协调，仅项目准备期间，先后邀请并接待亚行官员和咨询专家进行项目考察、评估、培训和会谈等10余次，共签署4项备忘录。在项目实施中，亚行官员和咨询专家多次到项目考察，并到子项目单位进行实地检查指导工作，对项目建设取得的效果表示肯定。

4. Managing for Results 管理以结果为导向

During preparatory stages of the project, Hebei Province made all efforts to resolve difficult problems, making real progress in doing so. To select appropriate projects of high responsiveness, the PMO selected eight subprojects with great potential for energy savings, considerable economic benefits, and a short payback period for the first batch of projects. To ensure the effectiveness of the subprojects, the PMO conducted on-site investigations with ADB's technical assistance experts, and pre-reviewed the feasibility report and environmental assessment reports for the subprojects.

The PMO promoted implementation of the project in strict compliance with the established plan. To keep up with updated information as progress was made, the PMO periodically coordinated with the subproject units and compiled 72 volumes of project progress reports. To ensure timely implementation, the PMO regularly convened project management coordinating meetings to actively solve any problems or difficulties encountered in the development of the project. To further ensure the quality of the project, the PMO authorized third-party construction supervision agencies to check and examine the progress of projects and the use of loan funds on 12 occasions.

在项目前期准备工作中项目办简化程序，攻破难点，务实推进。为提高项目的针对性，项目办确定了节能潜力大，经济效益好，资金回收期短的8个子项目作为首批项目实施。为提高项目成效，项目办联合亚行技援专家进行项目实地考察评估，并对项目可研和环评进行预审。

在项目实施中按照既定计划积极推进项目建设。为全面掌握各子项目单位的项目建设情况和施工进度，定期对各子项目单位进行调查，累积形成了72期项目进度情况。加快项目建设进度，多次召开项目管理协调会，积极解决子项目单位在建设过程中出现的问题和困难，保障项目顺利实施。为进一步加强项目实施质量，委托第三方工程监理机构核实项目进度情况和贷款资金使用情况，累计实地监督检查12次。

C. Good Practice 项目创新实践

1. Streamlined Financing Modality 简化的融资程序

The project adopted the modality of "financial transfer loans and an intermediate financial institution service," simplifying the loan-transfer model. The PMO provided ADB with a number of candidate subprojects for ADB's analysis, after which loan negotiations were undertaken, resulting in a loan request for a lump sum of \$100 million, which the MOF transfer loaned to Hebei Province under the same conditions as those of ADB. After settlement of the exchange through a revolving account established with Hua Xia Bank, Shijiazhuang Branch (the financial institution), the loan principle was loaned directly to the subproject units in CNY. This is a simplified loan-transfer model that has

greatly enhanced the efficiency of review and approval of funds, while also ensuring that subproject units complete projects financed with ADB loans on time.

During implementation of the project, the Hebei Finance Bureau signed an intermediate financial service agreement with Hua Xia Bank, specifying the responsibilities of each party in terms of management of funds, accounts, and services. Moreover, the subproject loan-transfer agreement was signed by four parties—the Hebei Finance Bureau, the local financial bureaus of the subproject units, the subproject units themselves, and the intermediate financial institution—which clarified the conditions and procedures for the loan transfer and repayment, and the rights and responsibilities of each party, so as to ensure that the funds were withdrawn and utilized appropriately.

项目采用“财政转贷和中间金融机构服务”方式，从转贷模式上进行了简化，提出向亚行提供数个子项目，经亚行开展技援工作识别并确认后，将1亿美元一次性进行贷款谈判、申请和审批，财政部按照亚行的原贷款条件转贷给河北省。省财政厅通过金融服务机构（华夏银行石家庄分行）建立的循环资金账户，将亚行贷款结汇后，以人民币为币种直接转贷给子项目单位。该转贷模式，减少了中间转贷环节，大大提高了项目资金审批效率，保证了子项目单位及时利用亚行贷款实施项目建设。

在项目建设过程中，为加强财务管理，省财政厅与华夏银行签署中间金融服务协议，明确双方在资金、账户管理与服务的职责。同时，由省财政厅、项目单位所在地设区市或直管县财政局、子项目单位、中间金融服务机构等四方共同签署了子项目贷款转贷协议，明确转贷、提款及还款条件和程序，约束各方权利、义务和责任，保障了资金规范使用和提取。



Coke-resistant Plant's Stamp-charging Coke Oven
抗焦厂的印花装焦炉

2. Active Stakeholders Consultation 积极协调项目利益攸关方

In planning the project, Hebei Province was active in communicating with and requesting direction from the MOF and the NDRC on the progress of the preparatory work, and in developing mechanisms. The Hebei Finance Bureau and the Hebei Development Research Center have also cooperated well in finding ways to solve any problems that have arisen, ensuring that the project has proceeded smoothly. During the project implementation, the PMO adopted a pre-review working mechanism, and conducted on-site investigations together with ADB technical assistance experts. Moreover, the project conducted weekly coordination and quarterly inspections, set up a development supervision management system, and supervised and urged the subproject units to conduct development as planned, ensuring that the loaned funds brought the anticipated benefits to the subproject units.

在项目谋划过程中，积极与财政部和国家发改委沟通请示，及时汇报项目前期进展和制度建设情况，尤其是省财政厅和省发改委定期对项目进展情况及遇到的问题进行专题研究，相互支持，共同推进，保障了项目顺利进行。在项目实施期中，实行工作预审机制，联合亚行技援专家进行项目实地考察评估，对贷款支

付、招标采购等工作进行预审。同时，开展周调度、季检查工作、工程监理管理制度，每周对项目进行综合调度，督促子项目单位按计划进行建设，促使子项目单位能够早提款、早受益、早见效。

3. Maximizing Utilization of the Loan 高效利用贷款

Considering that the energy-efficiency and emissions-reduction project was to be so short in development but long in effectiveness, the PMO advanced the project in batches through the use of revolving loans. In principle, the loan term for each subproject does not exceed 5 years. After completion of the first batch of projects, succeeding projects will be subject to arrangements made by the HPG in accordance with ADB's project management principles. Through the use of revolving loan funds, the benefits of the loan can be expanded by several orders of magnitude.

鉴于节能减排项目具有建设周期短、时效性强等特点，项目利用亚行贷款采取多个子项目分批实施、贷款资金滚动使用的运作模式，子项目贷款期限原则上不超过5年。第一批项目完成后，后续项目由我省按照亚行项目管理原则自行安排，滚动循环使用贷款，将贷款效益放大几倍。

Transport and Communications 交通和通信

Loan 3014-PRC: Hubei-Yichang Sustainable Urban Transport Project 湖北宜昌可持续城市交通项目

A. Project Overview

项目概况

In 2015, a bus rapid transit (BRT) in Yichang, Hubei Province opened, which is the Asia's second gold-standard BRT system (after Guangzhou). The city is implementing two BRT corridors with a \$150 million loan from ADB. One extends from the city center 13 kilometers (km) southward to the high-speed railway station with 22 stations (opened July 2015), while other stretches 10 km to the north, and has 15 stations (most of them opening in November 2015). The Yichang BRT, along with other sustainable transport improvements along the BRT corridor, is a leading candidate for the 2016 Sustainable Transport Award to be held in Washington DC in January 2016.

湖北宜昌快速公交(BRT)系统于2015年正式开通,这是亚洲第二个金牌BRT系统。亚洲开发银行对两条BRT走廊提供1.5亿美元贷款。一条始于宜昌市中心,向南延伸至火车东站,长度13公里,共22个车站(该条BRT走廊已于2015年7月开通);另一条BRT走廊则由宜昌市中心向北延伸,长10公里,共15个车站(该BRT走廊的主体部分将于2015年11月开通)。每年一次的世界可持续交通大奖将于2016年1月在华盛顿颁发,目前宜昌BRT及其沿线配套的可持续交通改善项目是获奖的最大热门。

Yichang has a north-south layout and the two BRT corridors opened in 2015 are centrally located. The Dongshan Avenue corridor and BRT route connects the city center with the established, but rapidly densifying and expanding, Yiling District in the north. Most of the city's demand is concentrated in the downtown, which is well served by the BRT corridor. Another major development area is concentrated in the south of the city around the high-speed intercity rail station, which opened last year. The BRT corridor provides direct access to the high-speed station.

宜昌为南北走向的带状城市，2015年开通的两条BRT走廊正好贯穿宜昌市中心区域，其中东山大道BRT走廊使宜昌市中心与该市北部正在高速发展的夷陵区紧密相连，将更加促进城市发展。通过BRT走廊的修建，不仅可以满足客流需求和提升公交服务品质，此外宜昌市另一个正处于高速发展的主要区域——宜昌东站（高铁站）及其周边的发展也因BRT走廊的修建而与市中心联系更为密切，并从中受益。

B. Keys to Success

项目成功的关键

1. One Goal

目标一致

The importance of high-level support from Yichang officials, including the mayor, party secretary, and vice mayor cannot be overstated. The Yichang City Government established a Project Coordination Leading Group Office, to which key staff from related government departments were seconded,

holding regular meetings for the entirety of the implementation period. The executing agency (EA) and the implementing agency (IA) played key roles in the project implementation and coordination.

The system also benefited from guidance by ADB, without the support and hands-on determination of which to achieve a high-quality project the BRT corridor would either never have materialized or have been poorly implemented.

While local officials deserve praise for the system's successful planning, design, and implementation, ADB also played a vital role in the project's success. The stakes for a project, that connected the downtown city area to areas in the north and south were high, and the fact that local officials followed sound technical advice provided by local and international BRT experts ultimately ensured the project's success.



High capacity BRT in operation in Yichang
大运量的宜昌BRT系统



High capacity BRT in operation in Yichang
大运量的宜昌BRT系统

The Yichang Bus Group, which operates the BRT buses, was also key to the success of the project, and the group was closely involved in the planning and design process, especially operational design and bus-related issues, from the preliminary design stages through to construction and operation. The Yichang Bus Group also played a significant coordinating role and contributed significantly to communications and outreach activities.

必须要说的是，宜昌市领导（市委书记、市长及副市长）对宜昌BRT项目的成功起到至关重要的作用。宜昌市政府专门成立了项目指挥部和领导小组办公室，抽调各相关单位人员联署办公，每天进行项目协调和推进。项目执行机构和实施机构在项目的实施和协调方面起到至关重要的作用。

亚洲开发银行鼎力支持宜昌市BRT项目建设，以打造一流BRT系统的决心进行了关键性指导，得益于此，宜昌BRT系统能够成功建设且质量卓越，否则这个BRT项目可能会得不到实施或者施工质量差。

在亚行的支持之外，宜昌BRT项目的成功规划、设计和实施过程中，离不开当地官员的努力。由于BRT走廊贯穿南北，连接了城市的各个区域，所带来的风险不容小觑，正是由于当地官员坚持遵循并贯彻了国内外BRT专家的技术建议，宜昌BRT系统获得了成功。

宜昌BRT项目的成功，负责运营BRT的宜昌公交集团同样起到了重要作用。宜昌公交集团积极参与了BRT初步设计、建设和运营等各个阶段的规划和设计，尤其是涉及运营设计和公交相关的部分。与此同时，宜昌公交集团还在项目协调、对外宣传及交流活动中做出了重大贡献。

2. Professional support 专业团队的支持

The ADB project manager made an important early decision to split the BRT and ring-road components, hiring a consultant team to focus on the BRT project preparatory technical assistance in 2012. This was important because the BRT presented many challenges that differ from developing a peripheral ring-road project, calling for special BRT expertise.

亚洲开发银行项目经理2012年在项目前期技术援助阶段，果断和非常重要的将BRT项目与亚行贷款项目范围内其他项目进行分离，选取专业技术团队对BRT项目提供专业技术咨询，对项目的成功起到关键作用。值得一提的是，正是由于修建BRT所遇到的挑战与一般的城市道路项目并不相同，专业的BRT领域技术专家起到了非常重要的作用。

The corridor has all the features of a gold-standard BRT, and was planned and designed by the People's Republic of China (PRC) Institute for Transportation and Development

Policy in partnership with the Guangzhou Municipal Engineering Design and Research Institute. The international experts and most of the national experts were also key experts in Asia's other gold-standard BRT in Guangzhou. It was critical to the success of the project that the consultant team had experience with successful high-capacity BRT implementation and was able to share that experience with Yichang officials and government agencies.

交通与发展政策研究所 (ITDP) 中国办公室与广州市市政工程设计研究院联合完成了具备BRT金牌标准的所有特征的宜昌BRT系统规划设计。这些国际专家和大多数中国专家同时也是亚洲其他金牌BRT项目的主要负责人。拥有参与过大运量BRT实践经验的咨询团队对于宜昌BRT项目的成功非常重要，专家们的丰富经验，可以扬长避短，更利于宜昌市BRT项目的顺利开展。

The EA provided considerable flexibility for consultants in terms of developing a methodology, and in recruiting teams. BRT projects are multi-faceted and best achieved



High capacity BRT in operation in Yichang
大运量的宜昌BRT系统

through mobilization of a large team, and the project terms of reference for the project preparatory technical assistance (PPTA) study enabled the consultants to put such a team in place.

项目执行机构赋予了专业顾问们一定的自由度，自行提出团队方针与进行团队建设。由于BRT项目覆盖方方面面，需要动员的咨询团队规模较大，针对该项目所要求的打破亚行传统的项目前期技术援助研究（PPTA）和顾问专家的招标要求（TOR），非常成功和专业，使得宜昌市得到了非常专业和强大的顾问团队。

A separate BRT supervision contract was awarded, hiring experts to assist in supervising technical aspects of the BRT implementation and operation. This enabled the same experts who worked on the PPTA study to provide critical input during the later design and early operational stages.

独立的BRT监理合同授予BRT专家权力，使其可以监督并解决BRT在实施和运营中所遇到的技术问题。这使得参与了项目前期技术援助研究的专家同样可以在后期的设计和前期的运营阶段提供重要的技术援助。

3. Seamless Collaboration 精诚合作

The ADB's Project Management Office (PMO) was located both physically and politically in close proximity to the city's key decision-makers. This was an important factor in enabling the project to overcome implementation issues, such as design related to intersections, which is a common problem and often critically important to successful operation of a BRT, and required regular, intensive coordination with related agencies. The Yichang PMO successfully carried out this key coordination role.



High capacity BRT in operation in Yichang
大运量的宜昌BRT系统

亚行项目执行机构和实施机构与政府的决策者非常密切合作和保持沟通联系，领导小组和指挥部得成立和协调是攻克项目实施中遇到困难的重要因素。这些困难，例如交叉口设计相关问题，看似平常但却对于BRT的成功运营至关重要，这需要相关部门不断深入的协作。宜昌执行机构和实施机构成功的履行了这个关键的协调职责。

While city officials in some important positions changed during the course of the project, both ADB and the national and international expert teams retained the same key personnel. This was an important factor in ensuring continuity of the design and planning, and ultimately played an important role in the success of the project.

虽然在项目推进过程中宜昌市重要的政府官员发生人员变动，但亚行和国内外专家团队仍然维持主要班底。人员的一致性同样是保证规划和设计的持续性的重要因素，也是最终实现项目成功的一个重要原因。

BRT projects have many interrelated components including roadways, intersections, stations, institutional and regulatory issues, operational design, financing, communications, vehicles, information technology service elements, modal integration, and other aspects. Although not everything was perfectly ready when the system opened in mid-July, it was nevertheless impressive that the project team and local leadership were able to mobilize all of these elements to commence operation by July 2015.

BRT项目有很多相互关联的组成部分，包括道路、交叉口、站台、体制和管理问题，运营设计、融资、沟通、车辆、智能交通设备、交通模式整合和其他方面。虽然系统在7月中旬开通的时候还没有达到尽善尽美，但在市

政府领导的强力支持下，得以调动不同的资源，保证BRT系统于2015年7月成功开通运营，令人印象十分深刻。

C. The Results

项目成果

Surveys carried out in September 2015 revealed a range of impressive impacts. The BRT system in August averaged 240,000 daily passenger trips, with 200 new BRT buses in operation. Some 20% of BRT passengers had switched from using cars and taxis.

2015年9月进行的一项影响分析调查已经展现出一系列令人印象深刻的影响。平均每天有240,000人次乘搭宜昌BRT，另外，200辆新的BRT公交车也在8月正式投入运营。根据调查，20%的BRT乘客是从小汽车和出租车的出行方式中转移过来的。

The high-quality, high-capacity BRT corridor has improved traffic conditions. Other improvements include high-quality station architecture and signage, improved pedestrian and bicycle facilities—including dozens of safe crossings—segregated bike lanes, public-space improvements, bike parking, and bike sharing (currently in early implementation stages). BRT operations were also improved, resulting in 6% fewer bus-km per day simultaneously as usage increased. BRT speeds increased from 16 km/hr pre-BRT implementation to 20 km/hr post-BRT.

BRT走廊的发展以高质量、高容量的BRT系统为核心，同时改善了所有交通模式的运行情况。这些改善包括了高质量的站台建筑和标志，行人和自行车设施的改善，比如新增的数十个安全过街设施、隔离的自行车道、公共空



Parking improvements along the BRT corridor, with the same locations shown before and after BRT implementation.

BRT走廊沿线的停车改善，同样的位置在BRT实施前后的对比。

间、自行车停车、和公共自行车（目前正在早期实施阶段）。与此同时，BRT的运营系统也得到了改善，在客流增加的情况下，减少了6%的公交车每日公里数。公交车行驶速度也从16公里/小时（BRT开通前）提高至20公里/小时（BRT开通后）。

The BRT corridor serves as an anchor for a series of urban improvements throughout the city. Bike lanes along much of the corridor form the core of a new cycling network. Covered walkways at some key BRT stations and bike parking at BRT stations are both under construction. A new bike-share system, now being implemented and to be operational by December 2015, will allow residents to quickly and easily reach destinations and will nurture a cycling culture in the city.

宜昌BRT走廊为这个城市带来了一系列的城市改善。自行车道贯穿了走廊的大部分并成为了一个新的自行车网络核心。遍及主要BRT站点的有盖人行道和所有BRT站点的自行车停车设施都正在建设中。一个新的公共自行车系统也正在实施中并将于2015年12月投入运营，这将使居民能够快速方便地到达目的地并且能够在这个城市中培育自行车文化。

Yichang has also improved conditions for bicycles and pedestrians, with 30 km of bike lanes (part of a planned 220 km network), and 700 trees planted, along with 29 new safe pedestrian crossings and 400 bollards installed along the BRT corridor. A bike-sharing system has been approved and will be operational by December 2015.

宜昌还通过采取在BRT走廊建设30公里的自行车道（规划全长220公里网络中的一部分）、种植700棵树、设置29个新的安全的行人过街设施、和设置400个护柱等措施以改善自行车和行人通行的环境。另外，一个公共自行车系统已经获得批准并将于2015年12月投入使用。

As a result of successful project management, Yichang's BRT is already serving as a model to inspire many medium-sized cities, not only in operational and design terms, but also in the way the project was planned, designed, and implemented. The Yichang BRT is leading the way for mid-sized cities China-wide, the region, and the world, demonstrating how BRT can enhance transport services and provide connections with surrounding corridors.

成功的项目管理使得宜昌BRT成为鼓舞其他中型城市学习的榜样，值得学习的不仅在于宜昌BRT的运营和设计，更在于其项目规划、设计和实施的模式。如今，宜昌市BRT引领着国内的、亚太地区、乃至全球范围内的中型城市，用实例示范着一个优质的BRT系统是如何提升交通服务及周边走廊的品质的。

D. Innovation Features

项目创新

All of the benefits that come with Yichang's BRT, such as improved parking, improved pedestrian and bicycle infrastructure, and development of BRT station areas are all transferable to other cities and regions, and Yichang's chief innovation is to implement all these aspects simultaneously as part of the BRT corridor project. With an urban population of around 1.5 million, Yichang is Asia's first medium-sized city that offers a

high-quality model for BRT corridor urban development, combining improvements in multiple areas of sustainable urban transport.

路中同向岛式站台、高质量和高容量的BRT、停车改善、行人和自行车设施改善、BRT站点区域改善：这些成功经验都可以推广到其他城市和地区，而宜昌首要的创新是将这些领域的改善作为BRT走廊的一部分，与BRT走廊的建设同步实施。作为一个拥有150万人口的城市，宜昌市成为了亚洲首个在BRT走廊沿线的城市发展以及多方面的可持续城市交通改善领域起到了优质示范作用的中型城市。

One of Yichang's key innovations is the successful implementation of "directional" BRT stations, in which buses traveling in the same direction stop on both the left and right side of the platform. BRT buses have doors on both sides of the bus enabling on-and off-corridor operation. The directional BRT stations enable roughly the same capacity as a more traditional "offset" BRT station platform at half the overall length. The stations also enable some regular buses, with doors only on the right side, to be used in the BRT corridor along with BRT buses with doors on both sides of the bus. A directional station was first implemented in one station in Sao Paulo, Brazil, close on a decade ago, and later for several stations in the Lanzhou (Gansu Province) BRT, which opened in 2013, but Yichang is the first city to implement directional stations along an entire corridor.

宜昌BRT的另一项关键创新是成功实施了路中同向岛式站台，这种站台使同方向的公交车可以同时停靠站台的左右两边。BRT公交车的两侧都有门，使两边都能进行上下客。这种路中同向岛式站台仅仅需要传统的错位式BRT站台一半的长度便可以实现相同的容量。而传统的右侧单开门公交车也可以通过这种站

台与双侧开门的BRT公交车得以共同使用BRT走廊。路中同向岛式站台最早是在几十年前圣保罗的一个车站实施的，之后在2013年开通的

兰州BRT的几个车站中也有采用，但宜昌市是首个在整个BRT走廊全面使用路中同向岛式站台的城市。



Directional BRT station platform in Yichang
宜昌的路中同向岛式站台



Directional BRT station platform in Yichang
宜昌的路中同向岛式站台

L2600-PRC:

Anhui Integrated Transport Sector Improvement Project

安徽省综合交通行业改善项目

A. Project Description

项目概况

A \$200-million ADB loan was approved in 2009 to expand the road capacity of the Xuzhou–Mingguang Expressway and to improve local roads, and safety practices in Anhui Province. As an important component of "Vertical I" in the "four-vertical and eight-horizontal" expressway system of Anhui Province, the Anhui section connecting with the Xuzhou-Mingguang Expressway will become the most convenient express route from Xuzhou to Nanjing (Jiangsu Province) after completion.

The project covers eight municipalities and 14 counties, including four subprojects in total. The first is the Anhui section of the Xuzhou-Mingguang Expressway subproject, a new 139-kilometer (km), four-lane, access-controlled expressway, allowing for motor speeds of up to 120 km/hour in northeast Anhui Province. The second involves local roads and safety enhancements,



No.2 Bridge of Huaihong New River
怀洪新河二号特大桥

including 452 km of local roads to be upgraded or rehabilitated—nine roads in total, consisting of three renovated roads, four rehabilitated roads, and two security roads. The third subproject is a demonstration of rural-bus services. The fourth involves institutional development and capacity building. Work on the Xuzhou-Mingguang Expressway commenced in March 2011 and was completed at the end of 2014. Local roads and security works successively got underway from April 2011 and were completed in September 2015.

The Anhui Provincial Department of Transport (APDOT) is the executing agency, and the existing Foreign Funds Project Management Office (PMO) within APDOT is responsible for overall project implementation. The project implementation agencies are Anhui Communications Investment Group (ACIG), the Anhui Highway Administration Bureau (AHAB), and the Anhui Transportation Administration Bureau (ATAB).

2009年，亚行批准2亿美元贷款用于安徽省明高速公路及部分干线公路进行改扩建及安保工程、防护工程。徐明高速安徽段是安徽省“四纵八横”高速公路网中“纵一”的重要组成部分，项目建成后成为徐州至南京方向最便捷的快速通道。

本项目分布于八个市和十四个县/区，共有四个子项目，（1）徐明高速安徽段子项目。在安徽省东北部新建一条全封闭、四车道、设计时速为120公里/时的徐州—明光高速公路（共计139公里）。（2）地方公路和安全改善子项目。该子项对452公里地方道路进行升级或恢复，由9条道路组成，即3条改建类项目、4条恢复类项目及2条安保类项目。（3）农村客运服务示范子项目。（4）机构发展和能力建设子项目。徐明高速公路于2011年3月开工，已经于

2014年底完工。地方道路和安保工程于2011年4月陆续开工，已于2015年9月全部完工。

安徽省交通运输厅为本项目的执行机构，安徽省交通运输厅内部设置的外资项目管理办公室负责总体项目的执行。项目实施机构分别为安徽交通投资集团、安徽省公路管理局和安徽省道路运输管理局。

B. Delicacy Management 精细化管理

To ensure smooth implementation and efficient construction management for the ADB project, administrative agencies such as a PMO, AHAB, a supervision office and field offices were established to reinforce standardized practices, efficient and safe logistics, and quality control.

为更好的做好亚行项目建设管理工程，省厅外资办、省公路管理局、亚行项目总监办及各项目现场办等管理机构牢固树立“规范化、标准化、精细化”的管理理念，强化组强机构，加强调度、强化管理，严格监管，保证了亚行项目的平稳推进。

1. Promoting Dynamic Design 推行动态设计

During project implementation, the contractors constructed roads not by simply following drawings, but, rather, evaluating the feasibility of each design scheme according to actual local conditions, factoring in the condition of old roads, and carrying out interactive dynamic design. Since the aim of the project was largely to rehabilitate and renovate old roads in varying states of repair, with long intervals between the design and construction

phases, and the possibility of substantial design changes, it was necessary to organize experts to review changes to high standards of technical accuracy to ensure the most efficient and safe practices. As for slope protection works, the design of the worksites had to be undertaken according to specific geological conditions to realize "unique views for each slope" and mutual coordination between the slope and its surroundings. The design unit assigned skilled design representatives to be onsite to resolve both routine and complex problems in a timely manner.

项目实施过程中，建设单位不盲目按图施工，针对路网改造老路状况变化较大特点，根据现场实际对每项设计方案的合理性和可行性予以思考和论证，全面推行动态设计。亚行项目主要是对老路的恢复与改建，老路状况变化较大，且部分项目设计至施工周期间隔较长，变更设计量相对较大，对于一些技术难度较大的变更设计方案，组织专家进行审查，以保证方案的合理性和科学性。如针对边坡防护工程，根据具体地质情况进行工点设计，做到“一坡一景”，边坡与周围自然环境相协调。设计单位派驻有经验的设计代表常驻现场，做到一般问题现场解决，复杂问题限期解决，切实做好设计服务工作。

2. Promoting Standardized Construction 推进标准化建设

Site construction is an important element in the project preparation stage, also reflecting the level of management and the project's overall image. In this instance, site development was carried out to a level that compared favorably with previous highway-network construction. For example, the project offices of No 2.1 at the section from S105 Longtang to Chaohu Lake, and No 3.2 of X056 Shanmin Road were prefabricated, while access roads and



Rehabilitated Land after Temporary Use
恢复后的临时用地

mixing plants utilized hardened concrete, and asphalt pavements were covered with 8.5-m-high steel-sheeted shedding against rain, and all drainage facilities were in order. The construction standards were well received by leadership at all levels.

驻地建设是项目施工准备阶段的重要环节，也是项目建设管理水平和整体形象的体现。亚行项目驻地建设总体较以往路网建设上了新台阶。如S105龙塘至巢湖段No 2.1标、X056山闵路No3.2标项目部办公室采用标准活动板房，拌和站进出场道路采用混凝土硬化，沥青面层粗细集料均搭设高度8.5米彩钢瓦大棚遮盖防雨，排水设施完善，驻地建设总体规范，得到各级领导的一致好评。

3. Regularly Evaluating the Performance of Contractors and Engineers 开展定期综合考评

In order to enhance management of the project and encourage advanced practices, the PMO, AHAB and Supervision Office jointly promulgated "Methods for Evaluating Local Roads Improvement Works of Anhui Province with ADB Funding" as a basis for conducting a comprehensive evaluation of all subprojects. This involved evaluating all project site offices, the contractor, and supervision units. Such evaluations took into account project management, contract fulfillment, progress, quality, and safety. The process made it possible for participating units to form a healthy atmosphere of "competition, learning, pursuing goals, mutual assistance, and surpassing goals," thus facilitating the achievement of construction goals.

为加强亚行项目工程建设的管理，鼓励先进，促进落后，省厅外资办、省公路管理局、总监办共同研究制订了《亚行贷款安徽地方道路改善工程考评办法》，定期对各项目进行综合考评，考评对象包括项目现场办、承包人、监理单位，考评内容包括项目管理、合同履行、进度、质量、安全等方面。通过考评参建单位形成了“比、学、赶、帮、超”的良好氛围，促进了建设目标的实现。

C. Paying Attention to Safeguards 关注保障政策

1. Multi-measures to Implement Resettlement 多项措施落实移民安置

Setting up resettlement units.

Establishment of resettlement agencies

and allocation of fixed personnel for the project provided powerful support for smooth implementation of resettlement. During the preparatory stages of resettlement, the Resettlement Office established a system for land acquisition and a demolition agency, while providing training sessions to improve the professional skills of land acquisition and demolition personnel. Resettlement agency personnel were responsible throughout for the preparation and implementation of the Resettlement Action Plan.

移民安置机构设立。项目移民安置机构的建立和固定的专门负责人员的配备为移民安置工作的顺利实施提供了强有力的支持。在移民安置前期准备阶段，安置办建立了系统的征地拆迁组织机构，并通过机构培训，提高了各级征地拆迁人员业务素质。移民安置机构工作人员全过程参与了编制《移民安置行动计划》和实施过程。



Sun Hailong's House, Toupu Township, Wuhe County (before and after resettlement)
五河县头铺镇集居民孙海龙安置住所(前后对比)

Information disclosure and public participation. The Resettlement Office was committed to the "three disclosures"—quantity of compensation, standards of compensation, and compensation in strict accordance with the basic requirements of the Resettlement Action Plan, as well as various other compensation standards during the land acquisition and demolition cycle. Further, the office ensured that everyone affected is in full understanding of all resettlement-related work by disseminating a "Resettlement Information Manual." During resettlement, the office fully mobilized public participation, ensuring that resettlement was interactive and consultative, determining a land acquisition and demolition scheme, and establishing a compensation-standards and income-restoration scheme, so as to guarantee the interests of all those affected.

信息公开与公众参与。项目安置办在征迁过程中，严格按照《移民安置行动计划》的基本要求和各类补偿标准，实行了补偿数量、补偿标准、补偿金额“三公开”；通过发放《移民安置信息手册》等形式，使受影响人掌握了全部安置工作的相关信息。并在移民安置全过程中，从移民安置方案的制定、征地与拆迁方案及补偿标准的确定，到收入恢复方案的确定等充分调动公众积极性参与到协商工作中来，确保移民的利益。

Combining centralized resettlement and dispersed resettlement. To properly resettle demolition immigrants, each village and town conducted detailed field surveys of resettlement sites within their jurisdictions, and invited related departments, such as prefectural construction committees and prefectural bureaus of land and resources to conduct field surveys and formulate both centralized resettlement and dispersed

resettlement schemes in accordance with the actual conditions in each town and village along the road routes according to the relevant requirements of provincial, municipal, and prefectural headquarters. The terms of the resettlement scheme were established in full consultation with those affected and in conformity with their interests.

集中安置与分散安置相结合。为妥善安置拆迁移民，各乡镇对辖区范围内拆迁户的安置地点都进行了认真细致的现场调查。根据省、市、县指挥部的有关要求，结合沿线各镇、村的实际情况和村庄规划，并邀请县建委、县国土资源局等有关部门现场勘察，制定了集中安置和分散安置两种安置方案。移民安置方案的确定与受影响移民进行了充分协商，符合移民的利益。

Applying new technologies in resettlement. Some of those being resettled applied new construction technologies, such as the horizontal movement of homes, which greatly saves on demolition costs and results in incremental increases in the value of the property.

移民安置中的新技术应用。移民安置中，部分拆迁户采用房屋平移等建设工程新技术，大大的节约了拆迁成本，实现了房屋的保值增值。

Supporting vulnerable groups. In the implementation of resettlement, vulnerable groups affected by the project were analyzed based on their household conditions such as family-member structure, employment situation, and family incomes. This analysis was further compared with information from local civil affairs departments. All of the vulnerable groups affected received special

support from the PMO during resettlement, such as proper protection and care in terms of compensation for demolition, home building, and adequate allocation of resources. Onsite employment was provided for those affected.

弱势群体扶助。项目所影响的脆弱群体在移民安置实施过程中，根据其家庭成员结构、劳动力就业状况、家庭资源的拥有情况等自身客观条件和当地民政部门所掌握的材料对比分析进一步确定。所有受影响的脆弱群体，在移民安置实施过程中，项目办给予了特别的帮助，如在拆迁补偿、建房及资源的分配上给予适当优惠和照顾等。在施工过程中尽量安排拆迁户的劳力在工地务工。

2. Effective Environmental Protection Measures

有效的环保措施

Set up environmental management institutions, implement environmental protection capacity building, and carry out environmental protection awareness-raising campaigns. The project involved establishing environmental management agencies, assigning environmental managers to carry out environmental protection, and incorporating environmental index measurements into quarterly assessments of contractors, and rewarding high performers. Each supervision unit and contractor was required to convene environmental protection and technical-disclosure meetings on a regular basis, all construction personnel learned related knowledge about environmental protection, and were supported by environmental awareness campaigns at the construction sites through public information disclosure, marketing, and advertising. Such arrangements were all part of an overall push to enhance environmental



Affected Resident after Horizontal Movement
受影响平移后的房屋

awareness among everybody involved with the project.

成立环保管理机构，积极开展环保宣传教育，提高参建人员环保意识。成立环保管理机构，由专人抓环境保护工作，并把环保指标纳入承包商季度综合考核体系之中，并给予一定的奖励。要求各监理单位、承包商定期召开环境保护工作会议、技术交底会议，对所有参加的施工人员进行环境保护方面的学习，同时利用标语、标牌等形式在施工现场进行广泛宣传。施工现场提倡文明施工、生态施工，培养大家的环境理念，提高参建人员环境保护的意识。

Active training. The project placed emphasis on health, safety, and environmental improvement training for construction units and project management agencies. Training sessions according to local conditions were

undertaken on nearly 100 occasions, and involved some 1,000 construction personnel.

积极开展培训。重视对施工单位、项目管理机构环境、健康与安全培训，因地制宜组织各种培训，培训会近百次，共培训人数近千人次以上，有效提高了参建施工人员的环保、健康、安全意识。

Environmental monitoring. The project authorized environmental monitoring units to conduct quarterly environmental monitoring on air, water quality, and noise along the constructions routes, and provide technical support for environmental management.

开展环境监测。委托环境监测单位对沿线的环境空气、水体水质、环境噪声进行每个季度的环境监测工作，为施工沿线环境管理真正起到“耳目”作用，为环境管理提供技术支撑。

Control water and soil loss, and protect the environment. Measures were taken for preventing loss of water and of temporary soil during bridge-culvert engineering, the excavation of side ditches, setting up grit basins, discharging mud water after clarification, maintaining free-flow of ditch drainage along road routes, compressing roadside slopes, building concrete temporary drains, and constructing ditch and grit basins for deeply excavated sections to control water and soil loss.

控制水土流失，保护生态环境。做好路基填筑、桥涵工程施工过程中临时弃土的水土流失防护措施，要求开挖边沟，设沉砂池，泥水澄清后排放，并保持与沿线的沟渠水系畅通；对填筑路基边坡做到“随填随压”，并设混凝土临时排水沟，对深挖段的边坡，设置截水沟、沉砂池，以控制水土流失。

Control sewage discharge and protect the surface-water environment along the road routes. During bridge construction, cofferdams and mud pools were constructed with the aim of removing and disposing of mud regularly and in a proper manner so as to avoid it being directly discharged into the Huaihong New River, the Huaihe River, and the Xinbian River, with polluting repercussions. Septic tanks of volumes not less than 5 m³ were constructed at each construction site, as were sedimentation tanks and prefabricated water-recycling units at the mixing plant. It was prohibited to discharge untreated water. At the same time, a rainwater-collection system was implemented at at Huaihong New River, Huaihe River, and Xinbian River bridges to prevent rainwater flowing into river channels with polluting effects.

控制污水排放，保护沿线地表水环境。桥梁施工时，设立围堰、泥浆池，泥浆定期清运，妥善处理泥浆，避免泥浆直接排入怀洪新河、淮河、新汴河等水体，造成水域污染；每个施工驻地均设置容积不少于5立方米的化粪池；拌合站冲洗水、预制养护水均设置沉淀池，基本做到重复利用，严禁不经处理直接向外排放。同时在怀洪新河、淮河、新汴河等桥梁，设置雨水收集系统，防止雨水直接流入河道，污染途径水域。

Effectively implement environmental measures after completion of expressway construction to rehabilitate the ecological environment. After completing Xuzhou-Mingguang Expressway, environmental measures were effectively implemented to protect the environment along the road route, rehabilitate the environment of land used temporarily, utilizing it rationally in line with standards set by environmental agencies.

公路建成后沿线环保措施落实到位，生态恢复良好。徐明高速建成后，有效地落实项目环保措施，沿线的生态环境保护良好，临时用地生态得到恢复，合理利用，符合环保部门要求。

D. New Technologies in Application

新技术的应用

1. Low Embankment Design 低路堤设计的应用

The technical design for the project expressway adopted the guidelines of the study, "Design Technology for Expressway Low Embankments in Plains". Good results have been achieved in determining reasonable subgrade filling heights, comparing and selecting span and underpass structural modes, optimizing road design, and in reducing volumes of extracted earth.

项目结合《平原区高速公路低路堤设计技术》成果，对徐明高速公路采用平原高速低路堤设计，对于合理确定路基填土高度、比选构造物上跨与下穿方式、优化道路线形设计、减少道路取土占地等方面取得了较好的效果。

2. 60 m Composite Girders—Concrete Truss 60米钢管—混凝土桁架组合梁

The Xuzhou—Mingguang Expressway has 10 dike bridges in total. Compared with traditional schemes for dike bridges, which use continuous-girder bridges with 60-m main spans, truss-girder bridges have the following advantages: they reduce the height of the main girder by 0.8 m, and shorten the bridge length by about 40 m, with the

same clearance and longitudinal slope (2%). They are lightweight and have strong span capacity, while also being economical, and providing overall stability without cross-bracing. They also bring obvious economic benefits, with savings per bridge at about about CNY2 million (\$312,700).

Meanwhile, low-height, ribbed-type T-girders and trough girders over feeder roads were also adopted for the main bridge, implementing a "low-embankment" design concept to achieve an average fill height over the entire route of just 2.8 m. Compared with traditional embankment design, this is a decrease in total of about 0.35 m, saving around 1,180 mu of land, with economic savings of up to more than CNY100 million.

徐明高速公路共有垮堤桥10座，与传统的采用主跨60米的连续梁桥的垮堤桥方案相比，桁架梁桥有如下优势：一是降低主梁高度0.8米，在同等净空、纵坡（2%）条件下，可缩短桥长约40米。二是自重轻、跨越能力强，可较低下部结构的造价，整体稳定性好，不需要设横撑。三是经济效益明显，每座桥可节约造价约200万元。

同时主线桥采用低高度密肋式小“T”梁、支线上跨槽型梁等多项创新手段，系统实施“低路堤”设计理念，实现全线路堤平均填土高度仅2.8米，相比传统路堤设计降低约0.35米，共节约占地约1,180亩，取得直接经济效益1亿多元。

3. Prefabricated Culverts and Channels 装配式涵洞、通道

The project was the first to work with prefabricated culverts and channels, combining factory prefabrication and field



Assembled Box Culvert
装配式拱涵装配式箱涵



Assembled Box Culvert
装配式拱涵装配式箱涵

assembly. Compared with traditional cast-in-situ and prefabricated culvert works onsite, overall quality and production efficiency are greatly improved—and vastly more convenient in terms of engineering management.

项目在集团公司范围内率先开展涵洞、通道集中预制，实现了工厂化预制、养护，现场装配拼装。相比传统现场施工现浇、预制装配式涵洞工程整体质量和生产效率得到大幅提升，给工程管理带来极大便利。

4. Rotary Saddle Cable Towers 同向回转鞍座索塔锚固体系

Wuhe Huaihe Grand Bridge adopted a comprehensive tower-and-girder system, with single-tower, single-column and double-cable planes. The main bridge span is 246 m by 125 m, with the principle span and auxiliary span of the main girder respectively referring to the steel-box girder and pre-stressed concrete box girder, and the tower column referring to

the obelisk bridge tower at a height of 151 m. In the case of the Huaihe Grand Bridge, this is first time that such a rotary-saddle system has been employed either domestically or abroad, successfully resolving the problem of the tower body in other anchoring forms cracking under tension, and has also been applied to the No. 2 Bridge of the Wuhu–Yangtze River Highway. Meanwhile, the steel-deck pavement refers to an innovative ultra-thin polyurethane layer of pavement, solving a global problem with steel-deck pavements.

五河淮河特大桥采用独塔独柱双索面塔梁固结体系，主桥跨径布置为（246+125）米，主梁主跨为钢箱梁，副跨为预应力混凝土箱梁，塔柱采用方尖碑式桥塔，塔高151米。淮河特大桥的同向回转鞍座索塔锚固体系，国内外都是第一次成功地解决了其它锚固形式的塔体受拉易开裂问题，并推广应用于芜湖长江公路二桥；钢桥面铺装采用新型聚氨酯超薄层铺装体系，将解决钢桥面铺装这一世界性难题。

Urban and Social Development 城市和社会发展

Loan 2526-PRC: Xinjiang Urban Transport and Environmental Improvement Project

新疆城市交通和环境改善项目



A. Project Profile

项目概况

The project is to improve the road and sanitation infrastructure, and traffic management and safety in five cities of the Xinjiang Uyghur Autonomous Region (XUAR): Changji, Hami, Kuytun, Turpan, and Altay. The project also aims to improve the quality of life and health of residents, and offered enhanced environmental protection through new construction and rebuilding projects.

The project comprises five components: Altay Road and Environmental Improvement; Changji Road and Environmental Improvement; Hami Road and Environmental Improvement; Kuytun Road and Environmental Improvement; and Turpan Road and Environmental Improvement.

The ADB loan is \$100 million and the loan agreement was signed on August 26 2009, taking effect in November of the same year. The project implementation period lasted for 5 years, and it was closed at the end of 2014, as scheduled.

项目旨在通过项目实施，改善阿勒泰、昌吉、哈密、奎屯和吐鲁番5个城市的道路和环卫基础设施建设，提高交通管理和安全水平。通过新建和改建项目点的道路和环卫设施，提高居民的生活质量和健康水平，并对环境进行保护。

亚行贷款新疆城市交通和环境改善项目的五个子项目分别是（i）阿勒泰道路与环境改善；（ii）昌吉道路与环境改善；（iii）哈密道路与环境改善；（iv）奎屯道路与环境改善；（v）吐鲁番道路与环境改善。

亚行贷款1.0 亿美元。2009年8月26日签定贷款协议，并于当年11月生效，项目实施期5年，2014年底按计划如期关帐。

The Altay Road and Environmental Improvement component included the construction or upgrading of 18 municipal roads, with a total length of 24.54 kilometers (km)—construction of two new roads (0.5km), and upgrading of 16 existing roads (24.13km)—the construction of four new bridges, associated road facilities, and the purchase of road-maintenance equipment.

The Changji Road and Environmental Improvement component involved constructing eight new municipal roads, with a total length of 22.11 km, as well as one bridge, associated road facilities, and the purchase of road-maintenance equipment.

The Hami Road and Environmental Improvement component involved upgrading two municipal roads, with a total length of 5.42 km, constructing one culvert, associated road facilities, and the purchase of road-maintenance equipment.

The Kuytun Road and Environmental Improvement component involved upgrading 13 municipal roads, with a total length of 23.6 km, including two trunk roads, two secondary roads, and nine branch roads,



Completed Riverside Road, Altay
阿勒泰市完工后的滨河路

the construction of two bridges, associated road facilities, and the purchase of road-maintenance equipment;

The Turpan Road and Environmental Improvement component involved constructing or upgrading 12 municipal roads, with a total length of 20.93 km, including 10 trunk roads, and two branch roads, the construction of associated road facilities, and the purchase of road-maintenance equipment.

阿勒泰子项目内容包括：修建18条市政道路，总长24.54公里。修建4座新桥和2座涵洞，以及相关道路设施，采购道路维护设备；修建6座公共厕所，配备一批果皮箱，垃圾箱，购置环卫和工程车辆。

昌吉子项目内容包括：修建8条市政道路，总长22.11公里，包括一座桥梁，相关道

路设施，道路维护设备；1座新型公共厕所，配备一批果皮箱，垃圾箱，购置一批道路维护、环卫和工程车辆。

哈密子项目内容包括：改扩建2条道路，总长5.42公里，修建1个涵洞，相关道路设施，道路维护设备；配备一批垃圾箱，购置一批道路维护、环卫和工程车辆。

奎屯子项目内容包括：改扩建13条道路，总长23.6公里，新建2座桥梁以及相关道路设施；建设公共厕所11座，垃圾收集站5座；配备一批果皮箱，垃圾箱，购置一批道路维护、环卫车辆。

吐鲁番子项目内容包括：新建/改建12条市政道路，总长20.93公里，采购道路维护设备；修建公共厕所10座，9座垃圾收集站，配备一批果皮箱，垃圾箱，购置一批环卫车辆和312国道的照明和配电设备。



Completed Urban Road – Kashixi Road
完工的城市道路—喀什西路

B. Teamwork and Collaboration 团队和协作

Based on previous ADB project-management experience, the XUAR Government formed a project leadership group (PLG) headed by the government vice-chairman, and established the Xinjiang ADB Loan Project Management Office (XPMO), comprising of the Housing and Urban-rural Construction Bureau, the Xinjiang Finance Bureau and the Development and Reform Committee. Each institution was responsible to itself but also cooperated with other agencies to ensure effective project management. The XPMO was located at the Housing and Urban-Rural Construction Bureau.

政府吸收了前期亚行项目的管理经验，成立了以自治区常务副主席任组长的项目领导小组，下设由自治区住房和城乡建设厅、自治区财政厅和自治区发改委组成的管理办公室，按照分工合作、各司其职的方式积极发挥各行业厅局的职能作用对项目进行管理。项目管理办公室（XPMO）设在住房和城乡建设厅。

The Xinjiang project consultation and collaboration system was not only established under the auspices of the XUAR leadership, but also with an equal weighting given to the views of experts in specialized fields, and to international experts from various departments, so as to ensure that ADB's standards of policy transparency, procedural rigor, and standardized management were sufficiently understood and implemented in daily management.

新疆项目会商协作机制的建立，除了自治区领导的重视，各职能部门负责人员良好的专业素养和国际视野也非常重要，他们对亚行项目政策透明、程序严格、管理规范，计划性强

有充分的了解并应用于项目管理中，在日常管理中自觉实行，并指导各子项目管理单位认真落实。

In order to guarantee efficiency and quality of project management, the management and organizational institutions involved in the XUAR, and each institutional component of the Project Management Office (PMO), were established according to project conditions. The main scope of project was construction of municipal projects and sanitation facilities, requiring land acquisition and resettlement, so the PMO established the Urban-Rural Construction Bureau to facilitate project management and operations.

为保证项目管理效率和质量，项目健全了自治区和各子项目办组织管理机构，机构根据项目不同情况设置。项目主要是市政和环卫设施建设，征地拆迁量比较大，与此相关的政府管理职能大多在建设主管部门，项目办就设在住房和城乡建设局，这有利于项目建设管理和后期运营的衔接。

The XPMO conducted nine domestic training sessions and three overseas training sessions, with 17 people participating in the overseas component, and 82 in the domestic component. Meanwhile, 75 consultants were invited to give lectures to improve procurement and contract management, and the implementation of ADB's social-security policies, theoretical standards, and implementation capacity.

为提高项目办管理人员的能力，自治区项目办在项目实施期间共组织9次国内培训和3次国外培训，其中参与海外培训17人，国内培训约82人，咨询专家讲座约75人，加强他们在采购和合同管理、执行亚行社会保障政策的理论水平和执行能力。

C. Promoting Development for Ethnic Minorities and Women 促进少数民族和妇女发展

Five components of the project were located in ethnic-minority residential areas. Economic development is relatively lagging in such areas, and there is enthusiasm for local development, but questions as to how the development should take place. Such questions, in terms of project implementation, include how to protect the environment during the development process, how to guarantee the legitimate interests of project-affected people, how the general population and more vulnerable groups can benefit, and how to promote the development of ethnic minorities and women.

项目五个子项目所在地多为少数民族聚居地区。由于经济发展相对滞后，各地都有强烈的发展意愿，如何在发展中保护环境，保证受影响人群的合法利益，让普通人群、弱势群体更多受益，促进少数民族和妇女共同发展，是项目在实施中重点关注的问题。

As part of ensuring that ethnic minorities and women benefited from the project, during the project implementation period from 2010 to 2014, the project provided 4,946 jobs in five cities, including 1,208 jobs for women and 952 to ethnic minorities, with an average monthly salary of CNY2,500–CNY3,500 (\$390–\$550). Operation of the project itself provided 831 jobs, including 367 for women, and 175 for ethnic minorities at an average monthly salary CNY1,600–CNY2,600.

为了使得更多的少数民族和妇女从项目中受益，在2010年至2014年项目建设期间，五个项目城市共提供就业岗位4,946个，包括妇

女岗位1,208个，少数民族岗位952个，月平均工资2,500至3,500元；项目运营提供就业岗位831个，包括妇女岗位367个，少数民族岗位175个，月平均工资1,600至2,600元。

In the XUAR, due to minority-cultural influences and other traditional legacies, the development of opportunities for women lagged behind other parts of the PRC. Promotion of gender equality and the empowerment women, thus, became one of the project's key targets. Infrastructure rollout and environmental improvements have helped reduce the incidence of disease, while improvements in living conditions have also eased the burden of women in terms of household affairs. In addition, the project provided employment opportunities for women, improved their economic conditions, as well as their status within the family, and provided them with opportunities to participate in social activities that promoted self-development.

在新疆，由于少数民族文化和传统原因，妇女的发展比较落后，促进性别平等和提高妇女权益也是项目的重要目标之一。基础设施建设和环境改善减少疾病的发生，生活环境改善也减少了妇女在家务劳动中的投入。除此之外，通过项目为妇女提供就业，改善她们的经济状况，也起到了提高她们在家庭中的地位 and 参与社会活动的机会，提高了她们自身发展的能力。

Altay city carried out skills-training sessions for women, and provided them with micro-loans to support them to start planting and farming businesses. More than 2,300 women received training, while 5,031 women received financing totaling CNY229.2 million.

In Changji city, 55,774 residents participated in various skills- and entrepreneurship-training sessions—40% of them women. Since project implementation, 18 professional women's cooperatives were established, allowing 54 women were trained in seed cultivation. Cumulatively, CNY620 million in microloans for women were provided. Over a three-year period, the Department of Finance subsidized CNY38.2 million in lending, benefiting women in 10,332 households. Work-skills training for grassroots women's federations was held to train 153 directors from village and township women federations and village (neighborhood) women's organizations city-wide.

阿勒泰市通过开展妇女技能培训和妇女小额担保贷款项目，支持妇女开展种养殖经营，共培训妇女2,300多人，为5,031名妇女发放小额贷款22,924万元，支持妇女创业。昌吉市参加各类技能和创业培训55,774人，其中妇女参加比例40%以上。成立妇女专业合作组织

18个，培树种养殖致富女能手54名。累计发放妇女小额担保贷款6.2亿元，三年财政贴息资金3,818万元，受益妇女10,332户。

Kuytun city provided multiple training sessions for 400 rural women on cooking, household farming, the manufacture of pastries, computer literacy, languages, and legal issues, adding more than 200 women to the labor-force. Vocational-skills training was conducted for 2,607 urban women, assisting in the employment of 5,940 women. Cumulatively, 805 women were financed with microloans totaling CNY45.5 million. In 2013, women were the beneficiaries of 15 skills- and entrepreneurship-training sessions, while 68 women were selected to join the skeleton staff of grassroots-women's federations, and be part of regional and prefectural staff-training sessions. Eight promotional and training activities on laws protecting women and children were conducted for more than 3,000 people.



Women in Training of Embroidery
进行刺绣培训中的妇女

Hami city financed microloans totaling CNY293.4 million to women, covering 78,844 households, while also providing CNY11.3 million in subsidized support for women to start their own businesses. Entrepreneurship- and vocational-skills training was conducted for 3,190 women, covering the planting of fruit and vegetables and gardening management, embroidery, tailoring, and housekeeping services, while 20 embroidery talents went on organized study tours in other cities. The city government provided CNY1.25 million to support women to find jobs or start their own businesses.

项目实施期间，奎屯市对400多人次农村妇女进行了家禽养殖烹饪、糕点制作和电脑操作、双语、法律知识相关培训，妇女富余劳动力转移200多人；对2,607名城市妇女进行了各种职业技能培训，实现妇女就业5,940人。累计向805名妇女发放小额担保贷款4,552.8万元，帮助妇女创业。哈密市发放妇女小额贷款金额29,337.3万元，惠及妇女78,844户，落实贴息资金1,130.38万元，支持妇女创业。为3,190名妇女开展创业及职业技能培训，内容涉及花卉园艺管理、水果种植、刺绣、缝纫和家政服务，组织20名刺绣能手到外地考察学习。政府提供125万元支持妇女就业和创业。

D. Results

项目成果

The project improved the infrastructures of the five project cities, financing and enabling the development of improved environmental standards, as well as a generally improved environment in the project cities, while also promoting sustainable economic development.

项目提升了项目城市基础设施水平，改善了投资环境，增强了发展能力；改善了项目城市环境，促进了项目城市经济的可持续发展。

The project generated all-round benefits—employment and business opportunities, and a financing environment that greatly contributed to the regional economic and social development of the project cities. Compared to 2008, the resident-per-capita disposable incomes in the project cities had increased significantly by 2013—to CNY18,791 from CNY13,112 in Altay city, to CNY21,502 from CNY10,547 in Kuytun city, to CNY20,384 from CNY12,576 in Changji city, to CNY20,000 from CNY10,991 in Turpan city, to CNY21,128 from CNY11,083 in Hami city.

项目产生的收益、就业、商业机会、投资环境的改善对项目区区域经济社会发展做出了巨大的贡献。与2008年相比，项目城市2013年城市居民人均可支配收入有较大增长，阿勒泰市从13,112元增加到18,791元；奎屯市从10,547元增加到21,502元；昌吉市从12,576元增加到20,384元；吐鲁番市从10,991元增加到约20,000元；哈密市从11,083元增加到21,128元。

In Altay, where the economy is tourism dependent, urban-infrastructure improvements made the city more appealing and improved its tourist capacity in terms of hotels. Tourism numbers increased to 1.19 million in 2013 from 700,000 in 2008, with increased tourism revenues increasing to CNY720 million from CNY400 million in the same period.

在阿勒泰，城市基础设施改善使得这个旅游城市的吸引力和接待能力大幅度提高。游客

数量从2008年的70万人增加到2013年的119万人，旅游受益从4亿元增加到7.2亿元。

Kuytun is located at the center of northern XUAR's economic belt, making it an important transportation and logistics center. It is also an important city in terms of industry. The project has helped improve Kuytun's highway-network distribution and capacity, its sanitation facilities and the urban environment, while also facilitating the movement of Kuytun's commuters, and the development of the city's manufacturing capacity. In 2013, Kuytun received CNY10 billion in foreign investment. In the same year, the city hosted 1.3 million tourists, generating CNY600 million tourism revenues.

奎屯市地处新疆北疆经济带的中心，是重要的交通和物流中心和重要的工业城市。项目帮助完善了奎屯路网分布和通行能力，完善了环卫设施，改善了城市环境，增强了奎屯的客货流通和制造业发展能力。2013年奎屯市吸引外来投资100亿人民币，接待游客130万人次，创造旅游收入达6亿元。

The project also assisted in improving Changji city's road network, as well as its urban environment. A newly built road network expanded space available for urban development provided better economic connections between Changji and other cities, improving the financing environment, attracting increased foreign capital and central government investment. Over the past 5 years, Changji per-capita GDP increased by 232%. Many large-scale equipment manufacturers relocated to Changji, resulting in annual industrial growth of more than 20%, while tourism revenues have increased by 300% over the duration of the project.

Changji city has developed into a large-sized equipment manufacturing base in the XUAR.

项目完善了昌吉城市路网布局，也改善了城市环境。新建路网扩展了城市发展空间和昌吉市的对外经济联系，改善了投资环境，吸引了更多的外来资本和国家投资。5年来，昌吉市人均生产总值增加了232%，许多大型装备制造业落户昌吉，工业年均增长率都在20%以上，旅游收入实现增长300%。昌吉市已成为新疆大型装备制造业基地。

The project has helped improve the roads and environment in Turpan city's old town. Road network construction in the new district expanded the space available for future development of Turpan city. Improvement of roads and other transportation facilities, along with construction of sanitation facilities, helped promote tourism. Tourists numbers in Turpan increased to 4.5 million in 2012, up from 1.7 million in 2008, while tourism revenues increased to CNY740 million from CNY361 million in the same period.

项目在吐鲁番市不仅改善了老城区区的道路和环境，新区路网建设为吐鲁番市的未来发展拓展了新的空间。道路等交通设施的改善和环卫设施的建设对旅游业的发展起到很好的促进作用，吐鲁番市游客数量从2008年的170万人增加到2012年的450万人，旅游受益从3.61亿元增加到7.4亿元。

In Hami, the project played an important role in improving the urban infrastructure and residential-living environment. Hami city is a major transportation hub, connecting the western and the eastern coastal PRC. The local project roads run through the city north to south, connecting the old city with major urban roads to the west, which will improve

the development of Hami City and strengthen its hinterland connections.

在哈密市，项目对改善城市基础设施和居民生活环境起到积极作用。哈密市是新疆东部连接内地重要交通枢纽，项目道路是贯通城市南北，连接老城区和西部片区的主要城市干道，对改善哈密市发展环境和加强新疆与内地的联系具有具有重要意义。

L3003-PRC: Gansu Jiuquan Integrated Urban Environment Improvement Project

甘肃酒泉城市环境综合治理项目

A. Project Overview

项目概况

Jiuquan city is located on the ancient Silk Road in far northwestern Gansu Province. It is the largest agricultural seed-production base in China. In a clean-energy sector breakthrough, Jiuquan is also home to the world's first 10-million kilowatt wind-power base. The project is located in Jiuquan city's Suzhou district, which aims to promote environmentally sustainable and socioeconomically inclusive urban development by upgrading urban infrastructure and services. The project also supports wastewater collection and treatment, urban transport, and utility facilities, windbreak plantations, and related services and infrastructure.

酒泉市历史悠久，是古丝绸之路重镇；经济发展迅速，是中国最大的对外制种基地、首个“千万千瓦级风电基地”、全国重要的新能源基地。亚行贷款项目位于肃州区，旨在通过改善城市基础设施和服务，促进肃州区经济社会和城市环境可持续发展。该项目将支持污水管理、城市交通和公用设施、防风林种植以及相关服务设施。

The project has four components: a wastewater collection and treatment plant (WWTP) with a capacity of about 60,000 cubic meters (m³) per day, and a network of about 29 kilometers (km) of wastewater-collection piping; urban transport and utility facilities that comprise the construction of 15.9 km of urban roads, a new bridge, and reconstruction of an existing bridge; a windbreak plantation that has involved planting 60.5 hectares of windbreak tree screens along the northern and southern banks of Beida River; and overall capacity development and



A Bird View of the City Center of Jiuquan
酒泉市中心鸟瞰图

institutional strengthening. The ADB loan for the project was \$100 million. The loan agreement was signed on 31 August 2013, and it became effective on 21 October of the same year.

项目内容包括：1) 污水收集和处理：污水处理厂日处理能力为6万立方米，城市污水收集管网为29公里；2) 城市交通和公用基础设施：城市基础道路15.9公里，新建桥梁1座，改建桥梁1座；3) 防风林种植：北大河南北两岸种植防风林带60.5公顷；4) 能力建设和机构加强。亚行的贷款为1亿美元。该项目于2013年8月31日正式签约，同年10月21日贷款生效。

B. Keys to Success

项目成功关键

1. The Attention of Leadership. The project was Jiuquan's first international finance funded urban-infrastructure project, and it was recognized as a priority project by the Jiuquan Government. The project leadership team was put in place with Jiuquan's vice-mayor overseeing project implementation for the coordination of urban construction, in coordinating agency coordination between the Development and Reform Commission, the Finance Department, and the Construction Bureau. The leadership of

other provincial departments provided close guidance for other aspects of the project, which significantly supported smooth project implementation.

领导高度重视。本项目是酒泉市第一个城市基础设施外贷项目，酒泉市政府高度重视，专门成立了项目领导小组，由分管城建的副市长任领导小组组长，成员由发改、财政、建设、国土等相关部门组成，对于重大问题亲自协调；省发改、财政相关处室领导随时掌握项目进展，排难解惑，亲自带队赴国家及亚行进行项目协调。

2. Intensive Planning. During project planning, the selection of project components took into consideration urgent urban economic and social development needs, as well as ADB's People's Republic of China (PRC) Country Partnership Strategy (CPS). This included factoring in technological and economic feasibility, social and economic risks, land acquisition and demolition, and construction cycles. If selected projects were not in compliance with ADB technical assistance standards, alternative projects were initiated in fast response.

项目规划深入细致。在项目论证策划阶段，项目的筛选既要考虑本市经济社会发展的迫切需要，又要考虑亚行的资金投向；既要考虑技术、经济的可行性，又要考虑征地拆迁等

社会风险、建设周期等可控性。若筛选项目与亚行投向不符或技援论证结果不被支持，则要迅速启用备选项目。

3. Efficient and Stable Project Team. It was crucial to have a highly efficient and relatively stable project team after the project was launched, since the project was not only subject to domestic and ADB standards, but also covered a relatively long implementation period. The Jiuquan Project Management Office (PMO) staff consists of personnel from the Development and Reform Commission, the Finance Department, and the Construction Department. The PMO itself is an independent agency directly administered by the municipal government, with staff that are strong in terms of coordination and cooperation, business knowledge, and who are familiar with project program management. Maintaining the stability of the PMO staff was key to successful project implementation.

高效稳定的项目团队。在项目正式启动后，一个高效运行、保持稳定的项目团队至关重要。因为外贷项目不但要完成国外、国内两套程序，而且周期长。酒泉市项目办人员由建设、发改、财政等部门抽调，组成由市政府直接领导的独立机构，人员业务知识精通、熟悉项目程序管理，协调及协作能力强，是一支有集体荣誉感和社会责任感的队伍。尤其是项目办人员的稳定和连续为项目的快速、成功实施起了不可替代的作用。

4. Timely Provision of Counterpart Funds. Counterpart financing for the project was estimated at \$116 million. By the end of September 2015, a total of CNY350 million (\$55 million) was funded. Of that, the ADB contribution was CNY129.7 million, with CNY220 million counterpart funds accounting

for the rest. Timely allocation of counterpart funding helped ensure smooth project implementation.

配套资金按时到位。项目的地方配套资金为1.16亿美元。截止2015年9月底共完成投资3.5亿人民币，亚行贷款提款报账金额1.29亿人民币，国内到位配套资金2.2亿人民币。配套资金的足额到位有力保障了项目顺利推进。

5. Effective Coordination. From the upper-level leadership of ADB, to national and provincial development and reform commissions and financial departments, to lower-level management on a village and community level, and to design, construction, and supervision agencies, the PMO was key to connecting and coordinating all relevant partners. Effective coordination is also the basis of ensuring that the project was implemented in an orderly and smooth manner. Based on modern modes of project management, work responsibilities adhered to those involved. But at the same time, staff enthusiasm, initiative, and creativity was also facilitated, so as to reward staff with a sense of job achievement.

高效的协调。亚行贷款项目上对亚行、国家及省发改、财政部门、下对村组、社区；相关单位涉及勘察、设计、评估咨询、施工、监理；项目办作为核心纽带，始终要对上积极汇报，对下深化协调，无缝衔接。确保项目有条不紊，顺利推进。按照现代项目管理模式运作，工作责任到人；同时要善于激发人员积极性、主动性和创造性，真正使人员在工作中获得成就感。

6. Effective Management. The project-development system developed as the project entered the implementation stage,

with consultants playing a crucial role in developing the system. According to ADB-project management requirements and actual conditions in Jiuquan, the responsibilities of the PMO, and other implementing agencies became more clearly defined, establishing procedures for project-quality control, progress management, safety assurances, investment controls, environmental monitoring, external monitoring, and the establishment of cash reimbursements. The PMO, together with project implementation consultants, organized training programs for personnel in implementing institutions on the issues of construction, supervision, environmental monitoring, and the monitoring of domestic migration to make it possible for them to master ADB project-management requirements and ensure high-quality project implementation.

建章立制，规范管理。在项目进入实施阶段后，项目办在咨询专家的帮助下制定了《酒泉亚行项目管理办法》、《酒泉亚行项目财务管理手册》等制度，按照亚行项目管理要求和酒泉市实际，进一步明确了项目办、实施机构等的职责，对于工程质量、进度、安全、投资控制以及环境监测、移民外部监测、签证变更、提款报账等各个环节都明确规范，责任到人。项目实施过程中，项目办和咨询专家一起，组织实施机构、施工、监理、环境监测、移民外监等单位相关人员进行了多次培训，使其掌握亚行项目管理要求，提高了项目推进的效率和质量。

C. Achievements

项目取得的成就

1. Advance Contracting. Actively promoting advance procurement has laid a solid

foundation in terms of initiating effective project implementation. Preparatory project planning, approvals, land acquisition, and demolition work based on actual conditions of river flooding ahead of bridge construction, as well as advance procurements of a civil-contract package for the Xiyi Bridge, were carried out. Review of the design, the preparation of bidding documentation, procurements and other preparatory work were carried out well before the loan funds became effective. Advance contracting brought project implementation 6 months ahead of schedule.

提前采购。积极推进提前采购为项目在生效后快速启动打好基础。由于项目的规划设计、审批、征地拆迁等各项前期工作深入超前，结合桥梁施工河道度汛的实际条件，对西一桥土建合同包进行提前采购。并在贷款生效前具备了桥梁开工的所有条件。因在度汛前进行桥墩施工，所以比原采购计划提前工期近6个月。

2. Recruitment of Consultants.

Implementation-consulting services were very effective in terms of improving project-implementation management. After the loan went into effect, implementation consultants, and environmental and resettlement monitoring agencies have made significant contributions to bidding documentation and design reviews, monitoring reports and project management. Such work is essential for effective project implementation.

咨询专家到位。项目生效后，在前期PPTA基础上及时聘用项目咨询专家和移民外监机构，把好招标文件审查关，为亚行批复合同奠定条件；及时更新移民外监、环境监测等报告，及时对项目中的各种技术难题提供支持，使项目得以高效推进。



Xiyi Bridge Under Construction
施工中的西一桥

3. Improved Environment. The construction of the road subprojects between Gansu Province's cities of Jiuquan and Jiayuguan across the Gobi Desert has created about 2 km² of land for development. The development of windbreak forests has helped reduce particulate pollution. The construction of sewage treatment plants has helped solved urban sewage pollution problems downstream in Jinta county, alleviating pollution, improving the utilization of water resources, and improving living standards.

环境改善。道路子项目的实施在酒泉和嘉峪关之间的戈壁上开辟了约2平方公里的发展

用地；防风林减少了沙尘；污水处理厂的建设解决了城市污水对下游金塔县环境的污染，提高水资源利用率，改善了人居环境。

4. Improvements in Income for the Poor and Women. By August 2015, the project had provided 2,707 jobs, including 813 for women and 869 for the poor.

贫困人口和妇女的收入增加。截至2015年8月，项目提供2,707个用工岗位，其中813人为女性，869人为低收入者。



Construction Site of Wastewater Treatment Plant
污水处理厂施工现场



Workers Pouring Concrete
工人们浇注混凝土

Appendixes

附录

Appendix 1

Selection Criteria for Best Performing Projects

This is to recognize projects with an effective institutional set up, timely start-up of implementation, smooth disbursement and procurement, strict compliance with loan covenants, and effective delivery of scheduled outputs.

Prescreening Criteria:

A project is ineligible to participate in the award if:

1. ADB has declared any misprocurement
2. ADB's Special Project Facilitator has registered any complaints against the project
3. National media have reported any serious construction quality or construction safety issues
4. A major loan covenant has not been complied with

Selection Criteria:

The following criteria will be used to evaluate project implementation performance. Narrative evaluation methodology provides details for the evaluation (Attachment 2). Scores will be based on these criteria and bonus and penalty points according to the list below. Nominated projects will be ranked according to their total score by sector.

Criteria	Proposed Allocated Points
1. Institutional Set Up	15
• Specific PMO set up	5
• PMO staffing	5
• Grievance redress mechanism	5
2. Implementation Start-up Performance	20
• Loan approval to first disbursement	10
• Supervision consultant Mobilization	10
3. Project Management	15
• Progress report submission	5
• Safeguards reports submission	5
• Project performance monitoring report or socioeconomic impacts monitoring report submission	5

4. Contract Award and Disbursement	20
• Contract Award Achievement	5
• Disbursement Achievement	5
• Gap between time elapsed versus percentage of cumulative disbursements	10
5. Safeguards Compliance	20
• Compliance with resettlement covenants	10
• Compliance with environment and indigenous people covenants	10
6. Financial Management	10
• Financial management system	5
• Audited project accounts and financial statements Submitted	5
Total	100

Additional Bonus/Penalty:

1. Loan Extension:

- 10 (for extension \geq 24 months)
- 5 (for extension \geq 12, but $<$ 24 months)
- + 0 (for extension $<$ 12 months)
- + 5 (within original closing date)

2. Total Project Cost Increase (in terms of CNY):

- 10 (over 40% of total project cost at appraisal)
- 5 (over 20% of total project cost at appraisal)

3. Change of Project Outputs:

- 10 each (cancelling any main project outputs listed in the RRP)

4. Counterpart Funds:

- 10 (inadequate or late counterpart funding)

附录1

最佳表现项目的评选标准

最佳表现项目是指建立了有效的项目管理机构、项目实施启动及时、支出和采购进展顺利、严格遵守贷款协议，并能切实实现项目的预期产出的项目。

筛选标准：

出现以下情况的项目无参评此奖项资格：

1. 被亚行宣布过错误采购的项目
2. 在亚行特别项目协调人处有对项目投诉的登记的项目
3. 被国家媒体报道过发生任何严重建筑质量或建筑安全问题
4. 存在贷款协议主要条款没有遵守的项目

评选标准：

项目实施绩效将按照以下标准进行评估。评价方法说明将对评价内容加以详细说明（附件2）。评估小组将根据这些标准，以及下表中的加分和扣分来确定项目得分，并分行业对候选项目按总得分进行排序。

标准	计划分值
1. 机构建设	15
• 成立专门的项目管理办公室	5
• 项目管理办公室的人员设置	5
• 对项目受影响人抱怨的申诉机制	5
2. 项目实施启动情况	20
• 自贷款批准到第一笔支付之间的时间跨度	10
• 咨询专家和监理的动员	10
3. 项目管理	15
• 进度报告的提交	5
• 保障政策相关报告的提交	5
• 项目绩效监测报告或社会经济影响监测报告的提交	5
4. 合同授予和支付	20
• 已签订的合同额	5
• 已完成的支付额	5
• 已过去时间百分比与累计支付百分比之间的差距	10

5. 保障政策的遵守	20
• 关于移民安置协定的遵守情况	10
• 关于环境和少数民族协定的遵守情况	10
6. 财务管理	10
• 财务管理体系	5
• 经审计的项目账目和财务报表的提交	5
<hr/>	
总分	100
<hr/>	

额外加分/扣分：

1. 贷款延期：

- 10（延期≥ 24个月）
- 5（延期 ≥ 12个月，但 <24 个月）
- + 0（延期 < 12个月）
- + 5（未超出原截止时间）

2. 项目总成本增加（以人民币为单位）：

- 10（比预期项目总成本增加40%以上）
- 5（比预期项目总成本增加20% 以上）

3. 项目产出变更：

- 10 每项（取消任何一项行长报告和建议中的主要项目产出）

4. 配套资金：

- 10（配套资金不足或到位晚）

Appendix 2

Narrative Evaluation Methodology

1. Institutional Set up:

1.1 Specific PMO Set Up	<u>Allotted Point</u>
A PMO is set up specifically for the project	2
A PMO director or deputy director designated for the project	(full-time- 3; part-time- 1)
1.2 PMO Staffing	<u>Allotted Point</u>
Designated procurement/contract management staff	(full-time- 2; part-time- 1)
Designated disbursement staff	(full-time- 2; part-time- 1)
Designated coordinator/interpreter	(full-time- 1; part-time- 0)
1.3 Grievance redress mechanism (narrative justification needed)	<u>Allotted Point</u>
Available	5
Not available	0

2. Project Start-up:

2.1 Loan approval to first disbursement	<u>% of Allotted Point</u>
< 10 months	100
≥ 10, but < 14 months	75
≥ 14 months, but < 24 months	50
≥ 24 months	0
2.2 Fielding construction supervision consultants (firm or individual; ADB loan or domestic funded)	<u>% of Allotted Point</u>
Within 6 months after loan effectiveness	100
≥ 6 months, but < 10 months	50
≥ 10 months	0

3. Project Management:

3.1 Submission of progress reports	<u>Allotted Point</u>
Reports timely submitted	Yes: 2; No: 0
Adequacy of reports	Very good: 3; Good: 2; Acceptable: 1

3.2 Submission of monitoring reports, including environmental, resettlement, and ethnic minority

	<u>% of Allotted Point</u>
Timely submitted all monitoring reports with adequate information	100%
One monitoring report submitted with delay or with inadequate information	50%
Two monitoring reports submitted with delay or with inadequate information	0%

3.3 Submission of project performance monitoring or socioeconomic impacts monitoring report

	<u>Allotted Point</u>
Reports timely submitted	Yes: 2; No: 0
Adequacy of reports	Very good: 3; Good: 2; Acceptable: 1

4. Contract Award and Disbursement

4.1 Contract Award Achievement (Cumulative, as of the end of last year)	<u>% of Allotted Point</u>
Actual/Projection $\geq 90\%$	100
Actual/Projection $\geq 75\%$	50
Actual/Projection $< 75\%$	0

4.2 Disbursement Achievement (Cumulative, as of the end of last year)	<u>% of Allotted Point</u>
Actual/Projection $\geq 90\%$	100
Actual/Projection $\geq 75\%$	50
Actual/Projection $< 75\%$	0

4.3 Gap between time elapsed (from loan approval) versus percentage of cumulative disbursement (as of the end of last year)

	<u>% of Allotted Point</u>
$< 10\%$	100
$\geq 10\%$ and $< 20\%$	80
$\geq 20\%$ and $< 30\%$	50
$\geq 30\%$	0

5. Safeguards Compliance

5.1 Compliance with resettlement covenants	<u>% of Allotted Point</u>
Full complied	100
One noncompliance	50
More than one noncompliance	0

5.2 Compliance with environment and indigenous people covenants	<u>% of Allotted Point</u>
Fully complied	100
One noncompliance	50
More than one noncompliance	0

6. Financial Management

6.1 Financial management system	<u>Allotted Point</u>
Financial management system in use	1
Separate project account maintained	2
Designated disbursement staff	2
6.2 Submission of audited project accounts and financial statements	<u>% of Allotted Point</u>
Timely submission and acceptable	100
Timely submission but unacceptable	50
Delay in submission but acceptable	50
Delay in submission and unacceptable	0

附录2

评价方法说明

1. 机制建设：

1.1 成立专门的项目管理办公室	分值
专门为项目设立了项目管理办公室	2
项目有指定的项目管理办公室主任或副主任	(全职- 3; 兼职- 1)
1.2 项目管理办公室的人员设置	分值
指定采购/合同管理人员	(全职- 2; 兼职- 1)
指定支付人员	(全职- 2; 兼职- 1)
指定协调员/翻译	(全职- 1; 兼职- 0)
1.3 对项目受影响人抱怨的申诉机制（需要详细叙述）	分值
有	5
没有	0

2. 项目实施启动：

2.1 自贷款批准到第一笔支付之间的时间跨度	占分值%
< 10个月	100
≥ 10个月，但< 14个月	75
≥ 14个月，但< 24个月	50
≥ 24个月	0
2.2 咨询专家和监理的到场时间（包括公司或个人；亚行贷款或国内出资）	占分值%
贷款生效后6个月内	100
≥ 6个月，但< 10 months	50
≥ 10个月	0

3. 项目管理：

3.1 进度报告的提交	分值
及时提交报告	是：2；否：0
提交的报告内容翔实	非常好：3；良好：2；可接受：1

3.2 监测报告的提交，包括环境、移民安置和少数民族等	占分值%
及时提交所有监测报告且内容翔实	100%
一份监测报告延期提交或内容不充分	50%
两份监测报告延期提交或内容不充分	0%
3.3 项目绩效监测报告或社会经济影响监测报告的提交	分值
及时提交报告	是：2；否：0
报告内容翔实	非常好：3；良好：2；可接受：1

4. 合同授予和支付

4.1 已签订的合同额（截至上年末的累计数）	占分值%
实际数/计划数≥ 90%	100
实际数/计划数≥ 75%	50
实际数/计划数< 75%	0
4.2 已完成的支付额（截至上年末的累计数）	占分值%
实际数/计划数≥ 90%	100
实际数/计划数≥ 75%	50
实际数/计划数< 75%	0
4.3 已过去的时间百分比（自贷款批准之日起）与累计支付百分比（截至上年末）之间的差距	占分值%
<10%	100
≥ 10%且< 20%	80
≥ 20%且<30%	50
≥ 30%	0

5. 保障规定的执行

5.1 关于移民安置协定的遵守情况	占分值%
完全遵守	100
一个相关协定没遵守	50
超过一个相关协定没遵守	0
5.2 关于环境和少数民族协定的遵守情况	占分值%
完全遵守	100
一个相关协定没遵守	50
超过一个相关协定没遵守	0

6. 财务管理

6.1 财务管理体系	分值
财务管理体系的建立	1
项目单独核算	2
专设提款报账人员	2
6.2 提交经审计的项目账目和财务报表	占分值%
及时提交且合格	100
及时提交但不合格	50
延迟提交但合格	50
延迟提交且不合格	0

About the Asian Development Bank

ADB's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to two-thirds of the world's poor: 1.7 billion people who live on less than \$2 a day, with 828 million struggling on less than \$1.25 a day. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.

关于亚洲开发银行

亚洲开发银行（亚行）的远景目标是实现没有贫困的亚洲和太平洋地区。亚行的工作旨在帮助其发展中成员体减少贫困，改善人民生活质量。尽管亚太地区发展迅速，但该地区的贫困人口仍然占全世界贫困人口总数的三分之二：17亿人口日均生活费用低于2美元，8.28亿人口挣扎在日均生活费1.25美元的贫困线以下。亚行致力于通过共享式经济增长、环境可持续发展和区域一体化减少亚太地区的贫困。

亚行是一家多边开发金融机构，总部设在菲律宾首都马尼拉，现有67个成员体，其中亚太地区成员48个。它主要通过政策对话、贷款、股本投资、担保、赠款以及技术援助等工具向成员体国家提供帮助。

The logo of the Asian Development Bank (ADB) is a blue square with the letters "ADB" in white, bold, sans-serif font.

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